HAMMOND

Sk PRO





REFERENCE GUIDE

Software Version 2.0

FM2332-0926

IMPORTANT - PLEASE READ

Your Hammond SK PRO is designed to give you the true and authentic sound of Hammond Harmonic Drawbars, as well as provide you a large variety of other sounds and features to allow great flexibility in how you want to play. This Guide is designed to explain the operating features of your Hammond SK PRO as simply and graphically as possible.

Because we want to make this Guide as easy to understand as possible, the explanations are grouped by subject matter, and not necessarily in the order in which they appear in the Information Center Display (the screen on the front panel). For example, all functions pertaining to Drawbars are grouped together, all Percussion features are treated as a group, and so on.

Also, each feature is treated as an explanation unto itself, and does not require you to have prior working knowledge of some other feature. The explanations are presented such that, if you follow the steps outlined, the message you see in the Information Center Display screen will be identical to that shown in the keyboard at that stage of the explanation.

Do not be daunted by the number of steps required to perform each operation. Each step is simple. Simply bear these things in mind:

2. Read each step carefully.
2. Don't skip any of the steps.
2. Don't perform the steps out of sequence.

With these guidelines, you are well on your way to mastering all of the many sounds and features of your Hammond SK PRO.

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Sk PRO

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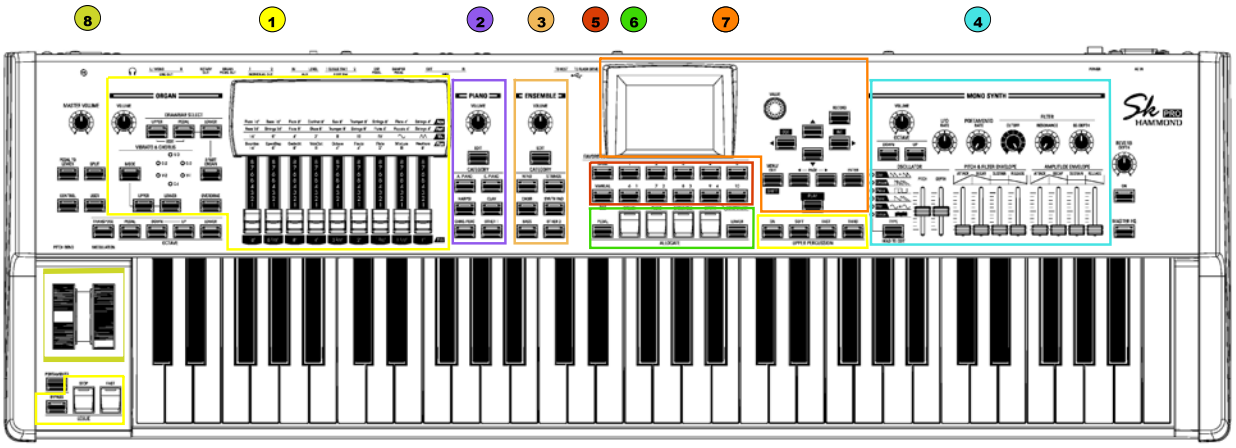
HAMMOND

Sk PRO

INTRODUCTION

INTRODUCTION

◆ Front Panel



The main sections of the Control Panel are outlined above. The following is a brief description of each one.

1 - ♦ ORGAN Voice Section

This section is used to control the ORGAN sounds which consist of classic Hammond Drawbar tones as well as Transistor Combo Organ and authentic Pipe Organ tones. The ORGAN Voice Section includes the Drawbars, Touch-Response Percussion and Vibrato and Leslie animation. as well as an EDIT feature for accessing editable Parameters quickly and a separate Volume control. This is explained more fully in the ORGAN VOICE SECTION chapter of this Guide starting on page 177.

2 - ♦ PIANO Voice Section

Your SK PRO has an inbuilt library of 163 high-quality waveforms representing various instruments such as Piano, Guitar, Strings, Trumpet, Saxophone, etc. There are two sections for controlling these sounds. The PIANO Voice Section can be used to control Piano and other Keyboard sounds. The front panel controls consist of six Category buttons plus an EDIT button for accessing editable Parameters quickly and a separate Volume control.

3 - ♦ ENSEMBLE Voice Section

The ENSEMBLE Voice Section also accesses the library of digital voices and can be used to control sounds such as Strings, Vocals, Guitar, Wind instruments, etc. The front panel controls consist of six Category buttons plus an EDIT button for accessing editable Parameters quickly and a separate Volume control.

NOTE: For more information consult the **PIANO / ENSEMBLE VOICE SECTIONS** chapter of this Guide starting on page 303.

4 - ♦ MONO SYNTH Voice Section

The MONO SYNTH Voice Section is a monophonic synthesizer utilizing physical modeling to create the sounds and effects of classic analog synthesizers. The front panel controls allow you to control a number of individual Oscillator Types as well as timed characteristics such as LFO and Envelope Generators for Pitch/Filter and Amplitude. There is also an EDIT button for accessing editable Parameters quickly and a separate Volume control. This is explained more fully in the MONO SYNTH VOICE SECTION chapter of this Guide starting on page 409.

5 - ♦ FAVORITES Section

Your SK PRO contains a large number of different types of sounds and a large number of ways to customize and tailor those sounds. Each Voice Section has sounds and Parameters which together constitute a Patch. Patches from the different Voice Sections are combined to produce Combinations. The FAVORITES Section allows you to access Combinations quickly during performance. This is explained more fully in the COMBINATIONS / PATCHES / BUNDLES / FAVORITES chapter of this Guide starting on page 163.

6 - ♦ ALLOCATE Section

These buttons allow you to assign the Sections to each Keyboard. In normal (single-manual) operation you simply press each button to turn the associated Voice Section "ON" or "OFF." A red LED will light when the Section is "ON." However, because the SK PRO Keyboard can be SPLIT and the instrument can also interface with a second MIDI Keyboard as well as a set of MIDI Bass Pedals, the ALLOCATE button section has been set up so you can easily assign Voice Sections to the LOWER and PEDAL Parts. This is explained in more detail in the ALLOCATING VOICES chapter of this Guide starting on page 44.

7 - ♦ INFORMATION CENTER DISPLAY

You can customize your SK PRO in a large number of different ways. The INFORMATION CENTER DISPLAY allows you to see and edit the Parameters associated with each portion of the instrument. The group of buttons to the right of the display screen allow you to navigate through the various Parameters as well as adjust the values of each Parameter. The different Menus shown in the Information Center Display are explained in detail in the INFORMATION CENTER DISPLAY chapter of this Guide starting on page 20.

8 - ♦ PITCH BEND & MODULATION Wheels

The Pitch Bend Wheel allows you to adjust the pitch range plus 12 half steps or minus 24 half-steps.

The Modulation Wheel allows you to add Modulation to connected MIDI instruments. It can also be used to control the internal ORGAN voices in several ways.

◆ Accessory Panel

All connections are found on the Accessory Panel on the back of the SK PRO.



1 - ♦ AC POWER

AC IN

Connect an AC Power Cord (provided) to this receptacle.

Power Switch

This turns the power to the SK PRO "ON" and "OFF."

2 - ♦ AUDIO CONNECTIONS

PHONES jack

Use this jack to connect a set of stereo headphones.

NOTE: Connecting headphones does **not** mute the LINE OUT or LESLIE Audio Outputs. If you wish the sound to go through the Headphones only, disconnect all other audio outputs.

LINE OUT jacks

Use these jacks to connect external audio equipment. If the connected mixer or monitor speaker is stereophonic, connect both the L and R jacks. If it is monaural, connect only the L/MONO jack.

LESLIE 11-PIN socket

Use this socket to connect a Leslie Speaker Cabinet having an 11-pin interface.

NOTE: When a Leslie Speaker Cabinet is detected at via the 11-pin socket, the inbuilt digital Leslie is disabled at the PHONES and LINE OUT jacks.

ROTARY OUT jack

Use this jack to bypass the inbuilt digital Leslie if you are not using the Leslie 11-pin socket and want a "dry" audio output from the ORGAN Section.

NOTE: Set the ROTARY OUT switch in the **AUDIO** FUNCTION Mode of the **SYSTEM** Menu to **Used** if you use this jack. This is explained starting on page 762.

ORGAN PEDAL OUT jack

Use this jack to connect a powered sub-woofer to increase the bass, or to bypass the Leslie to the PEDAL voices.

INDIVIDUAL OUT jacks

Use these jacks if you want to output the selected Voice Section independently.

AUX IN jack

Use this jack to connect an external audio source. When connected, the sound will be mixed with the internal keyboard sounds and sent out to the LINE OUT jacks and the Stationary channel of a multi-channel Leslie Speaker via the 11-pin socket. Use the AUX LEVEL knob to adjust the volume of the sound coming in from the AUX IN jack.

3 - ♦ CONTROLLER JACKS

FOOT SWITCH jacks

Use these jacks to connect Foot Switches to control functions such as Leslie speeds or change Combinations. Th e recommended Foot Switches are listed below;

```
HAMMOND . . .  FS-9H, VFP1
BOSS. . . . .  FS-5U
YAMAHA. . . .  FC4A, FC5
```

In addition, the FS-10TL Leslie Switch (not available in Europe) can be connected to the FOOT SWITCH 1 jack.

EXP PEDAL jack

Use this jack to connect an Expression Pedal to control volume while playing. The recommended Expression Pedals are listed below:

```
HAMMOND . . .  EXP-50J, EXP-20, V-20H, V-20R; NORM
KORG. . . . .  XVP-10, XVP-20; REV
ROLAND. . . .  EV-5; NORM
YAMAHA. . . .  FC7; REV
```

DAMPER PEDAL jack

Use this jack to connect a Damper Pedal (Sustain Pedal) for holding notes when keys are played and released. Th e recommended Damper Pedals are listed below:

```
HAMMOND . . .  FS-9H, VFP1
ROLAND. . . .  DP-10
YAMAHA. . . .  FC3A, FC4A, FC5
```

4 - ♦ MIDI PORTS

MIDI IN

Use this to receive MIDI data from a connected MIDI device.

MIDI OUT

Use this to transmit MIDI data to a connected MIDI device.

5 - ♦ USB PORTS

The USB Ports are located in the middle of the Accessory Panel.

TO FLASH DRIVE

Use this to connect a USB Flash Drive, which will allow you to:

1. Save and Load Patches,
2. Save and Load Custom Sets,
3. Save and Load Setups, and
4. Install software upgrades into the operating system.

TO HOST

Use this to connect to a computer, which will allow you to:

1. Send and Receive Setup and System files.
2. Send and Receive MIDI data (UPPER, LOWER, PEDAL Internal Zones and System Exclusive messages).

NOTE: For more information about the USB ports, see the **USING MEMORY** chapter of this Guide starting on page 794.

◆ Basic Hook-Up

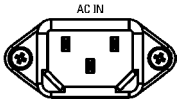
Pictured below is the Accessory Panel of your XK-4, which is used to connect AC Power and external devices.



The following paragraphs explain the basic setup procedure for your SK PRO.

♦ AC Power

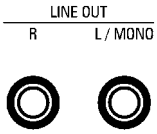
Your Hammond SK PRO is shipped from the factory set for 120V.AC power. To connect the SK PRO to A.C. power:



1. Locate the AC Power Cord that came with your SK PRO.
2. Connect the female end of the AC Power Cord to the receptacle on the SK PRO marked, “AC IN.”
3. Connect the 3-pronged plug into a grounded AC power outlet.

♦ Audio Connections

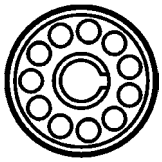
Connecting an external sound source



1. Use two audio cables with $^1/_4$" plugs on both ends of each cable.
2. Connect one end of each of the audio cables to the audio output connectors (marked LINE OUT) on the Accessory Panel.
3. Connect the other ends of each cable to the female $^1/_4$" audio input connectors of your sound source.

   If your amplifier has only a single (1) female $^1/_4$" phono plug audio input, you can connect one end of one cable to the L/MONO audio output connector on the SK PRO, and the other end to the female $^1/_4$" audio input connector of your amplifier.

Connecting a Leslie Speaker



The 11-pin Leslie socket on your SK PRO allows you to connect directly into any Leslie speaker having an 11-pin interface. If you wish to use a Leslie Speaker with your SK PRO, the Leslie Speaker should be connected before turning the power "ON."

Connecting a single-channel Leslie Speaker

1. Locate an 11-pin Leslie Connector Cable.
2. Connect one end of the Leslie Cable into the 11-pin receptacle on the Leslie Speaker.
3. Connect the other end of the Leslie Cable into the 11-pin Leslie socket found on the Accessory Panel of the SK PRO.
4. Turn the power to the SK PRO “ON” and set the EXT. LESLIE CHANNEL Parameter to 1.

NOTE: The EXT. LESLIE CHANNEL Parameter is explained on page 765 of this Guide.

Connecting a multi-channel Leslie Speaker

1. Locate an 11-pin Leslie Connector Cable.
2. Connect one end of the Leslie Cable into the 11-pin receptacle on the Leslie Speaker.
3. Connect the other end of the Leslie Cable into the 11-pin Leslie socket found on the Accessory Panel of the SK PRO.
4. Turn the power to the SK PRO "ON" and set the EXT. LESLIE CHANNEL Parameter to 3.

   NOTE: The EXT. LESLIE CHANNEL Parameter is explained on page 765 of this Guide.

5. Make sure a Tone Wheel) Organ Type (A-100, B-3, C-3 or Mellow) is selected.

   NOTE: **Organ Types** are explained starting on page 235 of this Guide.

6. Press the BYPASS button "ON" and set the volume of the Stationary Channel(s) at a desired level.
7. Press the BYPASS button "OFF" while playing, and set the volume of the Rotary Channel at the same audible level as the Stationary Channel(s).

   NOTE: Both the Leslie connections are "keyed," that is, each connection contains a notch which insures that the pins properly match up.

Connecting additional audio equipment

The 11-pin Leslie socket on your SK PRO allows you to plug directly into any Leslie speaker having an 11-pin interface. Compatible models include the 2101, 3300, 3500, 122XB, 981, 991 and the Heritage Series (122H, 142H). However, when plugging the SK PRO into a single-channel Leslie cabinet such as a 122H, only the TW, Vx, Farf and Ace Organ Types will sound through the Leslie cabinet. In order to hear the sounds from the Pipe Organ Type as well as the sounds from the other Voice Sections (PIANO, ENSEMBLE and MONO SYNTH), additional audio equipment must be connected. To hear the full sound output from your SK PRO when using a single-channel Leslie Speaker, do the following:

1. Locate an 11-pin Leslie Connector Cable.
2. Connect one end of the Leslie Cable into the 11-pin receptacle on the Leslie Speaker.
3. Connect the other end of the Leslie Cable into the 11-pin Leslie socket found on the Accessory Panel of the SK PRO.
4. Connect the SK PRO to a keyboard amp or powered speakers via ¼ " audio cables from the LINE OUT jacks of the SK PRO.
5. Turn the power to the SK PRO "ON" and set the EXT. LESLIE CH Parameter at 3.

   NOTE: The EXT. LESLIE CHANNEL Parameter is explained on page 765 of this Guide.

6. Make sure a Tone Wheel) Organ Type (A-100, B-3, C-3 or Mellow) is selected.

   NOTE: **Organ Types** are explained starting on page 235 of this Guide.

7. Press the BYPASS button "ON" and set the audio equipment at a desired level.
8. Press the BYPASS button "OFF" and set the Volume of the connected Leslie Speaker at the same audible level as when the [BYPASS] button is "OFF."

NOTE: To connect the SK PRO to a Leslie Speaker having a different pin configuration such as an older 6-pin 122 or 147, or a 9-pin cabinet such as the 760, 770 or 900 series cabinets, you will need an adapter kit and/or Connector Cable. Contact your Hammond Dealer for more information regarding which adapter kit and/or cable you may need.

♦ Connecting a Foot Switch



You can connect an optional foot switch such as the Hammond model FS-9H foot switch to your SK PRO. Connect the foot switch plug to one of the jacks marked FOOT SW on the back of the SK PRO.

NOTE: In order to insure proper operation of the Foot Switch, be sure to connect it when the power to the SK PRO is "OFF."

NOTE: The FOOT SW jacks on your SK PRO are "TRS-compatible," meaning that by using a Stereo "Y" connector or "splitter," more than one Foot Switch can be plugged into the same jack. You can also use a TRS cable to connect a dual-momentary switch to one of the FOOT SW jacks. For a complete explanation of this, please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 662.

♦ Connecting a Damper Pedal



To connect a Damper (piano sustain) Pedal, connect the plug from the pedal into the jack marked "DAMPER" on the back of the SK PRO.

♦ Connecting an Expression Pedal



If you wish to use an Expression Pedal, connect the plug from the Expression Pedal into the EXP.PEDAL jack. The Hammond EXP-50 / EXP-50J Expression Pedals are recommended.

♦ Connecting a MIDI pedal clavier



If you wish to use a Hammond MIDI pedal clavier, use a MIDI cable to connect the MIDI OUT port from the pedal clavier to the MIDI IN port of the SK PRO.

NOTE: If you are using a Hammond pedal clavier, the MIDI Channel should be set to **3**. The SK PRO is automatically configured to transmit Pedal MIDI data on MIDI Channel 3. If you need further information, please consult the Owner's Manual for your Hammond pedal clavier.

♦ Other MIDI Connections

Your SK PRO can interface with a great number of MIDI-compatible devices. See the MIDI chapter of this Guide for more information about MIDI connections and your Hammond SK PRO.

♦ Connecting a Set of Headphones



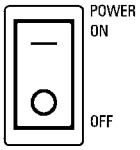
A stereo headphone jack is provided on the Accessory Panel next to the LINE OUT jacks so that you can play or practice in privacy. Connect the plug from a set of stereo Headphones into the Headphone jack.

NOTE: Be sure that your headphone set has either a ¼" plug or an adapter for a ¼" plug.

◆ Basic Controls

The panel controls on the SK PRO include Drawbars, knobs, buttons and sliders. These controls allow you to make adjustments and changes on the instrument.

♦ ON / OFF Power Switch



The ON / OFF Power Switch is located at the rear of the instrument on the right side of the Accessory Panel facing the keyboard. When this switch is in the "ON" (pushed in at the top) position, the Information Center Display as well as some LEDs (Light Emitting Diodes) will light up showing that the instrument is "ON."

NOTE: The SK PRO has a **POWER AUTO OFF** feature which automatically turns the power to the instrument "OFF" if no keys or controls are used within a 30-minute period. See page 15 for more information about this feature.

♦ MASTER VOLUME knob



The MASTER VOLUME knob is located on the extreme left of the Control Panel. With this knob, you can control the total or maximum volume of the entire instrument.

Turn this knob to the right to increase the total volume.

Turn this knob to the left to decrease the total volume.

NOTE: If you have an Expression Pedal connected, it will express up to the amount determined by the setting of the MASTER VOLUME knob as well as the Volume settings for each of the Voice Sections within the Combinations. For more information about Combinations, please consult the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 56.

♦ REVERB controls



The controls for the REVERB are located to the right of the Drawbars, in the group of knobs above the PERCUSSION buttons.

REVERB ON/OFF button



When this button is "ON" (orange LED lit), the Reverb effect will be added to the organ tones. The amount of Reverb is regulated by the REVERB knob, explained below.

REVERB knob

This knob allows you to control the total or maximum amount of digital Reverb.

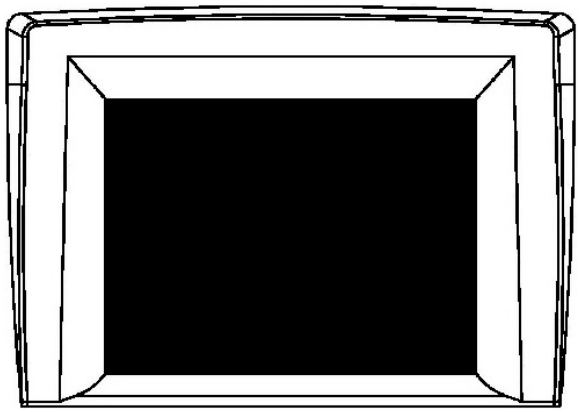
Turn this knob to the right to increase the amount of Reverb.

Turn this knob to the left to decrease the amount of Reverb.

NOTE: The REVERB button must be "ON" (orange LED lit) in order to hear the Reverb effect.

♦ Information Center Display

The Information Center Display is located in the center of the Control Panel.

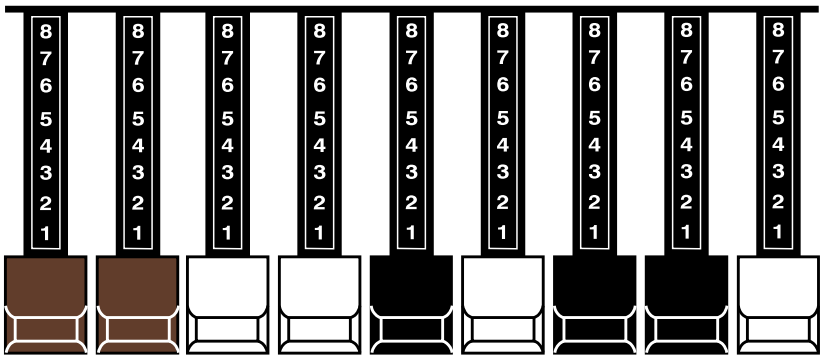


The Information Center Display has three modes: (1) PLAY Mode, (2) MENU Mode and (3) FUNCTION Mode. The PLAY Mode allows you to graphically see Drawbar settings, Extra Voice settings, Patch Numbers and Patch Names. The MENU Mode allows you to access the various change and edit the 's software parameters such as Drawbar Voicing, MIDI parameters and other advanced functions.

NOTE: The PLAY, MENU and FUNCTION Modes are covered in the **INFORMATION CENTER DISPLAY** chapter of this Guide.

♦ Drawbars

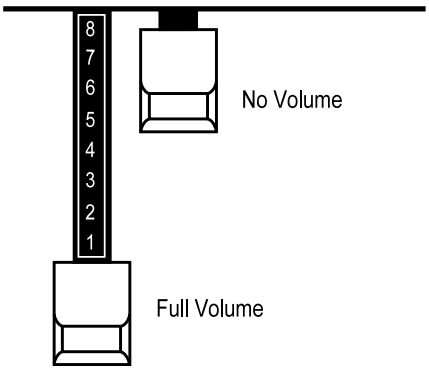
Drawbars are the heart and soul of the Hammond Sound.



The SK PRO has nine Drawbars, sometimes referred to as Tonebars. When the keyboard SPLIT feature is active, these same nine Drawbars are used to control the sound registrations for both UPPER Keyboard, (right of the SPLIT Point) and LOWER Keyboard (left of the SPLIT Point) as well as PEDAL tones.

Pulling a Drawbar out (toward you) will increase the volume in incremental steps from 0 (no sound) to 8 (maximum volume). Pushing the Drawbar back in (away from you) decreases the volume of that Drawbar.

Please refer to the DRAWBARS & PERCUSSION section of this Reference Guide for a complete explanation of Hammond Drawbars.



♦ Buttons

The button controls on the SK PRO PRO have LEDS or lights that will light up indicating "ON."



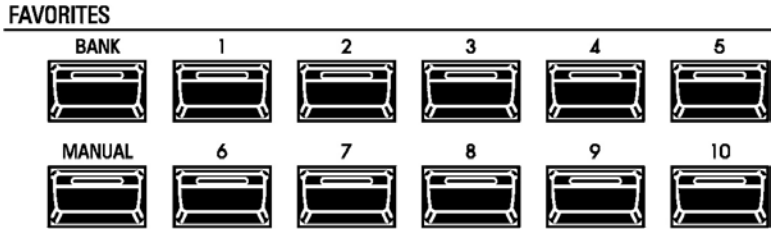
NOTE: The buttons in the **PIANO**, **ENSEMBLE** and **MONO SYNTH** Voice Sections **do not** all turn off, at least one LED in each of these five Sections will always remain lighted.

NOTE: The large white buttons may light different colors when pressed “ON” depending on their particular function. This is explained more fully in later chapters of this Guide.

NOTE: More detail about each of these sections can be found in later chapters of this Guide.

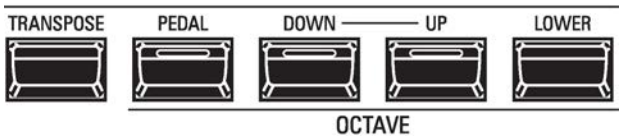
◆ Additional Controls

♦ FAVORITE buttons



These buttons allow you to access Patches quickly during performance. This is explained in the PATCHES & FAVORITES chapter of this Guide starting on page 163.

♦ OCTAVE / TRANSPOSE buttons



These buttons allow you to change the Octave of the selected Part as well as shift the musical key of the entire instrument. This is explained in more detail in the SPECIAL PERFORMANCE FEATURES chapter of this Guide starting on page 652.

♦ Additional Button Controls

CONTROL



This button allows you to access the CONTROL FUNCTION Mode instantly.

NOTE: More information about the **CONTROL** FUNCTION Mode can be found in the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 659.

PEDAL SUSTAIN



When this button is "ON" (LED lit), a lingering effect similar to a string bass is added to the Pedal Drawbar tones when Pedals are pressed and released.

NOTE: More information about the PEDAL SUSTAIN feature can be found on pages 97 and 724.

PEDAL TO LOWER



When this button is "ON" (LED lit), the tones produced by the Pedals will sound from the LOWER Part.

NOTE: More information about the PEDAL TO LOWER feature can be found on pages 96 and 723.

SPLIT



When this button is "ON" (LED lit), the keyboard is divided into UPPER and LOWER Parts.

NOTE: More information about the SPLIT function can be found on page 14.

USER



This button allows you to access a particular function instantly.

NOTE: You can assign a number of different functions to the **USER button** for quicker access during performance. A complete list of the functions that can be assigned to the USER button can be found in the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide on page 676.

PORTAMENTO



This button allows you to turn Portamento "ON" or "OFF."

NOTE: The **Portamento** feature affects the PIANO, ENSEMBLE and MONO SYNTH Voice Sections. More detailed information about Portamento as it relates to each Voice Section can be found in the individual chapters for each Voice Section. (**NOTE:** The Portamento does **not** affect the ORGAN Voice Section.)

♦ Pitch Bend & Modulation Wheels



The Pitch Bend Wheel is located to the extreme left of the keyboard. With it, you can adjust the pitch range plus 12 half steps or minus 24 half-steps.

The Modulation Wheel is located just to the right of the Pitch Bend Wheel. It has several functions that can be selected:

1. Send Continuous Controller (CC) data to a connected MIDI device.
2. Control the Overdrive Level.
3. Control Leslie rotor speeds.

NOTE: The Pitch Bend and Modulation Wheels can be programmed to control different functions for the different Voice Sections. More information can be found throughout this Guide.

Moving either control forward (away from you) will increase the intensity of the corresponding control.

Moving either control downward (toward you) will decrease the intensity of the corresponding control.

♦ Playing the instrument



SK PRO-61



SK PRO-73

Although the SK PRO is a single-keyboard instrument, it can be made to function in a manner similar to an instrument with two keyboards and a pedal keyboard, such as an organ. This is the reason for the references to UPPER, LOWER and PEDAL on the instrument.

On an organ, the UPPER Keyboard is usually used for the melody, and is played with the right hand. The LOWER Keyboard is usually used to provide accompaniment, or harmonic support for the melody and is played by the left hand. The PEDAL Keyboard, or clavier, is used to play the bass notes and is most commonly played by the left foot.

NOTE: You can connect a MIDI pedal clavier to the SKX PRO in order to play the instrument as a complete two-manual-and-pedal organ. Although we recommend one of the Hammond pedal claviers, any MIDI-compatible pedal clavier may be used; however, some initial setup may be required. Please consult the **MIDI** chapter of this Guide for more information.

On the SK PRO, this playing style is replicated by partitioning or "splitting" the single 61-note keyboard into two parts. The part played by the right hand is referred to as the UPPER Keyboard or Part, while the part played by the left hand is referred to as the LOWER Keyboard or Part.



The SPLIT button, located on the left of the Control Panel, is used to divide the keyboard into UPPER and LOWER Parts. Normally, 2B (the second "B" key counting from the left on the keyboard) marks the dividing point between the UPPER and LOWER Keyboards.



In addition, the 3PART ORGAN feature allows you instantly to convert the SK PRO into a vintage Hammond Organ with UPPER, LOWER and PEDAL Parts automatically assigned. For more information about the 3PART ORGAN feature, see the 3PART ORGAN chapter of this Guide starting on page 286.

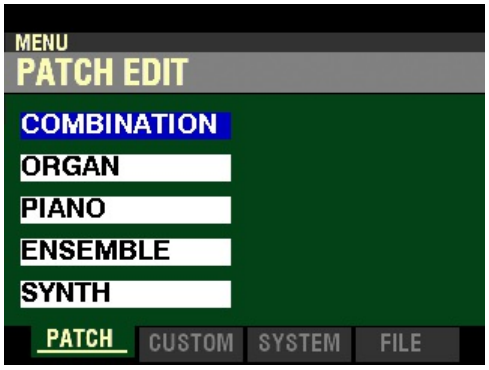
IMPORTANT NOTE: **2B** is the default SPLIT Point; however, you can relocate the SPLIT Point elsewhere on the keyboard. The SPLIT feature and how to use it is covered in the **ALLOCATING VOICE SECTIONS** and the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide.

IMPORTANT - PLEASE READ

◆ POWER AUTO OFF

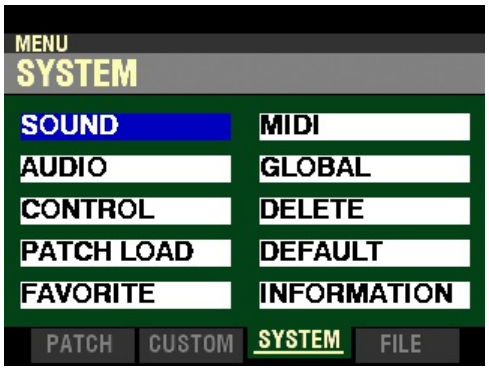
The SK PRO has a special feature called POWER AUTO OFF which automatically turns the power to the instrument "OFF" if no keys or buttons are pressed for 30 minutes. This is done for safety reasons and under most normal conditions we do not recommend disabling this feature; however, you may select whether or not the instrument will automatically turn "OFF" by doing the following procedure:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



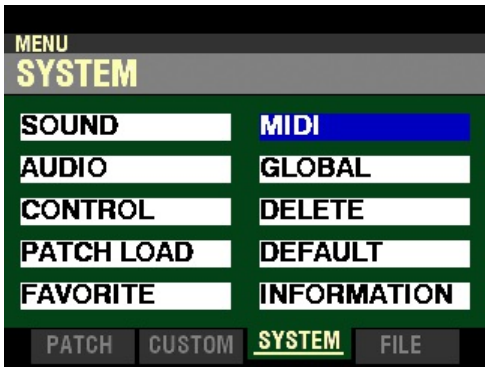
The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times to highlight the "SOUND" box.

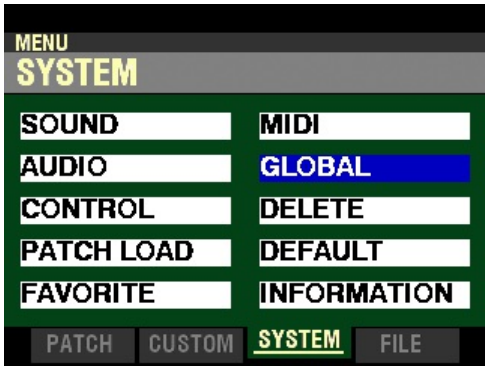


You are now in the SYSTEM Menu.

3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



4. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:



The data chart below shows the options you may select.

POWER AUTO OFF Options	
Setting	**Description**
30min	The AC power to the instrument will turn "OFF" after 30 minutes have elapsed with no keys or buttons being pressed.
Disable	The instrument will turn "ON" or "OFF" with the AC Power Switch, but not turn "OFF" automatically.

Turn the VALUE knob to select 30min or Disable. To disable this feature, select Disable.

◆ Recording a System Setup

The previous pages explain how to disable the POWER AUTO OFF feature of your SX PRO. This feature will be disabled as long as the power to the instrument is "ON." However, if you turn the instrument "OFF." then "ON" again, your setting will not be remembered.

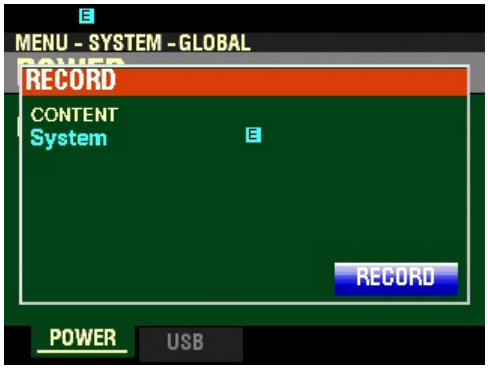
You can Record a Custom Setup in which this feature is set to Disable and will remain so even if the power in turned "OFF." In this way, you will not have continually to edit this feature each time the instrument is turned "ON."

To Record a Custom Setup with POWER AUTO OFF set to Disable, do the following:

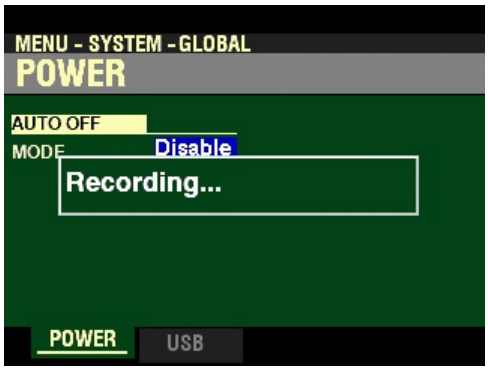
1. Follow the steps on the previous two pages to set the POWER AUTO OFF feature to Disable.

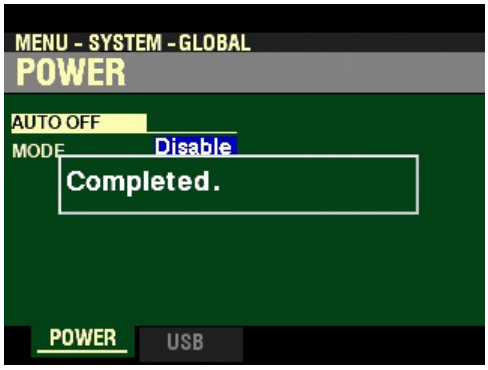


2. From the above screen, press the red RECORD button. The Information Center Display should now look like this:



3. Press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





After the "Completed" message disappears, the POWER FUNCTION Mode Page will display.

4. Press the PLAY button to return to the PLAY Mode.

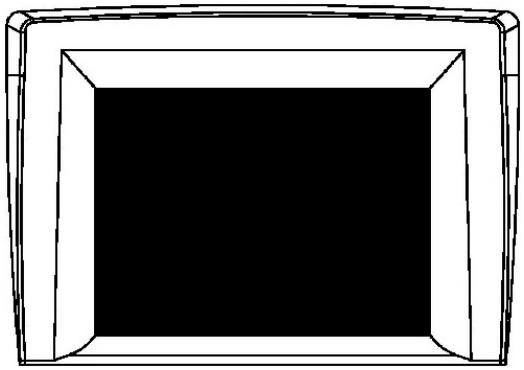
HAMMOND

Sk PRO

INFORMATION CENTER DISPLAY

INFORMATION CENTER DISPLAY

The Drawbars, buttons, sliders, knobs, etc., are used to control the operations necessary for Registration set-ups, settings for each voice, as well as MIDI information. The Information Center Display allows you to see and regulate these changes.



◆ MENU / EXIT, PLAY and ENTER buttons

These 3 buttons allow you to choose from among the various options for using the Information Center Display. The following is a very brief explanation of each of these buttons.

♦ MENU / EXIT



This button allows you to place the Information Center Display into MENU Mode, allowing you to access the FUNCTION Modes.

♦ PLAY



This button allows you to place the Information Center Display into PLAY Mode.

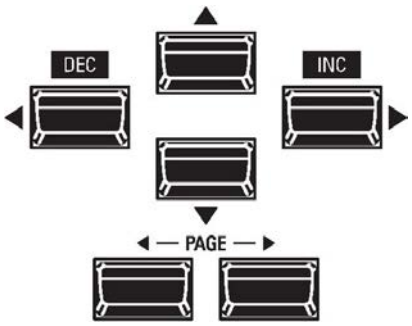
♦ ENTER



This button allows you to confirm that you want to Record or overwrite a setting you have edited.

NOTE: More information about editing Parameters and Recording edits will be covered extensively in later chapters of this Guide.

◆ DIRECTION and PAGE buttons



These buttons allow you to navigate the Information Center Display to find the Pages or Parameters you want to edit.

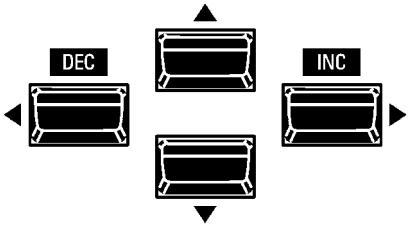
♦ PAGE buttons



The two PAGE buttons LEFT ("◀") and RIGHT ("▶") allow you to:

1. Select PLAY Mode Pages,
2. Select Menus,
3. Select Pages within each FUNCTION Mode.

♦ DIRECTION (Cursor) buttons



The four top buttons UP ("▲"), DOWN ("▼"), LEFT ("◀") and RIGHT ("▶") are the DIRECTION buttons. They allow you to:

1. Select Parameters within the PLAY Mode Pages,
2. Select FUNCTION Modes within the MENU Mode,
3. Select Parameters within each FUNCTION Mode Page.

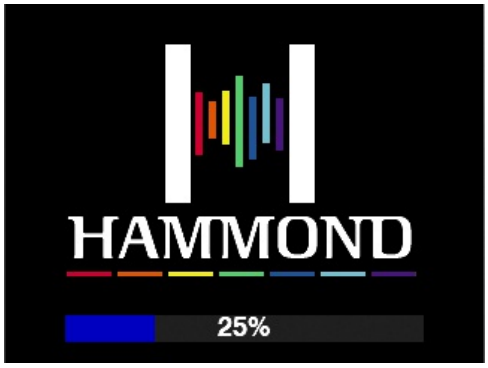
NOTE: More information regarding how to use the DIRECTION and PAGE buttons will be covered later in this section of the Guide.

◆ DISPLAY MODES

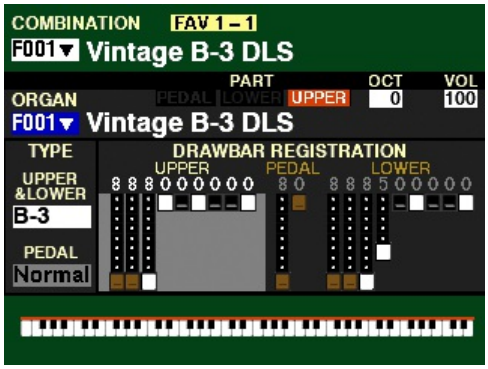
As stated in the INTRODUCTION, there are three Display Modes - PLAY Mode, MENU Mode and FUNCTION Mode.

The PLAY Mode may display up to six Pages - COMBINATION, ORGAN, PIANO, ENSEMBLE, MONO SYNTH and INTERNAL / EXTERNAL ZONES. These will be explained starting below.

After the power to the SK PRO has been turned "ON" the Information Center Display should show a screen similar to this:



While this screen is displaying, you will see a status bar which will scroll from left to right as the system software loads. After approximately 55 seconds, the Information Center Display will show a screen similar to this:



This PLAY Mode Page will show:

1. The Favorite Number and Favorite Bank Number,
2. The Combination Number and Name,
3. The Part, Octave and Volume settings for the ORGAN Section,
4. The name and number of the ORGAN Patch,
5. Drawbar registrations shown both graphically and numerically,
6. The Organ Types for UPPER, LOWER and PEDAL Parts,
7. The status of the SPLIT (either "ON" or "OFF," and the SPLIT Point).

NOTE: A **Combination** is a preregistered group of Patches and effects. More information can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 56.

NOTE: A **Patch** is a preregistered group of sounds and effects unique to a particular Voice Section. More information can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 139.

IMPORTANT: It is assumed that you have just turned the SK PRO "ON" and have not pressed either the PLAY or MENU / EXIT button. If you have, press the PLAY button until a screen similar to the one shown on the previous page displays. Also the Drawbars should be "OFF" (pushed "in").

◆ PLAY Modes

As explained on the previous page, there are six (6) possible PLAY Mode Pages:

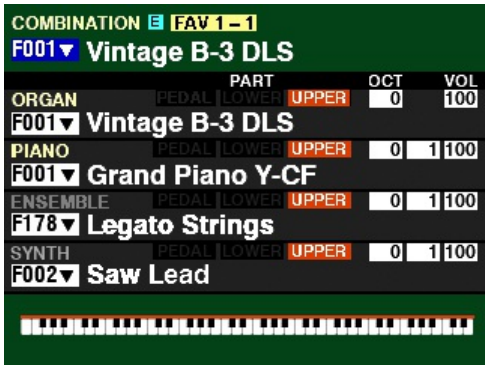
1. COMBINATION Display,
2. ORGAN Display,
3. PIANO Display,
4. ENSEMBLE Display,
5. MONO SYNTH Display,
6. INTERNAL / EXTERNAL ZONES Display.

The following paragraphs will explain each of the individual PLAY Mode Pages.

♦ PLAY Mode - COMBINATION Page

TRY THIS:

From the screen shown at the bottom of the previous page, press all four ALLOCATE buttons simultaneously to turn them "ON." The Information Center Display should look like this:



This Page will show:

1. The Favorite Number and Favorite Bank Number,
2. The Combination Number and Name,
3. The Numbers and Names for all four Voice Sections,
4. The Part, Octave, Velocity and Volume settings for each Voice Section.

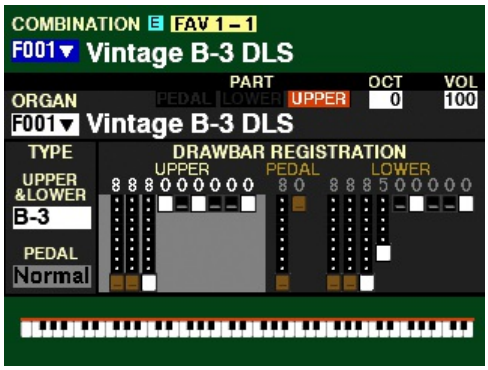
Notice also the small letter E at the top. This indicates the Combination has been changed from its default setting.

NOTE: More information about Combinations can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 55.

♦ PLAY Mode - ORGAN PATCH Page

TRY THIS:

From the screen shown on the previous page, press the PLAY button once. The Information Center Display should look similar to this:



This Page will show:

1. The Favorite Number and Favorite Bank Number (if applicable),
2. The Combination Number and Name,
3. The Drawbar registration for the ORGAN Section,
4. The Number and Name of the selected ORGAN Patch,
5. The TYPE settings for the ORGAN Patch,
6. The Part, Octave and Volume settings for the ORGAN patch.
7. The SPLIT Setting and Range on the keyboard (if SPLIT is active).

♦ PLAY Mode - PIANO PATCH Page

TRY THIS:

From the above screen, press the PLAY button once. The Information Center Display should look similar to this:



This Page will show:

1. The Favorite Number and Favorite Bank Number ,
2. The Combination Number and Name,
2. The Category of the selected PIANO Patch,
3. The Number and Name of the selected PIANO Patch,
4. The Part, Octave, Velocity and Volume settings for the PIANO patch.
5. The SPLIT Setting and Range on the keyboard (if SPLIT is active).

♦ PLAY Mode - ENSEMBLE PATCH Page

TRY THIS:

From the screen shown at the bottom of the previous page, press the PLAY button once. The Information Center Display should look similar to this:



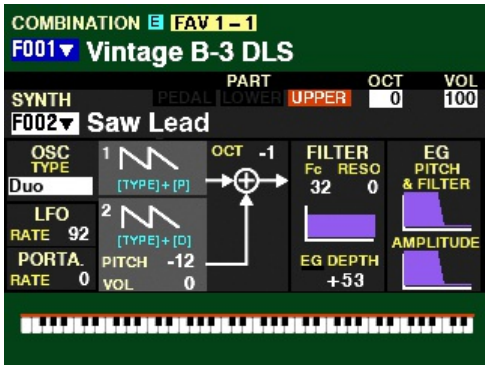
This Page will show:

1. The Favorite Number and Favorite Bank Number,
2. The Combination Number and Name,
3. The Category of the selected ENSEMBLE Patch,
4. The Number and Name of the selected ENSEMBLE Patch,
5. The Part, Octave, Velocity and Volume settings for the ENSEMBLE patch.
6. The SPLIT Setting and Range on the keyboard (if SPLIT is active).

♦ PLAY Mode - MONO SYNTH PATCH Page

TRY THIS:

From the above screen, press the PLAY button once. The Information Center Display should look similar to this:



This Page will show:

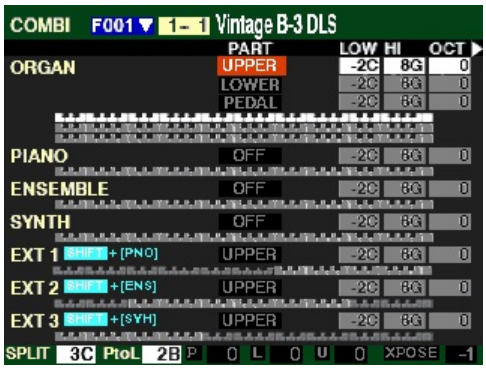
1. The Favorite Number and Favorite Bank Number (if applicable),
2. The Combination Number and Name,
3. The Category of the selected SYNTH Patch,
4. The Number and Name of the selected SYNTH Patch,
5. The Part, Octave, Velocity and Volume settings for the SYNTH patch.
6. Other SYNTH Parameters displayed with violet-colored graphics
7. The SPLIT Setting and Range on the keyboard (if SPLIT is active).

These are the PLAY Screens. See the following pages for an explanation of the MENU Mode.

♦ PLAY Mode - INTERNAL / EXTERNAL ZONES Page

TRY THIS:

From the screen shown at the bottom of the previous page, press the PLAY button until the Information Center Display looks similar to this:



This Page will show:

1. The Favorite Number and Favorite Bank Number (if applicable),
2. The Combination Number and Name,
3. The Part, Note Range and Octave settings for the ORGAN Patch,
4. The Part, Note Range and Octave settings for the PIANO Patch,
5. The Part, Note Range and Octave settings for the ENSEMBLE Patch,
6. The Part, Octave, Velocity and Volume settings for the SYNTH Patch,
7. The Part, Note Range and Octave settings for the External Zones,
8. The setting of the SPLIT Point,
9. The status of the PEDAL TO LOWER, the Octave settings for UPPER, LOWER and PEDAL and the Transposition setting.

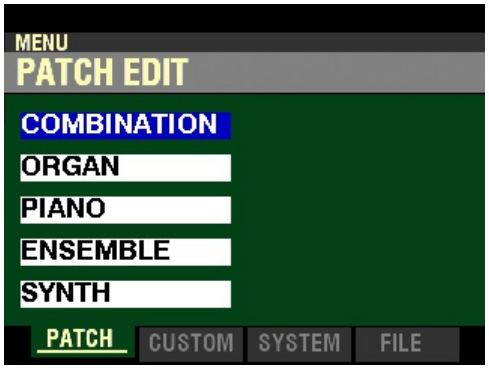
These are the PLAY Screens. An explanation of the MENU Mode follows starting on the next page.

◆ MENU Mode

The SK PRO has four (4) Menus. Each Menu contains a number of FUNCTION Modes which allow you to edit Parameters specific to a particular Function. This is explained in more detail starting below.

♦ MENU Mode - PATCH EDIT

If you press the MENU / EXIT button once from any of the PLAY Mode Pages, the Information Center Display should look like this:



Five (5) FUNCTION Modes should now appear in the display window.

Use the DIRECTION "▲" and "▼" buttons to select the FUNCTION Mode you want to edit.

COMBINATION - Allows you to edit COMBINATION Parameters.
ORGAN - Allows you to edit ORGAN Patches.
PIANO - Allows you to edit PIANO Patches.
ENSEMBLE - Allows you to edit ENSEMBLE Patches.
SYNTH - Allows you to edit MONO SYNTH Patches.

♦ MENU Mode - CUSTOM EDIT

From the PATCH EDIT Screen, press the PAGE "▶" button once. The Information Center Display should now look like this:



Four (4) FUNCTION Modes should now appear in the display window.

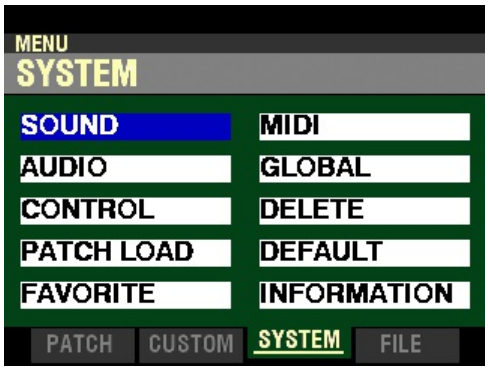
Use the DIRECTION UP "▲" and "▼" buttons to select the FUNCTION Mode you want to edit.

TONE WHEEL - Allows you to select from among a library of different Custom Tone Wheels as well as create and Record your own Custom Tone Wheels.
LESLIE - Allows you to select from among a library of different Custom Leslie Cabinets as well as create and Record your own Custom Leslie Cabinets.
PEDAL REG. - Allows you to select from among a library of different Custom Pedal Registrations as well as create and Record your own Custom Pedal Registrations.
PIPE - Allows you to select from among a library of different Custom Pipes as well as create and Record your own Custom Pipes.

NOTE: Each of the Custom Sets are explained fully in the **CUSTOM SETS** chapter of this Guide starting on page 473.

♦ MENU Mode - SYSTEM

From the CUSTOM EDIT Screen, press the PAGE "▶" button once. The Information Center Display should now look like this:



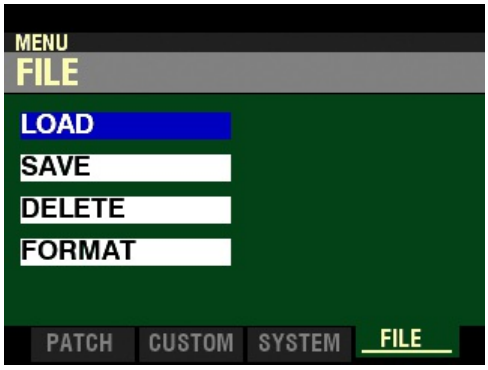
Ten (10) FUNCTION Modes should now appear in the display window.

Use the DIRECTION buttons to select the FUNCTION Mode you want to edit.

SOUND - Allows you to adjust Master Tune, Transpose, and Master Equalizer.
AUDIO - Allows you to adjust the audio configuration between Voice Sections and output jacks.
CONTROL - Allows you to adjust the Parameters for the various controllers such as Foot Switch, Expression Pedal, Display and Keyboard.
PATCH LOAD - Allows you to select which contents are loaded when a Combination or Patch is selected.
FAVORITE - Allows you select and edit Favorites.
MIDI - Allows you to adjust MIDI Channels, and various messages for the MIDI port and the USB MIDI.
GLOBAL - Allows you to adjust the Auto Power Off time and select USB Mass Storage.
DELETE - Allows you to delete U (User) contents.
DEFAULT - Allows you to return all or a portion of the instrument to factory settings.
INFORMATION - Allows you to see which jacks or portions of the instrument are active and to see and update the software.

♦ MENU Mode - FILE

From the SYSTEM Screen, press the PAGE "▶" button once. The Information Center Display should now look like this:



Four (4) FUNCTION Modes should now appear in the display window.

Use the DIRECTION "▲" and "▼" buttons to select the FUNCTION Mode you want to edit.

LOAD - Allows you to Load data from a USB Flash Drive or from the instrument's Internal Memory.
SAVE - Allows you to Save data to a USB Flash Drive or the instrument's Internal Memory.
DELETE - Allows you to Delete data from a USB Flash Drive or from the instrument's Internal Memory.
FORMAT - Allows you to format a USB Flash Drive for use with your SK PRO.

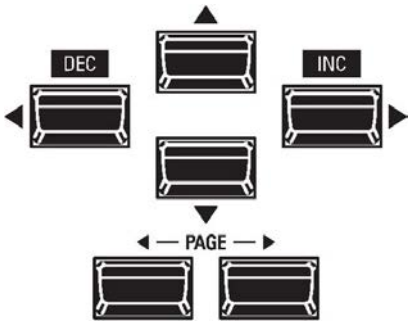
These are the MENU and FUNCTION Modes. Their operation is discussed in greater detail under separate chapters of this Guide.

Press the PLAY button to return to the PLAY Mode.

◆ FUNCTION Modes

The FUNCTION Modes within each Menu contain multiple Pages which allow you to adjust specific Parameters. The following pages will explain how to access the FUNCTION Modes to make the changes you wish.

♦ Using the DIRECTION and PAGE buttons



As stated earlier, the buttons marked with arrows - UP ("▲"), DOWN ("▼"), LEFT ("◀") RIGHT ("▶"), PAGE LEFT ("◀") and PAGE RIGHT ("▶") allow you to find the FUNCTION Mode Pages and Parameters within each Page quickly.

The four top buttons UP ("▲"), DOWN ("▼"), LEFT ("◀") and RIGHT ("▶") are the DIRECTION buttons. They allow you to navigate among the main MENU Pages as well as the Parameters within each FUNCTION Mode Page.

The two PAGE buttons LEFT ("◀") and RIGHT ("▶") allow you to select Pages within each FUNCTION Mode.

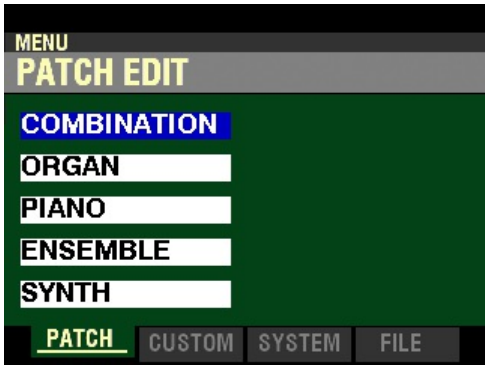
The following example is designed to help you get used to using the DIRECTION and PAGE buttons to find your way to the FUNCTION Mode you want to edit.

Selecting FUNCTION Mode

IMPORTANT NOTE: If you followed the instructions on pages 27 through 28, you will have seen all four of the Menus as well as descriptions of the FUNCTION Modes within each. You will also have noticed that one of the FUNCTION Modes will be "highlighted" - shown with a blue background with white lettering. This is to let you know which FUNCTION Mode will be selected when you press the ENTER button. The following pages explain this more fully.

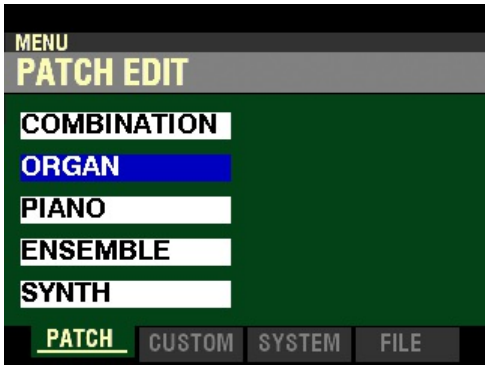
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



This is the PATCH EDIT Menu, which will be the first one displayed. The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



The "ORGAN" box will now be highlighted.

Use the DIRECTION "▲" and "▼" buttons to select FUNCTION Modes within the PATCH EDIT Menu.

3. Now press the PAGE "▶" button once. The Information Center Display should now look like this:



The CUSTOM EDIT Menu will now display. The "TONE WHEEL" box should be highlighted.

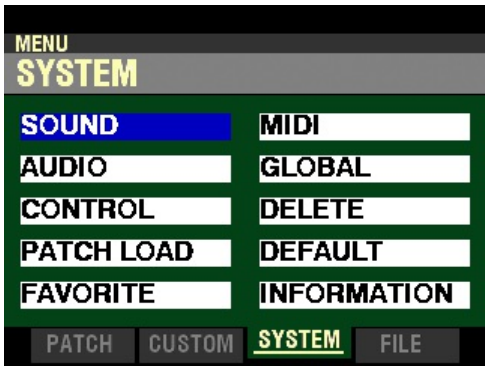
4. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



The "LESLIE" box will now be highlighted.

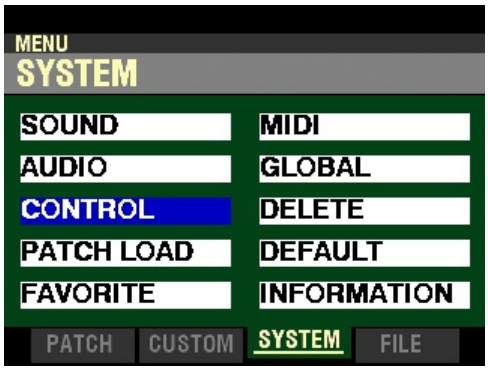
Use the DIRECTION "▲" and "▼" buttons to select FUNCTION Modes within the CUSTOM EDIT Menu.

5. Now press the PAGE "▶" button once. The Information Center Display should now look like this:



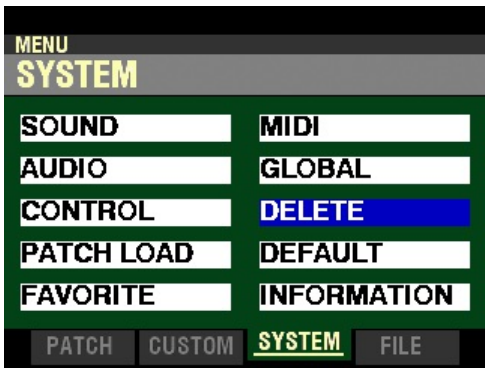
The SYSTEM Menu will now display. The "SOUND" box should be highlighted.

6. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



The "CONTROL" box will now be highlighted.

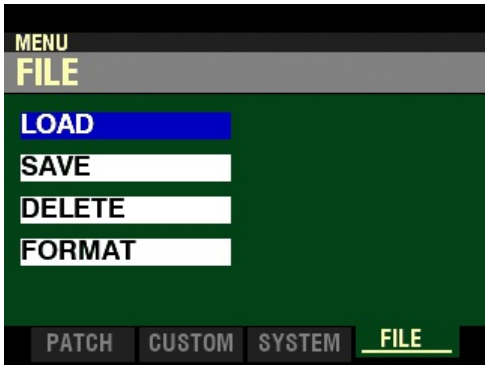
7. Now press the DIRECTION "▶" button once. The Information Center Display should now look like this:



The "DELETE" box will now be highlighted.

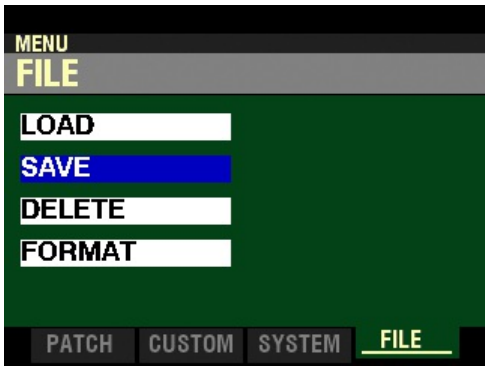
Use the DIRECTION buttons to select FUNCTION Modes within the SYSTEM Menu.

8. Now press the PAGE "▶" button once. The Information Center Display should now look like this:



The FILE Menu will now display. The "LOAD" box should be highlighted.

9. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



The "SAVE" box will now be highlighted.

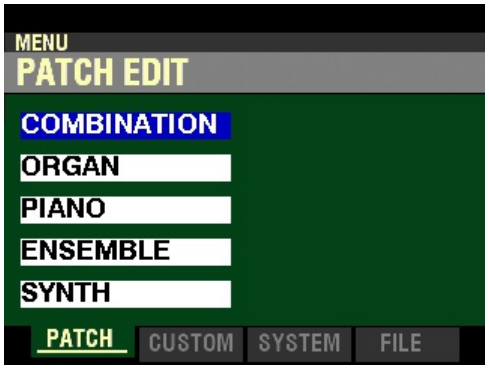
Use the DIRECTION "▲" and "▼" buttons to select FUNCTION Modes within the FILE Menu.

Selecting Pages within each FUNCTION Mode

Once you have selected the MENU you want, use the PAGE "▲" and "▼" buttons to select the specific FUNCTION Mode you want to edit. This is explained starting below.

TRY THIS:

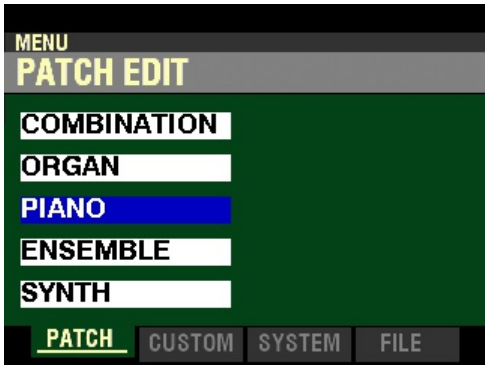
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



This is the PATCH EDIT Menu, which will be the first one displayed. The "COMBINATION" box should be highlighted.

Now, let us assume you want to edit the current PIANO Voice.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



The "PIANO" box will now be highlighted.

3. With "PIANO" now highlighted, press the ENTER button. The Information Center Display should now look like this:



You have now selected the PATCH EDIT -PIANO FUNCTION Mode.

4. From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



You have now selected Page 2 of the PATCH EDIT -PIANO FUNCTION Mode.

5. From the above screen, press the PAGE "◀" button once. The Information Center Display should now look like this:



In the previous examples, you can see how to display the various Pages within a FUNCTION Mode by using the PAGE "◀" and "▶" buttons.

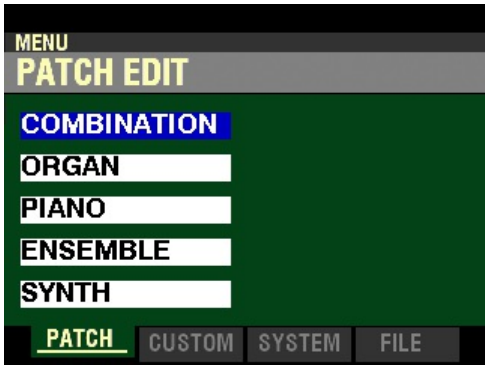
After you have found the Page you want, use the four DIRECTION ("▲" "▼" "◀" "▶") buttons to select the specific Parameter you want to edit.

Press the PLAY button to return to the PLAY Mode.

♦ Using the VALUE knob to adjust Parameters

TRY THIS:

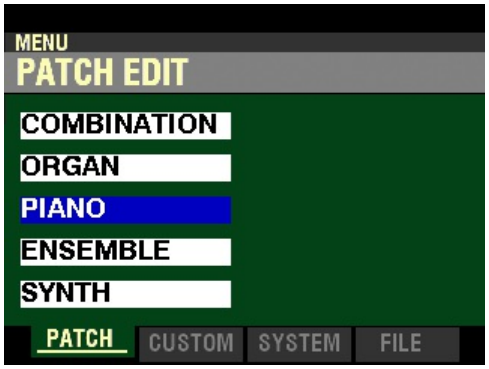
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



This is the PATCH EDIT Menu, which will be the first one displayed. The "COMBINATION" box should be highlighted.

Now, let us assume you want to edit a Parameter in the PIANO Voice Section.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



The "PIANO" box will now be highlighted.

3. With "PIANO" now highlighted, press the ENTER button. The Information Center Display should now look like this:



You have now selected the PATCH EDIT -PIANO FUNCTION Mode. The box to the right of "VOLUME" should be highlighted.

4. Turn the VALUE knob to the left so the Information Center Display looks like this:.



The LOUDNESS-VOLUME of the selected PIANO Patch is now set at 80.

5. From the above screen, turn the VALUE knob to the right so the Information Center Display looks like this:

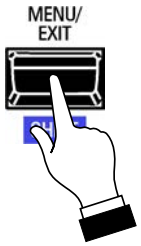


You have now set this Parameter to its upper limit - in this case, 127.

Changing Values in Larger Increments

In the example on the previous pages, you have used the VALUE knob to change the value of a Parameter by single degrees. However, there may be occasions when you want to to make changes more rapidly. To do this:

6. With the screen at the bottom of the previous page displaying, Press and Hold the SHIFT button.



7. While holding the SHIFT button down, turn the VALUE knob.



Notice the value is now changing by larger degrees (in this case, "10") This will enable you to adjust the values of Parameters having a large number of choices more quickly.

◆ "Shortcuts"

Sometimes it may be desirable to access a FUNCTION Mode Page more quickly than can be done by using the buttons on the Information Center Display. Because of this, your Hammond SK PRO has what are called "Shortcuts" to many FUNCTION Mode Pages. You can "shortcut" to a FUNCTION Mode Page associated with a particular function by Pressing and Holding a button controlling that function.

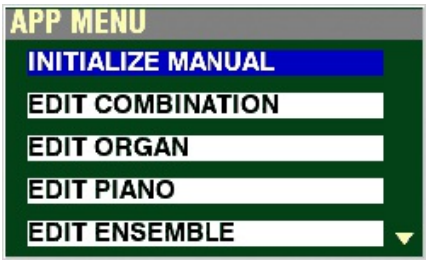
Many, but not all, FUNCTION Mode Pages can be accessed via Shortcuts. The different methods you can use to access a particular FUNCTION Mode Page will be explained in each section before explaining the FUNCTION Mode Page itself.

◆ APP (APPLICATION) MENUS

A new feature being introduced on the SK PRO series of instruments is the APP (APPLICATION) MENUS. These allow you to perform various editing procedures more quickly and easily.

There are different APP MENUS for different portions of the instrument. The following pages will list each one of the APP MENUS and the portions of the instrument to which they apply. More detailed descriptions on each APP MENU will be found in later chapters of this Guide.

♦ COMBINATION, Voice Sections and MANUAL

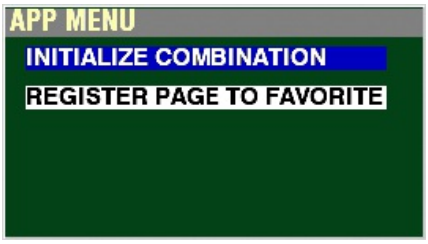


This APP MENU allows you to access the EDIT mode of each of the Voice Sections of the instrument as well as initialize the MANUAL feature.

NOTE: More information about the Voice Sections can be found in later chapters of this Guide.

NOTE: More information about the MANUAL feature and INITIALIZE MANUAL can be found starting on page 174.

♦ COMBINATION APP MENU



This APP MENU allows you to:

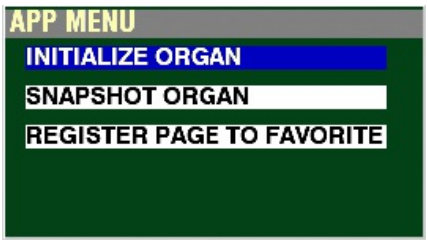
1. Initialize all the Parameters in the currently selected Combination,

2. Register the current FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

NOTE: More information about Combinations can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 55.

NOTE: For information on how to access the **COMBINATION** APP MENU, please see page 135.

♦ ORGAN APP MENU



This APP MENU allows you to:

1. Initialize all the Patch Parameters in the currently selected ORGAN Patch, including Drawbar registrations,

2. Capture the current physical Drawbar registrations and Overdrive settings so you can include them in your User ORGAN Patch,

3. Register the current FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

NOTE: More information about the ORGAN Voice Section can be found in the **ORGAN VOICE SECTION** chapter of this Guide starting on page 177.

NOTE: For information on how to access the **ORGAN** APP MENU, please see page 282.

♦ PIANO APP MENU



This APP MENU allows you to:

1. Initialize all the Patch Parameters in the currently selected PIANO Patch,

2. Initialize all the Parameters within a Component.

3. Copy all the Parameters within a Component to another Component,

4. Register the current FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

NOTE: More information about the PIANO Voice Section can be found in the **PIANO / ENSEMBLE VOICE SECTIONS** chapter of this Guide starting on page 303.

NOTE: For information on how to access the **PIANO** APP MENU, please see page 402.

♦ ENSEMBLE APP MENU



This APP MENU allows you to:

1. Initialize all the Patch Parameters in the currently selected ENSEMBLE Patch,
2. Initialize all the Parameters within a Component.
3. Copy all the Parameters within a Component to another Component,
4. Register the current FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

NOTE: More information about the PIANO Voice Section can be found in the **PIANO / ENSEMBLE VOICE SECTIONS** chapter of this Guide starting on page 303.

NOTE: For information on how to access the **ENSEMBLE** APP MENU, please see page 402.

♦ SYNTH APP MENU



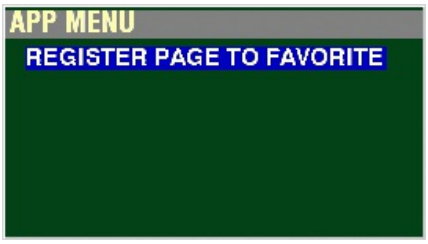
This APP MENU allows you to:

1. Initialize all the Patch Parameters in the currently selected MONO SYNTH Patch,
2. Capture the current SYNTH Parameters so you can include them in your User SYNTH Patch,
3. Register the current FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

NOTE: More information about the MONO SYNTH Voice Section can be found in the **MONO SYNTH SECTION** chapter of this Guide starting on page 409.

NOTE: For information on how to access the **SYNTH470** APP MENU, please see page 135.

♦ CUSTOM EDIT APP MENU

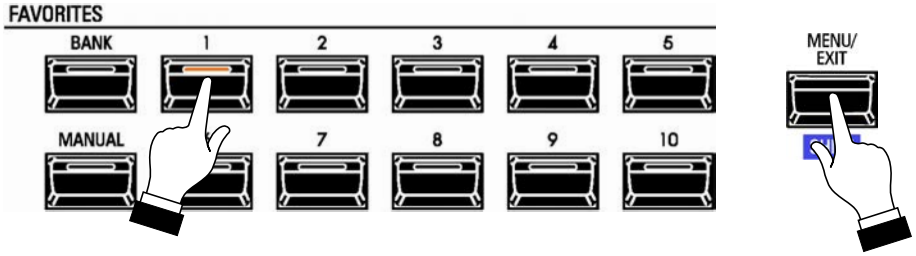


This APP MENU allows you to register the current CUSTOM SET FUNCTION Mode Page to one of the FAVORITE buttons for quick access.

♦ Accessing a Page Registered to a FAVORITE:

As shown on the previous pages, many of the APP MENUS allow you to register a FUNCTION Mode Page or screen to one of the 10 FAVORITE buttons so it can be accessed quickly.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information about how to register Pages to FAVORITES can be found in later chapters of this Guide.

NOTE: More information about the **CUSTOM SETS** FUNCTION Mode can be found in the **CUSTOM SETS** chapter of this Guide starting on page 473

NOTE: For information on how to access one of the **CUSTOM EDIT** APP MENUs, please see the pages listed below:

CUSTOM TONE WHEEL APP MENU - page 497.

CUSTOM LESLIE APP MENU - page 513.

CUSTOM PEDAL REG APP MENU - page 523.

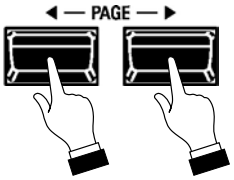
CUSTOM PIPE APP MENU - page 542.

◆ Locking / Unlocking the Display

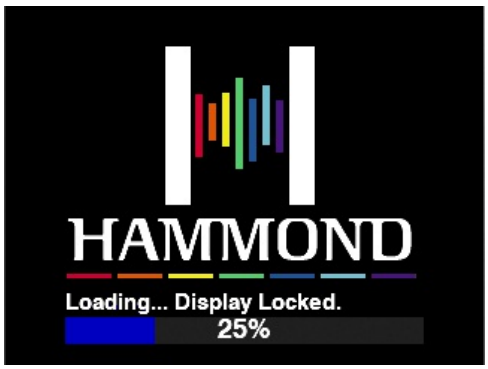
You can Lock the display in order to prevent accidental changes during live performance, or when more than one musician will be using the same instrument.

To Lock the display, do the following:

1. Make sure the power to the SK PRO is "OFF."
2. With the SK PRO power "OFF," Press and Hold the two PAGE buttons.



3. While holding the PAGE buttons, turn the power to the SK PRO "ON." Continue to hold the PAGE buttons until the Information Center Display looks like this:

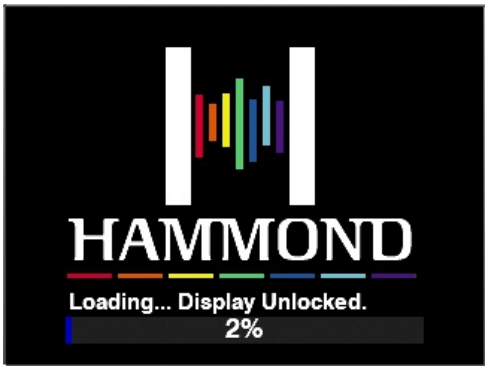


When the above message appears, Release the PAGE buttons and wait for the system to finish Loading.

When the display is Locked:

1. The MENU / EXIT button is disabled.
2. The RECORD button is disabled.
3. The "Shortcut" feature (explained on page 37). is disabled.
4. Combinations and Patches can still be recalled.

To Unlock the display, follow Steps 1 through 3 above. The Information Center Display will look like this:



NOTE: If the display is Locked when the instrument is first turned "ON," you will see "Loading...Display Locked." in the Information Center Display.

NOTE: If the display is Locked, restoring the default settings either by DEFAULT ALL or by applying power while holding the RECORD button does not Unlock the display. Follow the steps described above to Unlock the display.

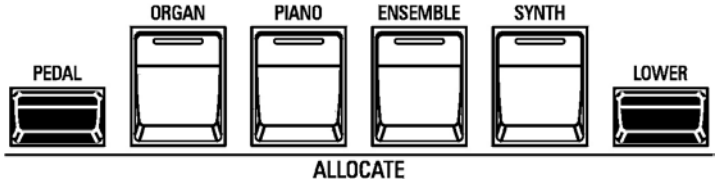
HAMMOND

Sk PRO

ALLOCATING VOICE SECTIONS

ALLOCATING VOICE SECTIONS

The ALLOCATE buttons are located in the center of the Control Panel just below the Information Center Display.



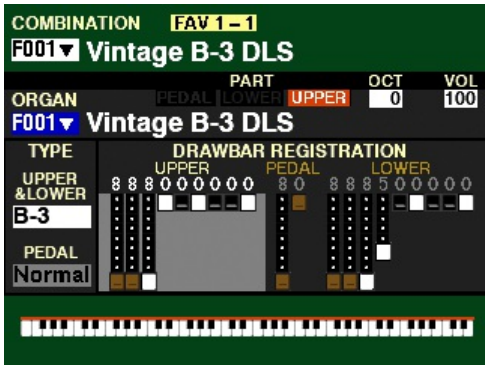
These buttons allow you to assign the Voice Sections..

In normal (single-manual) operation you simply press each button to turn the associated Voice Section "ON" or "OFF." A red LED will light when the Section is "ON."

However, because the SK PRO Keyboard can be SPLIT and the instrument can also interface with a second MIDI Keyboard as well as a MIDI pedal clavier, the ALLOCATE button section has been set up so you can easily assign Voice Sections to the LOWER and PEDAL Parts. This will be explained in more detail starting on the next page.

◆ Using the ALLOCATE buttons

After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look like this:

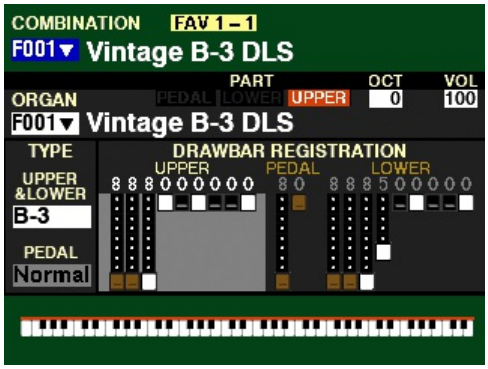


With the above screen displaying, read and try the examples on the following pages to see how to assign the Voice Sections to the Keyboard or Parts you are using.

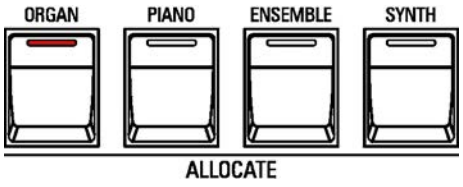
♦ ORGAN Section

TRY THIS:

1. Make sure the SK PRO is in PLAY Mode. If in doubt, press the PLAY button.
Also make sure the second line from the top reads F001 Vintage B-3 DLS. The Information Center Display should look like this:

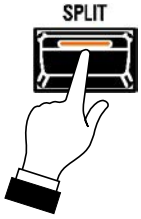


Notice that LOWER and PEDAL are both "greyed out." Notice also the ORGAN button in the ALLOCATE section is lit red.

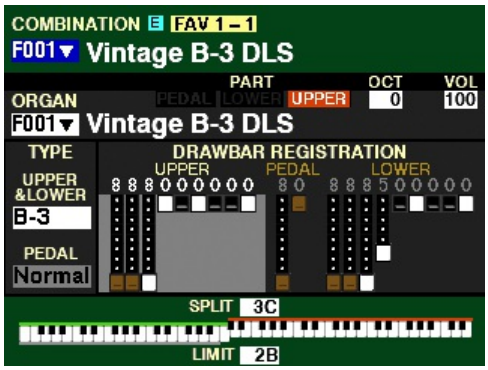


This means that the UPPER ORGAN registration will play throughout the entire keyboard.

2. Now press the SPLIT button "ON." The LED will light.



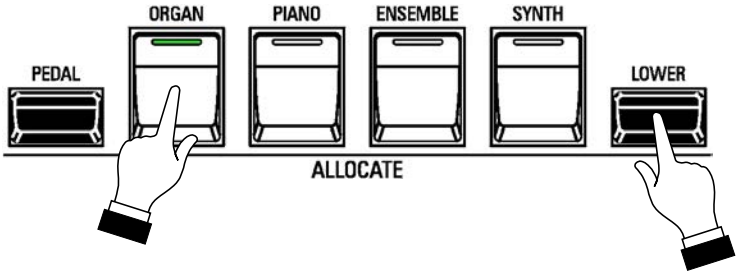
The Information Center Display should now look similar to this:



Notice the bottom portion of the display now shows that the keyboard is SPLIT. The Keyboard is now divided into UPPER and LOWER with UPPER to the right of the SPLIT Point and LOWER to the left of the SPLIT Point. The SPLIT Point will also be shown - in this case, 2B.

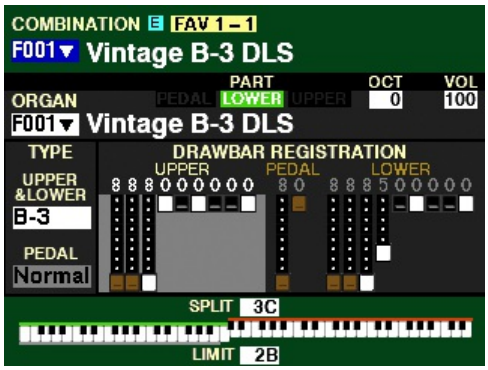
Notice also a small letter E at the top is now displaying, indicating the Combination has been changed from its factory setting.

3. Now Press and Hold the LOWER button and press the ORGAN button.



Notice the LED of the ORGAN button is green.

The Information Center Display should now look similar to this:



Notice the box labeled "LOWER" underneath "PART." This indicates the ORGAN Section will play from the LOWER (left of SPLIT) portion of the Keyboard.

SPECIAL NOTE: Notice the LOWER and PEDAL Parts are still "greyed out" even though SPLIT is "ON." Doing the above procedure will cause the UPPER ORGAN registration to play from the LOWER (left of SPLIT) portion of the Keyboard. In order to hear the LOWER and PEDAL Parts, the 3PART ORGAN button must be "ON." This is explained more fully in the **3PART ORGAN** chapter of this Guide starting on page 286.

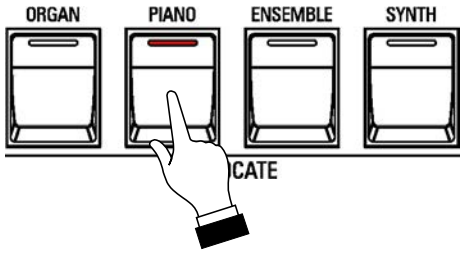
NOTE: If you wish you can allocate the UPPER ORGAN registration to the PEDALs by Pressing and Holding the PEDAL button and pressing the ORGAN button.

♦ PIANO / ENSEMBLE / SYNTH Sections - UPPER (single Keyboard)

TRY THIS:

1. Make sure the SK PRO is in PLAY Mode. If in doubt, press the PLAY button. Also make sure the second line from the top reads F001 Vintage B-3 DLS.

2. Press the PIANO button. A red LED will light. If any other ALLOCATE buttons are "ON" they should turn "OFF," leaving only the PIANO button "ON."

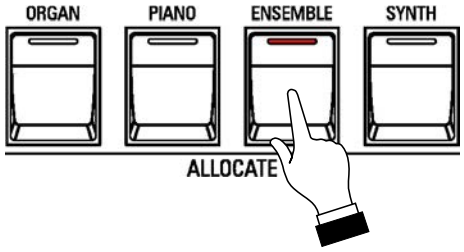


The Information Center Display should now look similar to this:



3. Play some notes. You will now hear the sound of an acoustic grand piano.

4. Now press the ENSEMBLE button. The PIANO button should turn "OFF" and the ENSEMBLE button should light.



The Information Center Display should now look similar to this:



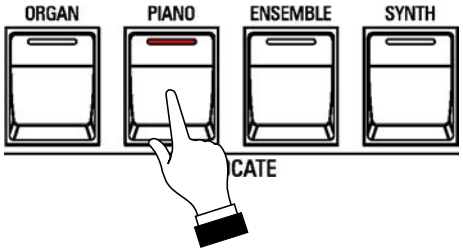
3. Play some notes on the keyboard. You will now hear the sound of a string section.

♦ PIANO / ENSEMBLE / SYNTH Sections - LOWER (SPLIT)

TRY THIS:

1. Make sure the SK PRO is in PLAY Mode. If in doubt, press the PLAY button. Also make sure the second line from the top reads F001 Vintage B-3 DLS.

2. Press the PIANO button. A red LED will light. If any other ALLOCATE buttons are "ON" they should turn "OFF," leaving only the PIANO button "ON."



The Information Center Display should now look similar to this:
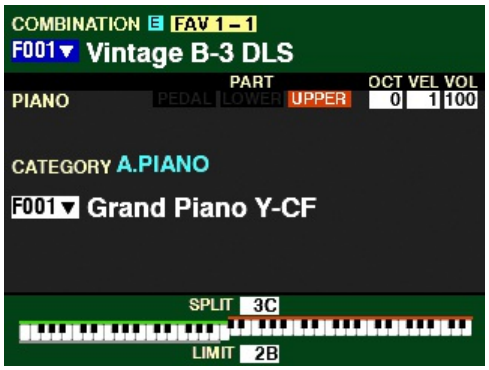


3. Play some notes. You will now hear the sound of an acoustic grand piano.

4. Now press the SPLIT button "ON." The LED will light.

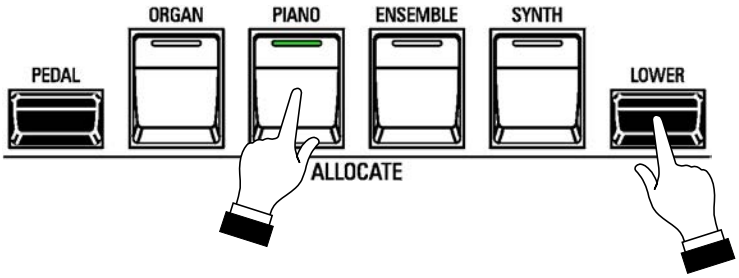


The Information Center Display should now look similar to this:



Notice the bottom line of the display now shows that the keyboard is SPLIT. The Keyboard is now divided into UPPER and LOWER with UPPER to the right of the SPLIT Point and LOWER to the left of the SPLIT Point. The SPLIT Point will also be shown - in this case, 2B.

5. Press and Hold the LOWER button and press the PIANO button.



Notice the LED of the PIANO button is green. This indicates the PIANO Section will play from the LOWER (left of SPLIT) portion of the keyboard.

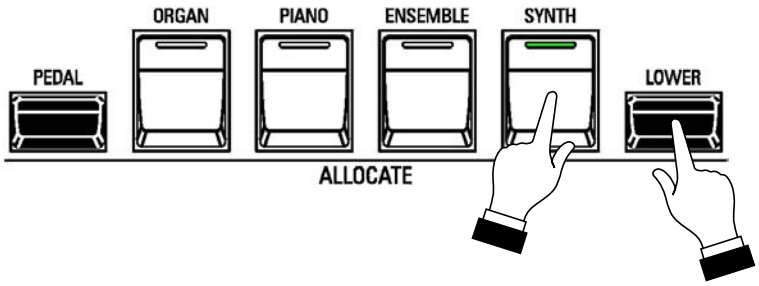
This is how to assign Voice Sections to different portions of the keyboard. If you want to play the Voice Sections from the entire Keyboard, simply press the ALLOCATE button for the Section you want. The LED of the button you pressed will light red and the selected Voice Section will play.

However, if you want to assign two or more Voice Sections to different parts of the keyboard, Press and Hold the LOWER button while simultaneously pressing the ALLOCATE button for the desired Voice Section. The LED of the Voice Section assigned to the LOWER portion of the keyboard will light green. In this way you can quickly identify which Sections will play from which portions of the keyboard.

NOTE: If the LED of an ALLOCATE button is **green**, the SPLIT button must be "ON" (LED lit) in order to hear that Voice Section. Also, that Voice Section will play only from the LOWER portion of the keyboard.

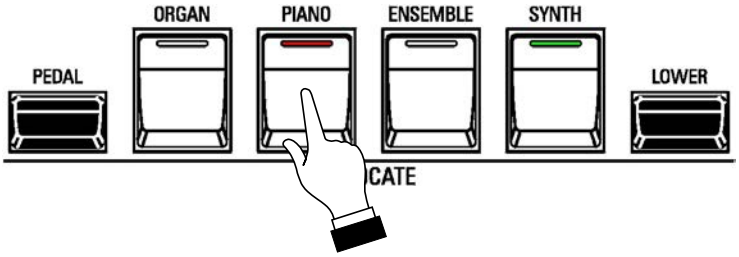
TRY THIS:

1. Press and Hold the LOWER button and press the SYNTH button.



Notice the LED of the SYNTH button is now green. This indicates the MONO SYNTH will play from the LOWER (left of SPLIT) portion of the keyboard. Notice also the LED of the PIANO button is now "OFF."

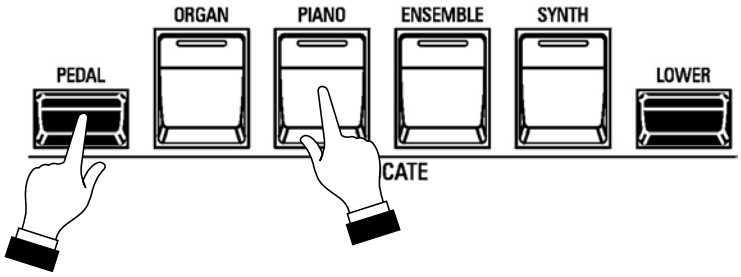
2. Press the PIANO button.



Notice the LED of the PIANO button is now red. This indicates the PIANO will now play on the UPPER portion of the keyboard. The ENSEMBLE button is still lit green, indicating the ENSEMBLE Voice will play from the LOWER portion of the keyboard.

♦ PIANO / ENSEMBLE / SYNTH Sections - PEDAL

You can also allocate Voice Sections to the PEDAL by Pressing and Holding the PEDAL button and pressing the ALLOCATE button for the desired Voice Section. The selected Voice Section will play from the Pedals.



NOTE: In order to hear a Voice Section allocated to the Pedals, the PEDAL TO LOWER button must be "ON," or a MIDI pedal clavier must be connected to the SK PRO.

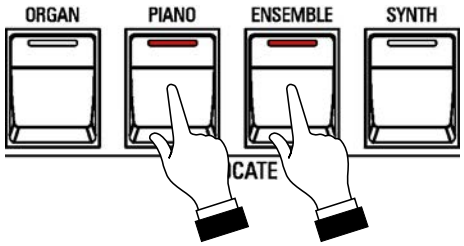
♦ Using two or more Voice Sections simultaneously

TRY THIS:

1. For this example, turn all four white ALLOCATE buttons "OFF."

NOTE: If one or more of the ALLOCATE buttons is registered for LOWER (green LED), press the button **two** times to turn it "OFF."

2. Press the PIANO and ENSEMBLE buttons together. The LEDs will light.



3. Play some notes on the keyboard. You will now hear the ENSEMBLE Voice together with the PIANO Voice.

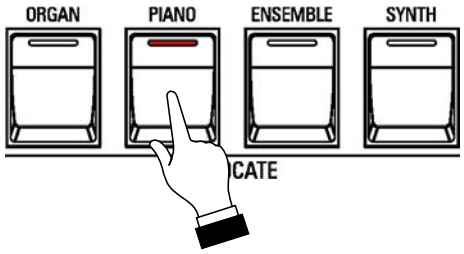
♦ Adding Voice Sections together

In normal operation, if you press a white ALLOCATE button while another one is already "ON," the first button will turn "OFF," leaving only the Voice Section you just selected.

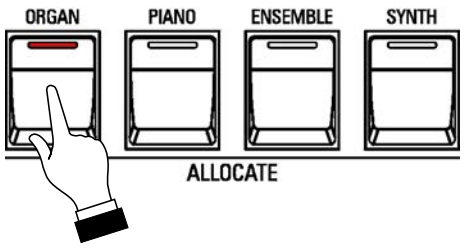
TRY THIS:

1. For this example, turn all four white ALLOCATE buttons "OFF."

2. Press the PIANO button. The LED will light.



3. Now press the ORGAN button.



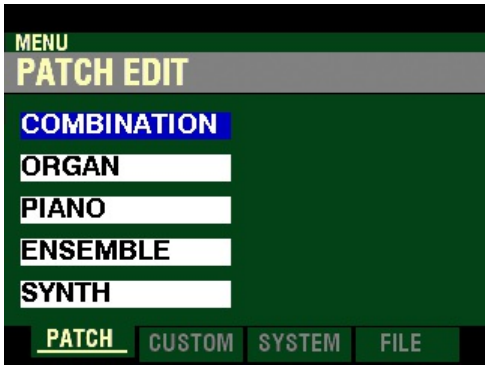
Notice the LED of the PIANO button has turned "OFF." This feature allows you to make quick registration changes in the midst of playing with a single button press.

However, there may be times when you will want to use the Voice Sections together or add Voice Sections together without taking your fingers from the keys. You can do this by setting the ALLOCATE buttons to be additive instead of cross-canceling, as they are in this example.

To do this, follow the instructions on the next page.

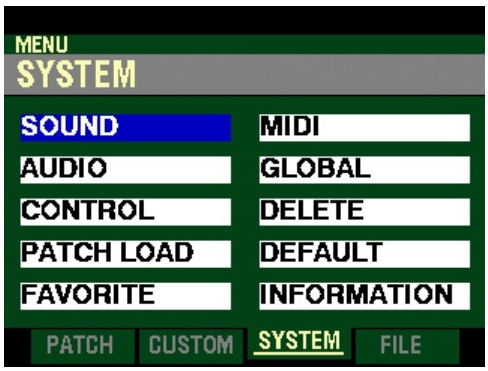
TRY THIS: - To make the ALLOCATE buttons Additive:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

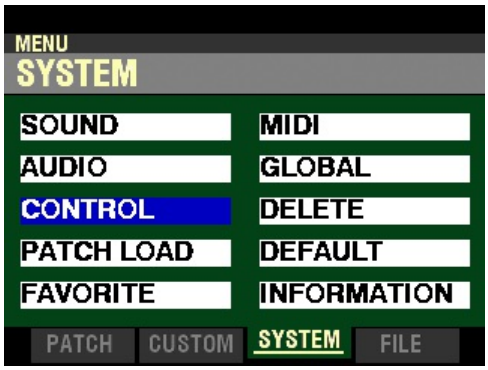


This is the PATCH EDIT Menu, which will be the first one displayed. The "COMBINATION" box should be highlighted.

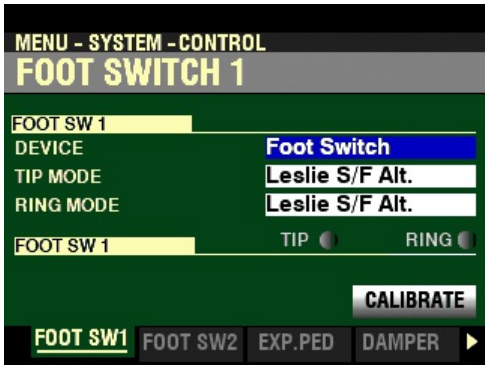
2. Press the PAGE "▶" button two times. The Information Center Display should now look like this:



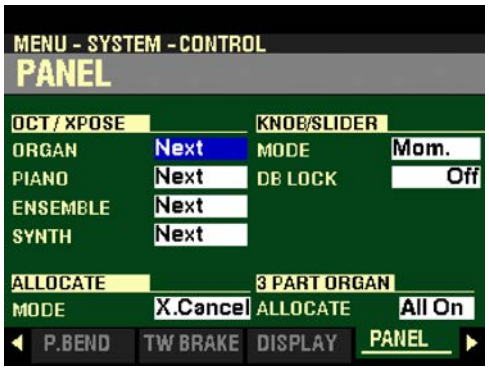
3. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



4. Press the ENTER button. This will bring up the CONTROL FUNCTION Mode Page and the Information Center Display should now look like this:

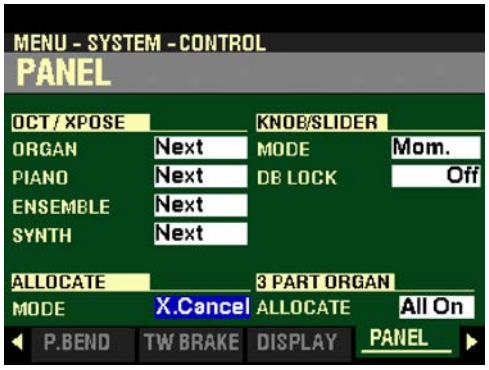


5. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



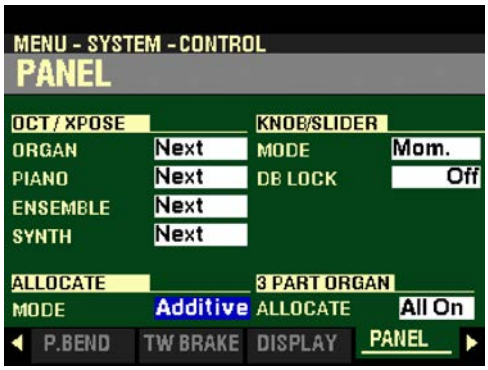
This is the PANEL FUNCTION Mode Page, which allows you to determine how the various controls on the Control Panel will function.

6. Press the DIRECTION "▼" button four times. The ALLOCATE Parameter should be highlighted:



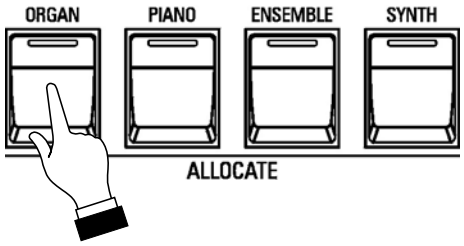
The highlighted box should show X.Cancel. This means the ALLOCATE buttons are 'cross-canceling," meaning that if one button is "ON" and another one is Pressed, the first button will turn "OFF."

7. Turn the VALUE knob to the left.

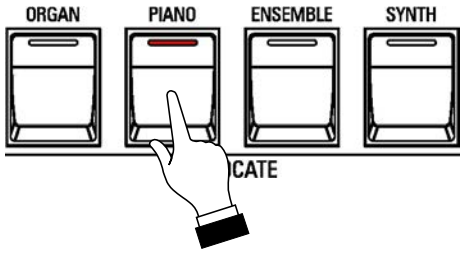


The highlighted box should now show Additive. This means the ALLOCATE buttons will add to each other instead of canceling each other.

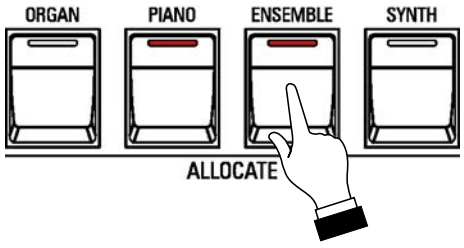
8. If the ORGAN button is "ON" (LED lit), press it to turn it "OFF" (LED not lit).



9. Press the PIANO button to turn it "ON."



10. Press the ENSEMBLE button.



Notice the PIANO button is still "ON."

11. Play some notes on the keyboard. You will now hear the ENSEMBLE Voice together with the PIANO Voice.

HAMMOND

Sk PRO

COMBINATIONS / PATCHES / BUNDLES / FAVORITES

COMBINATIONS / PATCHES / BUNDLES / FAVORITES

Your SK PRO contains a large number of different types of sounds and a large number of ways to customize and tailor those sounds. In addition, many of the different types of sounds can be blended or mixed with each other to produce many unique tone colors. In the organ world, this mixing, blending and tailoring of sounds is called Registration.

◆ COMBINATIONS

On the SK PRO, there are four sound-producing divisions or Sections:

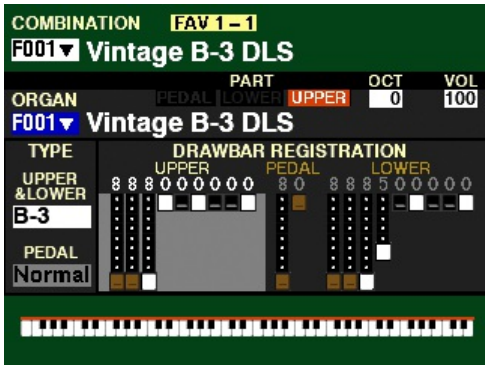
1. ORGAN
2. PIANO
3. ENSEMBLE
4. MONO SYNTH

Each Voice Section has sounds and Parameters which together constitute a Patch. Patches from the different Voice Sections are combined to produce a Combination.

♦ Selecting a Combination

TRY THIS:

1. Turn the power to the SK PRO "ON." After the operating system finishes loading (approximately 55 seconds), the Information Center Display will look like this:



This is PLAY Mode, which is the normal performance mode. The following paragraphs explain each line of the display.

The top line shows which Combination is currently active. It will also show the currently active FAVORITE Bank and FAVORITE Number.

NOTE: FAVORITES are covered later in this chapter starting on page 163

The line immediately below the top line shows the Combination Number and Name.

The line underneath the Combination Number and Name shows which Parts are active, as well as Octave, Velocity and Volume settings for the currently selected Part(s).

NOTE: The ORGAN Voice Section does **not** receive Velocity; therefore, the **Velocity** box on the line just below the top line will not be shown.

The middle portion of the display shows which Patches are enabled within the current Combination. A Combination will have Voices and Settings for each of the Voice Sections, but not all Combinations will have all of the Voice Sections sounding. The ALLOCATE buttons will be "ON" or "OFF" depending on which Patches are activated for the currently selected Combination.

NOTE: Selecting and de-selecting Patches will be covered later in this chapter.

There are two categories of Combinations on the SK PRO - Factory and User. The Factory Combinations are permanently factory-programmed and cannot be overwritten. User Combinations are Combinations which you create and Record, either by editing a Factory Combination and Recording the result as a User Combination or by using the MANUAL button to start from scratch and create and Record an entirely new Combination. In the Information Center Display, Factory Combinations are designated by the letter F and User Combinations are designated by the letter U. There are 100 Factory Combinations and, you can create and Record up to 100 User Combinations, making a total of 200 possible Combinations.

NOTE: Although you can create entirely new Combinations and store them, there may be occasions when a Combination already contains most of what you need, and only one or two changes need to be made. You can make the changes, and Record the Combination with your modifications as a User Combination.
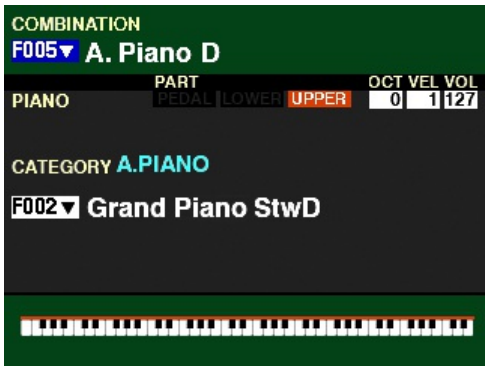
SPECIAL NOTE: User Combinations are not shown in the Information Center Display unless you create and Record them. Creating and Recording Combinations and Patches will be covered later in this chapter.

The three-digit number following the letter U or F refers to the currently selected Combination Number. The Combination Name appears to the right of the Combination Number.

For the Combination currently shown (F001 Vintage B-3 DLS), only the ORGAN Voice Section is active. Notice that only the ORGAN ALLOCATE button is "ON" (LED lit).

2. From the screen shown on the previous page, turn the VALUE knob to the right. You will see the Combination Numbers and Names change. You will also see the ALLOCATE buttons turn "ON" and "OFF" in accordance with whatever Patches are called for in each Combination.

   For this example, turn the VALUE knob until F005 shows on the top line of the Information Center Display:



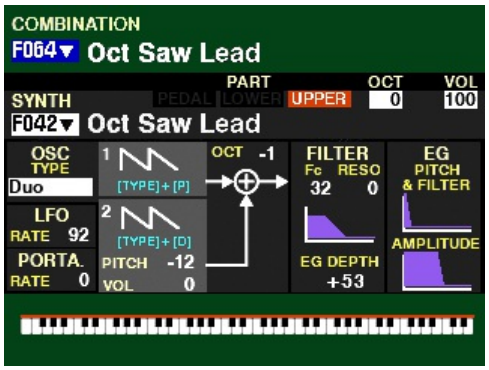
   Notice the ORGAN ALLOCATE button has turned "OFF" and the PIANO button has turned "ON." Only the PIANO Patch will now sound.

3. From the above screen, turn the VALUE knob until F041 shows on the top line of the Information Center Display:



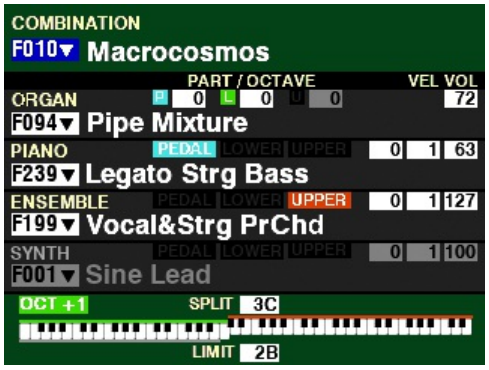
   Notice the PIANO ALLOCATE button has turned "OFF and the ENSEMBLE button has turned "ON." Only the ENSEMBLE Patch will now sound.

4. From the screen shown at the bottom of the previous page, turn the VALUE knob until F064 shows on the top line of the Information Center Display:



Notice the ENSEMBLE ALLOCATE button has turned "OFF" and the SYNTH button has turned "ON." Only the MONO SYNTH Patch will now sound.

5. From the above screen, turn the VALUE knob to the left until F010 shows on the top line of the Information Center Display:



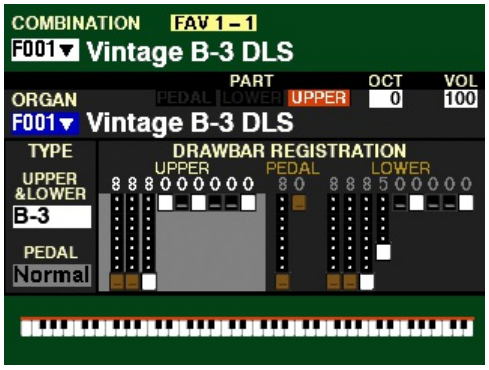
Notice the SYNTH line is "greyed out." Notice also that the SYNTH ALLOCATE button is not "ON." This indicates that the MONO SYNTH Voice Section will not play if this Combination is selected. However, you can press the SYNTH ALLOCATE button to turn it "ON," and the SYNTH line will change from grey to white. You can now play the MONO SYNTH Section.

♦ Selecting a Patch within a Combination

Although as was explained previously, not all Voice Groups will be active when a Combination has been selected, each Combination will contain information for each of the Voice Sections. This means that even though a Combination may have only one Voice Section active, you can turn other Voice Sections "ON" using the ALLOCATE buttons and you will hear a Patch from each Voice Section appropriate for the selected Patch. You will also see a small letter E to the right of "COMBINATION." This is an abbreviation for "EDIT," and indicates that you have edited or changed the Combination from its factory setting. Changes to Factory Combinations will not be remembered unless they are Recorded as User Combinations. This will be covered later in this chapter.

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look like this:



As explained previously, this is PLAY Mode. We will use F001 as the starting point since it is the Combination shown when the SK PRO is first turned "ON."

2. From the above screen, press the PIANO ALLOCATE button. The Information Center Display will now look like this:



Notice the ORGAN ALLOCATE button is now "OFF." Only the PIANO Patch will now sound.

Notice also the small letter "E" at the top. This indicates the Combination has been changed from its default setting.

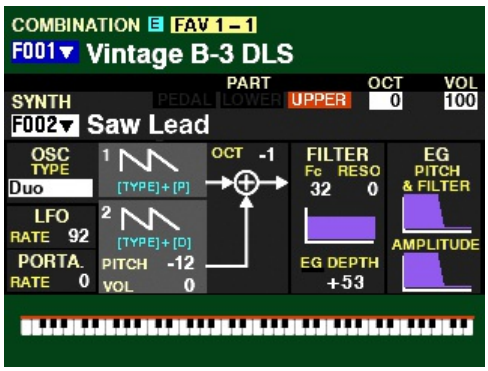
3. From the screen shown at the bottom of the previous page, press the ENSEMBLE ALLOCATE button. The Information Center Display will now look like this:



Notice the PIANO ALLOCATE button is now "OFF." The ENSEMBLE Patch will now sound.

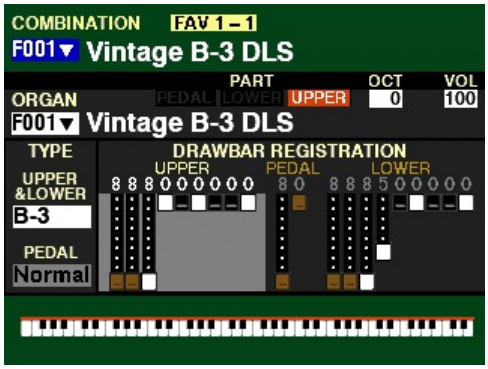
Notice also the small letter E at the top is still displaying, indicating the Combination has been changed from its factory setting.

4. From the above screen, press the SYNTH ALLOCATE button. The Information Center Display will now look like this:



Notice the ENSEMBLE ALLOCATE button is now "OFF." The MONO SYNTH Patch will now sound.

5. Now press the ORGAN ALLOCATE button "ON." The Information Center Display will now look like this:



You have now returned to the settings recorded in the Combination. The small E on the top line of the screen is now "OFF."

NOTE: The ALLOCATE buttons are normally "cross-canceling," meaning if one is turned "ON" the others will turn "OFF." However, the ALLOCATE buttons can be made "additive" - if one is turned "ON" any others also "ON" will remain "ON." For more information, consult page 51 of this chapter or page 684 of the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide.

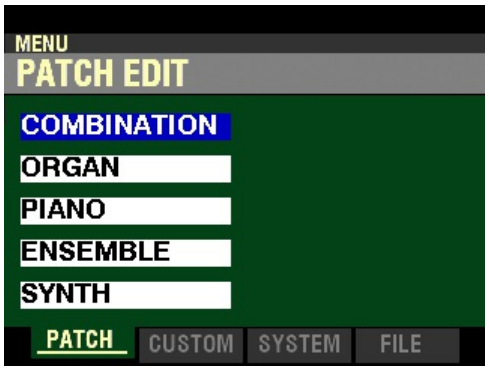
♦ COMBINATION FUNCTION Mode

In addition to the Voice Sections, there are additional Parameters which are included in a Combination regardless of how many Voice Sections may also be included. The COMBINATION FUNCTION Mode allows you to modify the characteristics which are included in Combinations and are not specific to a particular Voice Section. All these Parameters can be Recorded to a Combination.

Accessing the COMBINATION FUNCTION Mode using the MENU / EXIT button:

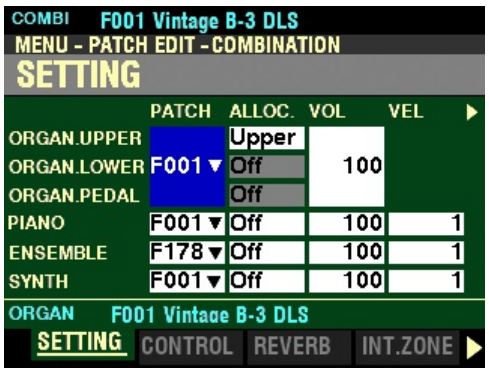
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

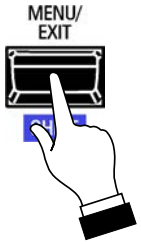
2. Press the ENTER button. The Information Center Display should now look like this:



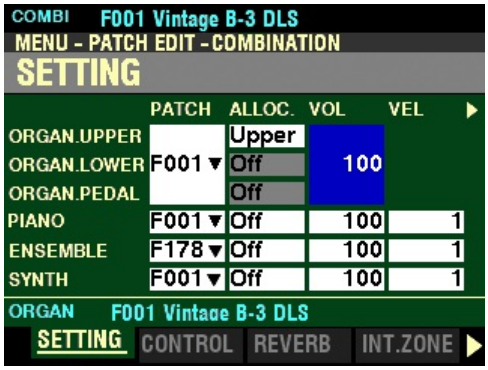
You are now in Page 1 of the COMBINATION FUNCTION Mode.

Accessing the COMBINATION FUNCTION Mode using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

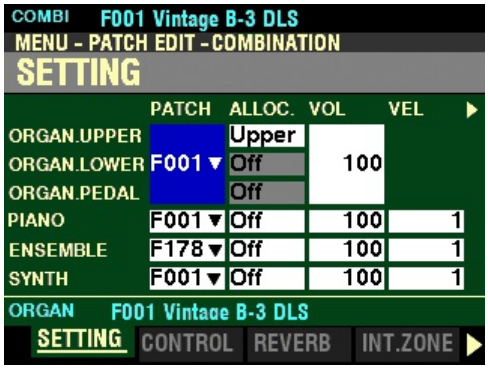


2. While holding the SHIFT button, turn the VOLUME knob for any of the four Voice Sections. The Information Center Display will look similar to this:



3. Release the SHIFT button.

4. Notice that the box underneath "VOL" is highlighted. For the purpose of the following explanations, use the DIRECTION buttons to highlight the box underneath "PATCH."



You are now in Page 1 of the COMBINATION FUNCTION Mode.

Notice the different Voice Sections for which you can adjust Parameters individually.

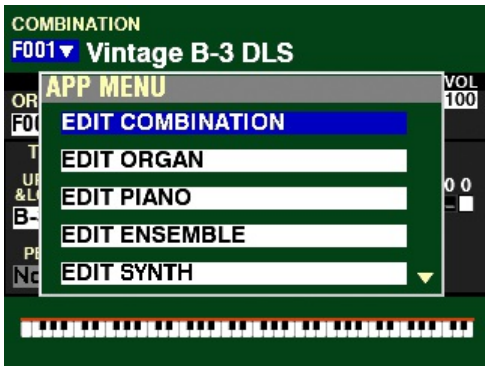
1. ORGAN (UPPER, LOWER and PEDAL Parts)
2. PIANO
3. ENSEMBLE
2. SYNTH

These Parameters are saved as part of a Combination, and are independent of the Parameters which are specific to each Voice Section, although a few are duplicated in the FUNCTION Mode Pages for each Voice Section.

You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the Combinations. These changes are explained starting on the next page.

Accessing the COMBINATION FUNCTION Mode using the APP MENU:

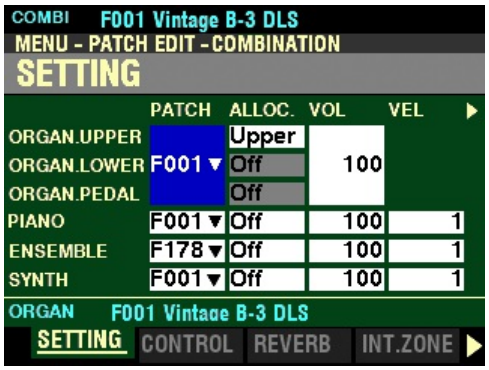
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



The "EDIT COMBINATION" box should be highlighted.

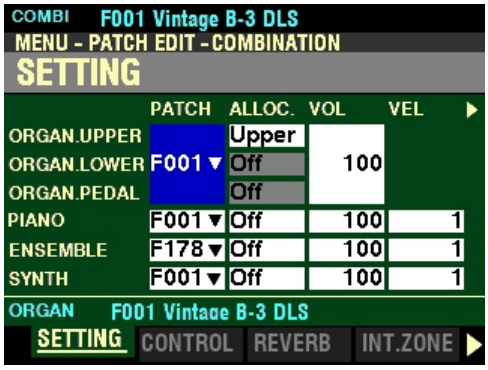
NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:



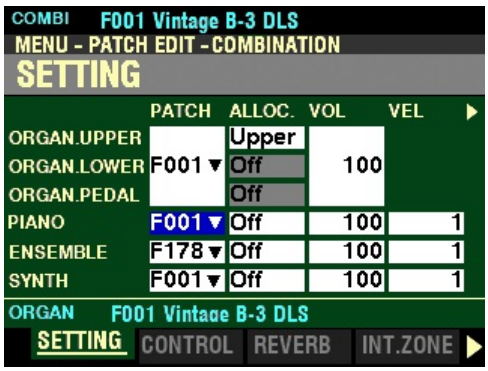
You are now in Page 1 of the COMBINATION FUNCTION Mode.

If you followed the instructions on the previous pages, you should see the screen shown below.



The large box to the right of the ORGAN Parts should be highlighted.

Because some Combination Parameters do not affect the ORGAN Voice Section, press the DIRECTION "▼" button once to highlight the Parameters for the PIANO Voice Section. This will permit an easier explanation of each of the Parameters.



SETTING FUNCTION Mode Page

This Page allows you to adjust the basic Parameters for each Voice Section. All of these Parameters can be Recorded to a Combination.

PATCH

This Parameter allows you to select Patch Numbers for the currently selected Combination.

The data chart below shows the options you may select.

SETTING - Patch Numbers	
Number	**Description**
B001 ~ B100	Bundles 1 through 100.
F001 ~ F100	Factory ORGAN Patches 1 through 100
U001 ~ U100	User ORGAN Patches 1 through 100
F001 ~ F300	Factory PIANO / ENSEMBLE Patches 1 through 300
U001 ~ U400	User PIANO / ENSEMBLE Patches 1 through 400
F001 ~ F100	Factory MONO SYNTH Patches 1 through 100
U001 ~ U100	User MONO SYNTH Patches 1 through 100

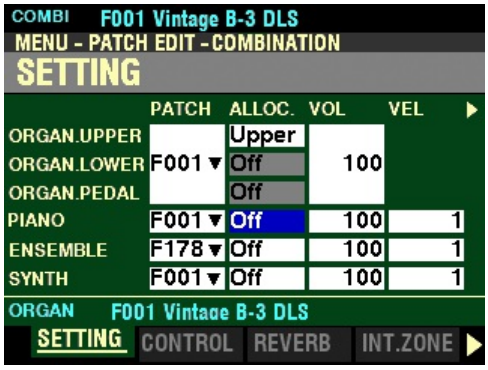
Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to select the Patch or Bundle you want.

NOTE: **Bundles**, **User Combinations** and **User Patches** will not be displayed unless you have Recorded them. Creating and Recording **Bundles**, **User Combinations** and **User Patches** will be covered later in this chapter.

From the screen shown in the middle of the previous page, press the DIRECTION "▶" button once.



The box underneath "ALLOC." should be highlighted.

ALLOC. (Allocate)

This Parameter allows you to assign the Voice Sections to each Part. The data chart below shows the options you may select.

NOTE: This Parameter is linked to the ALLOCATE buttons on the Control Panel.

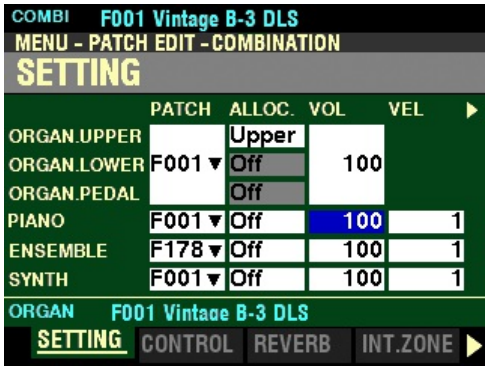
PATCH ALLOCATE Options	
Setting	**Description**
Off	The selected Voice Section will not sound. The ALLOCATE button associated with the selected Voice Section will not light.
Upper	The selected Voice Section will sound from the UPPER Part. The ALLOCATE button associated with the selected Voice Section will light red.
Lower	The selected Voice Section will sound from the LOWER Part. The ALLOCATE button associated with the selected Voice Section will light green. (The SPLIT button must be "ON" in order to hear the sound.)
Pedal	The selected Voice Section will sound from the PEDAL Part. (The PEDAL TO LOWER button must be "ON," or a MIDI pedal clavier must be connected to the SK PRO in order to hear the sound.)

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to select the allocation for the selected Voice Section.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

VOL - Volume

This Parameter allows you to adjust the Volume of the selected Section. You may select from 0 (no volume) to 127 (maximum volume).

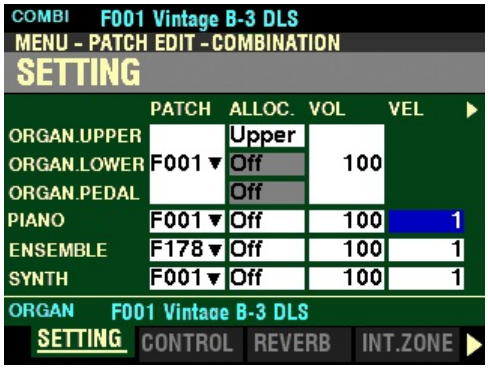
Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn either the VALUE knob or the VOLUME knob for the selected Voice Section to the right to increase the Volume.

Turn either the VALUE knob or the VOLUME knob for the selected Voice Section to the left to decrease the Volume.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

VEL - Velocity Curve

This Parameter allows you to select how the selected Voice Section will respond to key velocity. The data chart below shows the options you may select.

VELOCITY CURVE Options	
Setting	**Description**
Off	Standard "organ" touch - the notes play at a fixed velocity ("100") regardless of a light or heavy keystroke.
1	This is the most exaggerated velocity curve, most like an acoustic piano
2	Less exaggerated than "1."
3	Less exaggerated than "2."
4	This is the smallest change of response to key velocity.

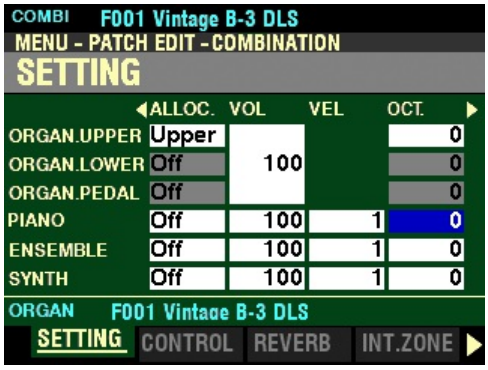
Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to select the Velocity Curve you prefer.

NOTE: This Parameter is **not** available for the ORGAN Voice Section, because the note(s) sound at the same volume on ORGAN tones regardless of key velocity.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - Octave

This Parameter allows you to select the Octave or pitch at which the selected Voice Section will sound. The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

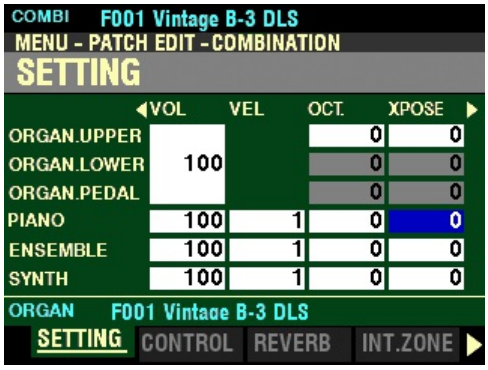
When you have made your selection:

Turn the VALUE knob to the right to raise the Octave for the selected Voice Section.

Turn the VALUE knob to the left to lower the Octave for the selected Voice Section.

NOTE: The actual sounding octave will be the sum of this Parameter plus the **Octave** setting controlled by the OCTAVE buttons on the Control Panel. For more information, please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 652.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XPOSE" should be highlighted.

XPOSE - Transpose

This Parameter allows you to shift the musical key of the selected Section. You may select from -6 (down six semitones) to +6 (up six semitones). At 0 there is no transposition.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

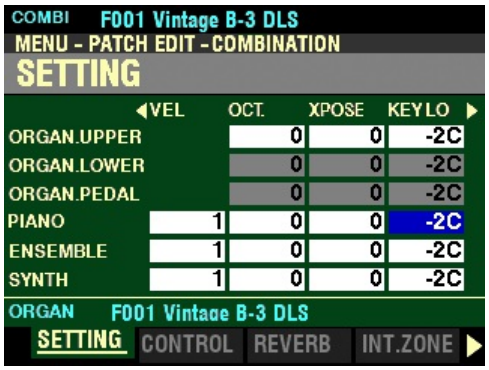
Turn the VALUE knob to the right to transpose the selected Voice Section higher.

Turn the VALUE knob to the left to transpose the selected Voice Section lower.

NOTE: This Parameter works independently of the TRANSPOSE feature controlled by the TRANSPOSE / UP / DOWN buttons on the Control Panel.

NOTE: This Parameter can be Recorded as part of a Combination. The TRANSPOSE function controlled by the buttons on the Control Panel transposes the entire instrument and its setting **cannot** be Recorded as part of a **Setup**. For more information about Setups, please consult the **USING MEMORY** chapter of this Guide starting on page.816.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "KEY LO" should be highlighted.

KEY LO - Key Range Low

This Parameter allows you to set the Low Key Range for the selected Section. You may select from -2C to 8G.

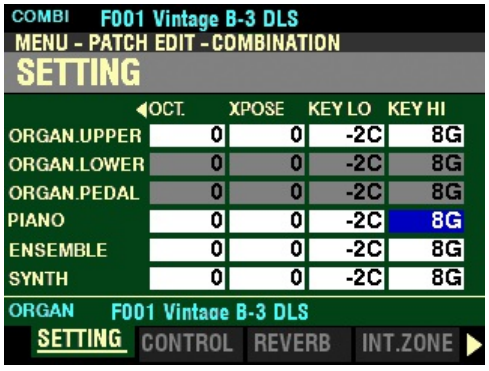
Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to the right to set the Low Key Range higher for the selected Voice Section..

Turn the VALUE knob to the left to set the Low Key Range lower for the selected Voice Section.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "KEY HI" should be highlighted.

KEY HI - Key Range High

This Parameter allows you to set the High Key Range for the selected Section. You may select from -2C to 8G.

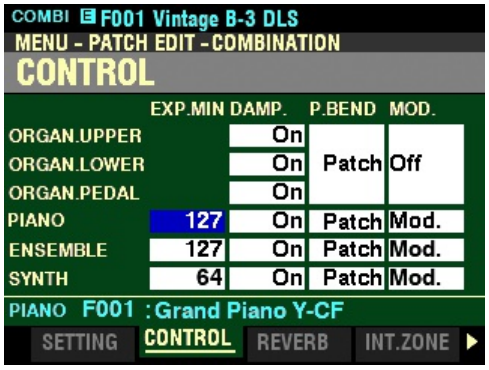
Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to the right to set the High Key Range higher for the selected Voice Section.

Turn the VALUE knob to the left to set the High Key Range lower for the selected Voice Section.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box underneath "EXP.MIN" should be highlighted.

CONTROL FUNCTION Mode Page

This Page allows you to adjust the Controls for each Voice Section. All of these Parameters can be Recorded to a Combination.

EXP.MIN - Expression Minimum Level

This Parameter allows you to adjust the Minimum volume when a connected Expression Pedal is "closed" or set at its minimum position. You may select from 0 to 127. At 0 no sound will be heard. At 127 the selected Voice Section will sound at its maximum level regardless of the setting of the connected Expression Pedal.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

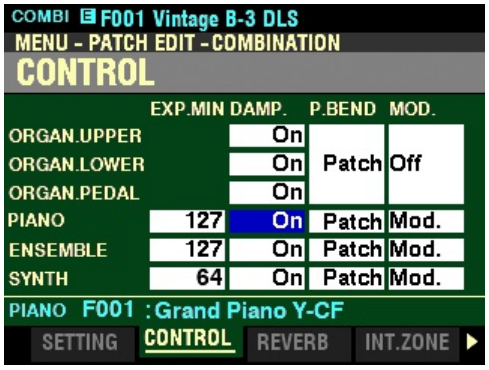
When you have made your selection:

Turn the VALUE knob to the right to increase the Minimum Level of the selected Voice Section.

Turn the VALUE knob to the left to decrease the Minimum Level of the selected Voice Section.

NOTE: This Parameter is **not** available for the ORGAN Voice Section.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "DAMP." should be highlighted.

DAMP. - Damper

This Parameter allows you to adjust whether or not a Voice Section will receive Damper information. The data chart below shows the options you may select.

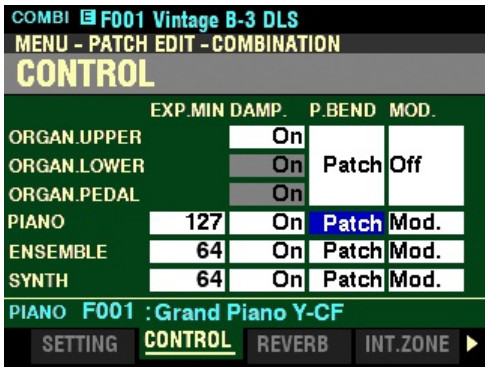
DAMPER Options	
Setting	**Description**
On	A connected Damper Pedal will sustain or "damp" the selected Section
Off	.A connected Damper Pedal will not affect the selected Section.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to turn Damper On or Off for the selected Voice Section.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "P.BEND" should be highlighted.

P.BEND - Pitch Bend Wheel

This Parameter allows you to adjust the range of the Pitch Bend Wheel for the selected Voice Section. The data chart below shows the options you may select.

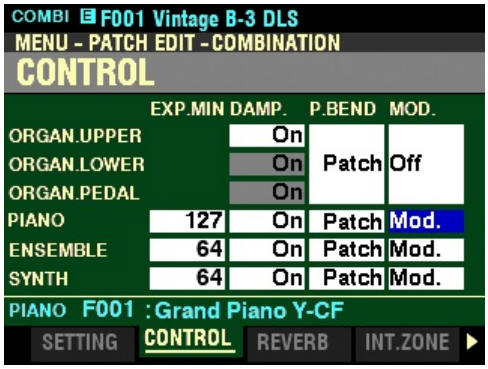
PITCH BEND WHEEL Options	
Setting	**Description**
Patch	A separate Pitch Bend Range can be set for each Patch.
0 ~ 12	The Pitch Bend Range settings for the individual Voice Sections are overridden and one Pitch Bend Range setting is applied to all Voice Sections universally.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to select the Pitch Bend setting you prefer.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "MOD" should be highlighted.

MOD - Modulation Wheel

This Parameter allows you to select the function for the Modulation Wheel for the selected Voice Section. The data chart below shows the options you may select.

MODULATION WHEEL Options	
Setting	**Description**
Off	The Modulation Wheel has no function.
Mod.	Adds Modulation to the selected Section.
Les	Controls the speed of the Leslie. (NOTE: This setting affects the ORGAN Voice Section only.)
OD	Controls the amount of Overdrive.
MFX 1	Controls the amount of the selected MULTI EFFECTS 1 setting.
MFX 2	Controls the amount of the selected MULTI EFFECTS 2 setting.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

When you have made your selection:

Turn the VALUE knob to select the setting for the Modulation Wheel you prefer.

REVERB FUNCTION Mode Page

This Page allows you to control the Reverb (reverberation) for each of the Voice Sections. All of these Parameters can be Recorded to a Combination.

NOTE: There are two (2) independent Reverbs - one for the ORGAN Voice Section and the other for the PIANO, ENSEMBLE and MONO SYNTH Voice Sections.

REVERB controls

ON button



When this button is "ON" (orange LED lit), the Reverb effect will be added. The amount of Reverb is regulated by the REVERB DEPTH knob, explained below.



REVERB DEPTH knob

This knob allows you to control the total or maximum amount of Reverb.

Turn this knob to the right to increase the amount of Reverb.

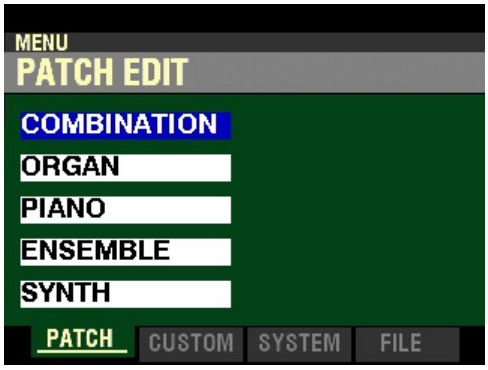
Turn this knob to the left to decrease the amount of Reverb.

NOTE: The ON button must be "ON" (orange LED lit) in order to hear the Reverb effect.

NOTE: Moving the REVERB DEPTH knob will cause a **POPUP** screen to display showing the current Reverb Depth. For more information about POPUPs please consult page 682.

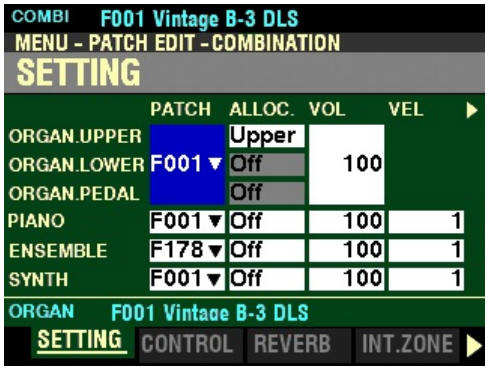
Accessing the REVERB FUNCTION Mode Page using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



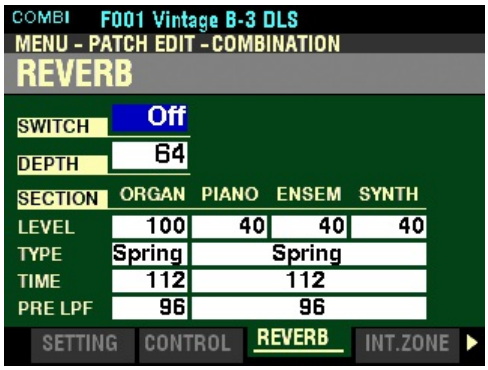
The "COMBINATION" box should be highlighted.

2. Press the ENTER button. The Information Center Display should now look like this:



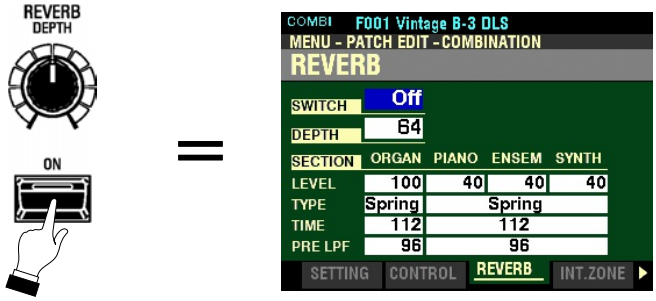
The SETTING Page of the COMBINATION FUNCTION Mode should now display.

3. Press the PAGE "▶" button two times. The Information Center Display should now look like this:



Accessing the REVERB FUNCTION Mode Page using the Shortcut:

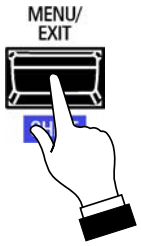
Press and Hold the ON button located underneath the REVERB DEPTH knob.



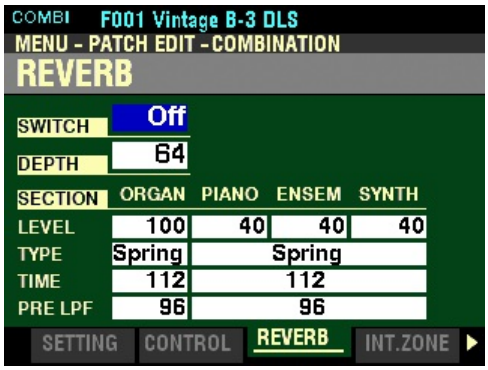
When the screen shown above displays, Release the ON button.

Accessing the REVERB FUNCTION Mode Page using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.



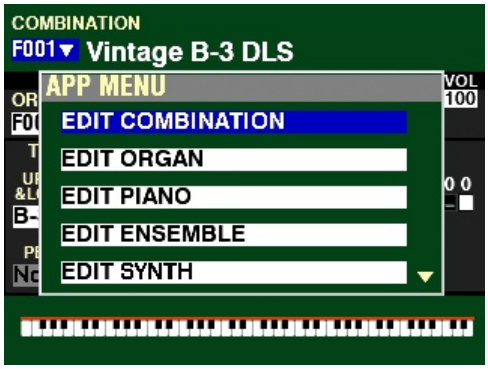
2. While holding the SHIFT button, turn the REVERB DEPTH knob. The Information Center Display will look similar to this:



3. Release the SHIFT button.

Accessing the REVERB FUNCTION Mode Page using the APP MENU:

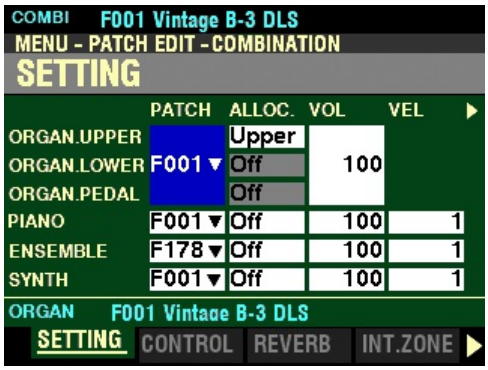
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



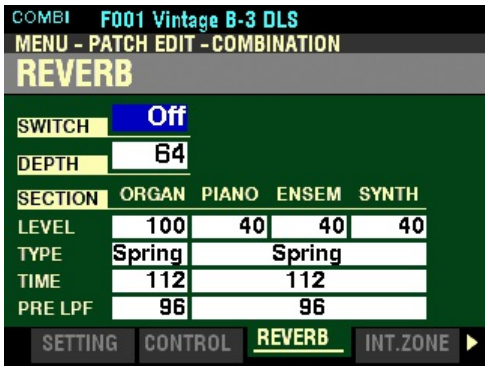
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:

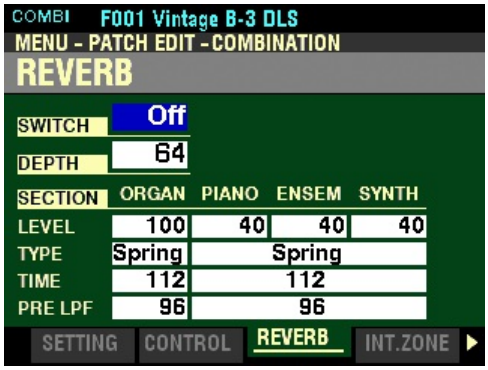


3. Press the PAGE "▶" button two times. The Information Center Display should now look like this:



You are now in the REVERB FUNCTION Mode Page. You can now use the DIRECTION buttons in conjunction with the VALUE knob to make various changes to the Reverb for each Voice Section. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "SWITCH" should be highlighted.

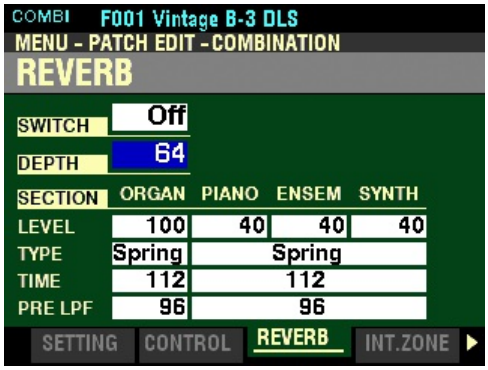
SWITCH

This Parameter allows you to turn REVERB "ON" or "OFF."

NOTE: This switch affects the ORGAN, PIANO, ENSEMBLE and MONO SYNTH Reverbs.

Turn the VALUE knob or press the ON button on the Control Panel to turn Reverb On or Off.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

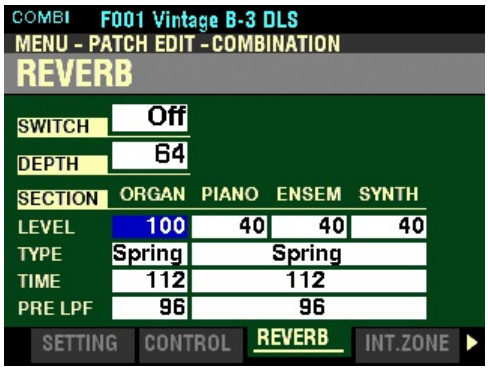
DEPTH

This Parameter allows you to set the overall depth of the entire Reverb effect. You may select from 0 no Reverb) to 127 (maximum Reverb).

Turn either the VALUE knob or the REVERB DEPTH knob on the Control Panel to the right to increase the amount of Reverb.

Turn either the VALUE knob or the REVERB DEPTH knob on the Control Panel to the left to decrease the amount of Reverb.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "LEVEL" should be highlighted.

LEVEL

These Parameters allows you to select the amount of the Reverb (send level) for each Section. You may select from 0 (no Reverb) to 127 (maximum Reverb).

Use the DIRECTION "◀" and "▶" buttons to highlight the Voice Section you want to modify.

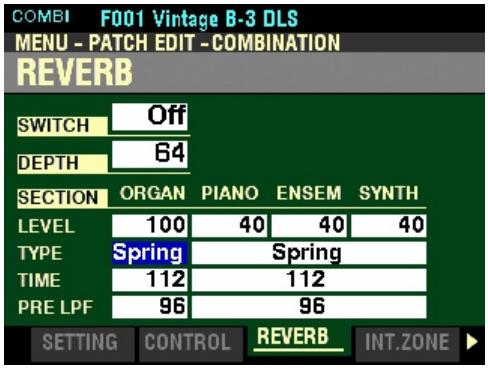
When you have made your selection:

Turn the VALUE knob to the right to increase the Reverb Level for the highlighted Voice Section.

Turn the VALUE knob to the left to decrease the Reverb Level for the highlighted Voice Section.

NOTE: The DEPTH Parameter described above controls the entire REVERB section. This Parameter allows you to raise or lower the amount or "send level" of REVERB for each Voice Section independently.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TYPE" should be highlighted.

TYPE

This Parameter allows you to select different Reverb Types for the ORGAN and PIANO/ENSEMBLE/MONO SYNTH Voice Sections. The data chart below shows the options you may select.

REVERB TYPE Options	
Reverb Type	**Description**
Room 1	Large room.
Room 2	Small room.
Live	Ambient room.
Hall 1	Dark hall, similar to a theatre.
Hall 2	Bright hall, similar to an auditorium.
Church	Large enclosure with a high ceiling.
Plate	Reverb produced by a steel plate.
Spring	Hammond spring-type Reverb.

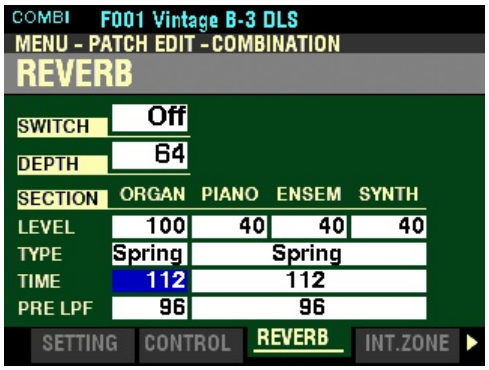
Use the DIRECTION "◀" and "▶" buttons to highlight the Voice Section you want to modify.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "TIME" should be highlighted.

TIME

This Parameter allows you to select different Reverb Decay Rates for the ORGAN, PIANO, ENSEMBLE and MONO SYNTH Voice Sections. You may select from 0 to 127. A higher value results in a longer decay.

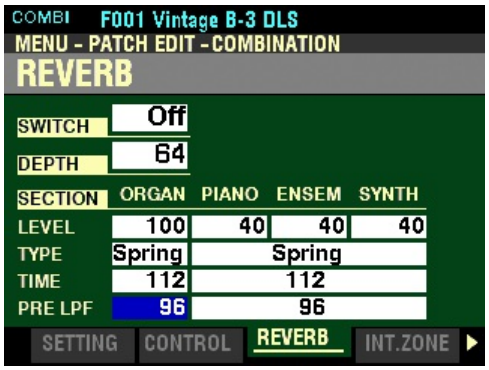
Use the DIRECTION "◀" and "▶" buttons to highlight the Voice Section you want to modify.

When you have made your selection:

Turn the VALUE knob to the right to increase the Reverb Decay Time for the highlighted Voice Section.

Turn the VALUE knob to the left to decrease the Reverb Decay Time for the highlighted Voice Section.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "MODE" should be highlighted.

PRE-LPF (Low Pass Filter)

This Parameter allows you to adjust the tone quality of the sound before it arrives at the Reverb. This allows you to simulate different acoustic environments or mechanical Reverb devices. You may select from 0 to 127. A higher value simulates a harder floor/wall/ceiling material and therefore a brighter sound.

Use the DIRECTION "◀" and "▶" buttons to highlight the Voice Section you want to modify.

When you have made your selection:

Turn the VALUE knob to the right to make the Reverb brighter for the highlighted Voice Section.

Turn the VALUE knob to the left to make the Reverb darker for the highlighted Voice Section.

◆ INTERNAL and EXTERNAL ZONES

Your SK PRO can function in a large variety of MIDI environments. In addition to transmitting basic MIDI information such as Note On/Note Off and Note Velocity, the SK PRO also can transmit Program Changes, Control Changes, NRPN and System Exclusive (SyxEx) codes.

It is also possible to use the SK PRO as a MIDI Master or Controller Keyboard for layering or multi-timbral (playing more than one sound at the same time). The following paragraphs explain this in more detail.

♦ INTERNAL ZONES

The internal sounds of the instrument - both Drawbars and Extra Voices - will play on what are called the Internal Zones. The Internal Zones transmit Note On/Note Off and Velocity data from the UPPER, LOWER and PEDAL Parts. These channels will both send (MIDI OUT) and receive (MIDI IN) data, and are therefore used when recording and playing back sequences.

NOTE: The UPPER Zone, in addition to Note On/Note Off and Velocity, also is used for transmitting Controller data.

♦ EXTERNAL ZONES

The External Zones allow you to use the SK PRO as a MIDI Master or Controller Keyboard. These allow you to play additional sounds from another MIDI instrument such as a sound module. The External Zones transmit but do not receive MIDI data - in other words, they are MIDI OUT only.

There are three (3) External Zones which can be assigned to the UPPER, LOWER or PEDAL Parts. In addition, different configurations can be saved to different Patches - for example, one Patch can have all three External Zones assigned to UPPER, another Patch can have one External Zone each for UPPER, LOWER and PEDAL, etc.

The features available for the Zones are found in the COMBINATION FUNCTION Mode. This is explained fully both in this chapter and in the MIDI chapter of this Guide.

♦ INTERNAL ZONES

This allows you to change the characteristics of the Internal or Keyboard Zones of your SK PRO. All of these Parameters can be Recorded to a Combination.

There are two ways to access the Internal Zone Parameters:

1. From the PLAY Mode, or

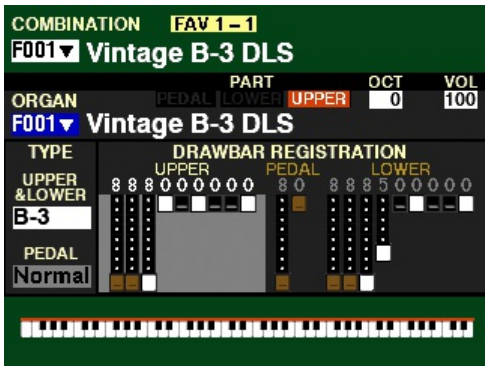
2. From the INTERNAL ZONE FUNCTION Mode Page.

The following pages explain this in more detail.

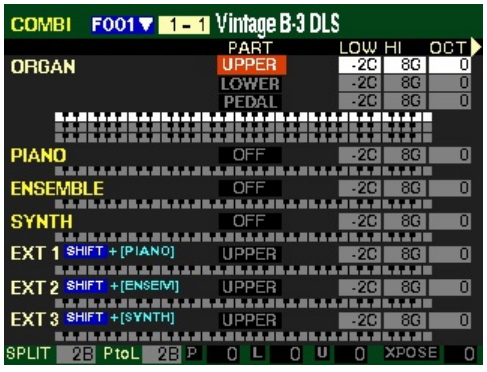
PLAY Mode - INTERNAL / EXTERNAL ZONES Page

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look similar to this:

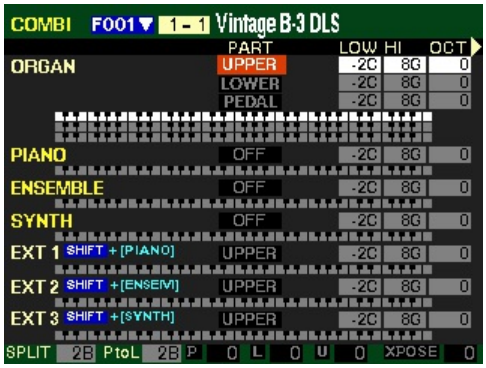


2. From the above screen, press either the PLAY button once or the PAGE "◀" or "▶" button two times until the Information Center Display looks similar to this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the Internal Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "COMBI" should be highlighted.

Notice the Keyboard graphics.

The top three keyboards represent the ORGAN Voice Section. The top keyboard represents the UPPER Part, the middle one represents the LOWER Part and the bottom keyboard represents the PEDAL Part.

The next three keyboards represent the PIANO, ENSEMBLE and MONO SYNTH Voice Sections.

The bottom three keyboards represent the External Zones, which will be explained later in this chapter.

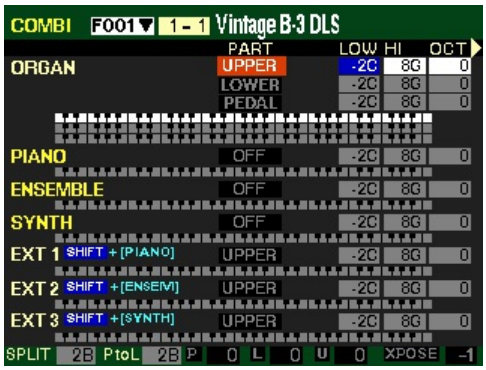
COMBI (Combination)

This Parameter allows you to use the VALUE knob to scroll through the Combinations.

Turn the VALUE knob to the right to scroll forward numerically through the Combinations.

Turn the VALUE knob to the left to scroll backward numerically through the Combinations.

From the screen shown in the middle of the previous page, press the DIRECTION "▶" button once.



The box underneath "LOW" should be highlighted.

LOW - Internal Zone Lower Note Limit

This Parameter allows you to set the lower note limit for the Internal Zone. You may select from -2C to 8G.

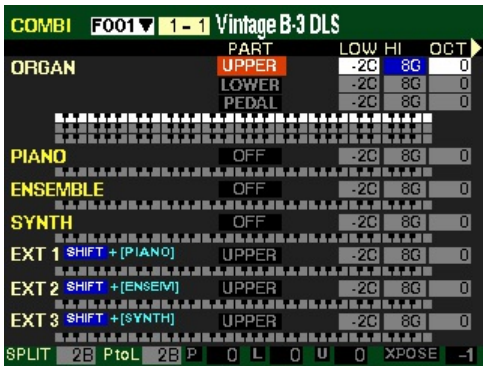
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to locate the Lower Note Limit for the selected Internal Zone higher.

Turn the VALUE knob to the left to locate the Lower Note Limit for the selected Internal Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "HI" should be highlighted.

HIGH - Internal Zone Upper Note Limit

This Parameter allows you to set the upper note limit for the Internal Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

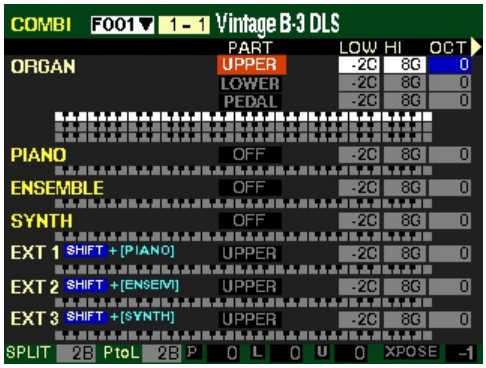
When you have made your selection:

Turn the VALUE knob to the right to locate the Upper Note Limit for the selected Internal Zone higher.

Turn the VALUE knob to the left to locate the Upper Note Limit for the selected Internal Zone lower.

NOTE: The Upper Limit number **cannot** be lower than the Lower Limit number.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - Internal Zone Octave

This Parameter allows you to determine the Octave or pitch at which the Internal Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

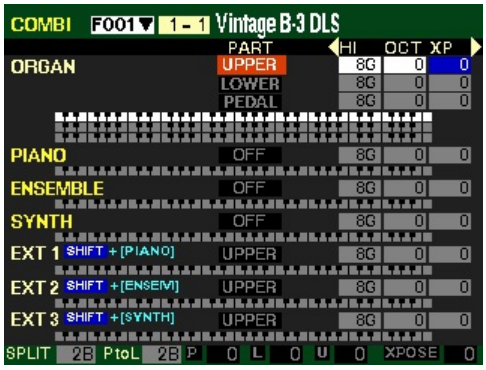
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected Internal Zone.

Turn the VALUE knob to the left to lower the Octave of the selected Internal Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XP" should be highlighted.

XP - Internal Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected Internal Zone by half-steps. You may select from -6 (down six half-steps) to +6 (up six half-steps). At 0 there is no transposition.

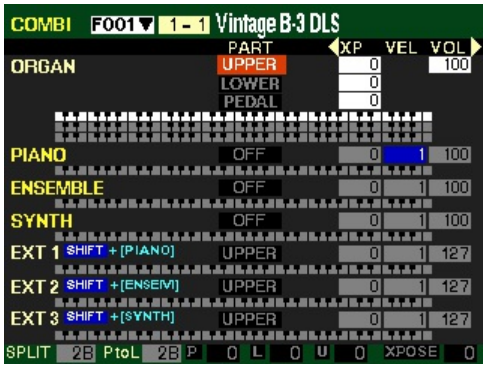
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected Internal Zone higher.

Turn the VALUE knob to the left to transpose the selected Internal Zone lower.

From the screen on the previous page, use the DIRECTION buttons to highlight the box underneath "VEL" (see below).



VEL - Internal Zone Velocity

This Parameter allows you to select how the selected Internal Zone will respond to key velocity. The data chart below shows the options you may select.

VELOCITY CURVE Options	
Setting	**Description**
Off	Standard "organ" touch - the notes play at a fixed velocity (**100**) regardless of a light or heavy keystroke.
1	This is the most exaggerated velocity curve, most like an acoustic piano.
2	Less exaggerated than **1**.
3	Less exaggerated than **2**.
4	This is the smallest change of response to key velocity.

Use the DIRECTION "▲" and "▼" buttons to move up and down among PIANO, ENSEMBLE and SYNTH.

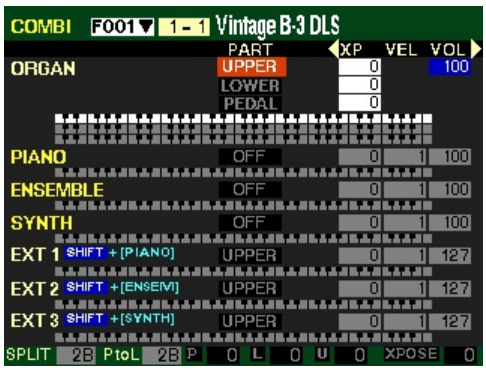
When you have made your selection:

Turn the VALUE Rotary Control to the right to scroll forward through the choices.

Turn the VALUE Rotary Control to the left to scroll backward through the choices.

NOTE: This Parameter is **not** available for the ORGAN Voice Section.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box underneath "VOL."



VOL - Internal Zone Volume

This Parameter allows you to control the volume (Controller #7) of the sound controlled by the selected Internal Zone. You may select from 0 (no volume) through 127 (maximum volume).

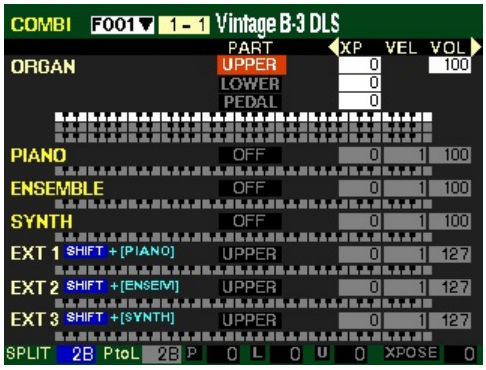
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected Internal Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected Internal Zone.

From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "SPLIT."



SPLIT - Keyboard Split Point

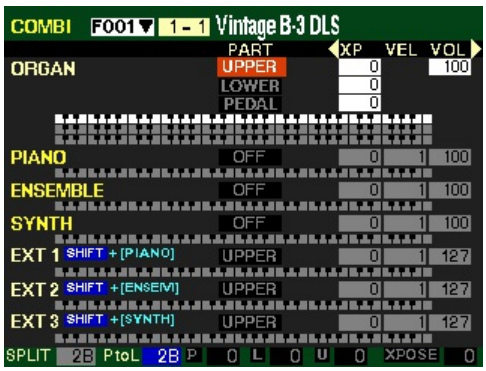
NOTE: If the SPLIT button is not "ON" (orange LED lit), this Parameter will be "greyed out." However, you can still change the SPLIT Point by following the procedure described below.

This Parameter allows you to change the SPLIT Point. You may select from 1C (the lowest note on the keyboard) to 6C (the highest note on the keyboard).

Turn the VALUE knob to the right to locate the SPLIT Point higher on the keyboard.

Turn the VALUE knob to the left to locate the SPLIT Point lower on the keyboard.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "PtoL" should be highlighted.

NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) in order to hear the effect of this Parameter setting.

PtoL - PEDAL TO LOWER Limit

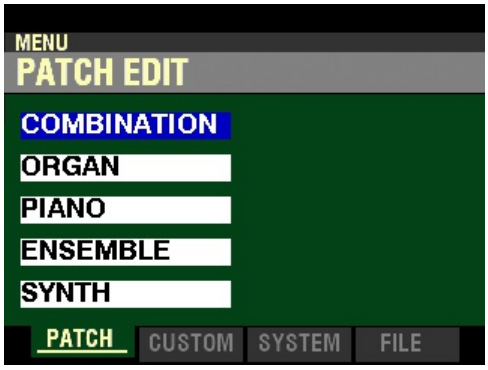
This Parameter allows you to set the range of the Pedal tones when PEDAL TO LOWER is "ON." You may select from 1C (the lowest note on the keyboard) to 3C (the third "C" on the keyboard).

Turn the VALUE knob to the right to locate the PEDAL TO LOWER Limit higher on the keyboard.

Turn the VALUE knob to the left to locate the PEDAL TO LOWER Limit lower on the keyboard.

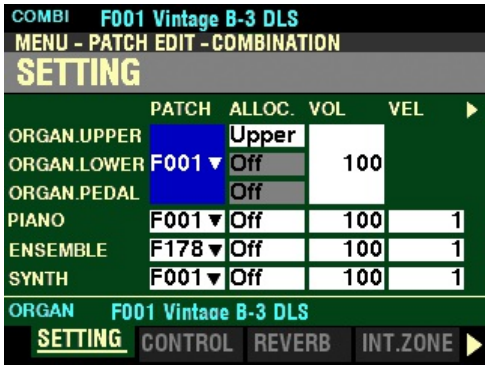
Accessing the INTERNAL ZONE FUNCTION Mode Page using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

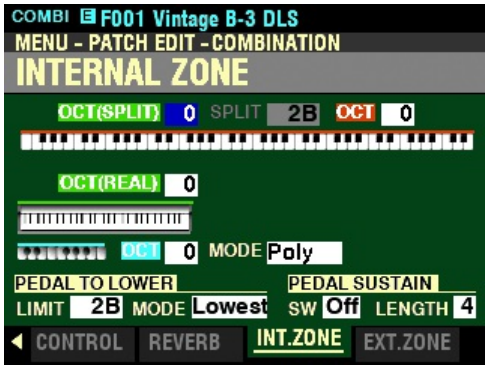


The "COMBINATION" box should be highlighted.

2. Press the ENTER button. The Information Center Display should now look like this:

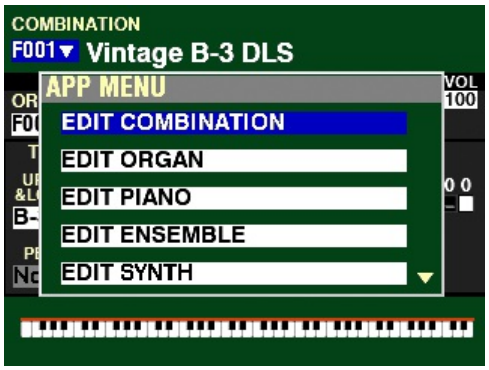


3. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



Accessing the INTERNAL ZONE FUNCTION Mode Page using the APP MENU:

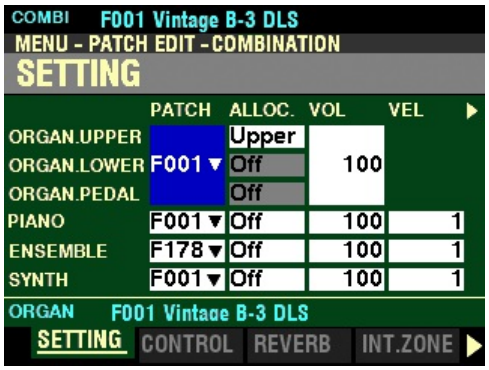
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



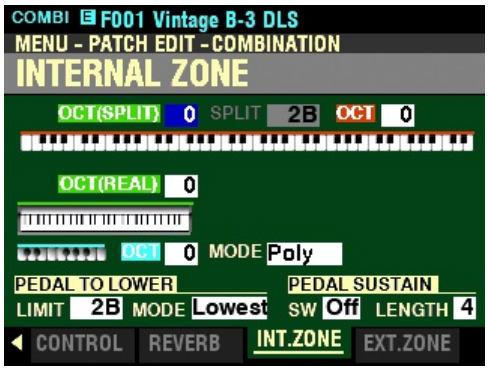
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:

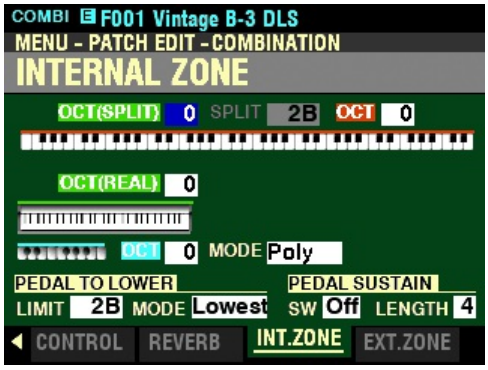


3. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the Internal Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "OCT(SPLIT)" should be highlighted.

Notice the three Keyboard graphics. The top keyboard represents the SK PRO, the middle one represents a connected MIDI keyboard used as part of an expanded MIDI system and the small one on the left either a connected MIDI pedal clavier such as the Hammond XPK-130G or the lower two octaves of the LOWER Keyboard when PEDAL TO LOWER is active.

NOTE: If the SPLIT button is "ON," the top keyboard will show the UPPER Part and the LOWER Part as well as the SPLIT Point.

OCT(SPLIT) - Lower Octave Setting for SPLIT

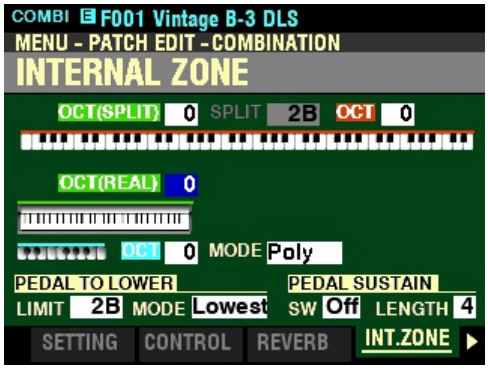
This Parameter allows you to set the octave for the LOWER Part when the SPLIT button is "ON." The data chart below shows the options you may select.

LOWER OCTAVE Options - SPLIT	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



OCT(REAL) - Lower Octave Setting for Expanded Keyboard

The term OCTAVE(REAL) refers to a connected MIDI keyboard being used to play the LOWER Part. This Parameter allows you to set the octave for the LOWER Part when a connected MIDI keyboard is used for the LOWER Part.

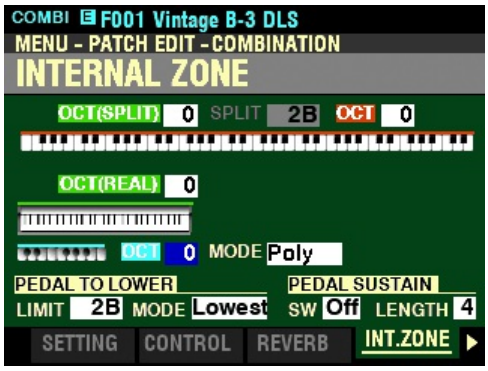
The data chart below shows the options you may select.

LOWER OCTAVE Options - REAL	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



OCT PEDAL - Pedal Octave Setting

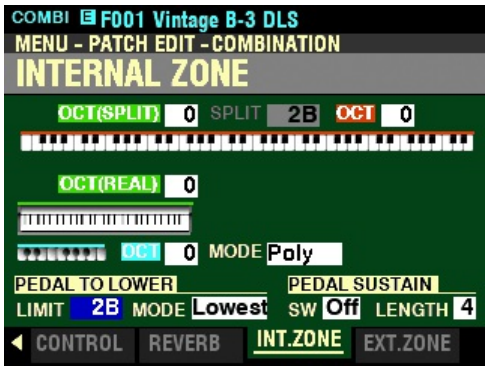
This Parameter allows you to set the octave for the PEDAL Part. The data chart below shows the options you may select.

PEDAL OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LIMIT" should be highlighted.

NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) in order to hear the effect of this Parameter setting.

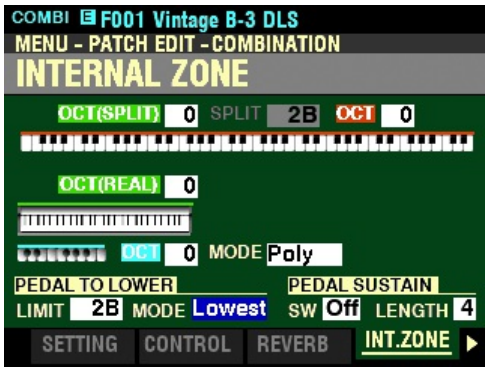
PEDAL TO LOWER LIMIT

This Parameter allows you to set the range of the Pedal tones when PEDAL TO LOWER is "ON" (orange LED lit). You may select from 1C (the lowest note on the keyboard) to 3C (the third "C" on the keyboard). The default setting is 2B (bottom two octaves of the keyboard).

Turn the VALUE knob to the right to locate the PEDAL TO LOWER Limit higher on the keyboard.

Turn the VALUE knob to the left to locate the PEDAL TO LOWER Limit lower on the keyboard.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "MODE" should be highlighted.

PEDAL TO LOWER MODE

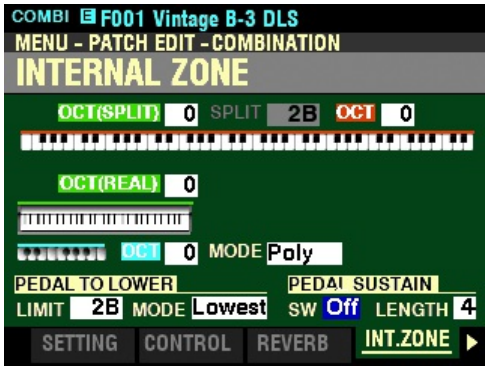
This Parameter allows you to select how the PEDAL TO LOWER feature works. The data chart below shows the options you may select.

PEDAL TO LOWER MODE	
Setting	**Description**
Lowest	The bass note will sound the lowest note played if multiple notes are depressed.
Chord	The keyboard is scanned for Chord Root and Chord Type and plays an appropriate bass note. For example, if the notes "G," "C" and "E" are played, it will be interpreted as a C major chord and the bass note will sound the note "C."
Poly	The bass tone will sound on all notes depressed.

Turn the VALUE knob to select Lowest, Chord or Poly.

NOTE: To hear the effects of the PEDAL TO LOWER MODE setting, press both the SPLIT and PEDAL TO LOWER buttons "ON" (LEDs lit) and play keys on the LOWER Part.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



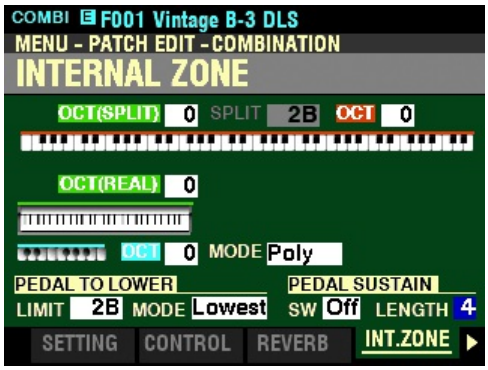
The box to the right of "SW" should be highlighted.

SW - Pedal Sustain Switch

This Parameter allows you to you to turn Pedal Sustain "ON" or "OFF." When this feature is active, the Pedal tones will smoothly decay upon release, much in the manner of a string bass.

Turn the VALUE knob to turn Pedal Sustain On or Off.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "LENGTH" should be highlighted.

LENGTH - Pedal Sustain Length

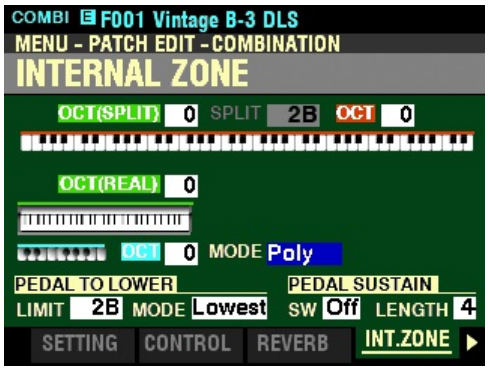
This Parameter allows you to adjust the amount of Pedal Sustain, or length of time the Pedal note will continue to sound after the pedal is released. You may select from 1 (shortest) to 5 (longest).

Turn the VALUE knob to the right to lengthen the Pedal Sustain.

Turn the VALUE knob to the left to shorten the Pedal Sustain.

NOTE: The **Pedal Sustain Switch** must be **On** in order to hear the effect of this Parameter.

From the screen shown at the bottom of the previous page, press the DIRECTION "▲" button once.



The box to the right of "MODE" should be highlighted.

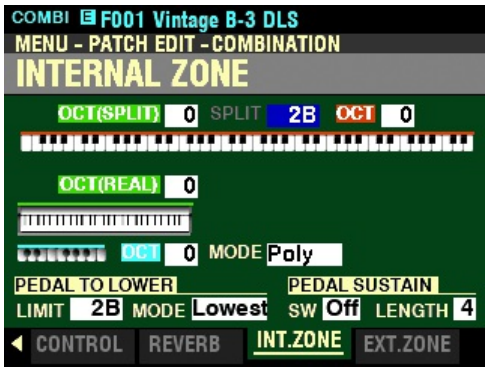
PEDAL MODE

This Parameter allows you to select the playing mode of the Pedals. The data chart below shows the options you may select.

PEDAL MODE Options	
Setting	**Description**
Poly	Polyphonic - more than one pedal note can sound at a time, as on a vintage organ.
Mono	Monophonic low-note select - if more than one pedal is played only the lowest note will sound.

Turn the VALUE knob to select Poly or Mono.

From the above screen, press the DIRECTION "▲" button once.



The box to the right of "SPLIT" should be highlighted.

SPLIT - Keyboard SPLIT Point

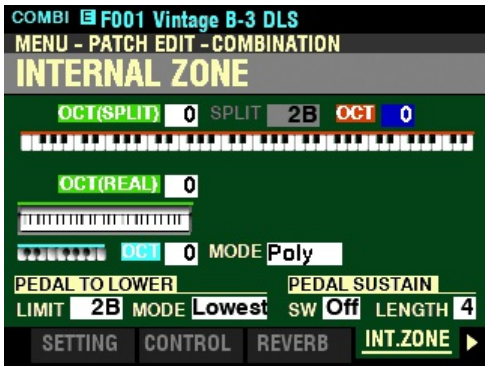
NOTE: If the SPLIT button is not "ON" (orange LED lit), this Parameter will be "greyed out." However, you can still change the SPLIT Point by following the procedure described below.

This Parameter allows you to change the SPLIT Point. You may select from 1C (the lowest note on the keyboard) to 6C (the highest note on the keyboard).

Turn the VALUE knob to the right to locate the SPLIT Point higher on the keyboard.

Turn the VALUE knob to the left to locate the SPLIT Point lower on the keyboard.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box to the right of "OCT" should be highlighted.

OCT - Upper Octave Setting

This Parameter Menu Page allows you to select the Octave range in which the UPPER Part will play. The data chart below shows the options you may select.

UPPER OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right or press the OCTAVE UP button on the Control Panel to raise the Octave.

Turn the VALUE knob to the left or press the OCTAVE DOWN button on the Control Panel to lower the Octave.

♦ EXTERNAL ZONES

The External Zone Parameters allow you to change the characteristics of the External Zones of your SK PRO. All of these Parameters can be Recorded to a Combination.

♦ Using External Zones

The External Zones present the most flexible method for using the SK PRO to control an external MIDI instrument (synthesizer, sound module, digital workstation or a MIDI-equipped Hammond Organ or Keyboard).

Please consult the Owner's Manual or Reference Guide for your particular instrument or software for information regarding the Program Numbers and Bank Numbers for specific sounds, plus Controller Numbers for specific functions.

IMPORTANT NOTE: Hammond's standard protocol is to transmit and receive **UPPER**, **LOWER** and **PEDAL** MIDI data on MIDI Channels **1**, **2** and **3** respectively. If you connect the SK PRO to the MIDI device you want to control, all MIDI messages from the SK PRO - Note On/Note Off, Program Changes, Controller Changes, etc. - will be "mirrored" on the connected device. Please consult the MIDI Template portion of this chapter (starting on page 695) and select the correct **EXZ** Template BEFORE you set the EXTERNAL ZONE Parameters below.

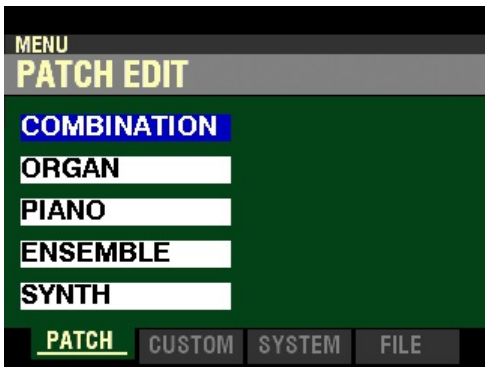
NOTE: Both Internal and External Zones are also covered in the **MIDI** chapter of this Guide.

EXTERNAL ZONE MASTER ON / OFF

As will be explained, External Zones can be turned "ON" or "OFF" individually for UPPER, LOWER and PEDAL. However, in order for MIDI data to be transmitted from External Zones, the MASTER ON / OFF Parameter must be set to On. If it is set to Off, no External Zone data will be transmitted even if individual External Zones are "ON."

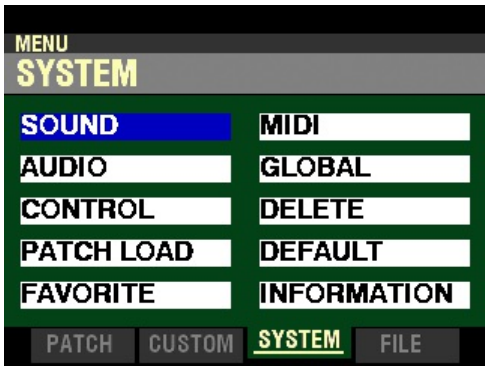
To enable transmission of External Zone MIDI data, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

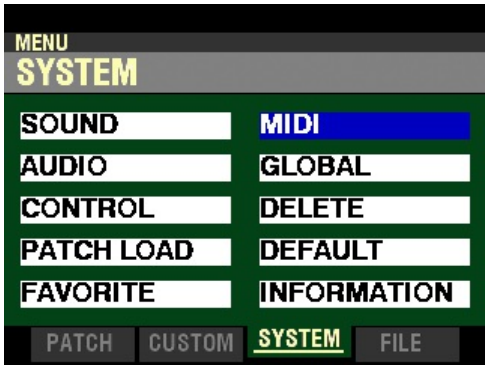


The "COMBINATION" box should be highlighted.

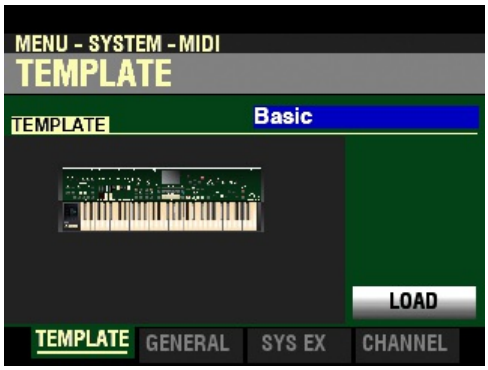
2. Press the PAGE "▶" button two times. The word "SOUND" should be highlighted.



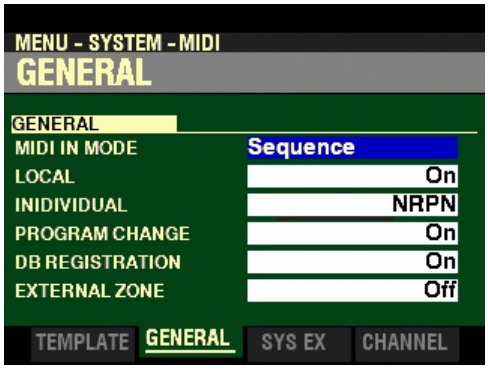
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



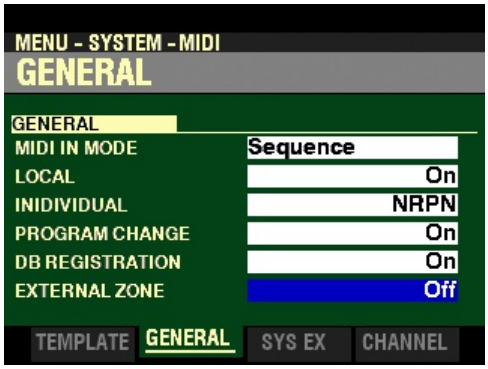
4. Press the ENTER button. The Information Center Display should now look like this:



5. Press the PAGE "▶" button once. The Information Center Display should now look like this:



6. Press the DIRECTION "▼" button five times. The Information Center Display should now look like this:



This is the Master Parameter which allows you to select whether to transmit External Zone data. The data chart below shows the options you may select.

MIDI EXTERNAL ZONE Options	
Parameter	**Description**
Off	No External Zone data is transmitted.
On	External Zone data will be transmitted to a connected MIDI device.

Turn the VALUE knob to select this Parameter On or Off. To allow MIDI data transmission from the External Zones, turn this Parameter On.

NOTE: Both Internal and External Zones are also covered in the **MIDI** chapter of this Guide.

There are two ways to access the External Zone Parameters:

1. From the PLAY Mode, or

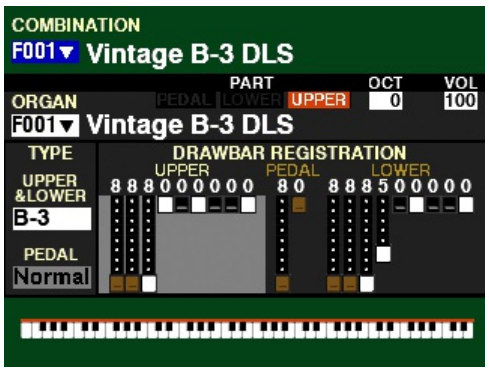
2. From the EXTERNAL ZONE FUNCTION Mode Page.

The following pages explain this in more detail.

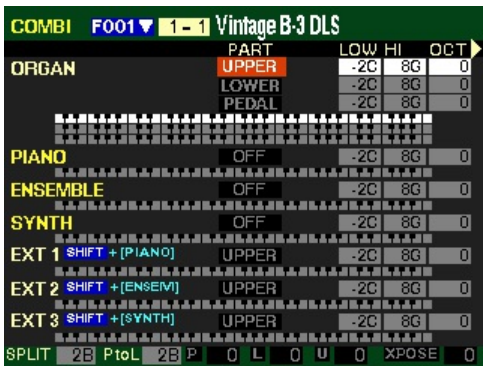
PLAY Mode - INTERNAL / EXTERNAL ZONES Page

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look similar to this:

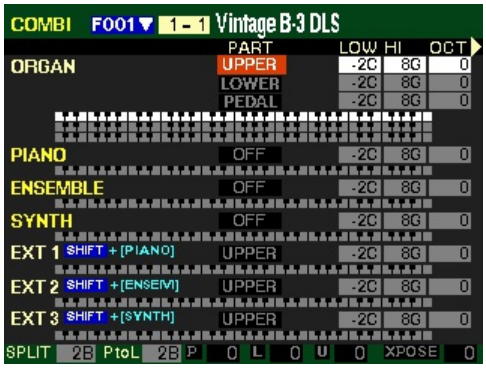


2. From the above screen, press either the PLAY button or either of the PAGE buttons once. The Information Center Display should now look similar to this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the External Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.

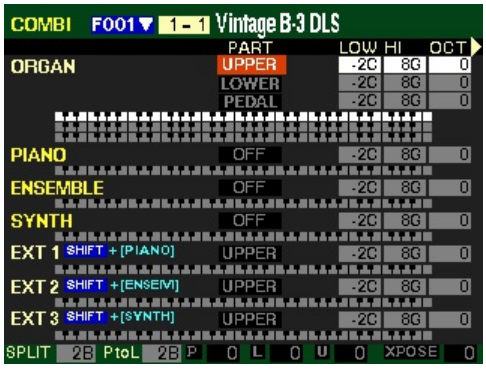


The box to the right of "COMBI" should be highlighted.

Notice the three Keyboard graphics. The top keyboard represents the UPPER Part, the middle one represents the LOWER Part and the bottom keyboard represents the PEDAL Part.

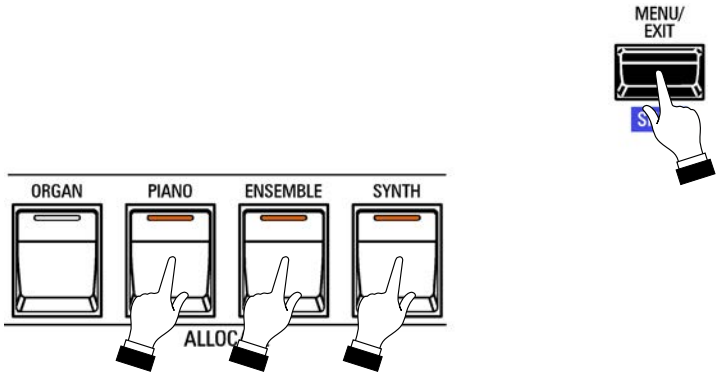
SPECIAL NOTE:

If the EXTERNAL ZONES Parameter in the SYSTEM -MIDI - GENERAL FUNCTION Mode Page (described on pages 100 to 102 and 727 to 729) is set to Off, the Information Center Display will look similar to this:



Notice that all the boxes are "greyed out." This indicates that no External Zone MIDI data will be transmitted even if the Allocate Parameters are set to UPPER, LOWER or PEDAL.

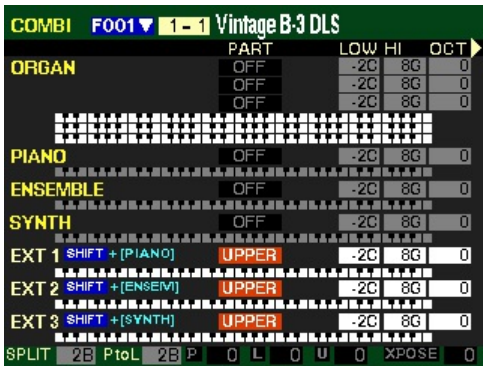
To enable the External Zones to transmit MIDI data, Press and Hold the SHIFT button and press one of the ALLOCATE buttons shown in the illustration below to turn the selected Zone On or Off.



The data chart on the next page shows how the External Zones are controlled by the PERCUSSION buttons.

EXTERNAL ZONE SWITCH Settings	
ALLOCATE button	**FUNCTION**
PIANO	Use this button to select the Part for EXTERNAL ZONE 1.
ENSEMBLE	Use this button to select the Part for EXTERNAL ZONE 2.
SYNTH	Use this button to select the Part for EXTERNAL ZONE 3.

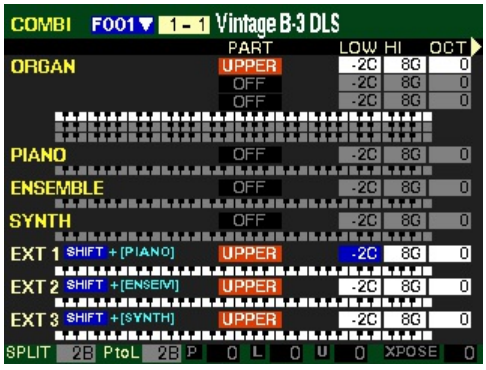
After doing the procedure described previously to enable the External Zones, the Information Center Display will look like this:



Notice the External Zone keyboards are now showing white. This lets you know that External Zone data will be transmitted to a connected MIDI Device.

NOTE: You can enable each of the External Zones separately; however, for purposes of explanation all three of the External Zones will be shown as **On**, meaning the keyboards will be shown **white**.

From the above screen, press the DIRECTION "▼" button repeatedly until the Information Center Display looks like this:



The box underneath "LOW" should be highlighted.

LOW - External Zone Lower Note Limit

This Parameter allows you to set the Lower note limit for the selected External Zone. You may select from -2C to 8G.

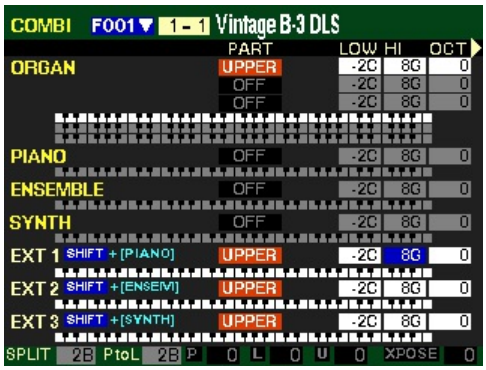
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "HI" should be highlighted.

HI - External Zone Upper Note Limit

This Parameter allows you to set the Upper note limit for the selected External Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

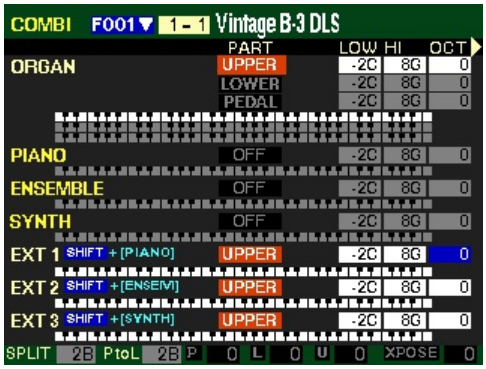
When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

NOTE: The Upper limit number **cannot** be lower than the Lower limit number.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - External Zone Octave

This Parameter allows you to determine the Octave or pitch at which the selected External Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

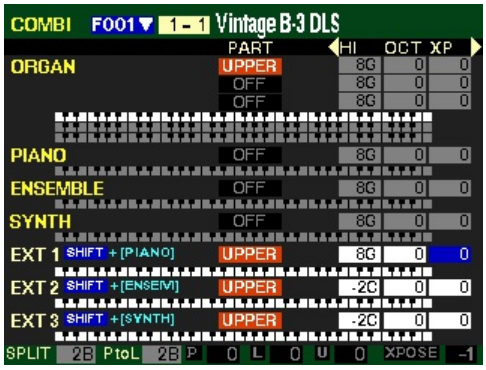
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected External Zone.

Turn the VALUE knob to the left to lower the Octave of the selected External Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XP" should be highlighted.

XP - External Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected External Zone by half-steps. You may select from -6 (down six half-steps) to +6 (up six half-steps). At 0 there is no transposition.

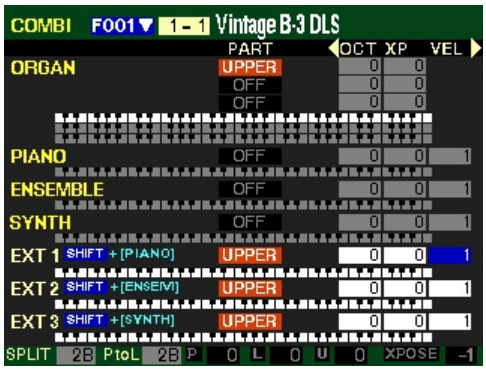
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected External Zone higher.

Turn the VALUE knob to the left to transpose the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

VEL - External Zone Velocity

This Parameter allows you to sets the character of the velocity to send to this zone. Th e setting range is Off and 1 to 4. At Off, the velocity is fixed at 100. The "press" (velocity response) of the keyboard progresses from 1 (heavier) through 4 (lighter).

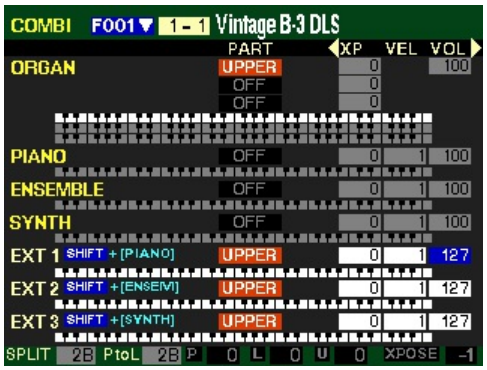
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to make the velocity response for the selected External Zone lighter.

Turn the VALUE knob to the left to make the velocity response for the selected External Zone heavier.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

VOL - External Zone Volume

This Parameter allows you to control the Volume (Controller #7) of the sound controlled by the selected External Zone. You may select from 0 (no volume) through 127 (maximum volume).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

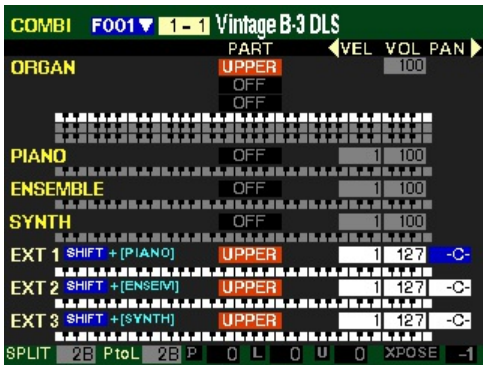
When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 115 and 131.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PAN" should be highlighted.

PAN - External Zone Pan

This Parameter allows you to set the directionality or Pan setting (Controller #10). You may select from L63 (the sound plays entirely through the Left channel), through to 0 (the sound is heard equally through both channels) and on through R63 (the sound plays entirely through the Right channel).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

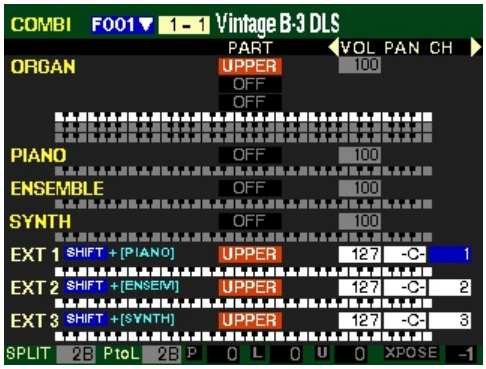
When you have made your selection:

Turn the VALUE knob to the right to emphasize the Right channel for the selected External Zone.

Turn the VALUE knob to the left to emphasize the Left channel for the selected External Zone.

NOTE: In order to hear the effect of this Parameter, the sound controlled from the External Zone must be connected via Stereo (both Left and Right channel) outputs.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "CH" should be highlighted.

CH - External Zone Channel

This Parameter allows you to select the MIDI Channel on which MIDI data from the selected External Zone will be transmitted. You may select from 1 through 16.

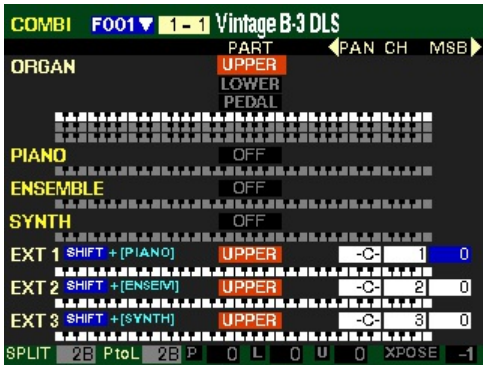
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Channels for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Channels for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MSB" should be highlighted.

The next two Parameters allow you to perform a Bank Select to give you access to more sounds. For a fuller explanation of Bank Select, consult page 861 of the APPENDIX chapter of this Guide.

BNK-M - External Zone Bank Select MSB

This Parameter allows you to set the value for Controller #0 (Most Significant Byte) for the selected External Zone. You may select from 0 through 127.

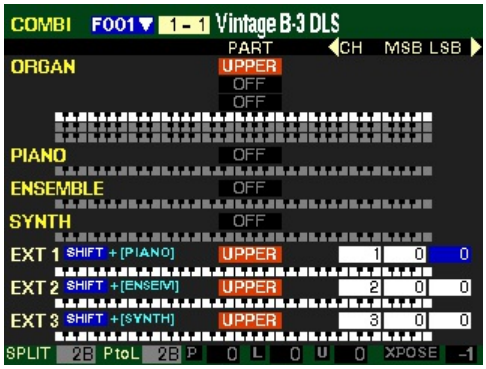
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the values for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the values for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "LSB" should be highlighted.

BNK-L - External Zone Bank Select (LSB)

This Parameter allows you to set the value for Controller #32 (Least Significant Byte) for the selected External Zone. You may select from 0 through 127.

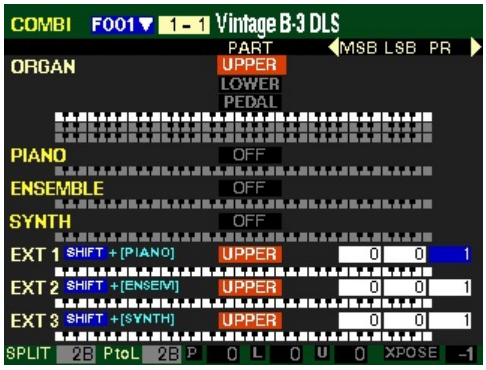
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the numbers for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PRG" should be highlighted.

PR - External Zone Program Number

This Parameter allows you to select from the Program Number, and therefore the Voice, for the selected External Zone. You may select from 1 through 128.

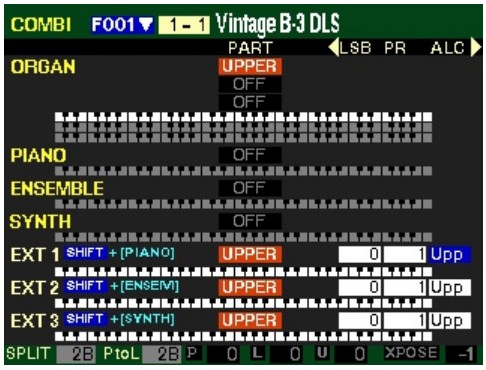
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Program Numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Program Numbers for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



External Zone Allocation

This Parameter allows you to select the Keyboard from which the selected External Zone will play. The data chart below shows the options you may select.

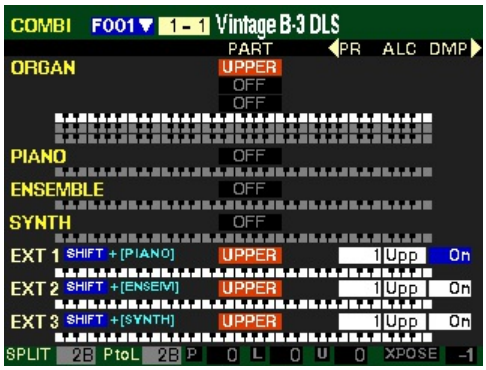
EXTERNAL ZONE ALLOCATION Settings	
Setting	**Description**
Upp	The selected External Zone will play from the UPPER Part.
Low	The selected External Zone will play from the LOWER Part.
Ped	The selected External Zone will play from the PEDAL Part.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select Upp, Low or Ped..

From the above screen, press the DIRECTION "▶" button once.



The box underneath "DMP" should be highlighted.

DMP - External Zone Damper

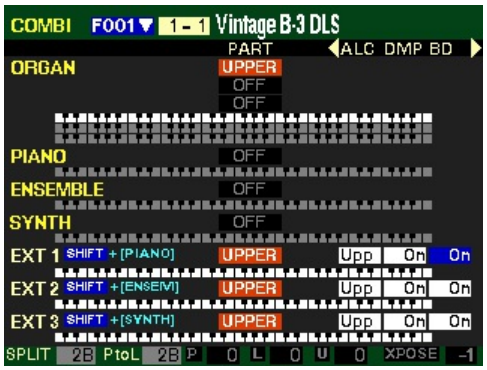
This Parameter allows you to select whether you want to send Damper (Controller #64) information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Damper On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "BD" should be highlighted.

BD - External Zone Pitch Bend

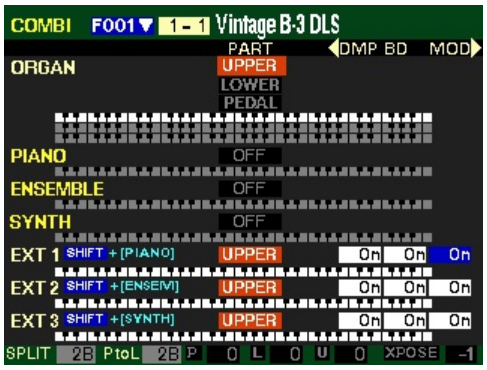
This Parameter allows you to select whether you want to send Pitch Bend information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Pitch Bend On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MOD" should be highlighted.

MOD - External Zone Modulation Wheel

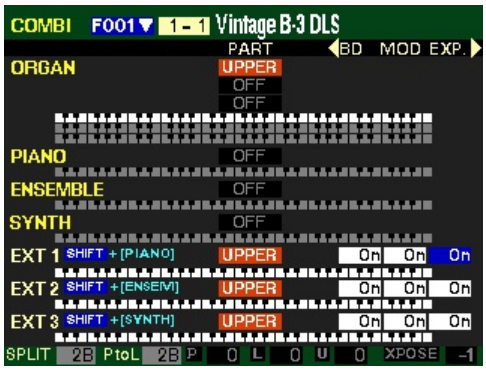
This Parameter allows you to select whether you want to send information from the Modulation Wheel as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Modulation On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "EXP" should be highlighted.

EXP - External Zone Expression ON/OFF

This Parameter allows you to select whether a connected Expression Pedal will affect the selected Zone.

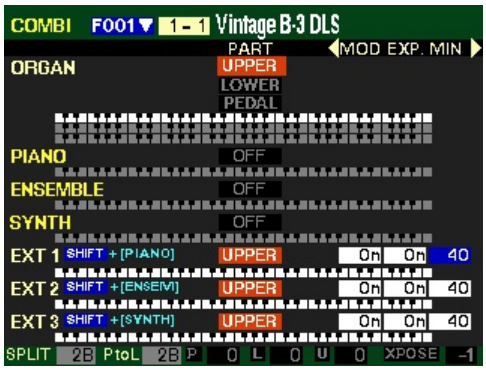
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Expression On or Off for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 115 and 758.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MIN" should be highlighted.

E.MIN - External Zone Minimum Volume

This Parameter allows you to adjust the Volume level when the Expression Pedal is "closed," or set at minimum. You may select from 0 through 63. At 0 no sound will be heard.

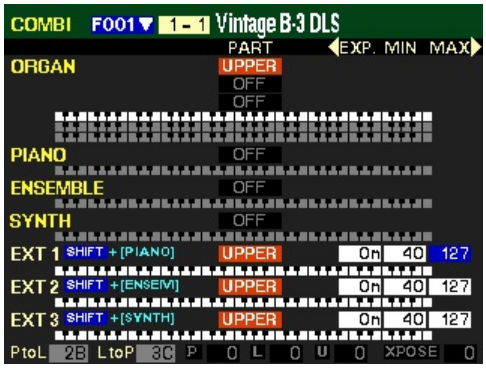
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "MAX" should be highlighted.

E.MAX - External Zone Maximum Volume

This Parameter allows you to adjust the volume level when the Expression Pedal is all the way "open," or set at maximum. You may select from 64 through 127.

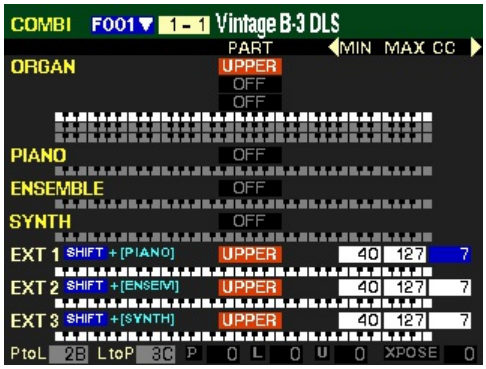
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "CC" should be highlighted.

CC - External Zone Expression Control Number

This Parameter allows you to select how you want to control the level of the selected External Zone. You may select either 7 (Controller #7 or Volume) or 11 (Controller #11 or Expression).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select 7 or 11.

What Is the Difference Between "Volume" and "Expression?"

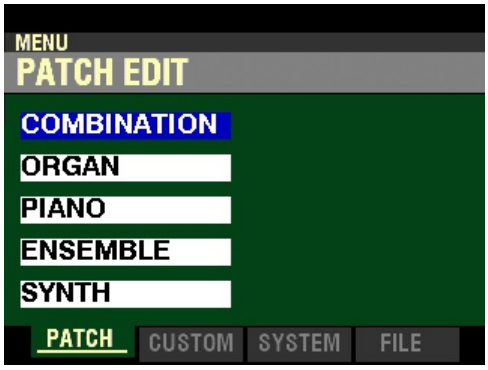
In purely technical terms, Volume and Expression are identical - both control loudness or sound level. The difference lies with how they are customarily used in MIDI applications, particularly in creating and playing back MIDI sequences.

The generally accepted protocol is to use Controller #7 (Volume) to set the overall or absolute level of a voice or sound, and use Controller #11 (Expression) to make variations (such as crescendi or diminuendi) against the overall level set by Controller #7. This is recommended particularly if you want to use your SKX PRO as a MIDI input device to record a sequence.

NOTE: In order for the External Zone Volume feature to work, the Expression Control Number must be set to **7** (Volume). If this parameter is set to **11** (Expression), changing the External Zone Volume setting will have no effect.

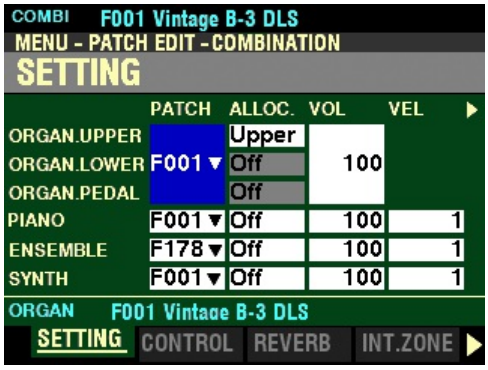
Accessing the EXTERNAL ZONE FUNCTION Mode Page using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

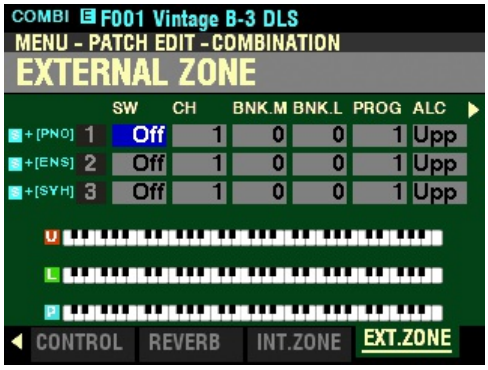


The "COMBINATION" box should be highlighted.

2. Press the ENTER button. The Information Center Display should now look like this:

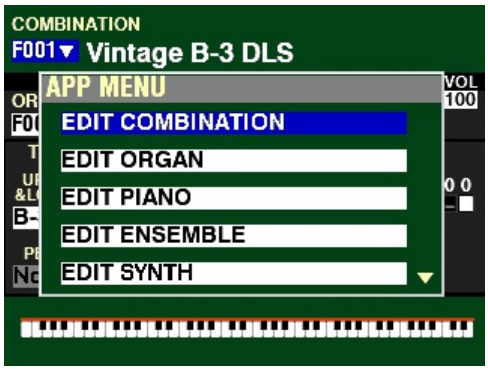


3. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



Accessing the EXTERNAL ZONE FUNCTION Mode Page using the APP MENU:

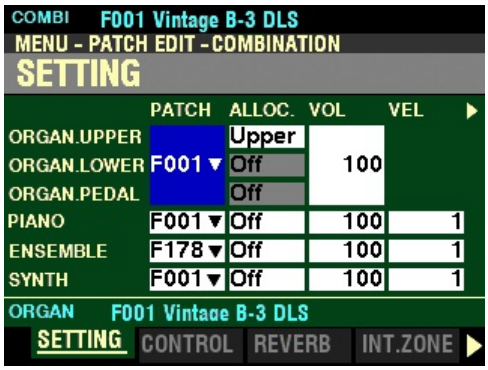
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



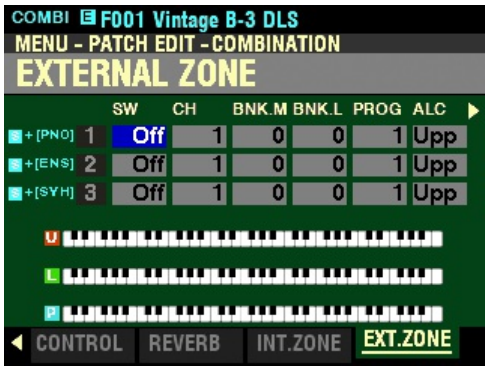
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:

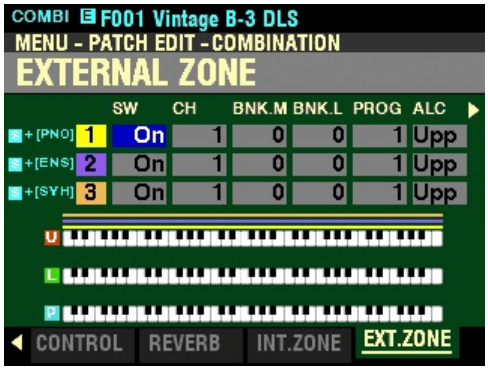


3. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the External Zones of your SK PRO. These changes are explained starting below.

NOTE: The External Zone Parameters are identical for all three External Zones; therefore for the sake of brevity only the Parameters for External Zone **1** (yellow box) will be shown and described.



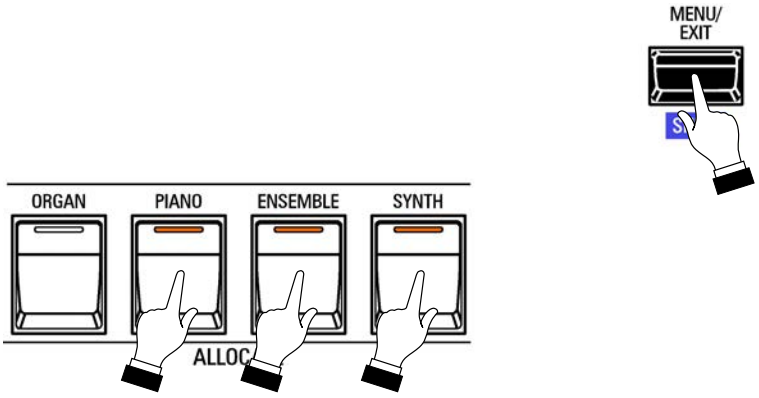
SW - External Zone Switch

This Parameter allows you to turn the selected External Zone "ON" (MIDI information will be transmitted) or "OFF" (no MIDI information will be transmitted).

You can turn the External Zones "ON" or "OFF" in one of two ways:

1. Use the DIRECTION buttons to highlight the EXTERNAL ZONE SW box you want and turn the VALUE knob to turn the selected Zone On or Off.

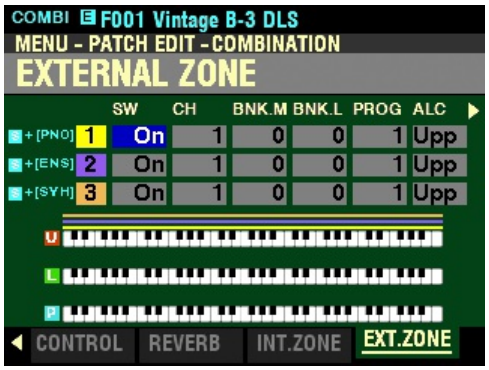
2. Press and Hold the SHIFT button and press one of the ALLOCATE buttons shown in the illustration below to turn the selected Zone On or Off.



NOTE: You can Press and Hold the SHIFT button to enable External Zones when the above screen is displaying. If the above screen is not displaying the PIANO, ENSEMBLE and SYNTH buttons function normally.

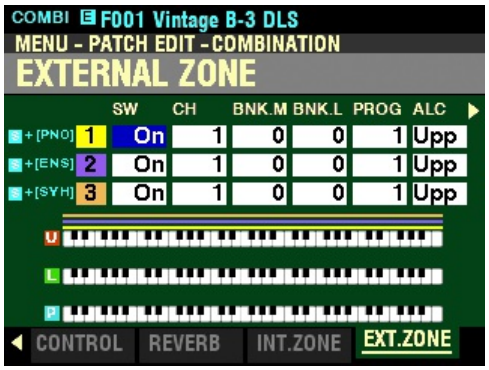
SPECIAL NOTE:

If the EXTERNAL ZONES Parameter in the SYSTEM -MIDI - GENERAL FUNCTION Mode Page (described on pages 100 to 102) is set to Off, the Information Center Display will look similar to this:



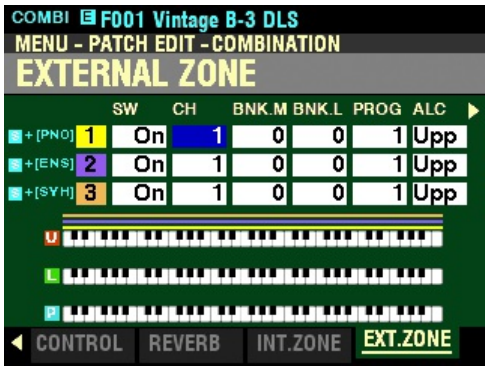
Notice that all the boxes are "greyed out." This indicates that no External Zone MIDI data will be transmitted even if the SW settings are set to On.

If the MIDI EXTERNAL ZONES Parameter is On, the Information Center Display will look similar to this:



The boxes are now showing white. This lets you know that External Zone data will be transmitted to a connected MIDI Device. Use the SW Parameters to control MIDI transmission for External Zones 1, 2 and 3 separately.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "CH" should be highlighted.

CH - External Zone Channel

This Parameter allows you to select the MIDI Channel on which MIDI data from the selected External Zone will be transmitted. You may select from 1 through 16.

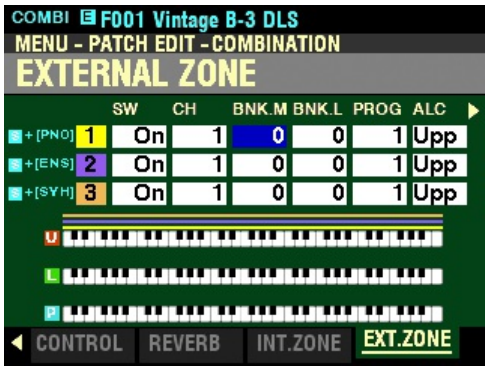
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Channels for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Channels for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "BNK-M" should be highlighted.

The two Parameters described on this page allow you to perform a Bank Select to give you access to more sounds. For a fuller explanation of Bank Select, consult page 861 of the APPENDIX chapter of this Guide.

BNK-M - External Zone Bank Select MSB

This Parameter allows you to set the value for Controller #0 (Most Significant Byte) for the selected External Zone. You may select from 0 through 127.

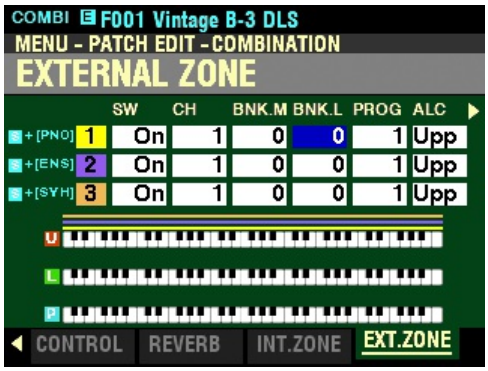
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the values for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the values for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "BNK-L" should be highlighted.

BNK-L - External Zone Bank Select (LSB)

This Parameter allows you to set the value for Controller #32 (Least Significant Byte) for the selected External Zone. You may select from 0 through 127.

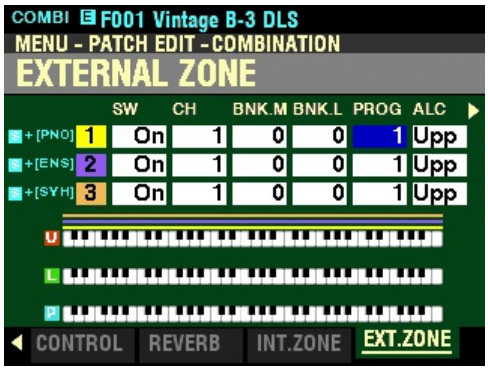
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the numbers for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PROG" should be highlighted.

PROG - External Zone Program Number

This Parameter allows you to select from the Program Number, and therefore the Voice, for the selected External Zone. You may select from 1 through 128.

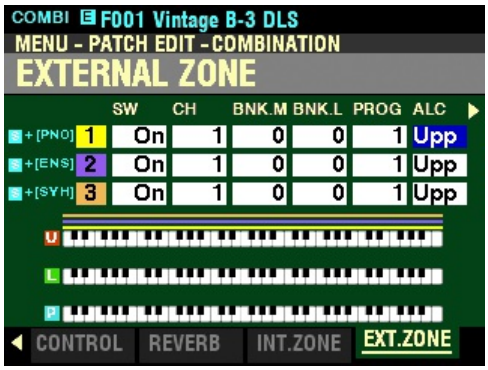
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Program Numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Program Numbers for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "ALC" should be highlighted.

ALC - External Zone Allocate

This Parameter allows you to select which Part will control the selected External Zone.

The data chart below explains each of the settings in more detail.

EXTERNAL ZONE ALLOCATE Options	
Setting	**Function**
Upp	Use this setting to allocate the selected External Zone to the UPPER Keyboard.
Low	Use this setting to allocate the selected External Zone to the LOWER Keyboard.
Ped	Use this setting to allocate the selected External Zone to the PEDAL Part. (NOTE: The PEDAL Part will play either from a connected MIDI pedal clavier or from the LOWER Keyboard when PEDAL TO LOWER is activated.)
Off	Use this setting if you have external MIDI instruments connected and you do not wish to send Note messages (Note On, Note Off and Note Velocity), but you still want to transmit MIDI Program Changes or Controller Changes.

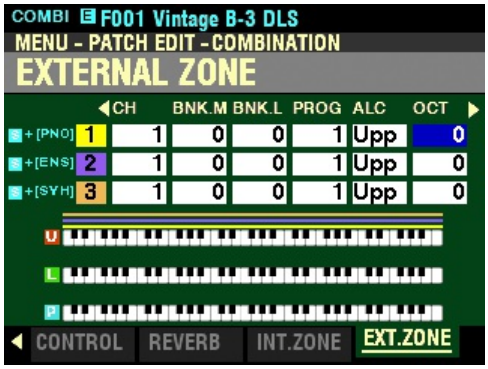
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - External Zone Octave

This Parameter allows you to determine the Octave or pitch at which the External Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

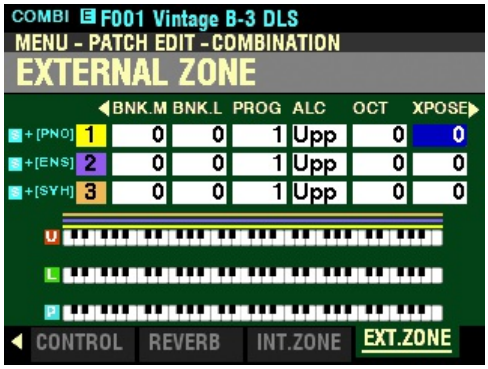
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected External Zone.

Turn the VALUE knob to the left to lower the Octave of the selected External Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XPOSE" should be highlighted.

XPOSE - External Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected External Zone by half-steps o. You may select from -63 (down five octaves and a third) to 63 (up five octaves and a third). At 0 there is no transposition.

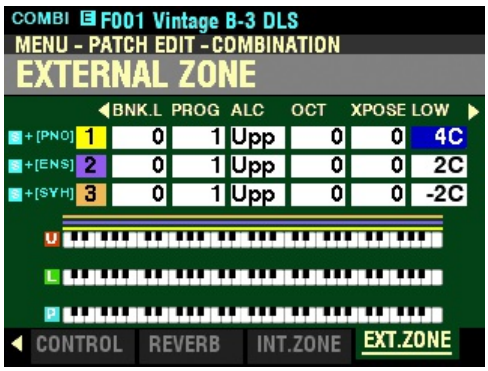
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected External Zone higher.

Turn the VALUE knob to the left to transpose the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "LOW" should be highlighted.

LOW - External Zone Lower Note Limit

This Parameter allows you to set the Lower note limit for the External Zone. You may select from -2C to 8G.

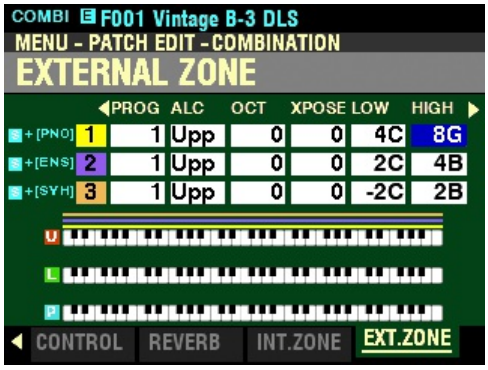
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "HIGH" should be highlighted.

HIGH - External Zone Upper Note Limit

This Parameter allows you to set the Upper note limit for the External Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

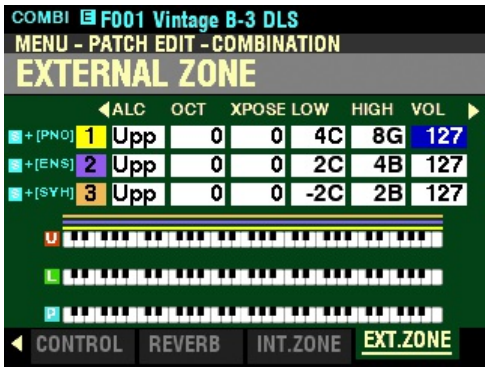
When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

NOTE: The Upper Limit number **cannot** be lower than the Lower Limit number.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

VOL - External Zone Volume

This Parameter allows you to control the volume (Controller #7) of the sound controlled by the selected External Zone. You may select from 0 (no volume) through 127 (maximum volume).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

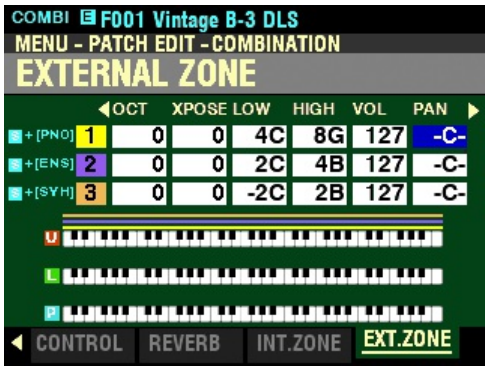
When you have made your selection:

Turn the VALUE knob to the right to increase the volume for the selected External Zone.

Turn the VALUE knob to the left to decrease the volume for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 115 and 131.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "PAN" should be highlighted.

PAN - External Zone Pan

This Parameter allows you to set the directionality or Pan setting (Controller #10). You may select from L63 (the sound plays entirely through the Left channel), through to -C- (the sound is heard equally through both channels) and on through R63 (the sound plays entirely through the Right channel).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

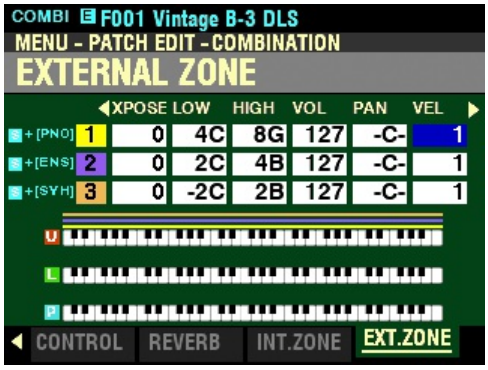
When you have made your selection:

Turn the VALUE knob to the right to emphasize the Right channel for the selected External Zone.

Turn the VALUE knob to the left to emphasize the Left channel for the selected External Zone.

NOTE: In order to hear the effect of this Parameter, the sound controlled from the External Zone must be connected via **Stereo** (both Left and Right channel) outputs.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

VEL - External Zone Velocity

This Parameter allows you to sets the character of the velocity to send to this zone. Th e setting range is Off and 1 to 4. At Off, the velocity is fixed at 100. The "press" (velocity response) of the keyboard progresses from 1 (heavier) through 4 (lighter).

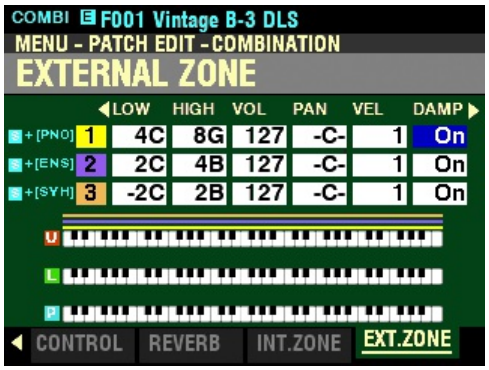
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to make the velocity response for the selected External Zone lighter.

Turn the VALUE knob to the left to make the velocity response for the selected External Zone heavier.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "DAMP" should be highlighted.

DAMP - External Zone Damper

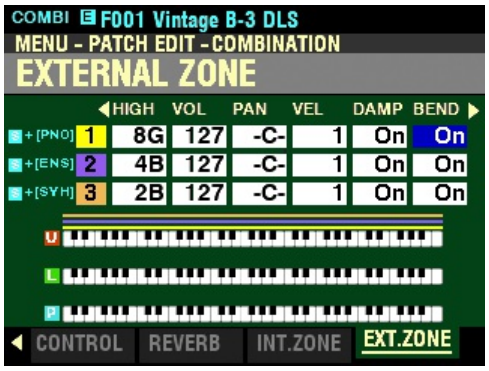
This Parameter allows you to select whether you want to send Damper (Controller #64) information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Damper On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "BEND" should be highlighted.

BEND - External Zone Pitch Bend

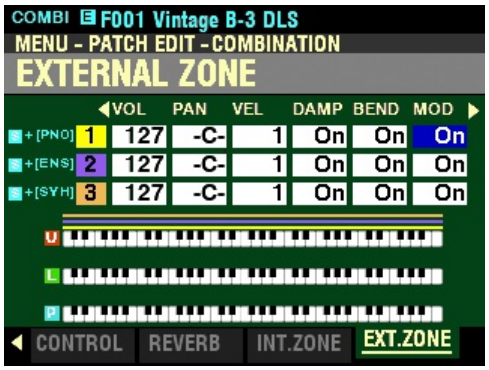
This Parameter allows you to select whether you want to send Pitch Bend information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Pitch Bend On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "MOD" should be highlighted.

MOD - External Zone Modulation Wheel

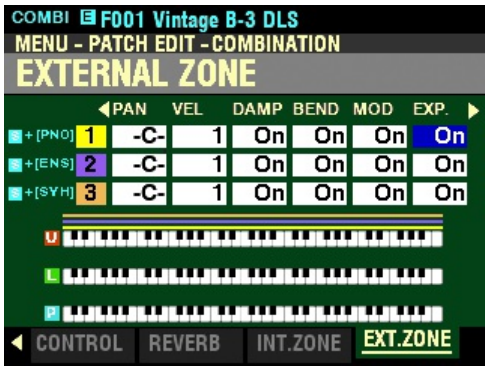
This Parameter allows you to select whether you want to send information from the Modulation Wheel as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Modulation On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "EXP" should be highlighted.

EXP - External Zone Expression ON/OFF

This Parameter allows you to select whether a connected Expression Pedal will affect the selected Zone.

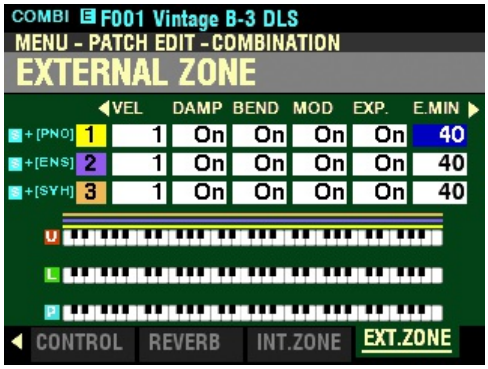
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Expression On or Off for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 115 and 131.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "E.MIN" should be highlighted.

E.MIN - External Zone Minimum Volume

This Parameter allows you to adjust the volume level for the selected External Zone when the Expression Pedal is "closed," or set at minimum. You may select from 0 through 63. At 0 no sound will be heard. At 127 the selected Voice Section will sound at its maximum level regardless of the setting of the connected Expression Pedal.

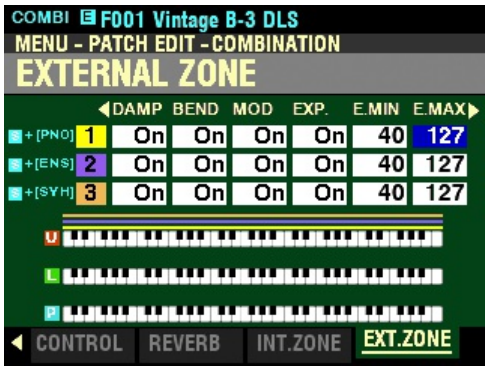
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to set the Minimum Volume for the selected External Zone higher.

Turn the VALUE knob to the left to set the Minimum Volume for the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "E.MAX" should be highlighted.

E.MAX - External Zone Maximum Volume

This Parameter allows you to adjust the volume level for the selected External Zone when the Expression Pedal is all the way "open," or set at maximum. You may select from 64 through 127.

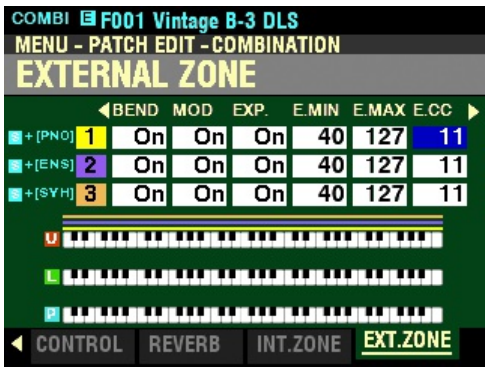
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to set the Maximum Volume for the selected External Zone higher.

Turn the VALUE knob to the left to set the Maximum Volume for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box underneath "E.CC" should be highlighted.

E.CC - External Zone Expression Control Number

This Parameter allows you to select how you want to control the level of the selected External Zone. You may select either 7 (Controller #7 or Volume) or 11 (Controller #11 or Expression).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

Turn the VALUE knob to select 7 or 11.

What Is the Difference Between "Volume" and "Expression?"

In purely technical terms, Volume and Expression are identical - both control loudness or sound level. The difference lies with how they are customarily used in MIDI applications, particularly in creating and playing back MIDI sequences.

The generally accepted protocol is to use Controller #7 (Volume) to set the overall or absolute level of a voice or sound, and use Controller #11 (Expression) to make variations (such as crescendi or diminuendi) against the overall level set by Controller #7. This is recommended particularly if you want to use your SKX PRO as a MIDI input device to record a sequence.

NOTE: In order for the External Zone Volume feature to work, the Expression Control Number must be set to **7** (Volume). If this parameter is set to **11** (Expression), changing the External Zone Volume setting will have no effect.

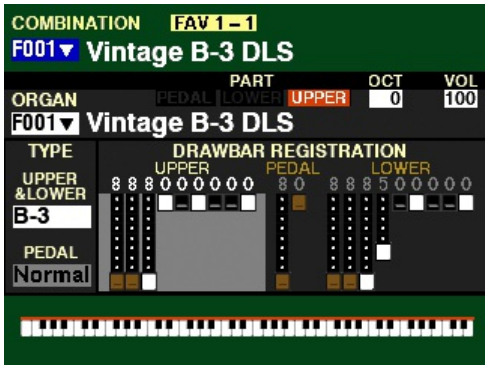
♦ Creating a User Combination

Because each Combination will contain information for each of the Voice Sections, you can customize a Factory Combination by selecting which Voice Sections you want to be active and Recording the result as a User Combination. The following pages will explain how to do this.

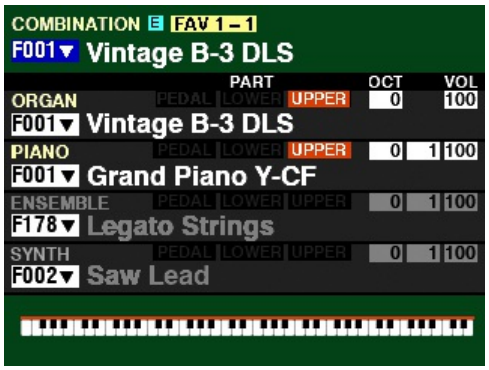
For example, suppose you want to change Combination F001 so that the PIANO Voice Section will be active along with the ORGAN Voice Section (which is already sounding). Please consult page 59 for more information on selecting a Patch within a Combination.

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display looks like this:



2. From the above screen, press the ORGAN and PIANO ALLOCATE buttons together. The Information Center Display will now look like this:



Notice the center of the screen now shows the status of all four Voice Sections. Also notice the ENSEMBLE and SYNTH Voice Sections are "greyed out," meaning they are not currently sounding.

As explained previously, the small letter E at the top indicates you have changed the Combination from its factory setting.

You can now Record the above registration as a User Combination. The following pages explain this in more detail.

♦ Example of Recording a User Combination

The Combination Parameters which can be modified are described and explained on pages 61 through 131, 758.

Now, suppose you have made some changes to any or all of the Combination Parameters and you want to remember the changes you have just made for future use. To do this, you must Record the current settings as a new or User Combination.

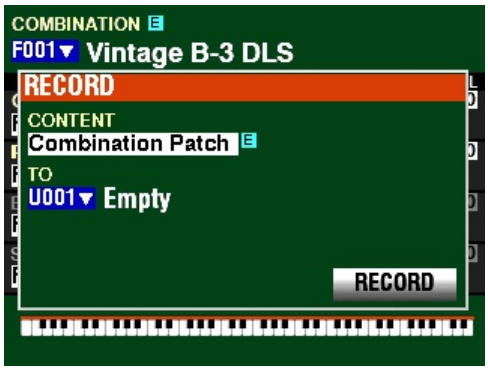
1. After you have edited the Combination Parameters you want to change, press the red RECORD button located to the right of the display. You will see the following message in the display:



Notice that the box underneath "CONTENT" is highlighted.

You can now use the VALUE knob to select what you want to Record. For this example, leave this Parameter set for "Combination Patch," since we are Recording a User Combination.

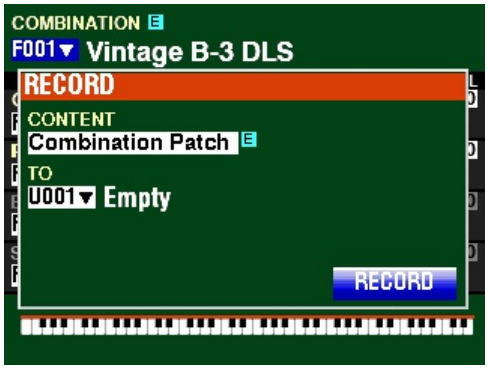
2. From the above screen, press the DIRECTION "▼" button to highlight the box underneath "TO."



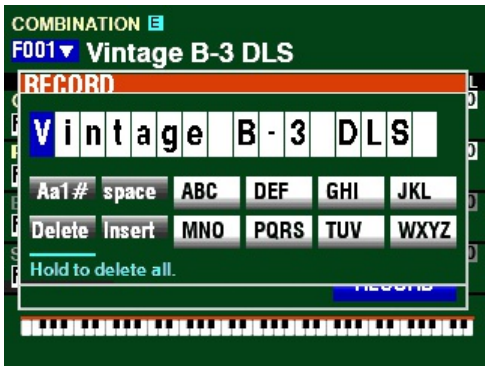
You can now use the VALUE knob to select the User Number which will contain your User Combination. For this example, leave the value set at U001.

NOTE: A User Combination Number which has not been previously Recorded will display, **Empty**. This is a safeguard against overwriting a previous Recorded Combination accidentally.

3. From the above screen, press the DIRECTION "▼" button to highlight the "RECORD" box.



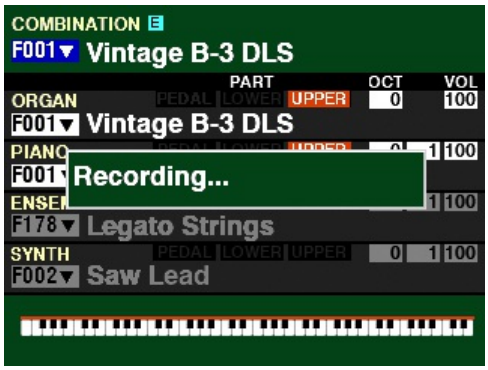
4. Press the ENTER button. The Information Center Display will look similar to this:

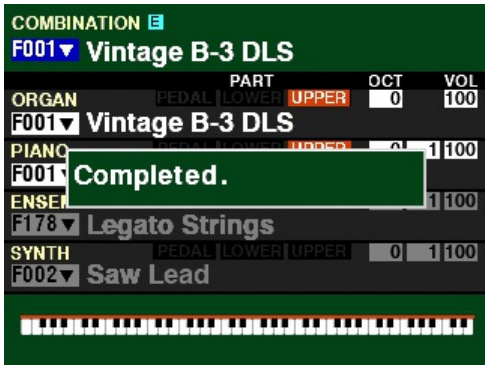


This is the screen you will use to Name your User Combination. For this example, leave the Name shown as it is.

NOTE: The Naming procedure is the same for Combinations, Patches, Bundles and Custom Sets. It is covered in this chapter starting on page 144.

5. Press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





After the "Completed" message disappears, you will see the Combination Number at the top of the screen change to U001. This indicates that a User Combination is now active. If you Rename a Combination, the new Name will display to the right of the Combination Number.

NOTE: After you have created and Recorded a User Combination, you can assign it to a FAVORITE for quick access. More information can be found starting on page 163.

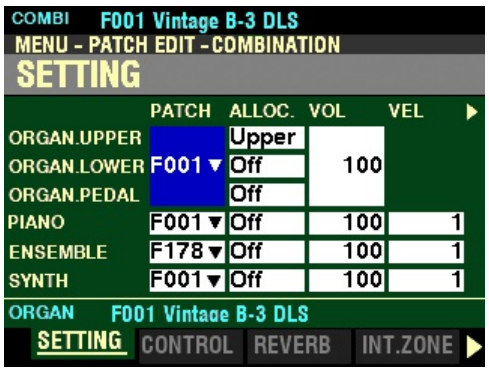
NOTE: When the SK PRO is first turned "ON" and the operating system finishes loading, Combination **F001** is automatically assigned as the default Combination. If you change Combination **F001** and Record it to **U001**, it will be remembered unless you perform a DEFAULT ALL operation to restore the factory settings. For more information, please consult the **SPECIAL UTILITY FEATURES** chapter of this Guide starting on page 788.

♦ COMBINATION APP MENU

When you are editing Parameters for a Combination, you can access the APP MENU to make some editing operations quicker and easier. The following paragraphs will explain this in more detail.

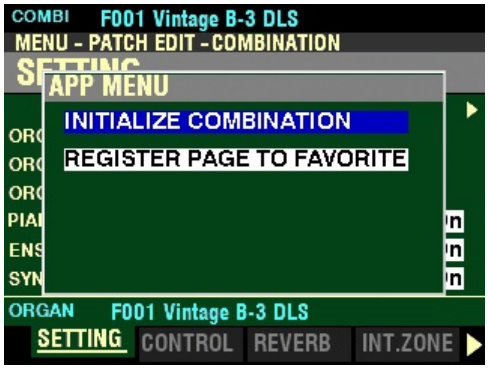
TRY THIS:

1. Access the COMBINATION FUNCTION Mode using any of the methods described starting on page 61. The Information Center Display should look like this:



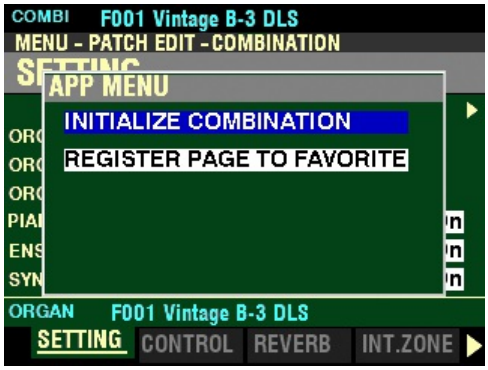
2. Press and Hold the MANUAL "▤" button for approximately 1 second.

3. Release the MANUAL "▤" button. The Information Center Display should now look like this:



This is the APP MENU for the COMBINATION FUNCTION Mode. You can now use the DIRECTION "▲" and "▼" buttons to make changes to the selected Combination. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.

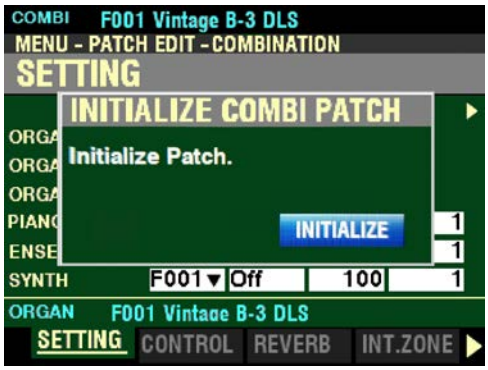


The "INITIALIZE COMBINATION" box should be highlighted.

♦ INITIALIZE COMBINATION

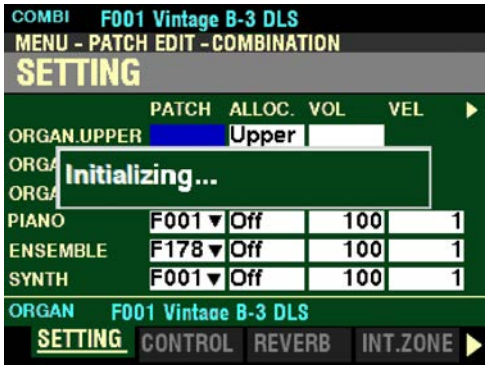
This allows you to clear all the Parameters in the currently selected Combination.

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



The INITIALZE icon will be highlighted.

2. Press the ENTER button to initialize all the COMBINATION Parameters. You will see the following message flash in the display for approximately 1 second::



After the above message disappears, Page 1 of the COMBINATION FUNCTION Mode will reappear.

NOTE: If you DO NOT wish to initialize, press the MENU / EXIT or PLAY button instead of the ENTER button.

From the screen shown at the top of the previous page, press the DIRECTION "▼" button once.



The "REGISTER PAGE TO FAVORITE" box should be highlighted.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

To register the current Page to a FAVORITE, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

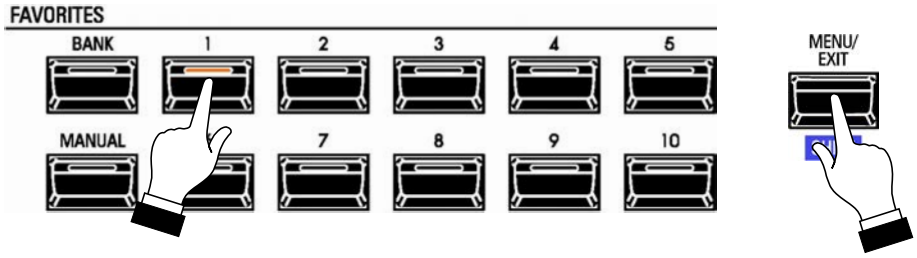


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

◆ PATCHES

As explained previously, the SK PRO has four sound-producing divisions or Sections:

1. ORGAN
2. PIANO
3. ENSEMBLE
4. MONO SYNTH

In the keyboard and synth world, a sound or group of sounds and effects is colloquially known as a Patch. This term derives from old-style synthesizers which used patch cords (originally telephone switchboard-type cords) to connect the various components to produce specific types of sounds. Although modern technology has rendered this technique unnecessary, the term "Patch" has remained (although more recently some manufacturers have adopted other names such as "Tone" or "Voice" to describe collections of sounds and parameters).

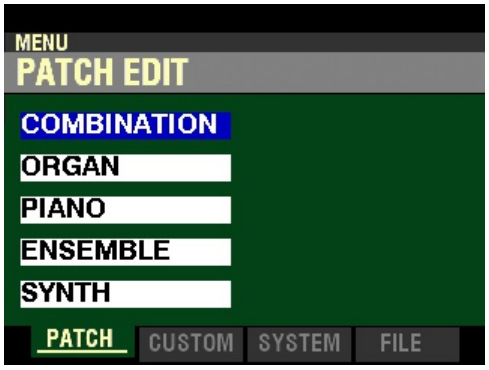
On the SK PRO, a Patch is defined as a collection of Parameter settings for each Voice Group. For example, the ORGAN Voice Section has sounds and Parameters which together constitute an Organ Patch and the PIANO Voice Section has sounds and Parameters which make up a Piano Patch. The same is true for the ENSEMBLE and MONO SYNTH Voice Sections.

NOTE: As explained previously, Patches from the different Voice Sections are combined along with the Combination Parameters to produce a **Combination**.

♦ Voice Sections

TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



This is the PATCH EDIT Menu, which will be the first one displayed. The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button to select a Voice Section. Pressing it once from the screen shown on the previous page will highlight the ORGAN Voice Section. Pressing it multiple times will highlight the other Voice Sections individually.

Press the DIRECTION "▼" button" once:



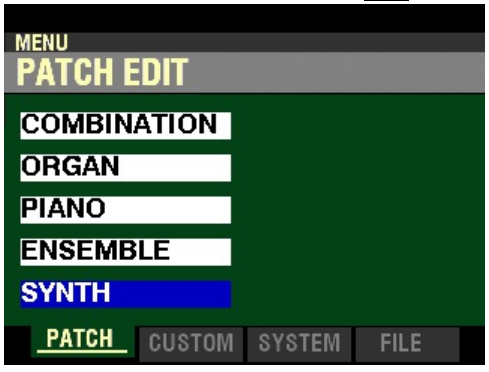
Press the DIRECTION "▼" button two times:



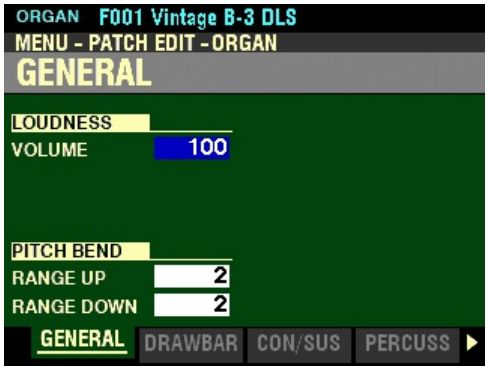
Press the DIRECTION "▼" button three times:



Press the DIRECTION "▼" button four times:



3. After you have made your selection, press the ENTER button. You will see a screen similar to the one shown below:



The Parameters shown will not be identical for all the Voice Sections, but the GENERAL screen will be the first one shown when you follow the procedure described here.

After doing the above, you can begin editing the different Parameters for the Voice Section you have selected and Record them to a User Patch. Your User Patch can then be Recorded into a User Combination if you wish.

NOTE: You can also access the above screen for each Voice Section by pressing the EDIT button associated with that Section or by using the APP MENU. This is explained in more detail in the chapters for each Voice Section.

The chapter for each Voice Section will provide a complete explanation of the Parameters available and how they will affect the sound. Please consult the ORGAN VOICE SECTION, PIANO / ENSEMBLE VOICE SECTIONS or MONO SYNTH VOICE SECTION chapters of this Guide for more information. The APPENDIX will also provide a list of all available Parameters for each Voice Section.

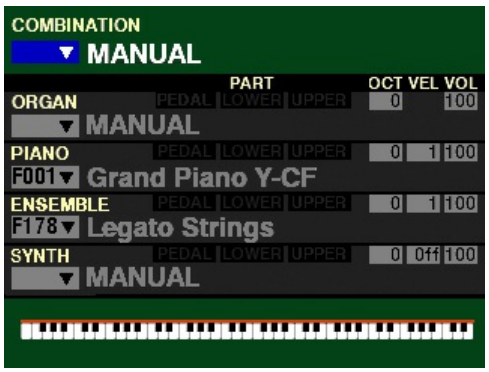
NOTE: You can also create User Patches from existing Factory Patches. For more information consult page 59.

♦ Creating a New User Patch

You can create and Record your own User Patches with your own settings.

TRY THIS:

1 From any of the PLAY Mode Pages, press the MANUAL button. This will disable all Combinations and Patches so that you can create an entirely new Patch. The Information Center Display should display "MANUAL" at the top of the screen.



2. Select which Voice Section you want to work with to make your new Patch - ORGAN, PIANO, ENSEMBLE or SYNTH. If the Voice Section you want to work with is not shown in the display, press the ALLOCATE button associated with that Voice Section. The red LED of the button will light and the Voice Section will show in the display.

3. The FUNCTION Mode of each Voice Section allows you to edit any of the Patches. You can access the FUNCTION Modes of the Voice Sections in several ways. This is explained more fully in the VOICE SECTION chapters of this Guide.

   After you have selected the Patch to be edited, enter the FUNCTION Mode for the Voice Section you are working with. To do this, follow the instructions described on the previous three pages. You can edit as many or as few of the Voice Sections as you wish.

4. Make whatever changes you wish. For a complete list of the Parameters that can be modified for the Patches in each Voice Group, please consult the APPENDIX chapter of this Guide starting on page 831.

   You can find a detailed description of the Patch Parameters for each Voice Section in each of the VOICE SECTION chapters of this Guide.

5. After you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this:

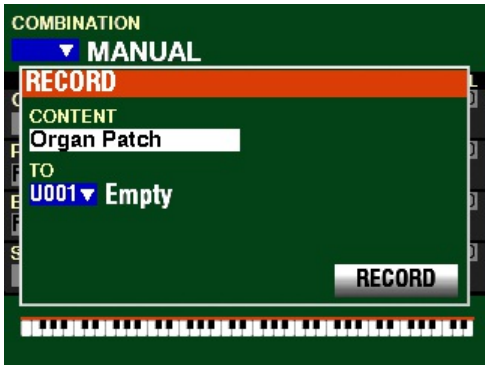


If "Combination Patch" is shown in the box under CONTENT, you will need to use the VALUE knob to select the Voice Section to which to Record the Patch. The data chart below shows the options you may select.

RECORD CONTENT Options	
Content	**Description**
Bundle	Record Combination Parameters, ORGAN Patches and SYNTH Patches.
Combination Patch	Record Voice Sections and Combination Parameters to a Combination.
Organ Patch	Record ORGAN Parameters to an ORGAN Patch.
Piano Patch	Record PIANO Parameters to a PIANO Patch.
Ensemble Patch	Record ENSEMBLE Parameters to an ENSEMBLE Patch.
Synth Patch	Record MONO SYNTH Parameters to a SYNTH Patch.

Bundles and Combinations contain multiple Parameters from different Voice Groups. To Record a Patch for one of the Voice Groups, use the VALUE knob to select ORGAN, PIANO, ENSEMBLE or SYNTH Patches.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the box underneath "TO."

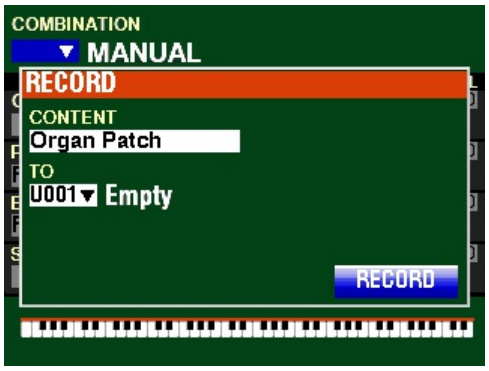


NOTE: For this example, "Organ Patch" is shown.

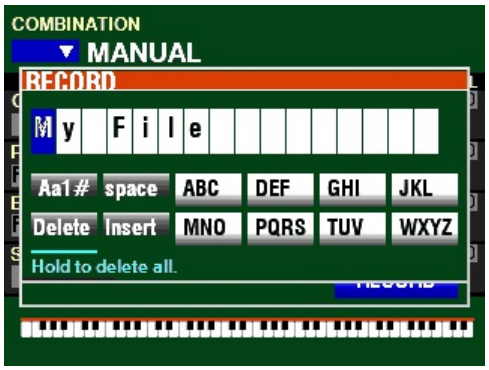
You can now use the VALUE knob to select the User Number which will contain your User Patch.

NOTE: A User Patch Number which has not been previously Recorded will display **Empty**. This is a safeguard against accidentally overwriting a previously Recorded Patch.

7. After you have made your selection, press the DIRECTION "▼" button to highlight the "RECORD" box.



8. Press the ENTER button. The Information Center Display will look similar to this:

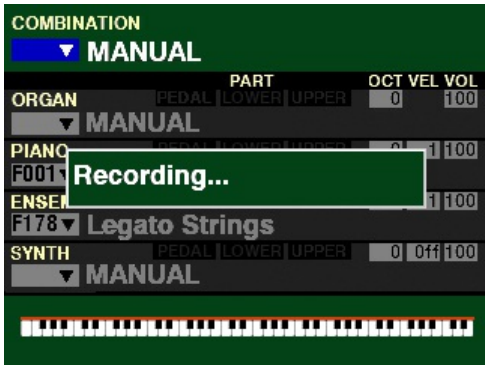


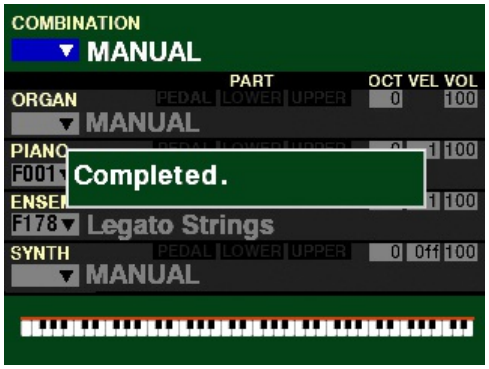
This is the screen you will use to Name your User Patch. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

9. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





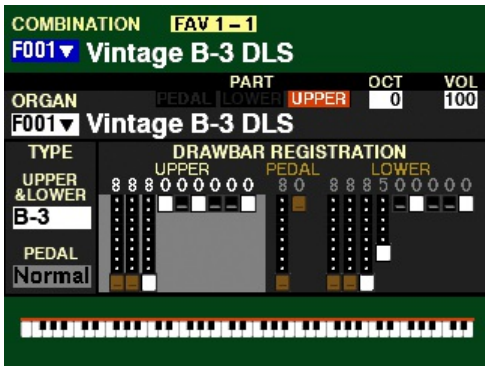
After the "Completed" message disappears, you will see the Number of the Patch you are working with as well as the Name of your new Patch. This indicates that a User Patch is now active.

♦ Editing a Factory Patch

The following pages explain how to modify a Factory Patch and Record it as a User Patch.

TRY THIS:

1. From the opening PLAY screen (shown below), select the Factory Patch you want to change.

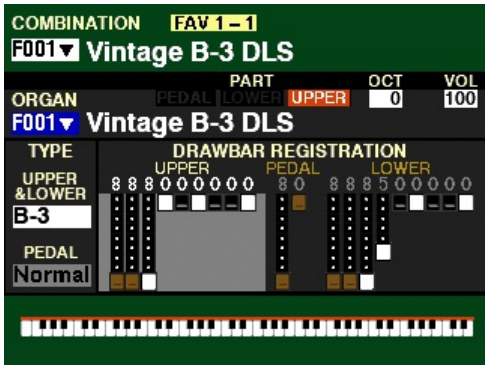


You may select a Factory Patch one of two ways:

1a. If the desired Voice Section is not showing in the display or is "greyed out," press the ALLOCATE button associated with the desired Voice Section "ON."

1b. If the desired Voice Section is showing in the display, use the DIRECTION buttons to highlight the box to the left of the Patch Name.

2. Press the DIRECTION "▼" button to highlight the Voice Section you want to work with. (In the example below, ORGAN is highlighted.)



3. If the Patch Number is not shown in the display, turn the VALUE knob to select the specific Patch you want to modify.

4. The FUNCTION Mode of each Voice Section allows you to edit any of the Patches. You can access the FUNCTION Modes of the Voice Sections in several ways. This is explained more fully in the VOICE SECTION chapters of this Guide.

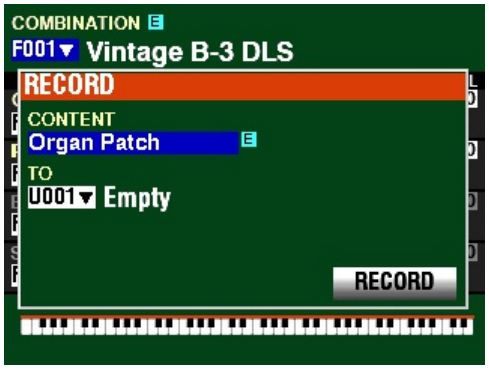
   After you have selected the Patch to be edited, enter the FUNCTION Mode for the Voice Section you are working with.

   For the ORGAN Voice Section, press the UPPER and PEDAL buttons in the DRAWBAR SELECT button section together. For the PIANO and ENSEMBLE Voice Sections, press the EDIT button in the desired button section. For the MONO SYNTH Voice Section, Press and Release the HOLD TO EDIT button.

5. Make whatever changes to the Patch you wish. For a complete list of the Parameters that can be modified for the Patches in each Voice Group, please consult the APPENDIX chapter of this Guide starting on page 831.

   You can find a detailed description of the Patch Parameters for each Voice Section in each of the VOICE SECTION chapters of this Guide.

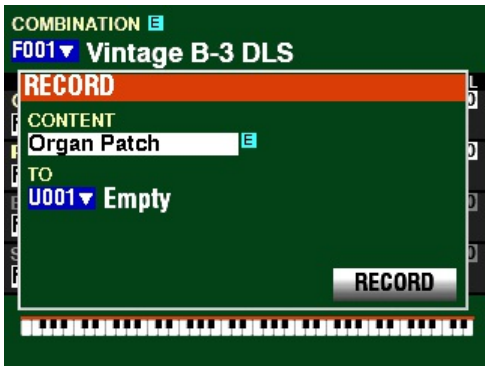
6. After you have finished making your changes, press the RECORD button. The Information Center Display should look similar to this:



   The box underneath "CONTENT" should be highlighted.

7. Use the VALUE knob to select the Voice Section you want to Record - Organ Patch, Piano Patch, Ensemble Patch, or Synth Patch.

8. After you have selected the Voice Section, press the DIRECTION "▼" button once to highlight the box underneath "TO."

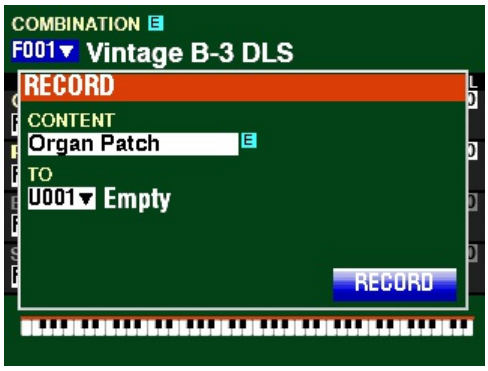


   NOTE: For this example, "Organ Patch" is shown.

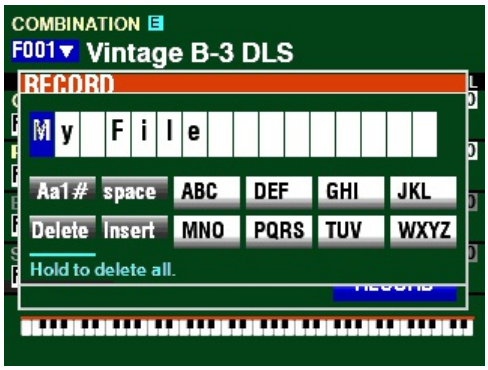
   You can now use the VALUE knob to select the User Number which will contain your User Patch.

   NOTE: A User Patch Number which has not been previously Recorded will display **Empty**. This is a safeguard against accidentally overwriting a previous Recorded Patch.

9. After you have selected the Patch Number, press the DIRECTION "▼" button once to highlight the "RECORD" box.



10. Press the ENTER button. The Information Center Display will look similar to this:

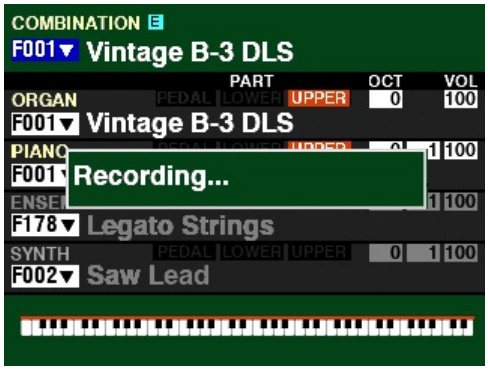


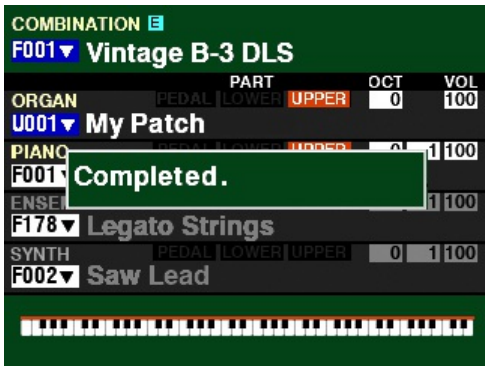
This is the screen you will use to Name your User Patch. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move through the characters.

11. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





NOTE: Do not turn the power "OFF" while the above messages are displaying.

After the "Recording..." message disappears, you will see the Number of the Patch you are working with change from Fnnn to Unnn. This indicates that a User Patch is now active. If you Rename a Patch, the new Name will display to the right of the Patch Number.

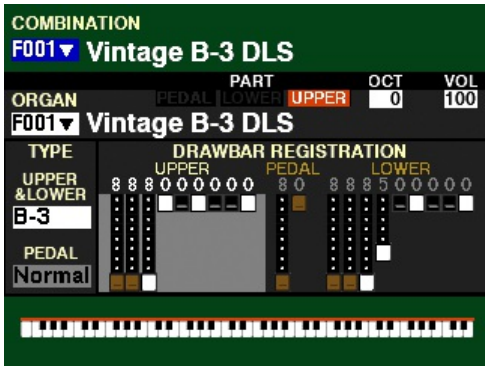
NOTE: If you DO NOT wish to Record, press the MENU / EXIT or PLAY button instead of the ENTER button.

12. Press the PLAY button to return to the PLAY Mode.

♦ Recording a User Patch to a Combination

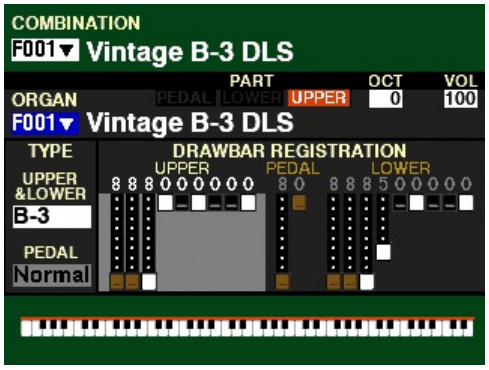
After you have created and Recorded a User Patch, you can then create and Record a User Combination containing your User Patch or Patches. This is explained starting below.

1. Select a Combination.

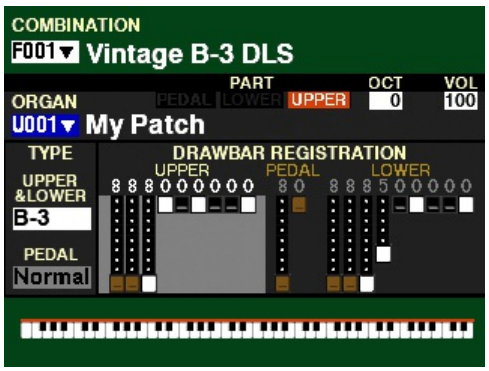


2. Use the DIRECTION "▼" button to highlight the Voice Section containing the Patch you want to include in your User Combination.

NOTE: If you want to include a Patch from a Voice Section not shown in the display, turn the ALLOCATE button for that Voice Section "ON" and use the DIRECTION "▲" or "▼" buttons to highlight the Voice Section you want.



3. Use the VALUE knob to select the User Patch you want to include in your User Combination.



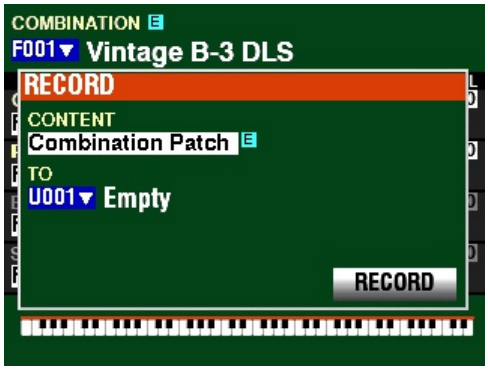
4. After doing the previous steps, press the red RECORD button located to the right of the display. You will see the following message in the display:



Notice that the box underneath ."CONTENT" is highlighted.

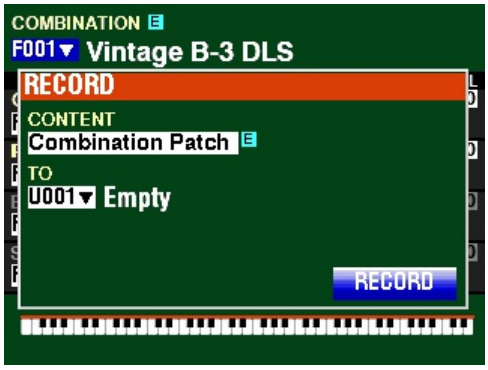
You can now use the VALUE knob to select what you want to Record. For this example, leave this Parameter set for "Combination Patch," since we are Recording a User Combination.

5. From the above screen, press the DIRECTION "▼" button to highlight the box underneath "TO."

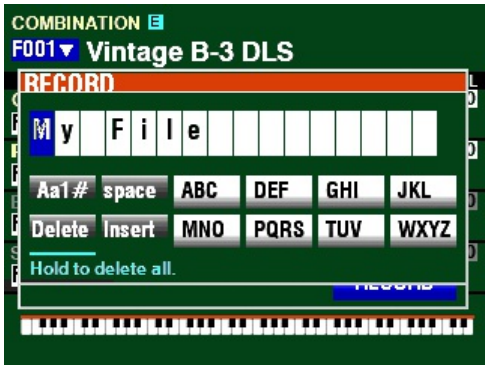


You can now use the VALUE knob to select the User Number which will contain your User Combination. For this example, leave the value set at U001.

6. From the above screen, press the DIRECTION "▼" button to highlight the "RECORD" box.



7. Press the ENTER button. The Information Center Display will look similar to this:

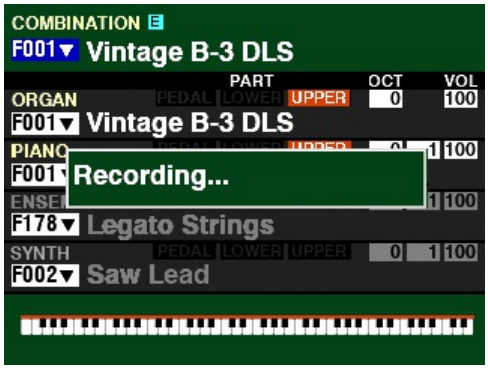


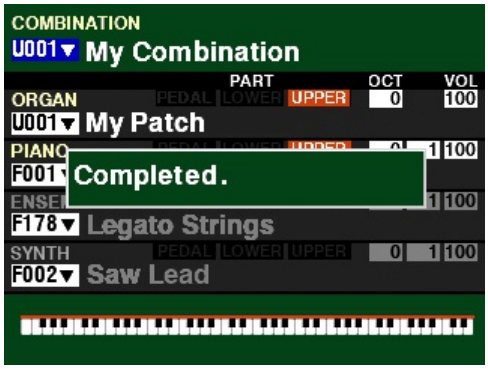
This is the screen you will use to Name your User Patch. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move through the characters.

8. Press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





NOTE: Do not turn the power "OFF" while the above messages are displaying.

After the "Completed." message disappears, you will see the Combination Number at the top of the screen change to Uxxx. This indicates that a User Combination is now active. If you Rename a Combination, the new Name will display to the right of the Combination Number.

NOTE: If you DO NOT wish to Record, press the MENU / EXIT or PLAY button instead of the ENTER button.

9. Press the PLAY button to return to the PLAY Mode. The Combination will show in the display as "Uxxx" followed by the Name.

NOTE: After you have created and Recorded a User Combination, you can assign it to a FAVORITE for quick access. More information can be found starting on page 163.

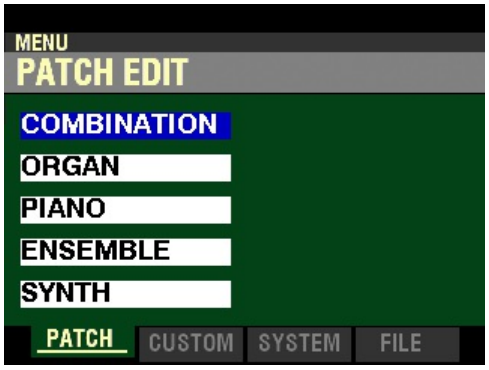
♦ PATCH LOAD FUNCTION Mode

This FUNCTION Mode allows you to select which parts of a Patch will load.

NOTE: The Parameters in this Mode are **System Parameters** and cannot be Recorded to a Combination or Patch; however, they can be Saved as part of a Setup.

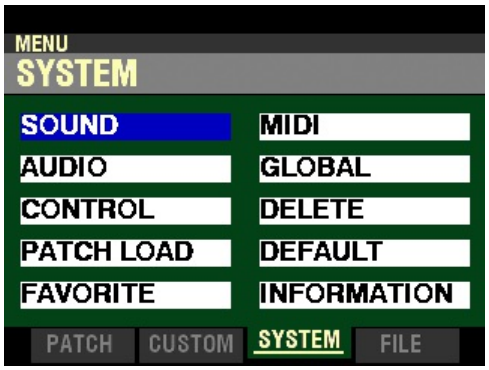
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



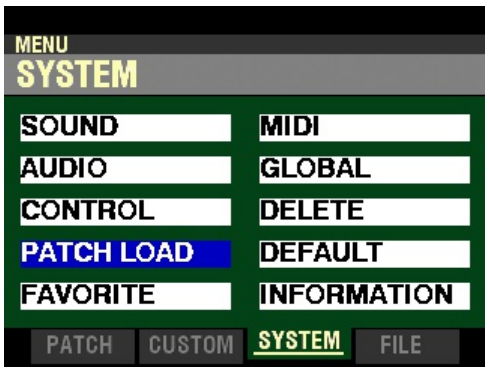
The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times to highlight the "SOUND" box.

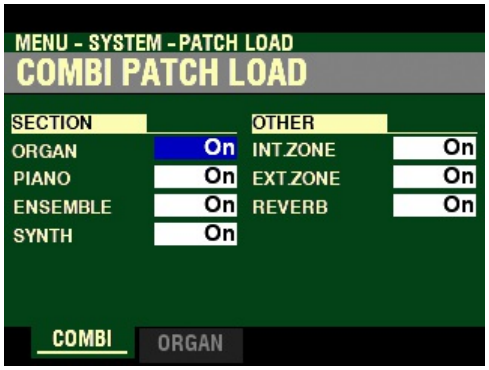


You are now in the SYSTEM Menu.

3. Press the DIRECTION "▼" button three times. The Information Center Display should now look like this:



4. Press the ENTER button. The Information Center Display should now look like this:



The box to the right of "ORGAN" should be highlighted.

COMBI PATCH LOAD

You can now select which portions of the instrument will be Loaded when a Combination is selected. These Parameters are explained starting below.

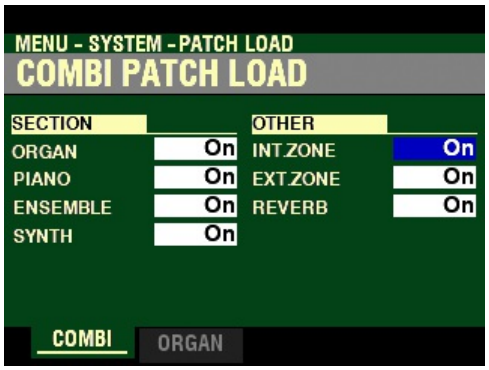
SECTION

The settings of these Parameters determine which Voice Sections will change when a Combination is selected. In this way, if you want only particular Voice Sections to change each time you select a different Combination, you can turn the desired Voice Section "ON" or "OFF."

Use the DIRECTION "▲" and "▼" buttons to move up and down among the Voice Sections.

Turn the VALUE knob to turn the selected Voice Section On or Off.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "INT ZONE" should be highlighted.

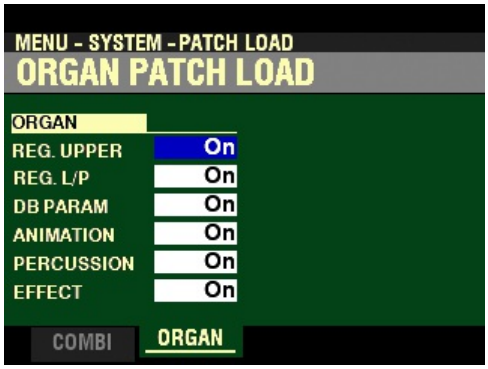
OTHER

The settings of these Parameters determine whether Internal Zones, External Zones or Reverb settings will change when a Combination is selected.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the OTHER Sections.

Turn the VALUE knob to turn the selected Parameter On or Off.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "REG. UPPER" should be highlighted.

ORGAN PATCH LOAD

The settings of these Parameters determine which portions of the ORGAN Voice Section will change when a different ORGAN Patch is selected.

NOTE: If you turn all ORGAN PATCH LOAD Parameters "OFF" except **REG.UPPER**, the ORGAN Patches will function like the Preset Keys of a vintage Hammond Organ, which would change **only** the Drawbar Registrations.

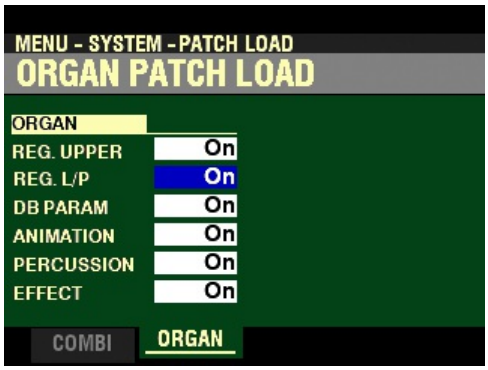
REG. UPPER

This Parameter allows you to select whether you want the Drawbar registration for the UPPER Part to change when you select an ORGAN Patch. The data chart below explains the options.

UPPER DRAWBAR REGISTRATION Options	
Setting	**Description**
On	The UPPER Drawbar Registration will change when an ORGAN Patch is selected.
Off	The UPPER Drawbar Registration will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REG. L/P" should be highlighted.

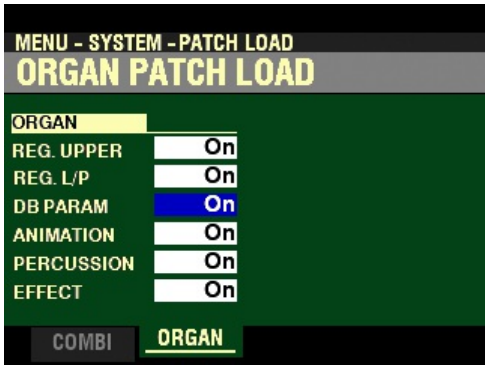
REG. L/P

This Parameter allows you to select whether you want the Drawbar registration for the LOWER and PEDAL Parts to change when you select an ORGAN Patch. The data chart below explains the options.

LOWER / PEDAL DRAWBAR REGISTRATION Options	
Setting	**Description**
On	The LOWER and PEDAL Drawbar Registrations will change when an ORGAN Patch is selected.
Off	The LOWER and PEDAL Drawbar Registrations will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DB PARAM" should be highlighted.

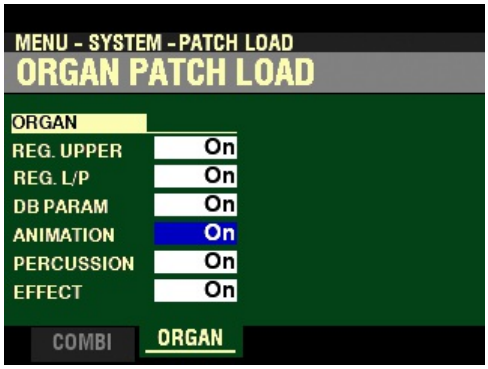
DB PARAM

This Parameter allows you to select whether you want the general ORGAN Section Parameters (such as Contact Parameters and Sustain Parameters) to change when you select an ORGAN Patch. The data chart below explains the options.

DRAWBAR PARAMETER Options	
Setting	**Description**
On	The ORGAN Section Parameters will change when an ORGAN Patch is selected.
Off	The ORGAN Section Parameters will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ANIMATION" should be highlighted.

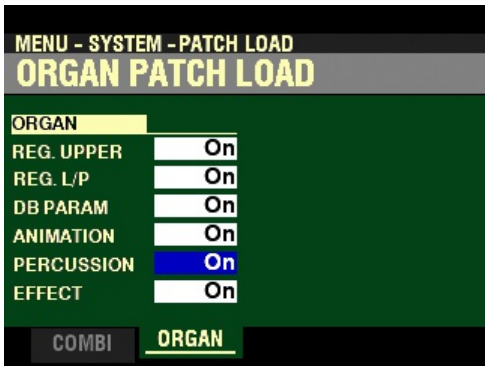
ANIMATION

This Parameter allows you to select whether you want the Animation for the ORGAN Section (Vibrato and Chorus, Leslie, etc.) to change when you select an ORGAN Patch. The data chart below explains the options.

ORGAN SECTION ANIMATION Options	
Setting	**Description**
On	The Animation for the ORGAN Section will change when an ORGAN Patch is selected.
Off	The Animation for the ORGAN Section will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "PERCUSSION" should be highlighted.

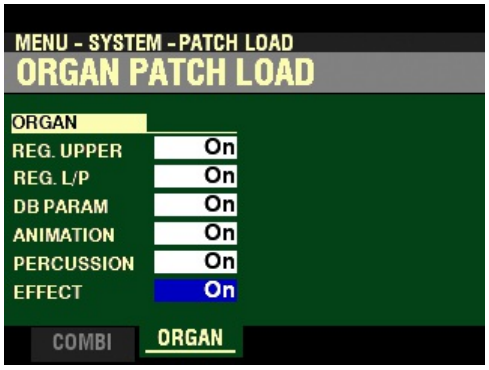
PERCUSSION

This Parameter allows you to select whether you want the PERCUSSION Parameters to change when you select an ORGAN Patch. The data chart below explains the options.

PERCUSSION Options	
Setting	**Description**
On	The PERCUSSION Parameters will change when an ORGAN Patch is selected.
Off	The PERCUSSION Parameters will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "EFFECT" should be highlighted.

EFFECT

This Parameter allows you to select whether you want ORGAN Section Effects (Multi Effects 1&2, Overdrive, Equalizer and Matching Transformer) to change when you select an ORGAN Patch. The data chart below explains the options.

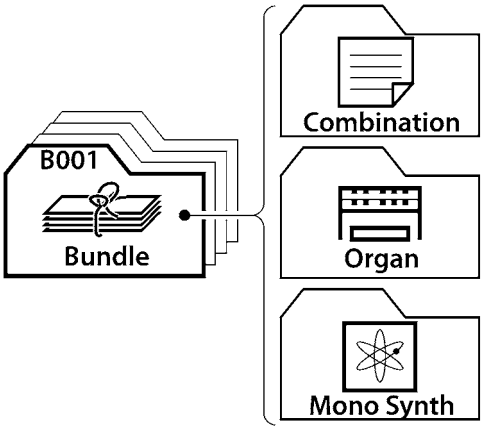
ORGAN SECTION EFFECT Options	
Setting	**Description**
On	The Effects for the ORGAN Section will change when an ORGAN Patch is selected.
Off	The Effects for the ORGAN Section will not change when an ORGAN Patch is selected.

Turn the VALUE knob to turn this Parameter On or Off.

◆ BUNDLES

♦ What Is A "BUNDLE?"

You can Record Combination Parameters, ORGAN Patches and MONO SYNTH Patches to a Bundle. You can then Record the Bundle along with PIANO and/or ENSEMBLE Patches to a Combination. The diagram below shows this in more detail.



By creating and Recording Bundles, you can decrease the number of steps necessary to create a Combination. If you want to change only the settings for the PIANO and/or ENSEMBLE Sections without changing the ORGAN Patches, MONO SYNTH Patches or the basic Combination Parameters, you can create a Bundle which contains the Combination Parameters, ORGAN Patches and SYNTH Patches you want and simply change the PIANO and/or ENSEMBLE Patches to create new custom Combinations.

You can either Record and use a Bundle on its own, or Record a Bundle as an interim step to Recording a Combination if you want several Combinations with the same Combination, ORGAN and SYNTH Parameter settings but different PIANO and/or ENSEMBLE settings.

♦ Creating and Recording a Bundle

TRY THIS:

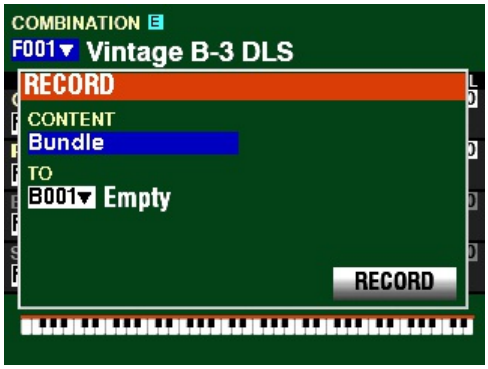
1. Create a Registration using Combination Parameters, ORGAN Section Parameters and MONO SYNTH Parameters.

2. If you have made changes to the ORGAN and/or SYNTH Voice Sections, Record your settings as User ORGAN Patches or SYNTH User Patches. (If you want to include Factory ORGAN or SYNTH Patches in your Bundle you can skip this step.)

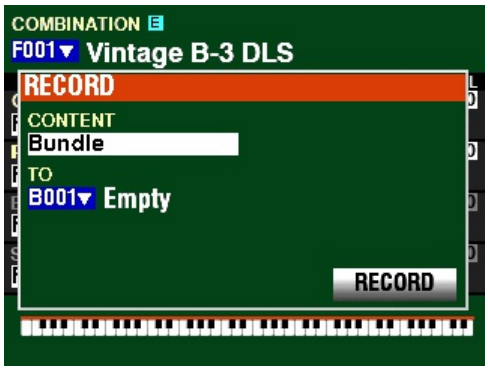
3. After you have made your changes to a Combination and/or to Patches, press the red RECORD button. The RECORD Page will display.



4. Use the VALUE knob to select the Bundle, Combination or Patch you wish to Record. You may select Bundle, Combination Patch, Organ Patch Piano Patch, Ensemble Patch or Synth Patch. For this example, turn the VALUE knob to select Bundle if it is not already displaying.



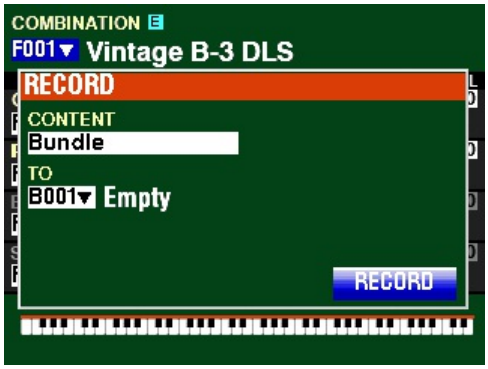
5. From the above screen, press the DIRECTION "▼" button to highlight the box underneath "TO."



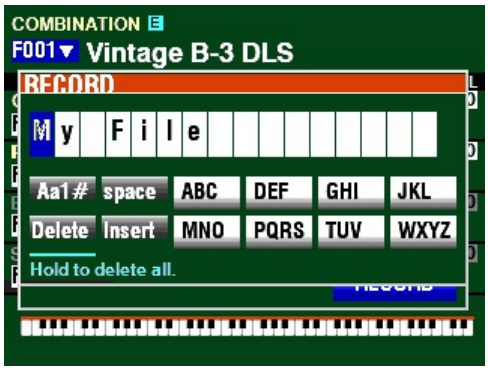
You can now use the VALUE knob to select the User Number which will contain your Bundle.

NOTE: There are **no** Factory Bundles.

6. From the above screen, press the DIRECTION "▼" button to highlight the "RECORD" box.



7. Press the ENTER button. The Information Center Display will look similar to this:

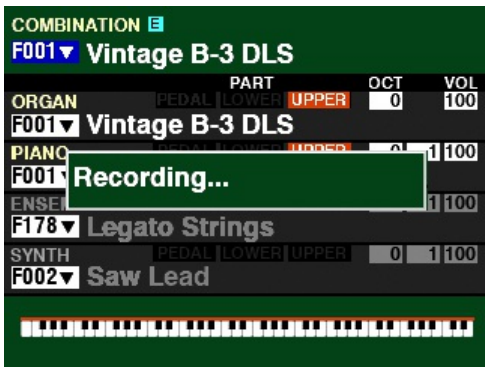


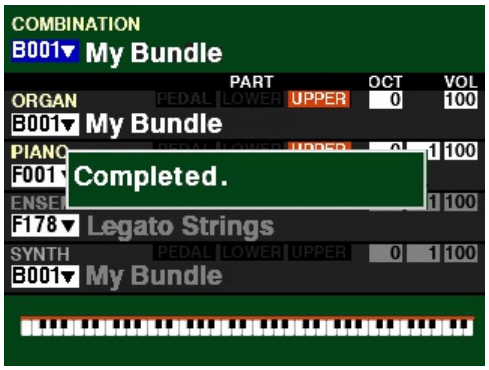
This is the screen you will use to Name your Bundle. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move through the characters.

8. Press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:





NOTE: Do not turn the power "OFF" while the above messages are displaying.

After the "Completed" message disappears, you will see the Bundle Number at the top of the screen change to B001. This indicates that a Bundle is now active. The Bundle Name will display to the right of the Bundle Number.

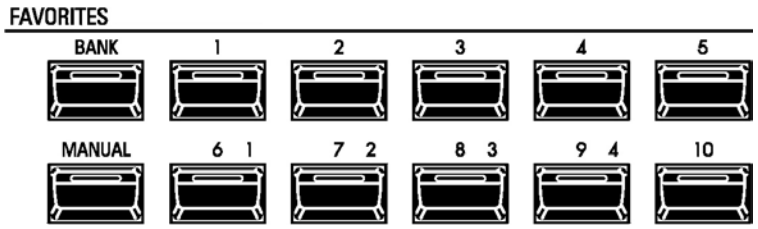
You will also notice the ORGAN and MONO SYNTH Voice Numbers and Names will display the Bundle Name and Number. This is because the ORGAN and MONO SYNTH Parameters are Recorded as part of a Bundle.

. **NOTE:** If you DO NOT wish to Record, press the MENU / EXIT or PLAY button instead of the ENTER button.

9. Press the PLAY button to return to the PLAY Mode. The Bundle will show in the display as "Bxxx" followed by the Name. You can now use the Bundle "as is" or include it in a Combination if you want also to include PIANO and/or ENSEMBLE settings as part of the total registration.

NOTE: See page 133 for more information on how to Record a Combination.

◆ FAVORITES



In order to make Combinations - both Factory and User - easier to use in real-time performance, the SK PRO gives you the ability to use the FAVORITES buttons to access the Combinations you use most frequently quickly. The principle is similar to the buttons on the radio in an automobile which allow you to find your most frequently listened-to stations.

The FAVORITES buttons are used one at a time - pressing a FAVORITES button while another is active cancels the previous Combination and selects the new one.

When the Information Center Display is in the PLAY Mode and a Favorite is activated, the Drawbar settings will change together with the names and volume settings of the Voices shown in the Information Center Display.

When a Favorite is selected, you can change any of the Parameters at any time; however, if you press another FAVORITES button, the settings you have changed will not be remembered. If you first Record the changes you have made, your changes will be remembered the next time you select that Favorite.

NOTE: For a complete listing of Combination and Patch Parameters, please consult the **APPENDIX** chapter of this Guide starting on page 829.

IMPORTANT: Do not confuse Favorites with Combinations or Patches. A Combination is a single registration, and a Patch is a setting for a particular Voice Section. A Favorite is a storage location for a Combination.

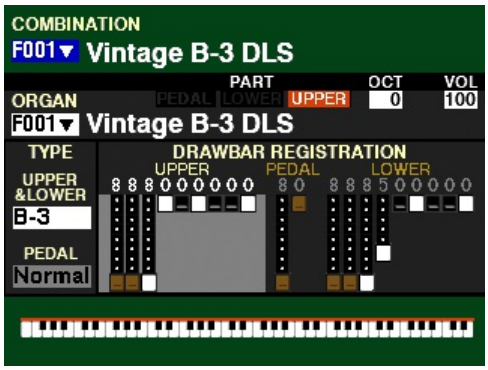
♦ Loading a Combination into a FAVORITE button

Although the FAVORITE buttons have Combinations pre-assigned to them, you can load other Factory Combinations or your own User Combinations to be recalled by FAVORITE buttons. The SK PRO contains ten (10) Banks of ten (10) Combinations each for a total of 100 Combinations.

The Factory (F) Combinations are loaded to the ten Favorite Banks in sequential order - Bank 1 contains Combinations F001 through F010, Bank 2 contains Combinations F011 through F020, etc. However, you can assign any Factory or User Combination to any Favorite. The Factory Combinations and Patches themselves will not be affected if you do so.

TRY THIS:

1. Make sure the Information Center Display is in PLAY Mode and the Combination Number is highlighted, as shown below.



When the Information Center Display is in this mode, pressing any of the numbered FAVORITE buttons will show which Combination is loaded into that particular Favorite.

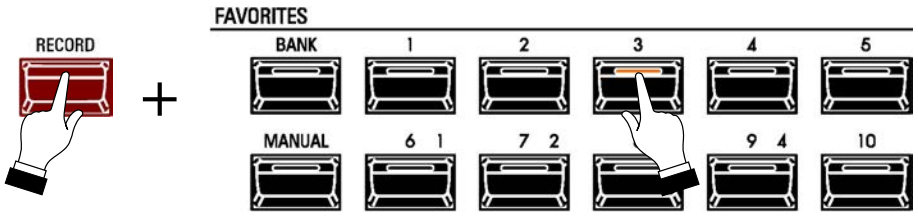
2. Turn the VALUE knob to select the Combination you want to assign as a Favorite.



3. Press and Hold the red RECORD button.



4. While continuing to hold the red RECORD button, press the numbered FAVORITE button you want to use to recall the Combination you have selected.



The orange LED of the FAVORITE button you pressed will flash rapidly several times. When it stops flashing, you will be able to recall your Combination from that FAVORITE button.

♦ FAVORITE BANKS

Your SK PRO contains 10 Banks of Combinations with 10 Favorites per Bank. This gives you a total of 100 Combinations you can access using the FAVORITE buttons.

You can load the FAVORITE buttons with up to ten (10) Banks of Favorites, so that you can have up to 100 Combinations available through the FAVORITE buttons.

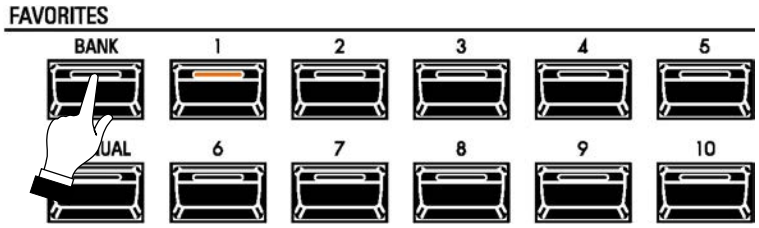
BANK button



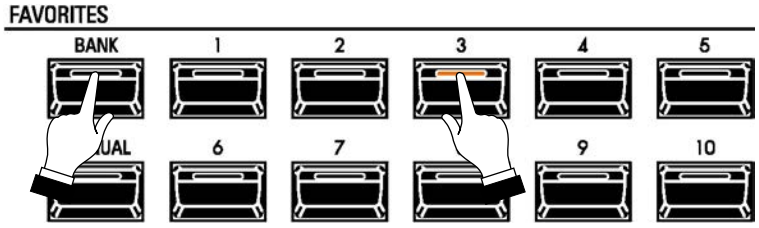
Use this button in conjunction with the numbered FAVORITE buttons to select Favorite Banks.

TRY THIS:

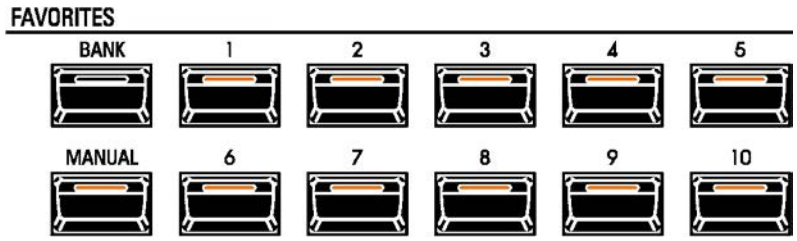
1. Press and Hold the BANK button. A FAVORITE button will light showing which Favorite Bank is currently active. The yellow "FAV" box at the top of the display will also show the currently selected Favorite Bank and the currently selected Favorite Number.



2. While holding the BANK button, press any one of the FAVORITE buttons.

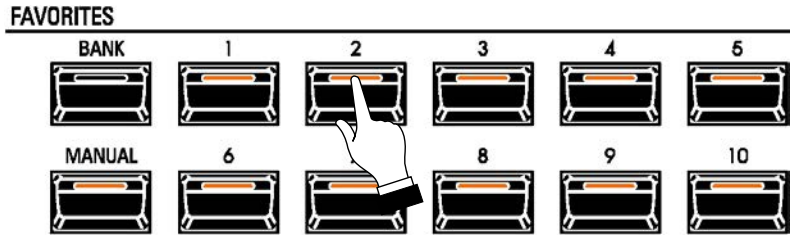


3. Release both buttons. The LEDs in the MANUAL button and all of the FAVORITE buttons will start flashing.



Notice the yellow "FAV" box at the top of the display now shows the Favorite Bank you selected in Step 2.

4. To stop the LEDs flashing and select a Favorite in the Bank selected in Step 2, press any one of the 10 FAVORITE buttons. The LEDs will stop flashing and the LED of the FAVORITE button you selected will stay "ON." Also, the yellow "FAV" box will show the Favorite Bank number you selected in Step 2 as well as the number of the Favorite you just selected.



After doing the above, all the LEDs will turn "OFF" except for the FAVORITE button you just selected. The FAVORITE buttons are now loaded with the Combinations from the Favorite Bank you selected.

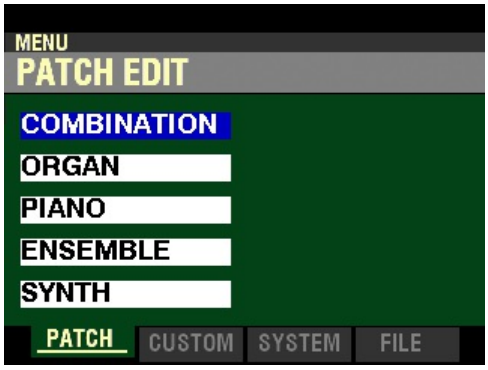
NOTE: You can also assign Favorites and Favorite Banks from the BANK Pages of the **FAVORITE** FUNCTION Mode. This is explained starting on the next page.

♦ FAVORITE FUNCTION Mode

This FUNCTION Mode allows you to adjust different Parameters relating to Favorites.

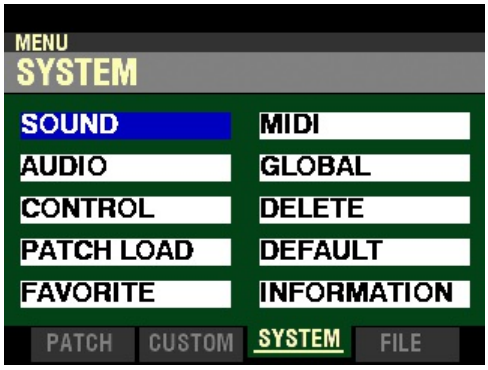
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



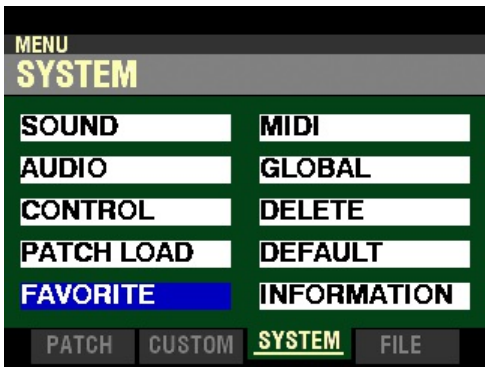
The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times to highlight the "SOUND" box.

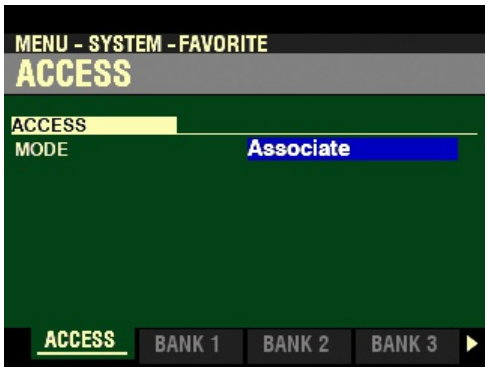


You are now in the SYSTEM Menu.

3. Press the DIRECTION "▼" button four times. The Information Center Display should now look like this:



4. Press the ENTER button. The Information Center Display should now look like this:



The box to the right of "MODE" should be highlighted.

You are now in the FAVORITE FUNCTION Mode. You can now use the DIRECTION buttons in conjunction with the VALUE knob to make various changes to the Favorites. These changes are explained starting below.

ACCESS

MODE

This Parameter allows you to determine the method by which Combinations are accessed and saved to Favorites. The data chart below explains each of the settings.

FAVORITES ACCESS Options	
Setting	**Description**
Associate	This allows you to touch a numbered FAVORITE button to recall the Combination associated with that button. To associate a Combination with a numbered button, Press and Hold the red RECORD button and touch one of the numbered FAVORITE buttons.
Bundle	This allows you to recall Bundles (Combination Parameters, ORGAN and MONO SYNTH Patches). (NOTE: There are no factory-programmed Bundles.)
Direct	Allows you to recall Combinations by using the numbered buttons as a numeric keypad. For example, if you want to recall Combination 099, simply touch "0," "9" and "9" and the ENTER button. (NOTE: This mode cannot associate a Combination to a numbered FAVORITE button.)

Turn the VALUE knob to select Associate, Bundle or Direct.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box underneath "NUMBER" should be highlighted.

NOTE: You can also SHORTCUT into this FUNCTION Mode Page by Pressing and Holding one of the ten FAVORITE buttons. The Combination associated with the button you Press and Hold will be highlighted in the display along with the Favorite Bank, which will be shown at the bottom of the screen.

BANK

PATCH NUMBER

This Parameter allows you to assign individual Combinations or Bundles to FAVORITE buttons for each Favorite Bank. In this way you can create custom Favorite Banks easily and quickly.

The left side of the display shows the Combination or Bundle Number. This number will be the same one shown at the top of the PLAY screen.

The middle portion of the display shows the Name in blue lettering. This name will be shown in the PLAY screen to the right of the Combination or Bundle Number.

Use the DIRECTION "▲" and "▼" buttons to move up and down among the FAVORITE Numbers.

Use the PAGE "◀" and "▶" buttons to move back and forth through the Favorite Banks (1 ~ 10).

Turn the VALUE knob to select from among the available Combinations. You will see the Name change when you select a different Combination.

The following is an example of how to create your own Combination Banks either with Factory Combinations, your own Combinations or Bundles.

TRY THIS:

1. Make sure the MENU-SYSTEM-FAVORITE -BANK 1 FUNCTION Mode Page is displaying (see below):



   The number F001 should be highlighted.

Now, suppose you want to replace Combination F001 with F064 (Oct Saw Lead).

2. Turn the VALUE knob to the right. The Combination Number will change. Continue to turn the VALUE knob until you see Oct Saw Lead in the middle portion of the display.



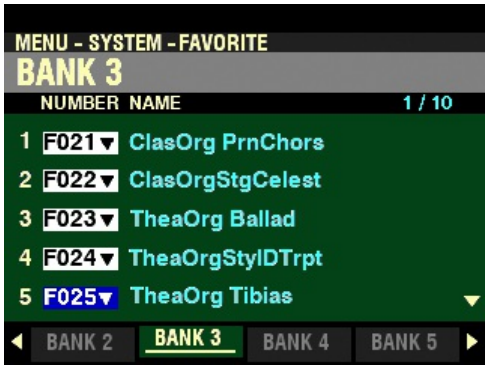
After doing the above, the Oct Saw Lead Combination will be selected the next time you press the FAVORITE 1 button.

Now, suppose you want to make some changes to another Favorite Bank - for example Bank #3.

3. From the screen shown at the bottom of the previous page, press the PAGE "▶" button to select Favorite Bank #3:

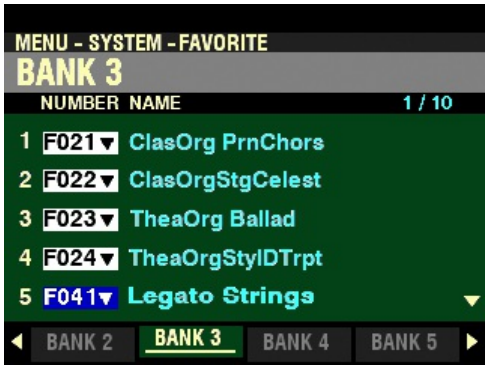


4. Use the DIRECTION "▲" or "▼" buttons to highlight the Favorite you want to change. For this example, select Favorite #5.



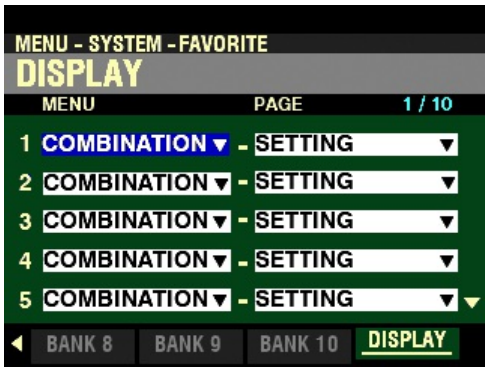
Now, suppose you want to replace Combination F025 with F041 (Legato Strings) for Favorite #5.

5. Turn the VALUE knob to the right. The Combination Number will change. Continue to turn the VALUE knob until you see Legato Strings in the middle portion of the display.



Repeat this procedure as many times as you wish, using the DIRECTION "▲" or "▼" buttons to select FAVORITE Numbers and turning the VALUE knob to select Factory Combinations, User Combinations or Bundles.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button repeatedly until the Information Center Display shows the following:



The box underneath "MENU" should be highlighted.

MENU & PAGE

These Parameters allow you to associate and confirm the assignment of Patches and Display Pages to numbered FAVORITE buttons. Pressing and holding the SHIFT button and pressing a FAVORITE button will display a FUNCTION Mode and a specific Page within the selected FUNCTION Mode.

NOTE: The MENU / EXIT button serves as a SHIFT button when it is pressed and held.

NOTE: You must specify both a MENU and a PAGE in order to make full use of this feature.

MENU

This Parameter allows you to associate a FUNCTION Mode with a FAVORITE button. The data chart below shows the options you may select.

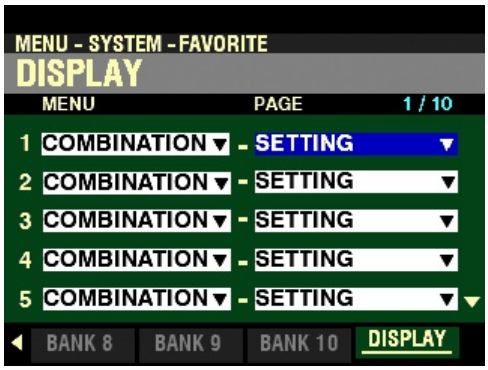
FAVORITE DISPLAY - MENU Options	
Setting	**Description**
COMBINATION, ORGAN, PIANO, ENSEMBLE, SYNTH	Displays the PATCH EDIT FUNCTION Modes.
TONE WHEEL, LESLIE, PEDAL REG., PIPE	Displays the CUSTOM SET FUNCTION Modes.
SOUND, AUDIO, CONTROL, PATCH LOAD, FAVORITE, MIDI, GLOBAL	Displays the SYSTEM FUNCTION Modes (except DELETE, DEFAULT and INFORMATION).

Use the DIRECTION "▲" and "▼" buttons to move up and down through the FAVORITE Numbers.

Turn the VALUE knob to select the option you want.

NOTE: The above Parameter allows you to specify the **MENU** only. The **PAGE** Parameter must also be selected. This is explained on the next page.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "PAGE" should be highlighted.

PAGE

This Parameter allows you to select a Page within the FUNCTION Mode shown to the left to associate with a FAVORITE button. The data chart below shows the options you may select.

FAVORITE DISPLAY - PAGES	
FUNCTION Mode	**Page**
COMBINATION	SETTING, REVERB, CONTROL, INT. ZONE, EX.ZONE
ORGAN	GENERAL, DRAWBAR, CON/SUS, PERCUSS, VIB&CHR, M.TRANS, LESLIE, MFX 1, O.DRIVE, MFX 2, EQUALIZ, TRANS1, TRANS2
PIANO, ENSEMBLE	GENERAL, P.CHORD, LFO 1, LFO 2, COMPO., COMPO.-BASIC, COMPO.-OSC, COMPO.-P.EG, COMPO.-DELAY, COMPO.-FILTER, COMPO.-FIL EG, COMPO.-AMP, COMPO.-AMP EG, MFX 1, O.DRIVE, MFX 2, EQUALIZ,
SYNTH	GENERAL, LFO, OSC, FILTER, P&FEG, AMP, AMP EG, MFX 1, O.DRIVE, MFX 2, EQUALIZ,
TONE WHEEL	SET, FOLD, EACH.WH, LEAK.WH, M.LEVEL
LESLIE	CABINET, SPEAKER ROTOR, MIKING, TRANS
PEDAL REG.	SET, EACH DB
PIPE	SET, UPPER DB, LOWER DB, PEDAL DB
SOUND	M.TUNE, M.EQ
AUDIO	AUDIO, LESLIE
CONTROL	FOOT SW1, FOOT SW2, EXP.PED, DAMPER, USER, P.BEND, TW BRAKE, DISPLAY, PANEL, KEY
PATCH LOAD	COMBI, ORGAN
FAVORITE	ACCESS, BANKS 1 ~ 10, DISPLAY
MIDI	TEMPLATE, GENERAL, SYS EX, CHANNEL
GLOBAL	POWER, USB

Use the DIRECTION "▲" and "▼" buttons to move up and down through the FAVORITE Numbers.

Turn the VALUE knob to select the option you want.

NOTE: These settings are Saved as part of a Setup.

NOTE: You can also associate a numbered button and a display page by pressing a numbered button while holding the SHIFT and RECORD buttons together.

◆ MANUAL button



Normally, one of the FAVORITE buttons is "ON" (LED lit), indicating that a Combination is selected. However, if you want to de-select Combinations and use the front panel controls entirely to control the sound, turn the MANUAL button "ON." The FAVORITE buttons will all turn "OFF" and all sounds and features of the SK PRO will be controlled by the front panel controls as well as by the settings from the Menus.

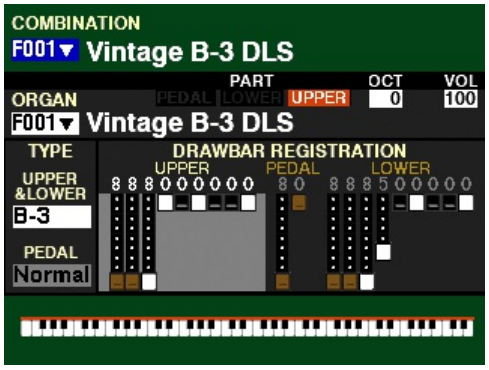
The "MANUAL" feature cancels all Combinations and works much the same way as the "Adjust Presets" on Hammond Organs with Preset Keys or the "Cancel" piston on many classic organs or on electronic home organs such as the Hammond XT/XH-series. The Hammond 935 Church Organ has a feature called "Panel Memory" which performs much the same function.

♦ INITIALIZE MANUAL

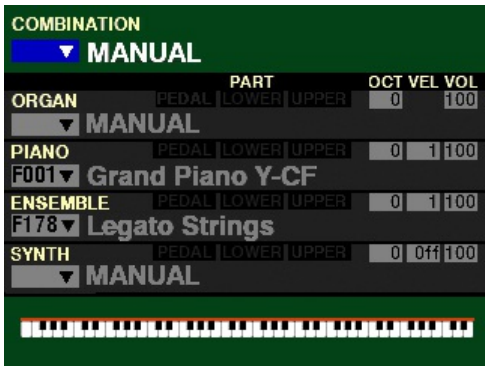
Some Menu Parameters may not be set the way you wish even if the MANUAL button is selected. If you encounter this, you can initialize all the MANUAL Parameters using the following procedure.

TRY THIS:

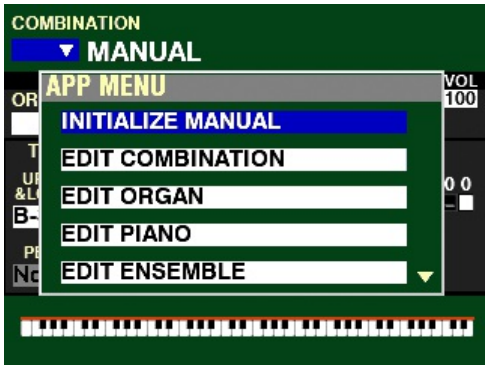
1. Make sure the Information Center Display is in PLAY Mode, as shown below.



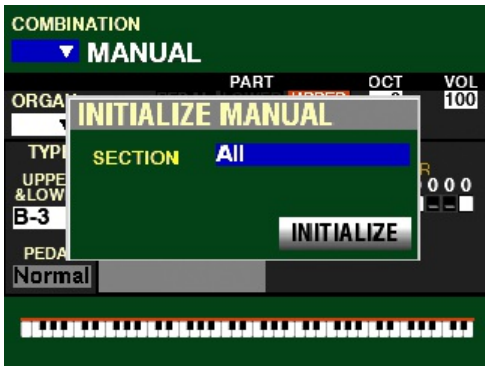
2. Press the MANUAL button "ON" (LED lit).



3. Press and Hold the MANUAL [≡] button to open the APP Menu. The "INITIALIZE MANUAL" box should be highlighted.

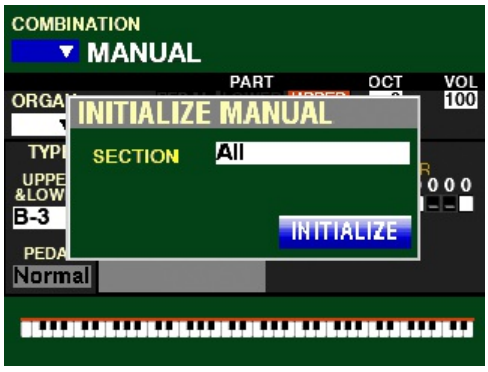


4. Release the MANUAL [≡] button and press the ENTER button. The screen shown below will display.



Use the VALUE knob to select which Section to Initialize - All, Organ or Synth.

5. Press the DIRECTION "▼" button to highlight he "INITIALIZE" box.



6. Press the ENTER button. You will see the message "Initializing..." flash in the display for approximately 1 second.

NOTE: If you DO NOT wish to Initialize, press the MENU / EXIT or PLAY button instead of the ENTER button.

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HAMMOND

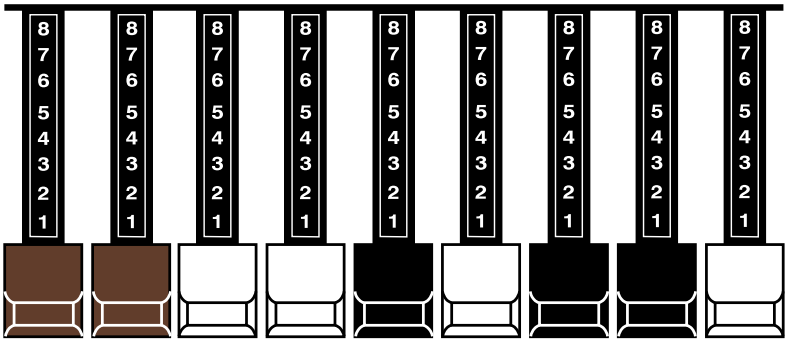
Sk PRO

ORGAN VOICE SECTION

ORGAN VOICE SECTION

The tones produced by the ORGAN Voice Section are controlled by a set of nine Drawbars.

Drawbars, sometimes called Tonebars, are the heart and basis of the renowned Hammond Sound and have been used since the first Hammond Organ Model A introduced in 1935. An explanation of how to use these Drawbars is given later in this chapter of the Guide.

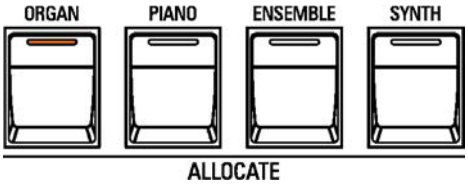


The ORGAN Voice Section can produce three different types of tones (Organ Types):

1. Tone Wheel Organ replicates the performance of a vintage Hammond Organ.
2. Transistor Organ replicates the sounds of various combo organs using solid-state technology.
3. Pipe Organ produces authentic pipe organ tones.

The different Organ Types will be explained later in this chapter of the Guide.

The ORGAN Voice Section will sound when the ORGAN button in the ALLOCATE button section is "ON." The LED will be lit.



◆ ORGAN VOLUME knob

The ORGAN VOLUME knob is located to the left of the Drawbars.
Use this control to raise or lower the volume of the UPPER, LOWER and PEDAL Drawbar tones.

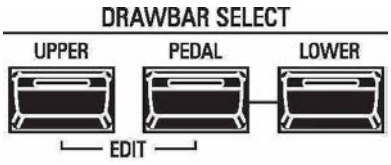


Turn this knob to the right to raise the volume

Turn this knob to the left to lower the volume.

NOTE: If you have an Expression Pedal connected, it will express up to the amount determined by the setting of the ORGAN VOLUME knob.

◆ DRAWBAR SELECT buttons



These buttons allow you to use the Drawbars to control sounds for UPPER. LOWER and PEDAL Parts. If an LED above a button is lit, the Drawbars will control the tones represented by that button.

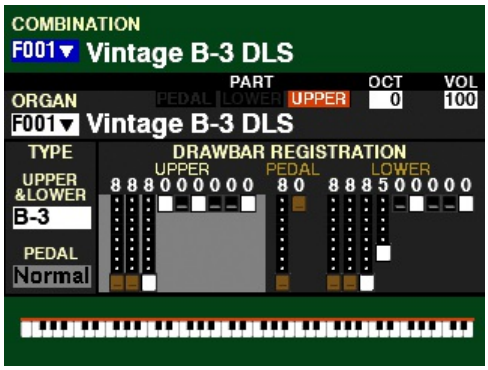
NOTE: One of the DRAWBAR SELECT buttons must be "ON" in order for the Drawbars to control the ORGAN tones.

♦ Using the DRAWBAR SELECT buttons

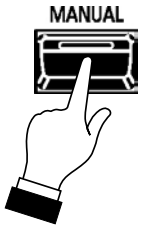
The following examples are designed to acquaint you with the DRAWBAR SELECT buttons.

TRY THIS:

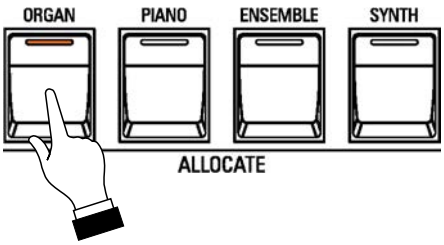
1. After turning the SK PRO "ON," Combination F001 should display (see below).



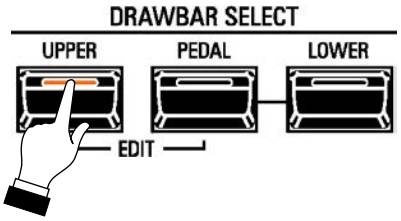
2. Press the MANUAL button. This will de-select Combinations and allow you to use the front panel controls entirely to control the sound, as explained on page 174.



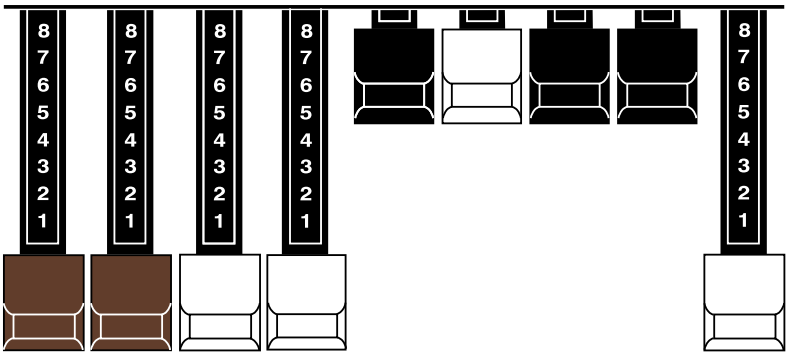
3. Press the ORGAN ALLOCATE button to turn it "ON." The LED will light.



4. If the UPPER button in the DRAWBAR SELECT button section is not "ON," press it to turn it "ON" (orange LED lit).



5. Create a Drawbar registration - for example, 88 8800 008. You can confirm the registration by consulting the Information Center Display.

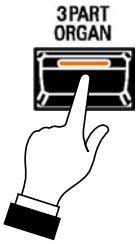


6. Play some notes on the keyboard. You will hear the notes play with the Drawbar registration you just set up.

Now, we will add a Drawbar registration to the LOWER Part.

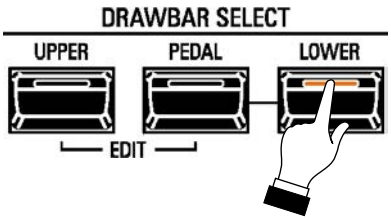
TRY THIS:

1. If the 3PART ORGAN button is not "ON," press it to turn it "ON."

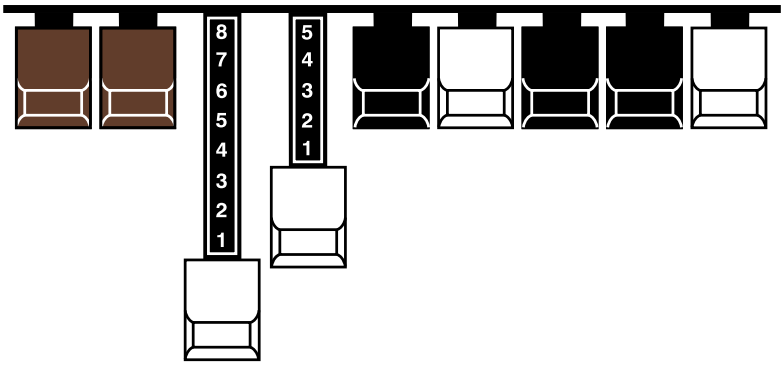


An orange LED will light and the SPLIT button will also turn "ON." This is necessary in order to hear the LOWER Registration.

2. Press the LOWER button in the DRAWBAR SELECT button section to turn it "ON" (LED lit).



3. Create a Drawbar registration - for example, 00 8500 000. You can confirm the registration by consulting the Information Center Display.



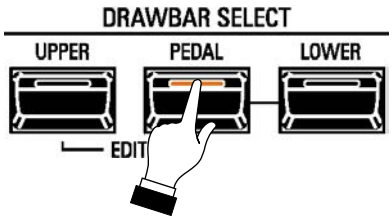
NOTE: If other Drawbars are sounding, pull them out and push them all the way in so that only the Drawbars indicated above will sound.

4. Play some notes on the lower portion of the keyboard. You will hear the notes play with the Drawbar registration you just set up.

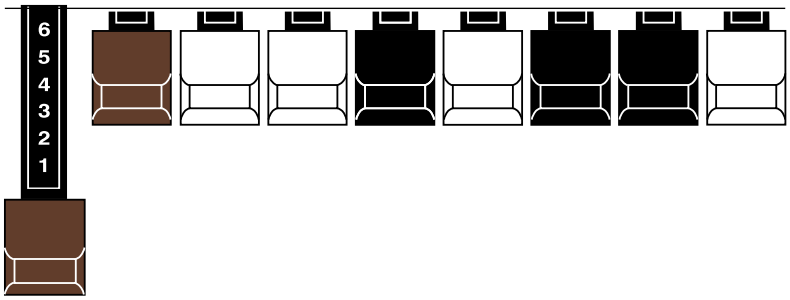
Finally, here is how to add a Pedal or Bass registration.

TRY THIS:

1. Press the PEDAL button in the DRAWBAR SELECT button section to turn it "ON" (red LED lit).



2. Create a Pedal Drawbar registration - for example, 60 0000 000. You can confirm the registration by consulting the Information Center Display.



NOTE: The Pedal tones are created by using ONLY the first **brown** Drawbar and the first **white** Drawbar. This is explained in more detail on page 245.

3. Press the PEDAL TO LOWER button to transfer the Pedal tones to the keyboard and play some notes on the left end of the keyboard. You will now hear the notes play with Pedal tones added.

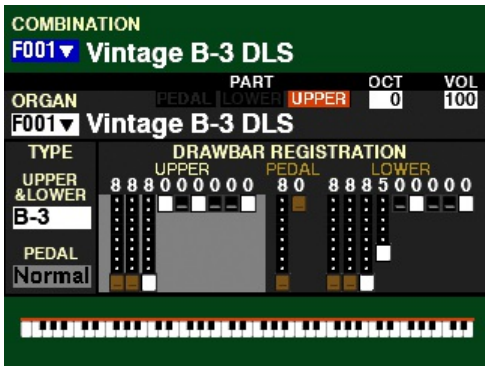
◆ Please Read

On the SK PRO, Drawbar Parameter changes for the PEDAL Part ("P") will not be heard unless the 3PART ORGAN, SPLIT and PEDAL TO LOWER buttons are "ON" or a MIDI pedal clavier is connected.

Notice that only two (2) Drawbar settings are shown for the Pedals in the Information Center Display. On most Hammond Organs with two manuals and pedals, there are two Drawbars for controlling the Pedal tones - one at "16'" pitch and the other at "8'" pitch. The SK PRO recreates this by using the Sub-Fundamental Drawbar (marked "16'") and the Fundamental Drawbar (marked "8'") to control the Pedal sounds. For more information, consult page 245.

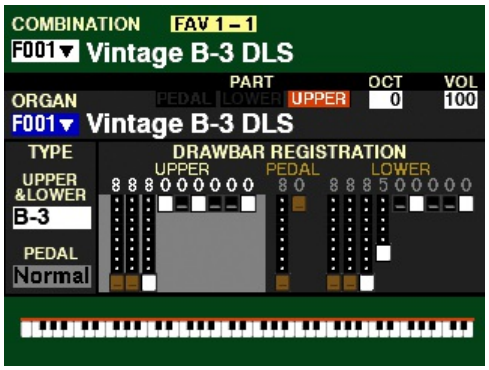
◆ PLAY Mode Parameters

1. After turning the SK PRO "ON," Combination F001 should display (see below).



Each of the Parameters you may change from the PLAY Mode screen will be explained starting below.

From the above screen, press the DIRECTION "▼" button once.



The box underneath "ORGAN" should now be highlighted.

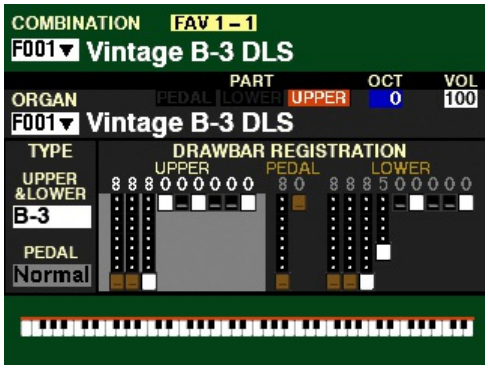
♦ PATCH

This Parameter allows you to select the Patch for the selected Voice Section.

Turn the VALUE knob to the right to scroll up numerically through the Patches.

Turn the VALUE knob to the left to scroll down numerically through the Patches.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should now be highlighted.

♦ OCT

This Parameter allows you to select the Octave range in which the ORGAN Voice Section will play. You may select from -2 (up to two octaves down) to +2 (up to two octaves up).

When you have made your selection:

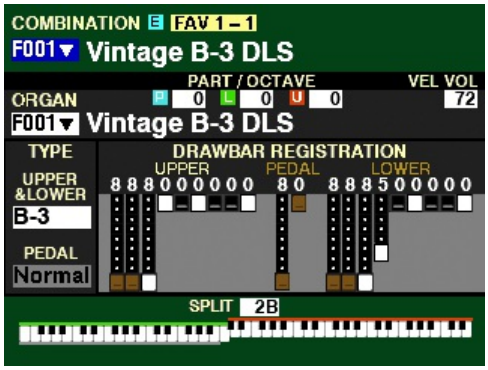
Turn the VALUE knob to the right to raise the Octave for the selected Part.

Turn the VALUE knob to the left to lower the Octave for the selected Part.

NOTE: The actual sounding octave will be the sum of this Parameter plus the **Octave** setting controlled by the OCTAVE buttons on the Control Panel. For more information, please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 652.

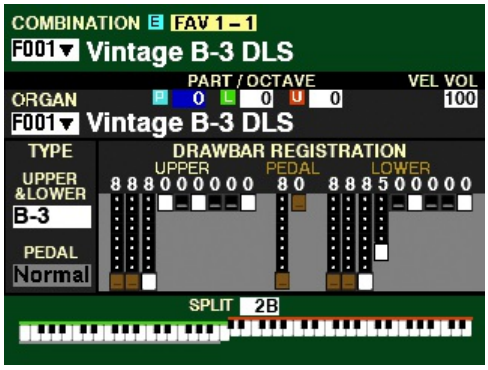
SPECIAL NOTE - 3PART ORGAN

1. From the screen shown at the bottom of the previous page, press the 3PART ORGAN button to turn it "ON" (orange LED lit). The Information Center Display should now look like this:



Notice the PART / OCTAVE boxes just underneath the Combination Name. You can now adjust the Octave settings for the UPPER, LOWER and PEDAL Parts. You may select from -2 (up to two octaves down) to +2 (up to two octaves up).

2. From the above screen , press the PAGE "▶" button once. The Information Center Display should now look like this:



The box underneath "PART" should now be highlighted.

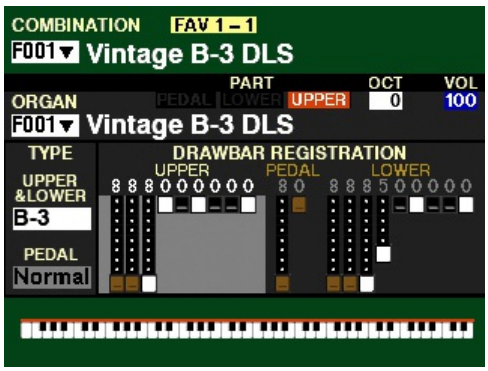
Use the DIRECTION "◀" and "▶" buttons to select U (UPPER), L (LOWER) or P (PEDAL).

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

For the remainder of the explanations in this section, press the 3PART ORGAN button to turn it "OFF." (LED not lit). The 3PART ORGAN feature is covered in more detail starting on page 286.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "VOL" should now be highlighted.

♦ VOL

This Parameter allows you to adjust the Volume of the ORGAN Voice Section. You may select from 0 (no volume) to 127 (maximum volume).

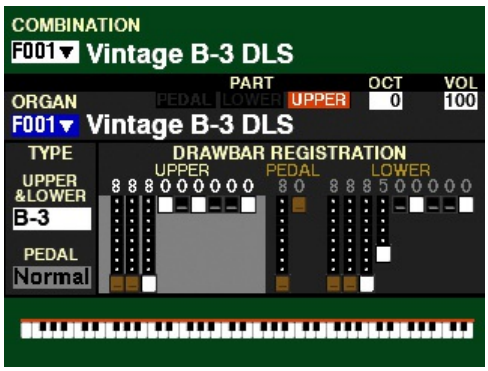
Turn either the VALUE knob or the ORGAN VOLUME knob to the right to increase the Volume.

Turn either the VALUE knob or the ORGAN VOLUME knob to the left to decrease the Volume.

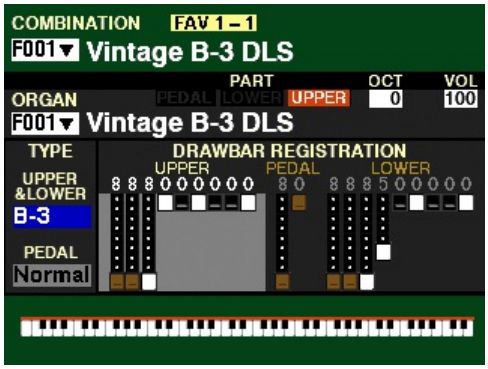
NOTE: The function of this Parameter is duplicated by the VOL (Volume) Parameter in the **COMBINATION** FUNCTION Mode. For more information consult page 66.

From the screen shown on the previous page:

1. Use the DIRECTION buttons to highlight the box underneath "ORGAN."



2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



The box underneath "UPPER & LOWER" should now be highlighted.

♦ UPPER & LOWER

This Parameter allows you to change the sound of the Drawbars for the UPPER and LOWER Parts. The data chart below shows the options you may select.

UPPER & LOWER ORGAN TYPE Options	
Setting	**Description**
A-100, B-3, C-3	Reproduces the sounds of various Tone-Wheel™ generators from vintage Hammond Organs.
Mellow	Produces very pure sine-wave tones similar to all-electronic Hammond Organs such as the Concorde, Grandee, Monarch, etc.
Vx.	Reproduces a vintage British combo organ.
Farf.	Reproduces a vintage Italian combo organ.
Ace.	Reproduces a vintage Japanese combo organ.
Pipe	Produces authentic Classic and Theatre pipe organ tones.

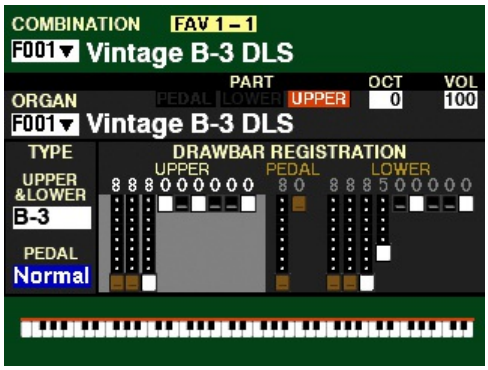
Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

NOTE: The function of this Parameter is duplicated by the UPPER & LOWER TYPE Parameter in the **DRAWBAR** Page of the **PATCH EDIT -ORGAN** FUNCTION Mode. For more information consult page 194.

NOTE: For more information about Organ Types, consult the **ORGAN TYPES** section of this chapter starting on page 235.

From the screen shown in the middle of the previous page, press the DIRECTION "▼" button once.



The box underneath "PEDAL" should now br highlighted.

♦ PEDAL

This Parameter allows you to select the Organ Type for the PEDAL Part. The data chart below shows the options you may select.

PEDAL TYPE Options	
Setting	**Description**
Normal	Produces the traditional tone-wheel registration of the B-3 / C-3 / A-100.
Muted	Produces very mellow analog-type pedal tones.

Turn the VALUE knob to select Normal or Muted.

NOTE: The function of this Parameter is duplicated by the PEDAL TYPE Parameter in the **DRAWBAR** Page of the **PATCH EDIT -ORGAN** FUNCTION Mode. For more information consult page 197.

NOTE: When one of the Transistor Organs (**Vx.** , **Farf.** or **Ace**.) is selected for the UPPER & LOWER Keyboard, **Muted** is automatically selected for the PEDAL Part.

NOTE: When the **Pipe** Organ Type is selected, the Pedal tones automatically become Pipe Organ tones and this Parameter is disabled.

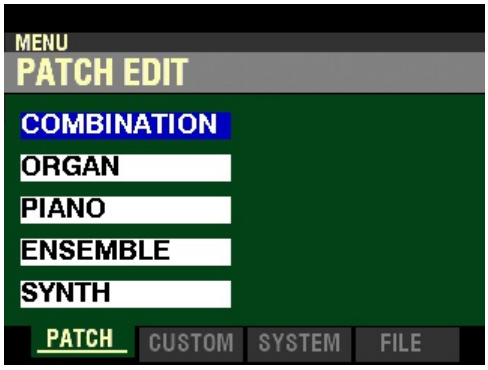
NOTE: If the 3PART ORGAN button is not "ON" (LED lit), the box for this Parameter will be "greyed out." However, you can still adjust this Parameter using the procedure described above. If the 3PART ORGAN button in turned "ON," the box will show a white background when not highlighted and the backgrounds for the LOWER and PEDAL Drawbars will switch from dark grey to light grey indicating the LOWER and PEDAL Drawbars are active.

◆ PATCH EDIT -ORGAN FUNCTION Mode

This FUNCTION Mode allows you to make various changes to the characteristics of the ORGAN Voice Section.

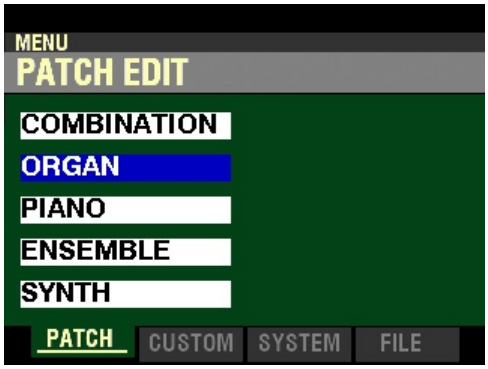
♦ Accessing the PATCH EDIT -ORGAN FUNCTION Mode using the MENU / EXIT button:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

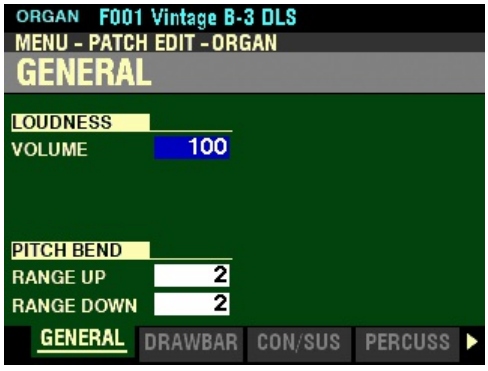


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

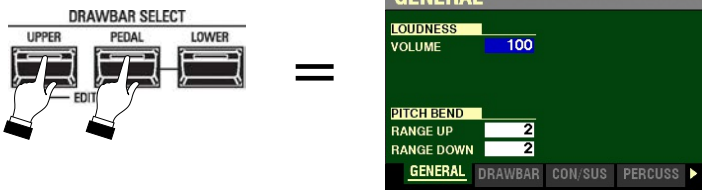


3. Press the ENTER button. The Information Center Display should now look like this:



♦ Accessing the PATCH EDIT -ORGAN FUNCTION Mode using the Shortcut:

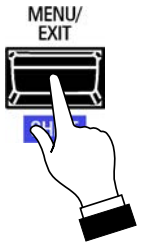
Press the UPPER and PEDAL DRAWBAR buttons together.



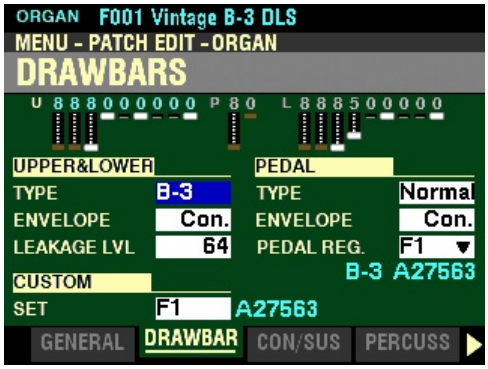
When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

♦ Accessing the PATCH EDIT -ORGAN FUNCTION Mode using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.



2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:

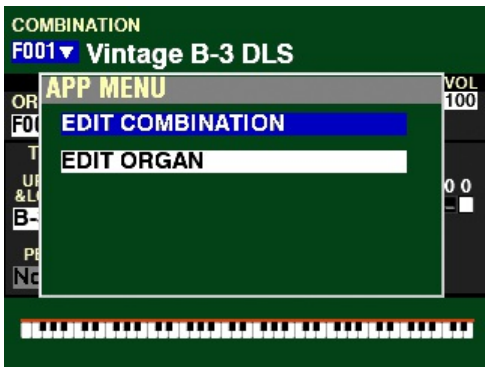


3. Release the SHIFT button.

NOTE: The above screen is the second Screen of the **PATCH EDIT -ORGAN** FUNCTION Mode Page. To see the opening screen (**GENERAL**) after using the SHIFT button, press the PAGE "◀" button **once**.

♦ Accessing the PATCH EDIT -ORGAN FUNCTION Mode using the APP MENU:

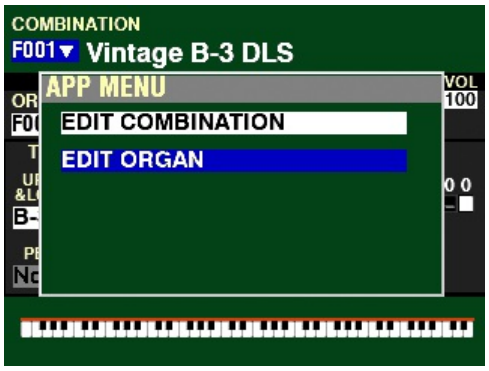
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



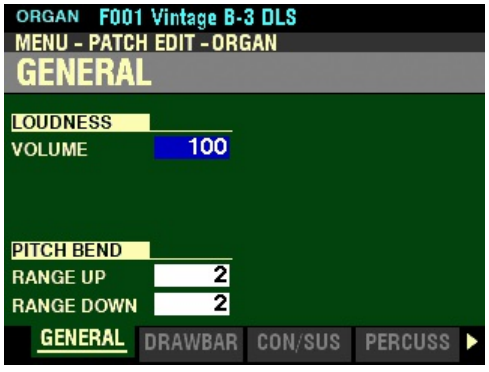
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.

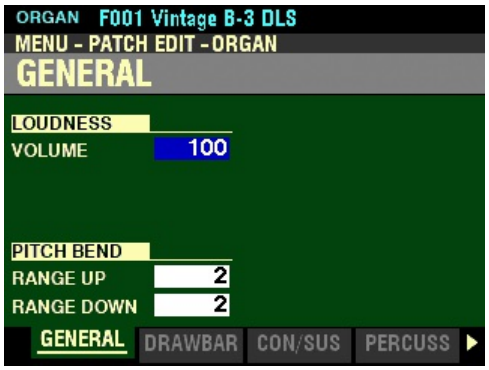


3. Press the ENTER button. You will see the screen shown below.



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the selected ORGAN Patch. These changes are explained starting on the next page.

♦ GENERAL Parameters



LOUDNESS

VOLUME

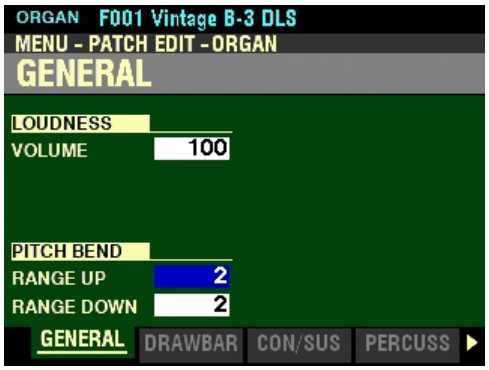
This Parameter allows you to adjust the maximum level of the selected ORGAN Patch. You may select from 0 (no Volume) to 127 (maximum Volume).

Turn the VALUE knob to the right to increase the Loudness of the Patch.

Turn the VALUE knob to the left to decrease the Loudness of the Patch.

NOTE: The **Loudness** Parameter serves to set the maximum volume of the selected ORGAN Patch and works independently of the ORGAN VOLUME knob. The overall volume of the ORGAN Voice Section is controlled by the ORGAN VOLUME knob. The MASTER VOLUME knob and/or a connected Expression Pedal will control the volume of the entire instrument.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RANGE UP" should be highlighted.

PITCH BEND

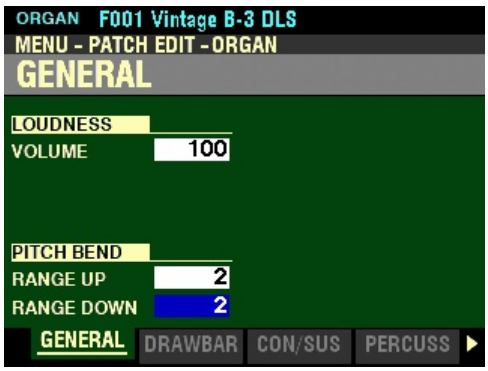
RANGE UP

This Parameter allows you to set the amount by which the pitch will bend up using the Pitch Bend Wheel for the ORGAN Voice Section. The lowest setting is 0 (no change), while the highest setting is 12 (twelve half-steps, or one full octave up). The default setting is 2.

Turn the VALUE knob to the right to increase the upward Range.

Turn the VALUE knob to the left to decrease the upward Range.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "RANGE DOWN" should be highlighted.

RANGE DOWN

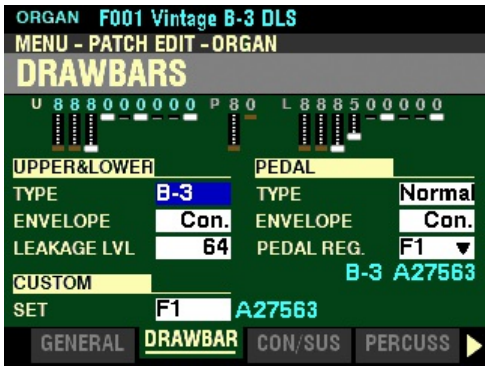
This Parameter allows you to set the amount by which the pitch will bend down using the Pitch Bend Wheel for the ORGAN Voice Section. The lowest setting is 0 (no change), while the highest setting is 24 (twenty-four half-steps, or two full octaves down). The default setting is 2.

Turn the VALUE knob to the right to increase the downward Range.

Turn the VALUE knob to the left to decrease the downward Range.

♦ DRAWBARS Parameters

From the screen shown on the previous page, press the PAGE "▶" button once.

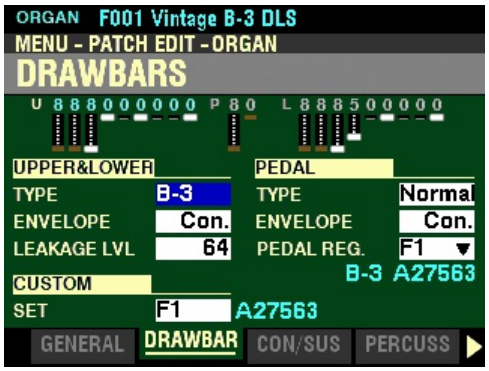


This FUNCTION Mode Page allows you to:

1. See the current Drawbar registration for the currently selected ORGAN Patch.
2. Select the Organ Type for the UPPER and LOWER Parts.
3. Select the Organ Type for the PEDAL Part.
4. Select the Attack and Release Envelopes for the UPPER and LOWER Parts.
5. Select the Attack and Release Envelope for the PEDAL Part.
6. Select the amount of Leakage for the UPPER and LOWER Parts.
7. Select the registration for the Pedal Drawbars.
8. Select the Custom Set for the ORGAN Voice Section.

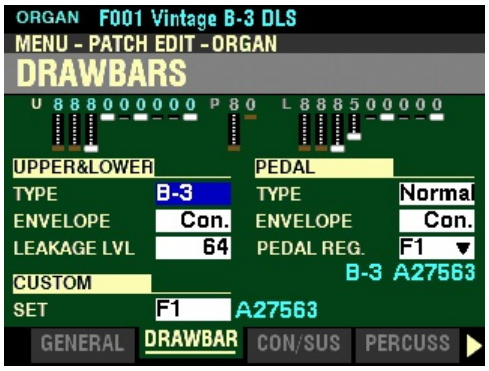
DRAWBAR REGISTRATION

You will see the Drawbar registration for the currently selected ORGAN Patch at the top of the display.



NOTE: The Drawbar registration shown will be the one programmed in the currently selected ORGAN Patch. Therefore, it may not correspond with the physical Drawbar positions. However, if you move any of the Drawbars, the display will show the position or positions of the Drawbar or Drawbars you moved.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "TYPE" should be highlighted.

UPPER & LOWER

TYPE

This Parameter allows you to change the sound of the Drawbars for the UPPER and LOWER Parts. The data chart below shows the options you may select.

UPPER & LOWER ORGAN TYPE Options

Setting	Description
A-100, B-3, C-3	Reproduces the sounds of various Tone-Wheel™ generators from vintage Hammond Organs.
Mellow	Produces very pure sine-wave tones similar to all-electronic Hammond Organs such as the Concorde, Grandee, Monarch, etc.
Vx.	Reproduces a vintage British combo organ.
Farf.	Reproduces a vintage Italian combo organ.
Ace.	Reproduces a vintage Japanese combo organ.
Pipe	Produces authentic Classic and Theatre pipe organ tones.

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

NOTE: The function of this Parameter is duplicated by the UPPER & LOWER Parameter in the ORGAN Play Mode Page. For more information consult page 186.

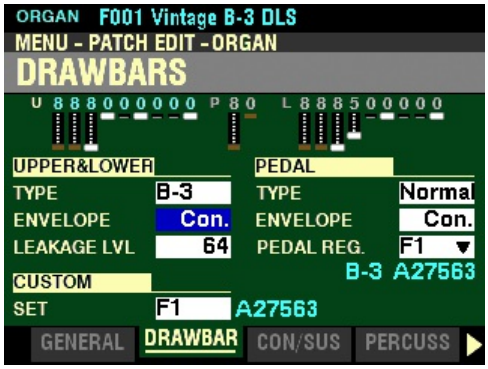
NOTE: The **A-100**, **B-3**, **C-3** and **Mellow** Organ Types are traditional settings modeled from vintage Hammond Organs. You can customize each one of these Organ Types to your liking. This is explained in the **CUSTOM SETS** chapter of this Guide starting on page 475.

NOTE: The **Vx.**, **Farf.** and **Ace.** Organ Types change the operation of the Drawbars from the traditional Hammond Harmonic Drawbar functions. This is explained starting on page 246 of this chapter of the Guide.

NOTE: The **Pipe** Organ Type changes the operation of the Drawbars to function similar to drawstops or stop tablets on a pipe organ. This is explained in the **CUSTOM SETS** chapter of this Guide starting on page 527.

NOTE: In software version 1.7, the Drawbar graphics in the Information Center Display will show traditional Hammond Drawbars for the **A-100**, **B-3**, **C-3** and **Mellow** Organ Types. If the **Vx.**, **Farf.**,**Ace.** or **Pipe** Organ Types are selected, the Drawbar graphics will change to show the voices for those Organ Types. For a full explanation of how the Drawbars are configured for each Organ Type, consult the **ORGAN TYPES** section of this chapter starting on page 235.

From the screen shown on the previous page, press the DIRECTION "▼" button <u>once</u>.



The box to the right of "ENVELOPE" should be highlighted.

ENVELOPE

WHAT IS "KEY CLICK?"

On a tone-wheel Hammond Organ, each time a key is depressed with an active Drawbar registration, a Key Click (or Key Pop) is heard just before the note sounds. This is because, unlike other electrical or electronic musical instruments, the sound is always present at the key contacts. Therefore, pressing a playing key will likely intercept the sound wave at some point along its excursion, creating a "spike" or attack transient. This transient is heard as "Key Click." Since the generated sound is interrupted when a key is both pressed and released, there is a Release Key Click as well as an Attack Key Click.

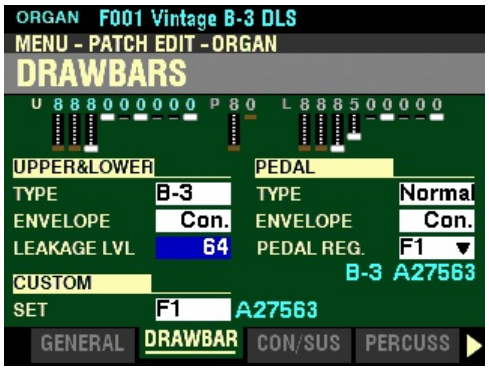
The ENVELOPE Parameter allows you to replicate this characteristic of vintage tone-wheel organs. You can adjust the rate of Attack (when a key is depressed) and Release (when the key is released). The data chart below shows the options you may select.

UPPER & LOWER ATTACK & RELEASE ENVELOPE Options	
Setting	**Description**
Con	This is the envelope of the key-click(s) generated with the Virtual Multi-Contacts.
1 ~ 15	This is the rate of Attack. The greater the value, the slower the Attack (the speed at the which the Drawbar registration sounds when a key is depressed).
R1 ~ R15	This changes the Release rate. The Attack rate is that provided by the Virtual Multi-Contacts. This means that the onset of the tone will be instantaneous while the Release rate is regulated by the numerical setting.
AR1 ~ AR15	This Parameter allows you to change both the Attack and Release rates simultaneously. At higher numerical settings the Attack and Release will be slow, similar to that of a pipe organ.

Turn the VALUE knob to select the Attack and Release characteristics you prefer.

NOTE: This Parameter is **<u>not</u>** available for the **<u>Pipe</u>** Organ Type.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LEAKAGE LVL" should be highlighted.

LEAKAGE LVL

WHAT IS "LEAKAGE?"

In a vintage Hammond Organ, each tone-wheel rotates next to a magnet. These are mounted in separate bins to isolate them from each other and prevent the magnets from intercepting frequencies from neighboring wheels; however, a small amount of current may still "leak" through, producing a phenomenon called Leakage. Leakage is usually heard as a "hash" type sound consisting of many frequencies sounding at once. A properly calibrated organ will have a minimum of this effect; however, an instrument which has been subjected to hard use over a period of time may exhibit more leakage noise.

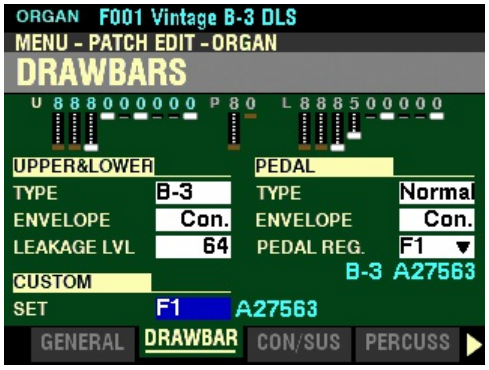
This Parameter allows you to adjust the total volume of the Leakage tone. You may select from 0 (no Leakage) to 127 (maximum amount of Leakage.

Turn the VALUE knob to the right to increase the volume of the Leakage tone.

Turn the VALUE knob to the left to decrease the volume of the Leakage tone.

NOTE: This Parameter is **not** available for the **Transistor** (**Vx**, **Farf** and **Ace**) or **Pipe** Organ Types.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SET" should be highlighted.

CUSTOM ORGAN SET

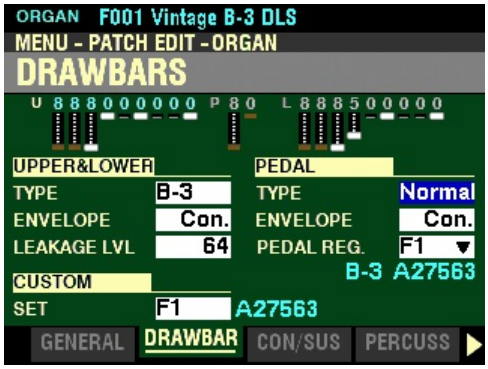
This Parameter allows you to select a customized set for each Tone Wheel Organ and Pipe Organ. There are three Factory (F) Custom Sets for each of the Tone Wheel Organs and Pipe Organ. You may select any of these, or if you have created and saved your own Custom Organ Set(s), you may select them as well. These will be identified by a number preceded by a U for User. You can save up to three (3) Custom Organ Sets for each Tone Wheel Organ and Pipe Organ.

Turn the VALUE knob to select the CUSTOM ORGAN SET you want.

NOTE: This Parameter is **not** available for the **Transistor** (**Vx**, **Farf** and **Ace**) Organ Types.

NOTE: For more information about Custom Organ Sets, consult the **CUSTOM SETS** chapter of this Guide.

From the screen at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE."



PEDAL

TYPE

This Parameter allows you to select the Organ Type for the PEDAL Part. The data chart below shows the options you may select.

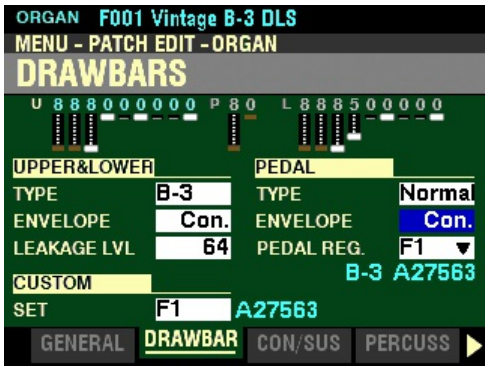
PEDAL TYPE Options	
Setting	**Description**
Normal	Produces the traditional tone-wheel registration of the B-3 / C-3 / A-100.
Muted	Produces very mellow analog-type pedal tones.

Turn the VALUE knob to select Normal or Muted.

NOTE: When one of the Transistor Organs (**Vx.** , **Farf.** or **Ace**.) is selected for the UPPER & LOWER Keyboard, **Muted** is automatically selected for the PEDAL Part.

NOTE: When the **Pipe** Organ Type is selected, the Pedal tones automatically become Pipe Organ tones and this Parameter is disabled.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "ENVELOPE" should be highlighted.

ENVELOPE

This Parameter allows you to adjust the rate of Attack (when a pedal is depressed) and Release (when the pedal is released). The data chart below shows the options you may select.

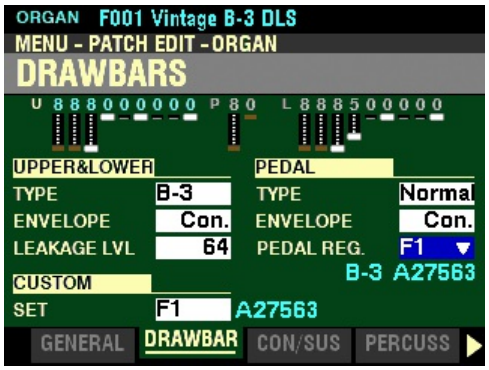
PEDAL ATTACK & RELEASE ENVELOPE Options	
Setting	**Description**
Con	This is the envelope of the key-click(s) generated with the Virtual Multi-Contacts.
1 ~ 15	This is the rate of Attack. A higher value will result in a slower Attack (the speed at the which the Drawbar registration sounds when a pedal is depressed).
R1 ~ R15	This Parameter changes the Release rate. The Attack rate is that provided by the Virtual Multi-Contacts. This means that the onset of the tone will be instantaneous while the Release rate is regulated by the numerical setting.
AR1 ~ AR15	This Parameter allows you to change both the Attack and Release rates simultaneously. At higher numerical settings the Attack and Release will be slow, similar to that of a pipe organ.

Turn the VALUE knob to select the Attack and Release characteristics you prefer.

NOTE: This Parameter is **not** available for the **Transistor** (**Vx.**, **Farf.** and **Ace**) or **Pipe** Organ Types.

NOTE: In addition to the above Parameters, the PEDAL Part can also receive **Pedal Sustain**, a popular effect for organ bass which adds a smooth decay reminiscent of a string bass. This feature is described in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide on page 97.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "PEDAL REG." should be highlighted.

PEDAL REG

This Parameter allows you to select the Custom Pedal Registration that you prefer. There are three Factory (F) registrations - F1, F2 and F3. You may select any of these, or if you have created and saved your own Custom Pedal Registration(s), you may select them as well. These will be identified by a number preceded by a U for User. You can save up to three (3) Custom Pedal Registrations.

Turn the VALUE knob to select the Custom Pedal Registration you want.

NOTE: For more information about Custom Pedal Registrations, consult the **CUSTOM SETS** chapter of the Guide starting on page 517.

♦ CONTACTS OF A TONE-WHEEL ORGAN & VIRTUAL MULTI-CONTACTS

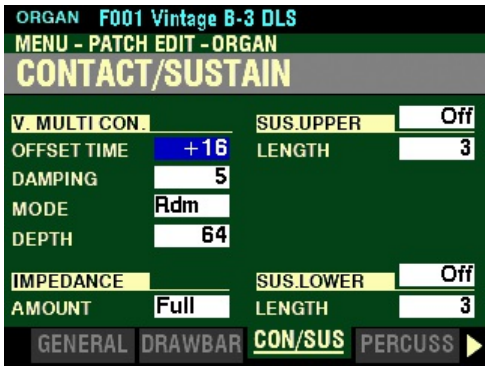
As explained in the CUSTOM SETS chapter of this Guide, the basis for the "Hammond Sound" is the tone- or phonic-wheel generator.

When a key is pressed on a tone-wheel Hammond Organ, it closes 9 small electrical switch contacts. These 9 contacts represent the 9 pitches provided by the Drawbars - the fundamental tone plus eight harmonics. The contacts are closed and opened by means of 9 horizontal flat springs which press 9 busbars. When a flat spring presses a busbar, electrical contact is made and the harmonic is permitted to sound. Since the 9 busbars are physically separated, the harmonics do not all sound simultaneously, but in succession. This can be heard most clearly by selecting one of the four Manual Drawbar sets of a tone-wheel organ (for example, Upper Manual "B"), pulling all of the Drawbars in the selected set out to their maximum volume setting and slowly pressing a playing key. Each of the harmonics will add in a sequence from highest to lowest until all 9 frequencies will be heard when the key is at the bottom of its travel. The "Key-Click" on tone-wheel Hammond Organs is due in part to these physical characteristics.

The SK PRO utilizes a new specially-designed "VMC™ (Virtual Multi-Contact) system which reproduces the effect of 9 contacts per note by means of special software.

♦ CONTACT / SUSTAIN Parameters

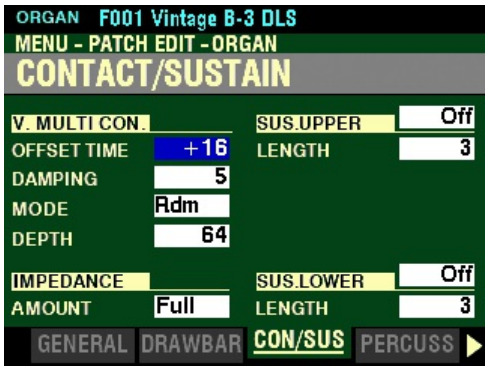
From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "OFFSET TIME" should be highlighted.

This FUNCTION Mode Page allows you to adjust the Parameters affecting the Virtual Multi-Contacts and the Sustain effect for the UPPER and LOWER Parts.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "OFFSET TIME" should be highlighted.

V.MULTI CON

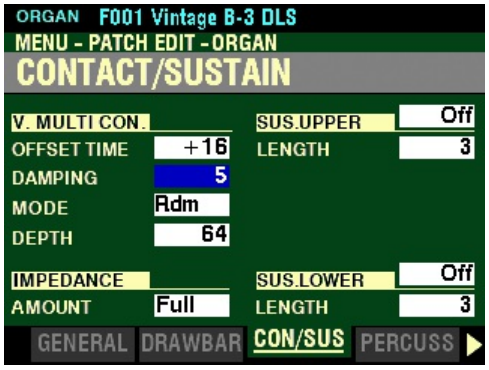
OFFSET TIME

This Parameter allows you to control the amount of time the Virtual Multi-Contacts will take to make full contact after a key is depressed. You may select from -64 to +63 as well as 0. A higher value causes a longer Attack time and a shorter Release time.

Turn the VALUE knob to the right to increase the Offset Time.

Turn the VALUE knob to the left to decrease the Offset Time.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DAMPING" should be highlighted.

DAMPING

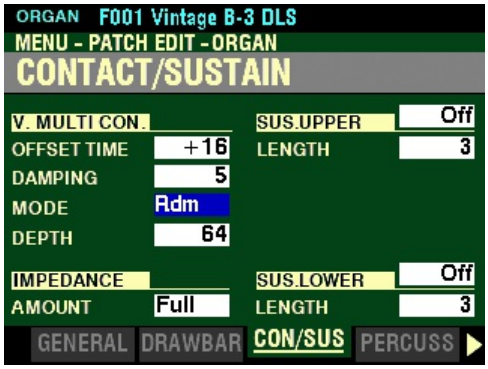
This Parameter allows you to control the amount of damping applied to the Virtual Multi-Contacts. You may select from 0 to 31. The higher the value, the more pronounced the Key Click.

Turn the VALUE knob to the right to make the Key Click brighter .

Turn the VALUE knob to the left to make the Key Click mellower.

NOTE: This Parameter can be used as a "tone-control" for the Key Click. If the Key Click is too bright or "noisy," adjust this Parameter to "smooth" the waveform and make the Key Click more mellow.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MODE" should be highlighted.

MODE

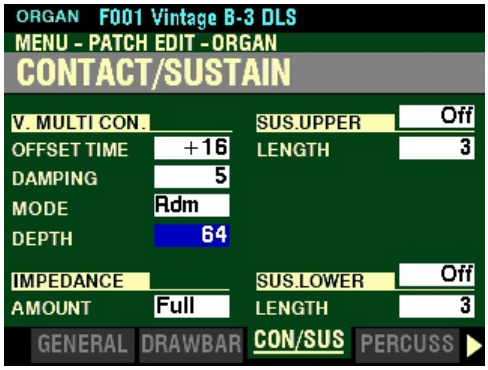
This Parameter allows you to select how the VMC's (Virtual Multi Contacts) will sound when keys are depressed. The data chart below shows the options you may select.

VMC MODE Options

Setting	Description
Random	When a key is depressed, each contact of the VMC's will connect in a random order at the shallow point, and all the contacts are fully made when the key reaches the bottom of its travel.
Velocity	When a key is depressed to the bottom of its travel, each contact of the VMC's is made by a time difference depending on the velocity. The contacts are made sequentially from high to low as on a tone-wheel organ.

Turn the VALUE knob to select Random or Velocity.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

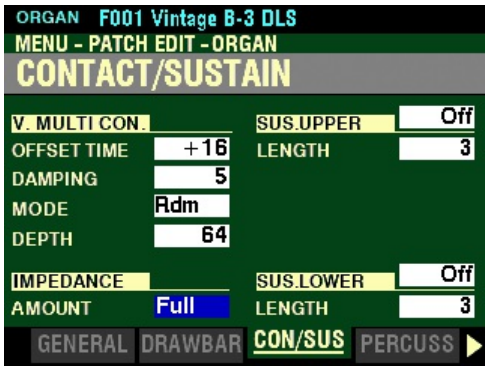
DEPTH

This Parameter allows you to adjust the amount of time for each VMC to sound when a key is depressed. You may select from 0 to 127. At 0 all the VMC's sound simultaneously. A higher value will result in a longer time interval between contacts.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "AMOUNT" should be highlighted.

IMPEDANCE

AMOUNT

This Parameter allows you to adjust the output impedance of the Tone Wheel Organ Types.

WHAT IS "IMPEDANCE?"

Impedance here refers to the AC load on a tone-wheel generator. When a note is played, it is "loaded down" by the circuits related to the contacts under the key being depressed. When more keys calling for the same tone wheels are pressed and held, the tone-wheel is loaded down further, causing a slight volume drop on those related notes. This characteristic can be highly variable from one vintage Hammond Organ to another, and the effect can be different on different organs built during different time periods and using components of slightly different values. These Parameter settings allow you to replicate the idiosyncrasies of different instruments.

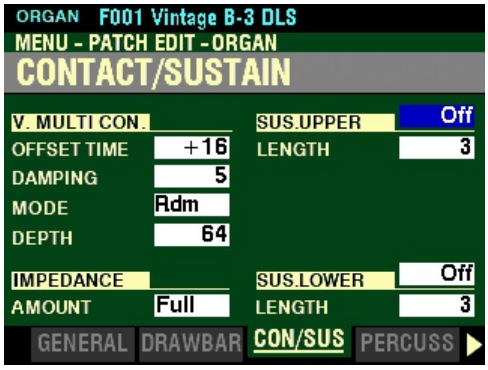
The data chart below shows the options you may select.

IMPEDANCE AMOUNT Options	
Setting	**Description**
Off	No change in volume when keys are depressed and held and other keys are depressed.
Half	When keys are depressed and held and other notes are played, the volume of the notes being held is reduced by a small amount.
Full	When keys are depressed and held and other notes are played, the volume of the notes being held is reduced by the full amount.

Turn the VALUE knob to select Off, Half or Full.

NOTE: The **Half** setting is designed to replicate the performance of a vintage Hammond Organ such as B-3, C-3, etc.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "SUS UPPER."



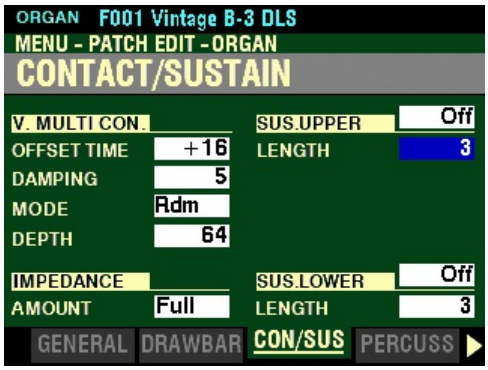
SUS.UPPER

SWITCH

This Parameter allows you to turn Sustain "ON" or "OFF" on the UPPER Part.

Turn the VALUE knob to turn UPPER Sustain On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "LENGTH" should be highlighted.

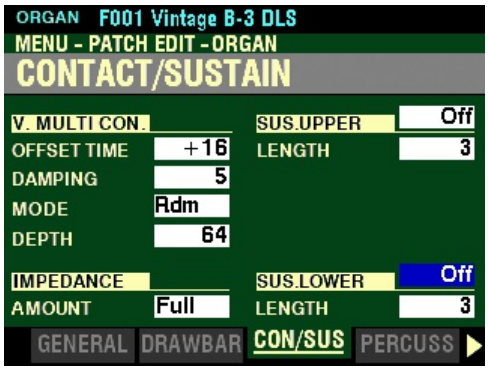
LENGTH

This Parameter allows you to adjust the length of the Sustain effect for the UPPER Part. You may select from 1 (shortest amount) to 5 (longest amount) as well as 0. At 0 there is no Sustain.

Turn the VALUE knob to the right to increase the UPPER Sustain Length.

Turn the VALUE knob to the left to decrease the UPPER Sustain Length.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SUS LOWER" should be highlighted.

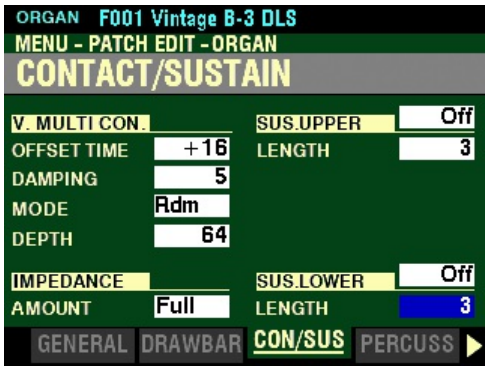
SUS.LOWER

SWITCH

This Parameter allows you to turn Sustain On or Off on the LOWER Part.

Turn the VALUE knob to turn LOWER Sustain On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "LENGTH" should be highlighted.

LENGTH

This Parameter allows you to adjust the length of the Sustain effect for the LOWER Part. You may select from 1 (shortest amount) to 5 (longest amount) as well as 0. At 0 there is no Sustain.

Turn the VALUE knob to the right to increase the LOWER Sustain Length.

Turn the VALUE knob to the left to decrease the LOWER Sustain Length.

◆ Vibrato & Chorus

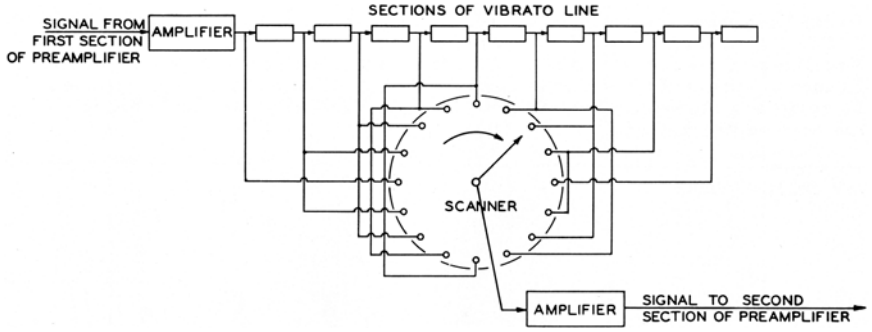
The Hammond Vibrato & Chorus is a hallmark of the "Hammond Sound."

"Vibrato" is created by a periodic raising and lowering of pitch, comparable to the effect produced when a violinist moves his finger back and forth on a string while playing, varying the frequency while maintaining constant volume.

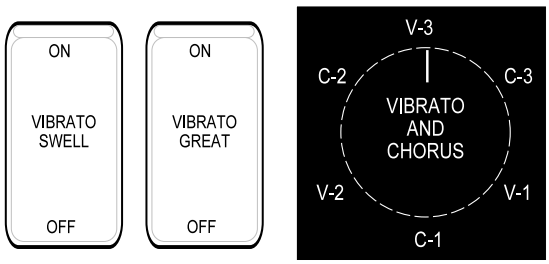
On a tone-wheel Hammond Organ equipped with Vibrato & Chorus, the vibrato circuitry consists of a series of plural coils or low-pass filter sections called a "delay line" or "line box" and a motor-driven "scanner" which, as the name implies, scans the delay line and progressively retards the phase, creating the Vibrato effect.

"Vibrato Chorus," an effect similar to the effect of two or three slightly out-of-tune frequencies mixed together, is obtained when the vibrato output signal is mixed with a portion of signal without vibrato.

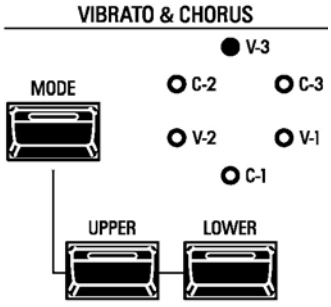
The diagram below shows the vibrato equipment of a typical tone-wheel Hammond Organ such as a B-3.



♦ The Vibrato and Chorus Controls

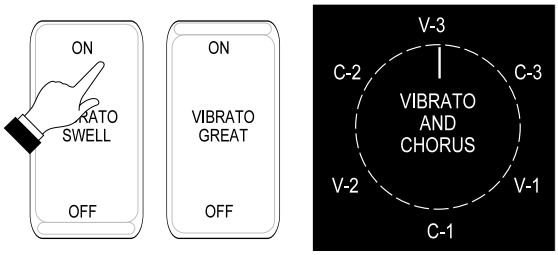


- Vintage B-3 / C-3 Vibrato and Chorus Controls -

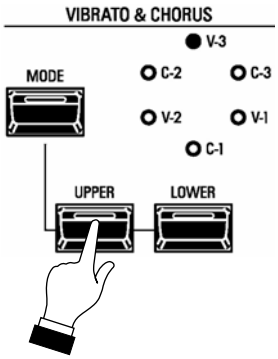


- SK PRO Vibrato and Chorus Controls -

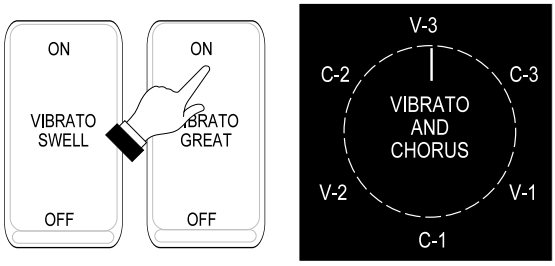
The Vibrato and Chorus controls on vintage Hammond console organs with either a "2" or a "3" as part of their model designation (B-2, B-3, etc.) consist of two tilt tablets and a six-position rotary control to the left of the Drawbars. The SK PRO uses a similar arrangement, except that it uses buttons instead of tilting tablets, and instead of a rotary control there is a MODE button which accesses the same six degrees of Vibrato and Chorus.



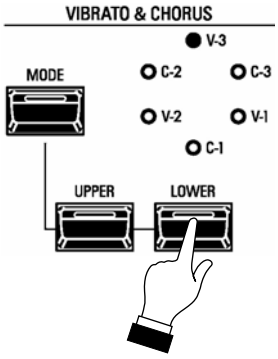
To turn the Vibrato or Chorus effect "ON" for the Swell Manual of a vintage B-3 / C-3, press the top of the VIBRATO SWELL tilt tab.



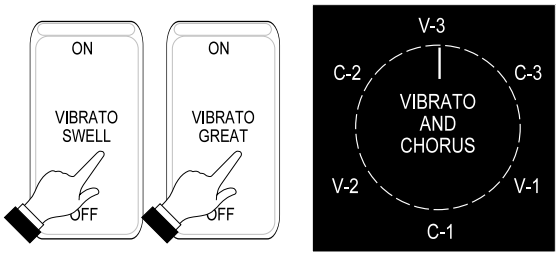
To turn the Vibrato or Chorus effect "ON" on the UPPER Part of the SK PRO, press the UPPER button "ON" (LED lit).



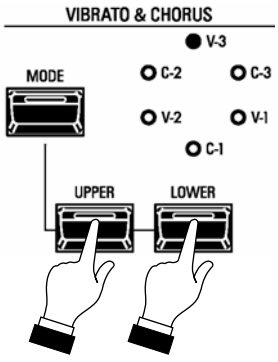
To turn the Vibrato or Chorus effect "ON" for the Great Manual of a vintage B-3 / C-3, press the top of the VIBRATO GREAT tilt tab.



To turn the Vibrato or Chorus effect "ON" for the LOWER Part of the SK PRO, press the LOWER button "ON" (LED lit).



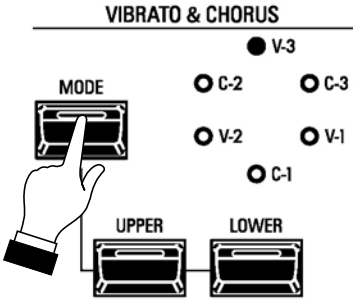
To turn the Vibrato or Chorus effect "OFF" for the Swell or Great Manuals of a vintage B-3 / C-3, press the tilt tabs at the bottom.



To turn the Vibrato or Chorus effect "OFF" for the UPPER or LOWER Parts of the SK PRO, press the buttons "OFF" (LEDs not lit).

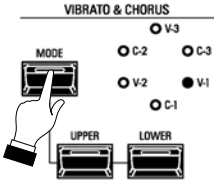
♦ Amount of Vibrato and Chorus

To select the amount of Vibrato or Chorus, press the MODE button repeatedly until the orange LED next to the desired effect and amount lights. Each successive button press will rotate the LED clockwise.



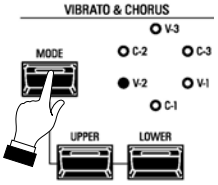
Vibrato

V-1 (Small Vibrato)



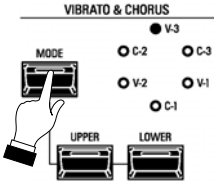
To select vibrato depth V-1, press the MODE button so that the orange LED next to the legend, “V-1" will light. This is the lightest depth and produces the vibrato equivalent of most orchestral solo instruments.

V-2 (Wide Vibrato)



To select vibrato depth V-2, press the MODE button so that the orange LED next to the legend, “V-2" will light. This is the standard depth vibrato used with the Drawbars to produce the effect of a theater organ.

V-3 (Full Vibrato)



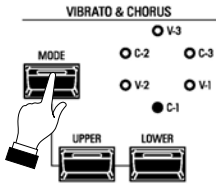
To select vibrato depth V-3, press the MODE button so that the orange LED next to the legend, “V-3" will light. This is the fullest amount and adds much warmth and enhances your music.

Remember, either one or both of the UPPER or LOWER buttons must be "ON" (orange LED lit) to allow you to hear the selected Vibrato effect for each Keyboard.

Chorus

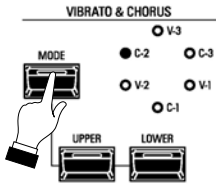
When the CHORUS effect is used, half of the tone is heard without Vibrato, and half of the tone is heard with Vibrato.

C-1 (Small Chorus)



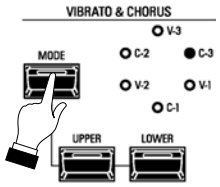
To select Chorus depth C-1, press the MODE button so that the orange LED next to the legend, “C-1" will light. This is the lightest depth, and produces the light chorus effect.

C-2 (Wide Chorus)



To select Chorus depth C-2, press the MODE button so that the orange LED next to the legend, “C-2" will light. This is the standard depth of the chorus effect.

C-3 (Full Chorus)



To select Chorus depth C-3, press the MODE button so that the orange LED next to the legend, “C-3" will light. This is the fullest amount.

Remember, either one or both of the UPPER or LOWER buttons must be "ON" (orange LED lit) to allow you to hear the selected Vibrato or Chorus effect for each Part.

SPECIAL NOTE - Vx., Farf., Ace and Pipe Organ Types

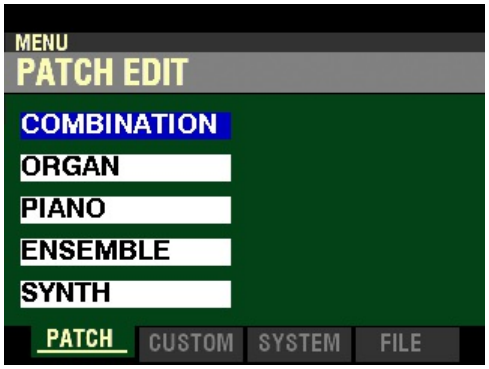
Instead of three degrees of Vibrato and three degrees of Chorus, the VIBRATO & CHORUS Controls will provide 6 degrees of Vibrato for the Vx., Farf. and Ace Organ Types and 6 degrees of Tremulant for the Pipe Organ Types. V-1 provides the smallest amount while C-3 gives the largest amount of Vibrato or Tremulant. The other modes provide various degrees between these two settings.

♦ VIBRATO & CHORUS FUNCTION Mode Page

You can adjust the Vibrato & Chorus of the Tone Wheel Organs, Vibrato for the Transistor Organs, and Tremulant for the Pipe Organ from the VIBRATO & CHORUS FUNCTION Mode Page.

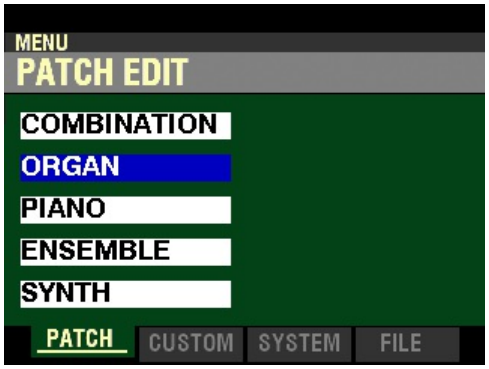
Accessing the VIBRATO & CHORUS FUNCTION Mode Page using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

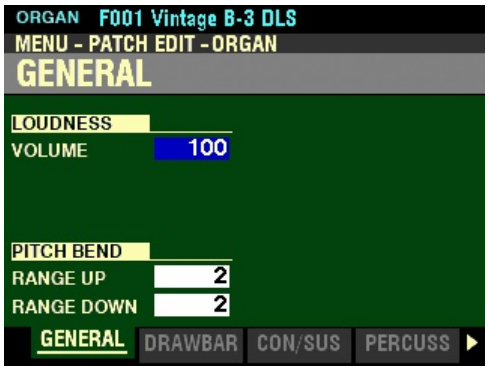


The "COMBINATION" box should be highlighted.

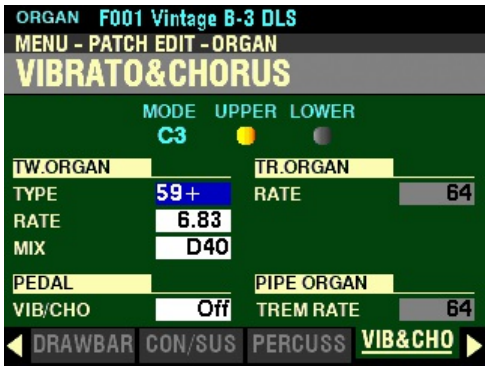
2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:

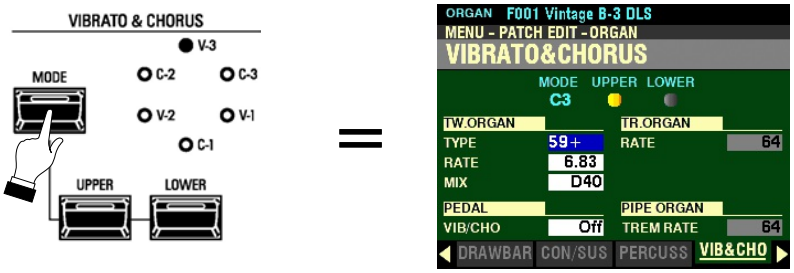


4. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



Accessing the VIBRATO & CHORUS FUNCTION Mode Page using the Shortcut:

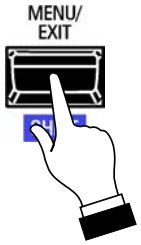
Press and Hold any of the three VIBRATO & CHORUS buttons (UPPER, LOWER or MODE).



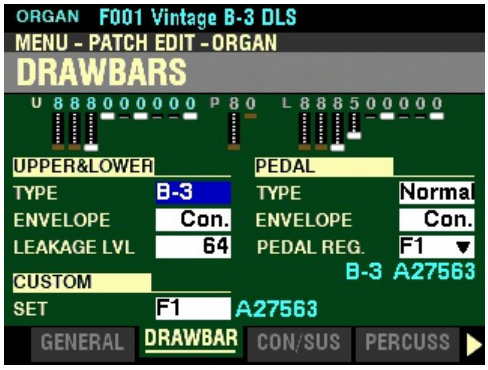
When the above screen displays, Release the VIBRATO button you are holding.

♦ Accessing the VIBRATO & CHORUS FUNCTION Mode Page using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

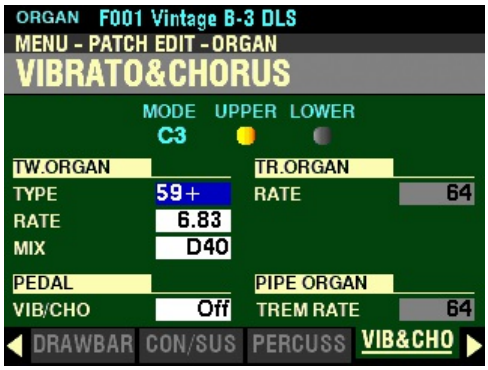


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

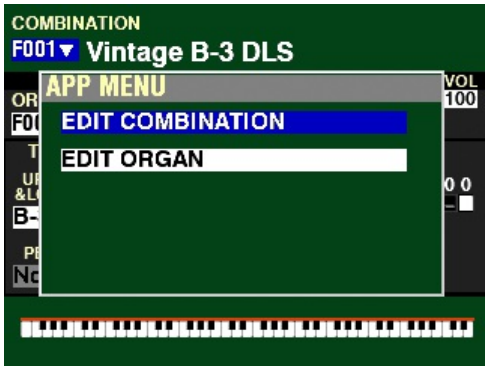
4. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



You are now in the VIBRATO & CHORUS FUNCTION Mode Page. You can now use the DIRECTION buttons in conjunction with the VALUE knob to make various changes to the Vibrato and Chorus. These changes are explained starting on the next page.

Accessing the VIBRATO & CHORUS FUNCTION Mode Page using the APP MENU:

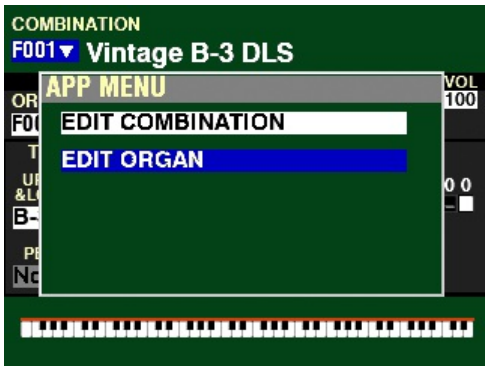
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "☰" button. The Information Center Display should now look similar to this:



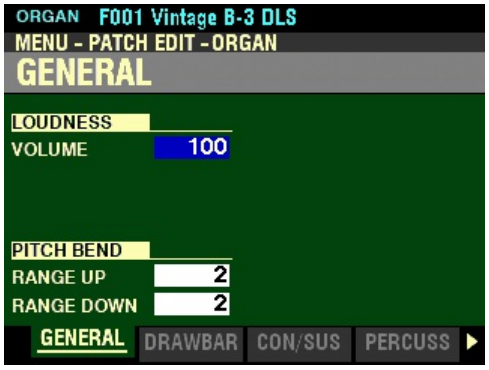
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

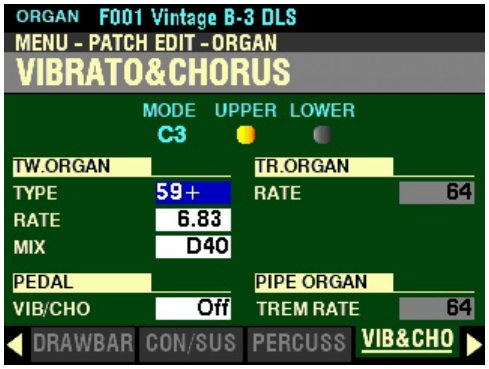
2. Release the MANUAL "☰" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:

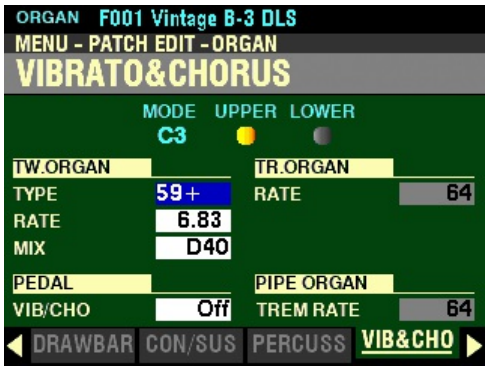


4. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



You are now in the VIBRATO & CHORUS FUNCTION Mode Page. You can now use the DIRECTION buttons in conjunction with the VALUE knob to make various changes to the Vibrato and Chorus. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.

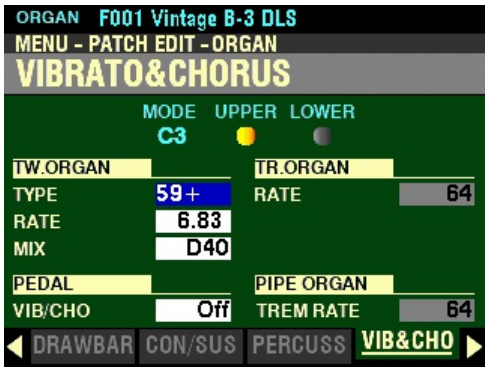


The box to the right of "TYPE" should be highlighted.

VIBRATO & CHORUS MODE, UPPER / LOWER ON / OFF

Notice the two small icons at the top of the display for UPPER and LOWER as well as the MODE setting. These correspond to the VIBRATO & CHORUS controls on the Control Panel. When either the UPPER or LOWER buttons are "ON" (LED lit), the corresponding icon will light. Also, the MODE shown will correspond to the Mode setting on the Control Panel.

In this screen, the box to the right of "TYPE" should be highlighted.



TW.ORGAN

TYPE

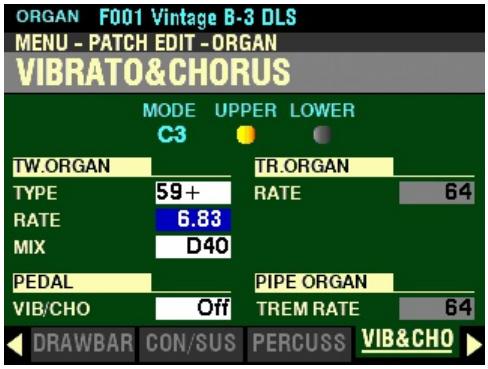
Hammond tone-wheel organs with Vibrato & Chorus were manufactured from 1949 through 1975. During that time, several different types of vibrato circuits were employed, particularly line boxes of different construction. This Parameter creates the effect of different types of Vibrato delay lines.

The data chart below shows the options you may select.

VIBRATO TYPE Options	
Setting	**Description**
55-57	Metal Box 1955 - 1957
57-59	Large Silver Box 1957 - 1959
59+	Small Silver Box 1959 and later

Turn the VALUE knob to select 55-57, 57-59 or 59+.

From the screen shown in the middle of the previous page, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

RATE

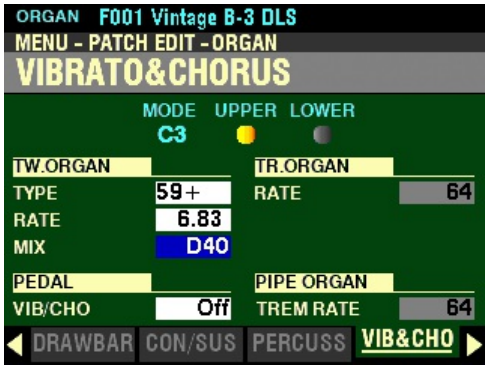
This Parameter allows you to select the Vibrato/Chorus Rate that you prefer. You may select from 5.78Hz to 7.90Hz. The default setting is 6.83Hz.

Turn the VALUE knob to the right to increase the Vibrato Rate.

Turn the VALUE knob to the left to decrease the Vibrato Rate.

NOTE: "Hz" is an abbreviation for "Hertz," which refers to the number of cycles per second.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "MIX" should be highlighted.

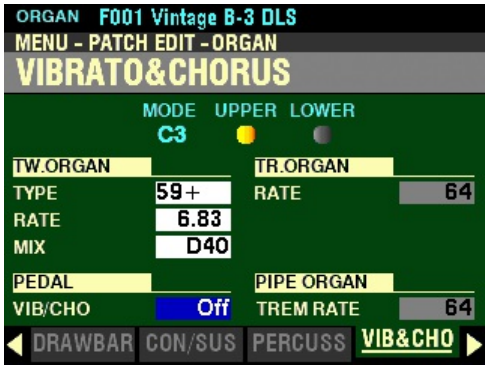
MIX

The Chorus effect is produced by mixing two audio signals together - one containing Vibrato and a "dry" signal with no Vibrato. The amount of Vibrato versus non-Vibrato signal can vary when comparing vintage organs. This Parameter allows you to control the amount of Vibrato signal versus the amount of "dry" or non-Vibrato signal. You may select from D64 (only the dry signal with no Vibrato) through 63V (only the Vibrato signal, with no dry signal). The middle or EVEN setting will mix the Vibrato and non-Vibrato signals together in equal amounts.

Turn the VALUE knob to the right to increase the amount of Vibrato signal.

Turn the VALUE knob to the left to decrease the amount of Vibrato signal.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "VIB/CHO" should be highlighted.

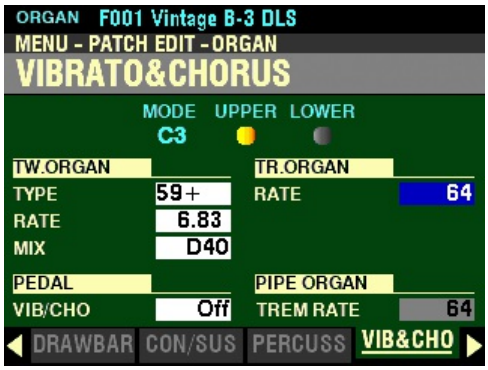
PEDAL

VIB CHO

This Parameter allows you to select whether you want Vibrato to affect the Pedal Drawbar tones when the VIBRATO LOWER Button is "ON." This replicates the Vibrato function on a vintage Hammond Organ.

Turn the VALUE knob to turn Vibrato On or Off for the Pedal Drawbar tones.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "RATE."



TR.ORGAN

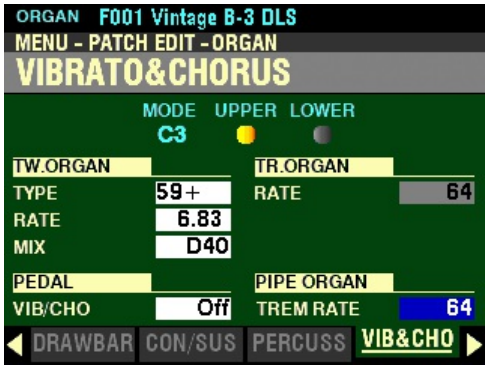
RATE

This Parameter allows you to adjust the Vibrato Rate for the Transistor Organs (Farf, Vx and Ace). You may select from 0 (no Vibrato) to 127 (fastest Vibrato Rate).

Turn the VALUE knob to the right to increase the Vibrato Rate.

Turn the VALUE knob to the left to decrease the Vibrato Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TREM RATE" should be highlighted.

PIPE ORGAN

TREM RATE

This Parameter allows you to adjust the Tremulant Rate for the Pipe Organ. You may select from 0 (no Tremulant) to 127 (fastest Tremulant).

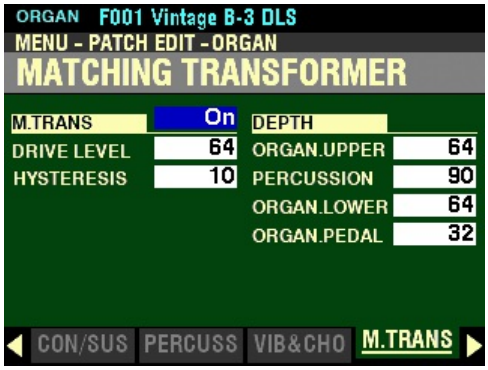
Turn the VALUE knob to the right to increase the Tremulant Rate.

Turn the VALUE knob to the left to decrease the Tremulant Rate.

NOTE: More information about Pipe Voices can be found starting on page 267 and in the CUSTOM SETS chapter starting on page 473.

♦ MATCHING TRANSFORMER FUNCTION Mode Page

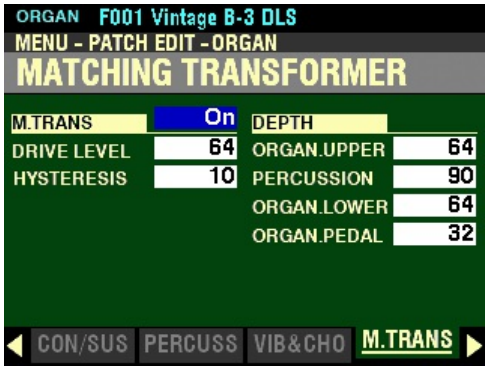
From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "M.TRANS" should be highlighted.

♦ WHAT IS A "MATCHING TRANSFORMER?"

The primary purpose of the Matching Transformer in a Hammond tone-wheel organ is to "match" the low Impedance of the generator and key circuits to the high impedance amplifier input. However, in the B-3/C-3/A-100 family of Hammond Organs it performs the additional function of combining the individual tones from each Drawbar into one complex musical tone. It serves also, through taps on its primary winding, to establish a series of intensity levels for the Drawbars. Doing this imparts some unique characteristics to the sound which are part of the tonal characteristics of a Hammond tone-wheel organ such as the B-3. This feature reproduces these characteristics digitally.



M.TRANS

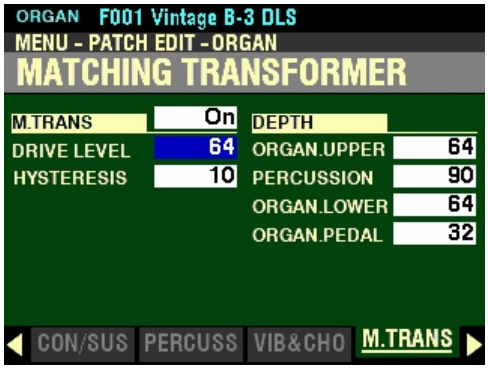
SWITCH

This Parameter allows you to select whether you want the Matching Transformer effect to be part of the ORGAN Drawbar tones. The data chart below shows the options you may select.

MATCHING TRANSFORMER Options	
Setting	**Description**
On	The Matching Transformer effect is added to the ORGAN Drawbar tones.
Off	The ORGAN Drawbar tones are "clean" - no Matching Transformer effect is added.

Turn the VALUE knob to turn this Parameter On or Off.

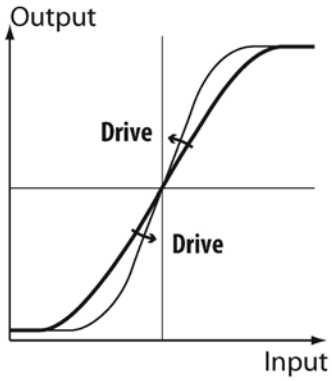
From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DRIVE LEVEL" should be highlighted.

DRIVE LEVEL

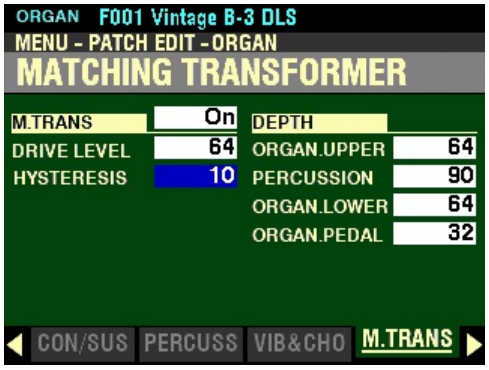
This Parameter allows you to set the saturation level of the Matching Transformer. You may select from 0 to 127. A higher value will result in more saturation at low volume levels (see the illustration below).



Turn the VALUE knob to the right to increase the amount of Saturation.

Turn the VALUE knob to the left to decrease the amount of Saturation.

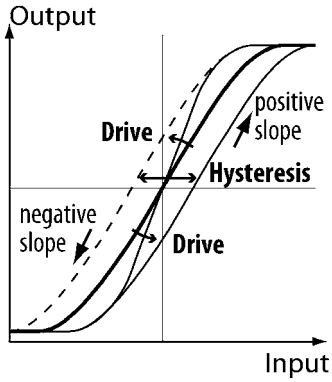
From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "HYSTERESIS" should be highlighted.

HYSTERESIS

Hysteresis refers to the fact that all of the values of a given event can change at different rates (see the illustration below).

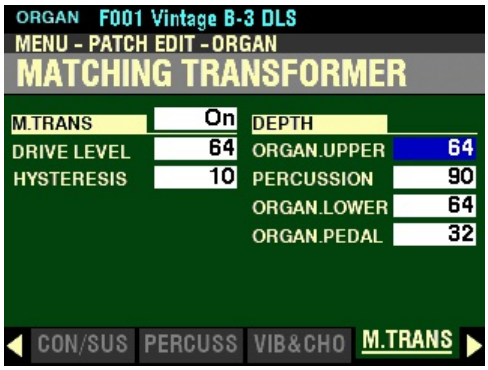


In the case of a Hammond Organ, as discussed previously, each Drawbar has 8 degrees of volume. When a Drawbar is moved, not only the volume but the sound quality changes because of the artifacts introduced by the Matching Transformer. This Parameter allows you to replicate this characteristic of a tone-wheel Hammond Organ by setting the strength of the Hysteresis characteristic. You may select from 0 to 127. The higher the value, the more "asymmetrical" the sound.

Turn the VALUE knob to the right to increase the strength.

Turn the VALUE knob to the left to decrease the strength.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "ORGAN.UPPER."



DEPTH

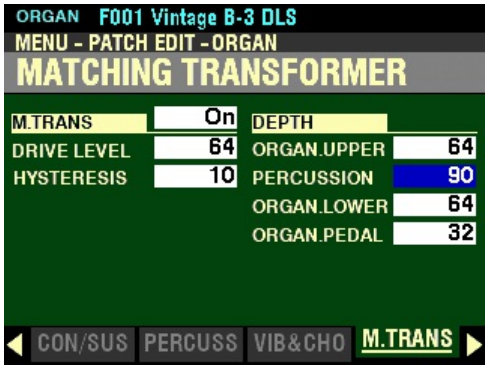
ORGAN.UPPER

This Parameter allows you to set the amount of the Matching Transformer modeling for the UPPER ORGAN Part. You may select from 0 to 127. A higher value creates a deeper effect.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "PERCUSSION" should be highlighted.

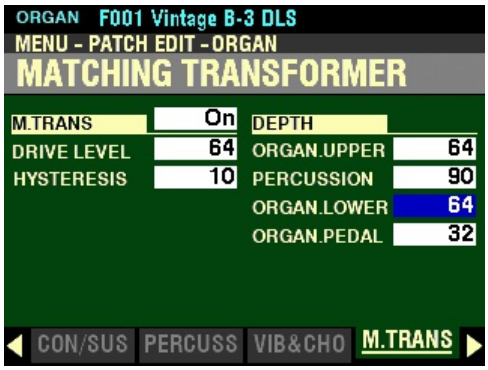
PERCUSSION

This Parameter allows you to set the amount of the Matching Transformer modeling for the PERCUSSION. You may select from 0 to 127. A higher value creates a deeper effect.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ORGAN.LOWER" should be highlighted.

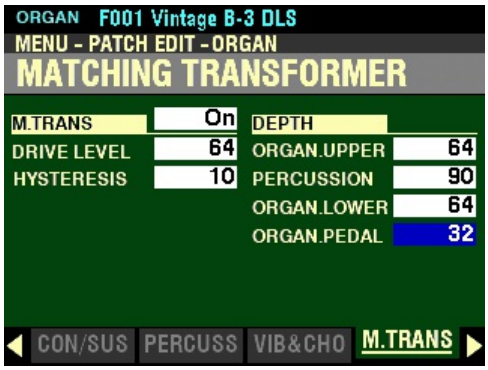
ORGAN.LOWER

This Parameter allows you to set the amount of the Matching Transformer modeling for the LOWER ORGAN Part. You may select from 0 to 127. A higher value creates a deeper effect.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ORGAN.PEDAL" should be highlighted.

ORGAN.PEDAL

This Parameter allows you to set the amount of the Matching Transformer modeling for the PEDAL tones. You may select from 0 to 127. A higher value creates a deeper effect.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

◆ LESLIE®

Your Hammond SK PRO has a built-in digital Leslie effect that replicates the sound of a twin-rotor Leslie Speaker cabinet. In addition, the SK PRO can also be used with a variety of different Leslie Speaker cabinets.

♦ What Is A "Leslie Speaker?"

When the Hammond Organ was first introduced in the mid 30's, it was not "self-contained" - in other words, the sound-producing apparatus was not contained within the console. In order to hear the sounds produced by the organ's tone generators, a separate "tone cabinet" containing an amplifier and speaker system had to be connected to the organ console via a special cable. The Hammond Organ Company for many years manufactured many different models of tone cabinets specifically for use with Hammond Organs. The best known of these is probably the PR-40 model, which used a 40-watt tube amplifier to drive a set of speakers.



Hammond PR-20, PR-40 Tone Cabinet



A typical Leslie Speaker cabinet.

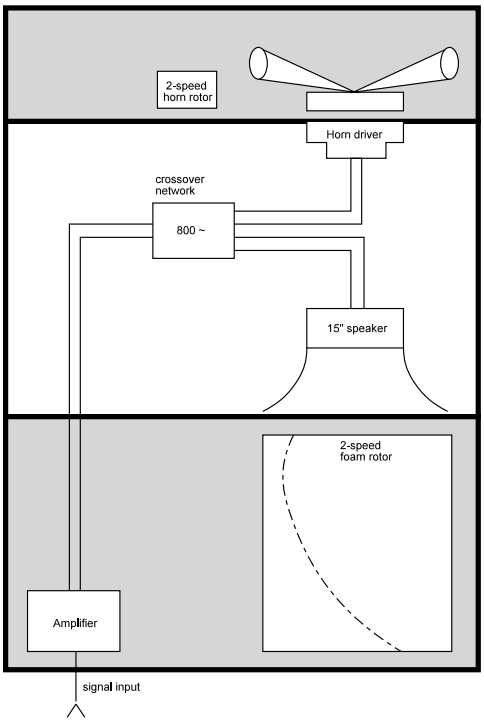
The Hammond engineers had very definite ideas about what a Hammond Organ should sound like and the Hammond speakers were designed to deliver that sound. In the late 30's, however, an independent engineer and organ enthusiast named Donald J. Leslie wanted a sound from a Hammond Organ more nearly approximating the sound of a theatre organ, particularly a realistic theatre organ tremulant. He found that rotating a baffle in front of a stationary speaker created the effect of a tremulant (the well-known "Doppler effect") and called the subsequent speaker the "Vibratone." (The "Vibratone" designation was eventually dropped and subsequent models would be known simply as Leslie Speakers.) Over a hundred models of Leslie Speakers have been made over the years; probably the best known being the models 122, 142, 145 and 147, all of which have 40-watt vacuum-tube amplifiers. The122 and 147 are both 41" tall (see above photo), while the 142 and 145 are 33" tall. The 122 and 142 have the same electronics, as do the 145 and 147.

Although the 122 and 147, as well as the 142 and 145, share identical cabinet designs, they are electrically dissimilar - the 122/142 is designed specifically for use with a Hammond Organ whose preamplifier has "GG" terminals (a "balanced" signal output), whereas the 147/145 has an "unbalanced" input more suitable for use with self-contained organs - other brands as well as Hammond.

Additionally, the 122 and 147 have different high-frequency responses - the 122 rolls off the treble at 6K to reduce key click, while the 147 does so at 8K, resulting in a slightly brighter overall sound.

♦ What Are "Horn" and "Bass?"

The basic Leslie Speaker design, as represented by the 122 and 147 families of cabinets, divides the sound between "treble" (above 800Hz) and "bass" (below 800Hz). The treble frequencies are routed to a treble speaker or "driver," while the bass tones sound through a bass speaker (typically 15"). In the classic design, the speakers themselves do not move - a baffle is rotated in front of each speaker to produce animation. The shape of the baffle for the high frequencies is similar to the bell of a horn, hence the popular designation "horn." The figure below illustrates this.



The Leslie cabinet type shown above connects to the organ console by means of a special connector kit which allows proper routing of both the audio signal and the electrical voltage necessary to operate the rotors.

The first Leslie speakers used two motors to rotate the baffles at a speed suitable for recreating theatre-organ-type tremulant which were controlled by a toggle switch on the side of the speaker cabinet. In the mid-60's an additional motor was added to both Horn and Bass which spun the rotors much more slowly to suggest the sound of a "celeste," or a compound organ stop with two or more ranks slightly detuned. Also added were switches which could be mounted to the front of an organ console to allow the organist to control the rotor speeds, and therefore the sound, while playing- "Chorale" described the effect produced by the Slow motors, while "Tremolo" was the designation used when the Fast motors were engaged. The picture below shows a typical Leslie switch of this kind.



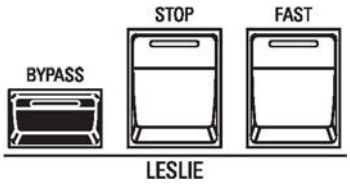
In more recent years there have been two important additions to the classic Leslie design:

1. The introduction of an 11-pin interface to allow a Leslie Speaker to handle more than one audio channel, as well as to isolate line voltage from the audio signal path.

2. The replacement of separate Fast and Slow motors with variable speed motors for both Horn and Bass. The newer motor design reduces the total number of motors from four to two, and also allows for "Brake" mode, or the ability to shut the rotors completely off (previously a special "brake kit" had to be added to the cabinet to permit this feature).

New digital technology has now made it possible to recreate the Doppler effect without using moving parts. This technology has been incorporated into the SK PRO. The following pages explain how the internal digital Leslie of your Hammond SK PRO works.

♦ LESLIE buttons



These three buttons allow you to control either the internal digital Leslie or the rotors of a connected Leslie Speaker cabinet.

BYPASS

When this button is "OFF" (LED not lit), the Drawbars will sound through the internal Leslie channel. Pressing the BYPASS button "ON" (LED lit) will change the sounds produced by the Drawbars from the Leslie channel to the stationary channel. The effect is similar to the sound produced by a vintage Hammond Organ being played through a Hammond speaker cabinet.

STOP

When this button is "OFF" (LED not lit), the Leslie effect is that of an acoustic Leslie Speaker cabinet with the rotors turning either slowly (Chorale) or Fast (Tremolo). Pressing the LESLIE STOP button "ON" (LED lit) will cause the Leslie rotors to stop turning.

FAST

The speed of the rotors of either the internal digital Leslie or a connected Leslie Speaker depends upon the position of the LESLIE FAST button.

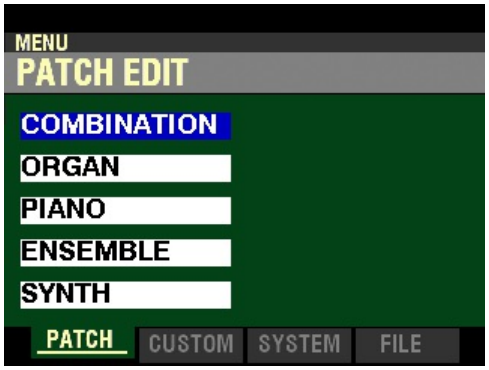
When this button is "OFF" (LED not lit), the Leslie effect is that of an acoustic Leslie Speaker cabinet with the rotors turning slowly (Chorale). Pressing the LESLIE FAST button "ON" (LED lit) will cause the Leslie effect to speed up and rotate fast (Tremolo) to produce a rich, full sound.

♦ LESLIE FUNCTION Mode Page

You may select the LESLIE Parameters for the ORGAN Voice Section from the LESLIE FUNCTION Mode Page.

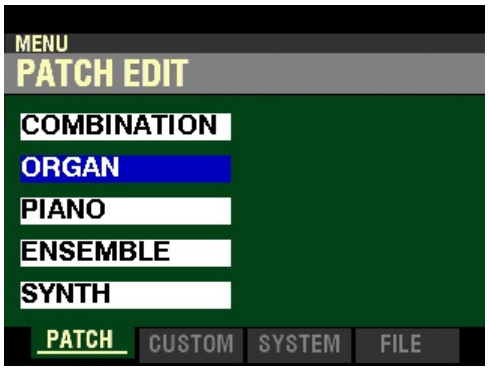
Accessing the LESLIE FUNCTION Mode Page using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

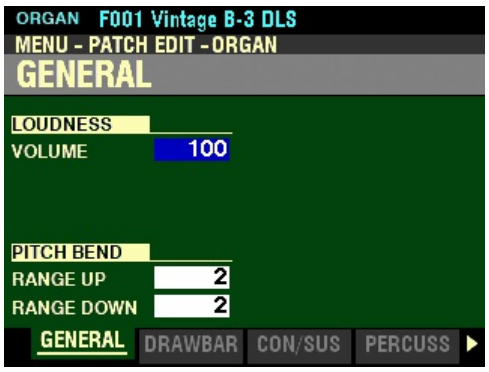


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:



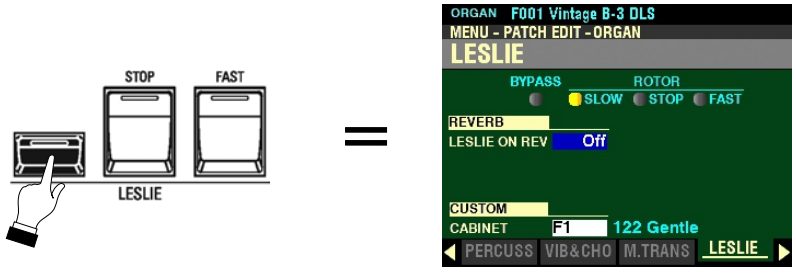
The MENU - PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



Accessing the LESLIE FUNCTION Mode Page using the Shortcut:

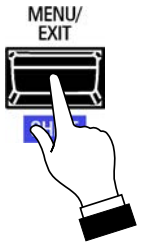
Press and Hold any of the three LESLIE buttons (BYPASS, STOP or FAST).



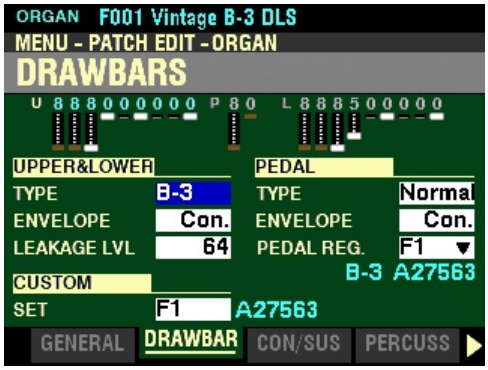
When the above screen displays, Release the LESLIE button you are holding.

♦ Accessing the LESLIE FUNCTION Mode Page using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.



2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

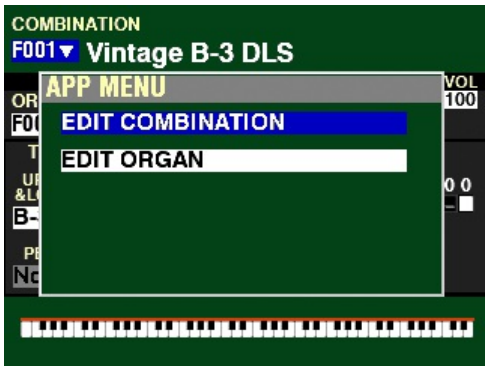
4. Press the PAGE "▶" button five times. The Information Center Display should now look like this:



You are now in the LESLIE FUNCTION Mode Page. You can now use the DIRECTION buttons in conjunction with the VALUE knob to make various changes to the digital Leslie. These changes are explained starting below.

Accessing the LESLIE FUNCTION Mode Page using the APP MENU:

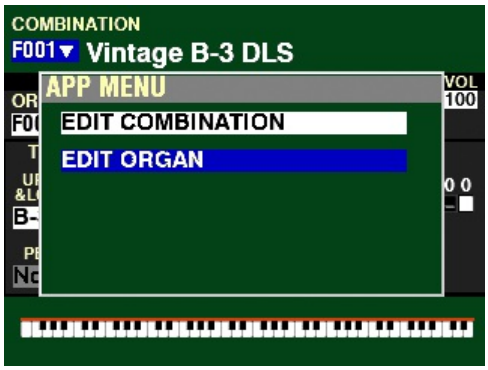
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



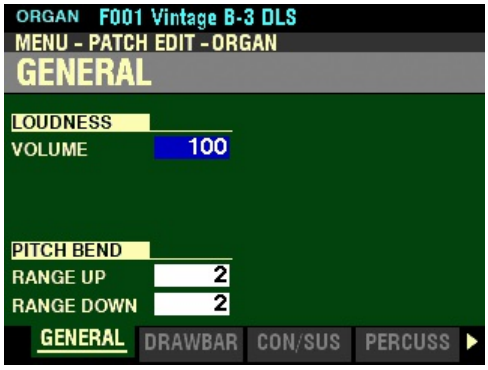
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



If you followed the instructions on the previous pages, you should see the screen shown below.



BYPASS / ROTOR

Notice the four small icons at the top of the display for BYPASS, SLOW, STOP and FAST. These correspond to the LESLIE buttons to the left of the keyboard. When any of the LESLIE buttons is "ON" (LED lit), the corresponding icon will light. If none of the LESLIE buttons is "ON," the SLOW icon will light.

In this screen, the box to the right of "LESLIE ON REV" should be highlighted.



REVERB

LESLIE ON REV

When an audio signal containing Reverb is sent to a Leslie Cabinet, the Reverb is modulated along with the main signal. This characteristic can be replicated using this Parameter.

The data chart below shows the options you may select.

LESLIE ON REVERB Options	
Setting	**Description**
Off	The effect is that of a Leslie Cabinet speaking into an auditorium or a large live room, or a Leslie Cabinet having a separate Reverb amplifier and speakers such as a vintage 122RV - the Organ tones are affected by the Leslie rotors but not the Reverb.
On	The effect is that of an audio signal containing both Organ tones and Reverb being fed into a single-channel Leslie - the rotors will modulate the Reverb as well as the basic Organ tones.

Turn the VALUE knob to turn the Leslie effect for the Reverb On or Off.

NOTE: This Parameter does **not** affect a connected Leslie Speaker Cabinet.

From the screen shown in the middle of the previous page, press the DIRECTION "▼" button once.



The box to the right of "CABINET" should be highlighted.

CUSTOM CABINET

This Parameter allows you to select a Custom Leslie Cabinet. There are eight Factory (F) Custom Sets. You may select any of these, or if you have created and saved your own Custom Leslie Cabinet(s), you may select them as well. These will be identified by a number preceded by a U for User.

Turn the VALUE knob to select the option you want.

NOTE: For more information about Custom Leslie Cabinets, consult the **CUSTOM SETS** chapter of this Guide starting on page 501.

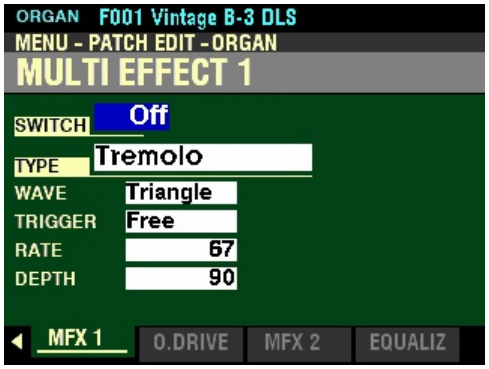
SPECIAL NOTE: All of the ORGAN Parameters affect the Tone Wheel Organs; however, some of the ORGAN Parameters do not affect the Transistor or Pipe Organs - for example, Leakage Level, Pedal Type and Custom Tone Wheels. If a particular Parameter does not affect the selected Organ Type, it will be "greyed out" or darkened in the display. However, the value of a disabled Parameter can still be adjusted using the VALUE knob.

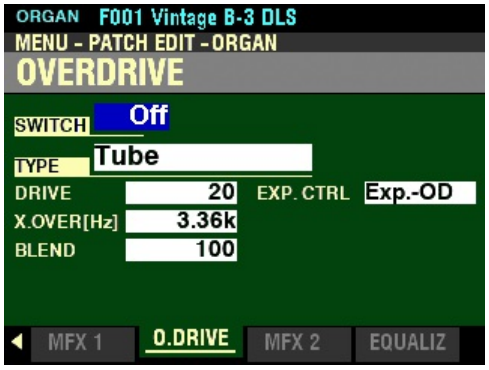
NOTE: All of the Organ Types except **Pipe** can be played either with the built-in digital Leslie or through a connected Leslie Speaker Cabinet.

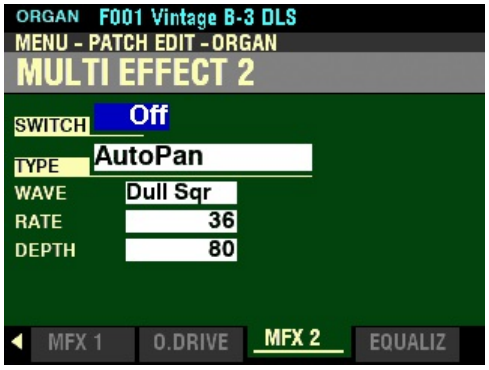
◆ MULTI EFFECT 1&2, OVERDRIVE and EQUALIZER

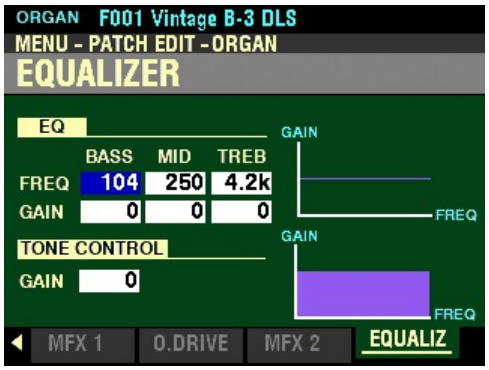
From the screen shown on the previous page, you can use the PAGE "◀" and "▶" buttons to move back and forth among the four remaining ORGAN FUNCTION Mode Pages.

IMPORTANT NOTE: These FUNCTION Mode Pages are covered in the **MULTI EFFECT / OVERDRIVE / EQUALIZER** chapter of this Guide since each Voice Section has these Parameters. However, the MULTI EFFECT / OVERDRIVE / EQUALIZER Parameters are controlled separately - adjusting one of these Parameters for one Voice Section will affect that Voice Section **only**.









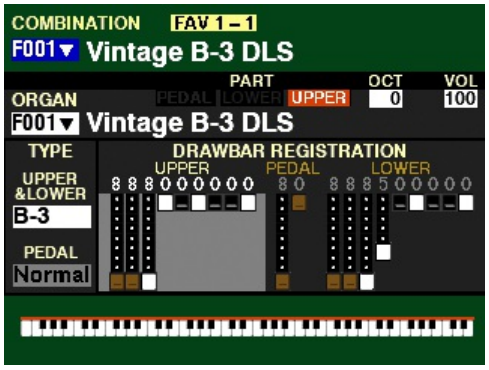
◆ ORGAN TYPES

In addition to traditional Hammond Drawbar tones, the Drawbars on the SK PRO can control a number of models of Combo Organs as well as different types of Pipe Organs. This Parameter allows you to select which type of organ sounds you want the Drawbars to control.

♦ Organ Types - A-100, B-3, C-3, Mellow

Accessing the Organ Types from a PLAY Screen:

1. After turning the SK PRO "ON," Combination F001 should display. (see below).



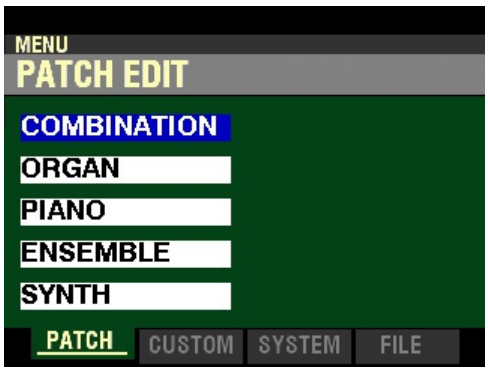
NOTE: Press the PLAY button to display the above screen if it is not already displaying.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



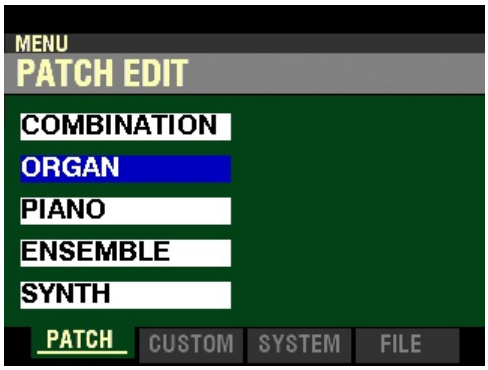
Accessing the Organ Types using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

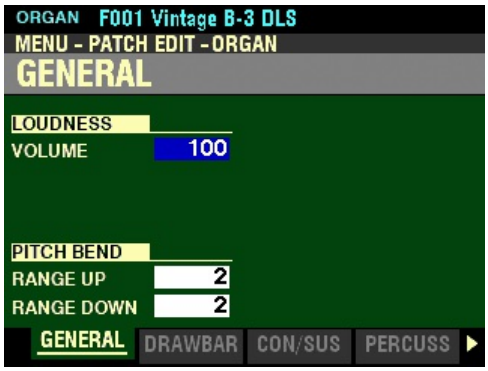


The "COMBINATION" box should be highlighted.

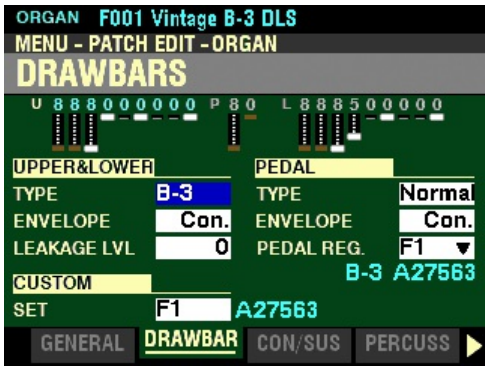
2. Press the DIRECTION "▼" button <u>once</u> to highlight the "ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:



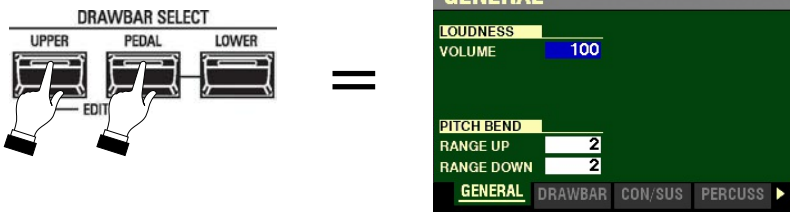
4. Press the PAGE "▶" button <u>once</u>. The Information Center Display should now look like this:



The box to the right of "TYPE" should be highlighted.

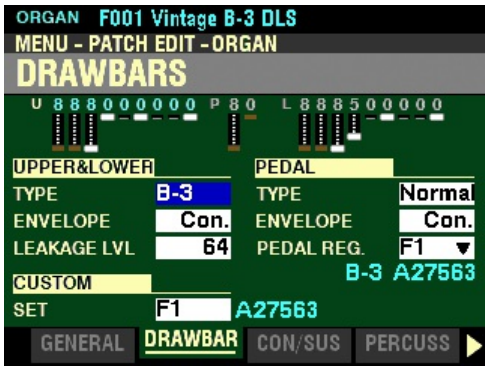
Accessing the Organ Types using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

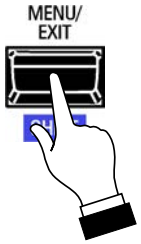
3. Press the PAGE "▶" button <u>once</u>. The Information Center Display should now look like this:



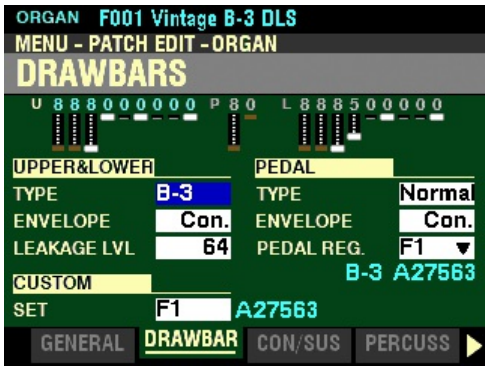
The box to the right of "TYPE" should be highlighted.

Accessing the Organ Types using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.



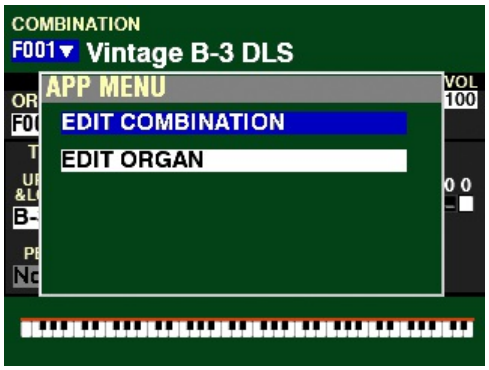
2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

Accessing the Organ Types using the APP MENU:

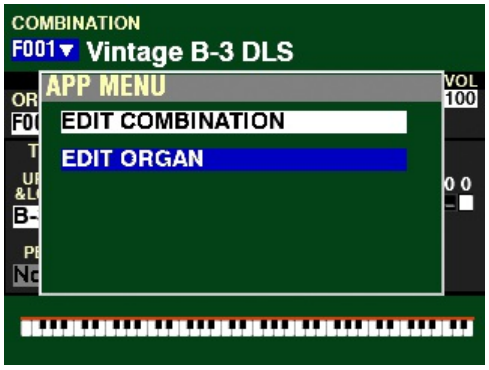
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



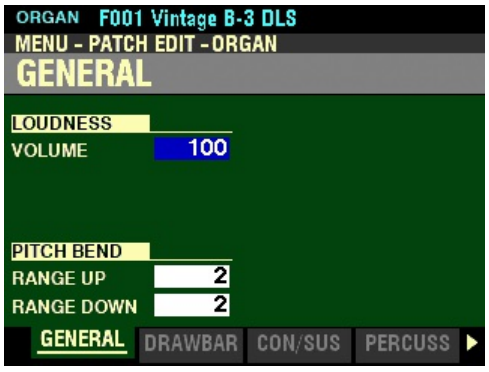
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

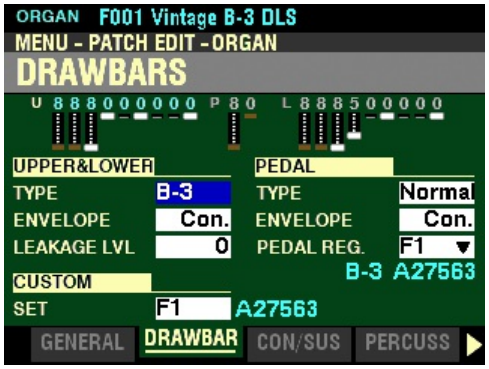
2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button once. The Information Center Display should now look like this:



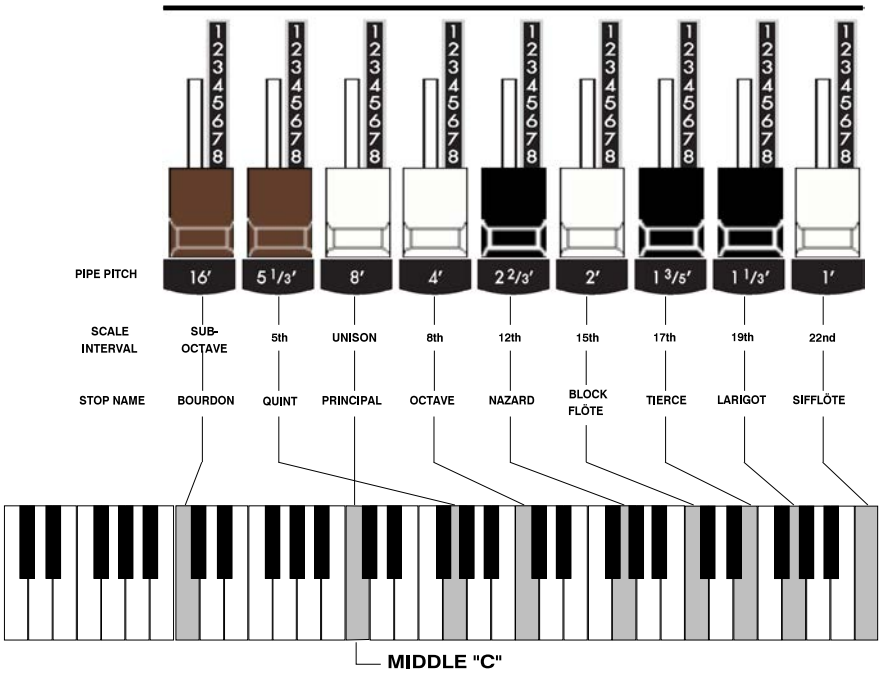
The box to the right of "TYPE" should be highlighted.

NOTE: The four Organ Types **A-100**, **B-3**, **C-3**, and **Mellow** replicate the sounds of various vintage Hammond Organs. For a more complete explanation of these Organ Types consult page 186.

You can now use the VALUE knob to select what type of organ sound will be associated with the Drawbars. The first four Drawbar Organ Types are traditional vintage Hammond settings. However, the last four Organ Types allow you to use the Drawbars to register other types of organ sounds. The Organ Types are explained starting below.

There are approximately 253,000,000 possible sound combinations that can be produced by these Drawbars. Each Drawbar consists of sine waves of different pitches.

The illustration below shows how each Drawbar relates to the keyboard when middle "C" is depressed.



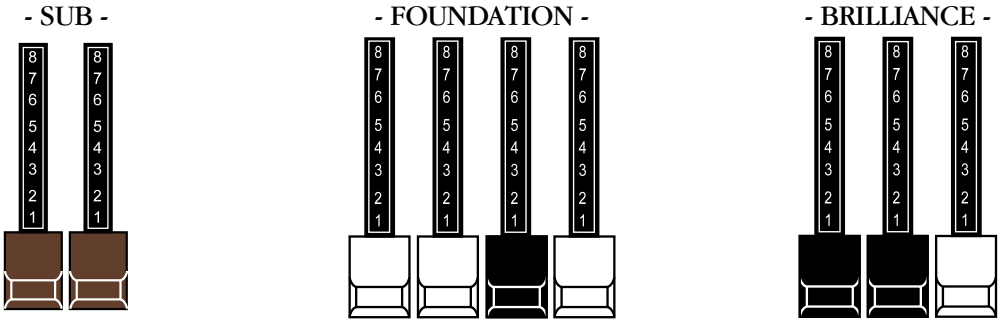
Notice there is a number followed by a footage mark in front of each Drawbar. For example, the first white Drawbar is shown as "8'." This is pipe organ terminology indicating that the pipe used to produce the lowest note on the keyboard on a pipe organ is actually eight feet long. The numbers from "1" to "8" on each Drawbar represent degrees of loudness - number 1 being the softest, and number 8 being the loudest.

The following pages explain characteristics of the Drawbars which are common to traditional uses of Drawbars in vintage Hammond Organs which have Drawbars.

Drawbars are divided into 3 groups of sound as well as 3 groups of color. We will first look at the 3 sound groups.

♦ Sound Groups

You can think of these sound groups in terms of the three levels - The Sub being the deep pitches, the Foundation being the mid range of pitches and the Brilliance being the high pitches.



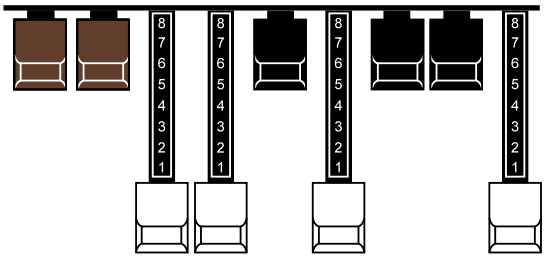
TRY THIS:

1. Make sure all Drawbars are “IN” (off).
2. Make sure the ORGAN ALLOCATE button is “ON” (LED lit).
3. Make sure the UPPER button in the DRAWBAR SELECT button section is “ON” (orange LED lit).
4. Press and Hold a “C” chord, starting with “E” above middle “C” (“E”, “G” & “C” notes) with your right hand on the keyboard.
5. Starting with the first white Drawbar, pull out and push in each of the Foundation Drawbars one group at a time until you have a sound that you like.
6. While still holding the “C” chord down, pull each of the brown Sub Drawbars out until you like the sound.
7. Now do the same with the Brilliance Drawbars.

It's that easy to create your own custom Drawbar settings.

♦ Color Groups

White Drawbars



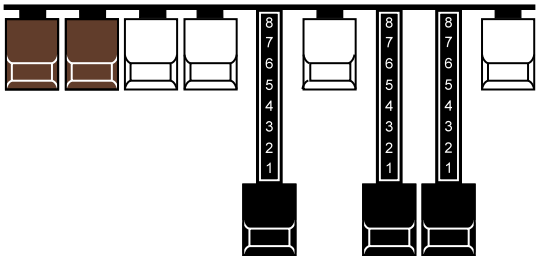
The first white Drawbar represents the "fundamental" or "8' base" tone. All of the other white Drawbars are octave intervals or harmonics of the fundamental tone. The tonal brilliance is greatly increased by adding white Drawbars, but the harmonics added are always in "consonance" or harmony.

TRY THIS:

1. Make sure all Drawbars are "IN" (off).
2. Make sure the ORGAN ALLOCATE button is "ON" (LED lit).
3. Make sure the UPPER button in the DRAWBAR SELECT button section is "ON" (orange LED lit).
4. Press and Hold middle "C" on the keyboard.
5. Pull the first white Drawbar all the way out. You will hear middle "C."
6. While holding middle "C," pull the other white Drawbars for the UPPER Keyboard out one by one in sequence.

As you add each Drawbar, you will hear the addition of the same note an octave higher in each case.

Black Drawbars



The Black Drawbars on the Hammond Organ represent the dissonant (discordant) harmonics which are also necessary in building rich tone colors. The mellowness of a horn, the pungency of strings, and the brilliance of reed voices owe much of their character to the presence of these harmonics in different degrees.

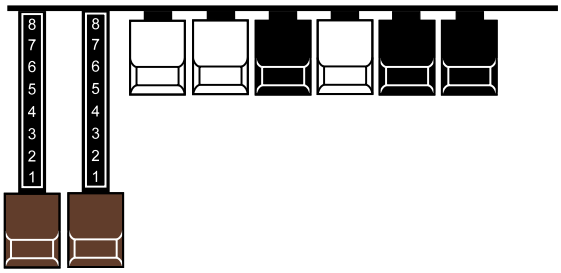
TRY THIS:

1. Make sure all Drawbars are "IN" (off).
2. Make sure the ORGAN ALLOCATE button is "ON" (LED lit).
3. Make sure the UPPER button in the DRAWBAR SELECT button section is "ON" (orange LED lit).
4. Press and Hold middle "C" on the keyboard.
5. Pull the first white Drawbar, marked 8', all the way out. You will hear middle "C."
6. While holding middle "C," pull the 3 Black Drawbars all the way out.

The sound produced by the Drawbars is that of a clarinet.



Brown Drawbars



In addition to the white and black Drawbars, there are two brown Drawbars in the group. These two Drawbars produce "sub-octave" effects. The first brown Drawbar is the sub-octave of the fundamental Drawbar. It is "one octave" lower in sound.

TRY THIS:

1. Make sure all Drawbars are "IN" (off).
2. Make sure the ORGAN ALLOCATE button is "ON" (LED lit).
3. Make sure the UPPER button in the DRAWBAR SELECT button section is "ON" (orange LED lit).
4. Press and Hold middle "C" on the keyboard.
5. Pull the first white Drawbar all the way out. You will hear middle "C."
6. While holding middle "C," pull the first brown Drawbar all the way out.

You will now hear the sound of "C" one octave lower being added.

The second brown Drawbar is the "sub-octave" of the third harmonic. Both of these Drawbars are used to add depth and richness to many combinations. They also increase the range of the manual by one octave since a solo registration of the "8 foot," or normal pitch, can be set up using the first brown Drawbar as the fundamental and played one octave higher.

TRY THIS:

1. Make sure all Drawbars are "IN" (off).
2. Make sure the ORGAN ALLOCATE button is "ON" (LED lit).
3. Make sure the UPPER button in the DRAWBAR SELECT button section is "ON" (orange LED lit).
4. Press and Hold middle "C" on the keyboard.
5. Pull the first white Drawbar all the way out. You will hear middle "C."
6. While holding middle "C," pull the first brown Drawbar all the way out. You will now hear the sound of "C" one octave lower being added.
7. Now pull the second brown Drawbar in the same group out, and you will hear it add a richness to the sound of the "C" note that you are holding down.

♦ Tone Families By Shape

Regardless of the size of a pipe organ or its number of stops, all of its voices are related to four basic families of tone. The four basic families - Flute, Reed, String and Diapason - can be quickly set up on the Drawbars by relating a pattern or shape to each family.

These are the generalities which apply to the tonal resources of the organ, and in themselves produce pleasant and usable effects. However, real beauty of tone is secured in two ways. The first way is to use registrations which have been devised by organists. The second way, and eventually the one that best expresses your own feeling for the music, is to create your own tonal effects, experimenting with and perfecting tones which you use to play your favorite selections.

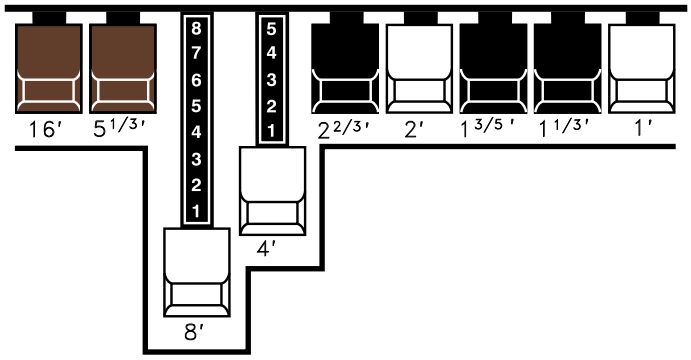
The Hammond Organ Drawbars allow you not only to set up any tonal effect you want, but also to make many fine variations of the tone. Only with the Hammond Drawbars can you play exactly the shade of tone you want for every selection and, perhaps even more important, for every size and type of room in which you play.

With the Hammond Organ Drawbars, a touch of a finger is all that is needed to make the tone quality softer or more brilliant, richer in one harmonic or another.

Typical Drawbar Registration Patterns For The Four Families Of Organ Sound

Flute family (2 step pattern)



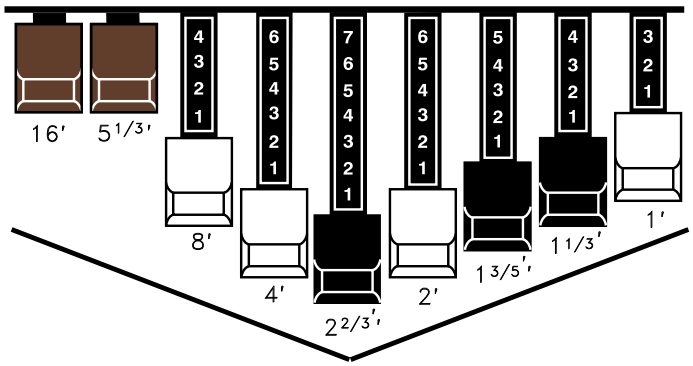


Flute Tones

Accompaniment Flute 8' I	00 8460 000
Accompaniment Flute 8' II	00 3220 000
Accompaniment Flute 8' III	00 8600 000
Chorus of Flutes 16'	80 8605 002
Orchestral Flute 8'	00 3831 000
Piccolo 2'	00 0006 003
Stopped Flute 8'	00 5020 000
Tibia 8'	00 7030 000
Tibia 4'	00 0700 030
Tibia (Theater) 16'	80 8605 004
Wooden Open Flute 8'	00 8840 000

Reed family (triangle pattern)



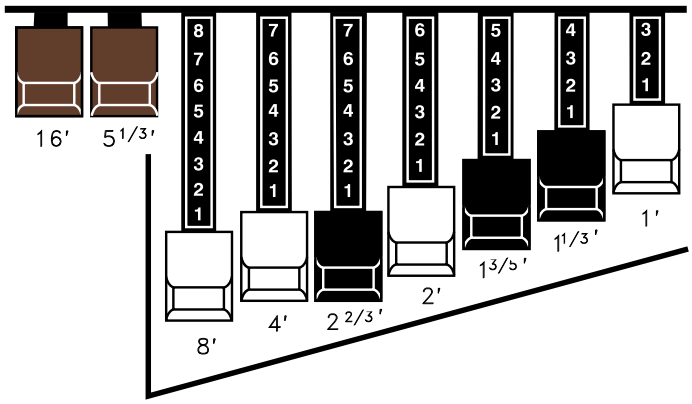


Reed Tones

Bassoon 16'	44 7000 000
Clarinet 8'	00 6070 540
English Horn 8'	00 3682 210
Flugel Horn 8'	00 5777 530
French Horn	00 7654 321
Kinura 8'	00 0172 786
Oboe 8"	00 4764 210
Trombone 8'	01 8777 530
Trumpet 8'	00 6788 650
Tuba Sonora 8'	02 7788 640
Vox Humana 8'	00 4720 123

Diapason family (check mark pattern)



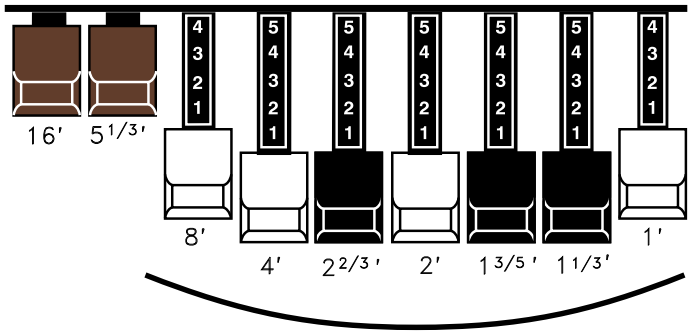


Diapason Tones

Accompaniment Diapason 8'	00 8874 210
Chorus Diapason 8'	00 8686 310
Diapason 8'	00 7785 321
Echo Diapason 8'	00 4434 210
Harmonic Diapason 16'	85 8524 100
Harmonic Diapason 8'	00 8877 760
Harmonic Diapason 4'	00 0606 045
Horn Diapason 8'	00 8887 480
Open Diapason 8'	01 8866 430
Solo Diapason	01 8855 331
Wood Diapason 8'	00 7754 321

String family (bow pattern)





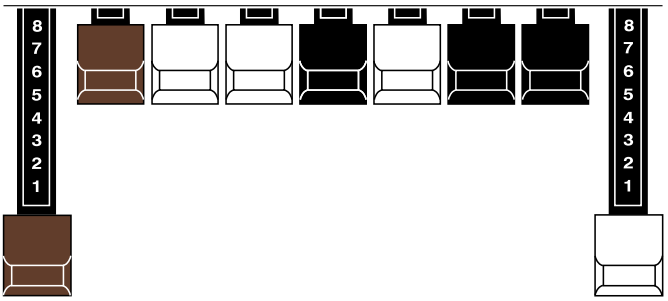
String Tones

Cello 8'	00 3564 534
Dulciana 8'	00 7770 000
Gamba 8' I	00 3484 443
Gemshorn 8'	00 4741 321
Orchestral String 8'	00 1464 321
Salicional 8'	00 2453 321
Solo Viola 8'	00 2474 341
Solo Violin 8'	00 3654 324
Viola da Gamba 8'	00 2465 432
Violina 4'	00 0103 064
Violone 16	26 3431 000

Jazz and Pop Drawbar Registrations

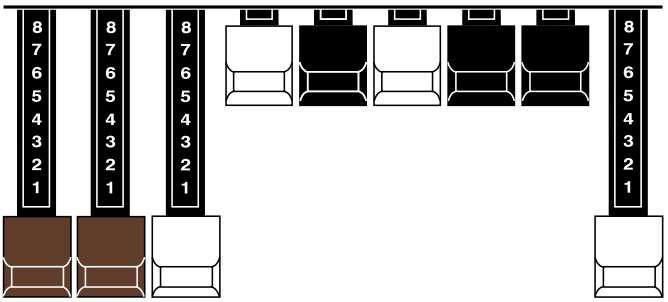
With Hammond Drawbars, any harmonic may be emphasized individually or eliminated completely. Even the fundamental may be eliminated. Because of this fact, many unusual and striking effects can be developed.

A POP ORGAN TONE - 80 0000 008



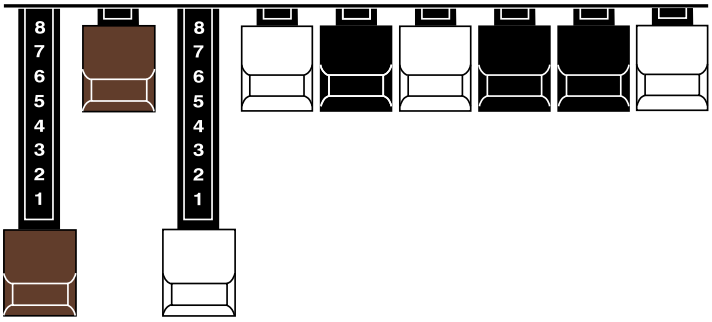
The above is an example of what can be done using the Drawbars to create new sounds. This is a very popular combination used by many pop organists. The effect of two harmonics five octaves apart gives a beautiful tone color for playing slower songs or ballads.

A JAZZ ORGAN TONE - 88 8000 008



There are many Drawbar combination which are not imitative of any instrument, but which are immediately recognized as "Hammond Sounds." The basic Hammond Organ jazz sound is obtained with the first three Drawbars, such as 88 8000 000. When the last white Drawbar is used along with the first three Drawbars, a very pleasing effect is created. For playing slower songs, you can wish to try a little less of the last white Drawbar - for example, 88 8000 005. The 8th harmonic will still be heard, but will not be as prominent.

Pedal Drawbars



The first brown Drawbar and the first white Drawbar control the sounds produced by the PEDAL Part. The first brown Drawbar produces a tone at 16' pitch for a deep foundation bass, while the first white Drawbar produces a tone at 8' pitch, or one octave higher.

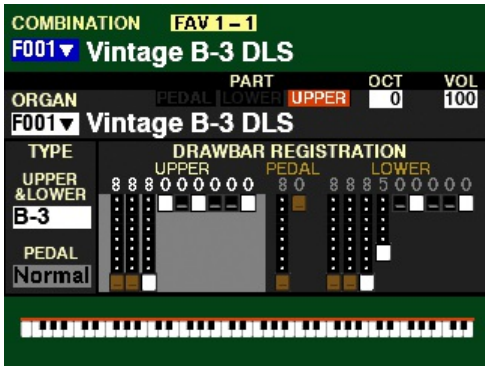
NOTE: The PEDAL DRAWBAR SELECT button must be “ON” in order to adjust the Pedal Drawbar tones. For more information, consult page 181.

♦ Organ Type - Vx.

The Vx. Drawbar Organ Type allows you to use the Drawbars to register the sound of a vintage British combo organ.

Accessing the Vx. Organ Type from a PLAY Screen:

1. After turning the SK PRO "ON," Combination F001 should display. (see below).

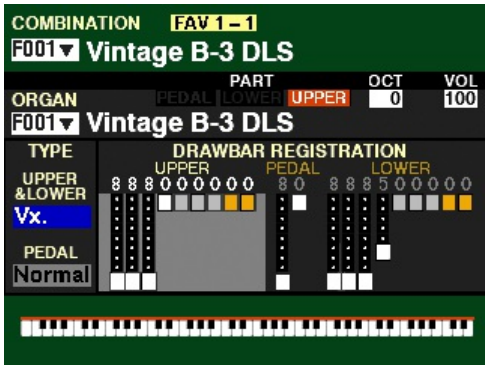


NOTE: Press the PLAY button to display the above screen if it is not already displaying.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:

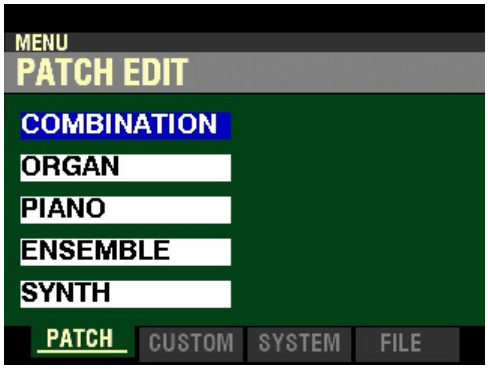


3. Turn the VALUE knob to select Vx.



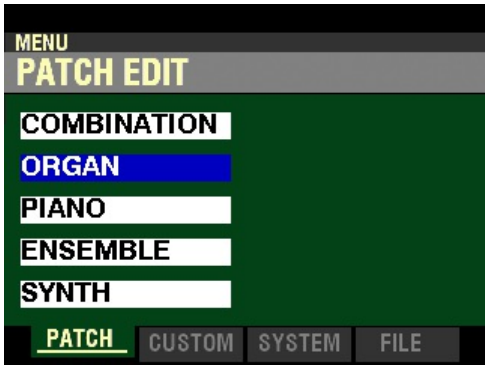
Accessing the Vx. Organ Type using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

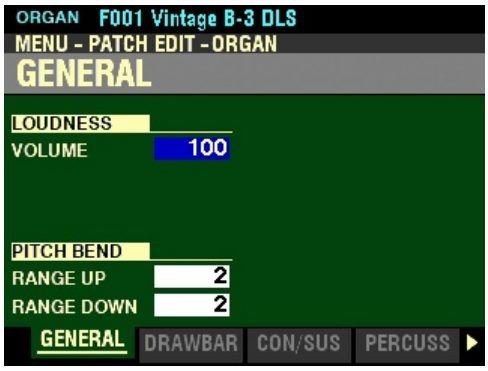


The "COMBINATION" box should be highlighted.

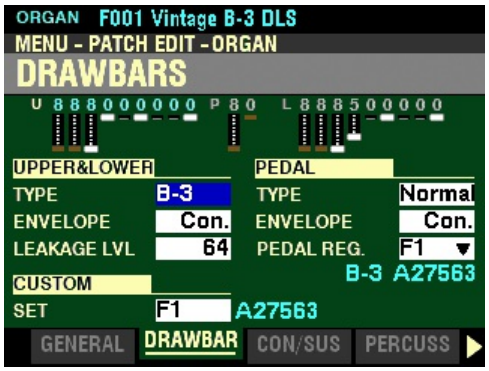
2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



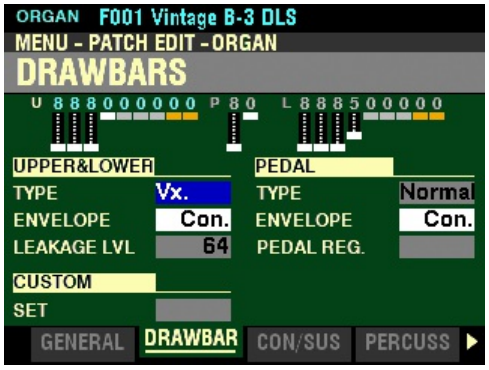
2. Press the ENTER button. The Information Center Display should now look like this:



3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:

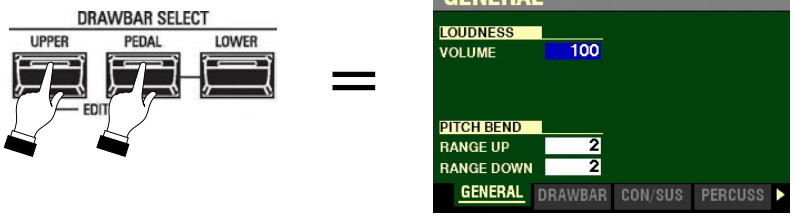


4. Turn the VALUE knob so the Information Center Display shows the following:



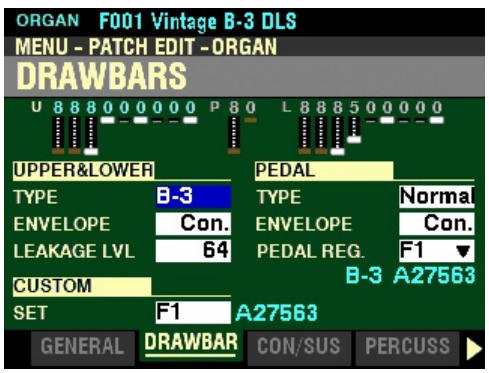
Accessing the Vx. Organ Type using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



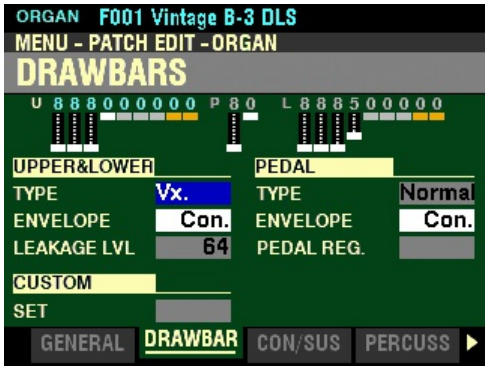
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button once. The Information Center Display should now look like this:



The box to the right of "TYPE" should be highlighted.

3. Turn the VALUE knob so the Information Center Display shows the following:

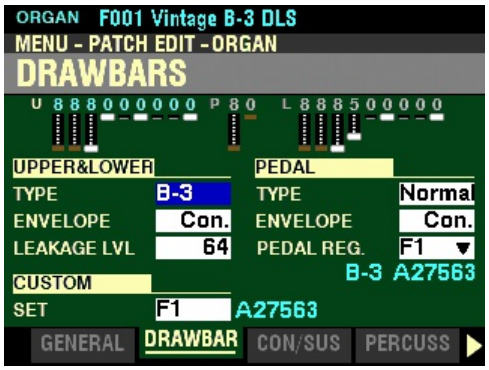


Accessing the Vx. Organ Type using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

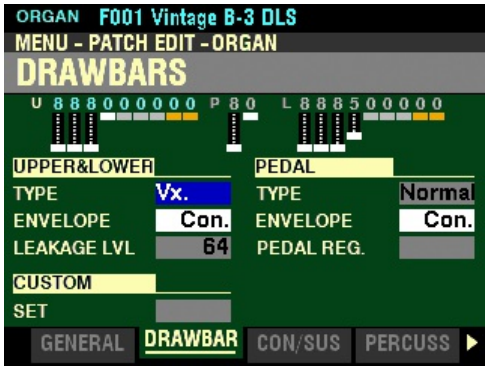


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



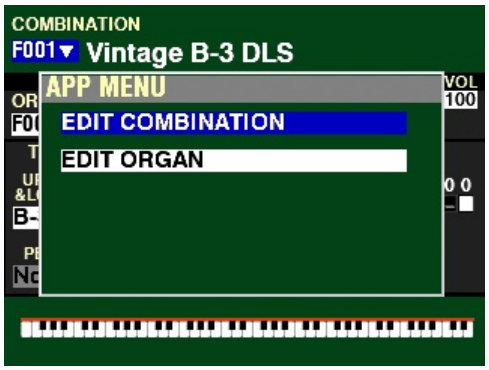
3. Release the SHIFT button.

4. Turn the VALUE knob so the Information Center Display shows the following:



Accessing the Vx. Organ Type using the APP MENU:

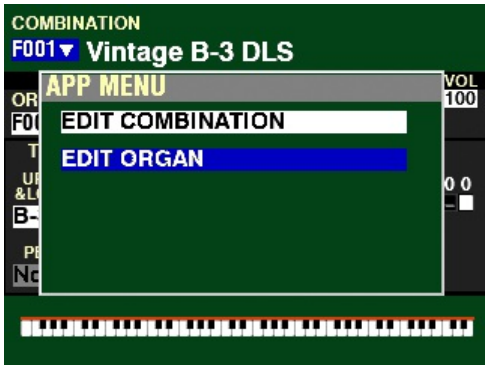
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "☰" button. The Information Center Display should now look similar to this:



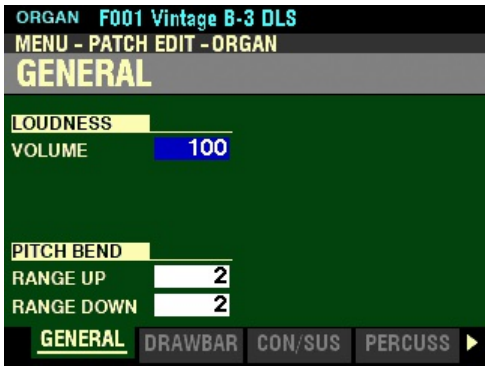
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

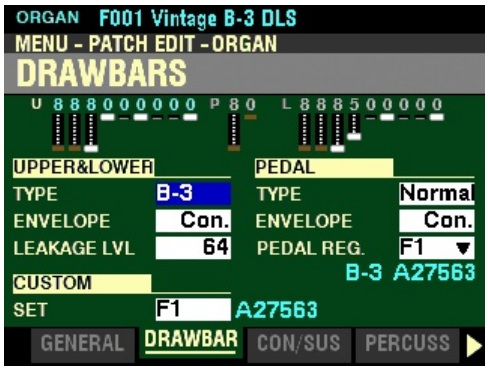
2. Release the MANUAL "☰" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



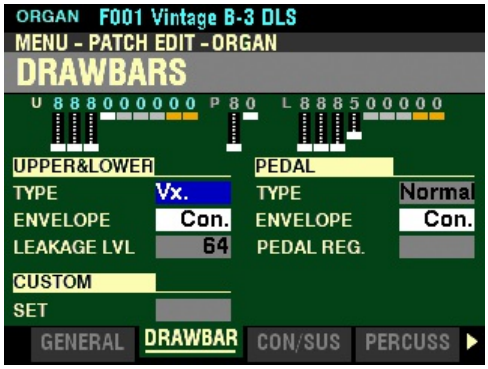
3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button once. The Information Center Display should now look like this:

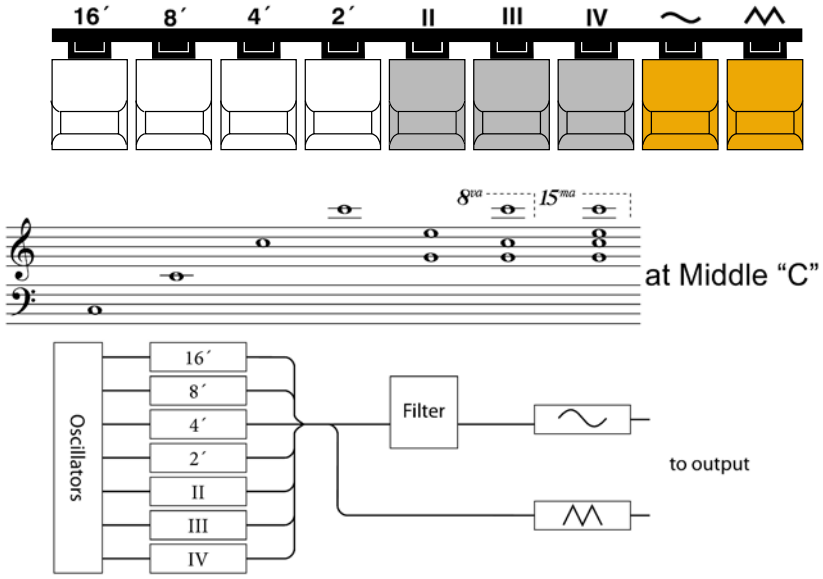


5. Turn the VALUE knob so the Information Center Display shows the following:



You can now use the Drawbars to control vintage British combo organ tones.

The figure below shows how the Drawbars are allocated for the Vx Organ Type.



The type of combo organ replicated by Vx had drawbar-type controls, but they functioned differently from Hammond Harmonic Drawbars. The first four Drawbars control individual pitches, while the next three are "Mixture" Drawbars which cause multiple pitches to sound. "II," "III" and "IV" refer to the number of pitches represented by that Drawbar.

The last two Drawbars control the type of tone produced by the first seven Drawbars. The last black Drawbar causes pure tones to sound while the last white Drawbar causes brighter and more harmonically complex tones to sound.

NOTE: The first seven Drawbars WILL NOT sound unless one or both of the last two Drawbars are also "out." These two Drawbars regulate the overall volume as well as timbre of the total Drawbar registration, and can be used separately or together.

NOTE: The colors shown in the above figure are the ones shown in the Information Center Display when the **Vx** Organ Type is selected.

NOTE: The Drawbar allocations shown above are identical for the UPPER and LOWER Parts.

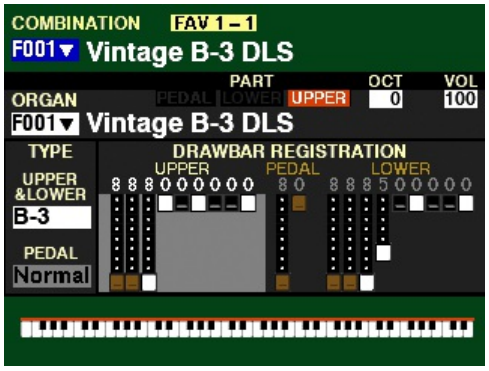
NOTE: The PEDAL tones will automatically play the **Muted** voicing for the **TONE WHEEL** Organ Type.

♦ Organ Type - Farf.

The Farf. Drawbar Organ Type allows you to use the Drawbars to register the sound of a vintage Italian combo organ.

Accessing the Farf. Organ Type from a PLAY Screen:

1. After turning the SK PRO "ON," Combination F001 should display. (see below).

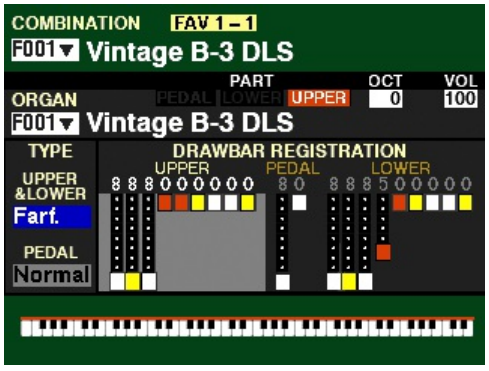


NOTE: Press the PLAY button to display the above screen if it is not already displaying.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:

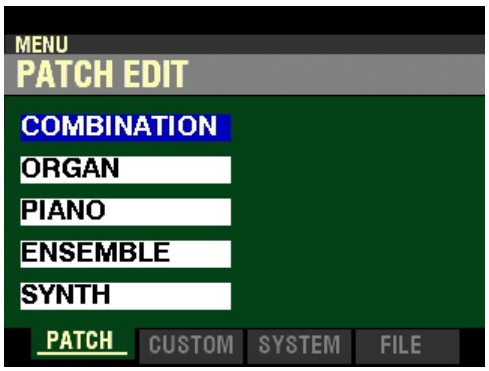


3. Turn the VALUE knob to select Farf.



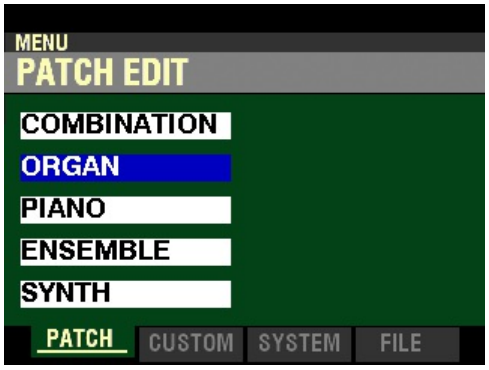
Accessing the Farf. Organ Type using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

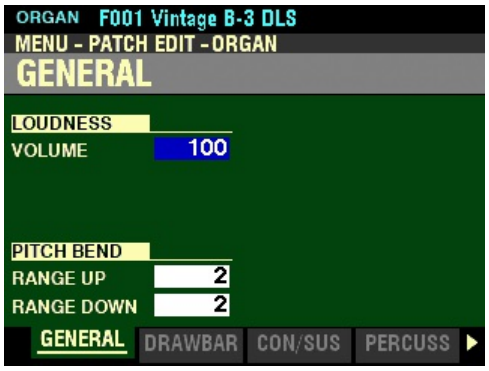


The "COMBINATION" box should be highlighted.

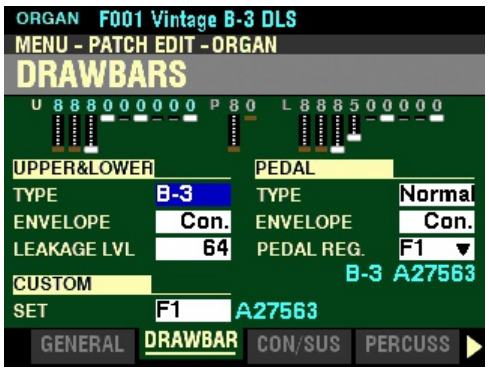
2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



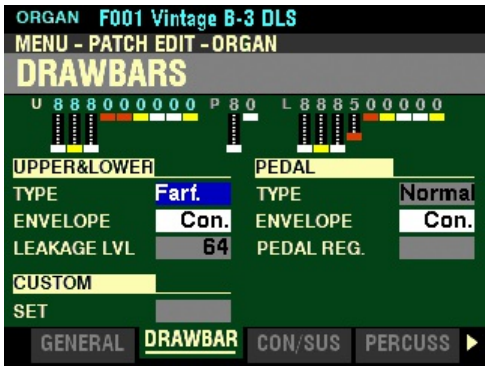
2. Press the ENTER button. The Information Center Display should now look like this:



3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:

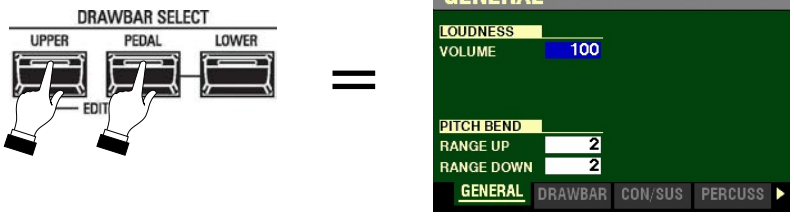


4. Turn the VALUE knob so the Information Center Display shows the following:

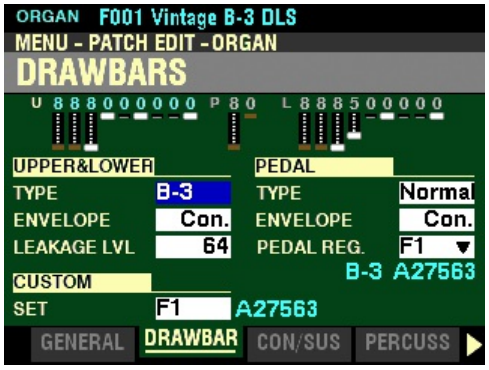


Accessing the Farf. Organ Type using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.

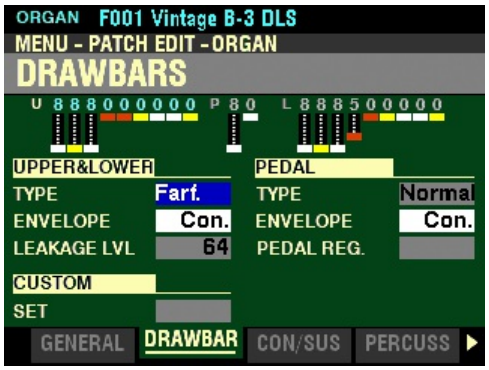


2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.
3. Press the PAGE "▶" button once. The Information Center Display should now look like this:



The box to the right of "TYPE" should be highlighted.

3. Turn the VALUE knob so the Information Center Display shows the following:

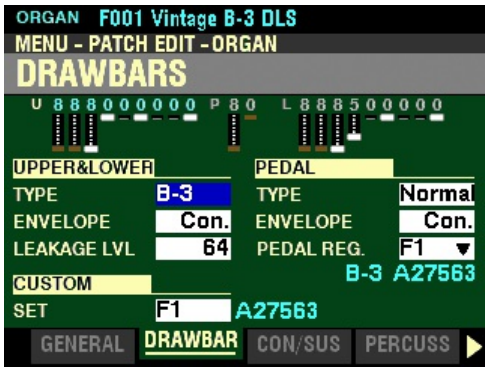


Accessing the Farf. Organ Type using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

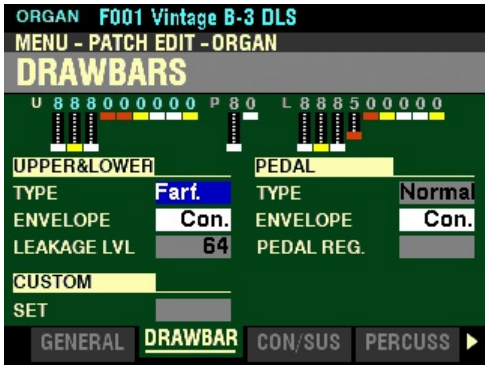


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



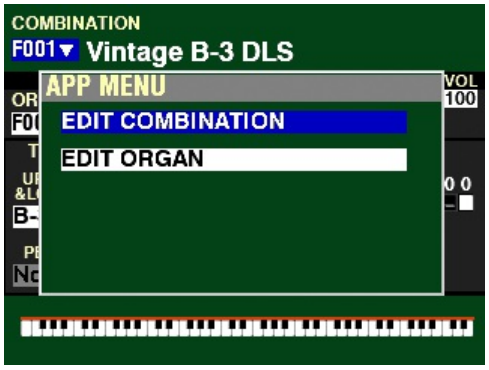
3. Release the SHIFT button.

4. Turn the VALUE knob so the Information Center Display shows the following:



Accessing the Farf. Organ Type using the APP MENU:

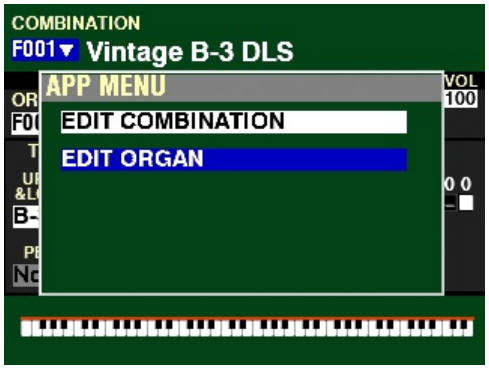
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



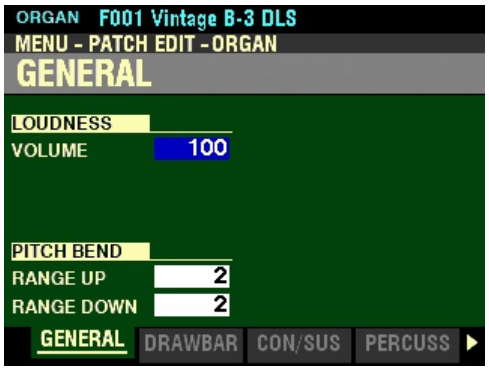
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

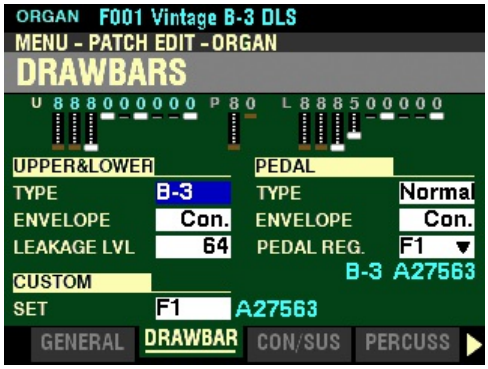
2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



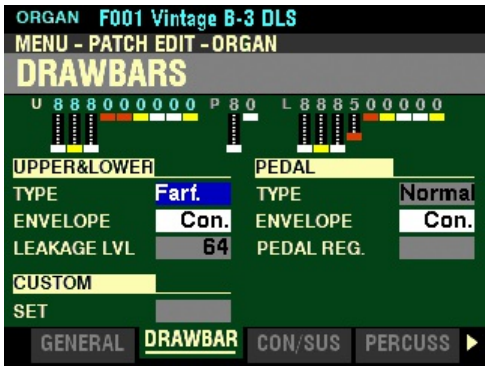
3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button once. The Information Center Display should now look like this:

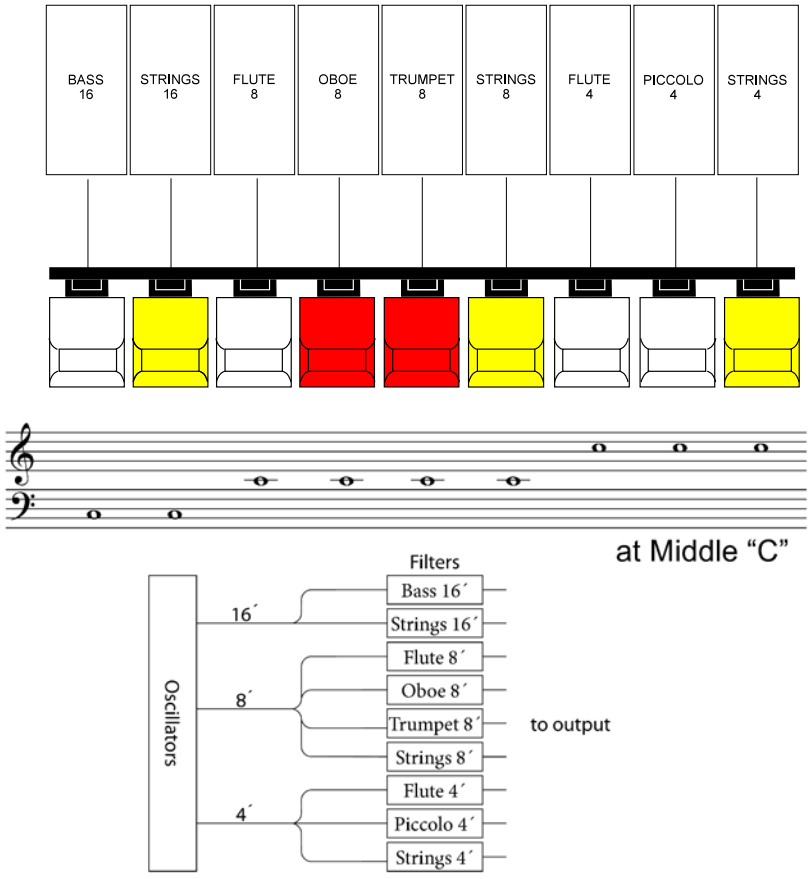


5. Turn the VALUE knob so the Information Center Display shows the following:



You can now use the Drawbars to control vintage Italian combo organ tones.

The figure below shows how the Drawbars are allocated for the Farf Organ Type.



The above configuration follows the layout of the "Combo Compact" series of combo organ, which used rocker-type tilt tablets rather than Drawbars to turn voices "ON" and "OFF." On the SK PRO, the Drawbars are used to control the same sounds. To replicate the effect of tablets, simply pull the Drawbar(s) representing the tone(s) you want "out" all the way. Or, you can create shadings of tones by using the Drawbars in the more traditional fashion.

NOTE: The colors shown in the above figure are the ones shown in the Information Center Display when the **Farf** Organ Type is selected.

NOTE: The Drawbar allocations shown above are identical for the UPPER and LOWER Parts.

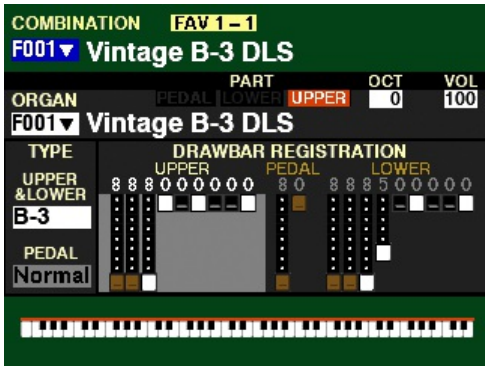
NOTE: The PEDAL tones will automatically play the **Muted** voicing for the **TONE WHEEL** Organ Type.

♦ Organ Type - Ace.

The Ace. Drawbar Organ Type allows you to use the Drawbars to register the sound of a vintage Japanese combo organ.

Accessing the Ace. Organ Type from a PLAY Screen:

1. After turning the SK PRO "ON," Combination F001 should display. (see below).

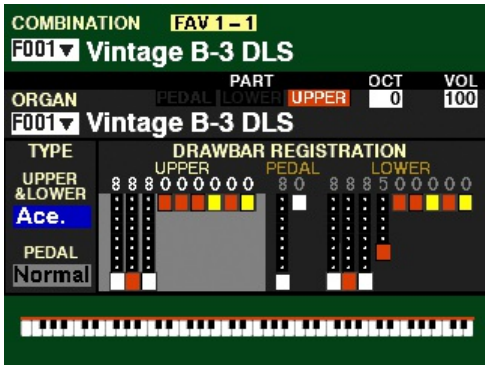


NOTE: Press the PLAY button to display the above screen if it is not already displaying.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:

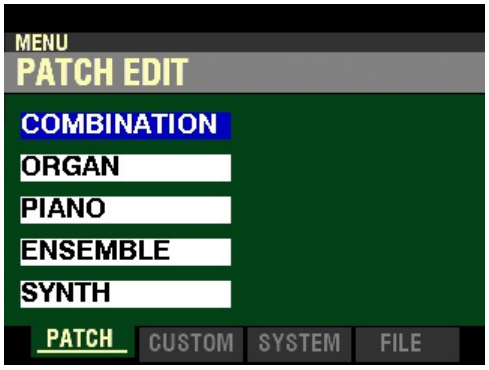


3. Turn the VALUE knob to select Ace.



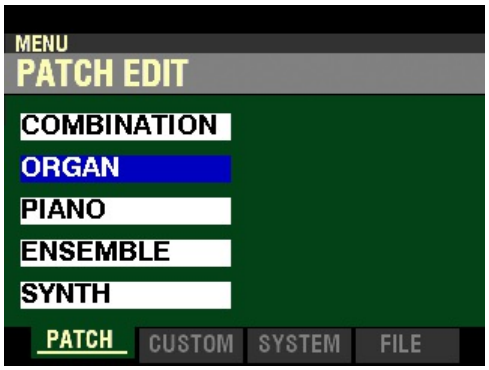
Accessing the Ace. Organ Type using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

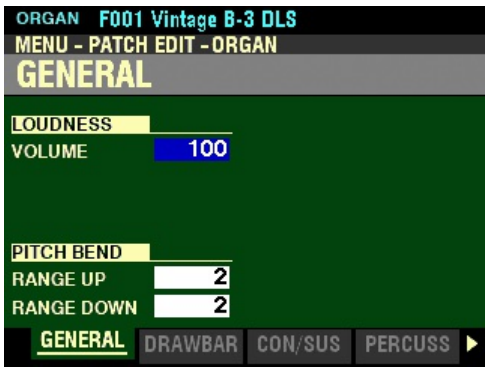


The "COMBINATION" box should be highlighted.

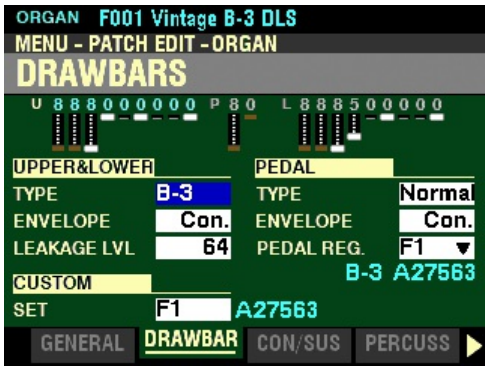
2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



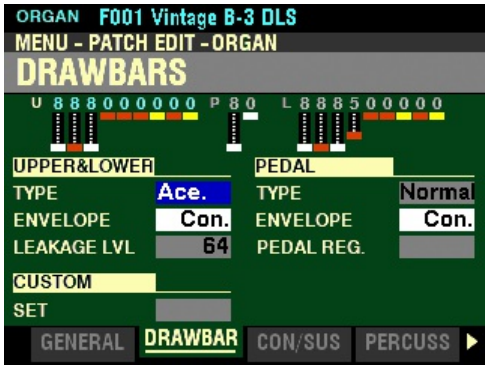
2. Press the ENTER button. The Information Center Display should now look like this:



3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:

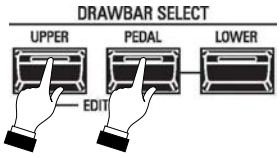


4. Turn the VALUE knob so the Information Center Display shows the following:

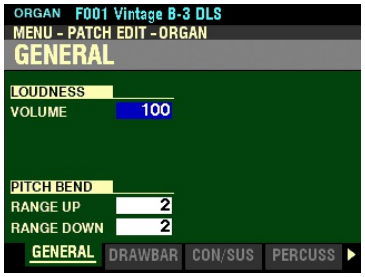


Accessing the Ace. Organ Type using the Shortcut:

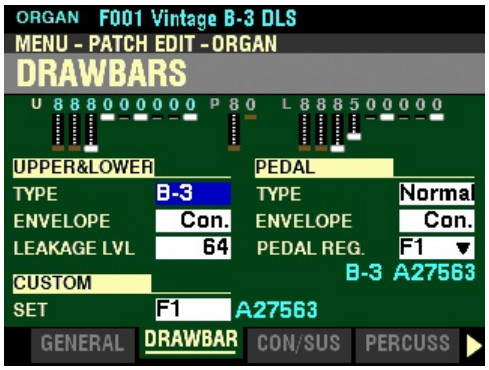
1. Press the UPPER and PEDAL DRAWBAR buttons together.



=

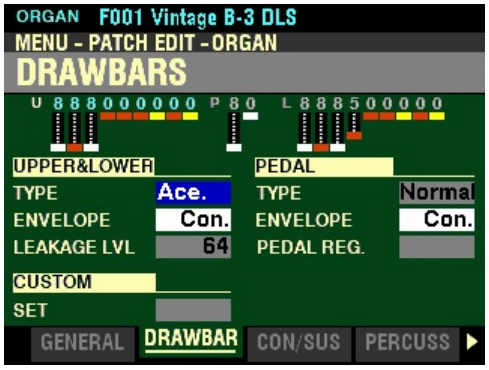


2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.
3. Press the PAGE "▶" button once. The Information Center Display should now look like this:



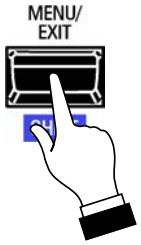
The box to the right of "TYPE" should be highlighted.

3. Turn the VALUE knob so the Information Center Display shows the following:

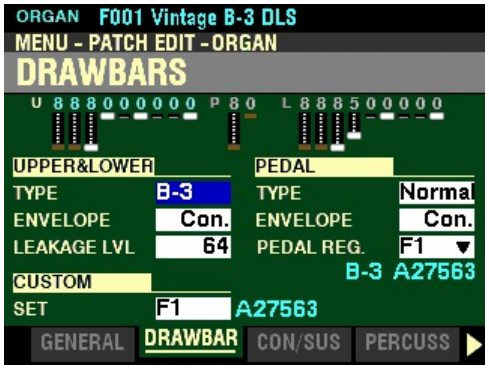


Accessing the Ace. Organ Type using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

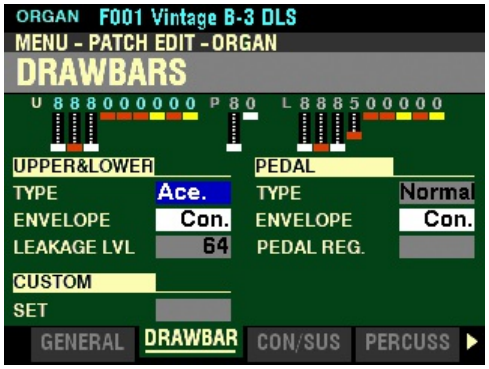


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



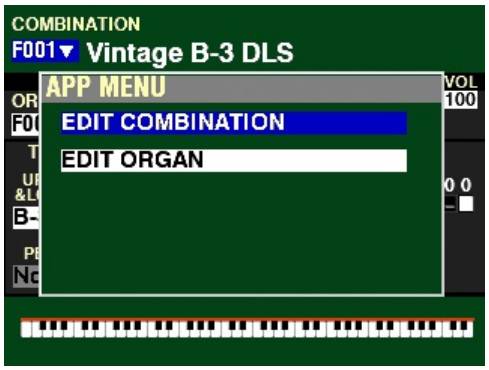
3. Release the SHIFT button.

4. Turn the VALUE knob so the Information Center Display shows the following:



Accessing the Ace. Organ Type using the APP MENU:

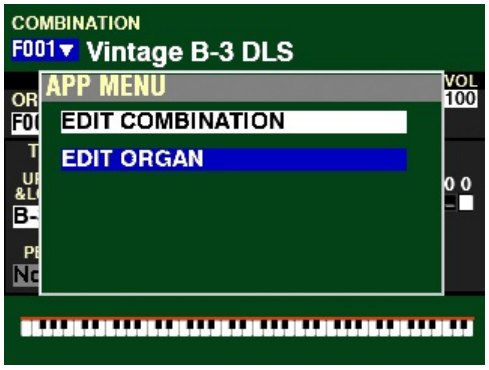
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



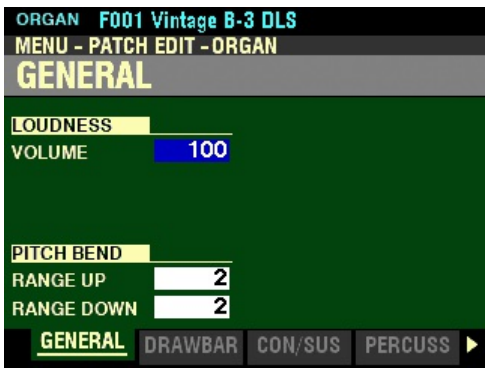
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

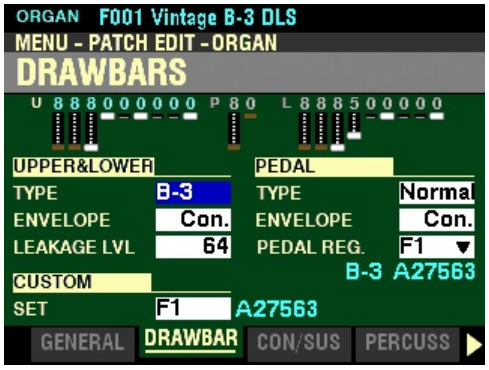
2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



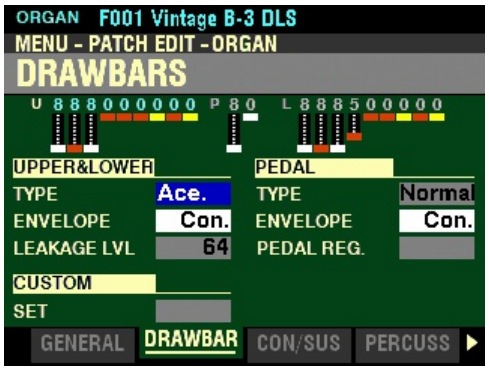
3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button <u>once</u>. The Information Center Display should now look like this:

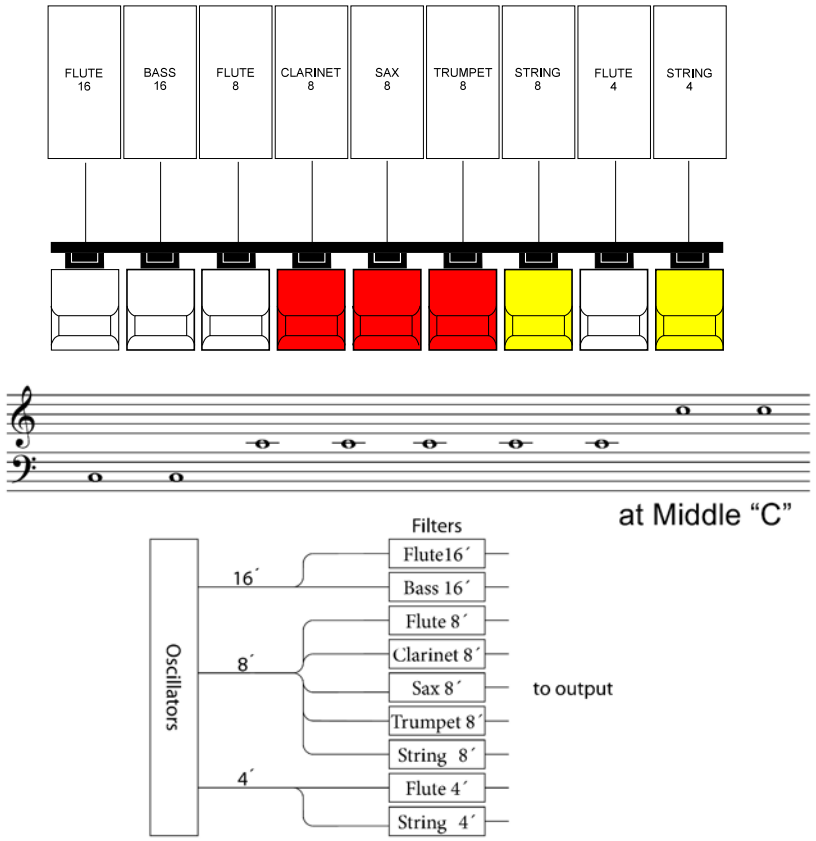


4. Turn the VALUE knob so the Information Center Display shows the following:



You can now use the Drawbars to control vintage Japanese combo organ tones.

The figure below shows how the Drawbars are allocated for the Ace Organ Type.



The above configuration follows the layout of the "TOP7" combo organ, which used rocker-type tilt tablets rather than Drawbars to turn voices "ON" and "OFF." On the SK PRO, the Drawbars are used to control the same sounds. To replicate the effect of tablets, simply pull the Drawbar(s) representing the tone(s) you want "out" all the way. Or, you can create shadings of tones by using the Drawbars in the more traditional fashion.

NOTE: The colors shown in the above figure are the ones shown in the Information Center Display when the **Ace** Organ Type is selected.

NOTE: The Drawbar allocations shown above are identical for the UPPER and LOWER Parts.

NOTE: The PEDAL tones will automatically play the **Muted** voicing for the **TONE WHEEL** Organ Type.

♦ Organ Type - Pipe

The Pipe Organ Type contains three (3) Custom Sets - Classic, Theatre 1 and Theatre 2. The following pages show how the Pipe Voices are allocated to the Drawbars for each Custom Set.

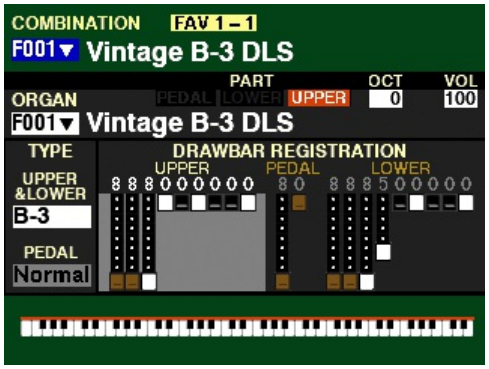
NOTE: **Classic** and **Theatre** denote different kinds of Pipe Organs. Classic organs are designed to play classical and liturgical music, while Theatre organs are better suited to semi-classical and popular music as well as orchestral transcriptions.

Organ Type - Pipe (Classic)

This Organ Type allows you to use the Drawbars to register authentic classical pipe organ tones.

Accessing the Classic Pipe Organ Type from a PLAY Screen:

1. After turning the SK PRO "ON," Combination F001 should display. (see below).

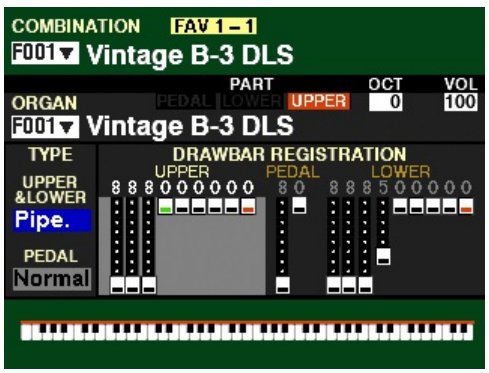


NOTE: Press the PLAY button to display the above screen if it is not already displaying.

2. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:

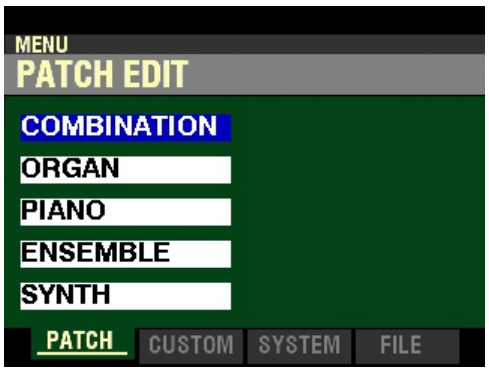


3. Turn the VALUE knob to select Pipe.



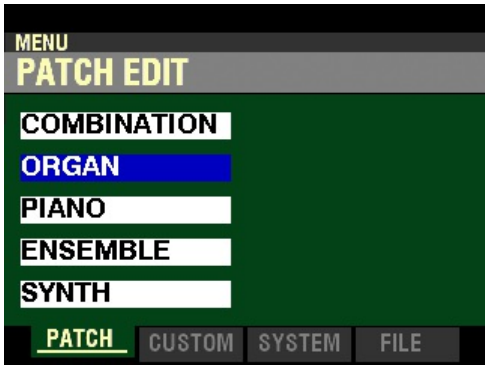
Accessing the Classic Pipe Organ Type using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

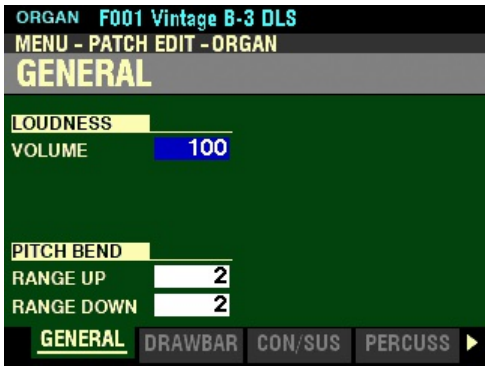


The "COMBINATION" box should be highlighted.

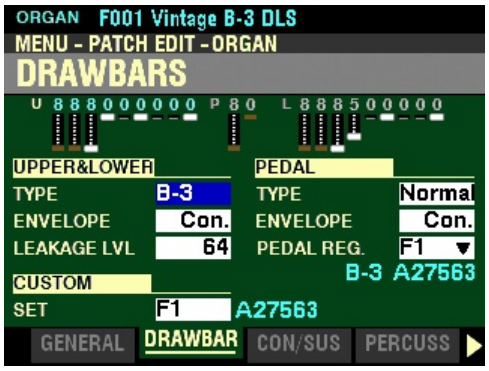
2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



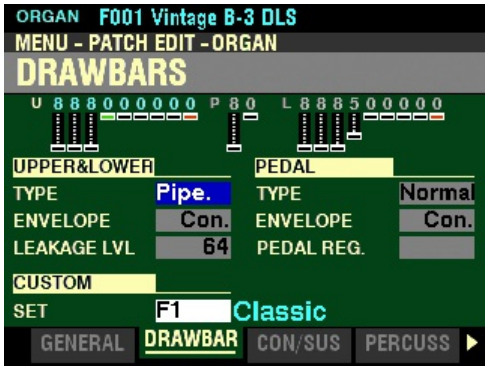
2. Press the ENTER button. The Information Center Display should now look like this:



3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:

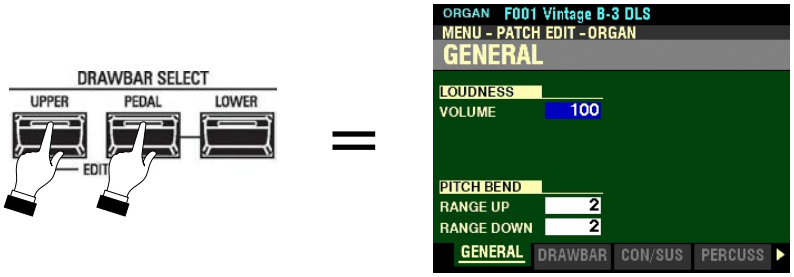


4. Turn the VALUE knob so the Information Center Display shows the following:



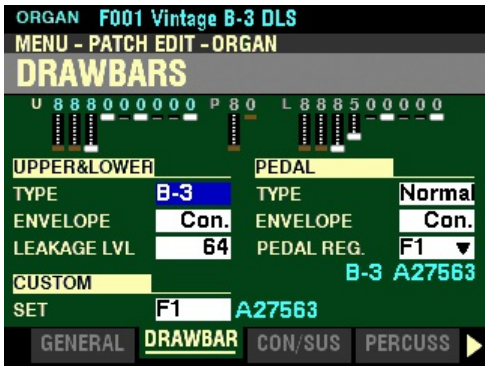
Accessing the Classic Pipe Organ Type using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



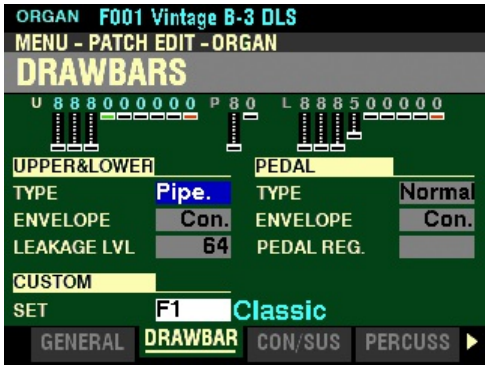
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button once. The Information Center Display should now look like this:



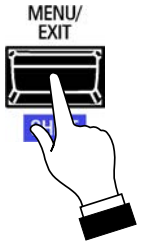
The box to the right of "TYPE" should be highlighted.

3. Turn the VALUE knob so the Information Center Display shows the following:

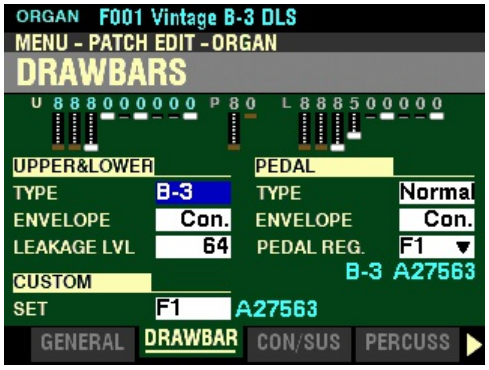


Accessing the Classic Pipe Organ Type using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

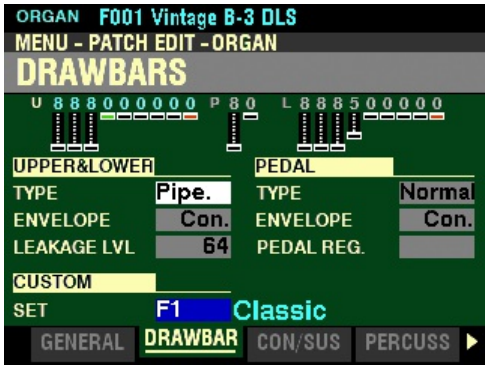


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



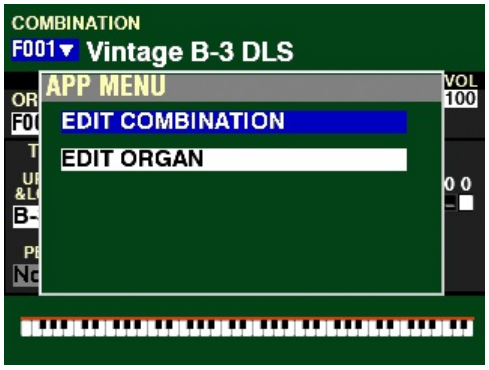
3. Release the SHIFT button.

4. Turn the VALUE knob so the Information Center Display shows the following:



Accessing the Classic Pipe Organ Type using the APP MENU:

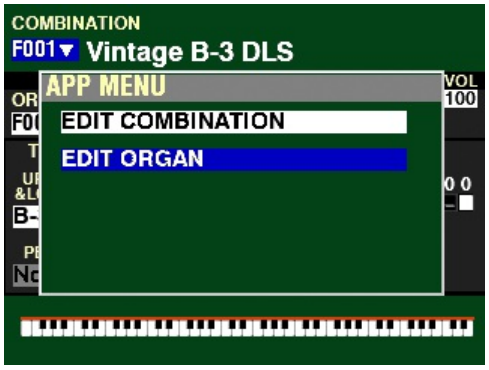
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



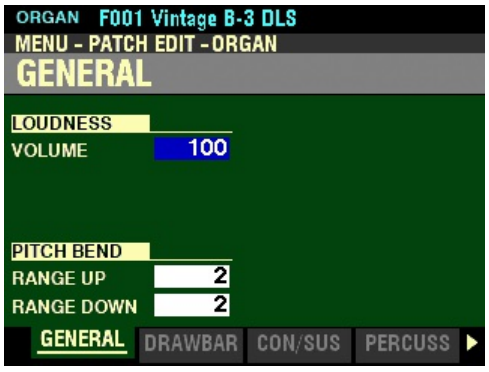
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

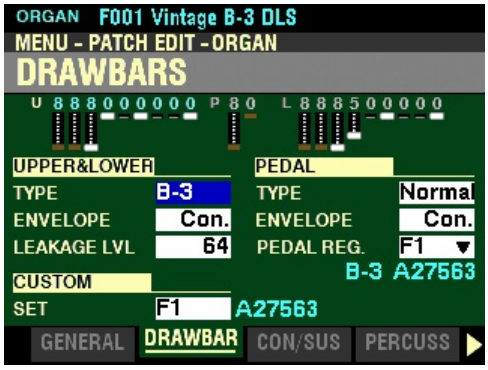
2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



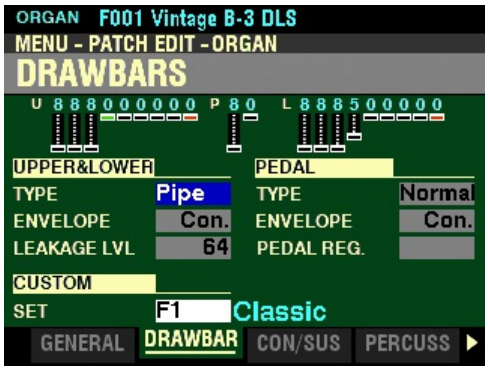
3. Press the ENTER button. The Information Center Display should now look like this:



4. Press the PAGE "▶" button once. The Information Center Display should now look like this:

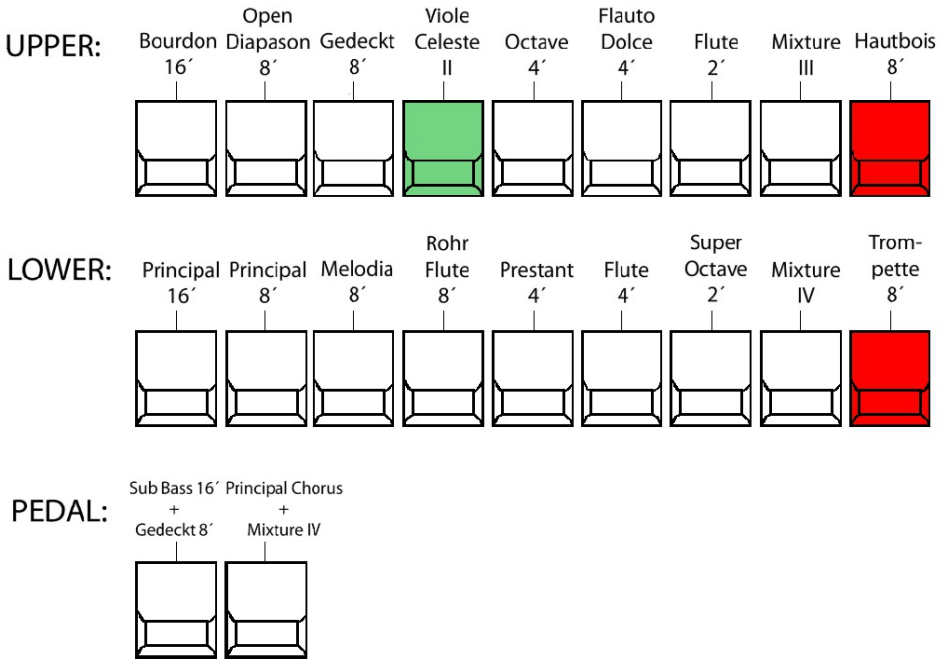


5. Turn the VALUE knob so the Information Center Display shows the following:



You can now use the Drawbars to control the voices of a classical pipe organ. The figure below shows how the Drawbars are allocated in this mode.

F1 - Classic:



NOTE: The colors shown in the above figure are the ones shown in the Information Center Display when the **Pipe - Classic** Organ Type is selected.

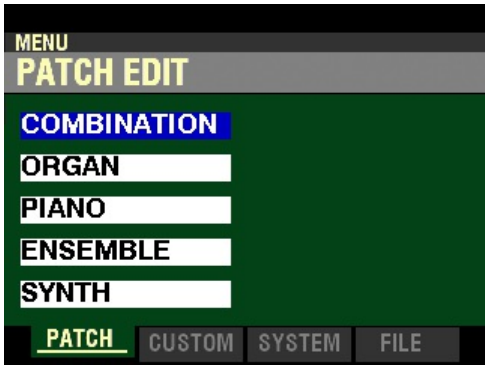
IMPORTANT NOTE: When **Pipe - Classic** mode is selected, the Drawbars will function similar to drawstops on a traditional pipe organ - pulling a Drawbar "out" will turn the associated Pipe Voice "ON" while pushing the Drawbar "in" will turn the Pipe Voice "OFF." The Pipe Voices **do not** have gradations of volume - they are either "ON" or "OFF."

♦ Organ Type - Pipe (Theatre)

This Organ Type allows you to use the Drawbars to register authentic theatre pipe organ tones.

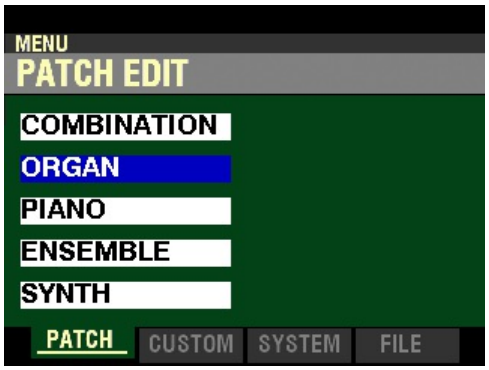
Accessing the Theatre Pipe Organ Type using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

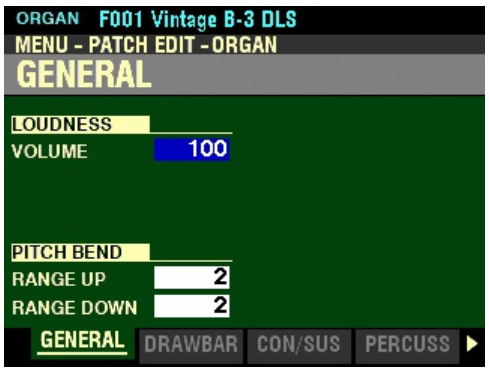


The "COMBINATION" box should be highlighted.

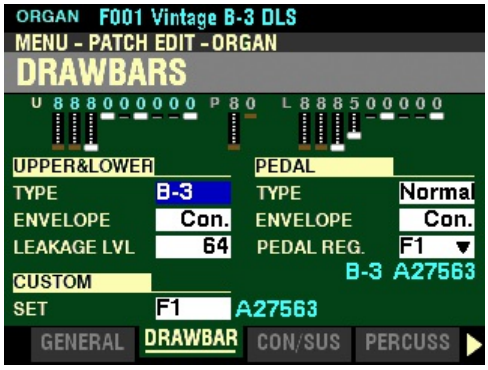
2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



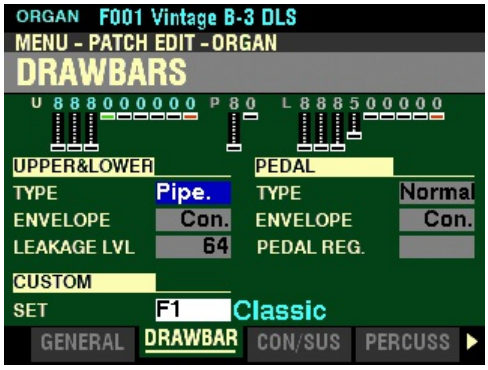
3. Press the ENTER button. The Information Center Display should now look like this:



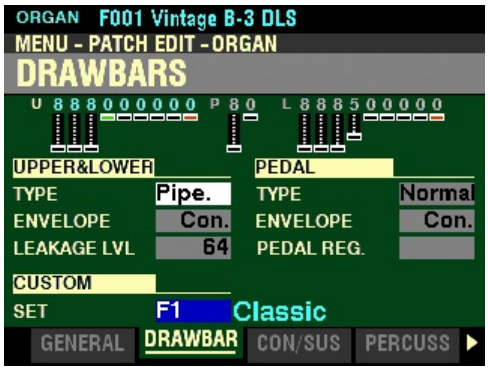
4. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



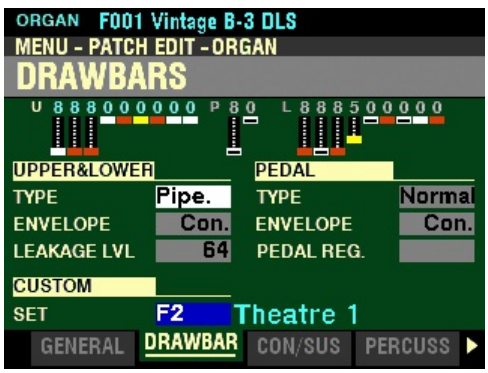
5. Turn the VALUE knob so the Information Center Display shows the following:



6. Press the DIRECTION "▼" button three times to highlight the box to the right of "SET."

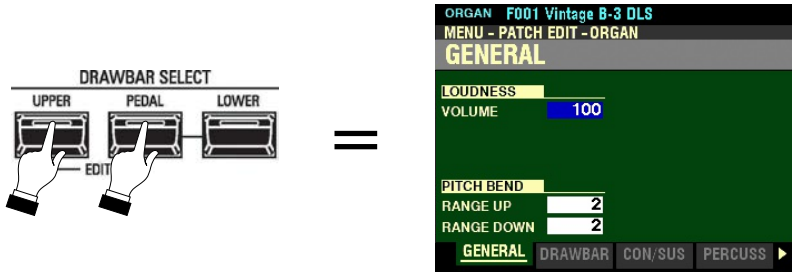


7. Turn the VALUE knob so that F2 displays in the box to the right of "SET."



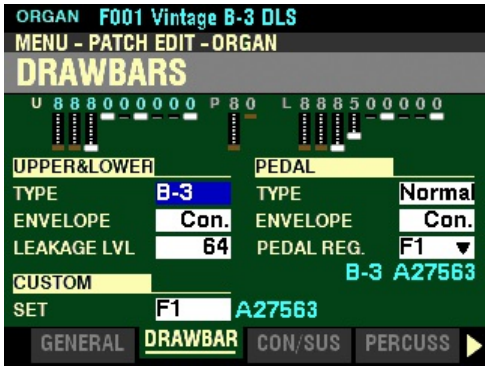
Accessing the Theatre Pipe Organ Type using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



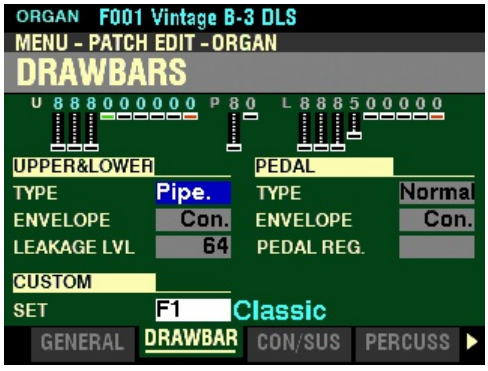
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button once. The Information Center Display should now look like this:

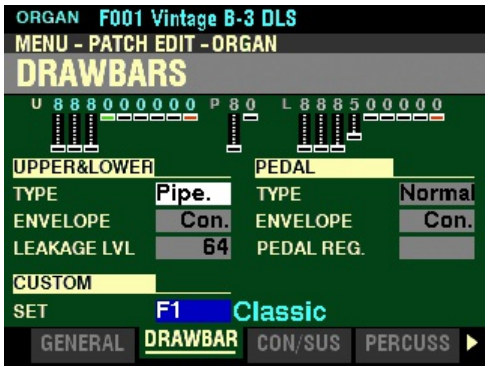


The box to the right of "TYPE" should be highlighted.

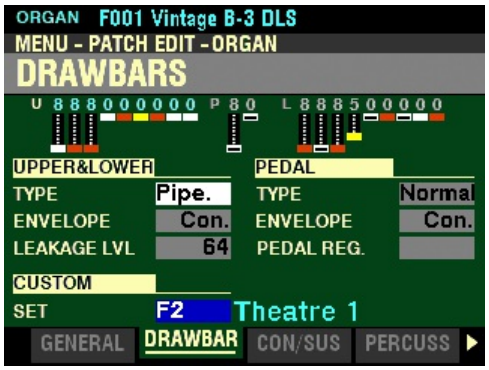
4. Turn the VALUE knob so the Information Center Display shows the following:



4. Press the DIRECTION "▼" button three times to highlight the box to the right of "SET."

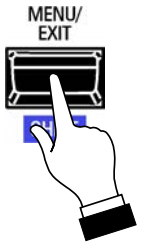


5. Turn the VALUE knob so that F2 displays in the box to the right of "SET."

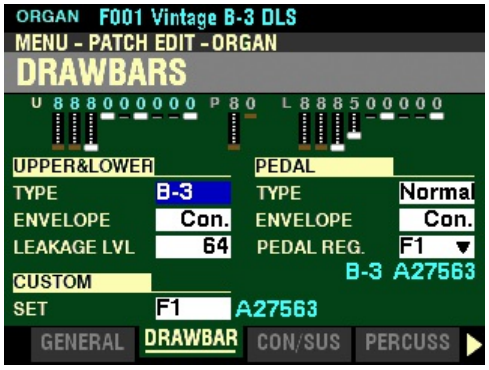


Accessing the Theatre Pipe Organ Type using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

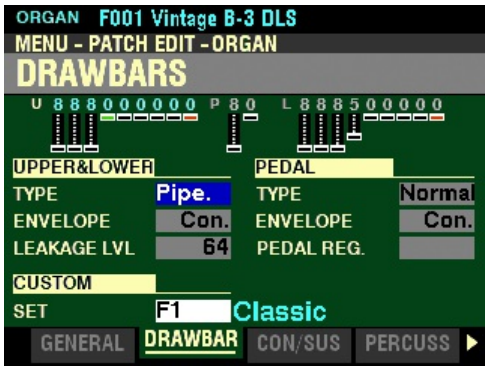


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:

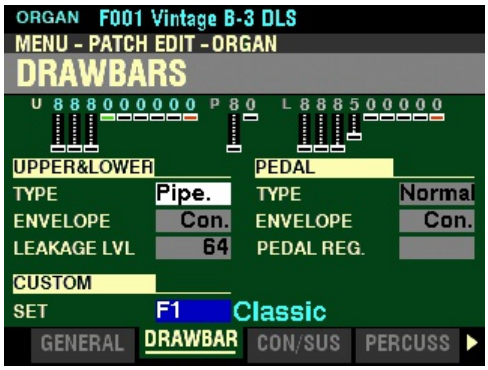


3. Release the SHIFT button.

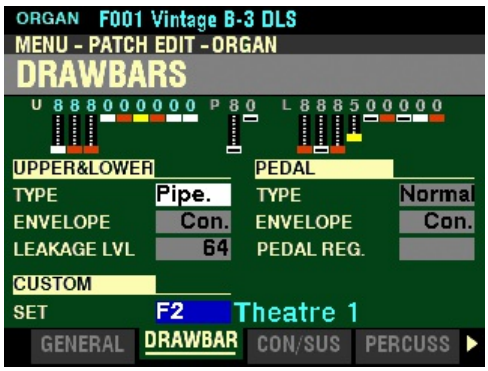
4. Turn the VALUE knob so the Information Center Display shows the following:



5. Press the DIRECTION "▼" button three times to highlight the box to the right of "SET."

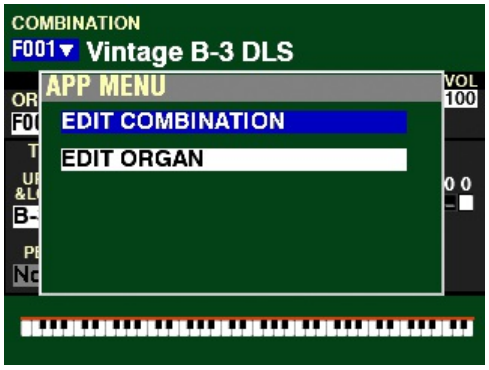


6. Turn the VALUE knob so that F2 displays in the box to the right of "SET."



Accessing the Theatre Pipe Organ Type using the APP MENU:

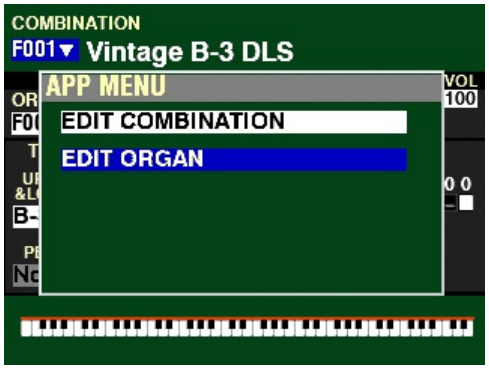
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look similar to this:



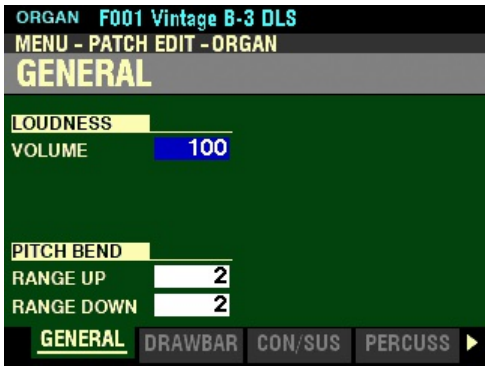
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

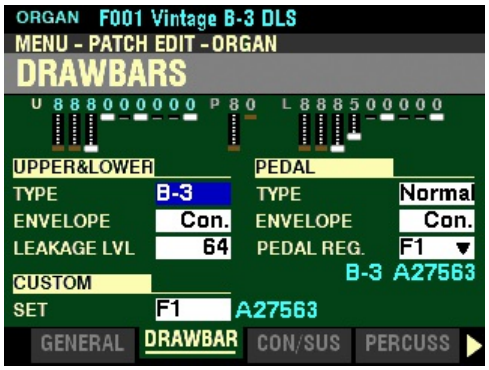
2. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



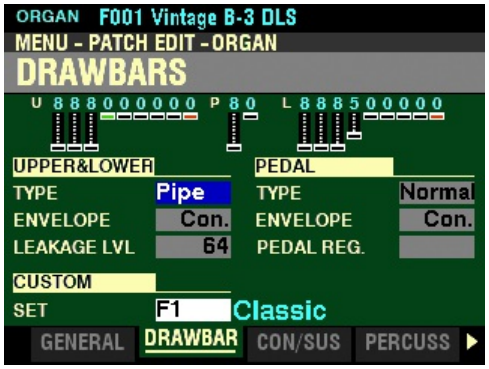
3. Press the ENTER button. The Information Center Display should now look like this:



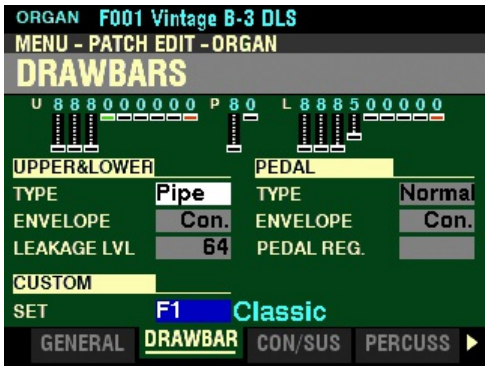
4. Press the PAGE "▶" button once. The Information Center Display should now look like this:



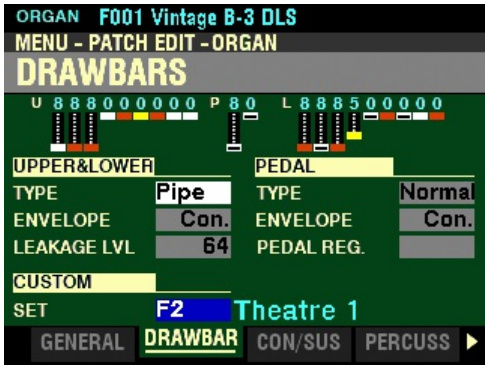
5. Turn the VALUE knob so the Information Center Display shows the following:



6. Press the DIRECTION "▼" button three times to highlight the box to the right of "SET."



7. Turn the VALUE knob so that F2 displays in the box to the right of "SET."



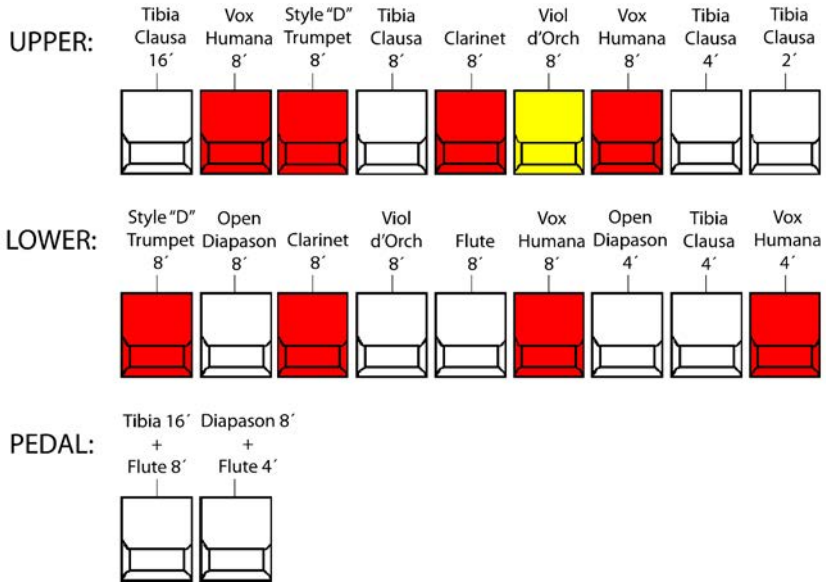
You can now use the Drawbars to control the voices of a theatre or "cinema" pipe organ.

Use the VALUE knob to select F2 Theatre 1 or F3 Theatre 2.

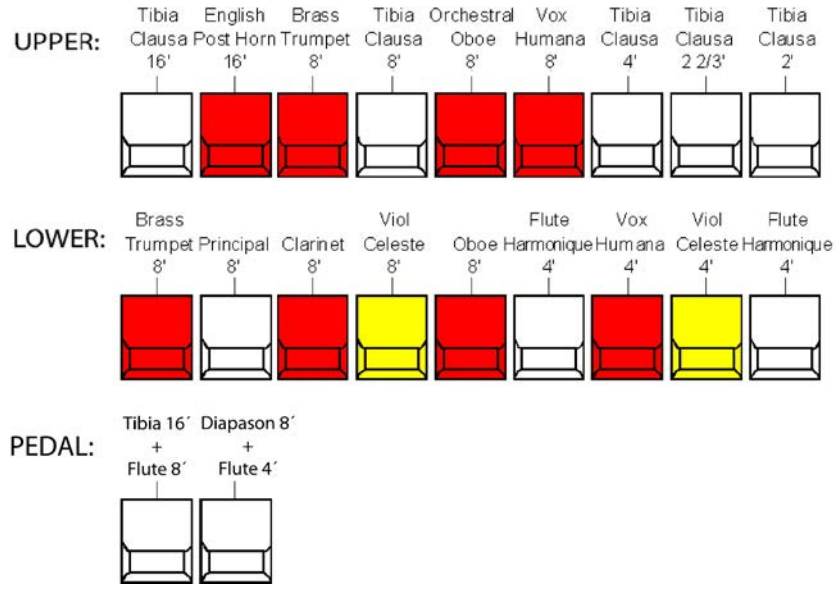
Theatre 1 is a stop complement similar to a Wurlitzer "Style 210" while Theatre 2 is derived from the stops from a Wurlitzer "Style 260 Special" including English Post Horn.

The figures below show how the Drawbars are allocated in this mode.

F2 - Theatre 1:



F3 - Theatre 2:



NOTE: The colors shown in the above figures are the ones shown in the Information Center Display when the **Pipe - Theatre** Organ Types are selected.

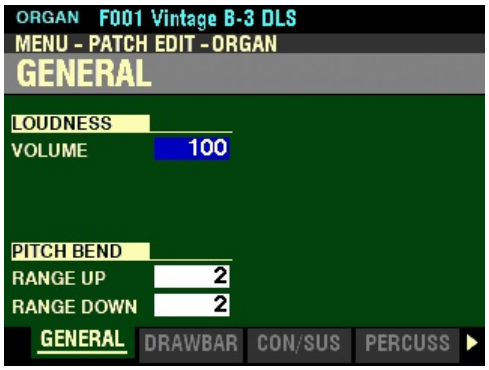
IMPORTANT NOTE: When **Pipe - Classic** mode is selected, the Drawbars will function similar to the stop tablets on a theatre pipe organ - pulling a Drawbar "out" will turn the associated Pipe Voice "ON" while pushing the Drawbar "in" will turn the Pipe Voice "OFF." The Pipe Voices **do not** have gradations of volume - they are either "ON" or "OFF."

◆ ORGAN APP MENU

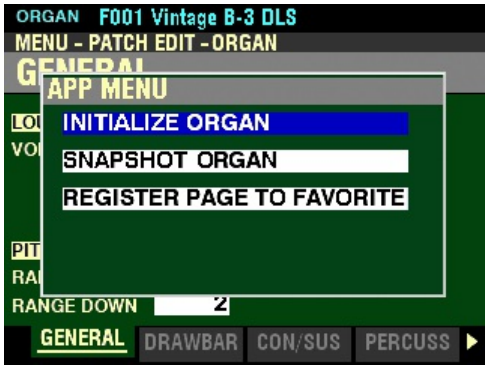
When you are editing Parameters for the ORGAN Voice Section, you can access the APP MENU to make some editing operations quicker and easier. The following paragraphs will explain this in more detail.

TRY THIS:

1. Access the PATCH EDIT -ORGAN FUNCTION Mode using any of the methods described starting on page 188. The Information Center Display should look like this:



2. Press and Release the MANUAL "☰" button. The Information Center Display should now look like this:



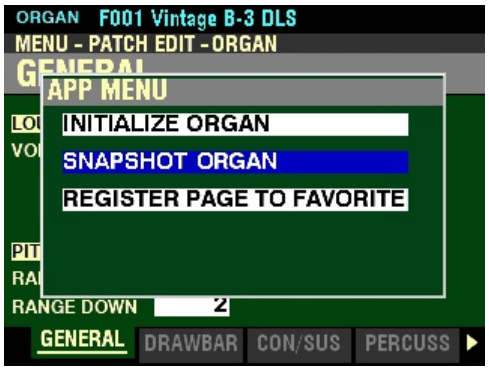
This is the APP MENU for the PATCH EDIT -ORGAN FUNCTION Mode Page. You can now use the DIRECTION "▲" and "▼" buttons to make changes to the selected ORGAN Patch. These changes are explained starting below.

♦ INITIALIZE ORGAN

This allows you to clear all the Patch Parameters in the currently selected Patch, including Drawbar registrations.

Press the ENTER button to initialize all the Patch Parameters.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



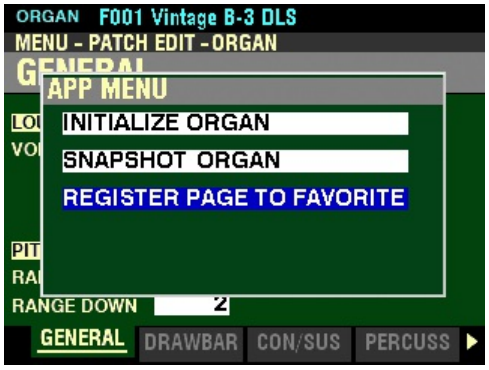
The "SNAPSHOT ORGAN" box should be highlighted.

♦ SNAPSHOT ORGAN

This allows you to capture the current physical Drawbar registrations and Overdrive settings so you can include them in your User ORGAN Patch.

Press the ENTER button to capture the current Drawbar registrations and Overdrive settings.

From the above screen, press the DIRECTION "▼" button once.



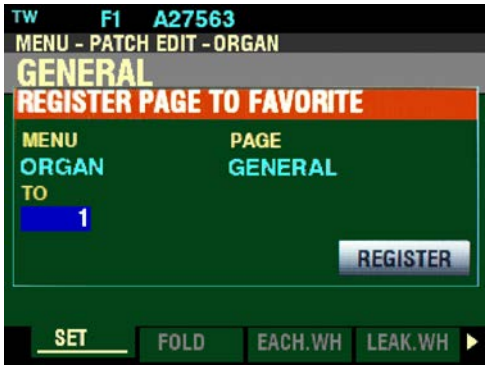
The "REGISTER PAGE TO FAVORITE" box should be highlighted.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

To register the current Page to a FAVORITE, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

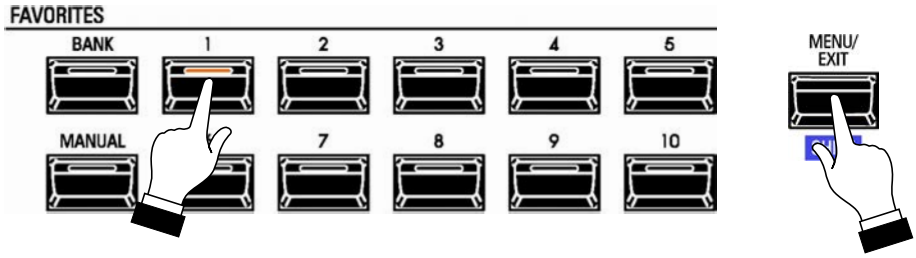


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

HAMMOND

Sk PRO

3PART ORGAN

3PART ORGAN

The SK PRO incorporates a new feature called 3PART ORGAN, which allows you instantly to convert the SK PRO into a "virtual Hammond B-3." This is explained in detail below.

As explained in other chapters of this Guide, the SK PRO contains four (4) Voice Sections: ORGAN, PIANO, ENSEMBLE and MONO SYNTH. These Voice Sections can be use alone or combined in various ways to produce a very wide variety of different tones and effects. In addition, the SPLIT feature allows you to assign the different Voice Sections to different ranges of the keyboard, allowing even greater flexibility.

However, because the SK PRO is first and foremost a Hammond Organ, there may be occasions when you will want to play it as a Hammond Organ without having to do a great deal of programming or setting up beforehand. The 3PART ORGAN feature allows you to do this.

If you look to the left of the Control Panel you will see a button marked 3PART ORGAN.



Touching this button "ON" (orange LED lit) will do three things:

1. Turn the SPLIT button "ON," thereby forcing the keyboard to be divided into UPPER and LOWER Parts,

2. Disable all other Voice Sections except ORGAN, and

3. Enable a Connected MIDI pedal clavier to play the PEDAL Part.

In this way, the touch of one button causes the SK PRO to function like a vintage Hammond Organ such as B-3, C-3, A-100, etc.

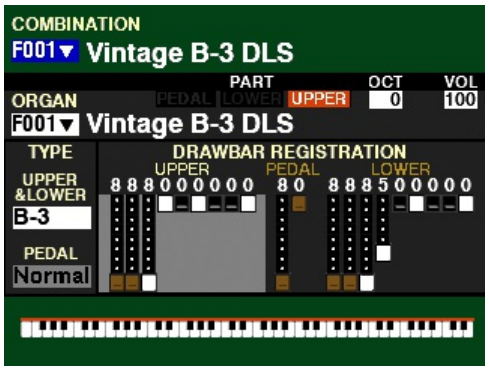
For an example of how this works please go to the next page.

◆ Using 3PART ORGAN

♦ Example 1

TRY THIS:

1. Make sure the SK PRO is in PLAY Mode. If in doubt, press the PLAY button. Also make sure the second line from the top reads F001 Vintage B-3 DLS. The Information Center Display should look like this:

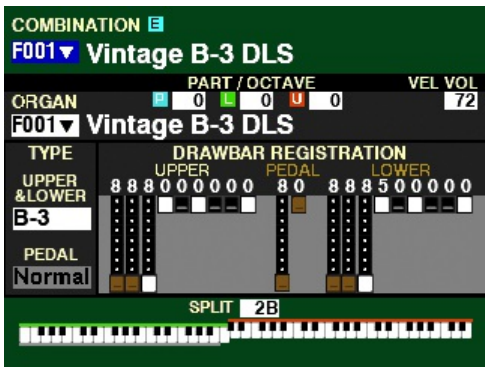


Notice the keyboard graphic at the bottom of the screen shows a single keyboard. Notice also the LOWER and PEDAL Drawbar icons are "greyed out."

2. Play some notes on the keyboard. You will hear the UPPER Part play throughout the entire keyboard.

3. Now press the 3PART ORGAN button "ON." You will see both the 3PART ORGAN and the SPLIT buttons turn "ON" (orange LED lit).

The Information Center Display should now look like this:



Compare this screen with the one above it. Notice the keyboard is now SPLIT into UPPER and LOWER Parts. Notice also the three icons for UPPER, LOWER and PEDAL Parts, and the Drawbar icons are showing "active."

Also notice the blue box "E" at the top of the screen, indicating the Combination has been edited or changed from its stored settings.
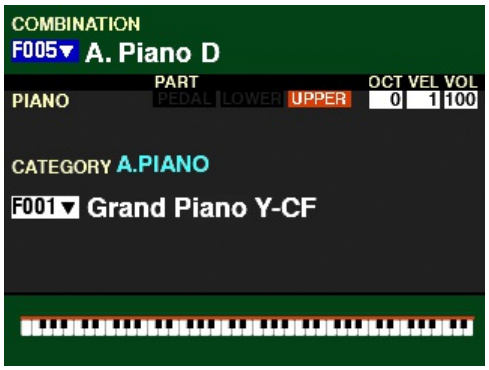
4. Play some notes on the keyboard. You will hear the UPPER Drawbar registration on the UPPER Part and the LOWER Drawbar registration on the LOWER Part. If you have a MIDI pedal clavier or if the PEDAL TO LOWER button is "ON" (LED lit),, you will also be able to play the PEDAL Drawbar registration from the MIDI pedals.

NOTE: A connected MIDI pedal clavier will play the ORGAN PEDAL Part **only** if the 3PART ORGAN button is "ON" (LED lit). However, if the SPLIT button is turned "OFF" the ORGAN PEDAL Part can still be played from the MIDI pedal clavier. Also, the PIANO, ENSEMBLE and MONO SYNTH Patches can be played from a MIDI pedal clavier by Pressing and Holding the PEDAL button in the ALLOCATE button group and pressing the PEDAL ALLOCATE button. This works independently from the 3PART ORGAN function.

♦ Example 2

TRY THIS:

1. Make sure the SK PRO is in PLAY Mode. If in doubt, press the PLAY button.
Also make sure the second line from the top reads, F005 A,Piano D. The Information Center Display should look like this:

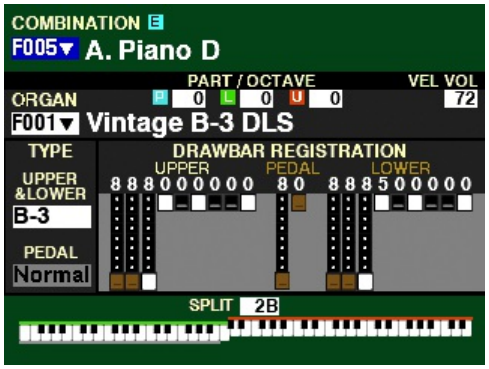


Notice only the PIANO ALLOCATE button turns "ON" for this Combination.

2. Play some notes on the keyboard. You will hear the sound of an acoustic grand piano.

3. Now press the 3PART ORGAN button "ON." You will see both the 3PART ORGAN and the SPLIT buttons turn "ON" (orange LED lit).

The Information Center Display should now look like this:



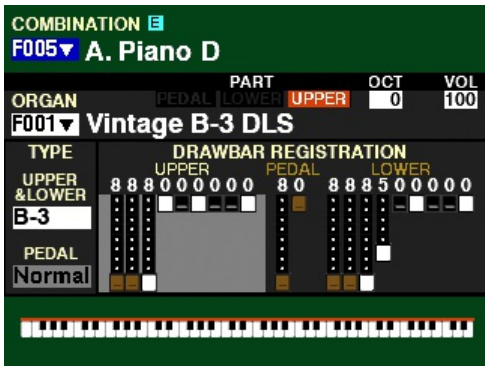
Notice the PIANO ALLOCATE button has turned "OFF" and the ORGAN ALLOCATE button is now "ON" with an orange LED.

Compare this screen with the one above it. Notice the keyboard is now SPLIT into UPPER and LOWER Parts. Notice also the three icons for UPPER, LOWER and PEDAL Parts, and the Drawbar icons are showing "active."

4. Play some notes on the keyboard. You will hear the UPPER Drawbar registration on the UPPER Part and the LOWER Drawbar registration on the LOWER Part. If you have a MIDI pedal clavier or if the PEDAL TO LOWER button is "ON" (LED lit), you will also be able to play the PEDAL Drawbar registration from the MIDI pedals.

5. Now press the 3PART ORGAN button "OFF." The SPLIT button will also turn "OFF."

The Information Center Display should now look like this:



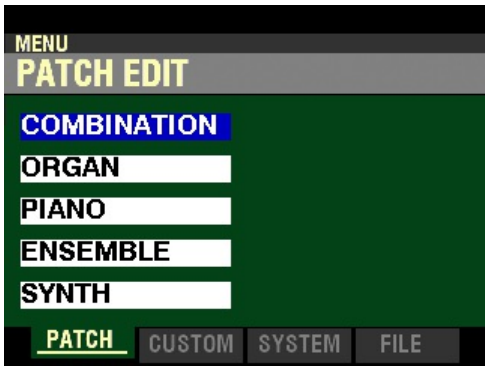
Notice the ORGAN ALLOCATE button LED is now red, and the keyboard icon at the bottom of the screen shows a single keyboard. Notice the LOWER and PEDAL Drawbar icons are now "greyed out," indicating SPLIT is "OFF." The PART icon will show only UPPER.

◆ 3PART ORGAN ALLOCATE

This Parameter allows you to select how the 3PART ORGAN button interacts with the ALLOCATE ORGAN button.

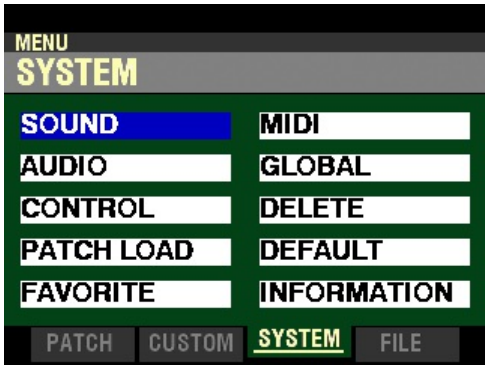
To access this Parameter, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



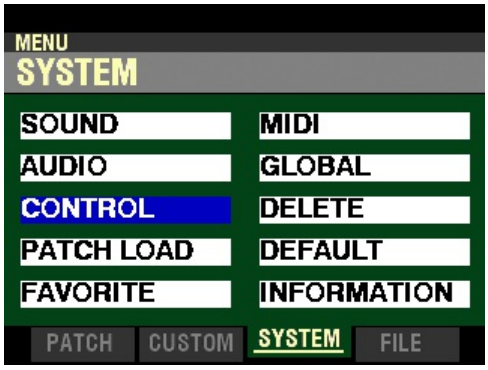
The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times. The Information Center Display should now look like this:

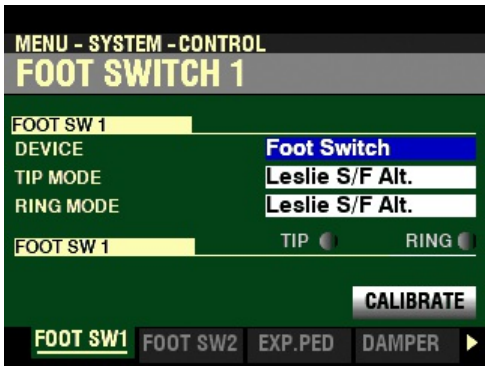


This is the SYSTEM FUNCTION Mode. The "SOUND" box should be highlighted.

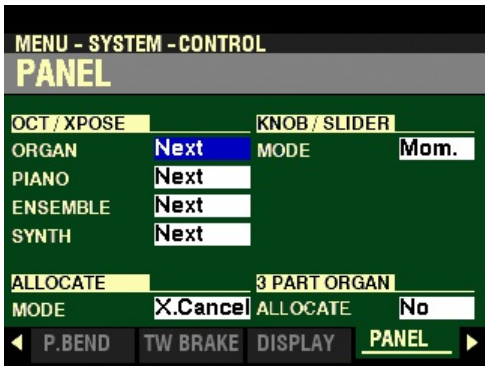
3. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



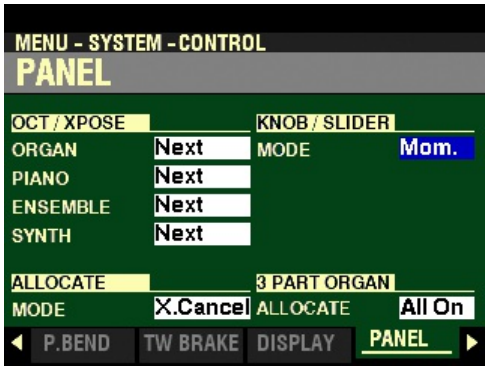
4. Press the ENTER button. The Information Center Display should now look like this:



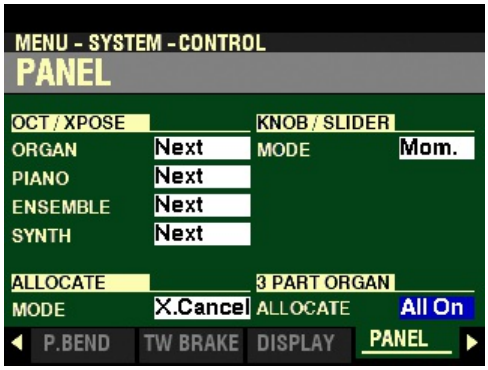
5. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



6. Press the DIRECTION "▶" button once to highlight the box to the right of "MODE."



7. Press the DIRECTION "▼" button once to highlight the box to the right of "ALLOCATE."



♦ 3PART ORGAN

This Parameter allows you to select how the 3PART ORGAN button interacts with the ALLOCATE ORGAN button. The data chart below shows the options you may select.

3PART ORGAN ALLOCATE Options	
Setting	**Description**
No	The 3PART ORGAN button has no effect on the ALLOCATE ORGAN button
All On	When the 3PART ORGAN button is turned "ON," all ORGAN Parts turn "ON." the SPLIT button turns "ON" and other Voice Sections are turned "OFF"

Turn the VALUE knob to turn this Parameter On or Off.

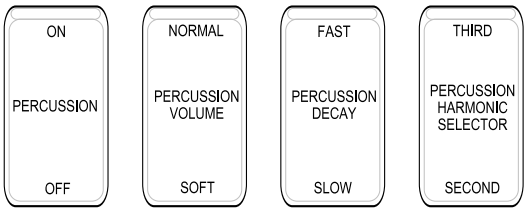
HAMMOND

Sk PRO

UPPER PERCUSSION

UPPER PERCUSSION - Touch-Response Percussion

An important component of the Hammond Sound is Touch-Response Percussion Control. On a vintage Hammond console organ, this feature is controlled by four tilting tablets on the extreme right of the control panel which look like this:



The PERCUSSION controls on the SK PRO consist of four separate buttons, located immediately to the right of the Drawbars, which control harmonic Percussion tones playable from the UPPER Part. They control all the same functions as the tilt tablets on a vintage Hammond.



IMPORTANT NOTE: To hear the tones produced by the PERCUSSION Voice buttons, the keys normally must be played in a detached (non-Legato) manner. If you play a single note and then hold it down while playing other keys, the Percussion voice will not play again until you release all keys and again play detached notes.

◆ ON



This button turns Percussion "ON" and "OFF." When this button is "ON" and the other buttons in the PERCUSSION section are "OFF," the tone for this harmonic is the same as the sound derived from the 4' Drawbar. Combining this Percussion tone with the Drawbars will produce bright and clear sounds.

◆ SOFT



This button regulates the volume of the Percussion tone. When it is in its normal state (LED not lit), the Percussion effect will be very prominent compared to the tones produced by the Drawbars. When this button is "ON" (LED lit) the Percussion effect is lower in volume or much less prominent.

◆ FAST



When this button is "OFF" (LED not lit), the Percussion tone will decay (die away) slowly like a chime. When FAST is "ON" (LED lit), the Percussion effect will decay rapidly like a xylophone or glockenspiel.

◆ THIRD



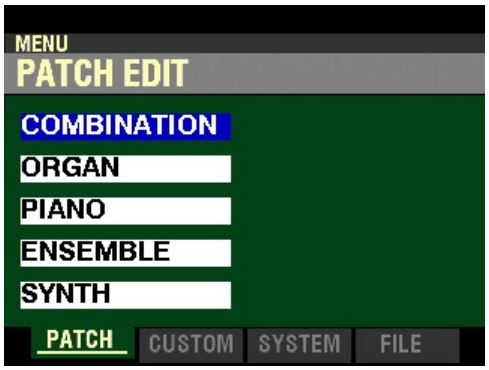
When this button is "ON" (LED lit), the Percussion tone is the same as the sound produced one produced by the first blank (2 2/3' or third harmonic) Drawbar. Combining this Percussion tone with the Drawbars will produce powerful and heavy sounds.

◆ PERCUSSION FUNCTION Mode Page

This FUNCTION Mode Page allows you to make various changes to the characteristics of the Percussion.

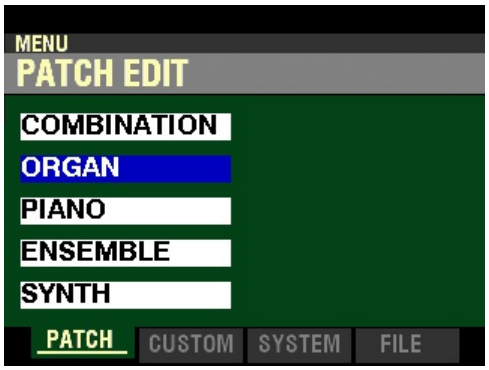
♦ Accessing the PERCUSSION FUNCTION Mode Page using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

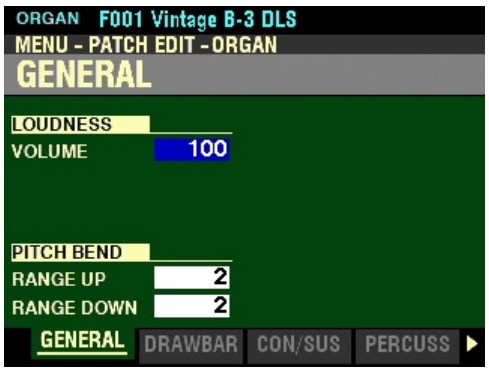


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

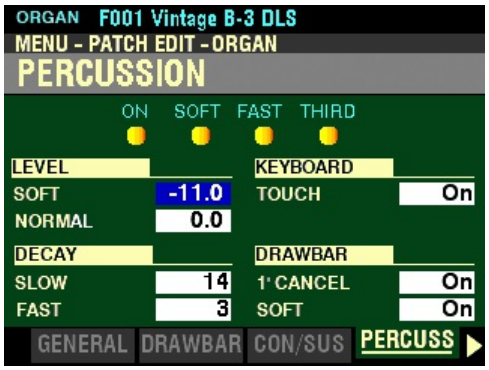


3. Press the ENTER button. The Information Center Display should now look like this:



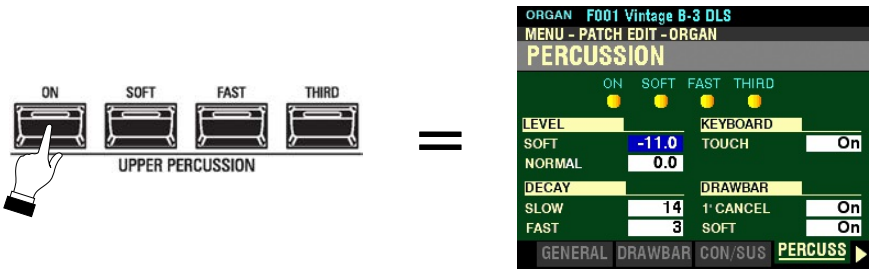
Page 1 of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



♦ Accessing the PERCUSSION FUNCTION Mode Page using the Shortcut:

Press and Hold any of the four PERCUSSION buttons.



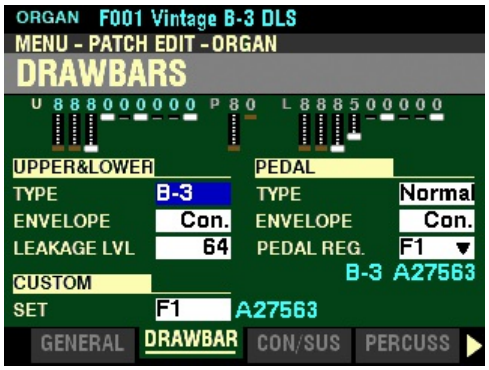
When the above screen displays, Release the PERCUSSION button you are holding.

♦ Accessing the PERCUSSION FUNCTION Mode using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT (MENU / EXIT) button.

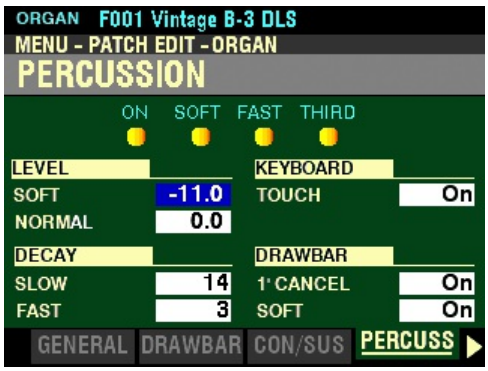


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

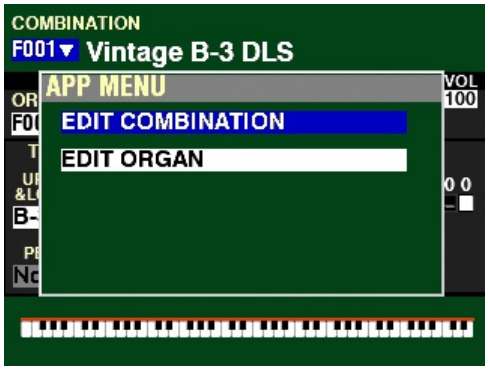
4. Press the PAGE "▶" button two times. The Information Center Display should now look like this:



♦ Accessing the PERCUSSION FUNCTION Mode Page using the APP MENU:

1. Make sure the ORGAN ALLOCATE button is "ON" (LED lit).

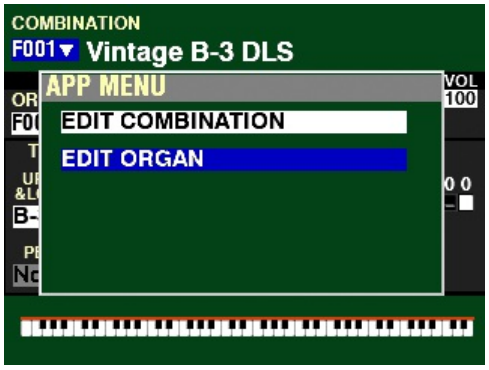
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "☰" button. The Information Center Display should now look similar to this:



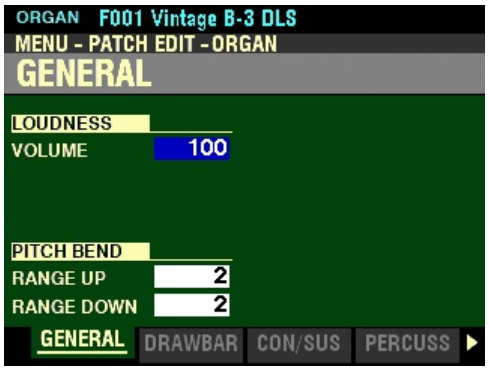
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.

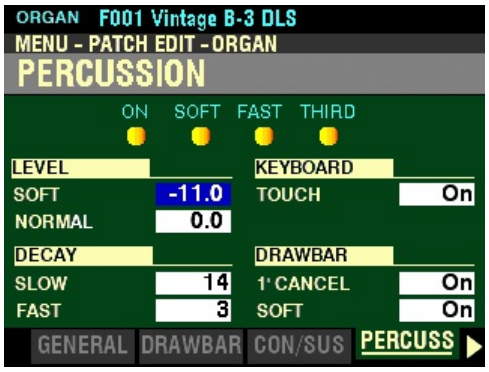


4. Press the ENTER button. The Information Center Display should now look like this:



Page 1 of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

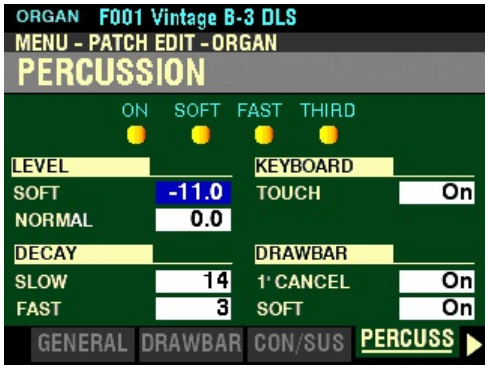
5. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



♦ PERCUSSION ON/OFF, VOLUME, DECAY and HARMONIC SELECTOR

Notice the four small icons at the top of the display for ON, SOFT, FAST and THIRD. These correspond to the four PERCUSSION buttons on the Control Panel. When any of these buttons are "ON" (LED lit), the corresponding icon will also light.

In this screen, the box to the right of "SOFT" should be highlighted.



♦ LEVEL

SOFT

NORMAL

This Parameter allows you to set the overall volume level of the Percussion tones. This will allow you to balance the amount of NORMAL and SOFT Percussion sound (the choices provided by the button) with the sound produced by the Drawbars. You can set the levels separately for the SOFT and NORMAL Percussion Volume settings.

Use the DIRECTION "▲" and "▼" buttons to select either SOFT or NORMAL.

When you have made your selection:

Turn the VALUE knob to the right to increase the Level.

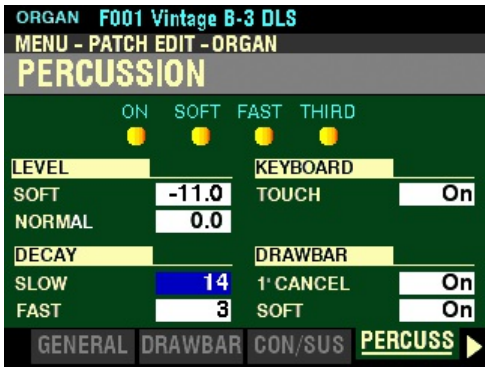
Turn the VALUE knob to the left to decrease the Level.

♦ DECAY

SLOW

FAST

From the screen shown on the previous page, press the DIRECTION "▼" button repeatedly until the box to the right of "SLOW" is highlighted.



This Parameter allows you to set the overall decay (the rate at which the Percussion tone dies away while a key is held) of the Percussion tones. The SLOW Parameter sets the amount of Slow Decay (FAST button "OFF") while the FAST Parameter sets the amount of Fast Decay (FAST button "ON"). You can set the levels separately for the SLOW and FAST Percussion Decay settings.

Use the DIRECTION "▲" and "▼" buttons to select either SLOW or FAST.

When you have made your selection:

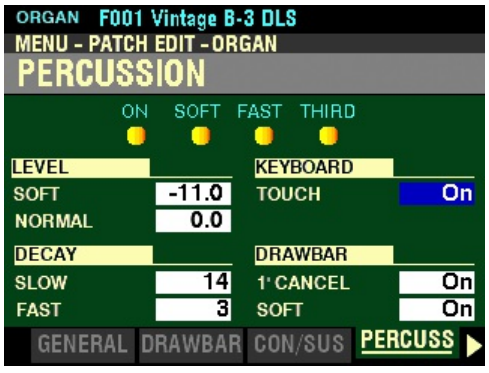
Turn the VALUE knob to the right to lengthen the Decay.

Turn the VALUE knob to the left to shorten the Decay.

♦ KEYBOARD

TOUCH

From the above screen, use the DIRECTION buttons to highlight the box to the right of "TOUCH."

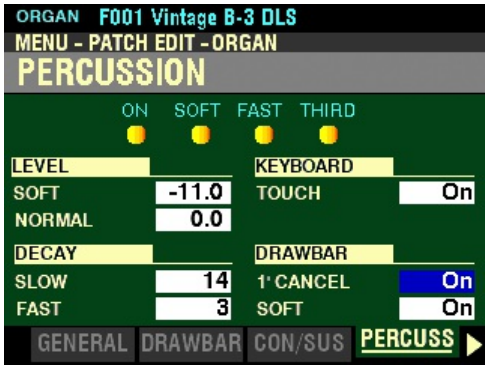


This Parameter allows you to turn the Percussion Touch-Response "ON" or "OFF." The data chart below shows the options you may select.

KEYBOARD TOUCH Options	
Setting	**Description**
On	Percussion tones will sound only if you play the keys in a detached manner (non-legato). Any degree of detachment is sufficient. This replicates the Touch-Response Percussion function on the original models B-3, C-3, RT-3, A-100, D-100 and M-3.
Off	Each key will sound when played regardless of whether other keys are being held. This replicates the Percussion function on the X-66, Concorde and later model Hammond Organs.

Turn the VALUE knob to turn this Parameter On or Off.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "1' CANCEL" should be highlighted.

♦ DRAWBAR

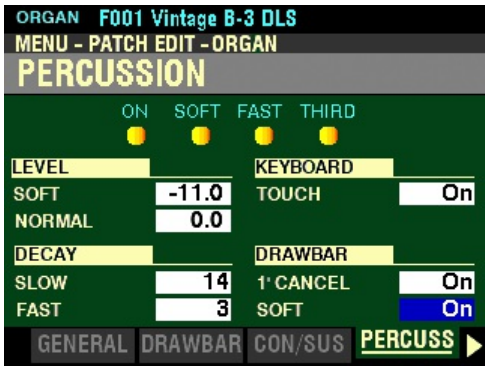
1' CANCEL

This Parameter allows you to select whether the 8th harmonic (1') Drawbar will be active when Percussion is "ON." The data chart below shows the options you may select.

PERCUSSION 1' CANCEL Options	
Setting	**Description**
On	The 8th harmonic Drawbar (1') will be canceled when Percussion is "ON". This replicates vintage Hammond Organs with Touch-Response Percussion Control such as the B-3, C-3, RT-3, A-100, D-100 and M-3.
Off	The 8th harmonic Drawbar (1') will continue to sound while Percussion is "ON". This replicates vintage Hammond Organs such as the L-100, M-100, etc.

Turn the VALUE knob to turn this Parameter On or Off.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "SOFT" should be highlighted.

SOFT

This Parameter allows you to set the Drawbar Level when Percussion is "ON" at normal volume (SOFT button "OFF"). The data chart below shows the options you may select.

PERCUSSION SOFT Options	
Setting	**Description**
On	The volume of the UPPER Drawbars will be reduced by -3db (-3 decibels) in loudness when Percussion is "ON" at Normal Volume. This replicates vintage Hammond Organs with Touch-Response Percussion Control such as the B-3, C-3, RT-3, A-100, D-100 and M-3.
Off	The volume of the UPPER Drawbars will remain at the same level, or "0db," when Percussion is "ON" at Normal Volume. This replicates vintage Hammond Organs such as the L-100, M-100, etc.

Turn the VALUE knob to turn this Parameter On or Off.

NOTE: A "decibel" is a unit of measurement for the loudness of a sound wave.

HAMMOND

Sk PRO

PIANO / ENSEMBLE
VOICE
SECTIONS

PIANO / ENSEMBLE Voice Sections

The SK PRO, in addition to being able to duplicate the sound of a vintage Hammond Organ as well as other organ sounds, has an inbuilt library of 163 high-quality waveforms representing various instruments (Piano, Guitar, Strings, Trumpet, Saxophone, Drums, etc.) These waveforms in turn are incorporated into Patches along with Parameters such as Attack, Filter, etc., which are applied to the waveforms to create different instrumental effects.

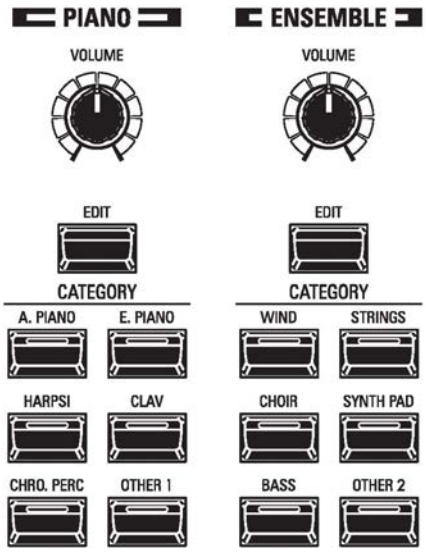
There are 300 Factory ("F") Patches available representing a wide variety of different instruments and effects, with provision for 400 User ("U") Patches. "F" Patches are permanently stored in memory and cannot be overwritten. "U" Patches can be created, Recorded, edited and re-Recorded at any time.

Both the Factory and User Patches can be played from either the PIANO or ENSEMBLE Section.

NOTE: When you finish editing a custom Patch, you will be shown where you can save your custom Patch - a "U" number will be shown in the display during the RECORD process as well as a Voice Category. This will be explained fully later on in this chapter of the Guide.

◆ PIANO / ENSEMBLE Controls

The PIANO / ENSEMBLE Controls are located on the left side of the Information Center Display.



Notice the two control sections are identical except for the Voice Categories. The PIANO Section is set up for easy access to Piano and other percussive keyboard or chromatic instruments while the ENSEMBLE Section allows you to quickly register instrumental voices such as Trumpet, Saxophone, Violin, Orchestral Strings, Choir, etc. However, as explained above, all of the Factory or User Patches can be played from either Section - the PIANO Section can play Strings if desired, the ENSEMBLE Section can play Electric Piano if desired, and so on. This is in order to allow maximum registration flexibility and versatility.

Later parts of this chapter will explain this in more detail.

♦ PIANO ALLOCATE button



Use this button to turn the PIANO Section "ON" or "OFF." When "ON," an LED will light.

♦ ENSEMBLE ALLOCATE button



Use this button to turn the ENSEMBLE Section "ON" or "OFF." When "ON," an LED will light.

♦ PIANO CATEGORY buttons



The PIANO CATEGORY buttons allow you to access various categories of voices. The categories represent voices which have been arranged into groups combining instruments of similar characteristics to make voice selection easier.

A.PIANO

This category contains Acoustic Pianos, Electric Grands, etc.

E.PIANO

This category contains Electric Pianos.

HARPSI

This category contains other keyboard instruments such as Harpsichords, etc.

CLAV

This category contains sounds similar to those produced by an electrically-amplified clavichord.

CHRO. PERC

This category contains chromatic percussion instruments such as Xylophone, Marimba, Glockenspiel, etc.

OTHER 1

This category contains Voice Categories such as Guitar, Wind, Strings, etc.

These voices can be used either in combination with the other Voice Sections or by themselves.

♦ PIANO VOLUME knob

The PIANO VOLUME knob is located above the PIANO CATEGORY buttons.



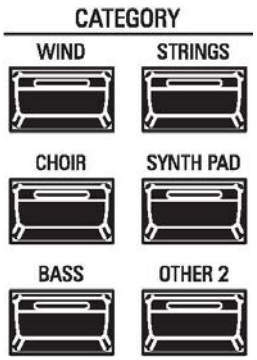
Turn this knob to the right to increase the volume.

Turn this knob to the left to decrease the volume.

NOTE: If you have an Expression Pedal connected, it will express up to the amount determined by the setting of the PIANO VOLUME knob.

NOTE: Moving the PIANO VOLUME knob will cause a **POPUP** screen to display showing the current Volume setting. For more information about POPUPs please consult page 682.

♦ ENSEMBLE CATEGORY buttons



The ENSEMBLE CATEGORY buttons allow you to access various categories of voices. The categories represent voices which have been arranged into groups combining instruments of similar characteristics to make voice selection easier.

WIND

This category contains Wind instruments such as Trumpets, Saxes, etc.

STRINGS

This category contains String instruments such as Violin, Orchestral Strings, etc.

CHOIR

This category contains Choir and Vocal sounds.

SYNTH PAD

This category contains Synth voices suitable for chordal accompaniment.

BASS

This category contains Bass voices.

OTHER 2

This category contains other Voice Categories such as Acoustic Pianos, Chromatic Percussions, etc.

These voices can be used either in combination with the other Voice Sections or by themselves.

♦ ENSEMBLE VOLUME knob

The ENSEMBLE VOLUME knob is located above the ENSEMBLE CATEGORY buttons.



Turn this knob to the right to increase the volume.

Turn this knob to the left to decrease the volume.

NOTE: If you have an Expression Pedal connected, it will express up to the amount determined by the setting of the ENSEMBLE VOLUME knob.

NOTE: Moving the ENSEMBLE VOLUME knob will cause a **POPUP** screen to display showing the current Volume setting. For more information about POPUPs please consult page 682.

There is a total of 177 Wave tables available for creating PIANO / ENSEMBLE Patches. These are listed on the next page and also in the APPENDIX chapter of this Guide.

♦ PIANO / ENSEMBLE WAVEFORM List

Category		Name	
1	A. Piano	1	GrandPf Yam CF3
		2	GrandPf Stw D St
		3	GndPf StwDSt Rel
		4	UpUf Regular
		5	UpUf Honky
		6	Electric Grand
		7	Toy Pf Kaw
		8	Toy Pf Kaw Rel
		9	Toy Pf Sch
		10	Toy Pf Sch Rel
		11	Pop Piano CF
2	E. Piano	1	EP Tine Mk1 On
		2	EP Tine Mk1 Off
		3	EP Tine Mk2 On
		4	EP Reed 200A
		5	E.Piano FM
		6	E.Piano FM Cho
		7	EP Tine Mk1 Soft
		8	EP Reed Soft
3	Harpsichord	1	Hpsichrd Back
		2	Hpsichrd Front
		3	Hpsichrd Buff
		4	Hpsi Off
4	Clav	1	Clav AC
		2	Clav AD
		3	Clav BC
		4	Clav BD
		5	Clav Off
5	Chro. Perc.	1	Xylophone YX
		2	Marimba YM Norm
		3	Marimba YM Trem
		4	Glockenspiel
		5	Glock. X-66
		6	Vibraphone YV
		7	Tublar Bells
		8	Tub Bells FM
		9	Tub Bells TW
		10	Church Bell
		11	Wine Glass
		12	Tonechimes
		13	Hand Bells
		14	Syn. Celesta
		15	Digi Bell 1
		16	Digi Bell 2
		17	Crystal
		18	Music Box
		19	Celesta
6	Guitar	1	Nylon-Str Gt.
		2	Steel-Str Gt.
		3	12Str Gt. A
		4	12Str Gt. B
		5	Jazz Gt.
		6	Pedal Steel Gt
		7	Orch Harp
		8	OH Whole Tone C
		9	OH Whole Tone F
		10	Pizzicato Str.
7	Ethnic	1	Dulcimer
		2	Sitar
		3	Tanpura
		4	Banjo
		5	Soh
		6	Pan Pipes
		7	Taisho Koto Lo
		8	Taisho Koto Hi
		9	Taisho Koto ChrA
		10	Taisho Koto ChrB
		11	TaiKoto ChdTremA
		12	TaiKoto ChdTremB
		13	Soh Toki
8	SFX	1	Sine
		2	White Noise
		3	Rain
		4	TelephoneRingSus
		5	TelephoneRingRel
		6	E. Driver Sus
		7	E. Driver Rel
9	Wind	1	Trumpet Str
		2	Trumpet Vib
		3	Trumpet Muted
		4	Tp. Fall Sus
		5	Tp. Fall Atk
		6	Tp. Grs Up Sus
		7	Trumpet Sect.
		8	Trombone Str
		9	Trombone Muted
		10	Tb. Fall Sus
		11	Tb. Fall Atk
		12	Flute Str
		13	Flute Vib
		14	Flute Atk
		15	Alto Sax Str
		16	Alto Sax Vib
		17	Tenor Sax Str
		18	Tenor Sax Vib
		19	Bari Sax Str
		20	Recorder
		21	Flute Taped
		22	M12 Box Brass 1
		23	M12 Box Brass 2
		24	M12 Brazz 1
		25	M12 Brazz 2
		26	M12 Horn Ens 1
		27	M12 Horn Ens 2
		28	Trumpet Loud
		29	French Horn
10	Strings	1	Str. Legato
		2	Str. Section
		3	Synth Str. Mlw
		4	Synth Str. Bri
		5	Sol. Str.
		6	Violins Taped
		7	Violin
		8	Glass Harp St
		9	Glass Harp Mono
11	Choir	1	Choir Aah CM
		2	Choir Doo CM
		3	Vocal CM Tn/S
		4	Choir Taped
12	Synth Pad	1	PWM
		2	EPFM Pad
		3	WG Pad Bright
		4	WG Pad Mellow
		5	Noise Choir
13	Bass	1	Acoustic Bs On
		2	Acoustic Bs Off
		3	Finger Bs Jz
		4	Finger Bs Pr
		5	Pick Bs Jz
		6	Pick Bs Pr
		7	Slap Bs Jz
		8	FM Bass
		9	Timpani Single
		10	Timpani Roll
		11	Timpani Gliss
		12	Fretless Bs
		13	EB-500 Brass
		14	EB-500 Strings
		15	EB-500 Wood
14	Synth Lead	1	Square
		2	Pulse 66%
		3	Pulse 75%
		4	Pulse 80%
		5	Sawtooth
		6	Kinura
		7	Lucy
		8	Even Bars
		9	OPZ LFO
		10	Osc. Sync U/D
		11	Osc. Sync D
15	Free Reed	1	Accordion
		2	Acdn SubOct
		3	Reed Organ
		4	Melodion B-24
		5	Melodion —37
		6	Melodion —37Oct
		7	Melodion PRO-44
		8	Melodion S-32
		9	Harm Single
		10	Harm Chro Norm
		11	Harm Chro Vib
		12	Harm BsChro
		13	Harm Bass Stacc
		14	Harm FM
16	Percussion	1	Ride Cymbal
		2	Crash Cymbal
		3	Crash Cymbal Lp
		4	Wind Chime
		5	Wind Chime Lp
		6	Tone Tang
		7	Jazz BD
		8	Jazz SD
		9	Jazz SD&BD Rnd
		10	Brush SD Swl On
		11	Brush SD Swl Off
		12	Brsh SD Tap/Slap
		13	Brush SD&BD Rnd

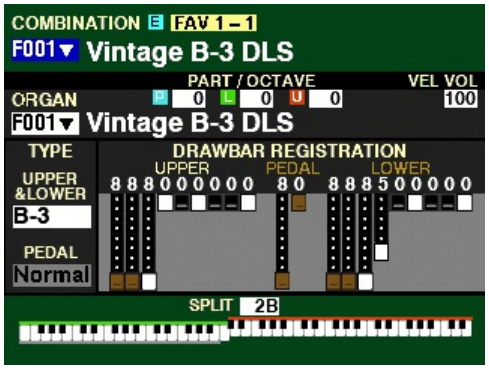
◆ Selecting a Voice

IMPORTANT: It is assumed that you have just turned the SK PRO "ON" and have not pressed either the PLAY or MENU / EXIT button.

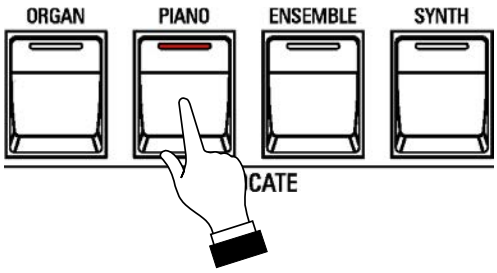
♦ PIANO Voice Section

TRY THIS:

1. After turning the SK PRO "ON," Combination F001 should display (see below).



2. Press the PIANO button in the ALLOCATE Section. The LED will ;light red.



The Information Center Display should now look similar to this:



3. Play some notes. You will now hear the sound of a concert grand piano.

4. Now press the E.PIANO button. The Information Center Display will show the following:



5. Play some notes. You will now hear the sound of an electric piano.

6. Now press the OTHER 1 button in the PIANO CATEGORY Group.



The Information Center Display should now look similar to this:



7. Play some notes. You will now hear the sound of a nylon-string guitar.

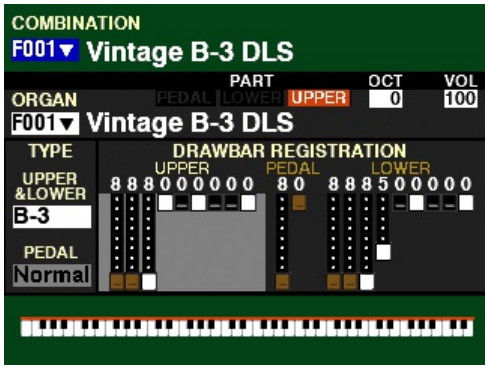
Each time you press one of the CATEGORY buttons you will see a List Menu similar to the one shown above listing the available choices for the selected Category. You will also see two numbers in blue on the right. The first number is the number of the highlighted Voice while the second number shows the number of available Voices for the selected Category.

An arrow ("▲" and "▼") on the extreme right of the display indicates you can use the DIRECTION "▲" and "▼" buttons to display the entire library of Voices for the selected Category.

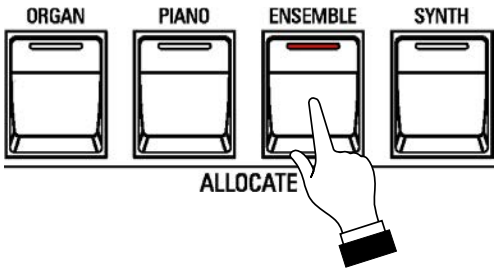
♦ ENSEMBLE Voice Section

TRY THIS:

1. After turning the SK PRO "ON," Combination F001 should display (see below).



2. Press the ENSEMBLE button in the ALLOCATE Section. The LED will light red.

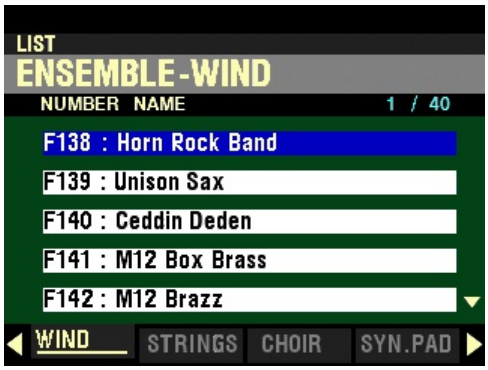


The Information Center Display should now look similar to this:



3. Play some notes. You will now hear the sound of a string section.

4. Now press the WIND button. The Information Center Display will show the following:



5. Play some notes. You will now hear the sound of a brass section.

6. Now press the OTHER 2 button in the ENSEMBLE CATEGORY Group.



The Information Center Display should now look similar to this:



7. Play some notes. You will now hear the sound of a synthesizer.

Each time you press one of the CATEGORY buttons you will see a List Menu similar to the one shown above listing the available choices for the selected Category. You will also see two numbers in blue on the right. The first number is the number of the highlighted Voice while the second number shows the number of available Voices for the selected Category.

An arrow ("▲" or "▼") on the extreme right of the display indicates you can use the DIRECTION "▲" or "▼" buttons to display the entire library of Voices for the selected Category.

◆ PLAY Mode Parameters

Follow the instructions on the previous pages for accessing the PLAY Mode screens for the PIANO and ENSEMBLE Voice Sections. You should see a screen similar to one of these, depending on which Voice Section you select.

PIANO Voice Section:



ENSEMBLE Voice Section:



The following pages will explain each of the Parameters you may change from the PLAY Mode screen.

NOTE: The Parameters for the PIANO and ENSEMBLE Parameters are identical.

From one of the screens shown on the previous page, press the DIRECTION "▼" button once. The Information Center Display should now look similar to this:

PIANO Voice Section:



ENSEMBLE Voice Section:



The box to the left of the Patch Name should now be highlighted.

♦ PATCH

This Parameter allows you to select the Patch for the selected Voice Section.

Turn the VALUE knob to the right to scroll up numerically through the Patches.

Turn the VALUE knob to the left to scroll down numerically through the Patches.

From the screen shown on the previous page, press the DIRECTION "▶" button once.

PIANO Voice Section:



ENSEMBLE Voice Section:



The box underneath "OCT" should now be highlighted.

♦ OCT

This Parameter allows you to select the Octave range in which the selected Voice Section will play. You may select from -2 (up to two octaves down) to +2 (up to two octaves up).

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

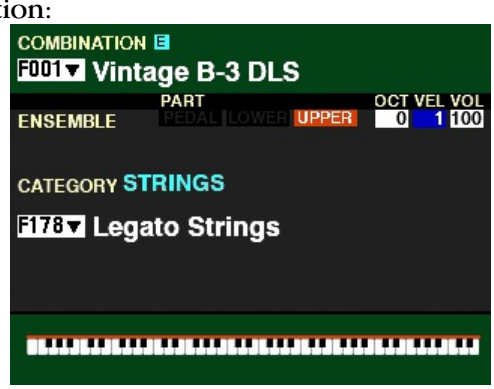
NOTE: The actual sounding octave will be the sum of this Parameter plus the **Octave** setting controlled by the OCTAVE buttons on the Control Panel. For more information, please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 652

From the screen shown on the previous page, press the DIRECTION "▶" button once.

PIANO Voice Section:



ENSEMBLE Voice Section:



The box underneath "VEL" should now be highlighted.

♦ VEL

This Parameter allows you to select how the PIANO or ENSEMBLE Voice Sections will respond to key velocity. The data chart below shows the options you may select.

VELOCITY CURVE Options	
Setting	**Description**
Off	Standard "organ" touch - the notes play at a fixed velocity ("100") regardless of a light or heavy keystroke.
1	This is the most exaggerated velocity curve, most like an acoustic piano
2	Less exaggerated than "1."
3	Less exaggerated than "2."
4	This is the smallest change of response to key velocity.

Turn the VALUE knob to select the Velocity Curve you prefer.

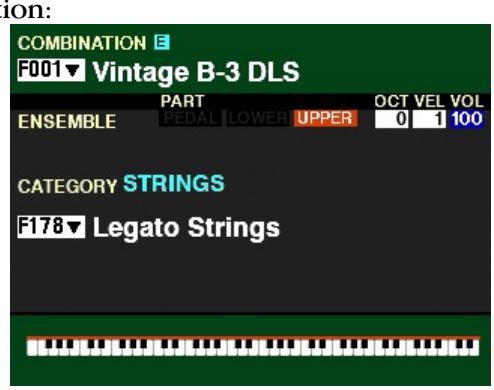
NOTE: The function of this Parameter is duplicated by the VEL (Velocity) Parameter in the **COMBINATION** FUNCTION Mode. For more information consult page 67.

From the screen shown on the previous page, press the DIRECTION "▶" button once.

PIANO Voice Section:



ENSEMBLE Voice Section:



The box underneath "VOL" should now be highlighted.

♦ VOL

This Parameter allows you to adjust the Volume of the selected Voice Section. You may select from 0 (no volume) to 127 (maximum volume).

Turn either the VALUE knob or the VOLUME knob for the selected Voice Section to the right to increase the Volume.

Turn either the VALUE knob or the VOLUME knob for the selected Voice Section to the left to decrease the Volume.

NOTE: The function of this Parameter is duplicated by the VOL (Volume) Parameter in the **COMBINATION** FUNCTION Mode. For more information consult page 66.

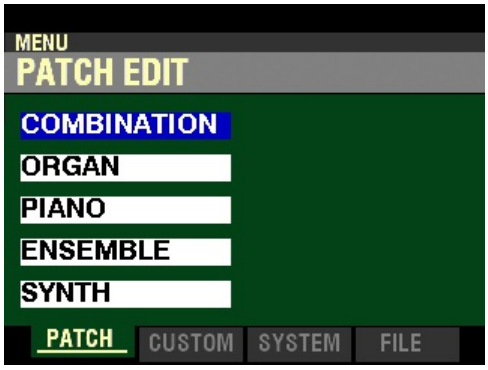
◆ PATCH EDIT -PIANO / ENSEMBLE FUNCTION Modes

These FUNCTION Modes allow you to modify the characteristics of the PIANO or ENSEMBLE Voices according to your preference.

NOTE: The **PIANO** and **ENSEMBLE PATCH EDIT** FUNCTION Modes are identical. The following pages of this Guide will refer to the **PIANO** PATCH EDIT Modes to explain both PIANO and ENSEMBLE.

♦ Accessing the PATCH EDIT -PIANO / ENSEMBLE FUNCTION Modes using the MENU / EXIT and DIRECTION buttons:

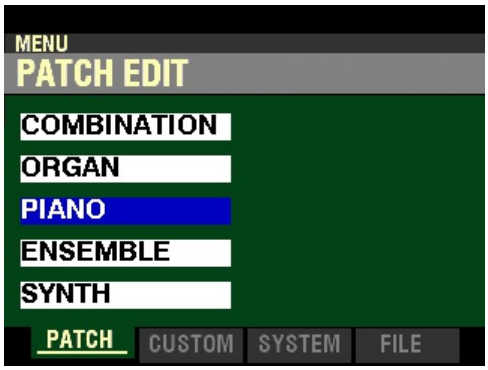
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

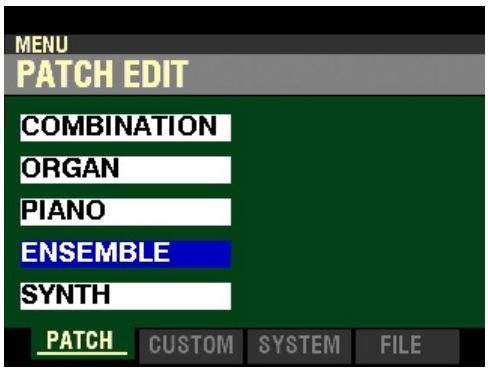
PIANO Voice Section:

2. Press the DIRECTION "▼" button two times to highlight the "PIANO" box.



ENSEMBLE Voice Section:

2. Press the DIRECTION "▼" button three times to highlight the "ENSEMBLE" box.



3. Press the ENTER button. The Information Center Display should now look similar to this:



NOTE: The PIANO display is shown above, which will display the currently selected PIANO Patch on the top line of the display. If ENSEMBLE is selected, the top line of the display will show the currently selected ENSEMBLE Patch. The currently selected Combination Number will display to the left of the Patch Name. The line just below the top line will display, **MENU - PATCH EDIT -ENSEMBLE**.

♦ Accessing the PATCH EDIT -PIANO / ENSEMBLE FUNCTION Modes using the Shortcut:

From any of the PLAY Mode Pages, press the EDIT button in either the PIANO or ENSEMBLE Voice Section, depending on which Voice you want to edit. The Information Center Display should now look similar to this:

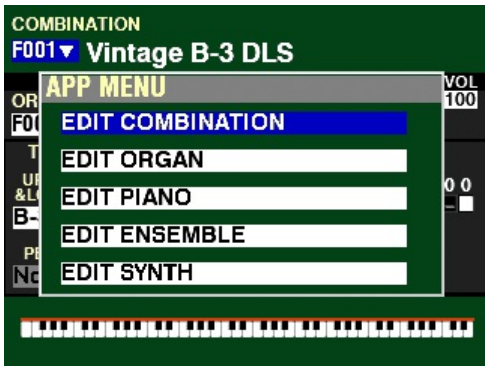


NOTE: The **PIANO** FUNCTION Mode Page is shown above, which will display the currently selected PIANO Patch on the top line of the display. If you press the EDIT button in the ENSEMBLE Voice Section, the top line of the display will show the currently selected ENSEMBLE Patch. The currently selected Combination Number will display to the left of the Patch Name. The line just below the top line will display **MENU - PATCH EDIT -ENSEMBLE**.

♦ Accessing the PATCH EDIT -PIANO / ENSEMBLE FUNCTION Modes using the APP MENU:

1. Make sure the PIANO or ENSEMBLE ALLOCATE button is "ON." (LED lit).

2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:

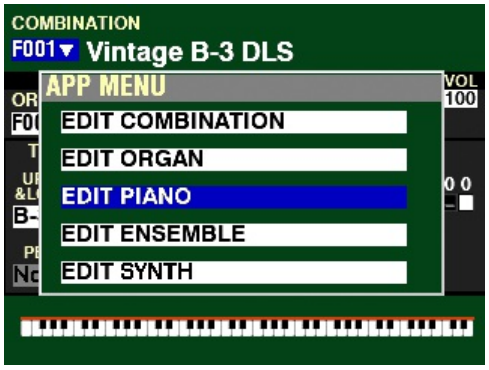


The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

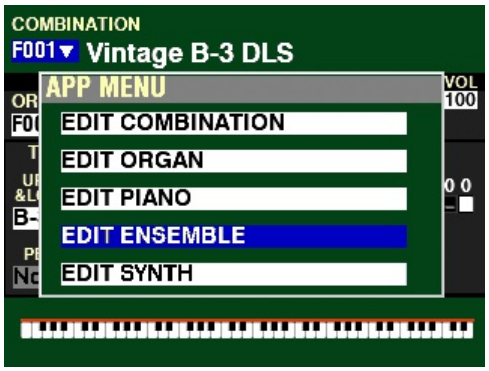
PIANO Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT PIANO" box.



ENSEMBLE Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ENSEMBLE" box.



4. Press the ENTER button. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the selected Patch. These changes are explained starting on the next page.

NOTE: The Parameters for the PIANO and ENSEMBLE Parameters are identical: therefore, for the explanation of each Parameter the PIANO Patch will be shown at the top of the display.

♦ GENERAL Parameters



LOUDNESS

VOLUME

This Parameter allows you to adjust the maximum level of the selected Patch. You may select from 0 (no Volume) to 127 (maximum Volume).

Turn the VALUE knob to the right to increase the Loudness of the Patch.

Turn the VALUE knob to the left to decrease the Loudness of the Patch.

NOTE: The **Loudness** Parameter serves to set the maximum volume of the selected PIANO or ENSEMBLE Patch and works independently of the VOLUME knob. The overall volume of the PIANO or ENSEMBLE Voice Section is controlled by the VOLUME knob associated with the selected Voice Section. The MASTER VOLUME knob and/or a connected Expression Pedal will control the volume of the entire instrument.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RANGE UP" should be highlighted.

PITCH BEND

RANGE UP

This Parameter allows you to set the amount by which the pitch will bend up using the Pitch Bend Wheel for the selected Patch. The lowest setting is 0 (no change), while the highest setting is 12 (twelve half-steps, or one full octave up). The default setting is 2.

Turn the VALUE knob to the right to increase the upward Range.

Turn the VALUE knob to the left to decrease the upward Range.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "RANGE DOWN" should be highlighted.

RANGE DOWN

This Parameter allows you to set the amount by which the pitch will bend down using the Pitch Bend Wheel for the selected Patch. The lowest setting is 0 (no change), while the highest setting is 24 (twenty-four half-steps, or two full octaves down). The default setting is 2.

Turn the VALUE knob to the right to increase the downward Range.

Turn the VALUE knob to the left to decrease the downward Range.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "PORTAMENTO."



PORTAMENTO

ON / OFF

This Parameter allows you to turn the Portamento effect "ON" or "OFF" for the selected Patch.

Turn the VALUE knob to turn Portamento On or Off.

NOTE: **Portamento** refers to a smooth transition or "sliding" from one note to another.

NOTE: The PORTAMENTO button must be "ON" (orange LED lit) to hear the Portamento effect.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MODE" should be highlighted.

MODE

This Parameter allows you to adjust how to control the Portamento effect from the keyboard. The data chart below shows the options you may select.

PORTAMENTO MODE Options	
Setting	**Description**
Every	The Portamento will be heard with every keypress.
Legato	The Portamento will be heard only when keys are played "legato" (a key is depressed while another key is held).

Turn the VALUE knob to select Every or Legato.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

RATE

This Parameter allows you to adjust the rate at which the pitch rises or falls when Portamento is "ON." You may select from 0 (the pitch will rise or fall instantaneously) to 127 (the pitch rises and falls at the slowest rate). Intermediate rates will cause the pitch to rise or fall at rates between 0 and 127.

Turn the VALUE knob to the right to increase the Portamento Rate.

Turn the VALUE knob to the left to decrease the Portamento Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MODE" below "MONO/POLY" should be highlighted.

MONO/POLY

MODE

This Parameter allows you to select whether the selected Patch will play single notes (Mono) or multiple notes (Poly) when more than one key is depressed simultaneously on the keyboard.

The data chart below shows the options you may select.

MONO/POLY MODE Options	
Setting	**Description**
Poly	"Polyphonic" - if more than one key is depressed, all notes will sound.
Mono	"Monophonic" - if more than one key is depressed, only one note will sound.
Rel.C	"Release Cancel" - more than one note can be played; however, the last note released will be erased by the next note played.

Turn the VALUE knob to select Poly, Mono or Rel.C.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "MONO PRIOR." should be highlighted.

MONO PRIORITY

This Parameter allows you to adjust which note will sound on the selected Patch if more than one note is played in MONO Mode.

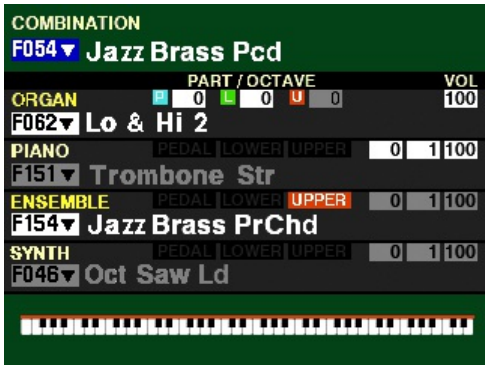
The data chart below shows the options you may select.

MONO PRIORITY Options	
Setting	**Description**
Auto	If the selected Patch is used with other Voice Sections, the highest note played will sound. If the selected Patch is used alone, the last played note will sound.
Last	The last played note will sound.
Low	The lowest note played will sound.
High	The highest note played will sound.

Turn the VALUE knob to select the option you want.

◆ SPECIAL NOTE - ProChord™

When you are in PLAY Mode and you scroll through the PIANO or ENSEMBLE Patches, you will see Pcd or PrChd in several of the Voice Names in the PIANO / ENSEMBLE Voice Sections.



Pcd or PrChd are abbreviations for ProChord.™ The next paragraphs will explain in detail how to use the ProChord™ feature.

♦ What Is "ProChord™" - PLEASE READ

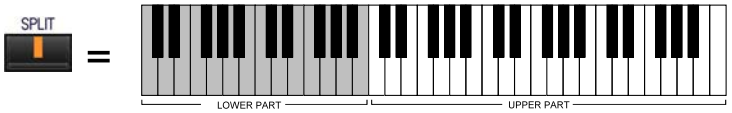
ProChord™ is a unique feature of certain Hammond Organ models, including the SK PRO, which allows you to play a single-note melody augmented by complex harmonies. ProChord is a sophisticated tool that can be used to enrich a performance, or provide an advanced edge to any style of music.

On the SK PRO, ProChord works like this: When notes or chords are played on the LOWER Part and a note is played on the UPPER Part, the note represented by the key played on the UPPER Part is heard along with a scored harmony pattern which sounds according to the Chord Root and Chord Type selected by the notes played on the LOWER Part. The Chord Root is the letter name of the chord (F, A, B♭, etc) while the Chord Type is the denomination of the chord (Major, Minor, Augmented, etc.).

The ProChord feature on the SK PRO will recognize 26 different Chord Types in response to notes played on the LOWER Part.

NOTE: Please consult the **APPENDIX** of this Guide starting on page 843 for more information on how to play the five basic Chord Types using a minimum number of notes as well as a listing of the 26 Chord Types recognized by ProChord.

NOTE: A note or chord must be played on the LOWER Part in order for the ProChord harmony to sound when notes are played on the UPPER Part.

SK PRO: 

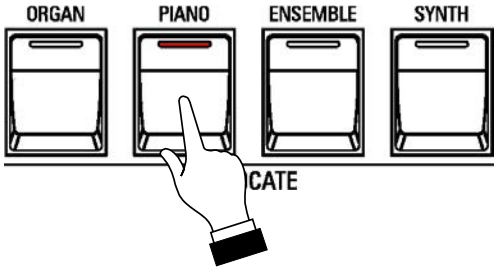
SK PRO 73: 

♦ Using ProChord

TRY THIS:

1. Make sure all the ALLOCATE buttons are "OFF" (LED not lit) and that F001 is showing at the very top of the display.

2. Press the PIANO ALLOCATE button "ON."



3. Press the DIRECTION "▼" button once. The Voice Name should be highlighted.



4. Turn the VALUE knob until F148 shows as the Patch Number.



5. Turn the SPLIT button "ON."

6. Play a chord on the LOWER Part and hold the keys down. You will not hear any sound.

7. While holding the keys down, play a single-note melody on the UPPER Part. You will hear the melody note plus a complex harmony pattern underneath the melody based on the chord you play. The Harmony will always be appropriate no matter what chord or melody you play.

8. Play a chord progression of your choice, and continue to play a melody on the UPPER Part. You will hear the harmony change in response to the chords you are playing on the LOWER Part.

The instructions on the previous page apply to all of the PIANO / ENSEMBLE Patches with ProChord. Each ProChord Patch will consist of a melody note plus a different harmony pattern. For example, the BigBandSax Patch has a 5-part open-harmony pattern, while the HP OldTime Patch has a 4-part closed harmony pattern. There are 17 harmony patterns in all, including also 2- and 3-part patterns.

Feel free to experiment with the different ProChord choices; however, remember:

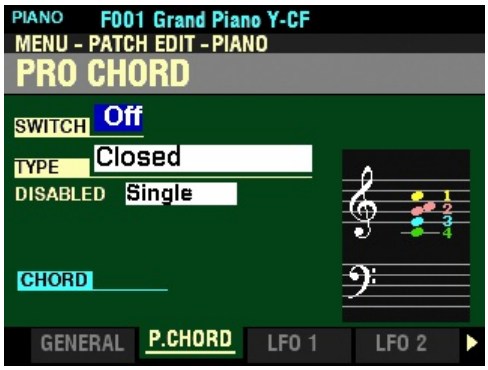
1. The harmony will ONLY sound if notes are pressed and held on the LOWER Part while the melody is played.

2. Play ONLY single-note melodies on the UPPER Part.

NOTE: Although several PIANO / ENSEMBLE Patches utilize ProChord (indicated by **Pcd** or **PrChd** in the Patch Name), ProChord can be added to any PIANO or ENSEMBLE Patch via the FUNCTION Mode Parameters. This is described starting on page 330.

NOTE: When a ProChord Patch is selected, the UPPER Part becomes monophonic - if a chord is played with the right hand only one key will play. Therefore, when using ProChord play a single-note melody.

From the screen shown on page 325, press the PAGE "▶" button once.



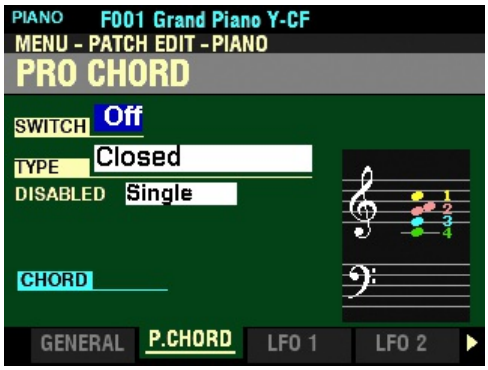
The box to the right of "SWITCH" should be highlighted.

♦ PRO CHORD Parameters

This FUNCTION Mode Page allows you to reproduce complex harmonies by playing a single-note melody with the right hand and chords with the left hand. The four Components provide both the Melody and Harmony notes in different configurations depending on the specific ProChord Type or harmony pattern selected.

The Parameters which apply to ProChord are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "SWITCH" should be highlighted.

SWITCH

This Parameter allows you to select whether you want the ProChord feature to be part of the selected Patch. The data chart below shows the options you may select.

PRO CHORD SWITCH Options	
Setting	**Description**
On	ProChord can be used with the selected Patch.
Off	ProChord is disabled for the selected Patch.

Turn the VALUE knob to turn ProChord On or Off for the selected Patch.

CHORD DISPLAY

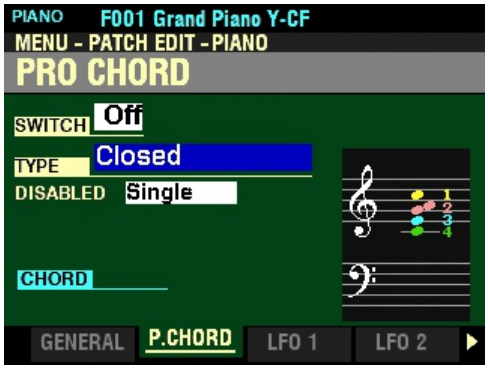


When this Page is displaying and SPLIT is active, notes pressed and held on the LOWER Part will cause a chord symbol to display next to the blue CHORD box (see the figure above). This symbol will show the Chord Root and Chord Type. For example, if you see the chord symbol Fm7, F is the Root of the chord and m7 (minor 7th) is the Chord Type.

This can be a useful feature to help you prepare a chord chart. If you are unsure how to write a particular chord, simply play the notes comprising the chord you want to identify and write down what is shown in the display on your chart.

The ProChord feature recognizes 26 different Chord Types. For a complete list of Chord Types, consult page 843 of the APPENDIX chapter of this Guide.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TYPE" should be highlighted.

TYPE

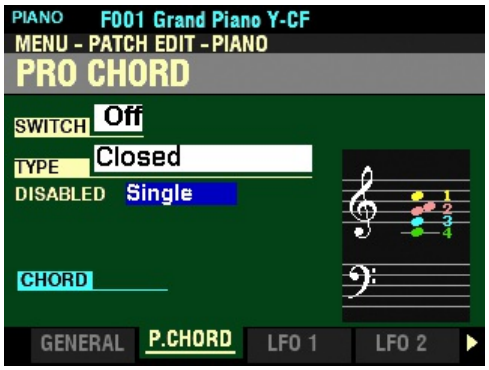
This Parameter allows you to select the ProChord Type or harmony pattern.

The data chart below shows the options you may select.

PRO CHORD TYPE Options	
Type	**Description**
Closed	Notes played on the LOWER Part are added to a single-note melody played on the UPPER Part.
Open	Similar to Closed, except that certain notes played on the LOWER Part sound an octave lower when added to a single-note melody played on the UPPER Part.
Duet	A single harmony note is added to a note played on the UPPER Part in response to keys pressed on the LOWER Part.
Block	5-part Closed harmony is added to single notes played on the UPPER Part.
Big Band Sax	Sax section chord voicing is added to single notes played on the UPPER Part.
Big Band	Big Band Brass voicing is added to single notes played on the UPPER Part.
Small Combo	3-part Closed harmony is added to single notes played on the UPPER Part.
Theatre	3-part Open harmony is added to single notes played on the UPPER Part.
Hymn	4-part choral-type harmony is added to single notes played on the UPPER Part.
Quartet 1	4-part Open harmony is added to single notes played on the UPPER Part.
Quartet 2	4-part Open harmony with wider voicing is added to single notes played on the UPPER Part.
Jazz Brass	5-part modern harmony is added to single notes played on the UPPER Part.
Strings	4-part Closed harmony with the melody note added two octaves below is added to single notes played on the UPPER Part.
Harmonic Chime	Chime voicing is added to single notes played on the UPPER Part.
Old Time	4-part old-time piano harmony is added to single notes played on the UPPER Part.
4 Part Closed	4-part Closed harmony is added to single notes played on the UPPER Part.
5 Part Open	5-part Open harmony is added to single notes played on the UPPER Part.

Turn the VALUE knob to select the ProChord Type you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "DISABLED" should be highlighted.

DISABLED

This Parameter allows you to select how ProChord works when it is disabled (no chord outlined by the left hand or disabled by the Foot Switch.

The data chart below shows the options you may select.

Pro Chord - DISABLED Options	
Setting	**Description**
Single	Component 1 only will sound.
Unison	All Components will sound.

Turn the VALUE knob to select Single or Unison.

NOTE: For more information about **Components**, see page 336.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "TRIGGER" should be highlighted.

♦ LFO 1 Parameters

Both the PIANO and ENSEMBLE Voice Sections have two LFOs (Low Frequency Oscillators). These can be used to modulate various Components. These are explained starting below.

NOTE: The Parameters explained below and on the following pages apply to both **LFO 1** and **LFO 2**.

NOTE: The violet-colored shapes on the right side of the screen are visual representations of the shapes of the selected Parameters. You will see their shapes change in response to the edits you make.

SETTING

These Parameters allow you to control the overall settings for the selected LFO.

TRIGGER

This Parameter allows you to adjust whether the phase of the LFO will reset each time a key is depressed.

The data chart below shows the options you may select.

LFO TRIGGER MODE Options	
Setting	**Description**
Note	The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.
Free	Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.

Turn the VALUE knob to select Note or Free.

NOTE: For more information about **Components**, see page 336.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "WAVEFORM" should be highlighted.

WAVEFORM

This Parameter allows you to select the waveform of the LFO. The data chart below shows the options you may select.

LFO WAVEFORM Options	
Waveform	**Description**
Triangle	A waveform which smoothly rises to a peak point and smoothly drops to a zero voltage.
Square	A waveform which sharply rises to a peak point and sharply drops to a zero voltage.
Rectangular Square	A waveform which smoothly rises to a peak point and smoothly drops to a zero voltage.
Saw Up	A sawtooth wave which ramps upward and drops sharply to a zero voltage.
Saw Down	A sawtooth wave which ramps downward to a zero voltage and rises sharply.
S/H	Sample/Hold - samples the input analog signal and hold the sampled signal for a specified time.
Fluctuation	Random waveform with no periodicity.

Turn the VALUE knob to select the Waveform you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

RATE

This Parameter allows you to adjust the Oscillation Rate of the LFO. You may select from 0 (the slowest rate) to 127 (the fastest rate).

Turn the VALUE knob to the right to increase the Rate.

Turn the VALUE knob to the left to decrease the Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DELAY TIME" should be highlighted.

DELAY TIME

This Parameter allows you to adjust the amount of time after the initial keypress before the LFO begins oscillating. You may select from 0 (the LFO begins immediately) to 127 (maximum time).

Turn the VALUE knob to the right to increase the Delay Time.

Turn the VALUE knob to the left to decrease the Delay Time.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATTACK RATE" should be highlighted.

ATTACK RATE

This Parameter allows you to adjust the amount of time for the LFO to build to its full amount when using Delay Time. You may select from 0 (the LFO begins immediately) to 127 (maximum time).

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

NOTE: **Delay Time** must be set to some value other than **0** to hear the effect of this Parameter.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE KEY TRK" should be highlighted.

RATE KEY TRK

This Parameter allows you to adjust how the Attack Rate is modulated by the note or pitch. You may select from 0 (no Key Tracking) to 127 (maximum Key Tracking - the rate of Attack increases as higher notes are played).

Turn the VALUE knob to the right to increase the amount of Attack Key Tracking.

Turn the VALUE knob to the left to decrease the amount of Attack Key Tracking.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "PITCH DEP" should be highlighted.

These Parameters allow you to control the characteristics of the LFO 1 for each Component.

♦ WHAT IS A "COMPONENT?"

The PIANO / ENSEMBLE Patches contain what are called Components. The SKX PRO contains 300 pre-programmed Patches for the PIANO and ENSEMBLE Voice Sections. Each individual Patch can contain up to four (4) sounding Components. These Components contain individual waveforms plus Parameters for controlling various characteristics such as Volume, Octave, Attack, Release and Filer Envelopes, etc. Thus, several Patches contain multiple waveforms, such as "Nylon&Steel Gtrs" and "Section Str. Oct." Each Component can be edited separately, though it is not necessary for each Component to be active as part of a Patch. A number of Patches have only one Component sounding, while other may have up to all four Components sounding.

For a fuller explanation of Components, please see page 336.



PITCH DEP

This Parameter allows you to adjust the LFO Pitch Depth for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF." When a Component is "ON," the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Pitch Depth.

Turn the VALUE knob to the left to decrease the Pitch Depth.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "PITCH MOD DEP" should be highlighted.

PITCH MOD DEP

This Parameter allows you to sets the maximum LFO Pitch Depth controlled by the Modulation Wheel for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF."

Turn the VALUE knob to the right to increase the Pitch Modulation Depth.

Turn the VALUE knob to the left to decrease the Pitch Modulation Depth.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "FILTER DEP" should be highlighted.

FILTER DEP

This Parameter allows you to adjust the LFO Filter Depth for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF."

Turn the VALUE knob to the right to increase the Filter Depth.

Turn the VALUE knob to the left to decrease the Filter Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "FILTER MOD DEP" should be highlighted.

FILTER MOD DEP

This Parameter allows you to adjust the maximum LFO Filter Depth controlled by the Modulation Wheel for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF."

Turn the VALUE knob to the right to increase the Filter Modulation Depth.

Turn the VALUE knob to the left to decrease the Filter Modulation Depth.

NOTE: These two Parameters work in conjunction with the FILTER Parameters in the **COMPONENT** FUNCTION Mode Page.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "AMP DEP" should be highlighted.

AMP DEP

This Parameter allows you to adjust the LFO Amplitude Depth for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF."

Turn the VALUE knob to the right to increase the Amplitude Depth.

Turn the VALUE knob to the left to decrease the Amplitude Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "AMP MOD DEP" should be highlighted.

AMP MOD DEP

This Parameter allows you to adjust the maximum LFO Amplitude Depth controlled by the Modulation Wheel for each Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components "ON" or "OFF."

Turn the VALUE knob to the right to increase the Amplitude Modulation Depth.

Turn the VALUE knob to the left to decrease the Amplitude Modulation Depth.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "TRIGGER" should be highlighted.

♦ LFO 2 Parameters

As explained on page 332, both the PIANO and ENSEMBLE Voice Sections have two LFOs (Low Frequency Oscillators). These can be used to modulate various Components.

All of the Parameters for LFO 1 apply equally to LFO 2.

From the above screen, press the PAGE "▶" button once.



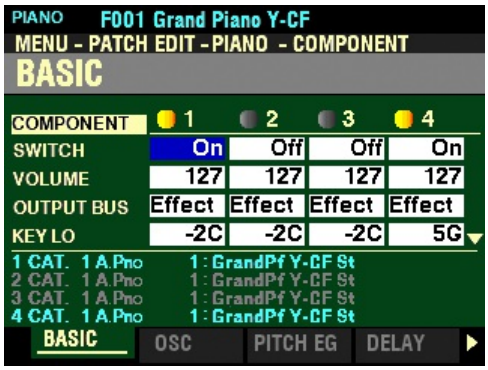
You are now in the FUNCTION Mode Page for editing Components.

♦ COMPONENT Parameters

The Component Parameters are explained starting below.

NOTE: For an explanation of Components, consult page 336.

From the screen shown at the bottom of the previous page, press the ENTER button (the EDIT box is already highlighted). The first Page of the COMPONENT FUNCTION Mode should now display. The box to the right of "SWITCH" should be highlighted.



BASIC Parameters

These Parameters allow you to adjust basic Parameters. These are explained starting below.

SWITCH

This Parameter allows you to select whether you want the selected Component to sound as part of the selected Patch. A round icon to the left of each number will be highlighted when a Component is On, or sounding.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Use the VALUE knob to turn the selected Component On or Off.

NOTE: When editing a Component be sure the box next to its number in the display is highlighted; otherwise you will not hear the effect of your edit(s). Also, be sure to notice the KEY LO and KEY HI settings, which are explained on page 343.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "VOLUME" should be highlighted.

VOLUME

This Parameter allows you to adjust the Volume of the selected Component. You may select from 0 (no volume) to 127 (maximum volume).

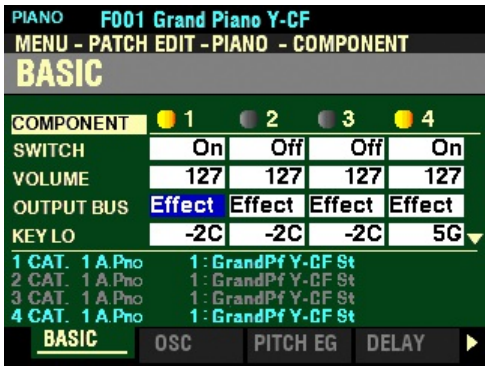
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Volume.

Turn the VALUE knob to the left to decrease the Volume.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "OUTPUT BUS" should be highlighted.

OUTPUT BUS

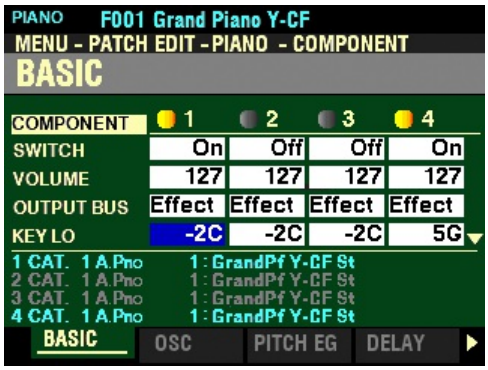
This Parameter allows you to select whether Section Effects are enabled or disabled for this Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select Dry (disabled) or Effect (enabled).

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "KEY LO" should be highlighted.

KEY LO

This Parameter allows you to adjust the lower sounding range of the selected Component by note number. You may select from -2C to 8G.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

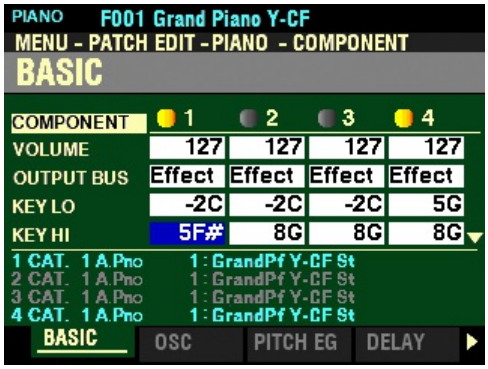
Use the 1, 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to set the range lower.

Turn the VALUE knob to the left to set the range higher.

NOTE: **-2C** is a note two octaves and a sixth below the lowest note on a standard 88-note piano keyboard. **8G** is two octaves and a fifth above the highest note.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "KEY HI" should be highlighted.

KEY HI

This Parameter allows you to adjust the upper sounding range of the selected Component by note number. You may select from -2C to 8G.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

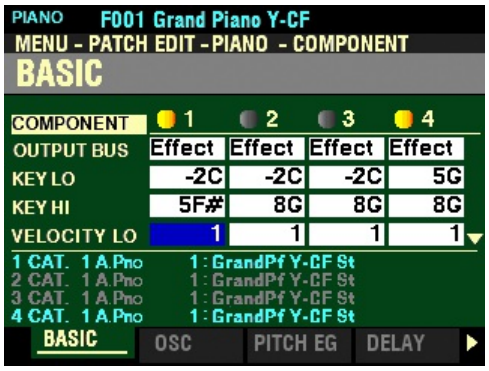
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to set the range lower.

Turn the VALUE knob to the left to set the range higher.

NOTE: The note ranges on the keyboards of the SKX PRO are **C1** to **C6**.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "VELOCITY LO" should be highlighted.

VELOCITY LO

This Parameter allows you to adjust the low sounding point of the selected Component. You may select from 0 to 127.

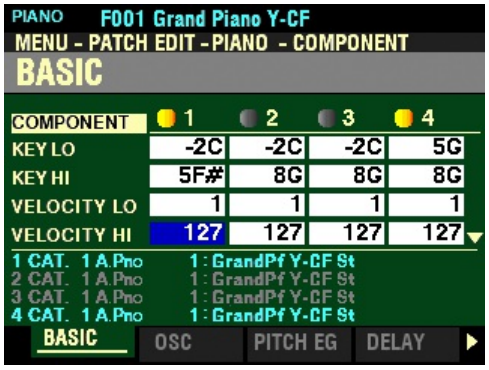
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Low Point.

Turn the VALUE knob to the left to decrease the Low point.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "VELOCITY HI" should be highlighted.

VELOCITY HI

This Parameter allows you to adjust the high sounding point of the selected Component. You may select from 0 to 127.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the High Point.

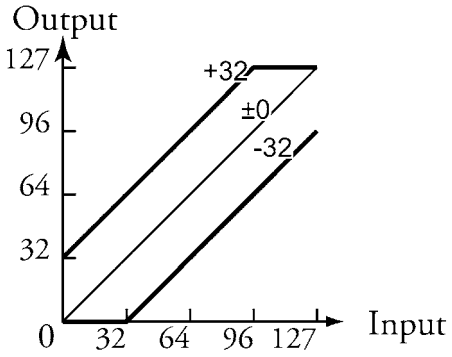
Turn the VALUE knob to the left to decrease the High Point.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "VEL OFFSET" should be highlighted.

VEL OFFSET



This Parameter allows you to adjust the relative loudness of notes played using the selected Component (see illustration above). You may select from -64 to +63. A lower setting will result in lower volume levels from the lowest to the highest key velocities. A higher setting will produce higher volumes from the lowest key velocities (the upper velocity level is fixed).

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1, 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Offset.

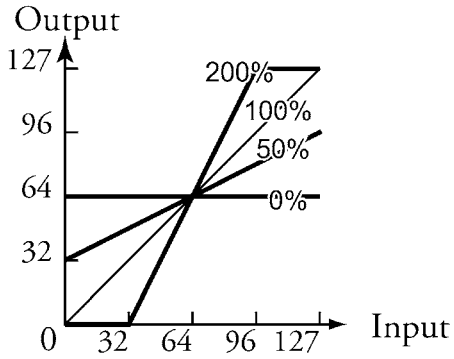
Turn the VALUE knob to the left to decrease the Offset.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "VEL DEPTH" should be highlighted.

VEL DEPTH



This Parameter allows you to adjust the response of the selected Component to key velocity (see illustration above). You may select from 0 to 200%. At 0 there is no change in velocity. At 200%, the volume is changed by the maximum amount in proportion to the velocity.

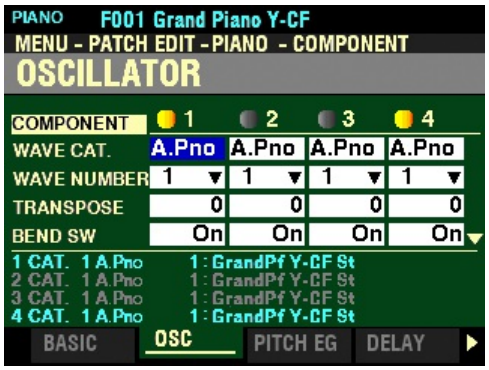
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1, 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "WAVE CAT." should be highlighted.

OSCILLATOR Parameters

These allow you to select the Waveform and adjust various Pitch Parameters. These are explained starting below.

WAVE CAT.

This Parameter allows you to select the Waveform Category. The data chart below shows the numbered categories for each Waveform Type.

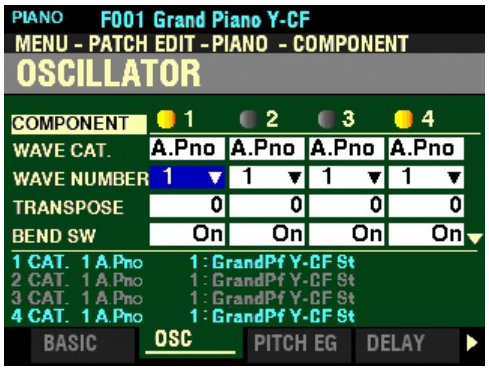
WAVEFORM CATEGORIES		
Number	**Description**	**Abbreviation**
1	Acoustic Piano	A.Pno
2	Electric Piano	E.Pno
3	Harpsichord	Harps
4	Clav	Clav
5	Chromatic Percussion	Ch.Pc
6	Guitar	Guitar
7	Ethnic	Ethnic
8	SFX (Special Effects)	SFX
9	Wind	Wind
10	Strings	Str.
11	Choir	Choir
12	Synth Pad	S.Pad
13	Bass	Bass
14	Synth Lead	S.Ld
15	Free Reed	F.Rd
16	Percussion	Perc

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select the Waveform Category you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "WAVE NUMBER" should be highlighted.

WAVE NUMBER

This Parameter allows you to select a specific Waveform Number. The data chart below shows the options you may select.

WAVEFORM NUMBERS

Number	Description	Abbreviation	Number of Waveforms
1	Acoustic Piano	A.Pno	11
2	Electric Piano	E.Pno	8
3	Harpsichord	Harps	4
4	Clav	Clav	5
5	Chromatic Percussion	Ch.Pc	18
6	Guitar	Guitar	9
7	Ethnic	Ethnic	6
8	SFX (Special Effects)	SFX	7
9	Wind	Wind	27
10	Strings	Str.	9
11	Choir	Choir	4
12	Synth Pad	S.Pad	5
13	Bass	Bass	11
14	Synth Lead	S.Ld	11
15	Free Reed	F.Rd	14
16	Percussion	Perc	13

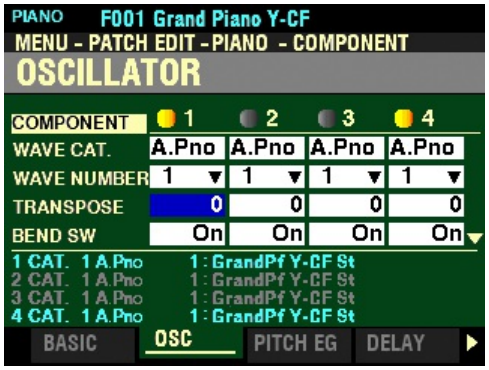
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select the Waveform Number you want.

NOTE: See the **APPENDIX** chapter of this Guide for a complete list of Waveform Numbers.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "TRANSPOSE" should be highlighted.

TRANSPOSE

This Parameter allows you to adjust the sounding pitch of the selected Component by half-steps or semitones. You may select from -63 (down five octaves and a third) to +63 (up five octaves and a third). At 0 there is no transposition.

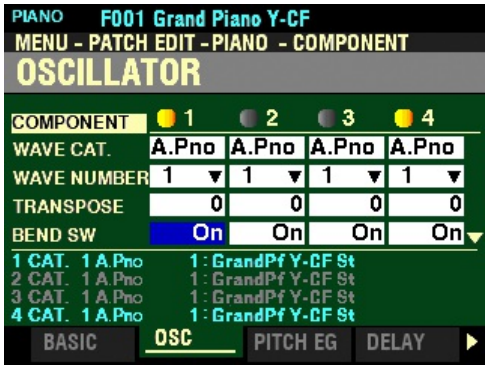
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to transpose the selected Component higher.

Turn the VALUE knob to the left to transpose the selected Component lower.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "BEND SW" should be highlighted.

BEND SW

This Parameter allows you to select whether the Pitch Bend Wheel will bend the pitch of the selected Component. The data chart below shows the options you may select.

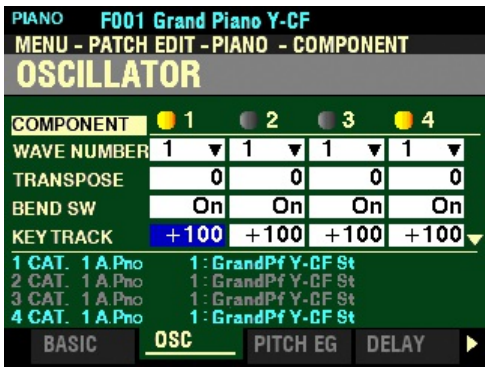
BEND SWITCH Options	
Setting	**Description**
Off	The Pitch Bend Wheel will not affect the selected Component.
On	The Pitch Bend Wheel will bend the pitch of the selected Component.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1, 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to turn this switch On or Off.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "KEY TRACK" should be highlighted.

KEY TRACK

This Parameter allows you to adjust the amount of pitch change between keys on the keyboard for the selected Component. You may select from -100 to +100. At +100 the musical distance between any two adjacent notes will be 100 cents or one half-step. This is the normal setting. At +50 the notes will be one quarter-step apart. At 0 every note on the keyboard will sound the same pitch. A minus setting will cause notes to decrease in pitch as higher notes are played on the keyboard.

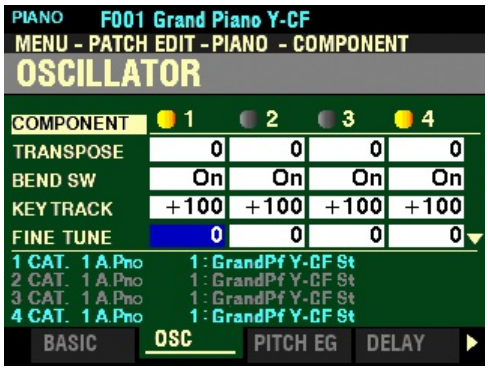
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to transpose the selected Component higher.

Turn the VALUE knob to the left to transpose the selected Component lowest.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "FINE TUNE" should be highlighted.

FINE TUNE

This Parameter allows you to adjust the sounding pitch of the selected Component by cents. You may select from -100 to +100. At "-100" the pitch will be one half-step flat. At "+100" the pitch will be one half-step sharp.

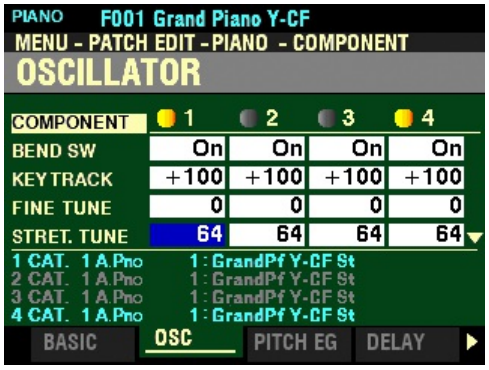
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Plus Depth.

Turn the VALUE knob to the left to decrease the Plus Depth.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "STRET TUNE" should be highlighted.

STRET. TUNE

This Parameter allows you to adjust the depth of the Stretch Tuning for the selected Component. You may select from 0 to 127. 0 is an Equal Temperament. If the value is increased, the bass will sound lower and the treble will sound higher.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

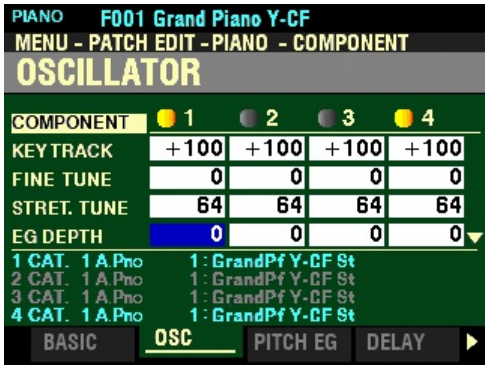
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Plus Depth.

Turn the VALUE knob to the left to decrease the Plus Depth.

NOTE: "Stretch tuning" is a method of tuning stringed instruments (notably piano) to compensate for their inherent inharmonicity, a characteristic that can differ from instrument to instrument. This is explained in more detail several places on the Internet and can be found by executing Searches on "Stretch tuning" or "Inharmonicity."

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "EG DEPTH" should be highlighted.

EG DEPTH

This Parameter allows you to adjust the depth of the pitch changing of the Pitch EG (Envelope Generator for the selected Component. You may select from -64 to +63. At 0 there is no pitch change. At -64 or +63 the pitch will change down or up by one octave.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

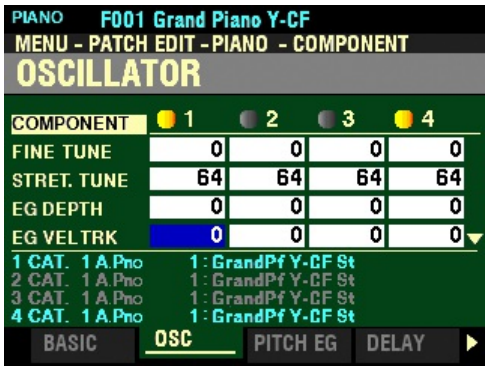
Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

NOTE: This Parameter must be set to some value other than **0** to hear the effect produced by the **PITCH EG**, which is explained starting on the next page.

NOTE: A large amount of pitch change may produce artifacts such as "step noise."

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "EG VEL TRK" should be highlighted.

EG VEL TRK

This Parameter allows you to adjust the depth of the pitch changing of the Pitch EG for the selected Component by keyboard velocity. You may select from 0 to 100%. At 0 there is no change by key velocity. At 100 the pitch will change by a wide amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

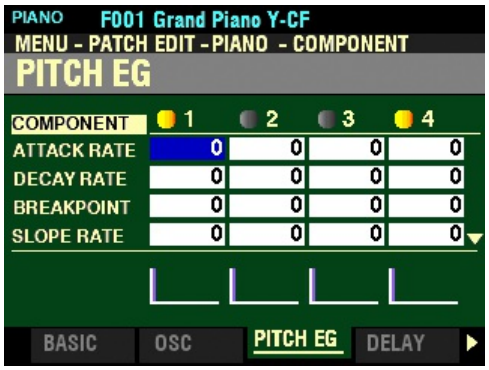
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the amount of Pitch variation.

Turn the VALUE knob to the left to decrease the amount of Pitch variation.

NOTE: The Pitch EG is explained in more detail starting on the next page.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "ATTACK RATE" should be highlighted.

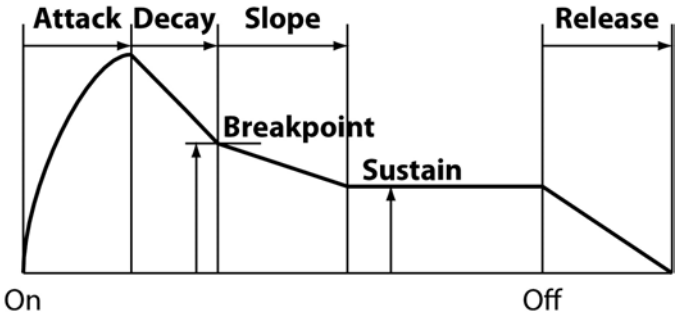
ENVELOPE GENERATORS (EG)

The EG's (Envelope Generators) allow you to control how the sound changes over time by playing notes on the keyboard.

There are three (3) EG's:

1. Pitch,
2. Filter, and
3. Amplitude.

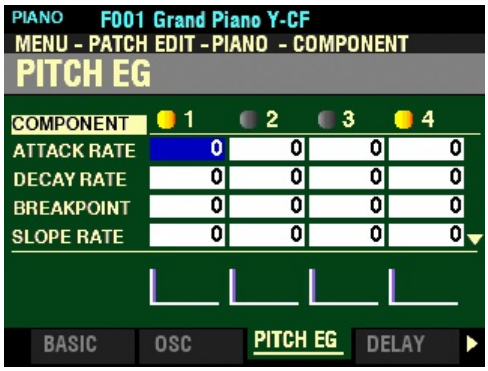
The illustration below shows the structure of the Envelope Generators for the PIANO/ENSEMBLE Section.



Each of the Parameters shown above as they affect Pitch will be explained starting on the next page.

NOTE: For these Parameters, you will notice violet-colored shapes at the bottom of the screen. These are visual representations of the shapes of the Parameters. You will see their shapes change in response to the edits you make.

PITCH EG Parameters



These Parameters allow you to adjust the Pitch Envelope.

NOTE: The PITCH EG DEPTH Parameter must be set to some value other than **0** to hear the effect produced by the PITCH EG.

ATTACK RATE

This Parameter allows you to adjust the time for the pitch to increase to its peak value beginning when a key is depressed. You may select from 0 to 127.

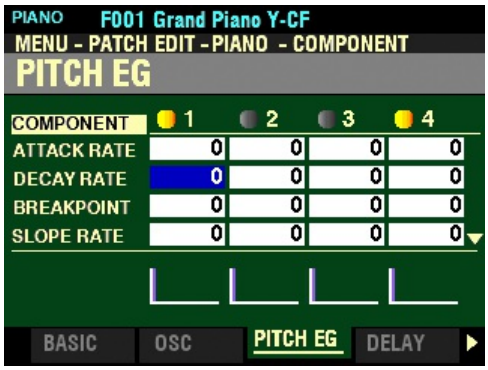
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DECAY RATE" should be highlighted.

DECAY RATE

This Parameter allows you to adjust the time from the peak amount to the Breakpoint Level (explained on the next page). You may select from 0 to 127.

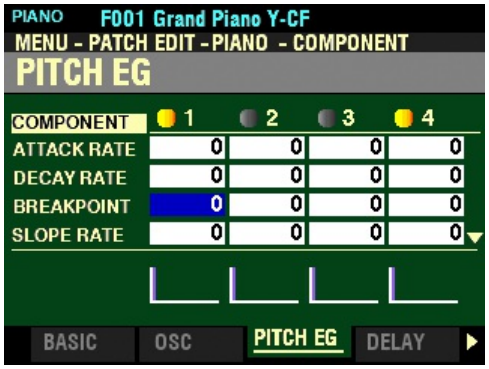
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "BREAKPOINT" should be highlighted.

BREAKPOINT

This Parameter allows you to adjust the level of the point immediately following the Attack. You may select from 0 to 127. A higher value will set a higher pitch as the Breakpoint.

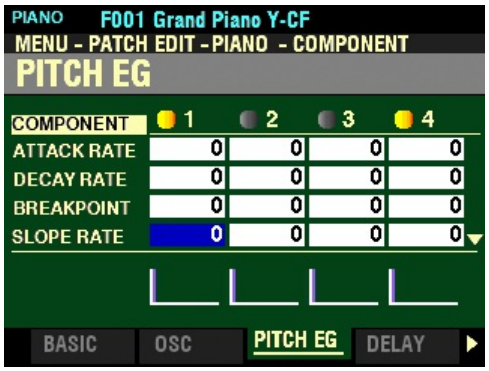
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Breakpoint Level.

Turn the VALUE knob to the left to decrease the Breakpoint Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SLOPE RATE" should be highlighted.

SLOPE RATE

This Parameter allows you to adjust the time from the Breakpoint Level to the Sustain Level. You may select from 0 to 127. A higher value decreases the time required for the pitch to return to the base frequency. A lower value increases the time.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "EG DEPTH" should be highlighted.

SUSTAIN LVL

This Parameter allows you to adjust the main level which will remain until the key is released. You may select from 0 to 127. A higher value will set a higher Sustain Level.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Sustain Level.

Turn the VALUE knob to the left to decrease the Sustain Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL RATE" should be highlighted.

REL RATE

This Parameter allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. You may select from 0 to 127. A higher value will result in a longer Release time.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATK VEL TRK" should be highlighted.

ATK KEY TRK

This Parameter allows you to adjust the rate of Attack of the Pitch EG by note. You may select from 0 to 127. At 0 each note will sound the same Pitch EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DCY KEY TRK" should be highlighted.

DCY KEY TRK

This Parameter allows you to adjust the rate of Decay of the Pitch EG by note. At 0 each note will sound the same Pitch EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SLO KEY TRK" should be highlighted.

SLO KEY TRK

This Parameter allows you to adjust the Slope Rate of the Pitch EG by note. You may select from 0 to 127. At 0 each note will sound the same Pitch EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL KEY TRK" should be highlighted.

REL KEY TRK

This Parameter allows you to adjust the Release Rate of the Pitch EG by note. At 0 each note will sound the same Pitch EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATK VEL TRK" should be highlighted.

ATK VEL TRK

This Parameter allows you to adjust the Attack Rate of the Pitch EG by key velocity. You may select from 0 to 127. A higher velocity will result in a more pronounced pitch change.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL VEL TRK" should be highlighted.

REL VEL TRK

This Parameter allows you to adjust the Release Rate of the Pitch EG by key velocity. You may select from 0 to 127. A higher velocity will result in a more pronounced pitch change.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

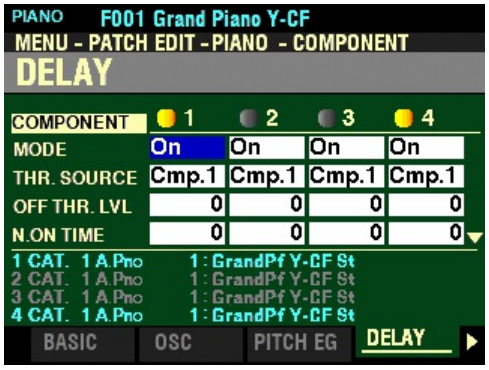
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

NOTE: The Velocity Parameter in the COMBINATION Edit Menu must be "ON" (values 1 ~ 4) in order to hear the effect of Velocity Tracking.

From the shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "MODE" should be highlighted.

DELAY Parameters

These allow you to adjust the note delay characteristics of the selected Component.

NOTE: Do not confuse this Parameter with the DELAY MULTI EFFECT Parameter (explained in the **MULTI EFFECT / OVERDRIVE / EQUALIZER** chapter of this Guide starting on page 630). This is **not** an effect meant to replicate a tape-delay unit. For a complete explanation of this Parameter, see the following paragraphs and pages.

MODE

This Parameter allows you to select how the notes will sound. The data chart below shows the options you may select.

DELAY MODE Options

Setting	Description
On	When the note is "ON" the selected Component sounds at the Note On Delay Time. When the note is "OFF" the sound will stop after the Note Off Delay Time.
Off Vel	The selected Component does not sound even if the note is "ON" If the note is "OFF" it will sound if the Amplitude EG level of the referenced Component is above the Note Off Threshold Level. The velocity of the note will be determined by the velocity with which the key is depressed.
Off EG	Similar to Note Off Vel, except that the velocity of the note will be determined by the level of the Amplitude EG of the referenced Component.

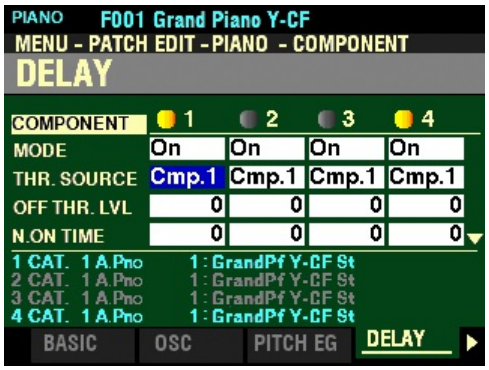
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select On, Off Vel or Off EG.

NOTE: Using one of the **Note Off** settings may cause played notes to cipher or "stick on." To avoid this, set the Sustain Level of the Amplitude EG at **0** if you are using one of the **Note Off** settings.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "THR SOURCE" should be highlighted.

THR SOURCE

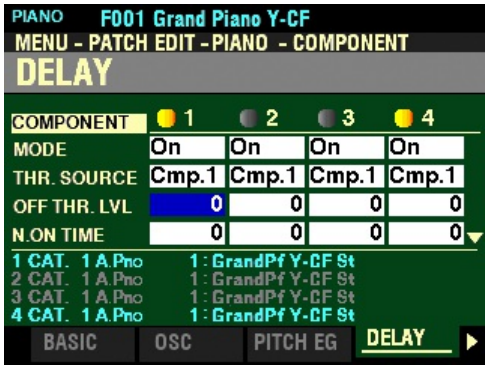
This Parameter allows you to select the reference Component for the Delay settings. You may select Cmp1, Cmp2, Cmp3 or Cmp4.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select the Source Component you want.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "OFF THR. LVL" should be highlighted.

OFF THR LVL

This Parameter allows you to adjust the Note Off level of the Amplitude Envelope of the reference Component (the Component selected under THR SOURCE). You may select from 0 to 127.

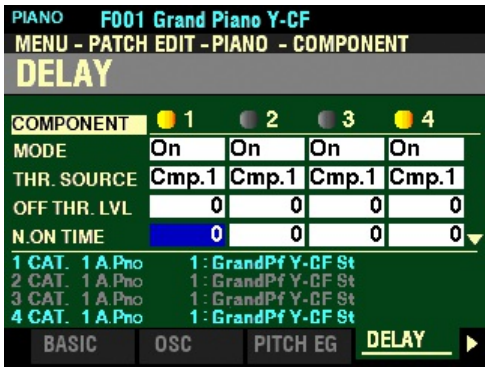
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Threshold Level.

Turn the VALUE knob to the left to decrease the Threshold Level.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "N.ON TIME" should be highlighted.

N ON TIME

This Parameter allows you to adjust the time to sound the note after a key is depressed. You may select from 0 to 127 (0 to 5 seconds).

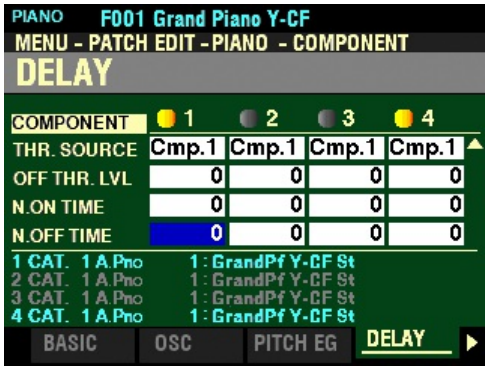
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Note On Delay Time.

Turn the VALUE knob to the left to decrease the Note On Delay Time.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "N.OFF TIME" should be highlighted.

N OFF TIME

This Parameter allows you to adjust the time to hold the note before it stops sounding after the key is released. You may select from 0 to 127 (0 to 5 seconds).

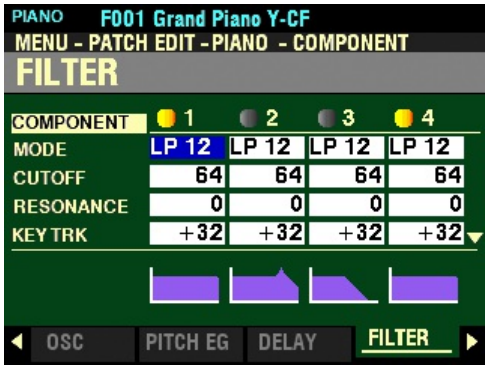
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Note Off Delay Time.

Turn the VALUE knob to the left to decrease the Note Off Delay Time.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "MODE" should be highlighted.

FILTER Parameters

These allow you to control the basic timbre of the sound by selectively blocking some frequencies while allowing others to sound.

NOTE: The violet-colored shapes at the bottom of the screen are visual representations of the shapes of the Parameters. You will see their shapes change in response to the edits you make.

MODE

This Parameter allows you to select the filter method. The data chart below shows the options you may select.

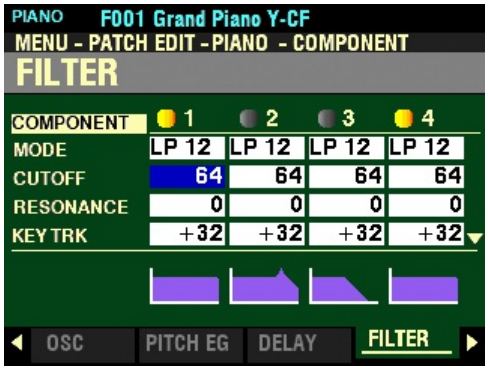
FILTER MODE Options	
Setting	**Description**
LP12	Low-Pass 12dB - reduces the higher frequencies at 12dB/octave.
HP12	High-Pass 12dB - reduces the lower frequencies at 12dB/octave

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select LP12 or HP12.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "CUTOFF" should be highlighted.

CUTOFF

This Parameter allows you to adjust the Cutoff Frequency of the Filter. You may select from 0 to 127.

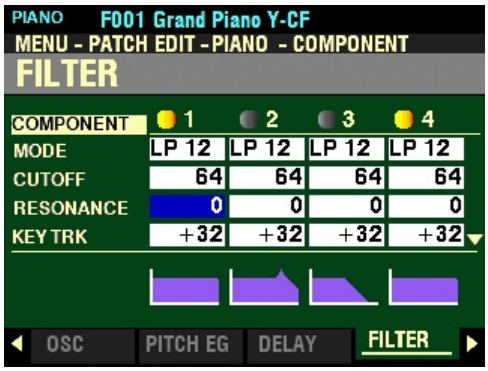
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Cutoff Frequency.

Turn the VALUE knob to the left to decrease the Cutoff Frequency.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RESONANCE" should be highlighted.

RESONANCE

This Parameter allows you to add a controlled amplification to the Cutoff Frequency, coloring the original pitch. You may select from 0 to 127.

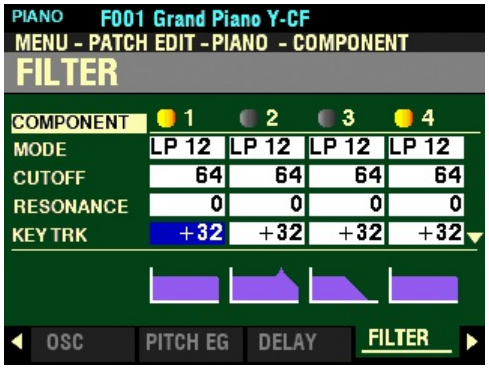
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Filter Resonance.

Turn the VALUE knob to the left to decrease the Filter Resonance.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "KEY TRK" should be highlighted.

KEY TRK

This Parameter allows you to adjust the amount the Cutoff Frequency will change by note. You may select from -100% to +100%. At 0 the Cutoff Frequency does not change. At 100%, the Cutoff Frequency changes by a wide amount.

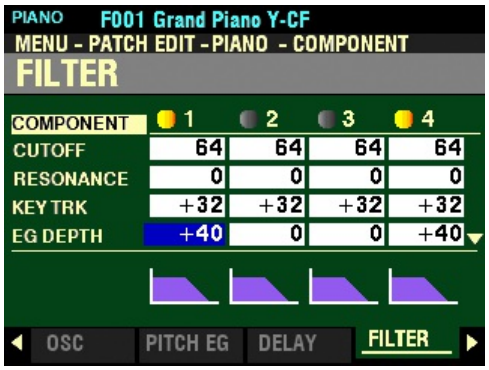
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the amount of Key Tracking.

Turn the VALUE knob to the left to decrease the amount of Key Tracking.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "EG DEPTH" should be highlighted.

EG DEPTH

This Parameter allows you to adjust the amount the Cutoff Frequency will change by the Filter Envelope. You may select from -100% to +100%. At 0 the Cutoff Frequency does not change. At 100%, the Cutoff Frequency changes by a wide amount.

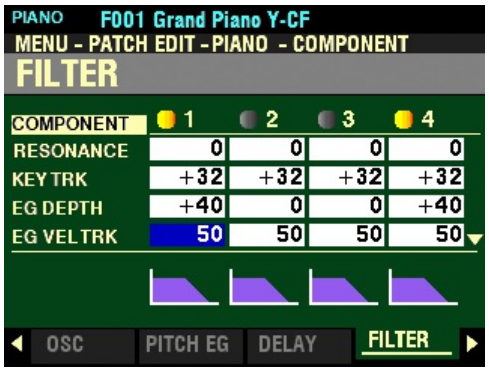
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "EG VEL TRK" should be highlighted.

EG VEL TRK

This Parameter allows you to adjust the amount of the Filter Envelope by Note "ON" or "OFF" velocities. You may select from 0 to 100. A lower key velocity will produce less of a Filter EQ. A higher velocity will produce a more pronounced EQ.

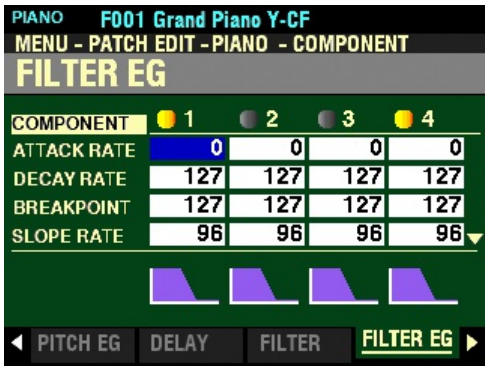
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the amount of Key Tracking.

Turn the VALUE knob to the left to decrease the amount of Key Tracking.

From the above screen, press the PAGE "▶" button once.



The box to the right of "ATTACK RATE" should be highlighted.

FILTER EG Parameters

These allow you to control how the Filter will change the sound over time.

ATTACK RATE

This Parameter allows you to adjust the time for the Cutoff Frequency to increase to its peak value beginning when a key is depressed. You may select from 0 to 127.

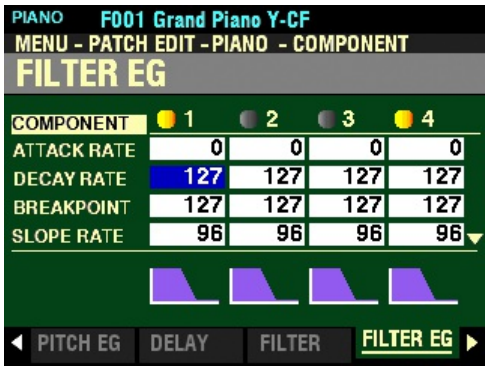
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DECAY RATE" should be highlighted.

DECAY RATE

This Parameter allows you to adjust the time from the peak amount to the Breakpoint Level. You may select from 0 to 127. A higher value results in a longer rate.

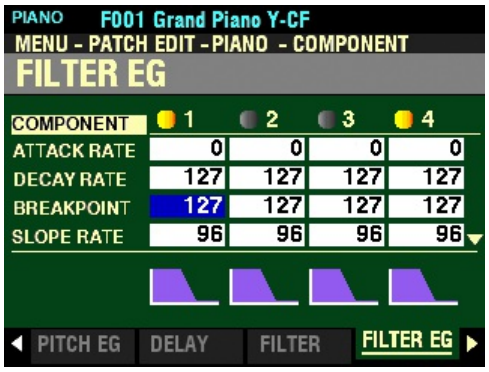
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "BREAKPOINT" should be highlighted.

BREAKPOINT

This Parameter allows you to adjust the level of the point immediately following the Attack. You may select from 0 to 127. A higher value will set a higher pitch as the Breakpoint.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Breakpoint Level.

Turn the VALUE knob to the left to decrease the Breakpoint Level.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SLOPE RATE" should be highlighted.

SLOPE RATE

This Parameter allows you to adjust the time from the Breakpoint Level to the Sustain Level (explained below). You may select from 0 to 127. A higher value decreases the time required for the sound to return to the base frequency. A lower value increases the time.

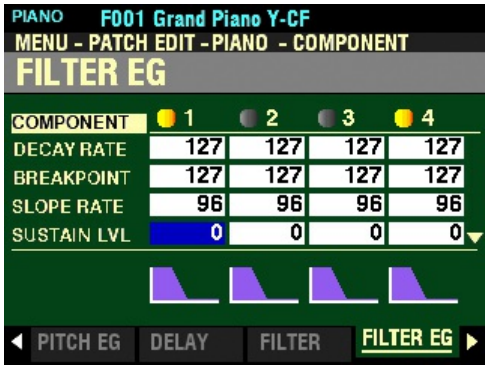
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SUSTAIN LVL" should be highlighted.

SUSTAIN LVL

This Parameter allows you to adjust the Cutoff Frequence Level which will remain until the key is released. You may select from 0 to 127. A higher value will set a higher pitch as the Breakpoint.

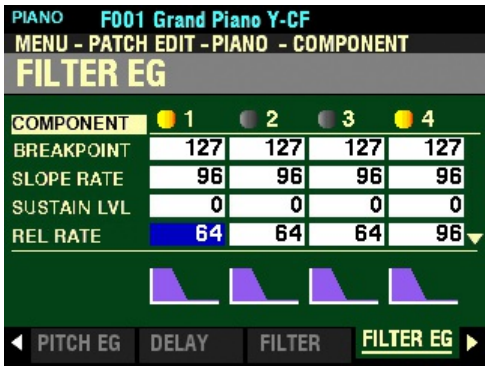
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Sustain Level.

Turn the VALUE knob to the left to decrease the Sustain Level.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "REL RATE" should be highlighted.

REL RATE

This Parameter allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. You may select from 0 to 127. A higher value will result in a longer Release time.

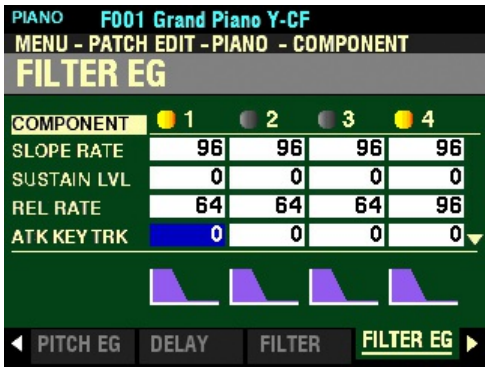
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ATK KEY TRK" should be highlighted.

ATK KEY TRK

This Parameter allows you to adjust the Attack Rate of the Filter EG by note. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

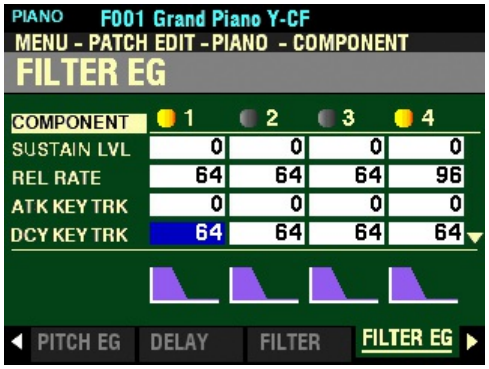
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DCY KEY TRK" should be highlighted.

DCY KEY TRK

This Parameter allows you to adjust the Decay Rate of the Filter EG by note. You may select from 0 to 127. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

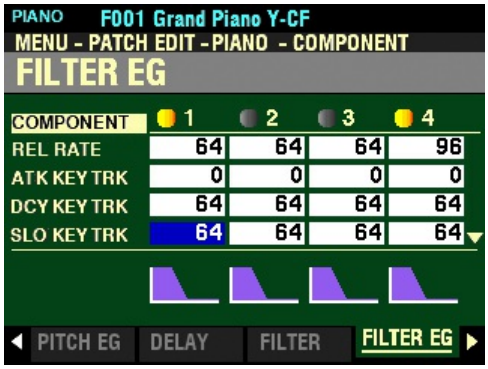
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SLO KEY TRK" should be highlighted.

SLO KEY TRK

This Parameter allows you to adjust the Slope Rate of the Filter EG by note. You may select from 0 to 127. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "REL KEY TRK" should be highlighted.

REL KEY TRK

This Parameter allows you to adjust the Release Rate of the Filter EG by note. You may select from 0 to 127. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ATK VEL TRK" should be highlighted.

ATK VEL TRK

This Parameter allows you to adjust the Attack Rate of the Filter EG by key velocity. You may select from 0 to 127. A higher velocity will result in a more rapid Envelope.

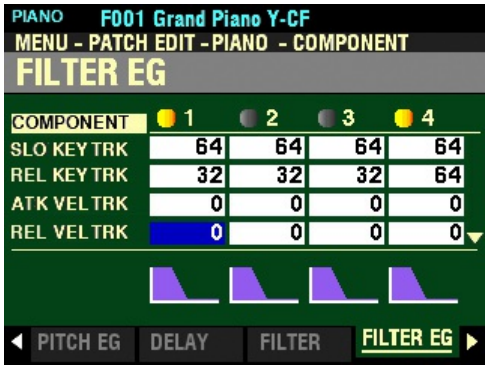
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "REL VEL TRK" should be highlighted.

REL VEL TRK

This Parameter allows you to adjust the Release Rate of the Filter EG by key velocity. You may select from 0 to 127. A higher velocity will result in a longer rate.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

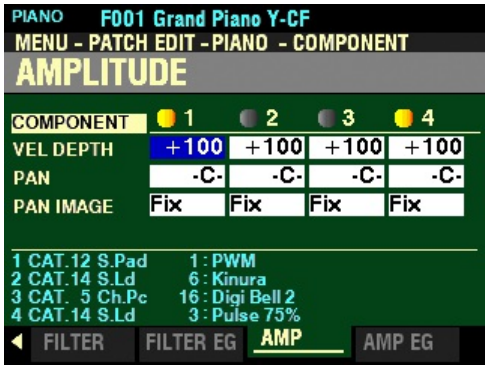
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

NOTE: The Velocity Parameter in the COMBINATION Edit Menu must be "ON" (values 1 ~ 4) in order to hear the effect of Velocity Tracking.

From the above screen, press the PAGE "▶" button once.



The box to the right of "VEL DEPTH" should be highlighted.

AMPLITUDE Parameters

VEL DEPTH

This Parameter allows you to adjust the amount of volume in response to key velocity. You may select from 0 to +100%. At 0 there is no change in volume. At +100%, the volume is changed by the maximum amount corresponding to velocity.

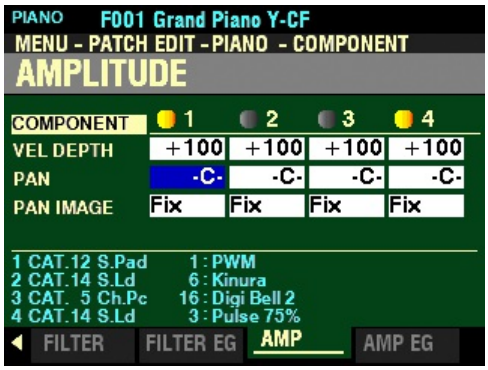
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1, 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Velocity Depth.

Turn the VALUE knob to the left to decrease the Velocity Depth.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "PAN" should be highlighted.

PAN

This Parameter allows you to adjust the directionality or Pan setting for the selected Component. You may select from 0 to 127. At "-C-" the sound is located in the center. At "L64" the sound will be in the Left channel only. At "R63" the sound will be in the Right channel only.

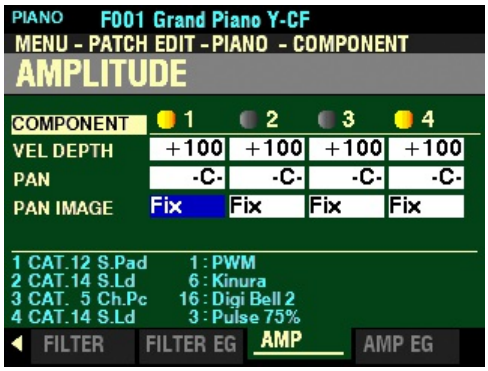
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Pan Directionality.

Turn the VALUE knob to the left to decrease the Pan Directionality.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "PAN IMAGE" should be highlighted.

PAN IMAGE

This Parameter allows you to adjust the panning by the note. The data chart below shows how the Tone Wheels are allocated to each Drawbar.

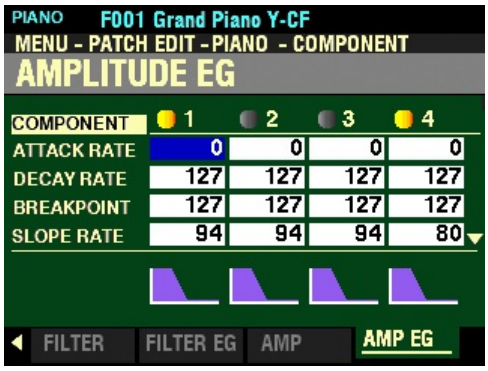
PAN IMAGE Options	
Setting	**Description**
Fixed	No panning - all notes come from the center.
L-R	Playing notes chromatically going up on the keyboard will cause the notes on the left to sound first.
R-L	Playing notes chromatically going up on the keyboard will cause the notes on the right to sound first.
Pyramid	Notes played chromatically going up on the keyboard will start in the center and alternate between left and right.
Inverted	Notes played chromatically going up on the keyboard will start at one end and alternate between left and right until they meet in the center.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to select the option you want.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "ATTACK RATE" should be highlighted.

AMPLITUDE EG Parameters

The Amplitude EG is an Envelope Generator affecting Volume.

ATTACK RATE

This Parameter allows you to adjust the time for the volume to increase to its peak value beginning when a key is depressed. You may select from 0 to 127.

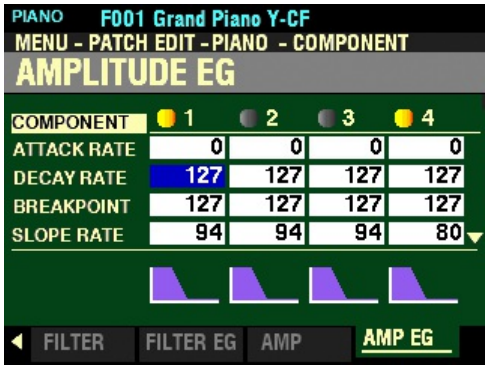
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DECAY RATE" should be highlighted.

DECAY RATE

This Parameter allows you to adjust the time from the peak amount to the Breakpoint Level. You may select from 0 to 127.

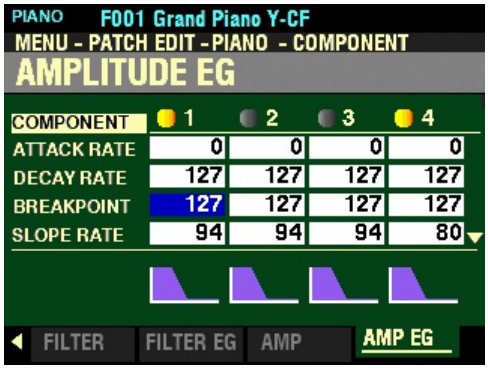
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "BREAKPOINT" should be highlighted.

BREAKPOINT

This Parameter allows you to adjust the level of the point immediately following the Attack. You may select from 0 to 127. A higher value will set a higher volume as the Breakpoint.

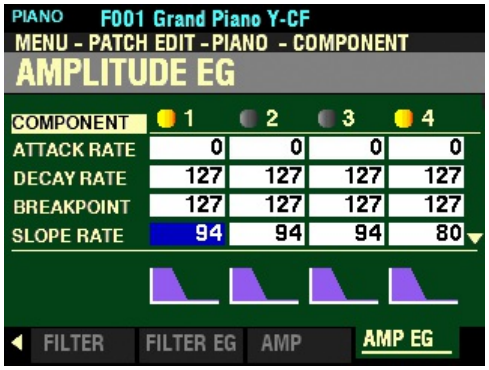
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Breakpoint Level.

Turn the VALUE knob to the left to decrease the Breakpoint Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SLOPE RATE" should be highlighted.

SLOPE RATE

This Parameter allows you to adjust the time from the Breakpoint Level to the Sustain Level. You may select from 0 to 127. A higher value decreases the time required for the sound to return to the base frequency. A lower value increases the time.

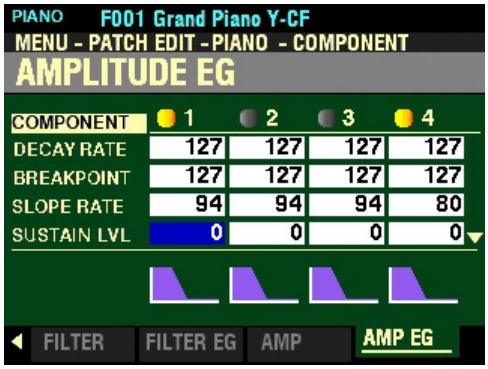
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SUSTAIN LVL" should be highlighted.

SUSTAIN LVL

This Parameter allows you to adjust the main level which will remain until the key is released. You may select from 0 to 127. A higher value will set a higher pitch as the Breakpoint.

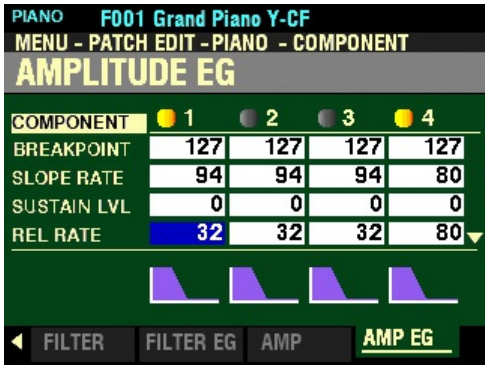
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Sustain Level.

Turn the VALUE knob to the left to decrease the Sustain Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL RATE" should be highlighted.

REL RATE

This Parameter allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. You may select from 0 to 127. A higher value will result in a longer Release time.

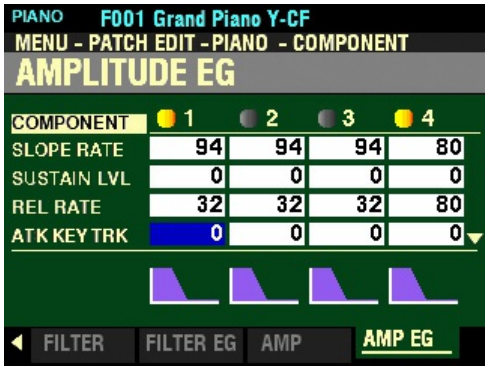
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATK KEY TRK" should be highlighted.

ATK KEY TRK

This Parameter allows you to adjust the Attack Rate of the Amplitude EG by note. You may select from 0 to 127. At 0 each note will sound the same Amplitude EG. 127 will cause the envelope to respond by the maximum amount.

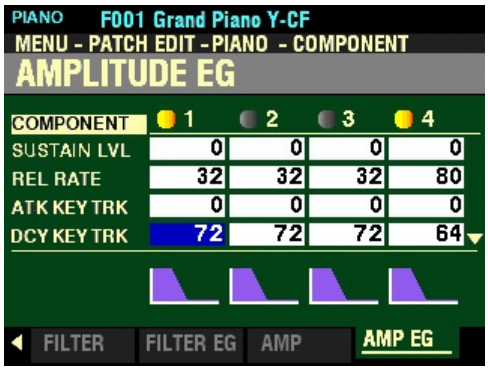
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DCY KEY TRK" should be highlighted.

DCY KEY TRK

This Parameter allows you to adjust the Decay Rate of the Amplitude EG by note. You may select from 0 to 127. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

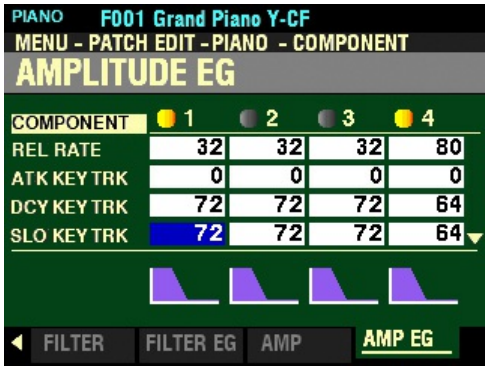
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Rate.

Turn the VALUE knob to the left to decrease the Decay Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SLO KEY TRK" should be highlighted.

SLO KEY TRK

This Parameter allows you to adjust the Slope Rate of the Amplitude EG by note. You may select from 0 to 127. At 0 each note will sound the same Filter EG. 127 will cause the envelope to respond by the maximum amount.

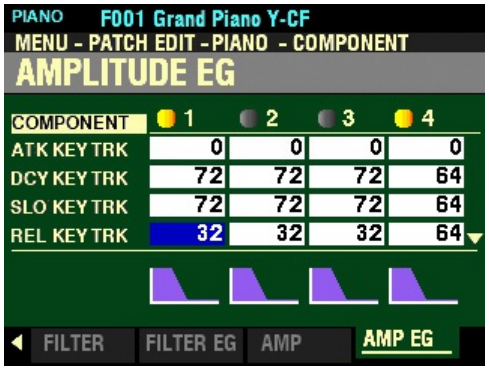
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Slope Rate.

Turn the VALUE knob to the left to decrease the Slope Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL KEY TRK" should be highlighted.

REL KEY TRK

This Parameter allows you to adjust the Release Rate and amount of the Amplitude EG by note. You may select from 0 to 127. At 0 each note will sound the same Amplitude EG. 127 will cause the envelope to respond by the maximum amount.

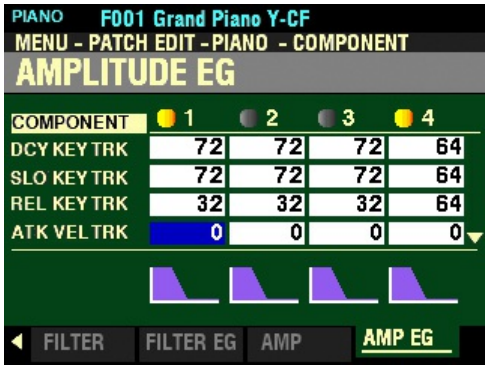
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATK VEL TRK" should be highlighted.

ATK VEL TRK

This Parameter allows you to adjust the Attach Rate of the Amplitude EG by key velocity. You may select from 0 to 127. A higher value will result in a slower Attack.

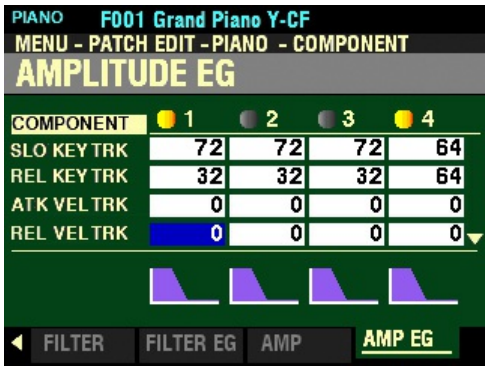
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL VEL TRK" should be highlighted.

REL VEL TRK

This Parameter allows you to adjust the Release Rate of the Amplitude EG by key velocity. You may select from 0 to 127. A higher velocity will result in a longer Release.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Rate.

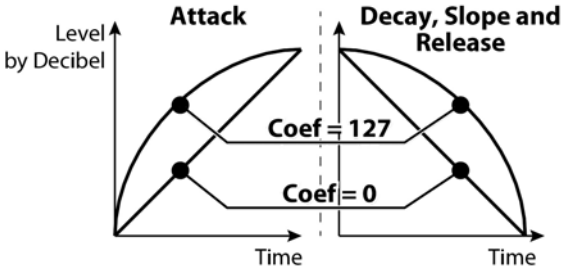
Turn the VALUE knob to the left to decrease the Release Rate.

NOTE: The Velocity Parameter in the COMBINATION Edit Menu must be "ON" (values 1 ~ 4) in order to hear the effect of Velocity Tracking.

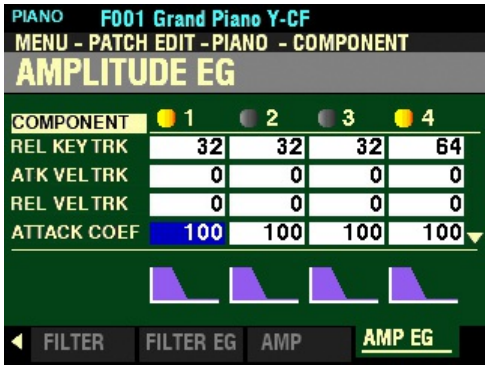
WHAT IS A "COEFFICIENT?"

In mathematics, a coefficient is a value used as a multiplier of some other property. For example, 6X denotes 6 times X. In this case 6 is the coefficient and X is the variable.

The diagram shown below illustrates this.



From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATTACK COEF" should be highlighted.

ATTACK COEF

This Parameter allows you to adjust the Attack Contour for each envelope zone. You may select from 0 to 127. A higher value creates a linear taper suitable for an "upward" level. A lower value creates an exponential taper suitable for a "downward" level.

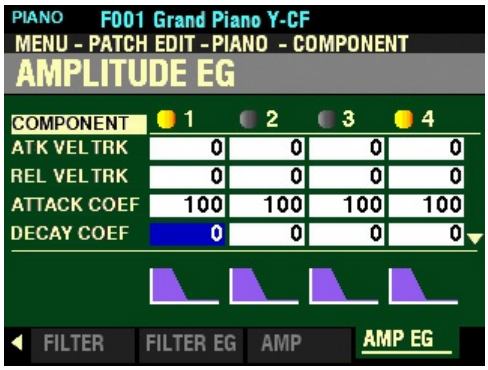
Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Attack Contour.

Turn the VALUE knob to the left to decrease the Attack Contour.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "DECAY COEF" should be highlighted.

DECAY COEF

This Parameter allows you to adjust the Decay Contour for each envelope zone. You may select from 0 to 127. A higher value creates a linear taper suitable for an "upward" level. A lower value creates an exponential taper suitable for a "downward" level.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

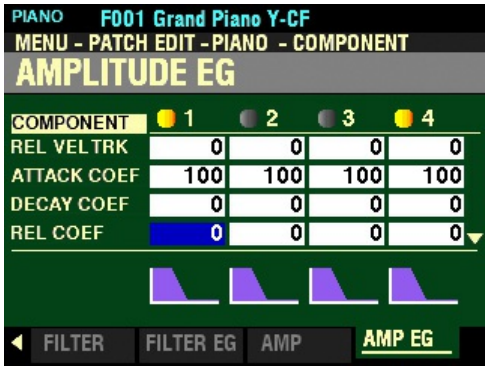
Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Decay Contour.

Turn the VALUE knob to the left to decrease the Decay Contour.

NOTE: The Decay Coefficient controls both Decay and Slope.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL COEF" should be highlighted.

REL COEF

This Parameter allows you to adjust the Release Contour for each envelope zone. You may select from 0 to 127. A higher value creates a linear taper suitable for an "upward" level. A lower value creates an exponential taper suitable for a "downward" level.

Use the DIRECTION "◀" and "▶" buttons to select the Component you want to edit.

Use the 1. 2, 3 and 4 numbered buttons to turn Components On or Off. When On, the graphic to the left of the number will light yellow/orange.

Turn the VALUE knob to the right to increase the Release Contour.

Turn the VALUE knob to the left to decrease the Release Contour.

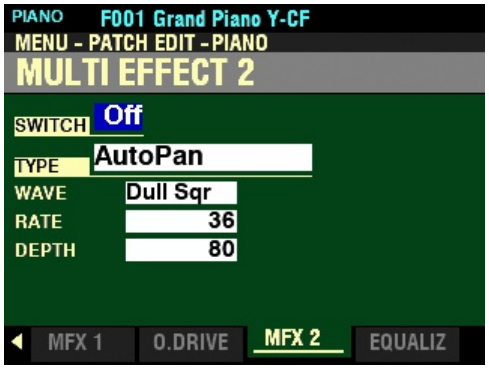
◆ MULTI EFFECT 1&2, OVERDRIVE and EQUALIZER

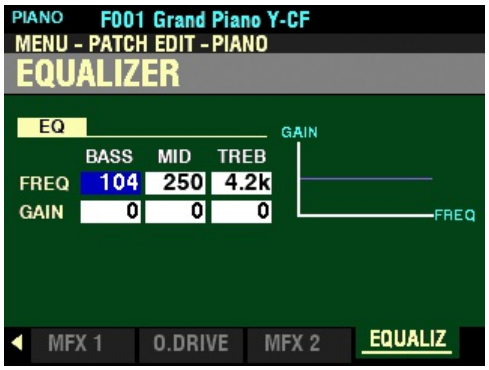
From the screen shown at the bottom of the previous page, use the PAGE "◀" and "▶" buttons to move back and forth among the four remaining PIANO/ENSEMBLE FUNCTION Mode Pages.

IMPORTANT NOTE: These FUNCTION Mode Pages are covered in the **MULTI EFFECT / OVERDRIVE / EQUALIZER** chapter of this Guide since each Voice Section has these Parameters. However, the MULTI EFFECT / OVERDRIVE / EQUALIZER Parameters are controlled separately - adjusting one of these Parameters for one Voice Section will affect that Voice Section **only**.









◆ PIANO/ENSEMBLE APP MENU

When you are editing Parameters for the PIANO or ENSEMBLE Voice Section, you can access the APP MENU to make some editing operations quicker and easier. The following paragraphs will explain this in more detail.

TRY THIS:

1. Access either the PATCH EDIT -PIANO or PATCH EDIT -ENSEMBLE FUNCTION Mode using any of the methods described starting on page 317. The Information Center Display should look like this:



2. Press and Release the MANUAL "▤" button. The Information Center Display should now look like this:

PIANO Voice Section:



ENSEMBLE Voice Section:



These are the APP MENUS for the PATCH EDIT -PIANO or PATCH EDIT -ENSEMBLE FUNCTION Mode Page. You can now use the DIRECTION "▲" and "▼" buttons to make changes to the selected PIANO or ENSEMBLE Patch. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.





The "INITIALIZE" box should be highlighted.

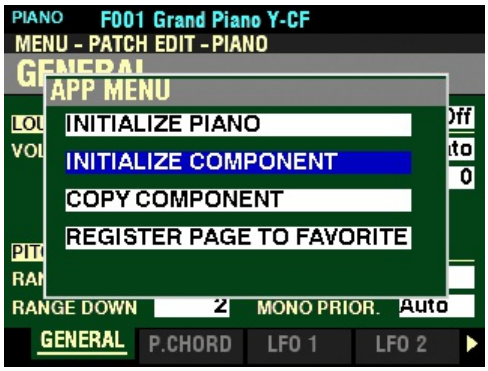
NOTE: The **PIANO** and **ENSEMBLE** **PATCH** **EDIT** FUNCTION Mode Pages are identical. The following pages will refer to the **PIANO** APP MENU to explain both PIANO and ENSEMBLE.

♦ INITIALIZE PIANO/ENSEMBLE

This allows you to clear all the Patch Parameters in the currently selected Patch.

Press the ENTER button to initialize all the Patch Parameters.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The "INITIALIZE COMPONENT" box should be highlighted.

♦ INITIALIZE COMPONENT

This allows you to clear all the Parameters within a Component.

To initialize a Component, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which Component you want to initialize. You may select from 1 to 4 or All (all Components will be initialized).

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "INITIALIZE" box.



4. Press the ENTER button. You will see the message "Initializing..." flash in the display for approximately 1 second.

NOTE: If you DO NOT wish to Initialize, press the MENU / EXIT or PLAY button instead of the ENTER button.

From the screen shown at the top of the previous page, press the DIRECTION "▼" button once.



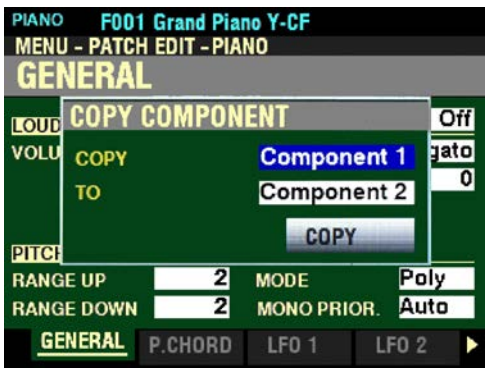
The "COPY COMPONENT" box should be highlighted.

♦ COPY COMPONENT

This allows you to copy all the Parameters within a Component to another Component.

To copy a Component, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select the source Component (the Component you want to copy from). You may select from 1 to 4.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "Component 2" box.



4. Use the VALUE knob to select the target Component (the Component you want to copy to). You may select from 1 to 4.

5. After you have made your selection, press the DIRECTION "▼" button to highlight the "COPY" box.



6. Press the ENTER button. You will see the message "Copy Component..." flash in the display for approximately 1 second.

NOTE: If you DO NOT wish to Initialize, press the MENU / EXIT or PLAY button instead of the ENTER button.

From the screen shown in the middle of page 405, press the DIRECTION "▼" button once.



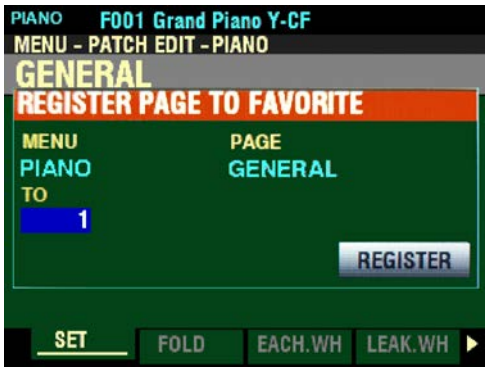
The "REGISTER PAGE TO FAVORITE" box should be highlighted.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

To register the current Page to a FAVORITE, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

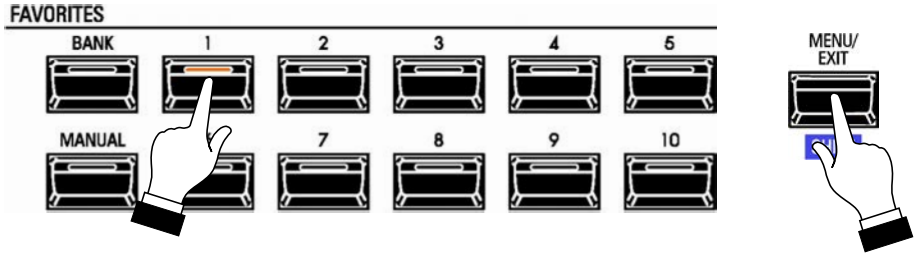


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page or screen to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

HAMMOND

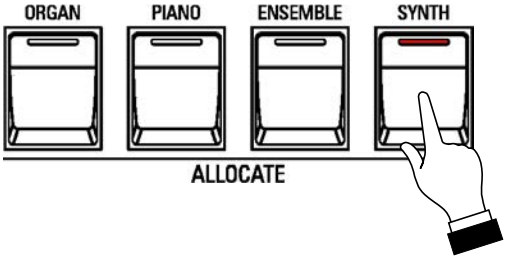
Sk PRO

MONO SYNTH VOICE SECTION

MONO SYNTH Voice Section

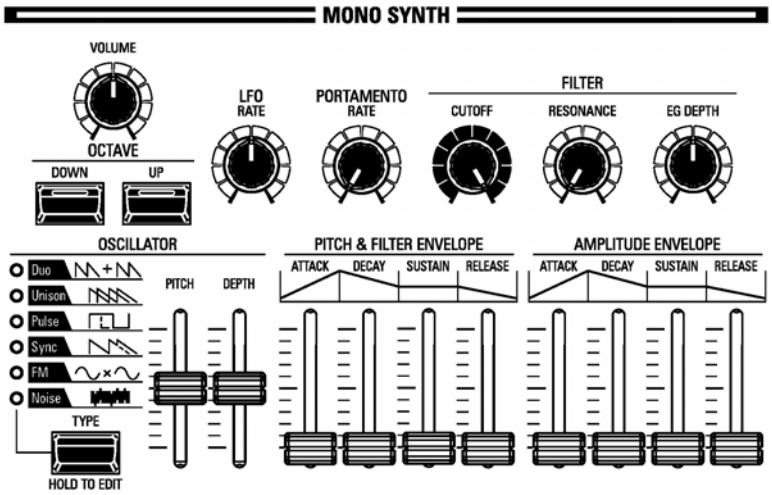
The MONO SYNTH Voice Section, as the name implies, is a monophonic synthesizer utilizing physical modeling to create the sounds and effects of classic analog synthesizers. There are several individual Oscillator Types which can be modified by the Filter (timbre), Amplitude (volume), Section Effects (Multi Effects and Overdrive) and Equalizer. Timed characteristics such as LFO and Envelope Generators for Pitch/Filter and Amplitude are also provided.

To hear the MONO SYNTH Voice Section, press the SYNTH button in the ALLOCATE button section. The LED will light.



◆ MONO SYNTH Controls

The controls for the MONO SYNTH are located to the right of the Information Center Display.



These controls are explained starting below.

♦ MONO SYNTH VOLUME knob



The MONO SYNTH VOLUME knob is located to the left of the MONO SYNTH controls. Use this control to raise or lower the volume of the MONO SYNTH Voice Section.

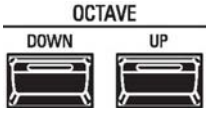
Turn this knob to the right to increase the volume.

Turn this knob to the left to decrease the volume.

NOTE: If you have an Expression Pedal connected, it will express up to the amount determined by the setting of the MONO SYNTH VOLUME knob.

NOTE: Moving the MONO SYNTH VOLUME knob will cause a **POPUP** screen to display showing the current Volume setting. For more information about POPUPs please consult page 682.

♦ OCTAVE buttons

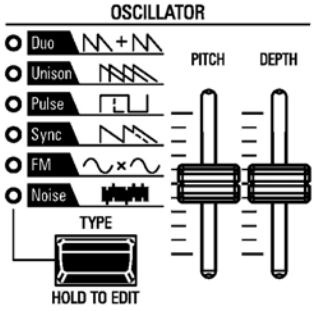


These controls allow you to select the Octave range in which the MONO SYNTH will play. You may select from -2 (up to two octaves down) to +2 (up to two octaves up).

Press the UP button to raise the Octave.

Press the DOWN button to lower the Octave.

♦ OSCILLATOR controls



An Oscillator is the basic sound-producing unit of an analog synthesizer. There are several different types which produce different waveforms having different harmonic structures. These in turn can be manipulated in various ways to produce a wide variety of different musical effects.

The MONO SYNTH on the SK PRO follows the pattern of classic analog synthesizers. "MONO" is an abbreviation for "monophonic," meaning if multiple notes are played on the keyboard, only one note will sound.

OSCILLATOR TYPE

The SK PRO has 6 audio oscillator settings which can be manipulated to produce a wide variety of tones. These are explained starting below.

DUO

This setting utilizes two different pitched Oscillators. The first Oscillator (OSC1) sounds at "true pitch," while the second Oscillator (OSC2) can be transposed up or down by one (1) octave in half-step increments. If the OSC2 LEVEL is set to 0, only OSC1 will sound. This Oscillator type is useful for Bass, Lead and "chord"effects.

UNISON

This setting utilizes from one to seven Oscillators, one of which can be detuned against the other. It can be used for celeste, chorus, or other purposely "out-of-tune" effects.

PULSE

A Pulse (or rectangular) waveform has a variable width known as the "duty cycle." The sound can be modified by changing the pulse width or duty cycle. For example, a duty cycle of 50% will produce a clarinet-like sound while a duty cycle of 6% will yield a bright, brass-like tone quality.

SYNC

This setting utilizes two Oscillators which synchronize against each other to produce overtone effects.

FM

This setting utilizes two Oscillators or "operators." OSC1 is the "carrier tone" and OSC2 is the "modulating tone." You can create both "harmonic" and "inharmonic" tonal effects.

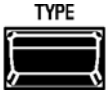
Adjusting the OSC2 pitch down creates wind-instrument sounds such as flute, brass, etc., while adjusting the OSC2 pitch up is suitable for bell-like or "metallic" tones.

Setting the FB (feedback) at Half allows you to create string-type tones while Full is useful for unpitched or "noise"-type tones.

NOISE

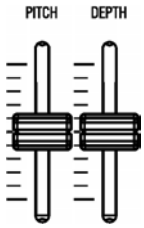
This setting creates unpitched sounds or "noise." The sound changes from "noise'to "random pitched tones'by controlling the sampling rate. A high sampling rate creates "seashore" type effects, a slightly lower rate yields a "noisy percussion,' and a still lower rate creates effects suggestive of a "retro science-fiction movie." This setting utilizes two different pitched Oscillators similar to Duo.

TYPE button



To select the Oscillator Type, press the TYPE button repeatedly until the orange LED next to the desired Oscillator Type lights. Each successive button press will change the LED.

OSCILLATOR PITCH & DEPTH sliders



These two sliders modify the selected Oscillator waveform.

NOTE: The DEPTH slider may have different functions depending on which Oscillator is selected.

NOTE: Moving either of these sliders will cause a **POPUP** screen to display showing the current setting. For more information about POPUPs please consult page 682.



♦ LFO RATE knob

This control allows you to adjust the Rate of the Low Frequency Oscillator (LFO).

Turn this knob to the right to increase the Rate.

Turn this knob to the left to decrease the Rate.



♦ PORTAMENTO RATE knob

This control allows you to adjust the Rate of the Portamento effect.

Turn this knob to the right to increase the Rate.

Turn this knob to the left to decrease the Rate.

NOTE: **Portamento** refers to a smooth transition or "sliding" from one note to another.

NOTE: The PORTAMENTO button must be "ON" (orange LED lit) to hear the Portamento effect.



♦ FILTER CUTOFF knob

This control allows you to select the frequency at which the filter begins to have an effect on the waveform's frequency components.

Turn this knob to the right to make the frequency higher.

Turn this knob to the left to make the frequency lower.



♦ FILTER RESONANCE knob

This control allows you to emphasize the portion of the sound in the region of the cutoff frequency.

Turn this knob to the right to increase the Resonance.

Turn this knob to the left to decrease the Resonance.



♦ FILTER EG DEPTH knob

This control allows you to adjust the depth of the filter envelope.

Turn this knob to the right to increase the Depth.

Turn this knob to the left to decrease the Depth.

◆ WHAT IS "ADSR?"

ADSR is an acronym for Attack, Decay, Sustain and Release. These four Parameters allow you to change different characteristics of the sound.

Attack refers to the amount of time for the sound to "build" to its peak level from its initial setting when a key is first depressed.

Decay refers to the change from the peak level to a "sustain" level which will be maintained as long as a key is held.

Sustain refers to the level at which the sound "arrives" and which will continue as long as a key is held.

Release refers to the amount of time for the sound level to fade away to zero after a key is released.

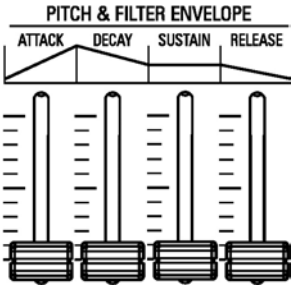
◆ WHAT IS AN "ENVELOPE?"

Envelope refers to the behavior of the ADSR Parameters over time as a key is pressed and held.

The eight sliders on the SK PRO allow you to adjust Pitch, Filter and Amplitude Envelopes. The Pitch Envelope allows you to control the pitch of the sound, the Filter Envelope will control the quality or timbre of the sound and the Amplitude Envelope allows you to control the volume of the sound.

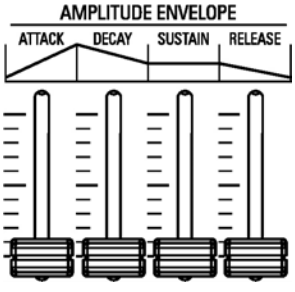
NOTE: If you access the Parameters in the **SYNTH** FUNCTION Mode, you will notice violet-colored shapes either on the right side or at the bottom of the screen. These are visual representations of the Envelope shapes of the selected Parameters. You will see their shapes change in response to the edits you make.

♦ PITCH & FILTER ENVELOPE sliders



These allow you to adjust how the Pitch and Filter change over time.

♦ AMPLITUDE ENVELOPE sliders



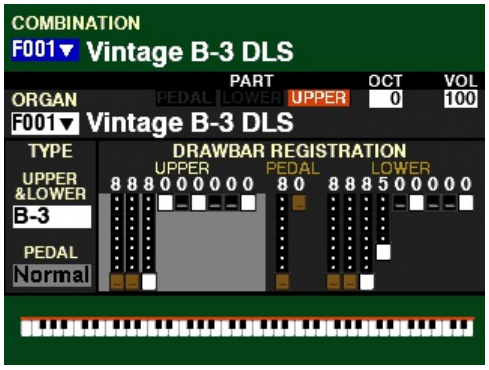
These allow you to adjust how the Amplitude or Volume changes over time.

NOTE: Moving any of these sliders will cause a **POPUP** screen to display showing the current setting. For more information about POPUPs please consult page 682.

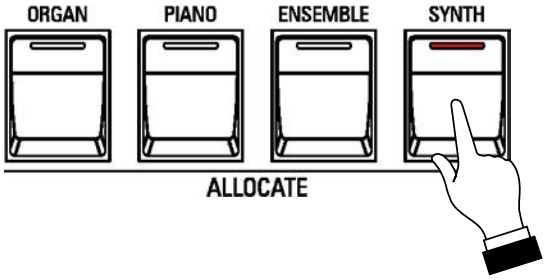
◆ Selecting a MONO SYNTH Patch

TRY THIS:

1. Make sure COMBINATION F001 is selected (see the line at the top of the screen).



2. Press the SYNTH button in the ALLOCATE Section. The red LED will light.



The Information Center Display should now look similar to this:



3. Play some notes. You will now hear the current registration for the MONO SYNTH.

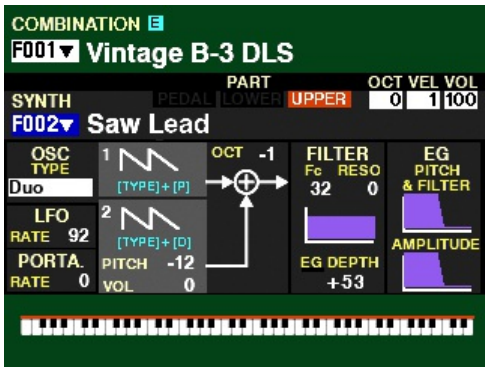
◆ PLAY Mode Parameters

If you followed the instructions on the previous pages, you should see the screen shown below.



Each of the Parameters you may change from the PLAY Mode screen will be explained starting below.

From the above screen, press the DIRECTION "▼" button once.



The box underneath "SYNTH" should now be highlighted.

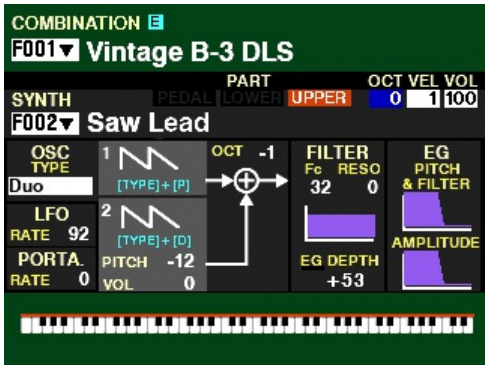
♦ SYNTH

This Parameter allows you to select the Patch for the MONO SYNTH.

Turn the VALUE knob to the right to scroll up numerically through the Patches.

Turn the VALUE knob to the left to scroll down numerically through the Patches.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should now be highlighted.

♦ OCT

This Parameter allows you to select the Octave range in which the MONO SYNTH will sound. You may select from -2 (up to two octaves down) to +2 (up to two octaves up).

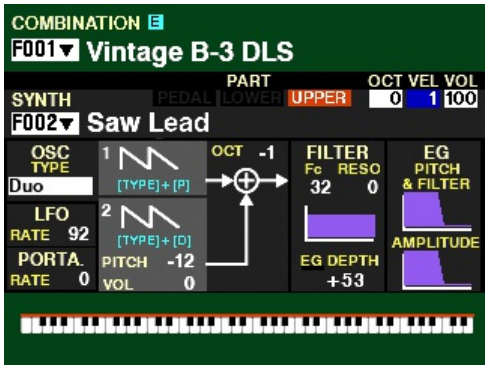
Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

NOTE: The function of this Parameter is duplicated by the OCTAVE buttons in the MONO SYNTH section. For more information consult page 410.

NOTE: The actual sounding octave will be the sum of this Parameter plus the **Octave** setting controlled by the OCTAVE buttons on the Control Panel. For more information, please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 652

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

♦ **VEL**

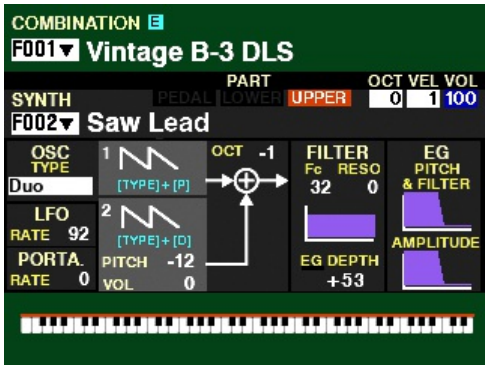
This Parameter allows you to select how the MONO SYNTH Voice Section will respond to key velocity. The data chart below shows the options you may select.

VELOCITY CURVE Options	
Setting	**Description**
Off	Standard "organ" touch - the notes play at a fixed velocity ("100") regardless of a light or heavy keystroke.
1	This is the most exaggerated velocity curve, most like an acoustic piano
2	Less exaggerated than "1."
3	Less exaggerated than "2."
4	This is the smallest change of response to key velocity.

Turn the VALUE knob to select the Velocity Curve you want.

NOTE: The function of this Parameter is duplicated by the VEL (Velocity) Parameter in the **COMBINATION** FUNCTION Mode. For more information consult page 67.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

♦ **VOL**

This Parameter allows you to adjust the Volume of the MONO SYNTH Section. You may select from 0 (no volume) to 127 (maximum volume).

Turn either the VALUE knob or the MONO SYNTH VOLUME knob to the right to increase the Volume.

Turn either the VALUE knob or the MONO SYNTH VOLUME knob to the left to decrease the Volume.

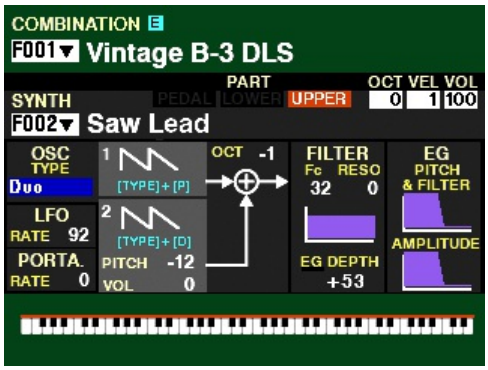
NOTE: The function of this Parameter is duplicated by the VOL (Volume) Parameter in the **COMBINATION** FUNCTION Mode. For more information consult page 66.

From the screen shown at the bottom of the previous page:

1. Press the DIRECTION "◀" button once to highlight the box underneath "SYNTH."



2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



♦ OSC TYPE

This Parameter allows you to select the Oscillator Type.

Turn the VALUE knob or press the TYPE button repeatedly until the orange LED next to the desired Oscillator Type lights. Each turn of the VALUE knob or successive button press will change the LED.

NOTE: The function of this Parameter is duplicated by the OSCILLATOR TYPE Parameter in the **OSCILLATOR** Page of the **PATCH EDIT -SYNTH FUNCTION Mode** and the TYPE button in the MONO SYNTH Section of the Control Panel. For more information consult pages 411 and 438.

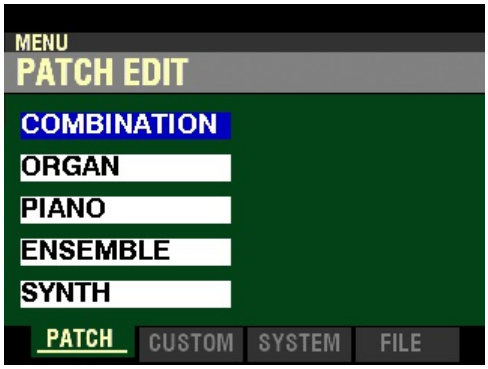
NOTE: For a complete explanation of the available Oscillator Types consult page 411.

◆ PATCH EDIT -SYNTH FUNCTION Mode

This FUNCTION Mode allows you to modify the characteristics of the MONO SYNTH Voices according to your preference.

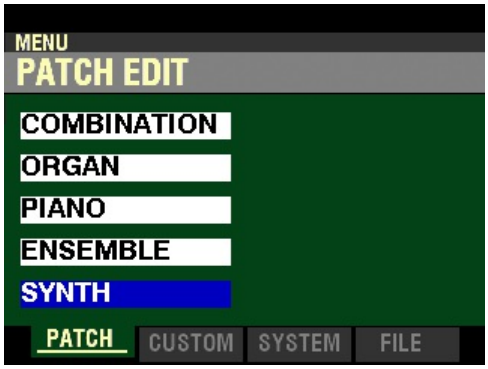
♦ Accessing the PATCH EDIT -SYNTH FUNCTION Mode using the MENU / EXIT and DIRECTION buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

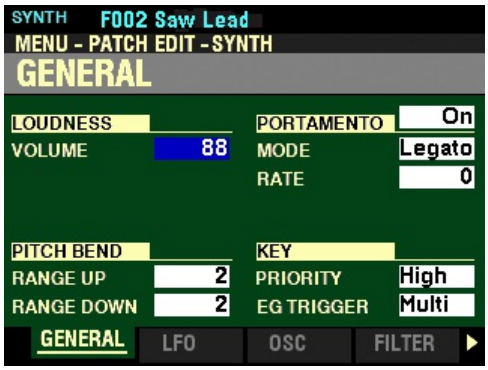


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button four times to highlight the "SYNTH" box.

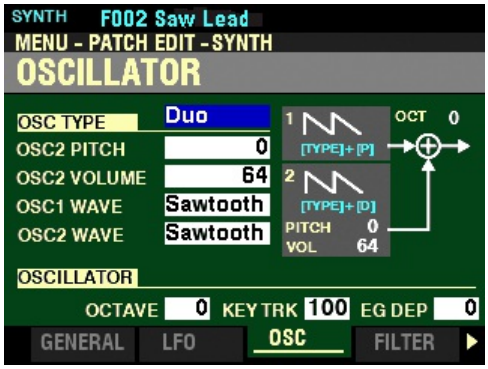


3. Press the ENTER button. The Information Center Display should now look like this:



♦ Accessing the PATCH EDIT -SYNTH FUNCTION Mode using the Shortcut:

1. Press and Hold the HOLD TO EDIT button in the MONO SYNTH Voice Section. You will see the OSCILLATOR screen:



2. Release the HOLD TO EDIT button.

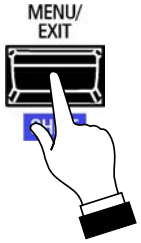
NOTE: The OSCILLATOR Screen is actually the third screen of the **PATCH EDIT -SYNTH** FUNCTION Mode Page. To see the opening screen (**GENERAL**) after using the Shortcut, press the PAGE "◀" button **two** times.

♦ Accessing PATCH EDIT -SYNTH FUNCTION Mode Pages using the SHIFT button:

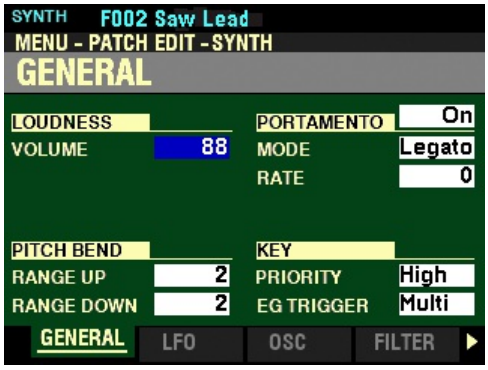
You can access individual Pages of the MONO SYNTH FUNCTION Mode using the SHIFT button. The following pages will explain this in detail.

Accessing the GENERAL Page:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, turn the PORTAMENTO RATE knob. The Information Center Display will look similar to this:

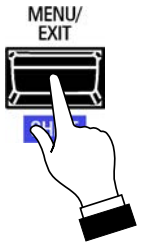


3. Release the SHIFT button.

A complete explanation of the GENERAL Parameters can be found starting on page 428.

Accessing the LFO Page:

1. Press and Hold the SHIFT button.



2. While holding the SHIFT button, turn the LFO RATE knob. The Information Center Display will look similar to this:

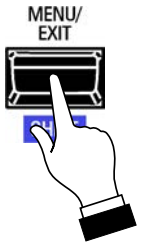


3. Release the SHIFT button.

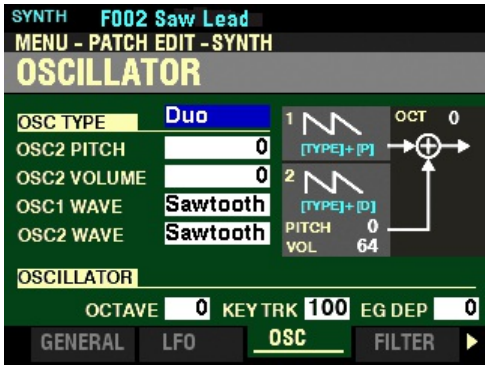
A complete explanation of the LFO Parameters can be found starting on page 432.

Accessing the OSCILLATOR Page:

1. Press and Hold the SHIFT button.



2. While holding the SHIFT button, move either of the two OSCILLATOR Sliders. The Information Center Display will look similar to this:

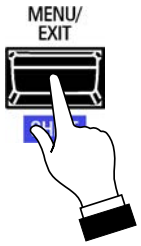


3. Release the SHIFT button.

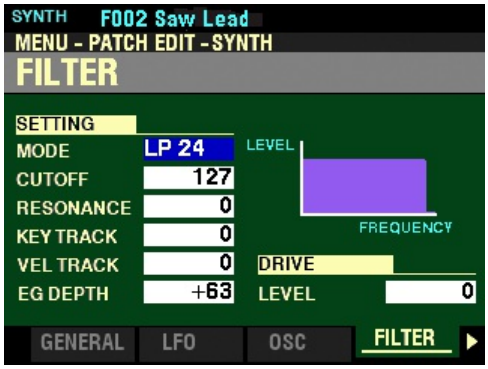
A complete explanation of the OSCILLATOR Parameters can be found starting on page 438.

Accessing the FILTER Page:

1. Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the three FILTER Sliders. The Information Center Display will look similar to this:

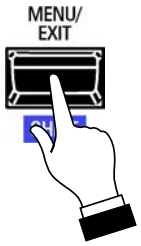


3. Release the SHIFT button.

A complete explanation of the FILTER Parameters can be found starting on page 460.

Accessing the PITCH&FILTER EG Page:

1. Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the three PITCH & FILTER ENVELOPE Sliders. The Information Center Display will look similar to this:

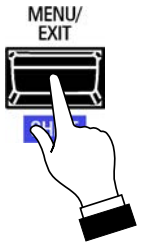


3. Release the SHIFT button.

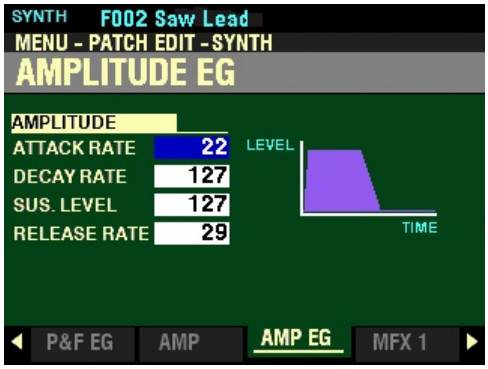
A complete explanation of the PITCH&FILTER EG Parameters can be found starting on page 464.

Accessing the AMPLITUDE EG Page:

1. Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the four AMPLITUDE ENVELOPE Sliders. The Information Center Display will look similar to this:



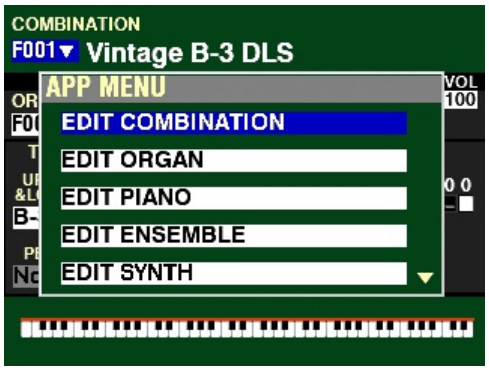
3. Release the SHIFT button.

A complete explanation of the LFO Parameters can be found starting on page 467.

♦ Accessing the PATCH EDIT -SYNTH FUNCTION Mode using the APP MENU:

1. Make sure the SYNTH ALLOCATE button is "ON" (LED lit).

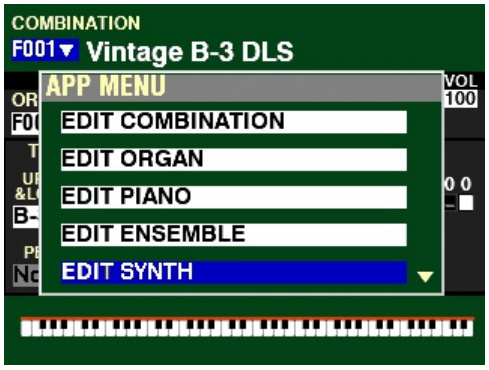
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



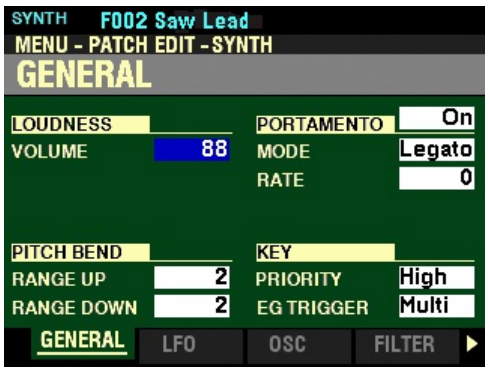
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT SYNTH" box.

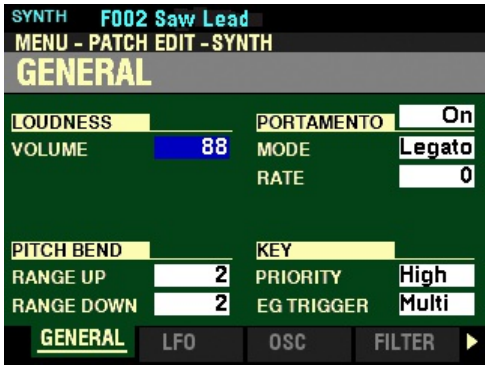


4. Press the ENTER button. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the Patches. These changes are explained starting on the next page.

♦ GENERAL Parameters



NOTE: To see the MENU shown above after using the Shortcut, press the PAGE "◀" button **two** times.

LOUDNESS

VOLUME

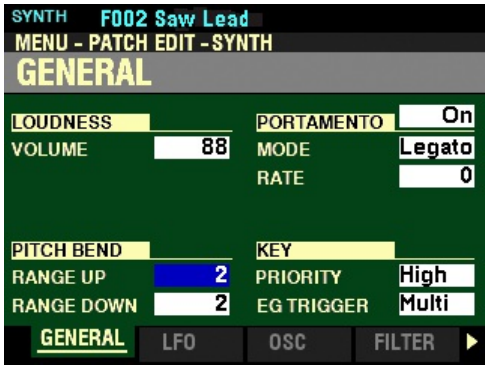
This Parameter allows you to adjust the maximum level of the selected Patch. You may select from 0 (no Volume) to 127 (maximum Volume).

Turn the VALUE knob to the right to increase the Loudness of the Patch.

Turn the VALUE knob to the left to decrease the Loudness of the Patch.

NOTE: The **Loudness** Parameter serves to set the maximum volume of the selected MONO SYNTH Patch and works independently of the SYNTH VOLUME knob. The overall volume of the MONO SYNTH Voice Section is controlled by the SYNTH VOLUME knob. The MASTER VOLUME knob and/or a connected Expression Pedal will control the volume of the entire instrument.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RANGE UP" should be highlighted.

PITCH BEND

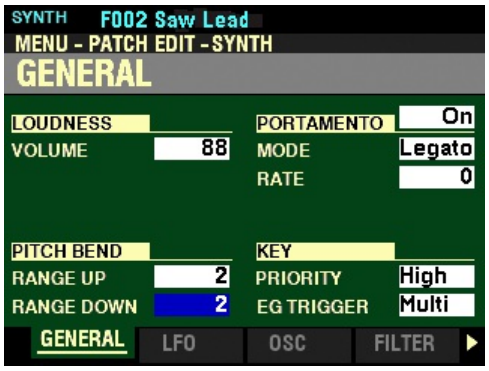
RANGE UP

This Parameter allows you to set the amount by which the pitch will bend up using the Pitch Bend Wheel for the selected Patch. The lowest setting is 0 (no change), while the highest setting is 12 (twelve half-steps, or one full octave up). The default setting is 2.

Turn the VALUE knob to the right to increase the upward Range.

Turn the VALUE knob to the left to decrease the upward Range.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "RANGE DOWN" should be highlighted.

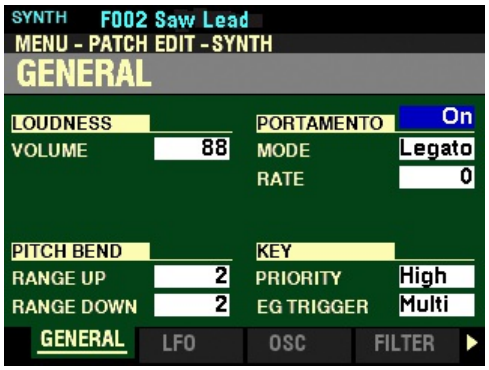
RANGE DOWN

This Parameter allows you to set the amount by which the pitch will bend down using the Pitch Bend Wheel for the selected Patch. The lowest setting is 0 (no change), while the highest setting is 24 (twenty-four half-steps, or two full octaves down). The default setting is 2.

Turn the VALUE knob to the right to increase the downward Range.

Turn the VALUE knob to the left to decrease the downward Range.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "PORTAMENTO."



PORTAMENTO

ON / OFF

This Parameter allows you to turn the Portamento effect On or Off for the selected MONO SYNTH Patch.

Turn the VALUE knob to turn Portamento On or Off.

NOTE: As explained on page 412, **Portamento** refers to a smooth transition or "sliding" from one note to another.

NOTE: Both the PORTAMENTO button and the PORTAMENTO Parameter must be "ON" in order to hear the Portamento effect.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MODE" should be highlighted.

MODE

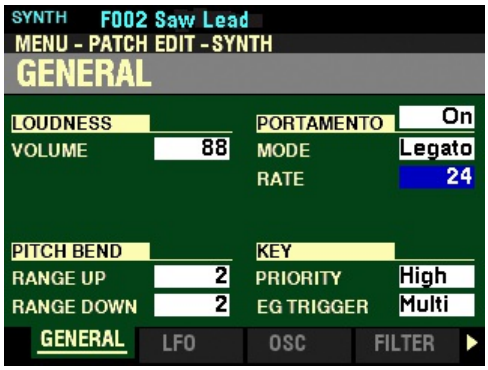
This Parameter allows you to adjust how to control the Portamento effect from the keyboard.

The data chart below shows the options you may select.

PORTAMENTO MODE Options	
Setting	**Description**
Every	The Portamento will be heard with every keypress.
Legato	The Portamento will be heard only when keys are played "legato" (a key is depressed while another key is held).

Turn the VALUE knob to select Every or Legato.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

RATE

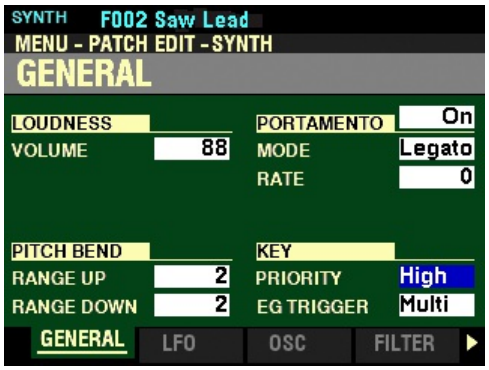
This Parameter allows you to adjust the rate at which the pitch rises or falls when Portamento is "ON." You may select from 0 (the pitch will rise or fall instantaneously) to 127 (the pitch rises and falls at the slowest rate). Intermediate rates will cause the pitch to rise or fall at rates between 0 and 127.

Turn the VALUE knob to the right to increase the Portamento Rate.

Turn the VALUE knob to the left to decrease the Portamento Rate.

NOTE: Both the PORTAMENTO button and the PORTAMENTO Parameter must be "ON" (orange LED lit) to hear the Portamento effect.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "PRIORITY" should be highlighted.

KEY

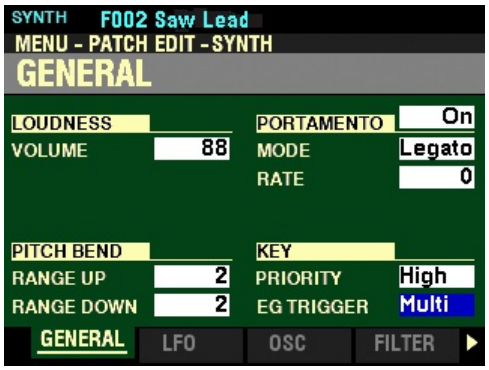
PRIORITY

This Parameter allows you to adjust which note will sound if more than one note is played. The data chart below shows the options you may select.

KEY PRIORITY Options	
Setting	**Description**
Auto	Sounds highest note played when used with other Sections. Sounds last played note when used alone.
Last	The last played note will sound
High	The highest note played will sound.
Low	The lowest note played will sound.

Turn the VALUE knob to select the option you want.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "EG TRIGGER" should be highlighted.

EG TRIGGER

This Parameter allows you to adjust whether the Envelope will reset each time a key is depressed. The data chart below shows the options you may select.

EG TRIGGER MODE Options	
Setting	**Description**
Single	The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.
Multi	Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.

Turn the VALUE knob to select Single or Multi.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "TRIGGER" should be highlighted.

♦ LFO Parameters

These allow you to adjust characteristics of the LFO (Low Frequency Oscillator, which creates Vibrato or Tremolo effects).

SETTING

These Parameters allow you to control the overall settings for the LFO.

TRIGGER

This Parameter allows you to adjust whether the phase of the LFO will reset each time a key is depressed. The data chart below shows the options you may select.

LFO TRIGGER MODE Options	
Setting	**Description**
Note	The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.
Free	Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.

Turn the VALUE knob to select Note or Free.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "WAVEFORM" should be highlighted.

WAVEFORM

This Parameter allows you to select the waveform of the LFO. The data chart below shows the options you may select.

LFO WAVEFORM Options	
Waveform	**Description**
Triangle	A waveform which smoothly rises to a peak point and smoothly drops to a zero voltage.
Square	A waveform which sharply rises to a peak point and sharply drops to a zero voltage.
Rectangular Square	A waveform which smoothly rises to a peak point and smoothly drops to a zero voltage.
Saw Up	A sawtooth wave which ramps upward and drops sharply to a zero voltage.
Saw Down	A sawtooth wave which ramps downward to a zero voltage and rises sharply.
S/H (Sample/Hold)	Samples the input analog signal and holds the sampled signal for a specified time.
Fluctuation	Random waveform with no periodicity.

Turn the VALUE knob to select the Waveform you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

RATE

This Parameter allows you to adjust the Oscillation Rate of the LFO. You may select from 0 (the slowest rate) to 127 (the fastest rate).

Turn the VALUE knob to the right to increase the Rate.

Turn the VALUE knob to the left to decrease the Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DELAY TIME" should be highlighted.

DELAY TIME

This Parameter allows you to adjust the amount of time after the initial keypress before the LFO begins oscillating. You may select from 0 (the LFO begins immediately) to 127 (maximum time).

Turn the VALUE knob to the right to increase the Delay Time.

Turn the VALUE knob to the left to decrease the Delay Time.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ATTACK RATE" should be highlighted.

ATTACK RATE

This Parameter allows you to adjust the amount of time for the LFO to build to its full amount when using Delay Time. You may select from 0 (the LFO begins immediately when a key is depressed) to 127 (maximum time).

Turn the VALUE knob to the right to increase the Attack Time.

Turn the VALUE knob to the left to decrease the Attack Time.

NOTE: **Delay Time** must be set to some value other than **0** to hear the effect of this Parameter.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE KEY TRK" should be highlighted.

RATE KEY TRK

This Parameter allows you to adjust how the Attack Rate is modulated by the note or pitch. You may select from 0 (no Key Tracking) to 127 (maximum Key Tracking - the Attack Rate increases as higher notes are played).

Turn the VALUE knob to the right to increase the amount of Attack Key Tracking.

Turn the VALUE knob to the left to decrease the amount of Attack Key Tracking.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "LFO DEP" should be highlighted.

LFO DEP

These three Parameters allow you to adjust the depth of the LFO for individual characteristics of the sound. You may select from 0 to 127 for each Parameter.

The data chart below shows the options you may select.

LFO DEPTH Options	
Setting	**Description**
PITCH	Allows you to adjust the depth of the LFO for controlling Pitch.
FIL	Allows you to adjust the depth of the LFO for controlling the Filter
AMP	Allows you to adjust the depth of the LFO for controlling Amplitude or Level.

Use the DIRECTION "◀" and "▶" buttons to select PITCH (Pitch), FIL (Filter) or AMP (Amplitude).

Turn the VALUE knob to select PITCH, FIL or AMP.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LFO MOD DEP" should be highlighted.

LFO MOD DEP

These three Parameters allow you to adjust the maximum depth of the LFO added by the Modulation Wheel. You may select from 0 to 127 for each Parameter.

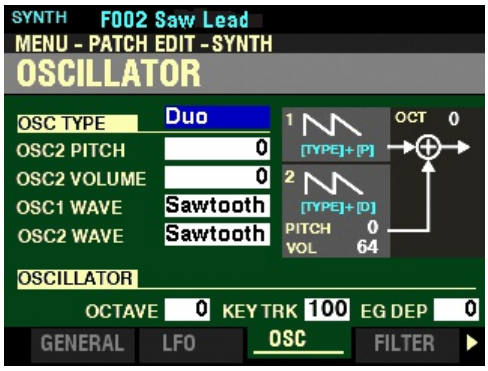
The data chart below shows the options you may select.

LFO MOD DEPTH Options	
Setting	**Description**
PITCH	Allows you to adjust the maximum depth of the LFO for controlling Pitch.
FIL	Allows you to adjust the maximum depth of the LFO for controlling the Filter
AMP	Allows you to adjust the maximum depth of the LFO for controlling Amplitude or Level.

Use the DIRECTION "◀" and "▶" buttons to select PITCH (Pitch), FIL (Filter) or AMP (Amplitude).

Turn the VALUE knob to select PITCH, FIL or AMP.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "OSC TYPE" should be highlighted.

♦ OSCILLATOR Parameters

These allow you to adjust the oscillating method or pitch.

NOTE: You can also SHORTCUT into this Page by Pressing and Holding the SHIFT button and moving the OSCILLATOR PITCH or DEPTH sliders.

OSC TYPE

This Parameter allows you to select the Oscillator to be modified.

NOTE: The data chart shown below gives a short description of the options you may select. For a complete description of Oscillator Types and Characteristics, consult page 411. To see the Parameters for each Oscillator Type explained individually, consult page 441.

The data chart below shows the options you may select.

OSCILLATOR TYPE Options	
Type	**Description**
Duo	Two oscillators at different frequencies.
Unison	Several oscillators sounding in unison which can be detuned.
Sync	A single oscillator sounds synchronized with "out-of-tune" frequency.
Pulse	A single oscillator sounds as a pulse wave
FM	Using one waveform to change or modulate another waveform, resulting in different sounds.
Noise	A single oscillator sounds various types of noise.

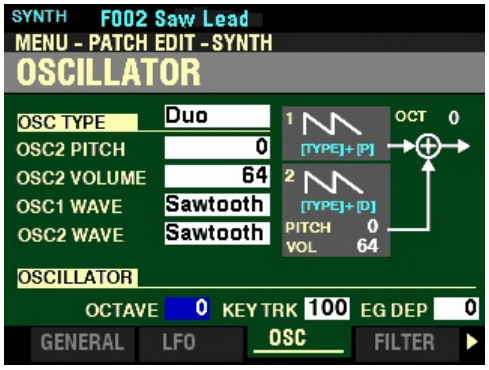
Turn the VALUE knob or press the TYPE button to select the Oscillator Type you want.

NOTE: The function of this Parameter is duplicated by the OSCILLATOR TYPE Parameter in the **SYNTH** PLAY Mode Page and the TYPE button in the MONO SYNTH Section of the Control Panel. For more information consult pages 411 and ?.

NOTE: If you select a TYPE, you will see the box to the right of "OSC TYPE" change each time the TYPE button is pressed. You will also see the orange LEDs in the OSCILLATOR group change to indicate the selected Oscillator. Each time a different Oscillator is selected you will see different Parameters displayed according to which Parameters apply to that particular Oscillator

Because each Oscillator has different Parameters, each Oscillator will be detailed and its Parameters explained starting on the next page.

From the screen shown on the previous page, press the DIRECTION "▼" button five times.



The box to the right of "OCTAVE" should be highlighted.

NOTE: The three Parameters described on the next two pages affect whatever Oscillator Type is selected.

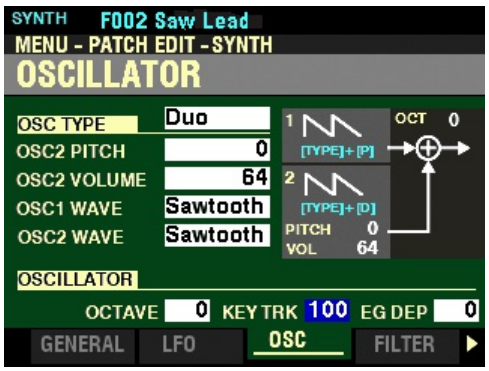
OCTAVE

This Parameter allows you to select the Octave or pitch at which the selected Oscillator will sound. The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob or press the OCTAVE buttons on the Control Panel to select the option you want.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box to the right of "KEY TRK" should be highlighted.

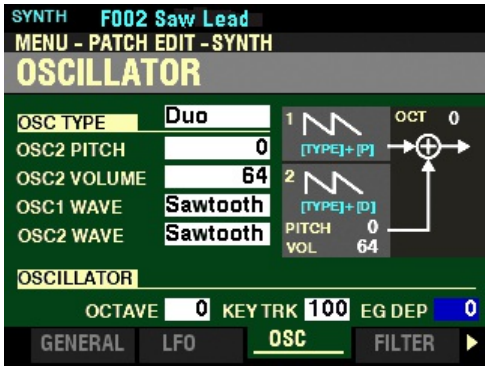
KEY TRK

This Parameter allows you to adjust the amount of pitch change between keys on the keyboard. You may select from 0 to +100. At +100 the musical distance between any two adjacent notes will be 100 cents or one half-step. This is the normal setting. At +50 the notes will be one quarter-step apart.
At 0, every note on the keyboard will sound the same pitch.

Turn the VALUE knob to the right to increase the amount of Key Tracking.

Turn the VALUE knob to the left to decrease the amount of Key Tracking

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "EG DEP" should be highlighted.

EG DEP

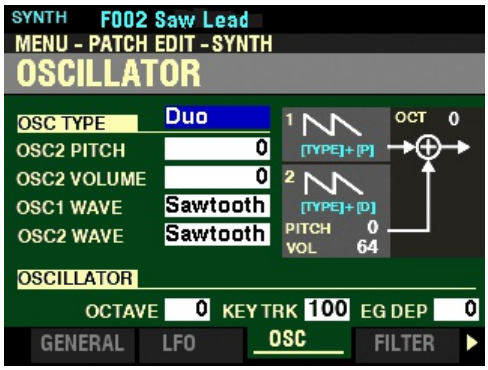
This allows you to adjust the depth of the pitch change by the Pitch Envelope. You may select from -64 to +63. At 0 there is no pitch change. At -64 the pitch will change down one octave. At +63 the pitch will change up one octave.

Turn the VALUE knob to the right to raise the Pitch by the Pitch Envelope.

Turn the VALUE knob to the left to lower the Pitch by the Pitch Envelope.

♦ OSCILLATOR TYPES

For the explanation of each Oscillator Type, make sure the OSCILLATOR FUNCTION Mode Page is displaying.



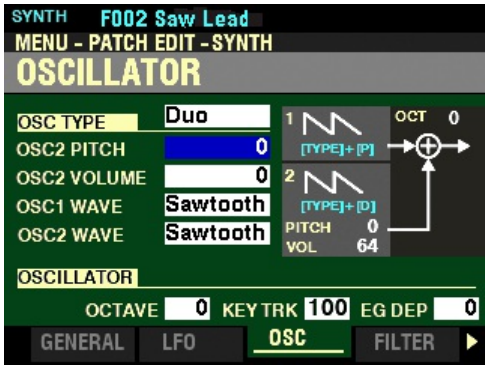
The box to the right of "OSC TYPE" should be highlighted.

NOTE: As you go through each of the Oscillator Types, you will notice graphics on the right side of the screen. These are visual representations of the characteristics of the selected Oscillator Type. You will see these graphics change as each Oscillator Type is selected.

Duo

This setting utilizes two different pitched Oscillators. The first Oscillator (OSC1) sounds at "true pitch," while the second Oscillator (OSC2) can be transposed up or down by one (1) octave in half-step increments. If the OSC2 LEVEL is set to 0, only OSC1 will sound. This Oscillator type is useful for Bass, Lead and "chord"effects.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "OSC2 PITCH" should be highlighted.

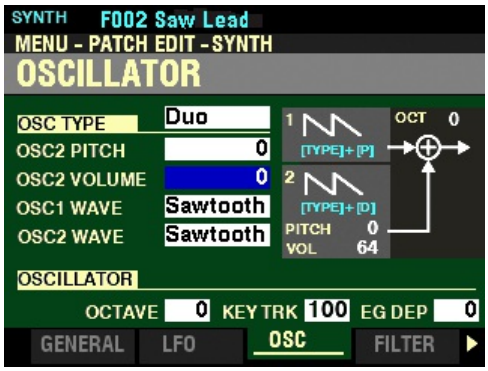
OSC2 PITCH

This Parameter allows you to transpose the second Oscillator (OSC2) either up or down six (6) semitones or half-steps from the center position.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to transpose the instrument up.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to transpose the instrument down.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "OSC2 VOLUME" should be highlighted.

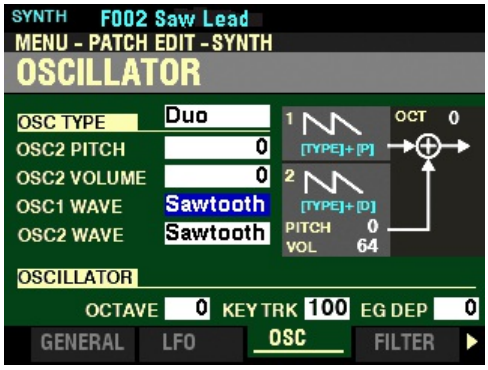
OSC2 VOLUME

This Parameter allows you to adjust the Volume of the second Oscillator (OSC2). You may select from 0 (no Volume) to 127 (maximum Volume).

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the Volume.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the Volume.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "OSC1 WAVE" should be highlighted.

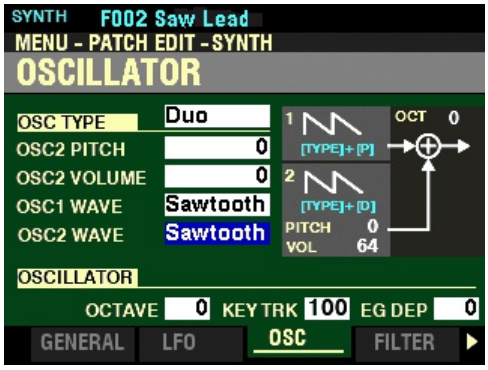
OSC1 WAVE

This Parameter allows you to select the Waveform of the first Oscillator (OSC1). The data chart below shows the options you may select.

OSCILLATOR 1 WAVEFORM Options	
Waveform	**Description**
Sawtooth	A waveform very rich in harmonics, so named because it resembles the teeth of a saw blade. It produces string- or brass-type tones.
Square	A waveform containing only odd-numbered harmonics, so named because of its shape. Its sound closely resembles that of a clarinet.
Saw+Sqr	A sawtooth and square wave mixed together, creating a sound midway in between a sawtooth and square wave.

Turn the VALUE knob to select Sawtooth, Square or Saw+Sqr.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "OSC2 WAVE" should be highlighted.

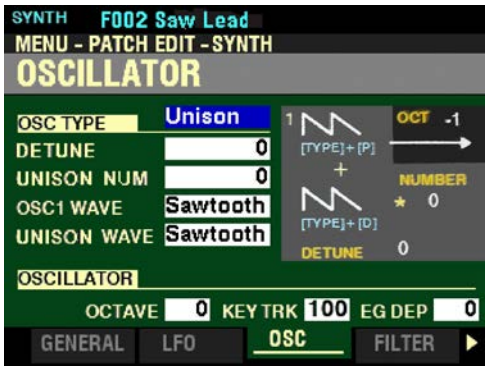
OSC2 WAVE

This Parameter allows you to select the Waveform of the second Oscillator (OSC2). The data chart below shows the options you may select.

OSCILLATOR 2 WAVEFORM Options	
Waveform	**Description**
Sawtooth	A waveform very rich in harmonics, so named because it resembles the teeth of a saw blade. It produces string- or brass-type tones.
Square	A waveform containing only odd-numbered harmonics, so named because of its shape. Its sound closely resembles that of a clarinet.
Saw+Sqr	A sawtooth and square wave mixed together, creating a sound midway in between a sawtooth and square wave.

Turn the VALUE knob to select Sawtooth, Square or Saw+Sqr.

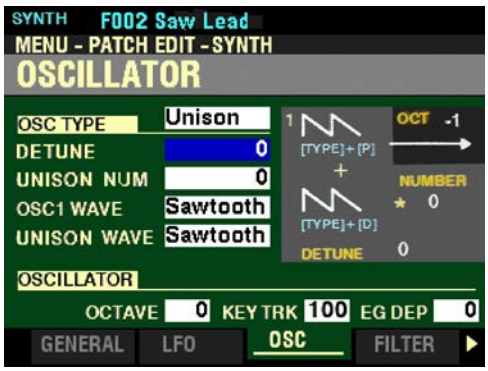
From the screen shown on the previous page, press the DIRECTION "▲" button repeatedly until the box to the right of "OSC TYPE is highlighted. Turn the VALUE knob so that "Unison" displays in the highlighted box.



Unison

This setting utilizes from one to seven Oscillators, one of which can be detuned against the other. It can be used for celeste, chorus, or other purposely "out-of-tune" effects.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DETUNE" should be highlighted.

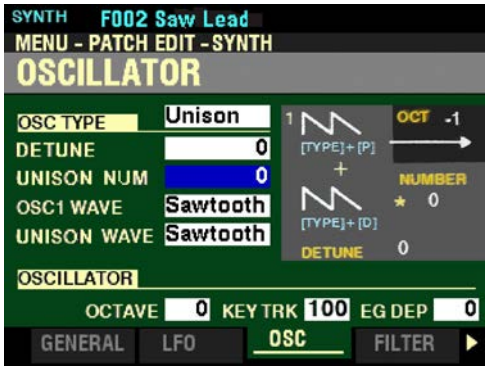
DETUNE

This Parameter allows you to adjust the depth of the Detune effect. You may select from 0 to 127. At 0, there is no Detuning. 127 produces the maximum amount of Detuning.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to increase the amount of Detune.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to decrease the amount of Detune.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "UNISON NUM" should be highlighted.

UNISON NUM

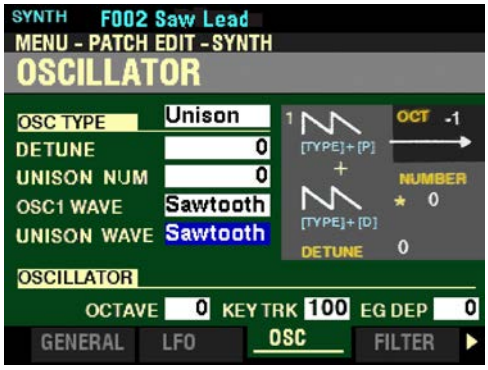
This Parameter allows you to select the number of Oscillators. You may select from 0 to 6.

NOTE: A setting of **6** will result in seven (7) Oscillators sounding. **1** will be the first Oscillator (OSC1) while **1** through **6** will be the secondary or other Oscillators.

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the number of Oscillators.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the number of Oscillators.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "UNISON WAVE" should be highlighted.

UNISON WAVE

This Parameter allows you to Waveform of the Unison waveform. The data chart below shows the options you may select.

UNISON WAVEFORM Options	
Waveform	**Description**
Sawtooth	A waveform very rich in harmonics, so named because it resembles the teeth of a saw blade. It produces string- or brass-type tones.
Square	A waveform containing only odd-numbered harmonics, so named because of its shape. Its sound closely resembles that of a clarinet.
Saw+Sqr	A sawtooth and square wave mixed together, creating a sound midway in between a sawtooth and square wave.

Turn the VALUE knob to select Sawtooth, Square or Saw+Sqr.

From the screen shown on the previous page, press the DIRECTION "▲" button repeatedly until the box to the right of "OSC TYPE is highlighted. Turn the VALUE knob so that "Pulse" displays in the highlighted box.



Pulse

A Pulse (or rectangular) waveform has a variable width known as the "duty cycle." The sound can be modified by changing the pulse width or duty cycle. For example, a duty cycle of 50% will produce a clarinet-like sound while a duty cycle of 90% will yield a bright, brass-like tone quality.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "PULSE WIDTH" should be highlighted.

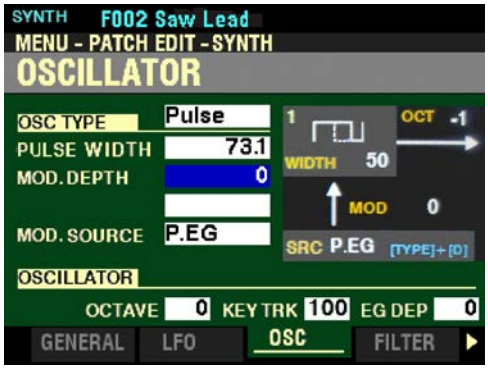
PULSE WIDTH

This Parameter allows you to adjust the Pulse Width. You may select from 50 to 98. These numbers represent the duty cycle of the wave. A setting of 50 results in a Pulse Wave with a 50% duty cycle, resulting in a clarinet-like sound, while a setting of 98 will result in a duty cycle of 98%, resulting in a thin "stringy" tone quality.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to increase the Pulse Width.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to decrease the Pulse Width.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MOD.DEPTH" should be highlighted.

MOD.DEPTH

This Parameter allows you to Depth of the Pulse Width Modulation. You may select from 0 to 127. At 0 there is no Modulation. 127 results in maximum Modulation.

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the Modulation Depth.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the Modulation Depth.

NOTE: This Parameter will affect the Pulse Wave in different ways depending on the MOD.SOURCE setting.

From the screen shown on the previous page, press the DIRECTION "▼" button two times (skip the blank box).



The box to the right of "MOD SOURCE" should be highlighted.

MOD.SOURCE

This Parameter allows you to select the source of the Modulation. The data chart below shows the options you may select.

MODULATION SOURCE Options	
Setting	**Description**
P.EG (Pitch Envelope)	The Modulation is regulated by the Pitch Envelope. Use the PITCH & FILTER ENVELOPE sliders to change the tonality of the sound while a key is pressed and held.
LFO	The Sync effect is controlled by the Low-Frequency Oscillator (LFO). Use the OSCILLATOR DEPTH slider to control the amount of modulation. Use the LFO RATE knob to control the rate of modulation.
Note	The Modulation changes by note. Lower notes will receive slower or less Modulation while higher notes receive faster or more Modulation. Use the OSCILLATOR DEPTH slider to adjust the amount of change from note to note.

Turn the VALUE knob to select P.EG, LFO or Note.

From the screen shown on the previous page, press the DIRECTION "▲" button repeatedly until the box to the right of "OSC TYPE is highlighted. Turn the VALUE knob so that "Sync" displays in the highlighted box.



Sync

This setting utilizes two Oscillators which synchronize against each other to produce overtone effects.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "OSC2 PITCH" should be highlighted.

OSC2 PITCH

This Parameter allows you to adjust the Pitch of the second Oscillator (OSC2). You may select from 0 to 127. At 0 there is no effect. 127 is the maximum setting which will result in an extreme "out-phasing" type of sound.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to increase the Pitch.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to decrease the Pitch.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MOD.DEPTH" should be highlighted.

MOD.DEPTH

This Parameter allows you to adjust the amount of Modulation applied to the second Oscillator (OSC2). You may select from 0 to 127. At 0 there is no Modulation. A setting of between 1 and 8 will produce a vibrato-like effect, and higher numbers will result in more extreme Modulation effects.

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the Modulation Depth.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the Modulation Depth.

From the screen shown on the previous page, press the DIRECTION "▼" button two times (skip the blank box).



The box to the right of "MOD.SOURCE" should be highlighted.

MOD.SOURCE

This Parameter allows you to select the source of the Modulation. The data chart below shows the options you may select.

MODULATION SOURCE Options	
Setting	**Description**
P.EG (Pitch Envelope)	The Modulation is regulated by the Pitch Envelope. Use the PITCH & FILTER ENVELOPE sliders to change the tonality of the sound while a key is pressed and held.
LFO	The Sync effect is controlled by the Low-Frequency Oscillator (LFO). Use the OSCILLATOR DEPTH slider to control the amount of modulation. Use the LFO RATE knob to control the rate of modulation.
Note	The Modulation changes by note. Lower notes will receive slower or less Modulation while higher notes receive faster or more Modulation. Use the OSCILLATOR DEPTH slider to adjust the amount of change from note to note.

Turn the VALUE knob to select P.EG, LFO or Note.

From the screen shown on the previous page, press the DIRECTION "▲" button repeatedly until the box to the right of "OSC TYPE is highlighted. Turn the VALUE knob so that "FM" displays in the highlighted box.



FM

"FM" is an abbreviation for Frequency Modulation. This setting utilizes two Oscillators or"operators." OSC1 is the"carrier tone" and OSC2 is the "modulating tone." You can create both "harmonic" and "inharmonic" tonal effects.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "OSC2 PITCH" should be highlighted.

OSC2 PITCH

This Parameter allows you to adjust the Pitch of the second Oscillator (OSC2). You may select from 0.5 to 16. Adjusting the OSC2 pitch lower creates wind-instrument sounds such as flute, brass, etc., while adjusting the OSC2 pitch higher is suitable for bell-like or"metallic" tones.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to adjust the Pitch higher.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to adjust the Pitch lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MOD.DEPTH" should be highlighted.

MOD.DEPTH

This Parameter allows you to adjust the Modulation depth of the "modulating tone" (OSC2) against the "carrier tone" (OSC1). You may select from 0 to 127. At 0 there is no Modulation - only the carrier tone will sound, resulting in a pure sine wave. Higher settings will increase the depth of the modulating tone , resulting in sounds with more harmonic development.

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the Modulation Depth.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the Modulation Depth.

From the screen shown on the previous page, press the DIRECTION "▼" button two times (skip the blank box).



The box to the right of "FEEDBACK" should be highlighted.

FEEDBACK

In FM synthesis, "Feedback" is a term used when a carrier tone is fed back onto itself, making the carrier tone its own modulator. This Parameter allows you to adjust the level of Feedback. Setting the FB (feedback) at Half allows you to create string-type tones while Full is useful for unpitched or "noise"-type tones.

The data chart below shows the options you may select.

FEEDBACK Options	
Setting	**Description**
Off	No feedback.
Half	Increases the harmonic content of the tone, depending on the MOD.DEPTH setting.
Full	Creates sounds with more "noise" content, particularly at higher settings of the MOD.DEPTH Parameter.

Turn the VALUE knob to select Off, Half or Full.

From the screen shown on the previous page, press the DIRECTION "▲" button repeatedly until the box to the right of "OSC TYPE is highlighted. Turn the VALUE knob so that "Noise" displays in the highlighted box.



Noise

This setting creates unpitched sounds or"noise.' The sound changes from "noise'to "random pitched tones'by controlling the sampling rate. A high sampling rate creates "seashore" type effects, a slightly lower rate yields a "noisy percussion,' and a still lower rate creates effects suggestive of a"retro science-fiction movie." This setting utilizes two different pitched Oscillators similar to Duo.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SMPL FREQ" should be highlighted.

SMPL FREQ

This Parameter allows you to adjust the Sampling Rate. You may select from 0 to 127. A lower value results in random pitched tones. A higher value increases the rate and imparts more of a "noise" characteristic to the sound.

Move the OSCILLATOR PITCH slider up or turn the VALUE knob to the right to increase the Sampling Rate.

Move the OSCILLATOR PITCH slider down or turn the VALUE knob to the left to decrease the Sampling Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MOD.DEPTH" should be highlighted.

MOD.DEPTH

This Parameter allows you to adjust the Modulation Depth of the sampling rate. You may select from 0 to 127. A lower number results in random pitched tones. A higher number increases the rate at which the random pitched tones sound.

Move the OSCILLATOR DEPTH slider up or turn the VALUE knob to the right to increase the Modulation Depth.

Move the OSCILLATOR DEPTH slider down or turn the VALUE knob to the left to decrease the Modulation Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "NOISE TYPE" should be highlighted.

NOISE TYPE

This Parameter allows you to select the Noise Type or "color." The data chart below shows the options you may select.

NOISE Options	
Noise Type	**Description**
Red	Random noise which contains all audible frequencies but heavily weighted toward lower frequencies.
Pink	Random noise which contains all audible frequencies, with the higher frequencies sounding at a lesser intensity than the lower frequencies, but dropping off more slowly than Red noise.
White	Random noise which contains all audible frequencies at the same amplitude or intensity.

Turn the VALUE knob to select Red, Pink or White.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MOD.SOURCE" should be highlighted.

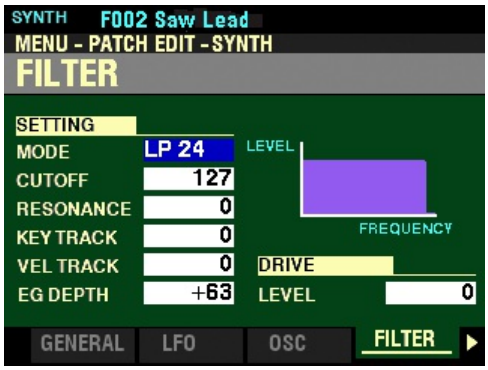
MOD.SOURCE

This Parameter allows you to select the source of the Modulation. The data chart below shows the options you may select.

MODULATION SOURCE Options	
Setting	**Description**
P.EG (Pitch Envelope)	The Modulation is regulated by the Pitch Envelope.
LFO	The Modulation is controlled by the Low-Frequency Oscillator (LFO)
Note	The Modulation changes by note. Lower notes will receive slower or less Modulation while higher notes receive faster or more Modulation.

Turn the VALUE knob to select P.EG, LFO or Note.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "MODE" should be highlighted.

♦ FILTER Parameters

These allow you to adjust the harmonic content of the sound.

NOTE: You can also Shortcut into this Page by Pressing and Holding the SHIFT button and moving the FILTER CUT OFF, RESONANCE or EG DEPTH knobs.

SETTING

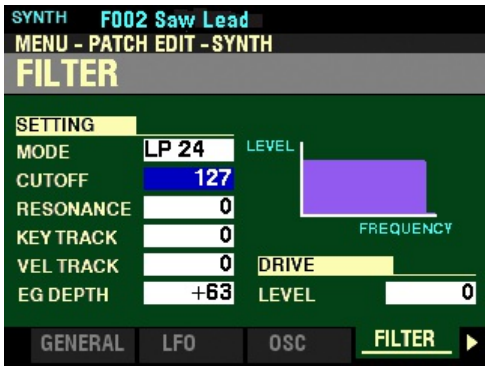
MODE

This Parameter allows you to select the filtering method. The data chart below shows the options you may select.

FILTER MODE Options	
Setting	**Description**
LP12 / LP24	Low-Pass 12(24)dB; reduces above the Cutoff Frequency at 12(24)dB/octave.
HP12 / HP24	High-Pass 12(24)dB; reduces below the Cutoff Frequency at 12(24)dB/octave.

Turn the VALUE knob to select the option you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "CUTOFF" should be highlighted.

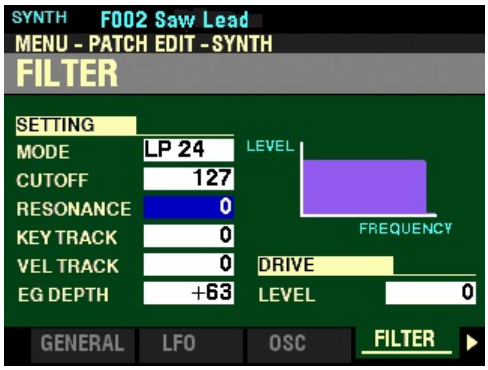
CUTOFF

This Parameter allows you to adjust the Cutoff Frequency of the Filter. You may select from 0 to 127.

Turn the VALUE knob to the right to raise the Cutoff Frequency.

Turn the VALUE knob to the left to lower the Cutoff Frequency.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RESONANCE" should be highlighted.

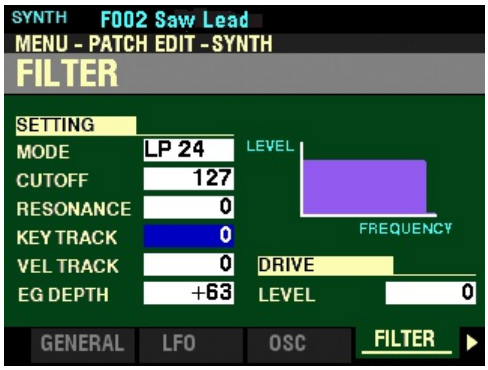
RESONANCE

This Parameter allows you to add a controlled amplification to the Cutoff Frequency, coloring the original pitch. You may select from 0 to 127.

Turn the VALUE knob to the right to increase the Resonance.

Turn the VALUE knob to the left to decrease the Resonance.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "KEY TRACK" should be highlighted.

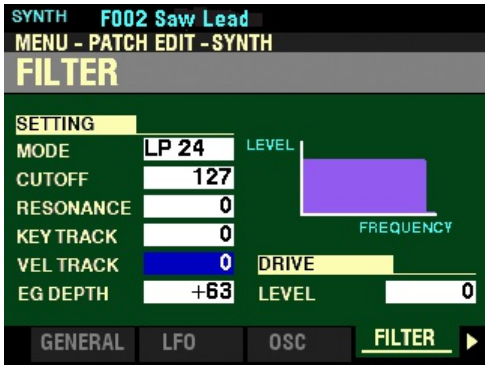
KEY TRACK

This Parameter allows you to adjust the amount of the Filter by note. You may select from -64 to +63.

Turn the VALUE knob to the right to increase the amount of Key Tracking applied to the Filter.

Turn the VALUE knob to the left to decrease the. amount of Key Tracking applied to the Filter.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "VEL TRACK" should be highlighted.

VEL TRACK

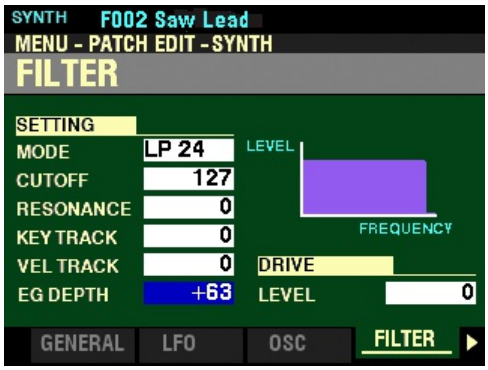
This Parameter allows you to adjust the amount of the Filter by Note Velocity. You may select from 0 to 127.

Turn the VALUE knob to the right to increase the amount the Filter will change.

Turn the VALUE knob to the left to decrease the amount the Filter will change.

NOTE: The Velocity Parameter in the COMBINATION Edit Menu must be "ON" (values 1 ~ 4) in order to hear the effect of this Parameter.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "EG DEPTH" should be highlighted.

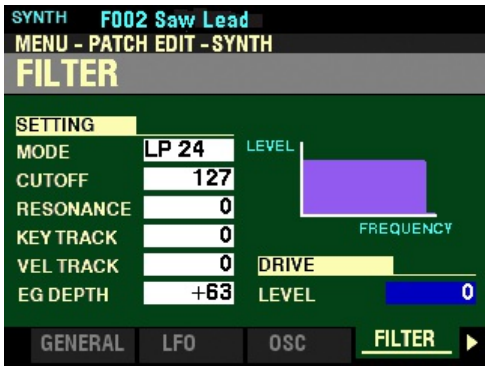
EG DEPTH

This Parameter allows you to adjust the amount of the changing Cutoff Frequency by the Filter EG. You may select from -64 to +63. At 0, the Cutoff Frequency does not change. At -64 or +63, the Cutoff Frequency changes by a wide amount.

Turn the VALUE knob to the right to increase the amount the Filter will change.

Turn the VALUE knob to the left to decrease the amount the Filter will change.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "LEVEL" should be highlighted.

DRIVE

LEVEL

This Parameter allows you to adjust the signal level going into the Filter. You may select from 0 to 127. 64 is a "clean" signal with no distortion. A higher value adds distortion.

Turn the VALUE knob to the right to increase the Drive Level.

Turn the VALUE knob to the left to decrease the Drive Level.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "ATTACK RATE" should be highlighted.

PITCH & FILTER EG Parameters

These allow you to control how the Pitch and Filter changes over time.

NOTE: You can also Shortcut into this Page by Pressing and Holding the SHIFT button and moving any of the four PITCH & FILTER ENVELOPE sliders.

NOTE: This EG affects both the Pitch and the Cutoff Frequency of the Filter.

NOTE: You can use the DIRECTION "▲" or "▼" buttons to highlight each of these Parameters. When a Parameter is highlighted, you can use the VALUE knob to change the highlighted value. However, the sliders can be used to change the value of each Parameter whether or not the Parameter is highlighted.

ATTACK RATE

This Parameter allows you to adjust the time for the sound to increase to its peak value beginning when a key is depressed. You may select from 0 to 127. A higher value will result in a slower Attack Rate.

Move the PITCH & FILTER EG ATTACK slider up or turn the VALUE knob to the right to increase the Attack Rate.

Move the PITCH & FILTER EG ATTACK slider down or turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DECAY RATE" should be highlighted.

DECAY RATE

This Parameter allows you to adjust the time from the peak amount to the Sustain Level (explained below). You may select from 0 to 127. A higher value will result in a longer Decay Rate.

Move the PITCH & FILTER EG DECAY slider up or turn the VALUE knob to the right to increase the Attack Rate.

Move the PITCH & FILTER EG DECAY slider down or Turn the VALUE knob to the left to decrease the Attack Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SUS LEVEL" should be highlighted.

SUS LEVEL

This Parameter allows you to adjust the main level which will remain until the key is released. You may select from 0 to 127. A higher value will result in a higher Sustain Level.

Move the PITCH & FILTER EG SUSTAIN slider up or turn the VALUE knob to the right to increase the Sustain Level.

Move the PITCH & FILTER EG SUSTAIN slider down or turn the VALUE knob to the left to decrease the Sustain Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RELEASE RATE" should be highlighted.

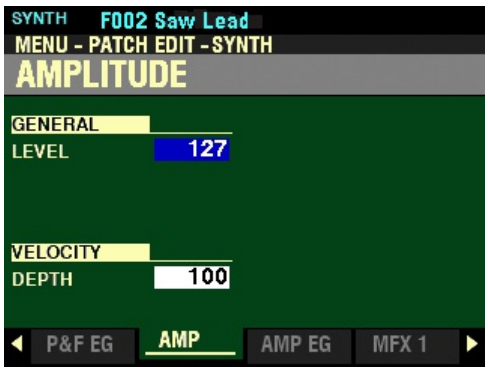
RELEASE RATE

This Parameter allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. You may select from 0 to 127. A higher value will result in a longer Release time.

Move the PITCH & FILTER EG RELEASE slider up or turn the VALUE knob to the right to increase the Release Rate.

Move the PITCH & FILTER EG RELEASE slider down or turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "LEVEL" should be highlighted.

AMPLITUDE Parameters

These allow you to adjust the Parameters controlling loudness.

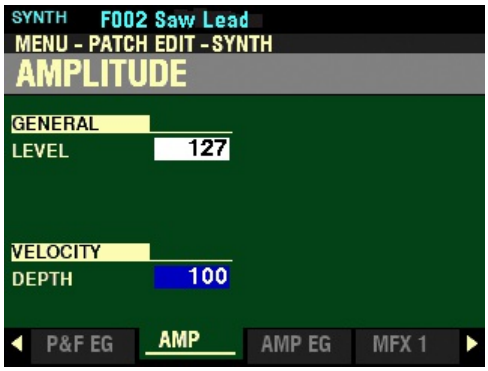
GENERAL LEVEL

This Parameter allows you to adjust the overall Amplitude or Level. You may select from 0 (no level) to 127 (maximum level).

Turn the VALUE knob to the right to increase the Level.

Turn the VALUE knob to the left to decrease the Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

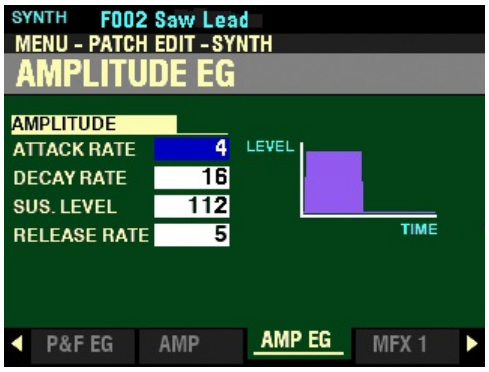
VELOCITY DEPTH

This Parameter allows you to adjust how the volume changes by keyboard velocity. You may select from 0 (no change in velocity) to 127 (the volume changes the maximum amount in proportion to the velocity).

Turn the VALUE knob to the right to increase the change in Velocity.

Turn the VALUE knob to the left to decrease the change in Velocity.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "ATTACK RATE" should be highlighted.

AMPLITUDE EG Parameters

These allow you to control how the Amplitude changes over time.

NOTE: You can use the DIRECTION "▲" or "▼" buttons to highlight each of these Parameters. When a Parameter is highlighted, you can use the VALUE knob to change the highlighted value. However, the sliders can be used to change the value of each Parameter whether or not the Parameter is highlighted.

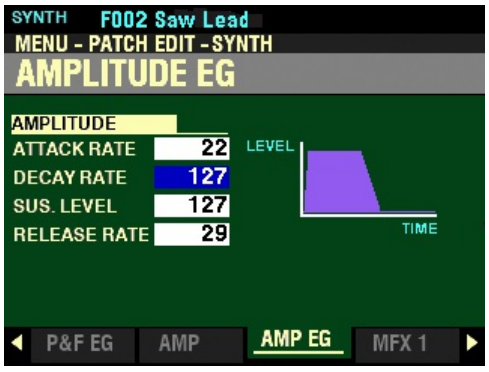
ATTACK RATE

This Parameter allows you to adjust the time for the sound to increase to its peak value beginning when a key is depressed. You may select from 0 to 127. A higher value will result in a slower Attack Rate.

Move the AMPLITUDE ENVELOPE ATTACK slider up or turn the VALUE knob to the right to increase the Attack Rate.

Move the AMPLITUDE ENVELOPE ATTACK slider down or turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DECAY RATE" should be highlighted.

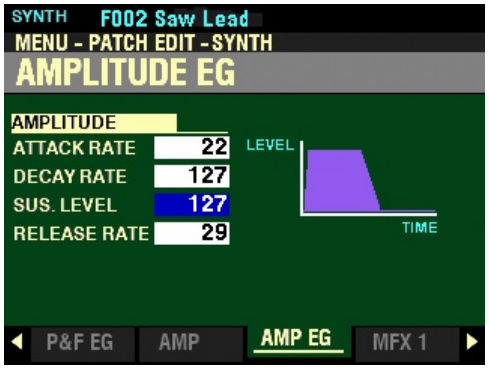
DECAY RATE

This Parameter allows you to adjust the time from the peak amount to the Sustain Level (explained below). You may select from 0 to 127. A higher value will result in a longer Decay Rate.

Move the AMPLITUDE ENVELOPE DECAY slider up or turn the VALUE knob to the right to increase the Attack Rate.

Move the AMPLITUDE ENVELOPE DECAY slider down or turn the VALUE knob to the left to decrease the Attack Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "SUS LEVEL" should be highlighted.

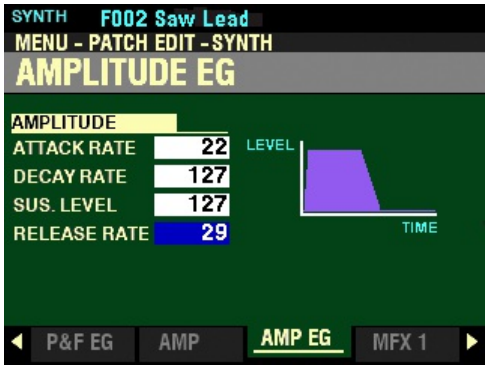
SUS LEVEL

This Parameter allows you to adjust the main level which will remain until the key is released. You may select from 0 to 127. A higher value will result in a higher Sustain Level.

Move the AMPLITUDE ENVELOPE SUSTAIN slider up or turn the VALUE knob to the right to increase the Sustain Level.

Move the AMPLITUDE ENVELOPE SUSTAIN slider down or turn the VALUE knob to the left to decrease the Sustain Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RELEASE RATE" should be highlighted.

RELEASE RATE

This Parameter allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. You may select from 0 to 127. A higher value will result in a longer Release time.

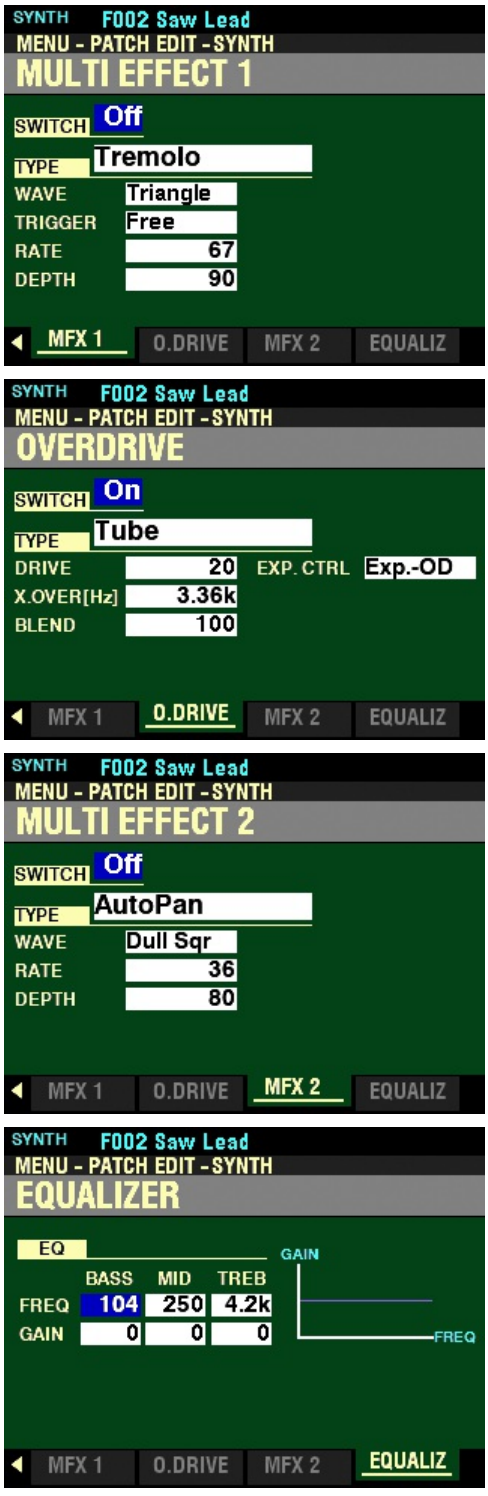
Move the AMPLITUDE ENVELOPE RELEASE slider up or turn the VALUE knob to the right to increase the Release Rate.

Move the AMPLITUDE ENVELOPE RELEASE slider down or turn the VALUE knob to the left to decrease the Release Rate.

◆ MULTI EFFECT 1&2, OVERDRIVE and EQUALIZER

From the screen shown at the bottom of the previous page, use the PAGE "◀" and "▶" buttons to move back and forth among the four remaining MONO SYNTH FUNCTION Mode Pages.

IMPORTANT NOTE: These FUNCTION Mode Pages are covered in the **MULTI EFFECT / OVERDRIVE / EQUALIZER** chapter of this Guide since each Voice Section has these Parameters. However, the MULTI EFFECT / OVERDRIVE / EQUALIZER Parameters are controlled separately - adjusting one of these Parameters for one Voice Section will affect that Voice Section **only**.

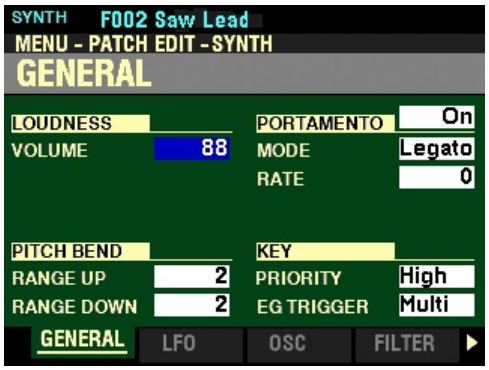


◆ SYNTH APP MENU

When you are editing Parameters for the SYNTH Voice Section, you can access the APP MENU to make some editing operations quicker and easier. The following paragraphs will explain this in more detail.

TRY THIS:

1. Access the PATCH EDIT -SYNTH FUNCTION Mode using any of the methods described starting on page 419. The Information Center Display should look like this:



NOTE: If you use the HOLD TO EDIT button to access the **PATCH EDIT -SYNTH** FUNCTION Mode, you will see the OSCILLATOR screen.

2. Press and Release the MANUAL "▤" button. The Information Center Display should now look like this:



This is the APP MENU for the PATCH EDIT -SYNTH FUNCTION Mode Page. You can now use the DIRECTION "▲" and "▼" buttons to make changes to the selected SYNTH Patch. These changes are explained starting below.

♦ INITIALIZE SYNTH

This allows you to clear all the Patch Parameters in the currently selected Patch, including Drawbar registrations.

Press the ENTER button to initialize all the Patch Parameters.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The "SNAPSHOT SYNTH" box should be highlighted.

♦ SNAPSHOT SYNTH

This allows you to capture the current MONO SYNTH settings so you can include them in your User SYNTH Patch

Press the ENTER button to capture the current MONO SYNTH settings.

From the above screen, press the DIRECTION "▼" button once.



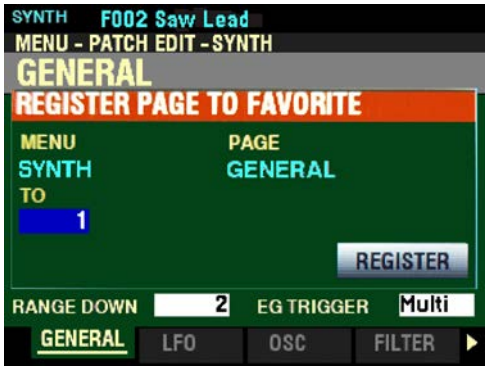
The "REGISTER PAGE TO FAVORITE" box should be highlighted.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

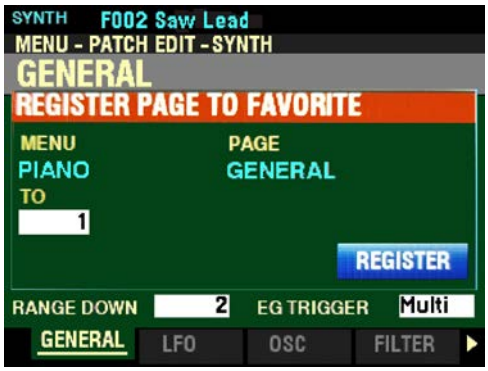
To register the current Page to a FAVORITE, do the following:

1. From the above screen, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

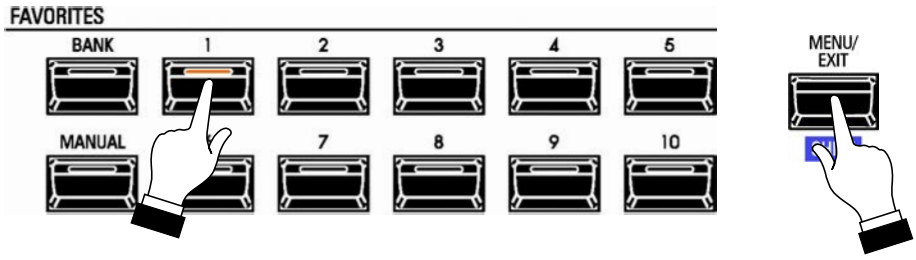


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page or screen to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages or screens to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

HAMMOND

Sk PRO

CUSTOM SETS

CUSTOM SETS

Your SK PRO allows you to Record certain Parameters into macro-settings called Custom Sets.

There are four groups of Custom Sets:

1. Custom Tone Wheel
2. Custom Leslie Cabinet
3. Custom Pedal Registration
4. Custom Pipe.

In this way you can include multiple Parameter settings as part of a Combination, Patch or Bundle, and include the same settings in multiple Patches.

◆ CUSTOM TONE WHEEL

This allows you to select or create Custom Tone Wheels. A Custom Tone Wheel includes profiles of specific organs, Drawbar Foldback points, levels of each individual Tone Wheel, etc.

◆ CUSTOM LESLIE

This allows you to select or create Custom Leslie Cabinets.

◆ CUSTOM PEDAL REGISTRATION

This allows you to select or create Custom Pedal Registrations (registrations for the Pedal Drawbars).

◆ CUSTOM PIPE

This allows you to select or create Custom Pipes. A Custom Pipe includes assignment of Pipe Voices to the Drawbars as well as Volume settings, Chiff settings, etc.

These four Custom Sets will be explained in this chapter of the Guide.

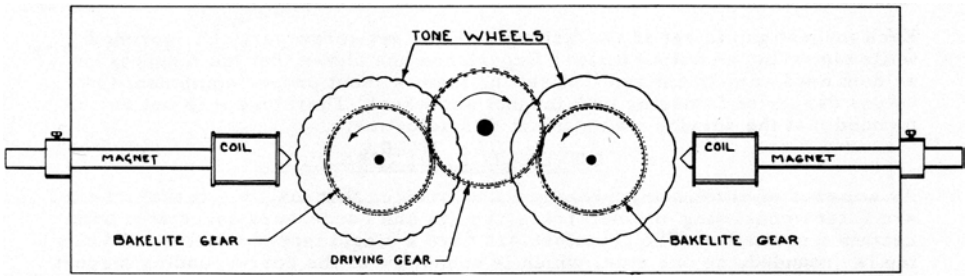
NOTE: If you edit any of the Custom Parameter settings, none of your changes will be remembered unless they are Recorded in one of the Custom Sets.

◆ CUSTOM EDIT -TONE WHEEL FUNCTION Mode

This FUNCTION Mode allows you to select from among a library of different Tone Wheel settings so that each of the Tone Wheel Organ Types will have the sound you want, as well as create your own Custom Tone Wheels.

♦ What Are "Tone Wheels?"

Tone Wheels (or "phonic wheels") are the method by which vintage Hammond Organs generate tone. Each individual frequency is generated by a steel disk 1 7/8" in diameter and containing a number of high and low points called teeth on its outer edge. (See the illustration below.) These disks are the Tone Wheels. The most common tone-wheel generator has a total of 96 tone wheels. In order to generate all the different frequencies, the tone wheels have different numbers of teeth - some wheels have 2 teeth, others have 4 teeth, others have 8, 16, 32, 64, 128, up to 192 teeth. On a B-3-type organ, only 91 of the 96 wheels generate musical notes - five of the wheels are blanks, or wheels having no teeth, to maintain balance. On later Hammond models such as the H-100 and X-77-series, the last 5 tone wheels are cut with 256 teeth, allowing them to play frequencies 92 through 96.



Notice in the drawing above that the tone wheels are placed so that they rotate next to magnetized rods. Each rod has a small coil of wire wrapped around one end. The tip of the magnet at the coil end is ground to a sharp edge and mounted near the edge of the tone wheel. Each tone wheel producing a note has a magnet associated with it.

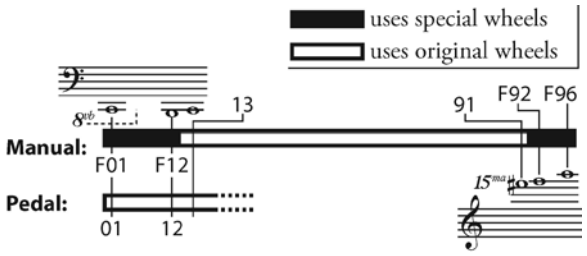
Notice also that the tone wheels are geared together. A constant-speed motor drives the gears which in turn cause the tone wheels to rotate. As the wheels rotate they do not touch the magnets, but pass very close to them. Each time a high spot passes the magnet, it generates a very small electrical current in the coil.

The number of high spots or teeth passing the magnet each second determines the musical note produced. If, for example, 440 teeth pass the magnet each second, 440 electrical impulses will be generated which, when converted into sound with a speaker, will sound the note, "A-440."

After going through a number of other processes, the electrical impulses finally reach the amplifier, which strengthens them enough to drive a speaker system, which in turn converts the electrical signal into audible tone. It is this audible tone which is heard as the "Hammond Sound."

♦ What Are "F Wheels?"

On the B-3/C-3/A-100, there are 91 sounding tone wheels. Wheels 01 through 12 are special wheels called Complex Wheels used exclusively for the lowest octave of the PEDAL tones. Later Hammond models had 96 sounding tone wheels, with the Sub-Fundamental Drawbar (the first brown Drawbar) continuing to play all the way down to the lowest "C" ("1C") and 5 additional pitches at the top. On the SK PRO, the extended pitches are designated as "F" (Fold Back) pitches (see the illustration below).



♦ What is "Leakage?"

As explained above, each tone wheel rotates next to a magnet, making a total of 91 or 96 magnets, one for each tone wheel. The tone wheels are mounted in separate bins in order to isolate them from each other and prevent the magnets from intercepting frequencies from neighboring wheels; however, a small amount of current may still "leak" through, producing a phenomenon called Leakage. Leakage is usually heard as a "hash" type sound consisting of many frequencies sounding at once. The phenomenon can be thought of as similar to white noise but with somewhat more definition, with individual pitches more discernable. A properly calibrated B-3 will have a minimum of this effect; however, an instrument which has been subjected to hard use over a period of time may exhibit more leakage noise.

♦ What Is "Motor Noise?"

The tone-wheel generator is secured to the console by means of four bolts. These bolts have reversible sleeves which can be positioned so that the entire tone-wheel generator can be suspended inside the console to keep vibration to a minimum and to prevent the console from amplifying the noise made by the synchronous motor. However, when moving the organ, these bolts can be reversed to secure the generator directly to the console shelf to prevent damage. The organ can be operated with the generator either suspended or bolted down; however, when the generator is bolted down, more motor noise will be heard.

NOTE: The **Mellow** Organ Type is included in this FUNCTION Mode because the sounds it produces are controlled by Hammond Drawbars in the same way as on a tone-wheel organ; however, it is intended to replicate Drawbar sounds from a non-tone-wheel Hammond Organ such as a Concorde or an X-5 combo organ.

NOTE: For a list of the Factory Custom Tone Wheel sets, consult page 845 of the **APPENDIX** chapter of this Guide.

♦ WHAT ARE "CUSTOM TONE WHEELS?"

As stated earlier, the first three Drawbar Voice Modes - "A-100," "B-3" and "C-3" - are designed to reproduce the sound of traditional Hammond Organs. Within each of these three Voice Modes are three different settings designed to reproduce specific characteristics of vintage Hammond Organs.

During the time the vintage Hammonds - B-models, C-models, A-100, etc. - were being manufactured, each individual organ was subjected to a very rigorous series of checks and tests to insure the quality of each unit, and to insure that all the units representing a particular model series, such as the B-3, all sounded alike. However, since the very newest B-3-type organ is at least 46 years old - production of tone-wheel organs having ceased in 1975 - and since the vintage instruments long antedate digital technology, they are dependent for their sound on analog components. Several factors such as the rate at which different components age, the fact that similar components used different materials throughout the lifespan of the model series, etc. may affect the sound of a particular unit. Thus, a B-3 manufactured in 1959 may well have a slightly different tone than one made in 1969, not necessarily because of the year but because of slight differences in component values among other factors.

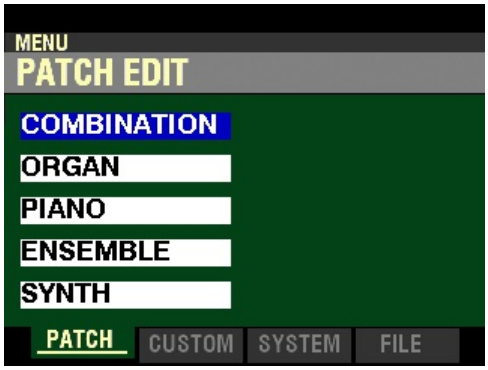
Over the years, a great deal of arcane folklore - a great deal of it falling into a category best described as "old wives' fables" - has sprung up regarding such topics as the superiority or inferiority of this or that period of time during which vintage Hammonds were manufactured, the superiority or inferiority of types of materials for certain components, etc. Some of these differences do exist, but as noted above, they are more likely to be the result of factors not necessarily having anything to do with the age of the instrument. Many characteristics of the Hammond Organ, especially as heard in much jazz and rock music, have to do with the overall condition of the instrument - whether it has been in a home for the bulk of its life and played only rarely, whether it has been used by a touring musical ensemble and been moved frequently, perhaps even dropped occasionally, or even whether it has sat in a recording studio with sporadic or no maintenance, etc.

Because of these many factors - again, some real, some contrived - and because different people therefore mean different things when they say "Hammond Sound" or "B-3 Sound," the Custom Tone Wheel feature is included to allow you to find the nearest approximation of what you want your "Hammond Sound" to be. The following pages will explain the feature in more depth.

SPECIAL NOTE: The characteristics of Drawbar Voice Types "Btype1" and Btype2" apply equally to all Hammond Organs based on the B-3 design, which includes models B-3, C-3, A-100 series, RT-3 and D-100 series. Contrary to popular myth, there is NO inherent difference between a B-3 and a C-3 - they were manufactured to the identical specification except for the cabinet design. The A-100 and D-100 had slightly different circuitry due to the need to drive self-contained speakers; however, they were calibrated the same as the B-3 and C-3 so that they sounded identical when connected to either an external Hammond speaker or an external Leslie Speaker. For the sake of brevity, "B-3" will be used to refer to all models based on the same platform.

To access the CUSTOM EDIT -TONE WHEEL FUNCTION Mode, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode.



The "TONE WHEEL" box should be highlighted.

3. Press the ENTER button. The Information Center Display should now look like this:



You are now in the CUSTOM EDIT -TONE WHEEL FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box underneath "ORGAN TYPE" should be highlighted.

♦ **SET**

ORGAN TYPE

This Parameter allows you to select the Organ Type.

Turn the VALUE knob to select A-100, B-3, C-3, or Mellow.

From the above screen, press the DIRECTION "▼" button once.



The box underneath "CUSTOM" should now be highlighted.

CUSTOM SET

This Parameter allows you to select a Custom Tone Wheel Set.

There are three choices available for each TONE WHEEL Organ Type The data chart on the next page shows the options you may select.

TONE WHEEL ORGAN TYPES & CUSTOM SETS		
Organ Type	**Custom Set**	**Description**
A-100	F1: #35564 F2: Shiny F3: Mixture	A-102, serial number #35564. Leakage tones with even overtones. Harmonized leakage tones.
B-3	F1: A27563 F2: #364839 F3: Mixture.	B-3, serial number #A27563. B-3, serial number #364839. Harmonized leakage tones.
C-3	F1: C155596 F2: Shiny F3: Mixture	C-3, serial number #C155596. Leakage tones with even overtones. Harmonized leakage tones.
Mellow	F1: Full Flats F2: Husky F3: Flute Lead	Pure sine waves, all frequencies sounding at the same volume. Pure sine waves with a slight bass and mid-frequency boost. Pure sine waves with reduced bass and treble, the opposite of “Husky.”

Turn the VALUE knob to select the Tone Wheel Type and Custom Set you want.

From the screen shown at the bottom of the previous page, press the PAGE “▶” button <u>once</u>.

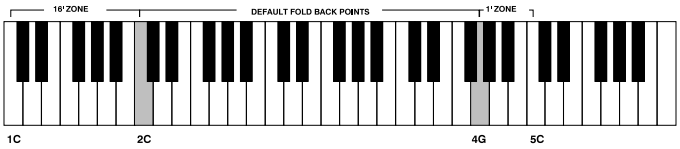


The box underneath “LOW” should be highlighted.

♦ FOLD BACK

On the earliest model Hammond Organs, the Sub-Fundamental Drawbar (the one marked, “16'”) would continue to play all the way down to the lowest "C" ("1C"). Newer models such as the Hammond Models X-66, X-77 and Concorde do the same, however, the 8th harmonic Drawbar (the one marked “1'”) continues to play up the manual to the next to highest "C" ("5C") on the manual.

On a B-3, the lowest note produced by the Sub-Fundamental Drawbar is the 2nd "C" ("2C") from the left end of the manual, while the highest note that can be played by the 8th harmonic Drawbar is the 4th "F♯" from the left end of the manual. The lower and higher keys on the manual "Fold Back," in that they repeat the pitches played by other notes.



This Parameter allows you to set the Upper and Lower frequency limits of the Drawbars.

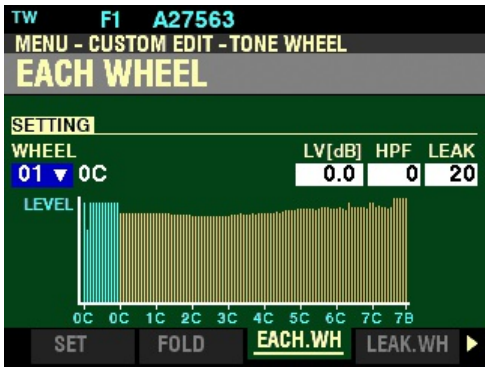
Use the DIRECTION “◀” and “▶” buttons to select either <u>LOW</u> or <u>HIGH</u>. <u>LOW</u> refers to the lower limit of the Sub-Fundamental Drawbar while <u>HIGH</u> refers to the upper limit of the pitches called up by the high-pitched Drawbars (the last four Drawbars). The selected parameter will be highlighted.

Turn the VALUE knob to the <u>right</u> to move the Fold Back point <u>higher</u>.

Turn the VALUE knob to the <u>left</u> to move the Fold Back point <u>lower</u>.

NOTE: The Fold Back will be heard starting with the first black (third harmonic) Drawbar and all the other Drawbars which introduces high harmonics.

From the screen shown on the previous page, press the PAGE "▶" button once.



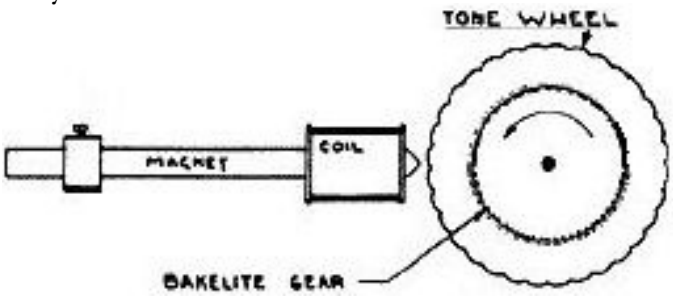
The box underneath "WHEEL" should be highlighted.

♦ EACH WHEEL

This Page allows you to change the characteristics of all 96 tone wheels individually.

What Is "Generator Calibration?"

Because each frequency on a Hammond Organ is generated independently and the circuitry and hardware necessary to generate each tone is quite complex, there is the potential for a great deal of variation in sound from one frequency to another.



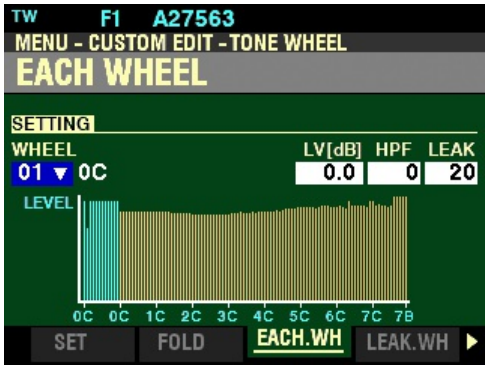
The above diagram shows how a single frequency is generated. As explained on page 475, there is one tone wheel for each frequency. The number of tone wheels which generate actual frequencies varies with the model. Most organs based on the original Hammond design - the model A and its derivatives (B-3, C-3, etc.) had 91 tone wheels that sound, while later models such as the "H" series and the X-77 had 96 (the extra five tone wheels being used to generate higher frequencies). The SK PRO has 108 virtual tone-wheels - 96 manual tone-wheels plus the 12 tone-wheels for the bass frequencies which play only from the Pedals on a vintage Hammond Organ.

As explained previously, each tone has a magnetized rod associated with it. When the tone wheels rotate, a very small electrical current is generated in the coil each time a high spot passes the magnet. The strength of the current determines the loudness of the resulting musical note.

At the Hammond tone-wheel factory, the distance of each magnet to each tone wheel - as well as the number of windings for each coil - was very carefully controlled to insure that each frequency would play at the correct volume. In other words, the generator on each tone-wheel organ was very carefully calibrated. However, a number of third-party technicians would re-calibrate generators to change the sound in various ways - make the sound brighter, etc. The CUSTOM TONE WHEEL Parameter Menu allows you to "re-calibrate" the digital tone wheels of your instrument to create exactly the tone quality you desire.

NOTE: In order to use this Parameter, you should already have some idea of the type of sound you want. Also, you should be prepared that getting the results you want may require some "trial-and-error" before you are satisfied with the results.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "WHEEL" should be highlighted. This number represents the currently selected Tone Wheel.

WHEEL

This Parameter allows you to select the Tone Wheel you want to edit.

Selecting a Tone Wheel to Edit

Using the VALUE knob:

Turning the VALUE knob will allow you to scroll through the Tone Wheels. You may select from F01 ("0C") through F96 ("8B").

Turn the VALUE knob to the right to scroll forward through the Wheels.

Turn the VALUE knob to the left to scroll backward through the Wheels.

You will see the red bar in the display move to designate the selected Tone Wheel.

Using the Drawbars and Keyboard:

If you want to find a certain Tone Wheel quickly, you can use the Drawbars and the playing keys to select it.

TRY THIS:

1. With the Page shown at the top of this page displaying, Press and Hold a key on the keyboard.

2. While holding down a key, move one of the Drawbars - for example, the first white (8') Drawbar.

   The number shown in the Information Center Display will be the number of the Tone Wheel associated with that key and that Drawbar.

   Notice the bar graph in the display will change with each Fundamental Wheel you select. This will show you the level for each Leakage Wheel. The bar designating the selected Wheel will show red.

   Each individual Drawbar will play a different portion of the Tone Wheels. The data chart on the next page shows how the Tone Wheels are allocated to each Drawbar.

EACH WHEEL Options	
Drawbar	**Tone Wheels**
Pedal Drawbars	Wheels 01 ~ 67
16'	Wheels F01 ~ 61
5 ⅓'	Wheels 20 ~ 80
8'	Wheels 13 ~73
4'	Wheels 25 ~ 85
2 ⅔	*Wheels 32 ~ F92
2'	*Wheels 37 ~ F96
1 3/5	*Wheels 41 ~ F96
1 ⅓	*Wheels 44 ~ F96
1'	*Wheels 49 ~ F96

+ - The Lower note limit of this Drawbar is determined by the Drawbar FOLD BACK setting.

* - The Upper note limit of this Drawbar is determined by the Drawbar FOLD BACK setting.

NOTE: Wheels F01 through F12 and F92 through F96 are designated **F** as a reminder they are additional wheels added on later Hammond models. For a more complete explanation of this, consult page 476.

NOTE: As explained previously, Wheels 01 through 12 (shown in blue on the screen) are special wheels producing complex tones for the lowest octave of the PEDAL tones. They **cannot** be assigned to the UPPER or LOWER Keyboards.

After you have selected a Tone Wheel to edit, you can change the characteristics of that Tone Wheel. This is explained starting below.

From the screen shown on page 482 , press the DIRECTION "▶" button once.



The box underneath "LV(dB)" should be highlighted.

LV(dB) - Tone Wheel Level

This Parameter allows you to adjust the volume or level of the selected Tone Wheel. You may select from -20 (lowest level) to +2 (loudest level). The numbers represent decibels, or units of volume.

Turn the VALUE knob to the right to increase the level of the selected Tone Wheel.

Turn the VALUE knob to the left to decrease the level of the selected Tone Wheel.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "HPF" should be highlighted.

HPF - High-Pass Filter

This Parameter allows you to adjust the level of the High-Pass Filter (HPF) for the selected Tone Wheel. You may select from 0 (low frequencies at their lowest level) to 127 (low frequencies at their highest level).

Turn the VALUE knob to the right to reduce the low frequencies.

Turn the VALUE knob to the left to boost the low frequencies.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "LEAK" should be highlighted.

LEAK - Leakage Amount

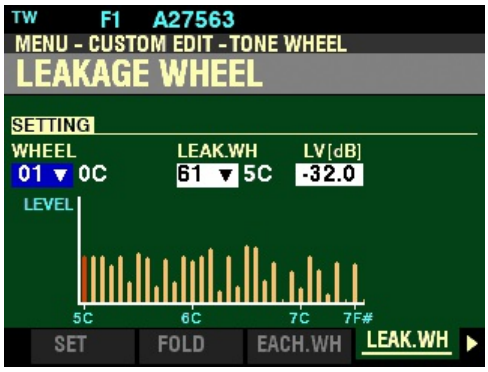
This allows you to adjust the amount of Leakage sound added to the Fundamental sound. You may select from 0 to 127. A higher value will result in more Leakage.

Turn the VALUE knob to the right to increase the amount of Leakage.

Turn the VALUE knob to the left to decrease the amount of Leakage.

IMPORTANT NOTE: If you change any of the Custom Tone Wheel settings, you **must** save them in order for them to be remembered. If the changes are not saved, they will be lost when power to the instrument is switched "OFF."

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.

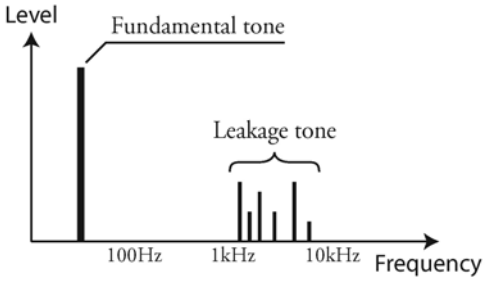


♦ LEAKAGE WHEEL

As explained on page 476, Leakage is a characteristic of vintage Hammond Organs consisting of a "hash" type sound caused by many frequencies sounding at once. These Leakage frequencies are intercepted from neighboring wheels inside the generator. On the SK PRO, this phenomenon is produced in the same manner as on a vintage Hammond Organ - by other wheels producing a small amount of sound in addition to the basic tone. The tone wheel producing the basic tone is referred to as the Fundamental Wheel while the wheels contributing the Leakage are Leakage Wheels. Leakage Wheels are wheels 61 through 91.

These Parameters allow you to adjust the Leakage Tone to add to any of the Fundamental Wheels by using the Leakage Wheels The Leakage Wheels will sound along with the Fundamental Wheel.

The figure below illustrates this in more detail.



Leakage Tone

The data chart below shows how the Leakage Wheels are allocated to each Drawbar frequency.

LEAKAGE WHEEL Options	
Fundamental Wheel	**Leakage Wheels**
01 ~ 12	Leakage Wheels 61~91
F01 ~ F12	
13 ~ 72	

If you followed the instructions on the previous pages, you should see the screen shown below.



The box underneath "WHEEL" should be highlighted. This number represents the currently selected Fundamental Wheel.

Notice one of the level bars is highlighted red. This bar represents the currently selected Tone Wheel.

WHEEL

This Parameter allows you to select the Fundamental Wheel containing the Leakage Wheels you want to edit. You may select from 01 ("0C") through F96 ("8B").

Selecting a Fundamental Wheel to Edit

Using the VALUE knob:

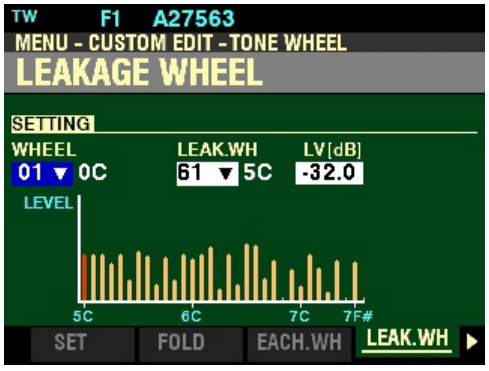
Turning the VALUE knob will allow you to scroll through the Wheels.

Turn the VALUE knob to the right to scroll forward through the Wheels.

Turn the VALUE knob to the left to scroll backward through the Wheels.

Using the Drawbars and Keyboard:

If you want to find a certain Leakage Wheel quickly, you can use the Drawbars and the playing keys to select it.



1. With the LEAKAGE WHEEL Page (shown above) displaying, Press and Hold a key on the keyboard.
2. While holding down a key, move one of the Drawbars - for example, the first white (8') Drawbar.

   The number shown in the Information Center Display will be the number of the Leakage Wheel associated with that key and that Drawbar.

   Notice the bar graphs will change with each Leakage Wheel you select. This will show you the level for each Leakage Wheel. The bar designating the selected Wheel will show red.

   The data chart on the next page shows the options you may select for Leakage Wheels.

LEAKAGE WHEEL Options		
Wheel Number	**Leakage Wheels**	**Level**
01 ~ 12, F01 ~ F12, 13 ~ F96	61 ~ 91	Inf, -92db ~ +4.0db

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "LEAK WH" should be highlighted.

LEAK.WH - Leakage Wheel

This allows you to select the Leakage Wheel to edit. You may select from 61 to 91.

Turn the VALUE knob to the right to scroll forward through the Wheels.

Turn the VALUE knob to the left to scroll backward through the Wheels.

You will see the red bar in the display move to designate the selected Leakage Wheel.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "LV[db]" should be highlighted.

LV(dB) - Leakage Wheel Level

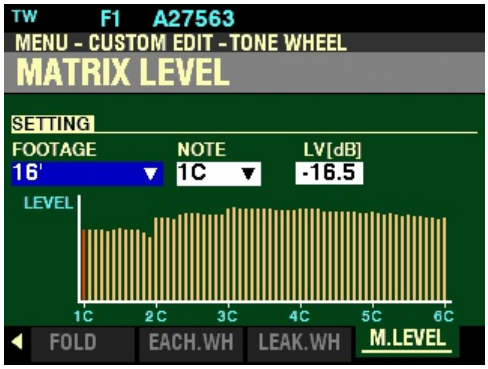
This Parameter allows you to adjust the volume or level of the selected Leakage Wheel. You may select Inf (zero level) or from -92dB (lowest level) to +40dB (loudest level). The numbers represent decibels, or units of volume.

Turn the VALUE knob to the right to increase the level of the selected Leakage Wheel.

Turn the VALUE knob to the left to decrease the level of the selected Leakage Wheel.

You will see the red bar in the display move to designate the level of the selected Leakage Wheel.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



♦ MATRIX LEVEL

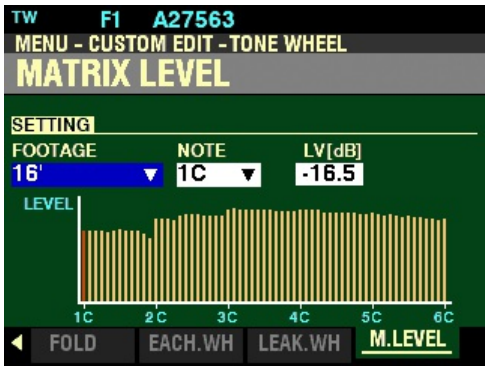
What Is A "Matrix?"

As explained on previous pages, each individual Tone Wheel on the SK PRO includes both a Fundamental Wheel (the basic pure tone) plus Leakage Wheels which provide the "generator leakage" sound characteristic of vintage Hammond tone-wheel organs. Each individual Drawbar contains a group of settings for the Fundamental Wheels and Leakage Wheels for each note. This group of settings is called a Matrix. There are eleven Matrixes, one for each of the nine Upper and Lower Drawbars as well as one for each of the two Percussion selections.

The Parameters on this Page allow you to adjust the characteristics of each Matrix. The data chart below shows the options you may select.

MATRIX LEVEL Options			
Drawbars	**Footage**	**Notes**	**Levels**
Upper / Lower Drawbars / Percussion	16', 5 1/3', 8', 4', 2 2/3', 2', 1 3/5', 1 1/3', 1' Perc 2nd harm., Perc. 3rd harm.	1C ~ 6C	Inf, -92db ~ +4.0db

If you followed the instructions on the previous pages, you should see the screen shown below.



The box underneath "FOOTAGE" should be highlighted.

Notice one of the level bars is highlighted red. This bar represents the currently selected Tone Wheel.

FOOTAGE

This Parameter allows you to select the Drawbar which produces the Matrix you want to edit. You may select 16, 5-1/3, 8, 4, 2-2/3, 2, 1-3/5, 1-1/3, 1, Perc 2nd through Perc 3rd.

Selecting a Matrix to Edit

Using the VALUE knob:

Turning the VALUE knob will allow you to scroll through the Wheels.

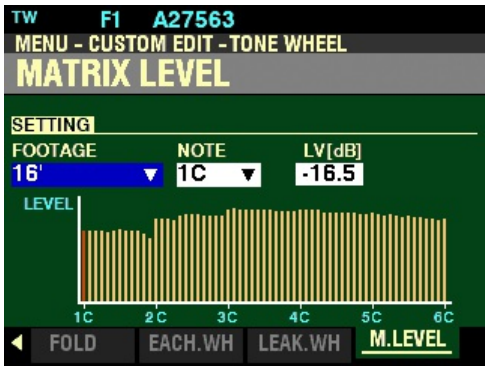
Turn the VALUE knob to the right to scroll forward through the Drawbars.

Turn the VALUE knob to the left to scroll backward through the Drawbars.

You will see the display change to show the Matrix for the selected Drawbar or Percussion.

Using the Drawbars and Keyboard:

If you want to find a certain Matrix quickly, use the Drawbars and the playing keys to select it.



1. With the MATRIX LEVEL screen (shown above) displaying, Press and Hold a key on the keyboard.

2. While holding down a key, move one of the Drawbars - for example, the first white (8') Drawbar.

   The number shown in the Information Center Display will be the number of the Matrix associated with that key and that Drawbar.

   Notice the bar graph in the display will change with each Footage you select. This will show you the levels for each Matrix. The bar designating the selected Tone Wheel in the selected Matrix will show red.

   The data chart below shows the options you may select for Leakage Wheels.

MATRIX LEVEL Options		
Wheel Number	**Leakage Wheels**	**Level**
01 ~ 12, F01 ~ F12, 13 ~ F96	61 ~ 91	Inf, -92db ~ +4.0db
Pedal Drawbar 16'	16', 5 1/3', 8', 4', 2 2/3', 2', 1 3/5', 1 1/3'	
Pedal Drawbar 8'	6', 5 1/3', 8', 4', 2 2/3', 2', 1 3/5', 1 1/3'	

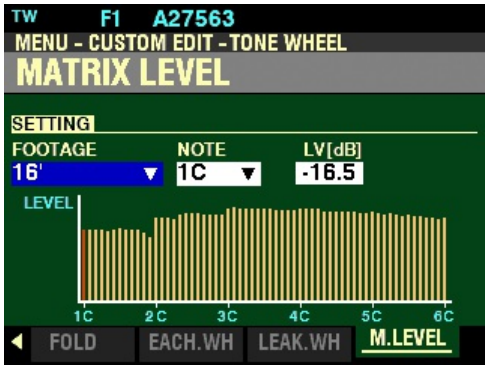
♦ Footages and Notes

TRY THIS:

1. Make sure all the Drawbars are "OFF" (pushed in).

2. Press the MANUAL button. This will allow you to start from a "zero" position - no Combinations or Patches will be active.

3. Make sure the Information Center Display shows the MATRIX Page of the CUSTOM EDIT - TONE WHEEL FUNCTION Mode. The Information Center Display should look similar to this:



   Notice the number on the left below "FOOTAGE" is highlighted. This number represents the currently selected Matrix.

4. Press and Hold a key on the keyboard.

5. While holding down a key, move one of the Drawbars - for example, the first white (8') Drawbar.

6. While holding the key down, move another Drawbar - for example, the second white (4') Drawbar. Notice the "LV(dB) box on the right. You will see the level change even though the note shown in the "NOTE" box remains the same.

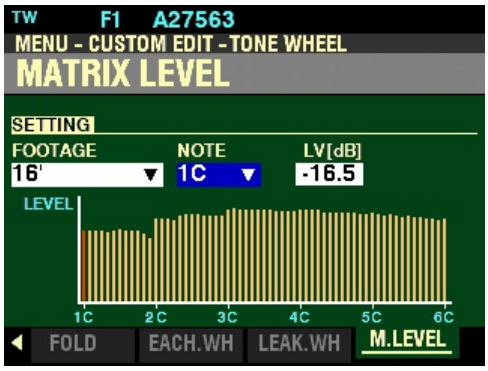
7. Try moving other Drawbars while still holding down the key. Notice the value shown in the "LV(dB)" box will change each time a different Drawbar is moved. This means the same note will sound at a different level for different Drawbars. The paragraphs below explain this in more detail.

Due to an anomaly of the human ear whereby "high" and "low" frequencies appear to be at different sound pressure levels, vintage Hammond Organs used different methods to compensate for this idiosyncrasy by adjusting or "tapering" frequencies so that they all will be perceived by the ear as sounding at the same level, particularly if more harmonics are added to the registration.

Early models accomplished this by carefully adjusting the distance between the tone wheels and the magnets so that "low" and "high" frequencies sounded at different levels. Later instruments such as B-3/C-3/A-100 use varying lengths of resistance wire connected from the keyboard terminals to the terminals on the generator in order to "taper" the frequencies.

The SK PRO recreates this characteristic by means of the MATRIX LEVEL Parameters, which are explained in more detail starting on the next page.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "NOTE" should be highlighted.

NOTE

This allows you to select the Note to edit. These Notes correspond to the playing keys on the keyboards. You may select from 1C to 6C.

Selecting a Note to Edit

Using the VALUE knob:

Turning the VALUE knob will allow you to scroll through the Wheels.

Turn the VALUE knob to the right to scroll forward through the Notes.

Turn the VALUE knob to the left to scroll backward through the Notes.

You will see the red bar in the display move to designate the selected Note.

Using the Drawbars and Keyboard:

If you want to find an individual Note quickly, use the Drawbars and the playing keys to select it.

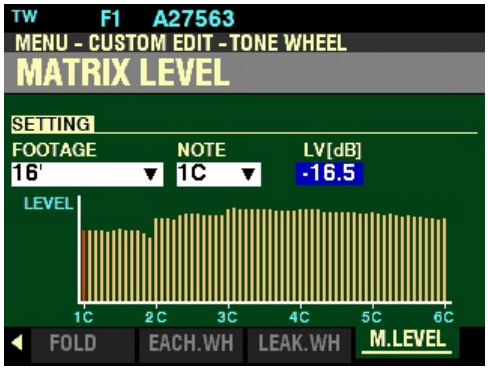
1. With the MATRIX LEVEL screen displaying and the box to the right of "NOTE" highlighted (shown above), Press and Hold a key on the keyboard.

2. While holding down a key, move one of the Drawbars - for example, the first white (8') Drawbar.

   The number shown in the box underneath "FOOTAGE" will be the number of the Matrix associated with that Drawbar. The box underneath "NOTE" will be the Note associated with the Tone Wheel belonging to the selected Matrix.

   Notice the bar graph in the display will change with each Footage you select. This will show you the level for each Tone Wheel within the selected Matrix. The bar designating the selected Tone Wheel in the selected Matrix will show red.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "LV[db]" should be highlighted.

LV(dB) - Matrix Level

This Parameter allows you to adjust the volume or level of the selected Matrix. You may select from Inf (zero level) to -92dB (lowest level) to +40dB (loudest level). The numbers represent decibels, or units of volume.

After you have selected a Matrix and a Note using the methods described on the previous pages:

Turn the VALUE knob to the right to increase the level of the selected Matrix.

Turn the VALUE knob to the left to decrease the level of the selected Matrix.

♦ Recording a Custom Tone Wheel

IMPORTANT NOTE: If you change any of the Custom Tone Wheel settings, you **must** save them in order for them to be remembered. If the changes are not saved, they will be lost when the power to the instrument is switched "OFF."

TRY THIS:

1. Access the CUSTOM EDIT -TONE WHEEL FUNCTION Mode Page using the procedure described on page 477. You should see Screen 1 of the CUSTOM EDIT -TONE WHEEL FUNCTION Mode Page. The box underneath "ORGAN TYPE" should be highlighted



2. Turn the VALUE knob to select the Organ Type you want to edit.

3. Press the DIRECTION "▼" button to highlight the box underneath "CUSTOM."



4. Turn the VALUE knob to select the Custom Set you want to modify.

5. Make whatever changes you want to the editable Parameters. The Custom Tone Wheel Parameters are covered on pages 477 through 493.

NOTE: For a complete list of the Parameters that can be modified for a Custom Tone Wheel set, consult page 846 of the **APPENDIX** chapter of this Guide.

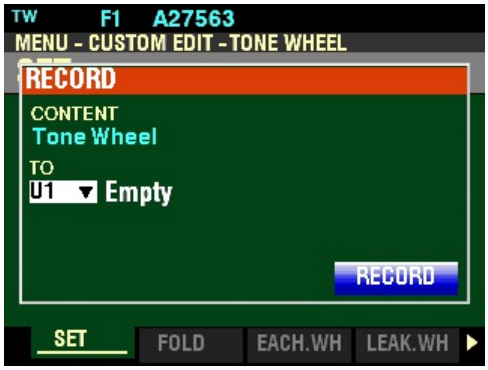
NOTE: If you have already made changes to a Custom Tone Wheel and you want to Record your changes, you can skip Steps 1 through 5 and go directly to Step 6.

6. After you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this. The box underneath "TO" should be highlighted.

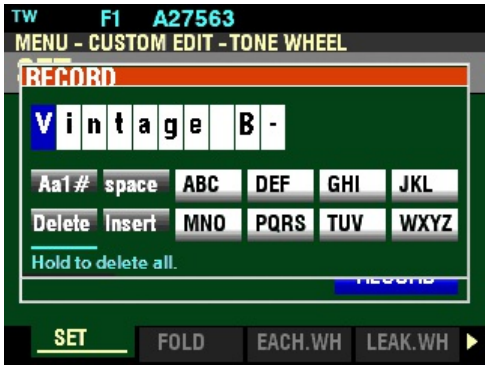


7. Use the VALUE knob to select the target Custom Tone Wheel (the Custom Tone Wheel you want to Record to). You may select from U1 to U3.

8. After you have made your selection, press the DIRECTION "▼" button to highlight the "RECORD" box.



9. Press the ENTER button. The Information Center Display will look similar to this:



This is the screen you will use to Name your Custom Tone Wheel. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

10. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:



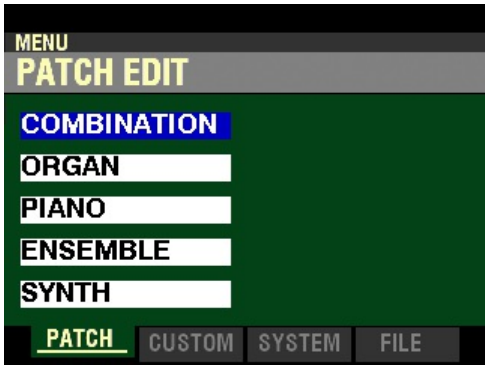
After the "Completed" message disappears, your Custom Tone Wheel has been Recorded.

◆ CUSTOM TONE WHEEL APP MENU

You can use the APP MENU to register a Custom Tone Wheel to a FAVORITE button for quicker access. The following paragraphs will explain this in more detail.

TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode.



3. Press the ENTER button.
If the Organ Type is not set at B-3, the Information Center Display will show the following:



If the above message displays, press the PAGE "▶" to highlight the "YES" icon and press the ENTER button. The Information Center Display should now look like this:



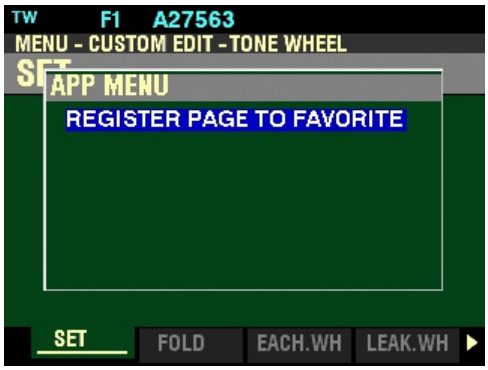
4. Turn the VALUE knob to select the Organ Type you want to register.

5. Press the DIRECTION "▼" button to highlight the box underneath "CUSTOM."



6. Turn the VALUE knob to select the Custom Set you want to register.

7. Press and Release the MANUAL "☰" button. The Information Center Display should now look like this:



This is the APP MENU for the CUSTOM EDIT -TONE WHEEL FUNCTION Mode Page.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

To register the current Page to a FAVORITE, do the following:

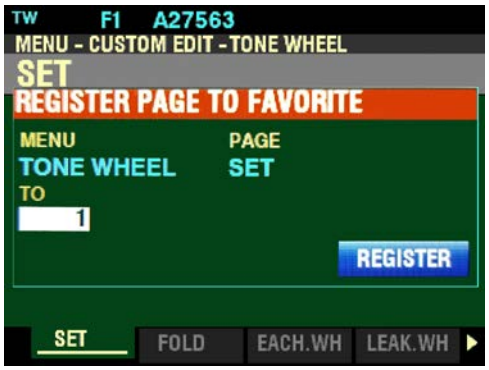
1. From the screen shown at the bottom of the previous page, press the ENTER button. The Information Center Display should look like this:



The box underneath "TO" should be highlighted.

2. Use the VALUE knob to select the target FAVORITE (the FAVORITE button you want to use to recall the selected Page). You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

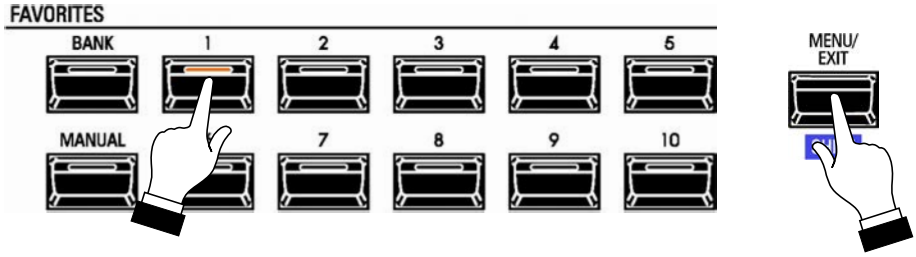


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

◆ CUSTOM EDIT -LESLIE FUNCTION Mode

This FUNCTION Mode allows you to select or edit the Custom Leslie Cabinets.

♦ WHAT ARE "CUSTOM LESLIE CABINETS?"

All of the Parameters described on this page and on the following pages comprise a Custom Leslie Cabinet. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Cabinet can be Recorded as part of a Patch.

The SK PRO has 8 Custom Leslie Cabinets indicated by an F (Factory) which are permanently written in memory. However, you can create and Record up to 8 User Cabinets which will be indicated by a U.

To create and Record a Leslie Cabinet, use the CUSTOM EDIT -LESLIE FUNCTION Mode to edit the Parameters of one of the F Cabinets. After you have made all of your changes, you can Record them as a U Cabinet.

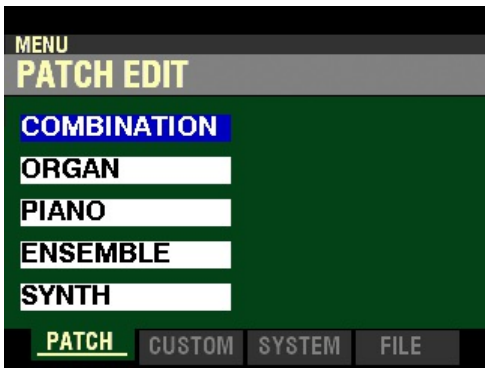
NOTE: For a list of the Factory Leslie Cabinets consult the **APPENDIX** on page 845

NOTE: For a complete list of the Parameters that can be modified for a Custom Leslie Cabinet consult the **APPENDIX** on page 847.

NOTE: If any of the Custom Cabinet Parameters are edited, an asterisk ("*") will show in the upper left corner of the display. To save the changes you have made, Record them as a Custom Leslie Cabinet.

To access the CUSTOM EDIT -LESLIE FUNCTION Mode, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You will now see the CUSTOM EDIT FUNCTION Mode.



3. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



4. Press the ENTER button. The Information Center Display should now look similar to this:



You are now in the CUSTOM EDIT -LESLIE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting on the next page.

♦ CABINET

If you followed the instructions on the previous pages, you should see the screen shown below.



The box underneath "CUSTOM" should be highlighted.

This Parameter allows you to select a Cabinet Number. The data chart below shows the options you may select.

CUSTOM LESLIE CABINET Options	
Cabinet Name	**Description**
122 Gentle	Replicates 122 cabinet (Large body, peaking horn driver) heard from a distance, rear.
122 Wild	Replicates 122 cabinet heard from a closer distance, front.
31H-Type	Replicates 31H cabinet heard from a distance, rear.
147 Gentle	Replicates 147 cabinet (Large body, wide range) heard from a distance.
147 Wild	Replicates 147 cabinet heard from a closer distance, front.
145 Gentle	Replicates 145 cabinet (Middle body, slightly narrow range) heard from a distance, rear.
145 Wild	Replicates 145 cabinet heard from a closer distance, front.
PR-40	Replicates a Hammond tone cabinet.

There are two categories of Custom Leslie Cabinets - Factory and User. The Factory Cabinets are factory-programmed and cannot be changed. User Cabinets are those which you create and Record. In the Information Center Display, Factory Cabinets are designated by the letter "F" and User Cabinets are designated by the letter "U." There are 8 Factory Cabinets and, you can create and Record up to 8 User Cabinets, making a total of 16.

Turn the VALUE knob to select the option you want.

SPECIAL NOTE: User Cabinets are not shown in the Information Center Display unless you create and Record them. Creating and Recording Custom Cabinets will be covered later in this chapter.

NOTE: As explained on page 224, the design of Hammond tone cabinets represented the sound quality desired by the Hammond Organ Company and **do not** contain rotating tremulants as do Leslie Speaker cabinets.

From the screen shown on the previous page, press the PAGE "▶" button <u>once</u>.



The "SPEAKER" Parameter should be highlighted.

♦ SPEAKER

This Parameter allows you to select a Speaker Type. The data chart below shows the options you may select.

CUSTOM LESLIE SPEAKER Options	
Speaker Type	**Description**
L145 Front	Leslie 145 Cabinet positioned so that the front of the cabinet is facing front.
L145 Rear	Leslie 145 Cabinet positioned so that the rear of the cabinet faces out.
L147 Front	Leslie 147 Cabinet positioned so that the front of the cabinet is facing front.
L147 Rear	Leslie 147 Cabinet positioned so that the rear of the cabinet faces out.
L122 Front	Leslie 122 Cabinet positioned so that the front of the cabinet is facing front.
L122 Rear	Leslie 145 Cabinet positioned so that the rear of the cabinet faces out.
Cone Type	Solid-state "combo" Leslie Cabinet such as model 760, etc.
PR-40 Type	Hammond PR-40 tone cabinet.

Turn the VALUE knob to select the Speaker Type you want.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "FAST SPEED[rpm]" should be highlighted.

♦ ROTOR

FAST SPEED - HORN / DRUM

This Parameter allows you to set the rotor speed for the TREMOLO or FAST Mode. You may select 0 (no rotation) or a value between 200 and 500 rpm.

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Fast Speed.

Turn the VALUE knob to the left to decrease the Fast Speed.

NOTE: **rpm** is an abbreviation for **r**evolutions **p**er **m**inute.

NOTE: **372** rpm is the factory setting for the **FAST** Speed of a Leslie Cabinet.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "SLOW SPEED[rpm]" should be highlighted.

SLOW SPEED - HORN / DRUM

This Parameter allows you to set the rotor speed for the CHORALE or SLOW Mode. You may select 0 (no rotation) or a value between 20 and 120 rpm.

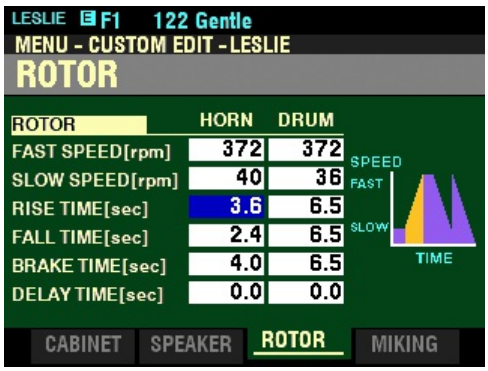
Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Slow Speed.

Turn the VALUE knob to the left to decrease the Slow Speed.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RISE TIME[sec]" should be highlighted.

RISE TIME - HORN / DRUM

This Parameter allows you to adjust the time for the rotors to "ramp up" to FAST Mode when switching from SLOW or STOP to FAST Mode. You may select from 0.8 to 12.5 seconds for the HORN rotor and from 1.0 to 12.5 seconds for the DRUM rotor.

Use the DIRECTION "◀" and "▶" buttons to select either HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Rise Time.

Turn the VALUE knob to the left to decrease the Rise Time.

From the screen shown at the bottom of the previous page,, press the DIRECTION "▼" button once.



The box to the right of "FALL TIME[sec]" should be highlighted.

FALL TIME - HORN / DRUM

This Parameter allows you to adjust the time for the rotors to reach the SLOW rotor speed when switching from FAST to SLOW Mode. You may select from 0.8 to 12.5 seconds for the HORN rotor and from 1.0 to 12.5 seconds for the DRUM rotor.

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Fall Time.

Turn the VALUE knob to the left to decrease the Fall Time.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "BRAKE TIME[sec]" should be highlighted.

BRAKE TIME - HORN / DRUM

This Parameter allows you to adjust the time for the rotors to Stop when switching from FAST to SLOW Mode. You may select from 0.8 to 12.5 seconds for the HORN rotor and from 1.0 to 12.5 seconds for the DRUM rotor.

Use the DIRECTION "◀" and "▶" buttons to select either HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Brake Time.

Turn the VALUE knob to the left to decrease the Brake Time.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DELAY TIME[sec]" should be highlighted.

DELAY TIME - HORN / DRUM

These allow you to adjust the time to start changing the speed, when the Mode is switched. You may select from 0 (no delay) to 1.0 second.

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Delay Time.

Turn the VALUE knob to the left to decrease the Delay Time.

From the above screen, press the PAGE "▶" button once.



The box to the right of "VOLUME[db]" should be highlighted.

MIKING - Virtual Microphone Settings

These Parameters allow you to replicate various Microphone placements of a Leslie Speaker Cabinet.

VOLUME - HORN / DRUM / SUB BASS

These allow you to adjust the volume levels of the Horn Rotor, Drum Rotor and Sub Bass. You may select -Inf and from -76 to 0 decibels (db). -Inf is silent.

Use the DIRECTION "◀" and "▶" buttons to select HORN, DRUM or SUB.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume of the selected Speaker.

Turn the VALUE knob to the left to decrease the Volume if the selected Speaker.

NOTE: The Sub Bass sound is "dry" - not modulated.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MIC WIDTH[cm]" should be highlighted.

WIDTH - HORN / DRUM

This Parameter allows you to adjust the distance between Left and Right Microphones. You may select from 0 to 40 centimeters (cm). A higher value will increase the stereo separation. At 0 there is no separation.

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Width.

Turn the VALUE knob to the left to decrease the Width.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "MIC CENTER[cm]" should be highlighted.

CENTER - HORN / DRUM

This Parameter allows you to adjust the offset between the center of two microphones and the pivot of the rotor. You may select from -50 to +50 centimeters (cm).

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the amount of Offset.

Turn the VALUE knob to the left to decrease the Amount of Offset

NOTE: On a Leslie Speaker Cabinet the Horn Rotor rotates counter-clockwise and the Drum Rotor rotates clockwise. The digital Leslie replicates this feature. To emphasize the 'upcoming', set a '+' value for the Horn rotor, and a '-' value for the Drum rotor.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MIC DISTANCE[cm]" should be highlighted.

DISTANCE - HORN / DRUM

This Parameter allows you to replicate distance settings between a Leslie Speaker and the microphones. You may select from 30 to 200 centimeters (cm). A lower value results in a deeper effect.

Use the DIRECTION "◀" and "▶" buttons to select HORN or DRUM.

When you have made your selection:

Turn the VALUE knob to the right to increase the Distance.

Turn the VALUE knob to the left to decrease the Distance.

♦ Recording a Custom Leslie Cabinet

IMPORTANT NOTE: If you change any of the Custom Leslie Parameters, you **must** save them in order for them to be remembered. If the changes are not saved, they will be lost when the power to the instrument is switched "OFF."

TRY THIS:

1. Access the CUSTOM EDIT -LESLIE FUNCTION Mode Page using the procedure described on page 501. You should now see Screen 1 of the CUSTOM EDIT -LESLIE FUNCTION Mode Page. The box underneath "CUSTOM" should be highlighted



2. Turn the VALUE knob to select the Custom Leslie Cabinet you want to edit.

3. Make whatever changes you want to the editable Parameters. The Custom Leslie Parameters are covered on pages 503 through 510.

4. After you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this. The box underneath "TO" should be highlighted.



5. Use the VALUE knob to select the target Custom Leslie Cabinet (the Custom Leslie Cabinet you want to Record to). You may select from U1 to U8.

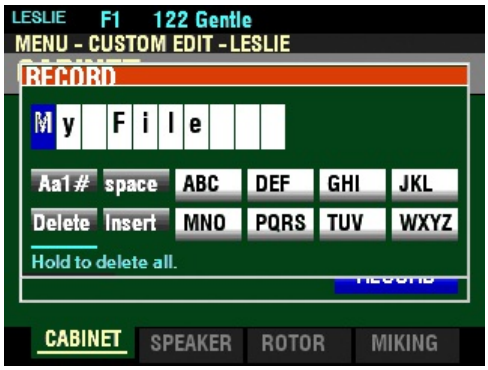
NOTE: For a complete list of the Parameters that can be modified for a Custom Leslie Cabinet, consult page 847 of the **APPENDIX** chapter of this Guide.

NOTE: If you have already made changes to a Custom Leslie Cabinet and you want to Record your changes, you can skip Steps 1 through 3 and go directly to Step 4.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the "RECORD" box.



7. Press the ENTER button. The Information Center Display will look similar to this:



This is the screen you will use to Name your Custom Leslie Cabinet. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options

Character	Button	Description
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

8. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:



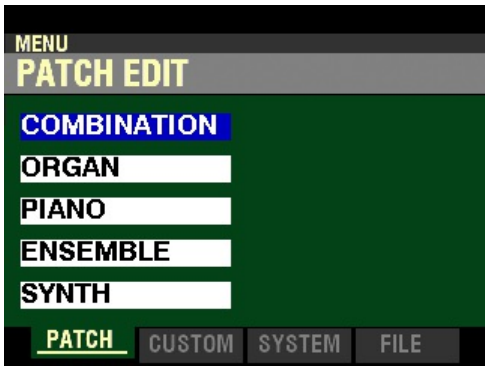
After the "Completed" message disappears, your Custom Leslie Cabinet has been Recorded.

◆ CUSTOM LESLIE APP MENU

You can use the APP MENU to register a Custom Leslie Cabinet to a FAVORITE button for quicker access. The following paragraphs will explain this in more detail.

TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode.



3. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



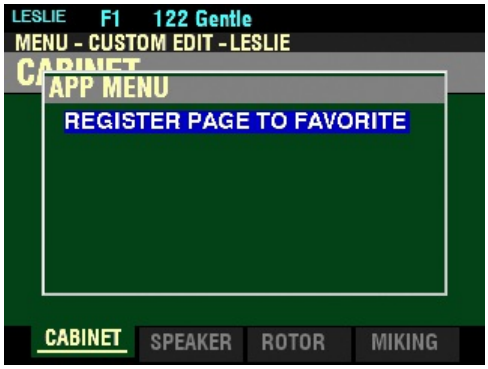
4. Press the ENTER button.
If the Organ Type is not set at B-3, the Information Center Display will show the following:



If the above message displays, press the PAGE "▶" button to highlight the "YES" icon and press the ENTER button. The Information Center Display should now look like this:



5. Press and Release the MANUAL "☰" button. The Information Center Display should now look like this:



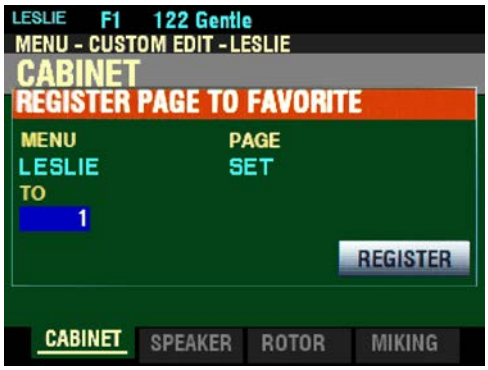
This is the APP MENU for the CUSTOM EDIT -LESLIE FUNCTION Mode Page.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

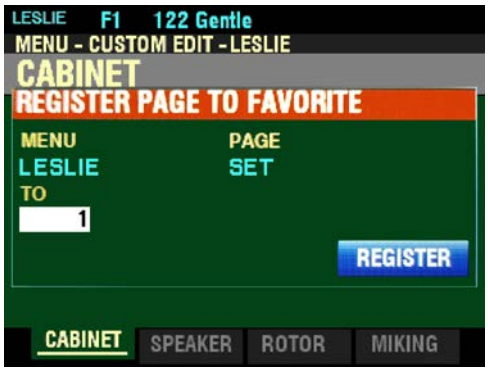
To register the current Page to a FAVORITE, do the following:

1. From the screen shown at the bottom of the previous page, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

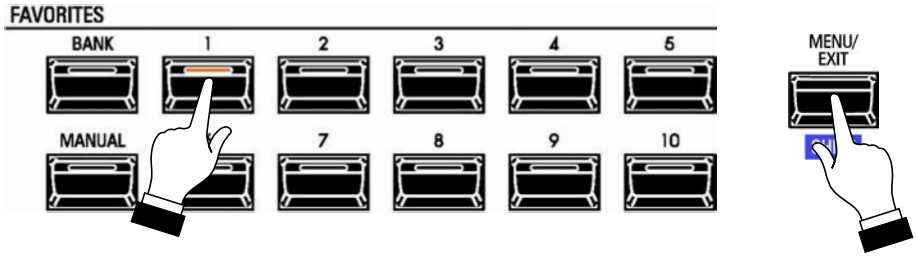


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



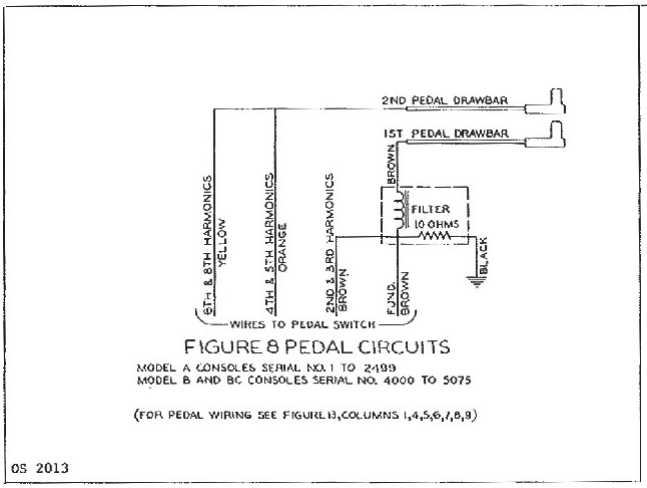
NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

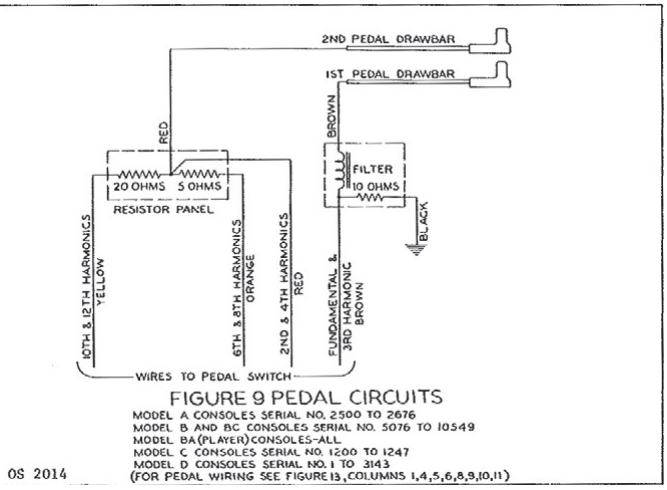
◆ CUSTOM EDIT -PEDAL REG. FUNCTION Mode

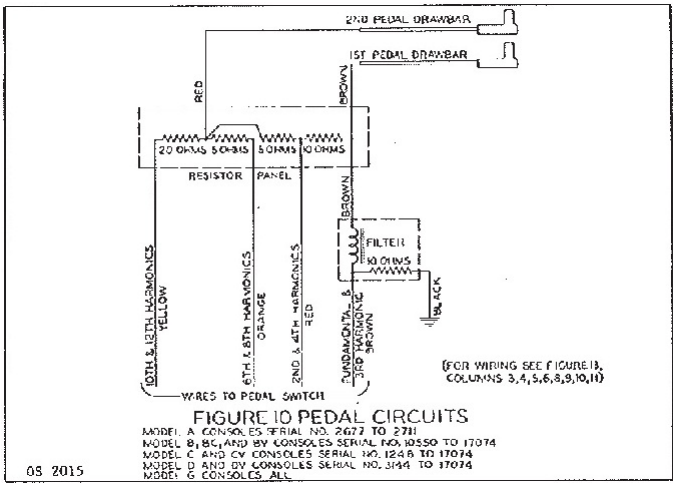
This FUNCTION Mode allows you to select or edit the registrations for the Pedal or Sub-Drawbars.

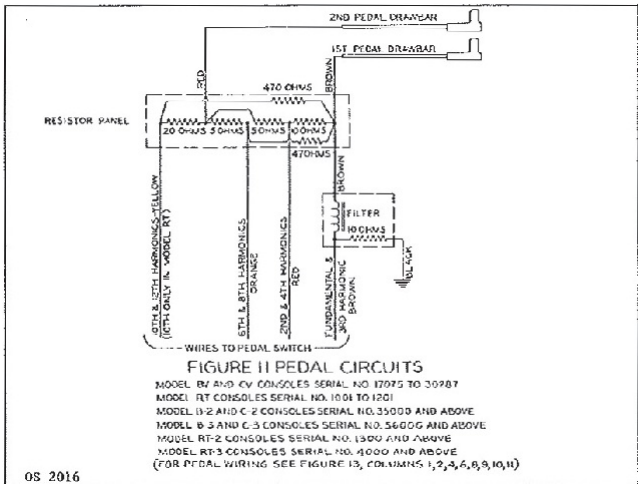
♦ WHAT ARE "SUB-DRAWBARS?"

On a tone-wheel Hammond Organ, the harmonic resources for Pedal tones are combined into two Drawbars each of which draws a combination of harmonics instead of individual harmonics as with the other Drawbars. Over the years, several different schemes were used to voice the Pedal Drawbars. These are shown below.









All of the Parameters described on this page and on the following pages comprise a Custom Pedal Registration. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pedal Registration can be Recorded as part of an ORGAN Patch.

The SK PRO has 3 Custom Pedal Registrations indicated by an F (Factory) which are permanently written in memory; however, you can create and Record up to 3 User Registrations which will be indicated by a U.

To create and Record a Custom Pedal Registration, use the CUSTOM PEDAL REG. FUNCTION Mode Page to edit the Parameters of one of the F Custom Pedal Registrations. After you have made all of your changes, you can Save them as a U Custom Pedal Registration.

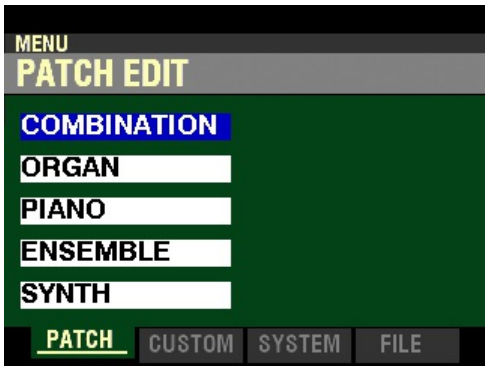
NOTE: For a list of the Factory Custom Pedal Registrations consult the **APPENDIX** on page 845.

NOTE: For a complete list of the Parameters that can be modified for a Custom Pedal Registration consult the **APPENDIX** on page 846.

NOTE: If any of the Custom Pedal Parameters are edited, an asterisk ("*") will show in the upper left corner of the display. To save the changes you have made, Record them as a Custom Pedal Registration.

To access the CUSTOM EDIT -PEDAL REG. FUNCTION Mode, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

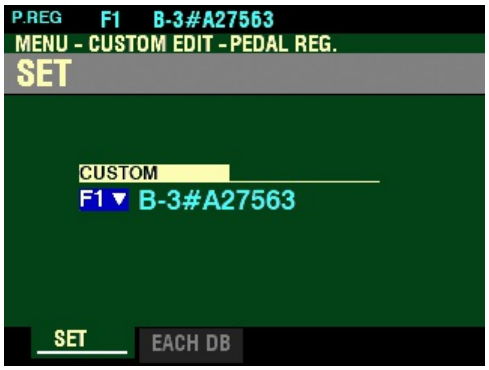
2. Press the PAGE "▶" button once. You will now see the CUSTOM EDIT FUNCTION Mode



3. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



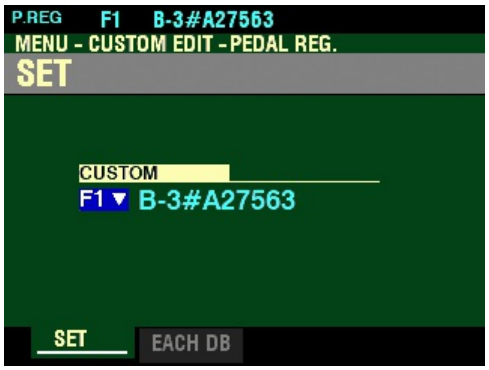
4. Press the ENTER button. The Information Center Display should now look like this:



You are now in the CUSTOM EDIT -PEDAL REG. FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting below.

♦ **SET**

If you followed the instructions on the previous pages, you should see the screen shown below.

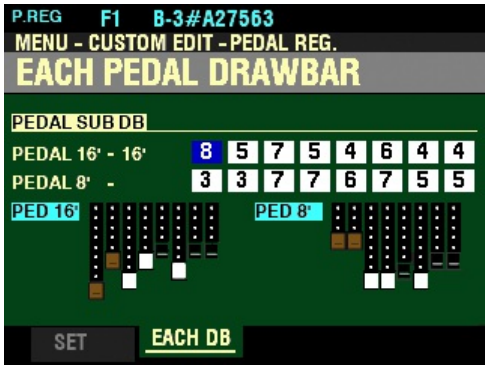


The box underneath "CUSTOM" should be highlighted.

This Parameter allows you to select the Custom Pedal Registration to edit.

Turn the VALUE knob to select B-3 A27563, B-3 #364839 or A-100 #33339.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The first box to the right of "PEDAL 16' - 16'" should be highlighted.

♦ EACH PEDAL DRAWBAR

This Page allows you to create a Custom Pedal Registration by changing the characteristics of each tone-wheel used for the Pedal Registration individually.

Each Pedal Drawbar has eight (8) Drawbars representing the tones available for Pedals on a vintage Hammond Organ. You may select from 0 (no volume or Off) to 8 (maximum volume).

Use the DIRECTION "▲" and "▼" buttons to highlight the Pedal Drawbar you wish to edit.

Use the DIRECTION "◀" and "▶" buttons to highlight each frequency within the selected Pedal Drawbar.

Turn the VALUE knob to the right to increase the volume of the selected Drawbar.

Turn the VALUE knob to the left to decrease the volume of the selected Drawbar.

You will see the selected Drawbar graphic in the screen move in response to your changes using the VALUE knob.

NOTE: The Drawbars on the Control Panel **cannot** be used to adjust the PEDAL DRAWBAR settings.

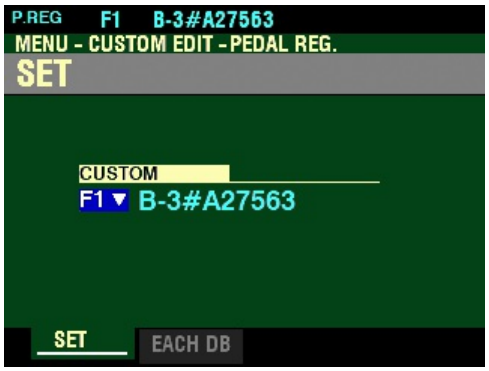
After you have edited the Pedal Drawbars to your preference, you can Record the results as a Custom Pedal Registration. This is explained starting on the next page.

♦ Recording a Custom Pedal Registration

IMPORTANT NOTE: If you change any of the Custom Pedal Registration Parameters, you **must** save them in order for them to be remembered. If the changes are not saved, they will be lost when the power to the instrument is switched "OFF."

TRY THIS:

1. Access the CUSTOM EDIT -PEDAL REG. FUNCTION Mode using the procedure described on page 518. You should see Screen 1 of the CUSTOM EDIT -PEDAL REG. FUNCTION Mode Page. The box underneath "CUSTOM" should be highlighted.



2. Turn the VALUE knob to select the Custom Pedal Registration you want to edit.

3. Make whatever changes you want to the editable Parameters. The Custom Pedal Registration Parameters are covered on pages 519 through 520.

4. After you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this. The box underneath "TO" should be highlighted.



5. Use the VALUE knob to select the target Custom Pedal Registration (the Custom Pedal Registration you want to Record to). You may select from U1 to U3.

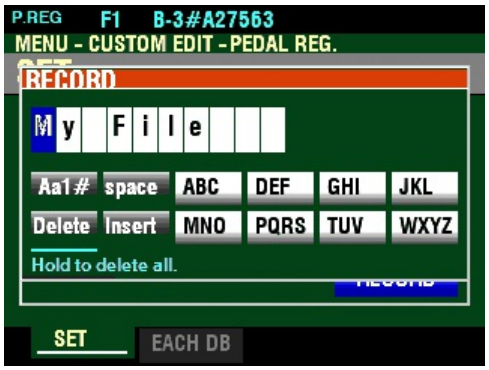
NOTE: For a complete list of the Parameters that can be modified for a Custom Pedal Registration, consult page 846 of the **APPENDIX** chapter of this Guide.

NOTE: If you have already made changes to a Custom Pedal Registration and you want to Record your changes, you can skip Steps 1 through 3 and go directly to Step 4.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the "RECORD" box.



7. Press the ENTER button. The Information Center Display will look similar to this:



This is the screen you will use to Name your Custom Pedal Registration. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

8. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:



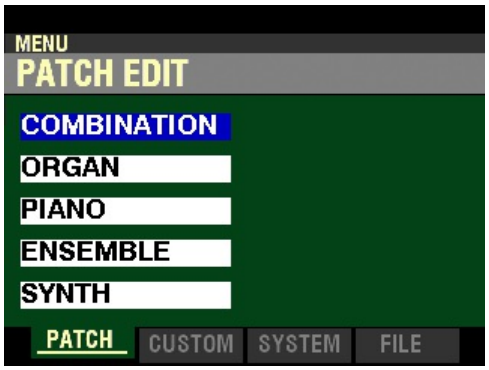
After the "Completed" message disappears, your Custom Pedal Registration has been Recorded.

◆ CUSTOM PEDAL REG. APP MENU

You can use the APP MENU to register a Custom Pedal Registration to a FAVORITE button for quicker access. The following paragraphs will explain this in more detail.

TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode.



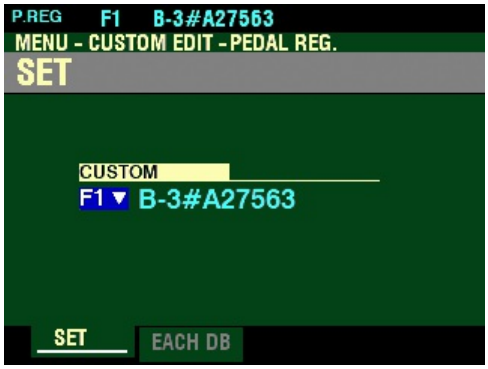
3. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



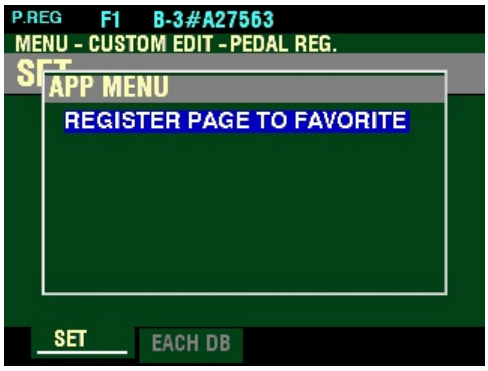
4. Press the ENTER button.
If the Organ Type is not set at B-3, the Information Center Display will show the following:



If the above message displays, press the PAGE "▶" to highlight the "YES" icon and press the ENTER button. The Information Center Display should now look like this:



5. Press and Release the MANUAL "🖹" button. The Information Center Display should now look like this:



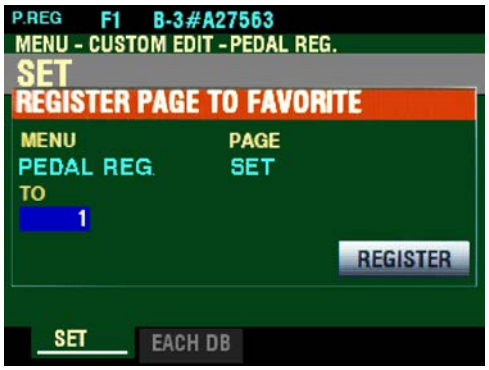
This is the APP MENU for the CUSTOM EDIT -PEDAL REG. FUNCTION Mode Page.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

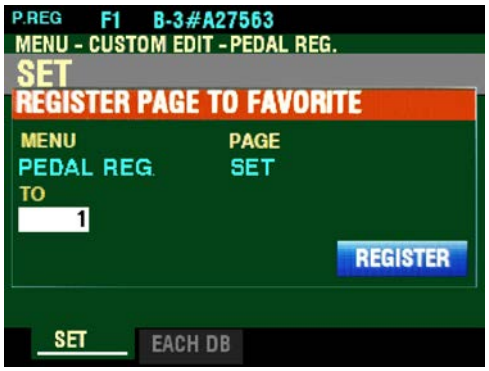
To register the current Page to a FAVORITE, do the following:

1. From the screen shown at the bottom of the previous page, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

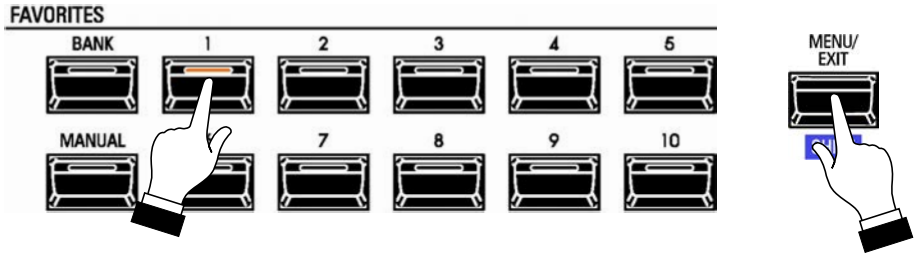


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

◆ CUSTOM edit -PIPE FUNCTION Mode

This FUNCTION Mode allows you to select or edit the characteristics of the Pipe Voices.

♦ WHAT ARE "CUSTOM PIPES?"

All of the Parameters described on this page and on the following pages comprise a Custom Pipe. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pipe can be Recorded as part of a Patch.

The SK PRO has 3 different Custom Pipes indicated by an F (Factory) which are permanently written in memory; however, you can create and Record up to 3 User Custom Pipes which will be indicated by a U.

To create and Record a Custom Pipe, use the CUSTOM EDIT -PIPE FUNCTION Mode to edit the Parameters of one of the F Custom Pipes. After you have made all of your changes, you can Save them as a U Custom Pipe.

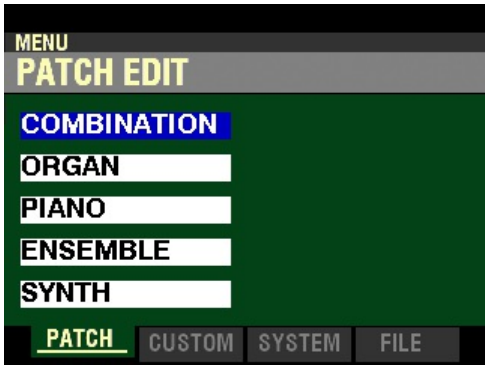
NOTE: For a list of the Factory Custom Pipes consult the **APPENDIX** on page 845.

NOTE: For a complete list of the Parameters that can be modified for a Custom Pipe consult the **APPENDIX** on page 846.

NOTE: If any of the Custom Pipe Parameters are edited, an asterisk ("*") will show in the upper left corner of the display. To save the changes you have made, Record them as a Custom Pipe.

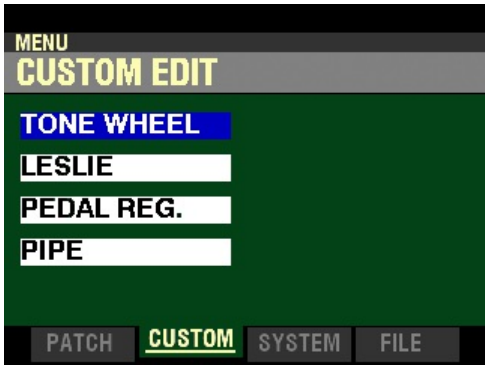
To access the CUSTOM EDIT -PIPE FUNCTION Mode, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

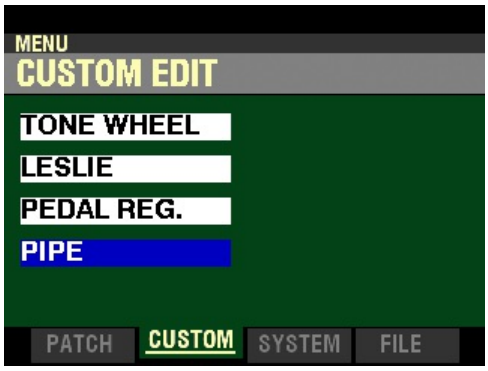


The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode



3. Press the DIRECTION "▼" button three times. The Information Center Display should now look like this:



4. Press the ENTER button.

   If the ORGAN Type is set at A-100, B-3, C-3, Mellow, Vx, Farf or Ace, the following message will appear:



5. Press the DIRECTION "▶" button to highlight "YES," then press the ENTER button. The Information Center Display should now look like this:



   You are now in the SET Page of the CUSTOM EDIT -PIPE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box underneath "CUSTOM" should be highlighted.

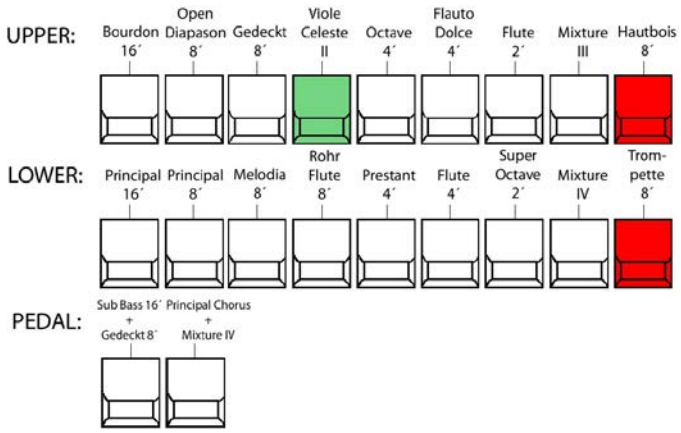
♦ **SET**

CUSTOM

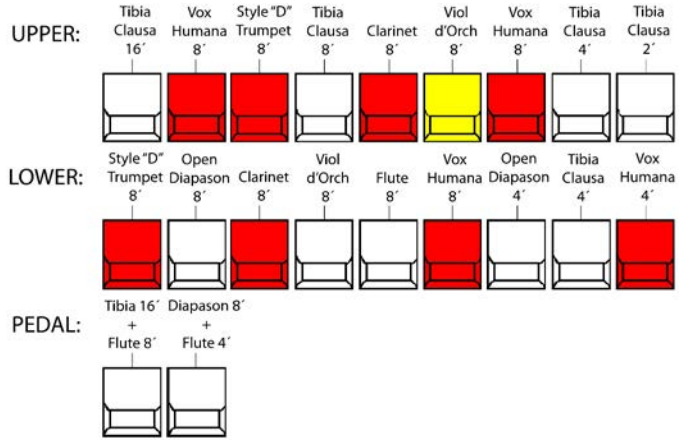
This Parameter allows you to select the Organ Type to edit.

Turn the VALUE knob to select Classic, Theatre 1, or Theatre 2. The following pages show how the Pipe Voices are allocated to the Drawbars for each Custom Set.

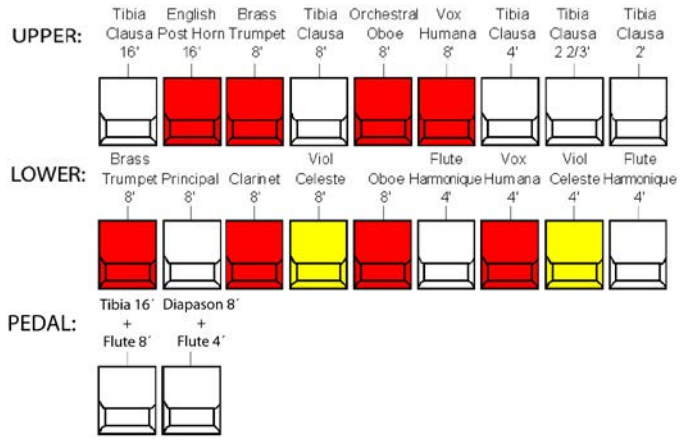
F1 - Classic - (classical or liturgical pipe organ):



F2 - Theatre 1 - patterned after Wurlitzer "Style D" theatre pipe organ:



F3 - Theatre 2 - patterned after Wurlitzer "Style 260 Special" theatre pipe organ:



NOTE: The colors shown in the above figures are the ones shown in the Information Center Display when the **Pipe - Classical** Organ Type is selected.

IMPORTANT NOTE: When the **Pipe** Organ Type is selected, the Drawbars will function similar to drawstops or stop tablets on a pipe organ - pulling a Drawbar "out" will turn the associated Pipe Voice "ON" while pushing the Drawbar "in" will turn the Pipe Voice "OFF." Unlike the other Organ Types, the Pipe Voices **do not** have gradations of volume - they are either "ON" or "OFF."

♦ STOP SET

From the screen shown on page 529, press the PAGE "▶" button once.



The box underneath "STOP" should be highlighted.

STOP

This Parameter allows you to select the Pipe Voice or Stop to be assigned to each Drawbar.

The designations to the left represent the Drawbars - for example, UPPER 1, refers to the first brown Drawbar, UPPER 2 refers to the second brown Drawbar, and so on until UPPER 9 which is the last white Drawbar.

NOTE: **UPPER STOP SET** is shown; however, you can use the PAGE "◀" or "▶" buttons to select **UPPER**, **LOWER** or **PEDAL** Stop Sets.

Use the DIRECTION "▲" and "▼" buttons to move up and down through the Drawbar assignments. You may select from UPPER 1 through UPPER 9.

The data chart on the next page shows the available Pipe Voices.

PIPE VOICES (STOPS)	
Voice Number	**Voice Name**
S01	Open Diapason
S02	Principal
S03	Diapason
S04	Bourdon 1
S05	Bourdon 2
S06	Gedeckt
S07	Rohr Flute
S08	Flute Harmonic
S09	Flautino
S10	Voix Cele II
S11	Clarinet
S12	Hautbois
S13	Oboe
S14	Vox Humana
S15	Trompette
S16	Cornet V
S17	Mixture III
S18	Mixture IV
S19	Reserved
S20	Reserved
S21	Reserved
S22	Tibia Clausa
S23	Brass Saxophone
S24	Brass Trumpet
S25	Clarinet
S26	Brs E.PostHorn
S27	Orchestral Oboe
S28	Style D Trumpet
S29	Viol d'Orchestre
S30	Vox Humana
S31	Viol Celeste
S32	Reserved
S33	Reserved
S34	CotVln 32' & Brdn 16'
S35	CtlBmb 32' & Prn 16'
S36	CntBrdn 32' & Flte 16'
S37	Trompette 16'
S38	Fagott 16'
S39	SubBs 16' & Gedeckt 8'
S40	Diapason 8' & Flute 4'
S41	PrnChors 8' & Mixt IV
S42	Tibia 16' & Flute 8'
S43	Diap 16' & PostHorns
S44	Cornopean
S45	Reserved
S46	Reserved

Use the DIRECTION "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

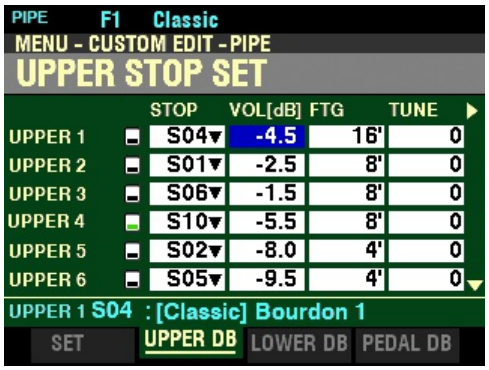
Turn the VALUE knob to select the Pipe Voice to assign to the selected Drawbar.

After you have selected which Pipe Voice you want to edit, you can make the following changes:

PIPE VOICE EDIT Options	
Parameter	**Description**
VOLUME	Allows you to set the Volume for the selected Pipe Voice.
FOOTAGE	Allows you to select the pitch range for the selected Pipe Voice.
DETUNE	Allows you to detune the selected Pipe Voice.
TREMULANT	Allows you to turn Tremulant "ON" or "OFF" for the selected Pipe Voice.
CHIFF	Allows you to set the amount of Chiff or attack for the selected Pipe Voice.
CUTOFF	Allows you to set the brightness of the selected Pipe Voice by setting its Filter Cutoff point.
PAN L-R	Allows you to set the directionality of the selected Pipe Voice.
IMAGING	Allows you to simulate pipe chest configurations for the selected Pipe Voice.

The following pages give a more detailed explanation of how these Parameters work.

From the screen shown on page 531, press the DIRECTION "▶" button once.



The box underneath "VOL(db)" should be highlighted.

VOL(db) - Pipe Voice Volume

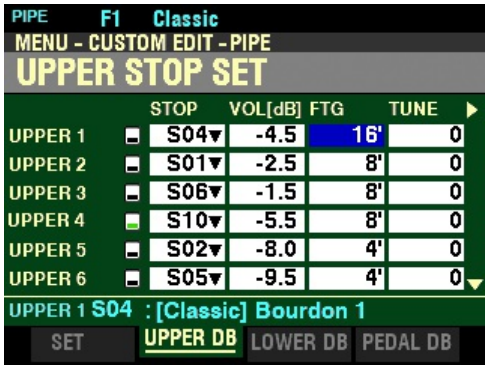
This Parameter allows you to adjust the Volume of the selected Pipe Voice. You may select a Volume setting from 0 (softest) to 127 (loudest).

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to increase the volume of the selected Pipe Voice.

Turn the VALUE knob to the left to decrease the volume of the selected Pipe Voice.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "FTG" should be highlighted.

FTG - Pipe Voice Footage

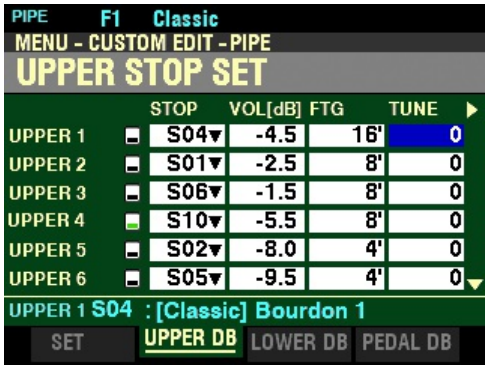
This Parameter allows you to select the Footage or pitch at which the selected Pipe Voice will sound. You may select 32', 16', 5⅓', 8', 4', 2⅔', 2', 1 $^{3}/_{5}$', 1⅓' or 1'.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "TUNE" should be highlighted.

TUNE - Pipe Voice Detune

This Parameter allows you to detune each individual Pipe Voice. You may select from -50 to +50 cents or one quarter-step sharp or flat.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to make the pitch of the selected Pipe Voice flat.

Turn the VALUE knob to the left to make the pitch of the selected Pipe Voice sharp.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "TREM" should be highlighted.

TREM - Pipe Organ Tremulant

This Parameter allows you to turn Tremulant On or Off for the selected Pipe Voice.

What is a "Tremulant?"

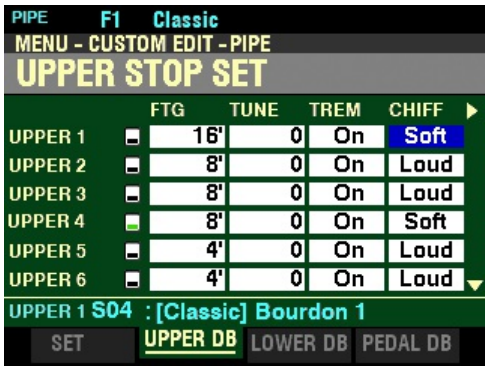
A Tremulant is a device on a pipe organ which varies the air pressure to the pipes periodically, producing a vibrato or tremolo effect. Many large organs have as many as 9 or 10 tremulants, each one affecting a different sound on the organ, while smaller organs may have only one or two.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to turn Tremulant On or Off for the selected Pipe Voice

NOTE: As explained on page 209, the VIBRATO & CHORUS Controls will provide 6 degrees of Tremulant for the **Pipe** ORGAN Voices. This Parameter must be set to "ON" in order to add Tremulant to the selected Voice using the VIBRATO & CHORUS Controls.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "CHIFF" should be highlighted.

CHIFF

This Parameter allows you to set the amount of Chiff or attack for each individual Pipe Voice.

What Is "CHIFF?"

There are two classifications of organ pipes based on the method used to produce sound. "Flue" or "labial" pipes produce sound by means of sending a stream of air through the body of the pipe, while "reed" or "lingual" pipes utilize a reed vibrating against a metal rod (called a shallot) in a manner similar to a reed instrument such as a clarinet.

A flue pipe can be voiced in such a way so that when a key is depressed and the air first enters the pipe, there is a small, short burst of upper harmonics before the tone develops fully. The term Chiff was coined by pipe organ makers to describe this sound. The amount of Chiff can vary depending on the maker and the effect desired - some organ builders voice the flue pipes with little or no Chiff while others, perhaps influenced by the "neo-baroque" school of organ building, deliberately strive to include the Chiff effect.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to add more Chiff to the selected Pipe Voice.

Turn the VALUE knob to the left to add less Chiff to the selected Pipe Voice.

From the screen on the previous page, press the DIRECTION "▶" button once.



The box underneath "C.OFF" should be highlighted.

C.OFF - Pipe Voice Cutoff

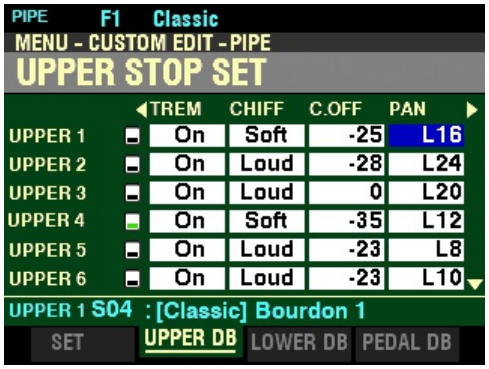
This Parameter allows you to set the brightness of each individual Pipe Voice by setting its Filter Cutoff point.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to make the selected Pipe Voice mellower.

Turn the VALUE knob to the left to make the pitch selected Pipe Voice brighter.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PAN" should be highlighted.

PAN - Pipe Voice Pan

This Parameter allows you to simulate different placements of pipe ranks.

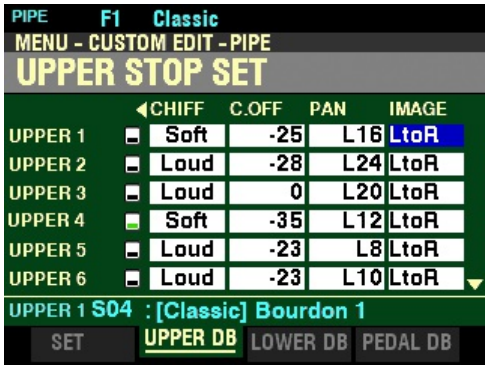
Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to move the sound of the selected Pipe Voice left.

Turn the VALUE knob to the left to move the sound of the selected Pipe Voice right.

NOTE: Setting this parameter to "-C-" will locate the sound in the center.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "IMAGE" should be highlighted.

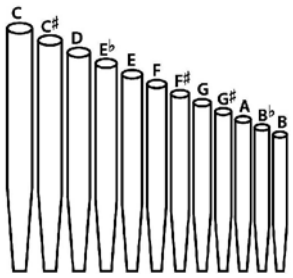
IMAGE - Pipe Voice Imaging

This Parameter allows you to simulate different arrangements of pipes.

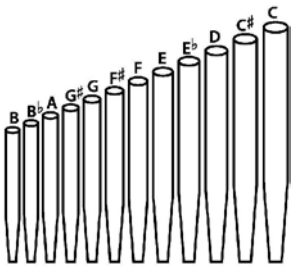
What Is "Pipe Imaging?"

The pipes of a pipe organ are arranged into sets called ranks. Each ranks consists of pipes representing a specific sound on the organ - Open Diapason, Trompette, etc. (In keeping with the different philosophies of organ sound, many organ stop names are of European origin; hence the use of French, German, Dutch, etc., names.)

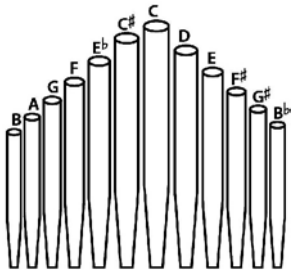
The pipes of each rank are supported by an assembly called a chest. The pipes can be arranged in many different ways on the chest. The pipe arrangement chosen by the maker depends on several things - aesthetics, musical, etc. - but the four most common ones are shown on the next page.



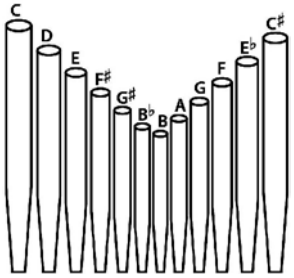
Left to Right - The pipes producing lower pitches are on the left. Playing notes chromatically going up on the keyboard will cause the pipes on the left
to sound first.



Right to Left - The pipes producing higher pitches are on the right. Playing notes chromatically going up on the keyboard will cause the pipes on the left to sound first.



Pyramid - when notes are played chromatically going up on the keyboard, the notes start in the center and alternate between left and right.



Inverted Pyramid - when notes are played chromatically going up on the keyboard, the notes start at one end and alternate between left and right until they meet in the center.

NOTE: The **Pyramid** and **Inverted Pyramid** pipe placement schemes are sometimes referred to as "C-C#" placement due to chromatic notes being separated.

The SKX PRO gives you 5 different Pipe Imaging choices. The data chart below explains them.

PIPE IMAGE Options	
Setting	**Description**
L-R	Chromatic arrangement Left to Right (see drawing).
R-L	Chromatic arrangement Right to Left (see drawing).
PYR	"C - C#" Pyramid arrangement (see drawing).
IVR	"C - C#" Inverted pyramid arrangement (see drawing).
- FIX -	No imaging.

Use the PAGE "◀" and "▶" buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

♦ Recording a Custom Pipe

IMPORTANT NOTE: If you change any of the Custom Pipe Parameters, you **must** save them in order for them to be remembered. If the changes are not saved, they will be lost when the power to the instrument is switched "OFF."

TRY THIS:

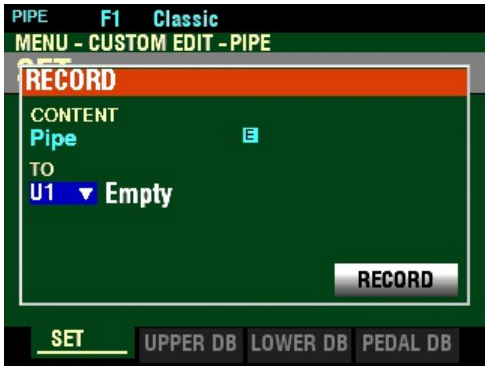
1. Access the CUSTOM EDIT -PIPE FUNCTION Mode using the procedure described on page 527. You should see the SET Page of the CUSTOM EDIT -PIPE FUNCTION Mode Page. The box underneath "CUSTOM" should be highlighted



2. Turn the VALUE knob to select the Custom Pipe Set you want to edit.

3. Make whatever changes you want to the editable Parameters. The Custom Pipe Parameters are covered on pages 529 through 539.

4. After you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this. The box underneath "TO" should be highlighted.

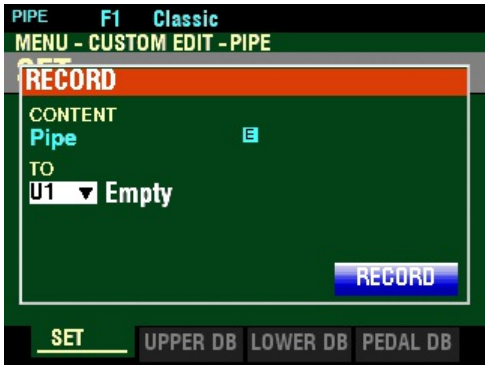


5. Use the VALUE knob to select the target Custom Pipe (the Custom Pipe you want to Record to). You may select from U1 to U8.

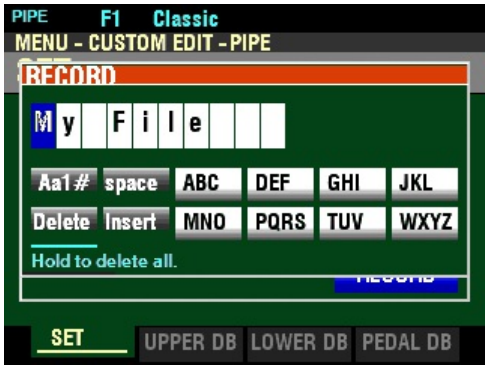
NOTE: For a complete list of the Parameters that can be modified for a Custom Pipe, consult page 846 of the **APPENDIX** chapter of this Guide.

NOTE: If you have already made changes to a Custom Pipe and you want to Record your changes, you can skip Steps 1 through 3 and go directly to Step 4.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the "RECORD" box.



7. Press the ENTER button. The Information Center Display should look similar to this:



This is the screen you will use to Name your Custom Pipe. You can use the FAVORITE buttons and the BANK and MANUAL buttons (the two rows of six buttons just below the Information Center Display) to select and enter characters The data chart below explains the function of each of the buttons.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

8. After you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in the display for approximately 1 second each:



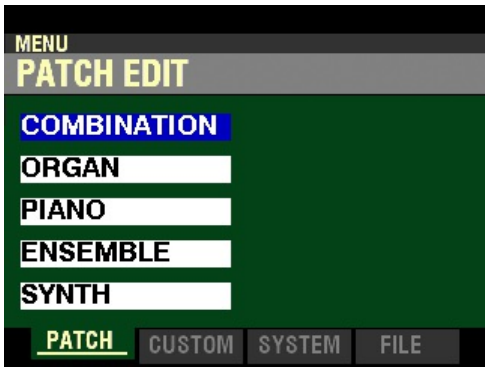
After the "Completed" message disappears, your Custom Pipe has been Recorded.

◆ CUSTOM PIPE APP MENU

You can use the APP MENU to register a Custom Pipe to a FAVORITE button for quicker access. The following paragraphs will explain this in more detail.

TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

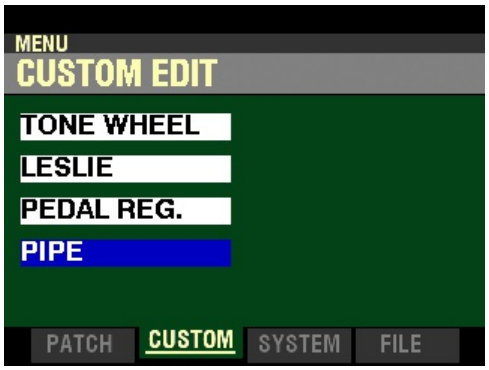


The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button once. You are now in the CUSTOM EDIT FUNCTION Mode.



3. Press the DIRECTION "▼" button three times. The Information Center Display should now look like this:



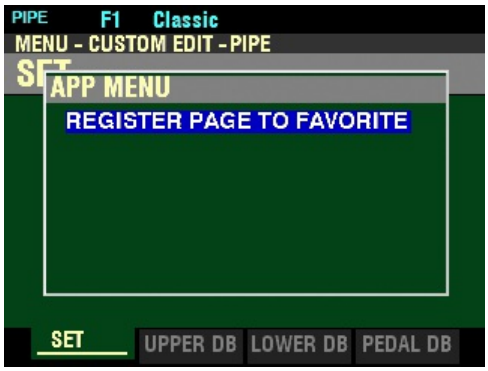
4. Press the ENTER button.
If the Organ Type is not set at Pipe, the Information Center Display will show the following:



If the above message displays, press the PAGE "▶" button to highlight the "YES" icon and press the ENTER button. The Information Center Display should now look like this:



5. Press and Release the MANUAL "☰" button. The Information Center Display should now look like this:



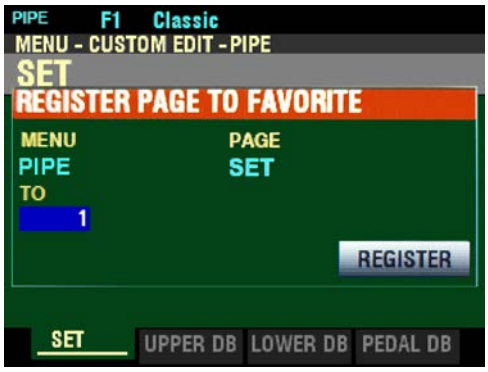
This is the APP MENU for the CUSTOM EDIT -PIPE FUNCTION Mode Page.

♦ REGISTER PAGE TO FAVORITE

This allows you to register the current Page to one of the FAVORITE buttons for quick access.

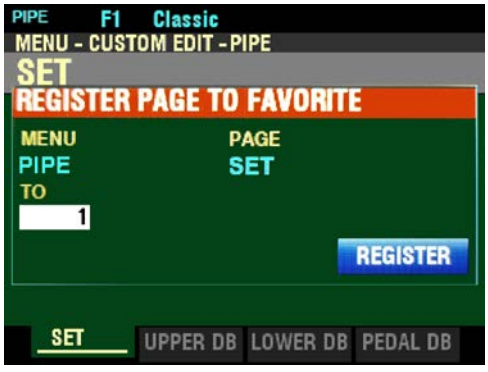
To register the current Page to a FAVORITE, do the following:

1. From the screen shown at the bottom of the previous page, press the ENTER button. The Information Center Display should look like this:



2. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

3. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

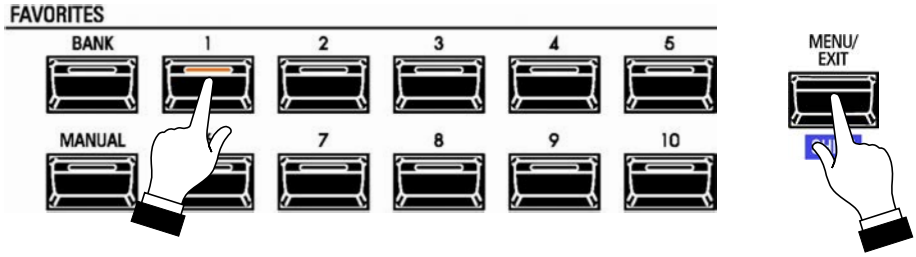


4. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

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HAMMOND

Sk PRO

MULTI EFFECTS / OVERDRIVE / EQUALIZER

MULTI EFFECTS / OVERDRIVE / EQUALIZER

Each of the Voice Sections of the SK PRO contains 4 different FUNCTION Modes which add different effects to the selected sounds. These will be explained starting below.

◆ NOTE - MULTI EFFECTS 1 & 2

The Multi Effects on the SK PRO are divided into two (2) groups. Multi Effect 1 consists of effects added before Overdrive or Expression are added to the audio signal. Multi Effect 2 comprises effects added after the audio has received Overdrive and/or Expression.

◆ MULTI EFFECT 1

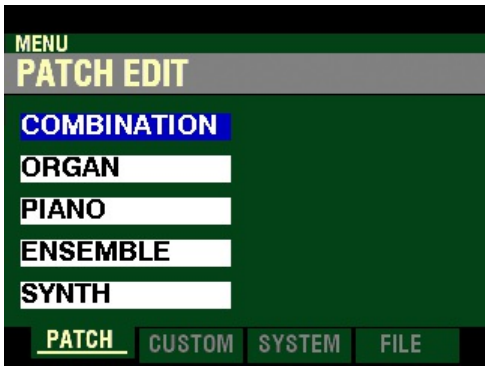
There are four Multi Effects that are inserted at pre-Overdrive or Expression.

1. Tremolo
2. Wah-Wah
3. Ring Modulator
4. Compression

This FUNCTION Mode Page allows you to select and adjust these Effects.

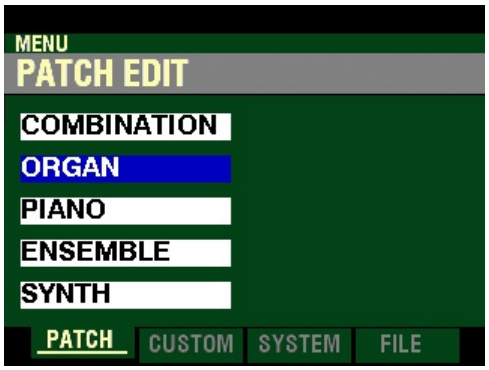
♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the ORGAN Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

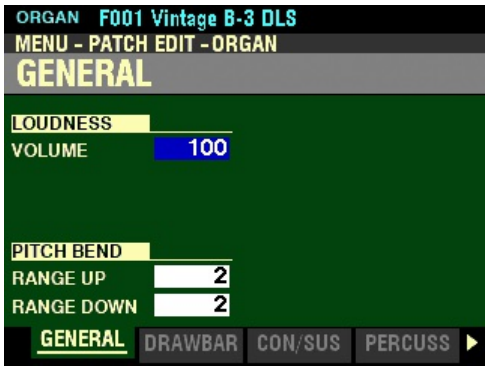


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

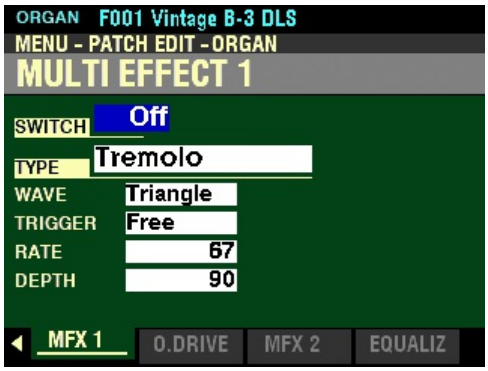


3. Press the ENTER button. The Information Center Display should now look like this:



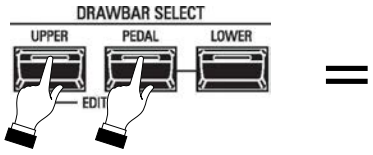
The GENERAL Page of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the ORGAN Voice Section using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



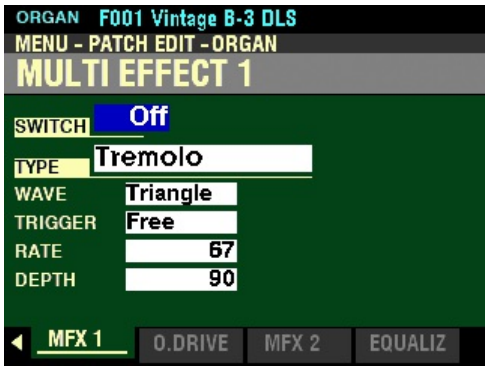
=



The PATCH EDIT -ORGAN FUNCTION Mode should now display.

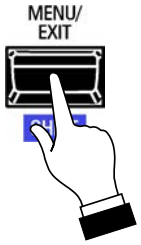
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:

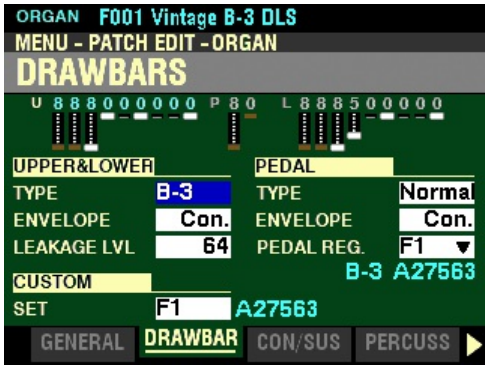


♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the ORGAN Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.

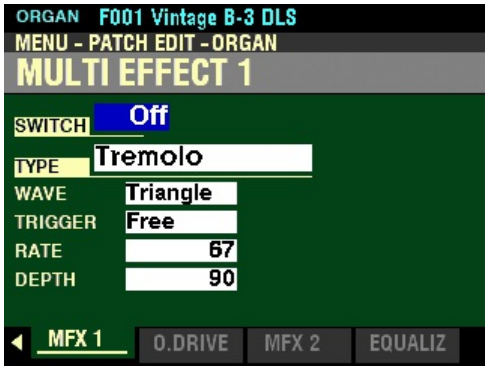


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

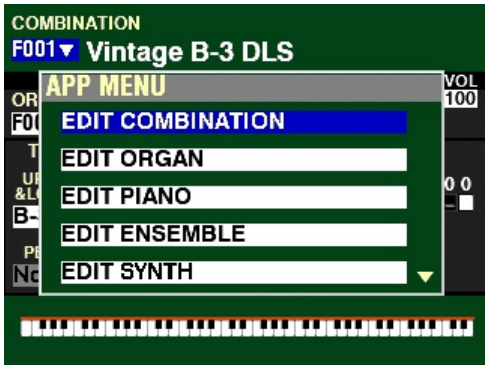
4. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the ORGAN Voice Section using the APP MENU:

1. If the ORGAN button in the ALLOCATE button section is not "ON," press it to turn it "ON."

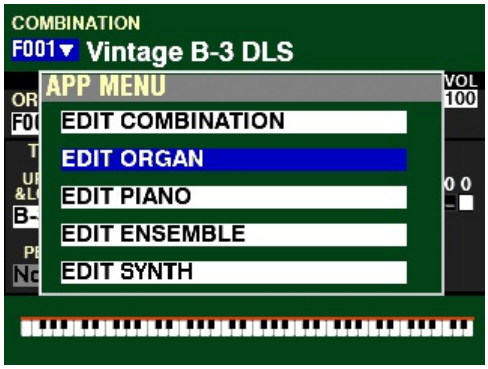
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



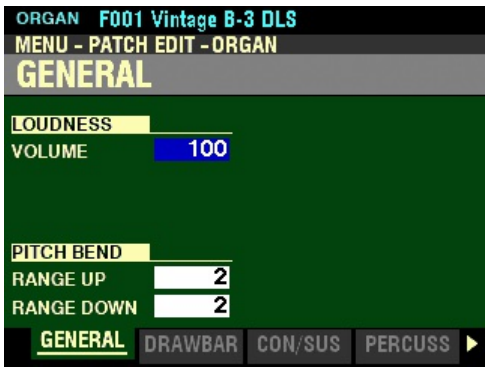
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

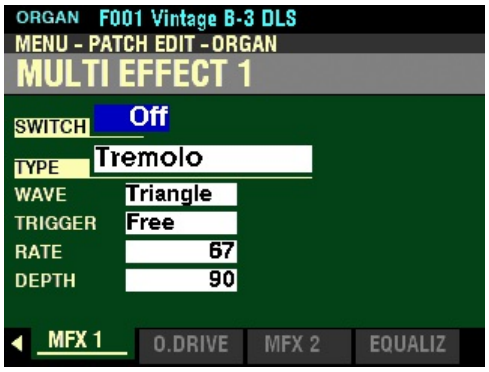
3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



4. Press the ENTER button. The Information Center Display should now look like this:



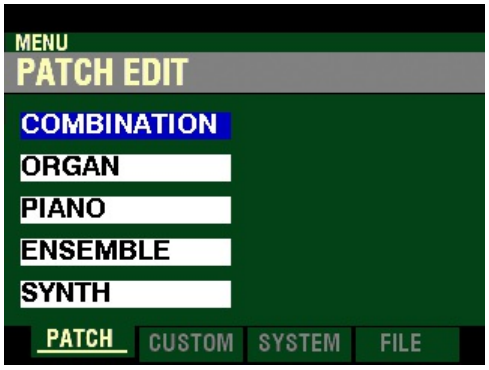
5. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



You are now in the MULTI EFFECT 1 Page of the PATCH EDIT -ORGAN FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the ORGAN sounds.

♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the MENU / EXIT, DIRECTION and PAGE buttons:

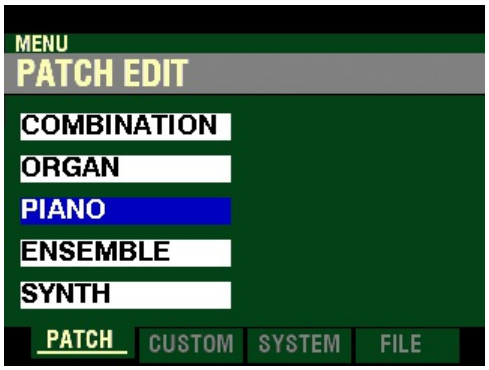
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

PIANO Voice Section:

2. Press the DIRECTION "▼" button two times to highlight the "PIANO" box.



3. Press the ENTER button. The Information Center Display should now look like this:



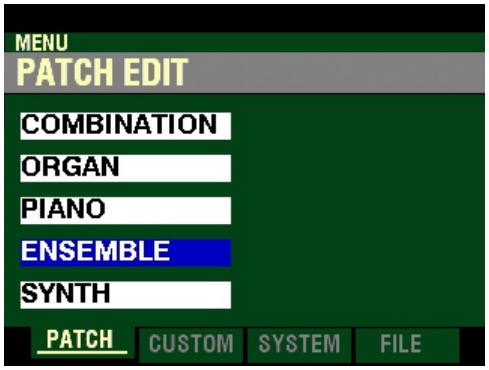
The GENERAL Page of the PATCH EDIT -PIANO FUNCTION Mode should now display.

4. Press the PAGE "▶" button five times. The Information Center Display should now look like this:

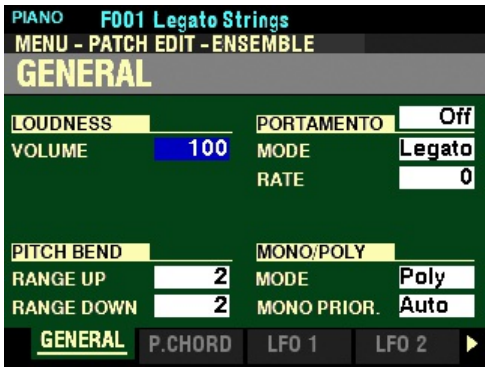


ENSEMBLE Voice Section:

2. Press the DIRECTION "▼" button three times to highlight the "ENSEMBLE" box.



3. Press the ENTER button. The Information Center Display should now look like this:



The GENERAL Page of the PATCH EDIT -ENSEMBLE FUNCTION Mode should now display.

4. Press the PAGE "▶" button five times. The Information Center Display should now look like this:



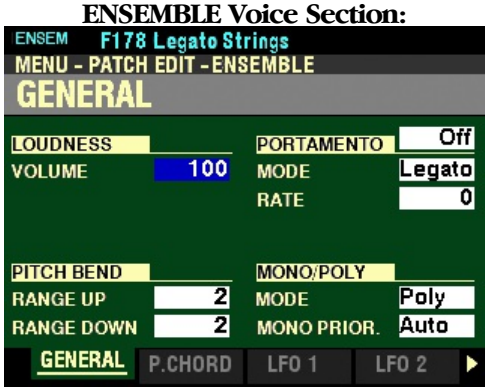
♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the Shortcut:

1. Press and Release the EDIT button in either the PIANO or ENSEMBLE Voice Section, depending on which Section you want to edit. The Information Center Display should now look like this:

PIANO Voice Section:



ENSEMBLE Voice Section:

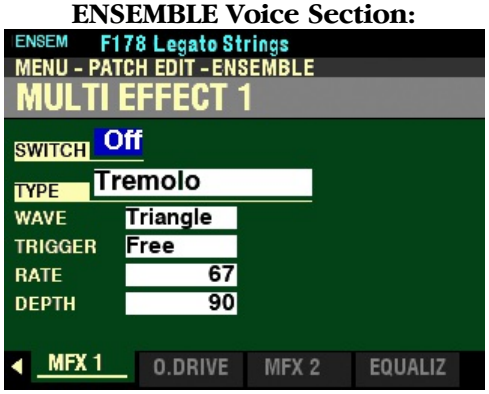


2. Press the PAGE "▶" button five times. The Information Center Display should now look like this:

PIANO Voice Section:



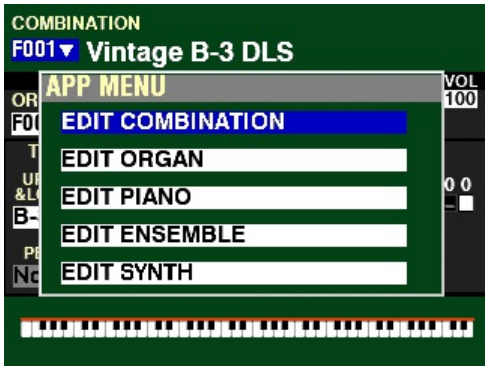
ENSEMBLE Voice Section:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the APP MENU:

1. If the PIANO or ENSEMBLE buttons in the ALLOCATE button section are not "ON," press the ALLOCATE button for the Voice Section you wish to edit "ON."

2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:

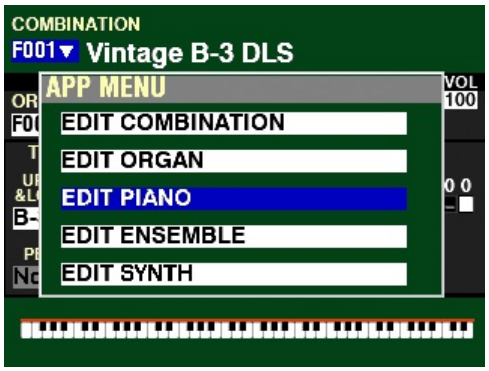


The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

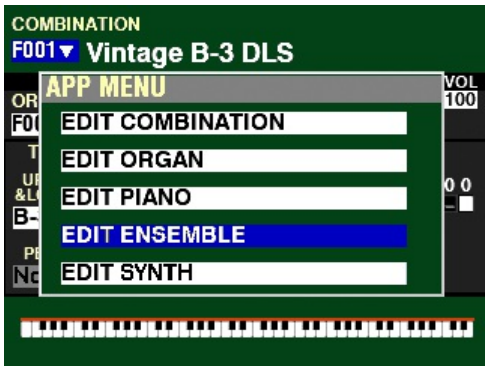
PIANO Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT PIANO" box.



ENSEMBLE Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT ENSEMBLE" box.



4. Press the ENTER button. The Information Center Display should now look like this:



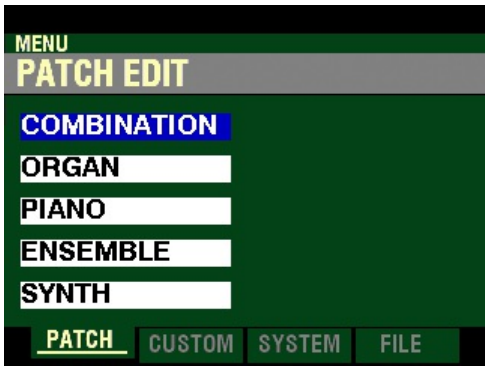
5. Press the PAGE "▶" button five times. The Information Center Display should now look like this:



You are now in the MULTI EFFECT 1 Page of the PATCH EDIT -PIANO or ENSEMBLE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the PIANO or ENSEMBLE sounds.

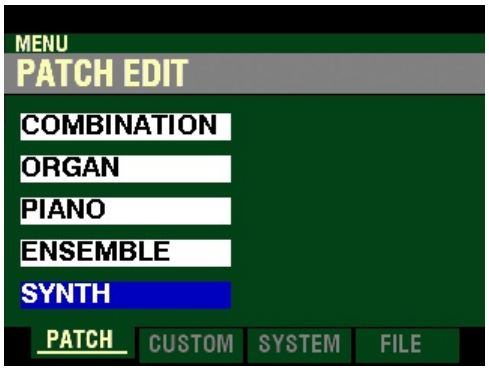
♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the MONO SYNTH Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

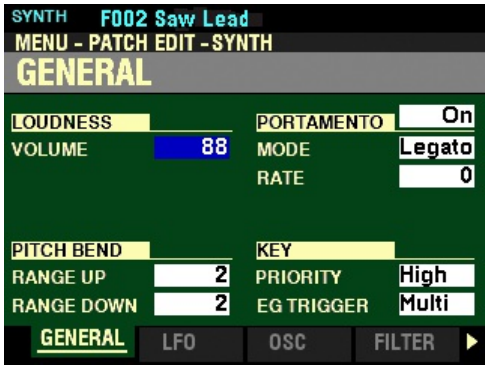


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button four times to highlight the "SYNTH" box.



3. Press the ENTER button. The Information Center Display should now look like this:



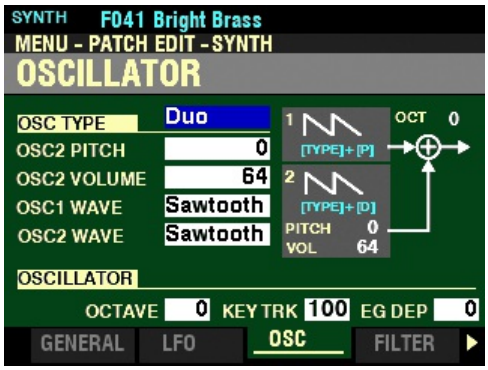
The GENERAL Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the MONO SYNTH Voice Section using the Shortcut:

1. Press and Release the HOLD TO EDIT button in the MONO SYNTH Section. After you release the button, the Information Center Display should look like this:



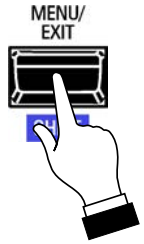
The OSCILLATOR Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

2. Release the HOLD TO EDIT button and press the PAGE "▶" button five times. The Information Center Display should now look like this:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the MONO SYNTH Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the knobs or sliders in the MONO SYNTH Voice Section. You will see one of the Pages in the PATCH EDIT -SYNTH FUNCTION Mode Page.

3. Release the SHIFT button.

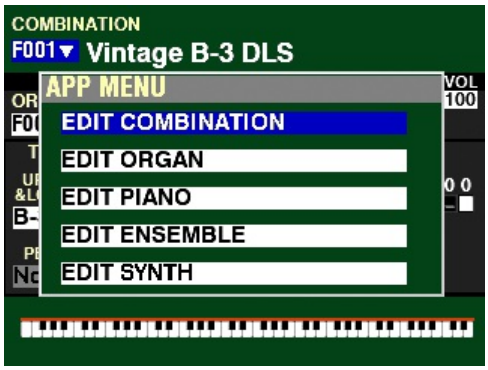
4. Press the PAGE "▶" button repeatedly until the Information Center Display looks like this:



♦ Accessing the MULTI EFFECT 1 FUNCTION Mode Page for the MONO SYNTH Voice Section using the APP MENU:

1. If the SYNTH button in the ALLOCATE button section is not "ON," press it to turn the MONO SYNTH Voice Section "ON."

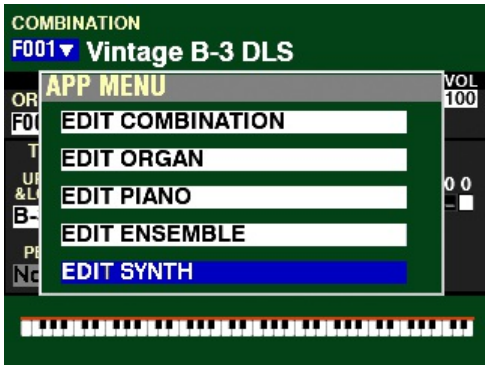
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "🖹" button. The Information Center Display should now look like this:



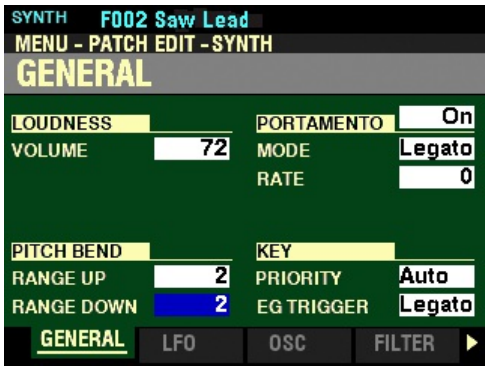
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

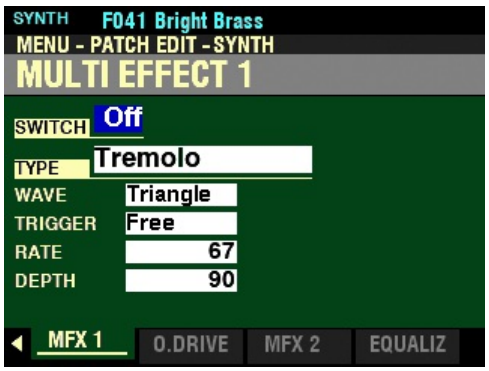
3. Release the MANUAL "🖹" button and press the DIRECTION "▼" button to highlight the "EDIT SYNTH" box.



4. Press the ENTER button. The Information Center Display should now look like this:



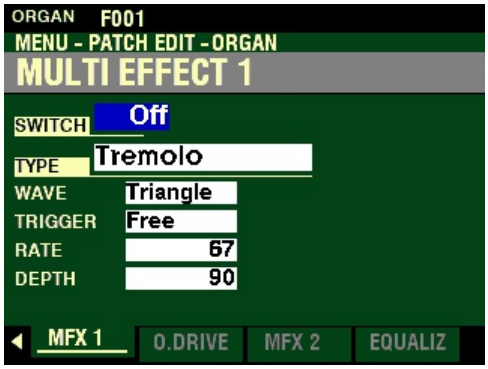
5. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



You are now in the MULTI EFFECT 1 Page of the PATCH EDIT -SYNTH FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the MONO SYNTH.

NOTE: The **MULTI EFFECT 1** Parameters are identical for all Voice Sections. To avoid confusing repetition, the ORGAN Voice Section will be used as the basis for the explanations of these Parameters.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "SWITCH" should be highlighted.

♦ SWITCH

This Parameter allows you to turn MULTI EFFECT 1 On or Off.

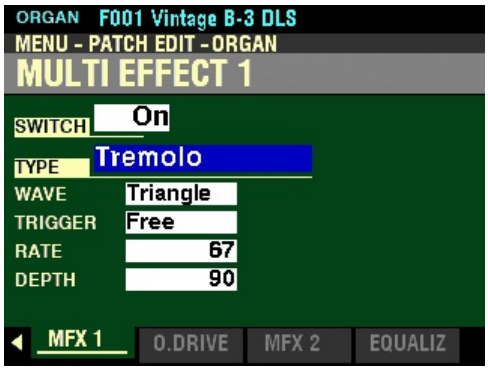
NOTE: This is a "MASTER ON / OFF" for MULTI EFFECT 1.

Turn the VALUE knob to turn MULTI EFFECT 1 On or Off.

For the following explanations, turn the MULTI EFFECT 1 SWITCH On This is so you may select and hear the changes to the characteristics for the selected MULTI EFFECT 1 as you make them.



From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TYPE" should be highlighted.

♦ **TYPE**

This Parameter allows you to select the Type of Multi Effect that will be added when the MULTI EFFECT 1 SWITCH is On.

The data chart shown below describes the different effects in the MULTI EFFECT 1 FUNCTION Mode in the order in which they appear in the Information Center Display.

MULTI-EFFECT 1 TYPE Options	
Multi Effect	**Description**
Tremolo	Raises and lowers the amplitude or volume at a determined rate.
Wah-Wah	Periodic emphasis and de-emphasis of upper frequencies by means of a frequency filter to impart a speech-like quality to the sound.
Ring Modulator	Signal-processing effect whereby two different frequencies are mixed together in such a way as to reduce or eliminate the individual frequencies themselves, leaving only the sum and the difference of the two frequencies.
Compressor	Detects the volume of the source, and reduces or emphasizes the amount of volume change.

Turn the VALUE knob to select Tremolo, Wah-Wah, Ring Modulator or Compressor.

NOTE: These Multi-Effects are **not** available for the **Pipe** Organ Type.

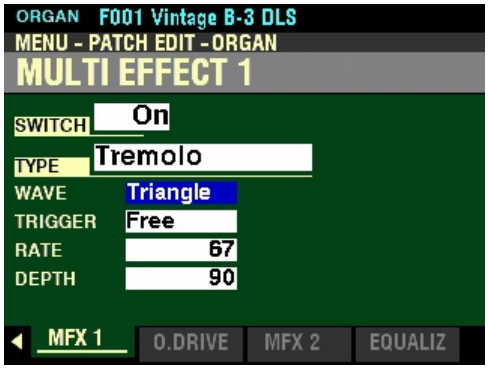
The next pages will describe the MULTI EFFECT 1 Parameters.

Tremolo

Tremolo is a periodic raising and lowering of the amplitude or volume at a determined rate.

NOTE: This Multi Effect is different from the Leslie **Tremolo**, which is meant to simulate the tremulant of a pipe organ.

With "Tremolo" selected, press the DIRECTION "▼" button once.



The box to the right of "WAVE" should be highlighted.

Make sure the box to the right of "SWITCH" displays On; otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the Tremolo MULTI EFFECT as you make them.

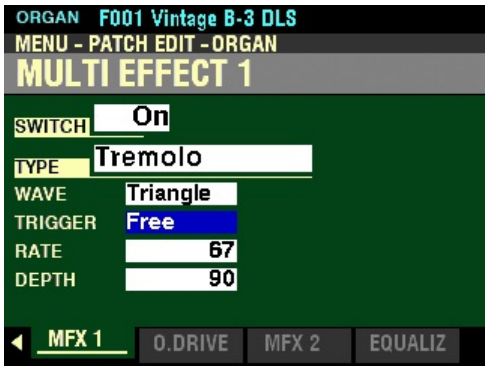
WAVE

This Parameter allows you to select which waveform will be used to modulate the Tremolo. The data chart below shows the options you may select.

TREMOLO LFO WAVE Options	
Waveform	**Description**
Triangle	Triangle wave, which will change the volume smoothly from loud to soft to loud.
Square	Square wave, which will cause the volume to rise and fall suddenly.
SawDown	Descending Sawtooth wave, which will cause the volume to rise suddenly and fall gradually.
S&H	Sample & Hold, which will cause the volume to rise and fall randomly.
DullSqu	Dull Square wave - similar to Square, but with a smoother rising and falling of the volume.

Turn the VALUE knob to select the Waveform you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "TRIGGER" should be highlighted.

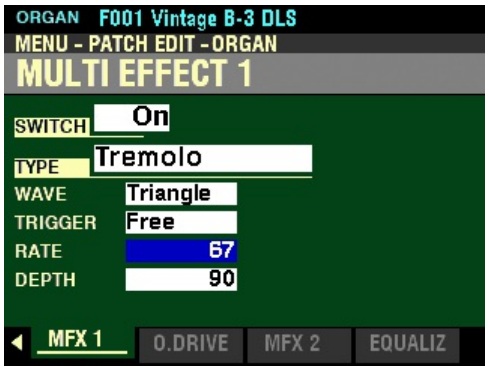
TRIGGER

This Parameter allows you to adjust whether the phase of the modulating waveform will reset each time a key is depressed. The data chart below shows the options you may select.

TREMOLO TRIGGER Options	
Setting	**Description**
Free	Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.
Single	The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.

Turn the VALUE knob to select Free or Single.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

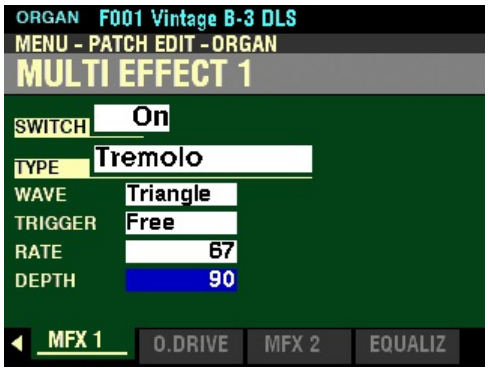
RATE

This Parameter allows you to adjust the rate of the Tremolo cycle. You may select from 0 (slowest rate) to 127 (fastest rate)

Turn the VALUE knob to the right to increase the Rate.

Turn the VALUE knob to the left to decrease the Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

DEPTH

This Parameter allows you to adjust the intensity or depth of the Tremolo. You may select from 0 (no modulation) to 127 (maximum modulation).

Turn the VALUE knob to the right to increase the Tremolo Depth.

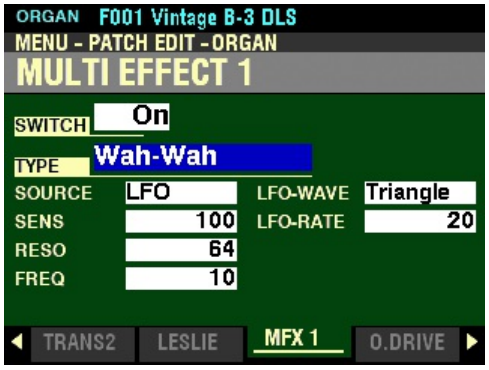
Turn the VALUE knob to the left to decrease the Tremolo Depth.

Wah-Wah

Wah-Wah is a periodic emphasis and de-emphasis of upper frequencies by means of a frequency filter to impart a speech-like quality to the sound. The term itself is descriptive of the sound produced (what grammaticians call an "onomatopoeia.").

Guitarists frequently use this effect, which is also somewhat similar to the sound produced by a trumpeter using a Wah-Wah or Harmon mute.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Wah-Wah."



Make sure the box to the right of "SWITCH" displays On; otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the Wah-Wah MULTI EFFECT as you make them.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "SOURCE" should be highlighted

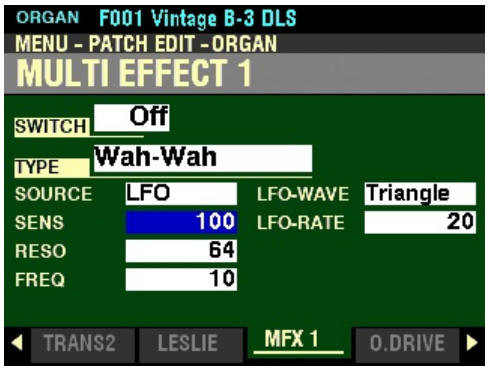
SOURCE

This Parameter allows you to select how the Wah-Wah effect is controlled. The data chart below shows the options you may select.

WAH-WAH SOURCE Options	
Setting	**Description**
Mod.	The effect is controlled by the Modulation Wheel.
Exp.	The effect is controlled by the Expression Pedal.
LFO	The effect is controlled by the inbuilt LFO (**L**ow **F**requency **O**scillator).
Input	The effect is controlled by the input audio envelope of the sound engine.

Turn the VALUE knob to select the option you want.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "SENS" should be highlighted.

SENS - Wah-Wah Sensitivity

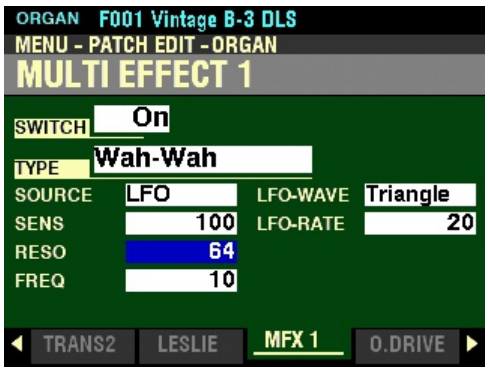
This Parameter allows you to sets the Sensitivity or High and Low ranges of the Wah-Wah effect. You may select from 0 (minimum range) to 127 (maximum range).

Turn the VALUE knob to the right to increase the range.

Turn the VALUE knob to the left to decrease the range.

NOTE: The effect of this Parameter depends on the **SRC** (Source) setting. When **LFO** is selected, the VALUE knob can be used to control the excursion of the Wah-Wah effect. When **EXP** is selected, the Expression Pedal can be used to control the Wah-Wah sensitivity.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "RESO" should be highlighted.

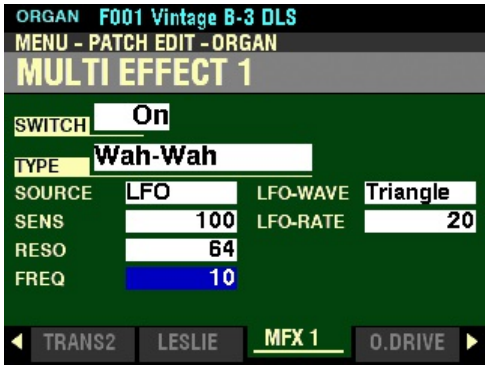
RESO - Wah-Wah Resonance

This Parameter allows you to set the resonance frequency of the Low-Pass Filter used to control the Wah-Wah effect. You may select from 0 (minimum resonance) to 127 (maximum resonance). At higher number settings, the Wah-Wah effect becomes more pronounced and articulated.

Turn the VALUE knob to the right to increase the amount of Resonance.

Turn the VALUE knob to the left to decrease the amount of Resonance.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "FREQ" should be highlighted.

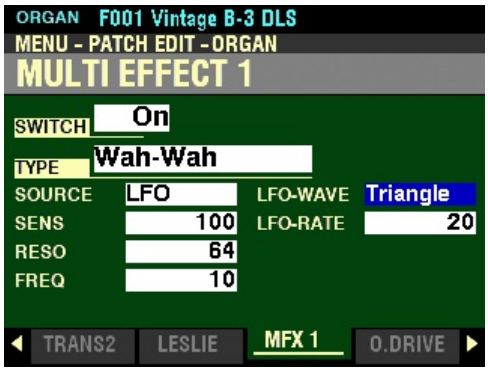
FREQ - Wah-Wah Frequency

This Parameter allows you to adjust the central frequency of the Wah-Wah effect. You may select from 0 (lowest frequency) to 127 (highest frequency).

Turn the VALUE knob to the right to increase the Frequency.

Turn the VALUE knob to the left to decrease the Frequency.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "LFO WAVE."



LFO WAVE - Wah-Wah Waveform

This Parameter allows you to select which waveform will be used to modulate the Wah-Wah effect. The data chart below shows the options you may select.

WAH-WAH LFO WAVE Options	
Waveform	**Description**
TRI	Triangle wave, which will change the sound smoothly from high to low to high.
SQR	Square wave, which will cause the filter to rise and fall suddenly.
SAW	Ascending Sawtooth wave, which will cause the filter to rise suddenly and fall gradually.
S&H	Sample & Hold, which will cause the filter to rise and fall randomly.

NOTE: The SOURCE must be set to "LFO" in order for this Parameter to function.

Turn the VALUE knob to select the Waveform you want.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "LFO RATE" should be highlighted.

LFO RATE - Wah-Wah Rate

This Parameter allows you to adjust the rate of the Wah-Wah effect. You may select from 0 (slowest rate) to 127 (fastest rate).

NOTE: The SOURCE must be set to **LFO** in order for this Parameter to function.

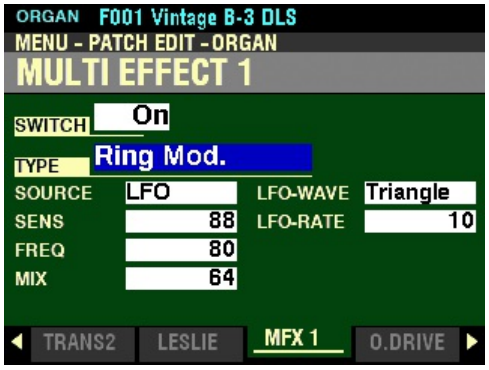
Turn the VALUE knob to the right to increase the rate.

Turn the VALUE knob to the left to decrease the rate.

Ring Mod. (Ring Modulator)

"Ring modulation" is a signal-processing effect whereby two different frequencies are mixed together in such a way as to eliminate, as much as possible, the individual frequencies themselves, leaving only the sum and the difference of the two frequencies. In analog circuits, this is accomplished by arranging diodes in a circle or ring, giving rise to the term, "ring modulator." The result is a sound rich in overtones and typically having somewhat of a bell-like or metallic quality. Because of this, the sound is sometimes called a "Klang tone."

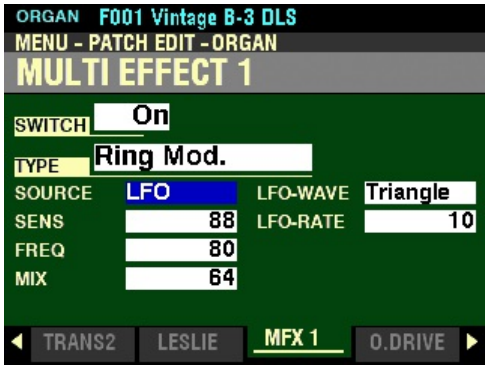
From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Ring Mod."



Make sure the box to the right of "SWITCH" displays <u>On</u>, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the <u>Ring</u> <u>Modulator</u> MULTI EFFECT as you make them.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "SOURCE" should be highlighted.

SOURCE

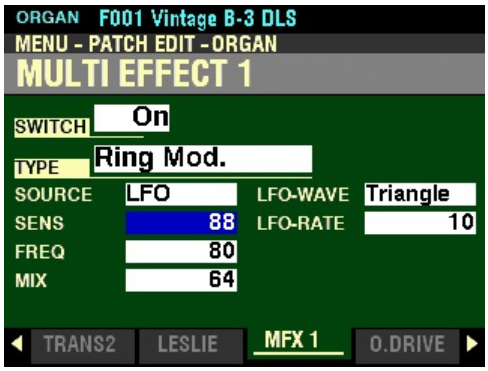
Because a Ring Modulator requires two frequencies, there needs to be some way to control the "ring" frequency, or the frequency the sound produced by the playing keys will interface with. This Parameter allows you to select how the ring frequency will be controlled.

The data chart below shows the options you may select.

RING MODULATOR SOURCE Options	
Setting	**Description**
MOD	The effect is controlled by the Modulation Wheel.
EXP	The effect is controlled by the Expression Pedal.
EXP	The effect is controlled by the inbuilt LFO (**L**ow **F**requency **O**scillator).
Note	The effect is controlled by the notes played on the keyboard.

Turn the VALUE knob to select the option you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "SENS" should be highlighted.

SENS - Ring Modulator Sensitivity

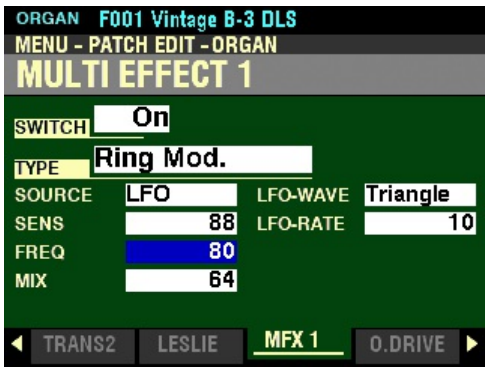
This Parameter allows you to sets the High and Low ranges of the Ring Modulator effect. You may select from 0 (minimum range) to 127 (maximum range).

Turn the VALUE knob to the right to increase the range.

Turn the VALUE knob to the left to decrease the range.

NOTE: The effect of this Parameter depends on the **SRC** (Source) setting. When **LFO** is selected, the VALUE knob can be used to control the excursion of the Ring Modulator effect. When **EXP** is selected, the Expression Pedal can be used to control the Ring Modulator sensitivity. When **Note** is selected, this Parameter is disabled.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "FREQ" should be highlighted.

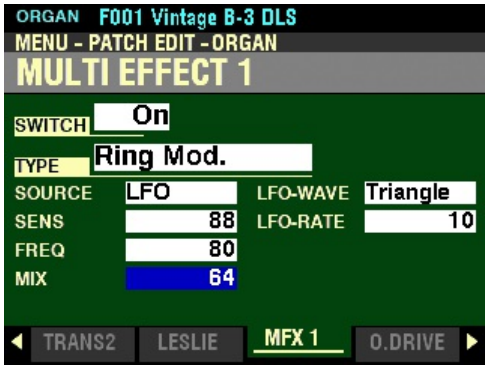
RES - Ring Modulator Frequency

This Parameter allows you to adjust the central frequency of the Ring Modulator effect. You may select from 0 (lowest frequency) to 127 (highest frequency).

Turn the VALUE knob to the right to increase the frequency.

Turn the VALUE knob to the left to decrease the frequency.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "MIX" should be highlighted.

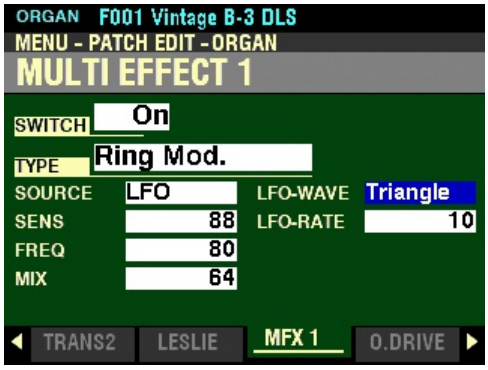
FREQ - Ring Modulator Mix

This Parameter allows you to adjust the volume balance between the "dry" and the effect sounds. You may select from 0 to 127. At 0 only the "dry" sound is heard. The effect level becomes greater as the value increases. At 64 the ratio between the "dry" and the effect sounds becomes 1:1. At 127" only the effect sound is heard.

Turn the VALUE knob to the right to emphasize the Effect Sound.

Turn the VALUE knob to the left to emphasize the Dry Sound.

From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "LFO WAVE."



LFO WAVE - Ring Modulator Waveform

This Parameter allows you to select which waveform will be used to modulate the Ring Modulator effect. The data chart below shows the options you may select.

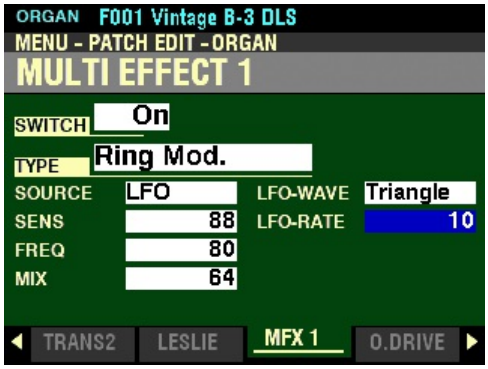
RING MODULATOR LFO WAVE Options

Waveform	Description
Triangle	Triangle wave, which will change the sound smoothly from high to low to high.
SQR	Square wave, which will cause the filter to rise and fall suddenly.
SAW	Ascending Sawtooth wave, which will cause the filter to rise suddenly and fall gradually.
S&H	Sample & Hold, which will cause the filter to rise and fall randomly.

Turn the VALUE knob to select the Waveform you want.

NOTE: The SOURCE must be set to **LFO** in order for this Parameter to function.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "LFO RATE" should be highlighted.

LFO RATE - Ring Modulator Rate

This Parameter allows you to adjust the rate of the Ring Modulator effect. You may select from 0 (slowest rate) to 127 (fastest rate).

Turn the VALUE knob to the right to increase the Rate.

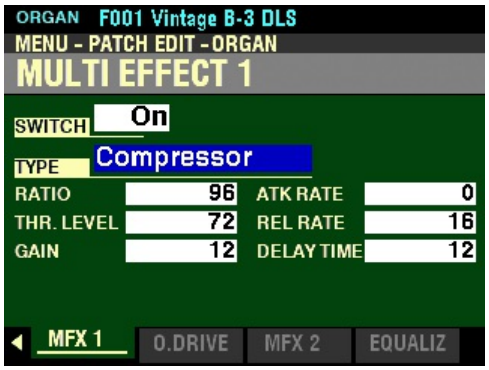
Turn the VALUE knob to the left to decrease the Rate.

NOTE: The SOURCE must be set to **LFO** in order for this Parameter to function.

Compressor

Compressor detects the volume of the source, and reduces or emphasizes the amount of volume change.

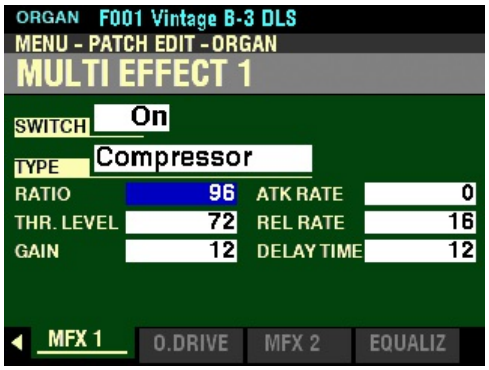
From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Compressor."



Make sure the box to the right of "SWITCH" displays On, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the Compressor MULTI EFFECT as you make them.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATIO" should be highlighted.

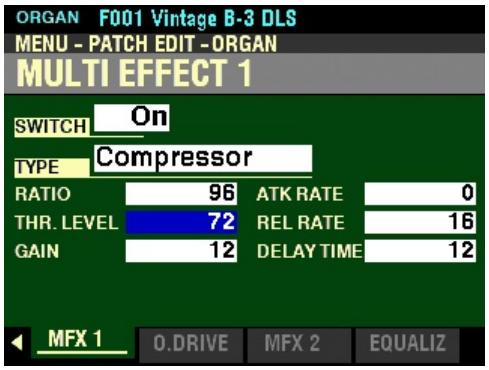
RATIO RATE

This Parameter allows you to adjust the ratio at which the volume changes between input and output. You may select from 0 to 127. A higher value results in a lesser change of volume.

Turn the VALUE knob to the right to increase the Ratio Rate.

Turn the VALUE knob to the left to decrease the Ratio Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "THR LEVEL" should be highlighted.

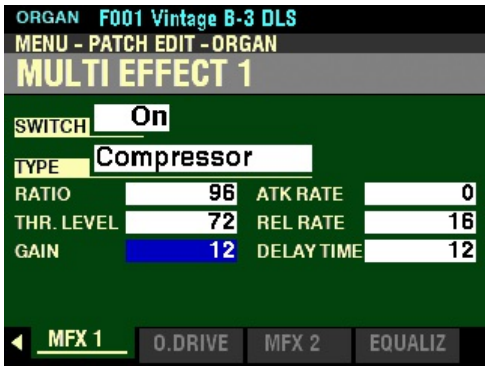
THRESHOLD LEVEL

This Parameter allows you to adjust the value of the input level at which reduction begins. You may select from 0 to 127 (0 to +24db). A lower value results in compression beginning at a lower input level.

Turn the VALUE knob to the right to increase the Threshold Level.

Turn the VALUE knob to the left to decrease the Threshold Level.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "GAIN" should be highlighted.

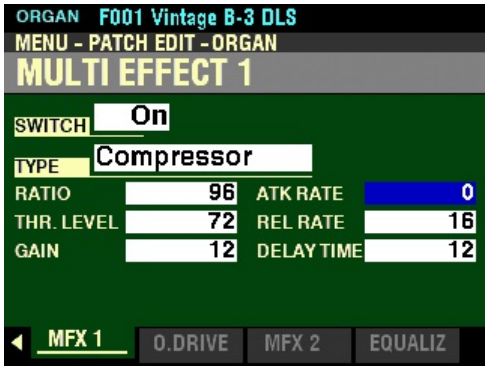
OUTPUT GAIN

This Parameter allows you to increase the volume to a level to be reduced by the compression process. You may select from 0 to 127 (0 to +24db) A higher value results in a higher volume.

Turn the VALUE knob to the right to increase the Gain.

Turn the VALUE knob to the left to decrease the Gain.

From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "ATK RATE."



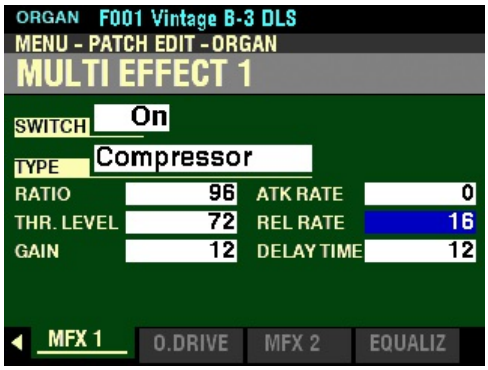
ATTACK RATE

This Parameter allows you to adjust the rate at which the volume is reduced when the input sound exceeds the threshold level. You may select from 0 to 127. A higher value results in a slower reduction rate and the Attack of the sound is emphasized.

Turn the VALUE knob to the right to increase the Attack Rate.

Turn the VALUE knob to the left to decrease the Attack Rate.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "REL RATE" should be highlighted

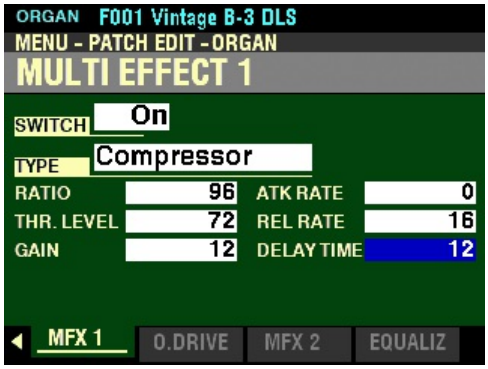
RELEASE RATE

This Parameter allows you to adjust the rate at which the volume is reduced when the input sound is lower than the threshold level. You may select from 0 to 127. A higher value results in a slower release time and the Return gain is delayed.

Turn the VALUE knob to the right to increase the Release Rate.

Turn the VALUE knob to the left to decrease the Release Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DELAY TIME" should be highlighted.

DELAY TIME

This Parameter allows you to adjust the amount of time before compression takes effect after a key is depressed. You may select from 0 to 127. A higher value results in a longer delay.

NOTE: This is referred to as the "lookahead" time. This is a special feature of digital compression systems whereby the system can "look ahead" to see the signal before it is processed, identify any possible problems (such as spikes, etc.) and apply any needed correction to it before Attack, Release and other Parameters are applied.

Turn the VALUE knob to the right to increase the Delay Time.

Turn the VALUE knob to the left to decrease the Delay Time.

◆ OVERDRIVE

When used with the ORGAN Voice Section, Overdrive adds a sound similar to the effect created by the vacuum tubes of a tube-style Leslie Speaker when its volume is pushed past its sound limit. In small amounts, Overdrive will add a "warmth" to the sound. In larger amounts it will add a raspy, "fuzzy" quality to the sound.

When used with the PIANO, ENSEMBLE or MONO SYNTH Voices, Overdrive adds distortion to the sound by increasing the pre-amplifier input gain.

NOTE: The Overdrive for the ORGAN Voice Section is **not** available for the **Pipe** Organ Type.

♦ OVERDRIVE button

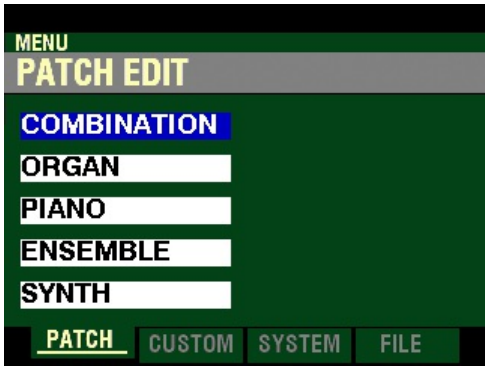


Press this button to turn the Overdrive effect "ON" or "OFF."

NOTE: The OVERDRIVE button must be "ON" in order to hear the Overdrive effect. Both the type and amount of Overdrive are controlled by Parameters.

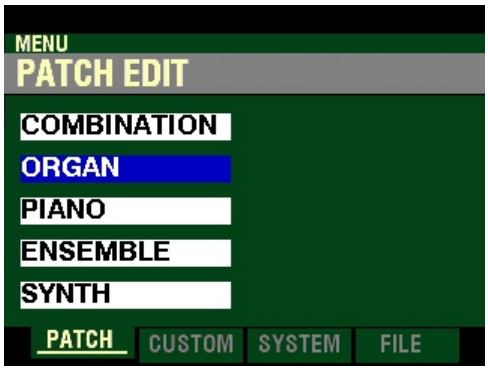
♦ Accessing the OVERDRIVE FUNCTION Mode Page for the ORGAN Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

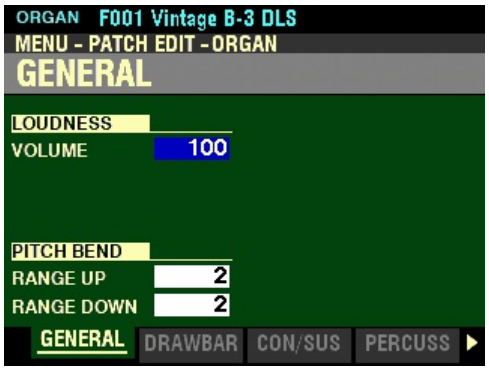


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

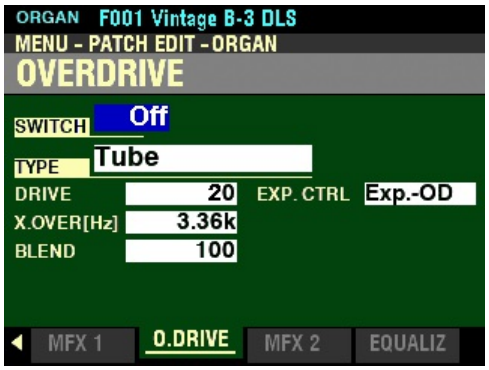


3. Press the ENTER button. The Information Center Display should now look like this:



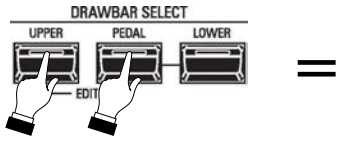
The GENERAL Page of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:

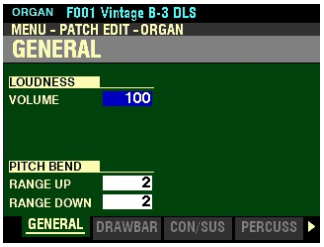


♦Accessing the OVERDRIVE FUNCTION Mode Page for the ORGAN Voice Section using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.

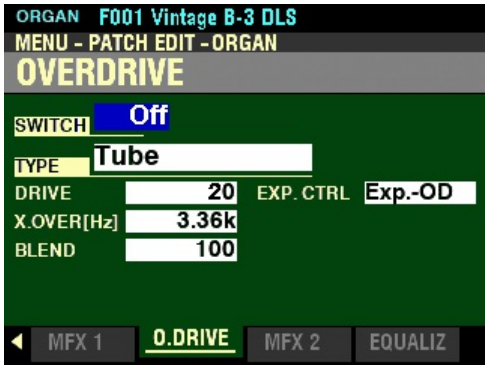


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2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

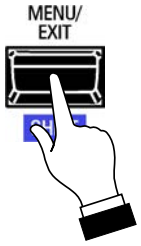
2. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



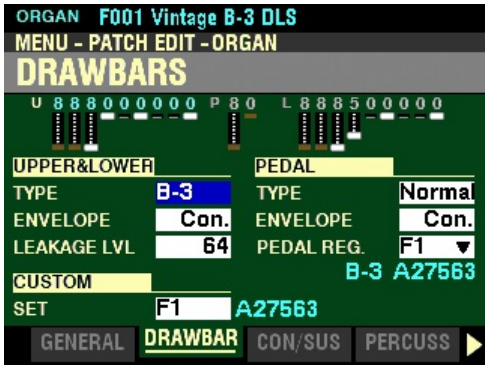
NOTE: You can access the ORGAN OVERDRIVE FUNCTION Mode Page at any time by Pressing and Holding the OVERDRIVE button in the ORGAN section of the Control Panel. However, the OVERDRIVE button **cannot** be used to Shortcut to the OVERDRIVE FUNCTION Mode Pages for the other Voice Sections.

♦ Accessing the OVERDRIVE FUNCTION Mode Page for the ORGAN Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

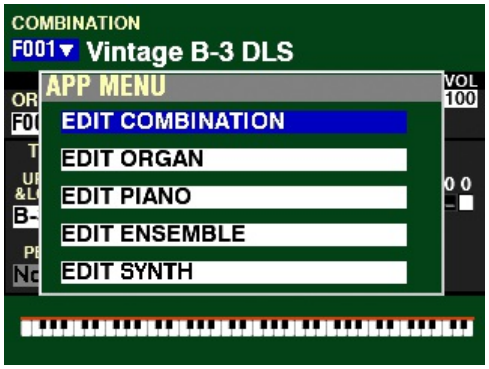
4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



♦Accessing the OVERDRIVE FUNCTION Mode Page for the ORGAN Voice Section using the APP MENU:

1. If the ORGAN button in the ALLOCATE button section is not "ON," press it to turn it "ON."

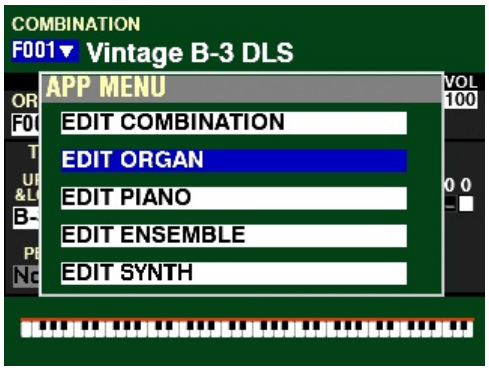
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "☰" button. The Information Center Display should now look like this:



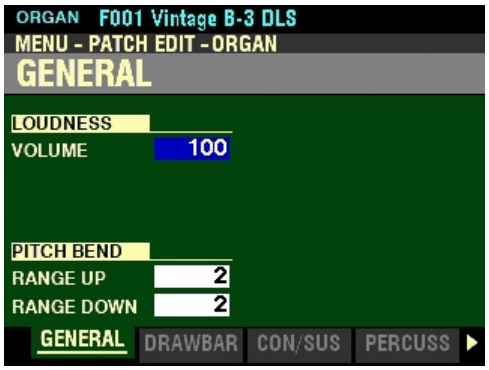
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

3. Release the MANUAL "☰" button and press the DIRECTION "▼" button once to highlight the "EDIT ORGAN" box.



4. Press the ENTER button. The Information Center Display should now look like this:



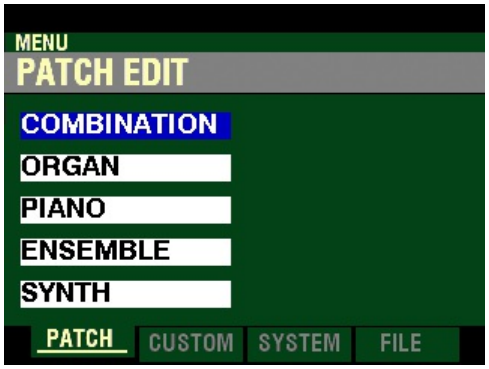
5. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



You are now in the OVERDRIVE Page of the PATCH EDIT -ORGAN FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the Overdrive for the ORGAN sounds.

♦ Accessing the OVERDRIVE FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the MENU / EXIT, DIRECTION and PAGE buttons:

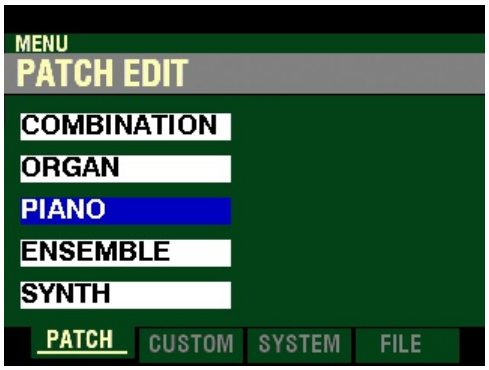
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

PIANO Voice Section:

2. Press the DIRECTION "▼" button two times to highlight the "PIANO" box.



3. Press the ENTER button. The Information Center Display should now look like this:



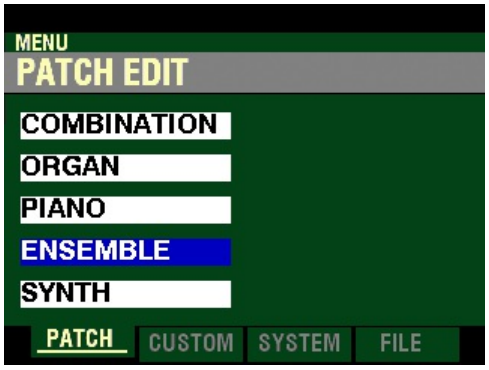
The GENERAL Page of the PATCH EDIT -PIANO FUNCTION Mode should now display.

4. Press the PAGE "▶" button six times. The Information Center Display should now look like this:

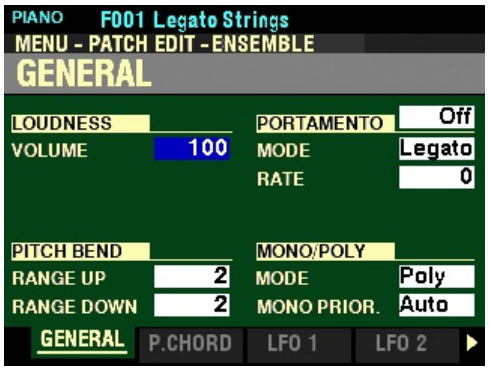


ENSEMBLE Voice Section:

2. Press the DIRECTION "▼" button three times to highlight the "ENSEMBLE" box.



3. Press the ENTER button. The Information Center Display should now look like this:



The GENERAL Page of the PATCH EDIT -ENSEMBLE FUNCTION Mode should now display.

4. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



♦ Accessing the OVERDRIVE FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the Shortcut:

1. Press and Release the EDIT button in either the PIANO or ENSEMBLE Voice Section, depending on which Section you want to edit. The Information Center Display should now look like this:

PIANO Voice Section:



ENSEMBLE Voice Section:



2. Press the PAGE "▶" button six times. The Information Center Display should now look like this:

PIANO Voice Section:

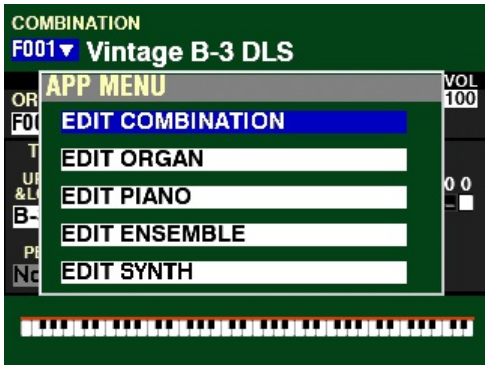




♦Accessing the OVERDRIVE FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the APP MENU:

1. Press the PIANO or ENSEMBLE button in the ALLOCATE button section to turn the Voice Section you wish to edit "ON."

2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:

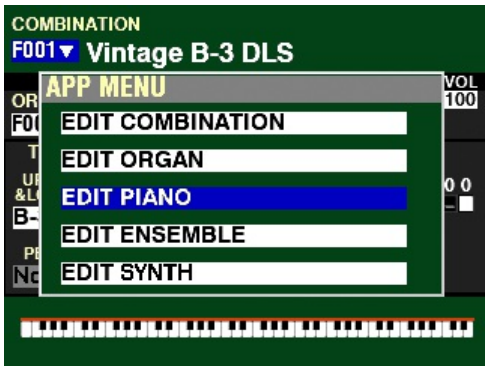


The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above

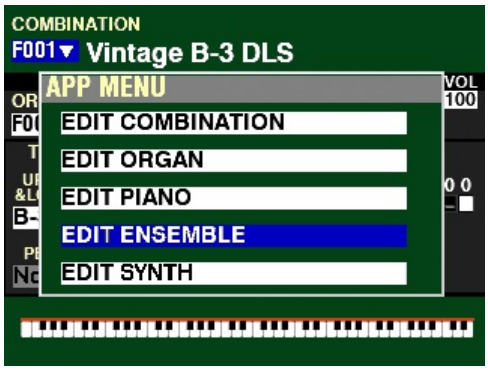
PIANO Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT PIANO" box.



ENSEMBLE Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the"EDIT ENSEMBLE" box.



4. Press the ENTER button. The Information Center Display should now look like this:



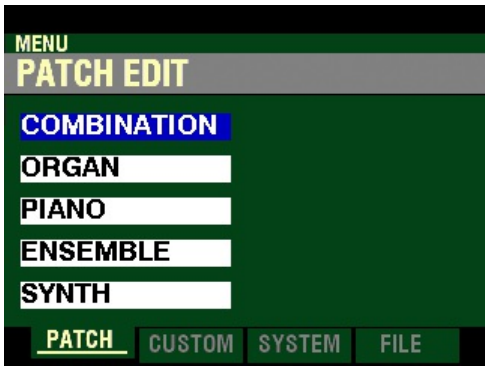
5. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



You are now in the OVERDRIVE Page of the PATCH EDIT -PIANO or ENSEMBLE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the Overdrive for the PIANO or ENSEMBLE sounds.

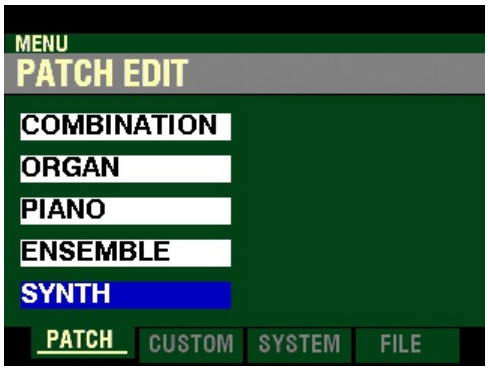
♦ Accessing the OVERDRIVE FUNCTION Mode Page for the MONO SYNTH Voice Section using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

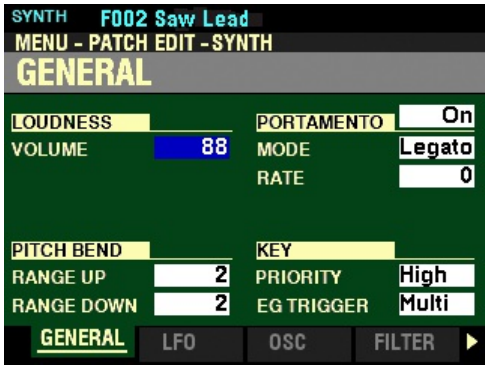


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button four times to highlight the "SYNTH" box.

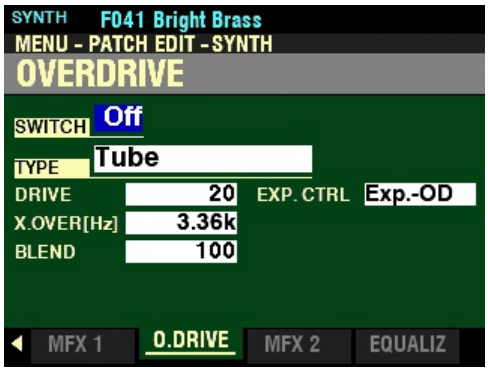


3. Press the ENTER button. The Information Center Display should now look like this:



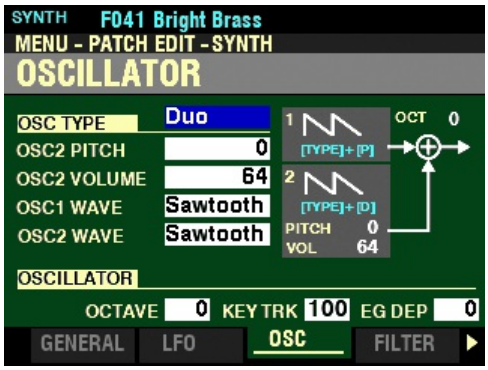
The GENERAL Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

4. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



♦ Accessing the OVERDRIVE FUNCTION Mode Page for the MONO SYNTH Voice Section using the Shortcut:

1. Press and Release the HOLD TO EDIT button in the MONO SYNTH Section. After you release the button, the Information Center Display should look like this:

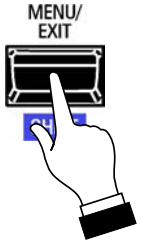


2. Press the PAGE "▶" button six times. The Information Center Display should now look like this:



♦ Accessing the OVERDRIVE FUNCTION Mode Page for the MONO SYNTH Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the knobs or sliders in the MONO SYNTH Voice Section. You will see one of the Pages in the PATCH EDIT -SYNTH FUNCTION Mode Page.

3. Release the SHIFT button.

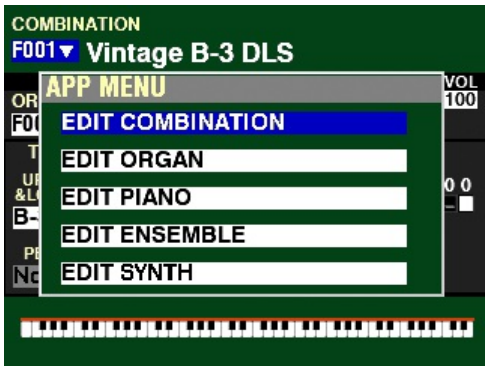
4. Press the PAGE "▶" button repeatedly until the Information Center Display looks like this:



♦ Accessing the OVERDRIVE FUNCTION Mode Page for the MONO SYNTH Voice Section using the APP MENU:

1. Press the SYNTH button in the ALLOCATE button section to turn the MONO SYNTH Voice Section "ON."

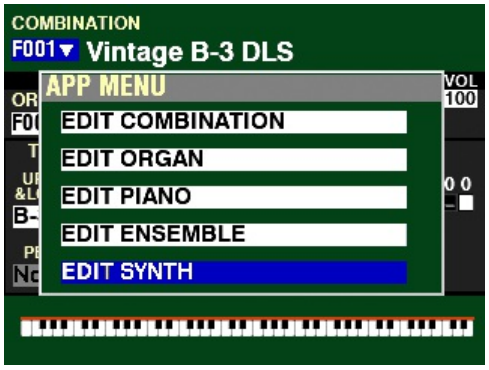
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



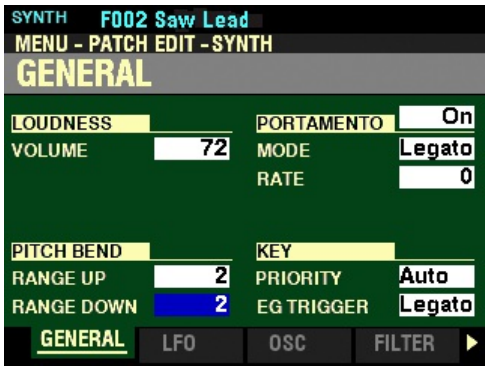
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

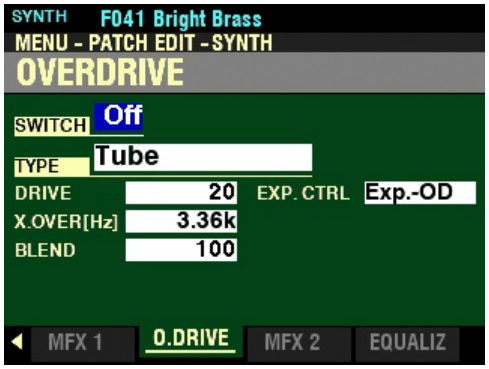
3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT SYNTH" box.



4. Press the ENTER button. The Information Center Display should now look like this:



5. Press the PAGE "▶" button five times. The Information Center Display should now look like this:



You are now in the OVERDRIVE Page of the PATCH EDIT -SYNTH FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the Overdrive for the MONO SYNTH.

NOTE: The **OVERDRIVE** Parameters are identical for all Voice Sections. To avoid confusing repetition, the ORGAN Voice Section will be used as the basis for the explanations of these Parameters.

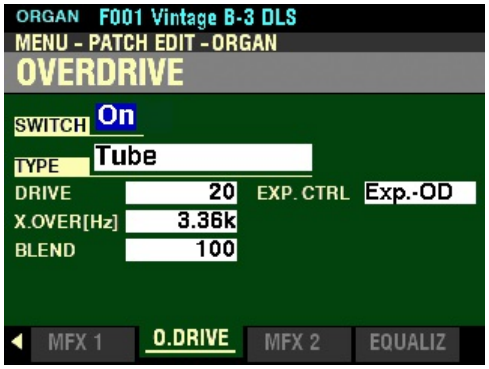
SWITCH

This Parameter allows you to turn OVERDRIVE On or Off.

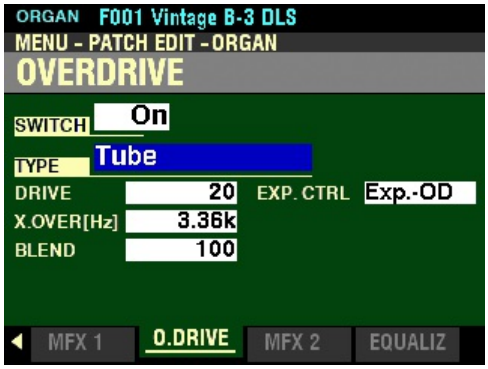
NOTE: This is a "MASTER ON / OFF" for **OVERDRIVE**.

Turn the VALUE knob to select On or Off.

For the following explanations, turn the OVERDRIVE SWITCH On. This is so you may select and hear the changes to the characteristics for the OVERDRIVE as you make them.



From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TYPE" should be highlighted.

TYPE

This Parameter allows you to adjust the character of the Overdrive.

The data chart below shows the options you may select.

OVERDRIVE TYPE Options	
Setting	**Description**
Tube	Soft clipped sound similar to a vacuum tube (valve) amplifier.
Solid	Hard clipped sound similar to a solid state amplifier.
Clip	Precision hard-clipped sound.
EP Amp	Soft clipped sound similar to the amplifier of an Electric Piano.

Turn the VALUE knob to select the option you want.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "DRIVE" should be highlighted.

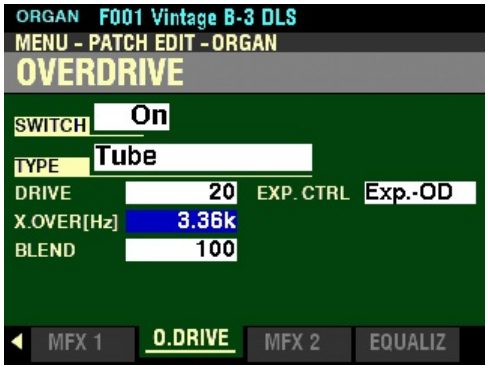
DRIVE

This Parameter allows you to adjust the amount of Overdrive. You may select from 0 to 127. A higher value results in more distortion.

Turn the VALUE knob to the right to increase the amount of Overdrive.

Turn the VALUE knob to the left to decrease the amount of Overdrive.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "X.OVER[Hz]" should be highlighted.

CROSSOVER FREQUENCY

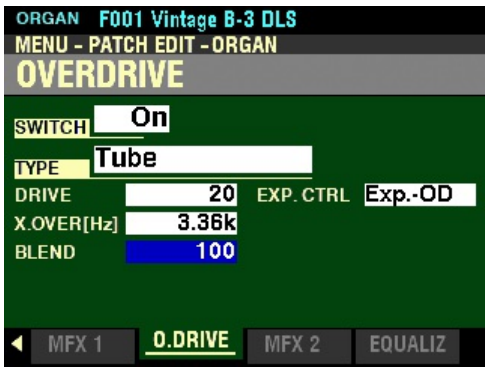
This Parameter allows you to adjust the upper limit of the frequency range receiving Overdrive. You may select from 400 to 14.7 kHz.

Turn the VALUE knob to the right to raise the Crossover Frequency.

Turn the VALUE knob to the left to lower the Crossover Frequency.

NOTE: The Overdrive effect introduces several artifacts to the sound, one of which is, harmonics (overtones). Some of these harmonics may be undesirable and create harmonic interference between "dry" and "overdriven" sounds. By using the Crossover Frequency Parameter to limit the amount of upper frequencies receiving Overdrive, you can minimize or eliminate harmonic interference and create a more pleasing sound.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "BLEND" should be highlighted.

BLEND

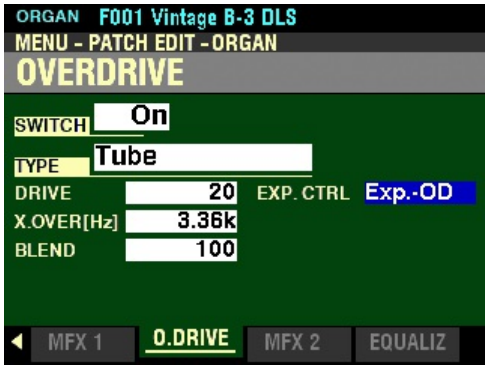
This Parameter allows you to adjust the balance between dry and Overdriven sounds. You may select from 0 to 127. At 0 the sound is "dry" At 127 only the Overdriven sound is heard. The numbers in between allow mixing of dry and Overdriven sounds.

Turn the VALUE knob to the right to increase the Overdrive.

Turn the VALUE knob to the left to decrease the Overdrive.

NOTE: The blending rate may not always be "1:1" if the value is set at 64 due to different envelopes between dry and Overdriven sounds.

From the above screen, press the DIRECTION "▶" button once to highlight the box to the right of "EXP CTRL."



EXPRESSION CONTROL

This Parameter allows you to select whether you want to use a connected Expression Pedal to control overall Volume, amount of Overdrive, or both. The data chart below shows the options you may select.

OVERDRIVE EXPRESSION CONTROL Options	
Parameter	**Description**
EX-OD	The Expression Pedal will control both Volume and Overdrive.
OD-EX	The Expression Pedal will control only the Volume.
OD ONLY	The Expression Pedal will control only the amount of Overdrive.
INPUT	the Expression Pedal will control both Volume and Overdrive, but by a lesser amount than EX-OD.

Turn the VALUE knob to select the option you want.

◆ MULTI EFFECT 2

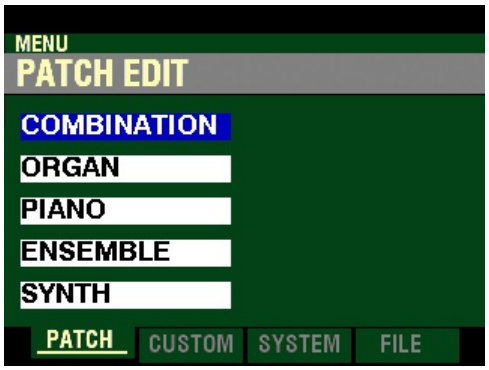
There are five Multi Effects that are inserted post-Overdrive and Expression.

1. AutoPan
2. Phaser
3. Flanger
4. Chorus
5. Delay

This FUNCTION Mode Page allows you to select and adjust these Effects.

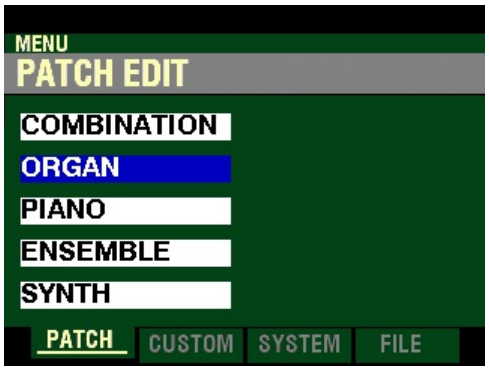
♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the ORGAN Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

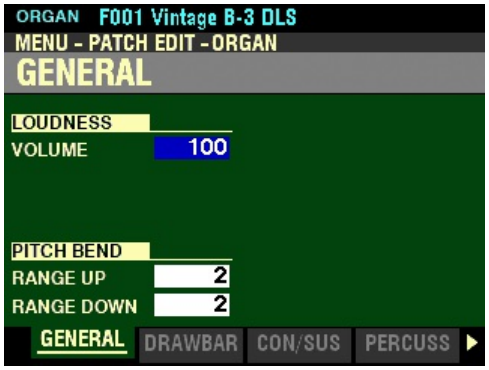


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

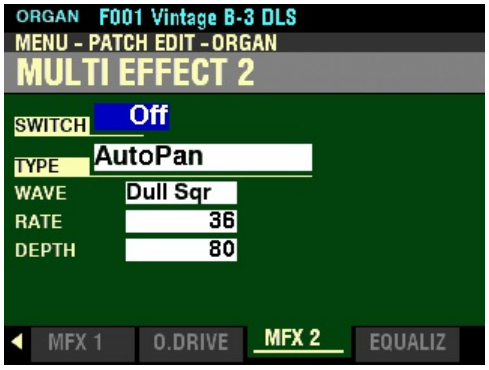


3. Press the ENTER button. The Information Center Display should now look like this:



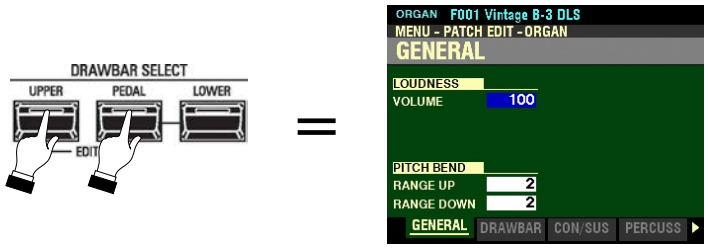
The GENERAL Page of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button nine times. The Information Center Display should now look like this:



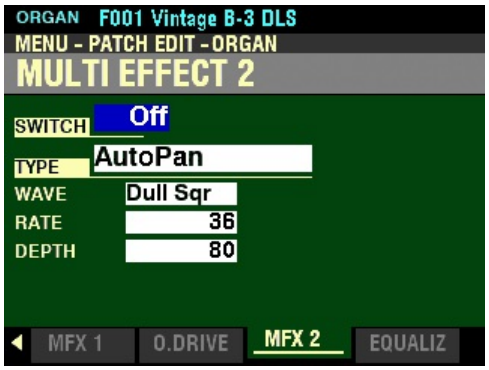
♦Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the ORGAN Voice Section using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



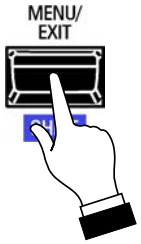
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button nine times. The Information Center Display should now look like this:

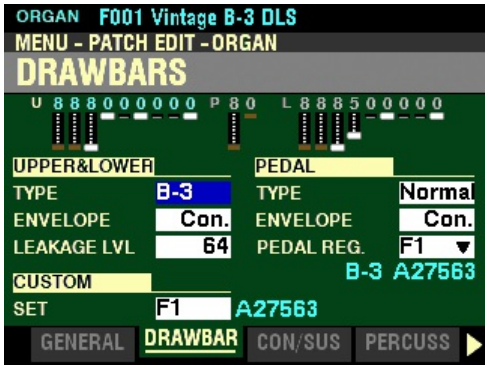


♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the ORGAN Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.

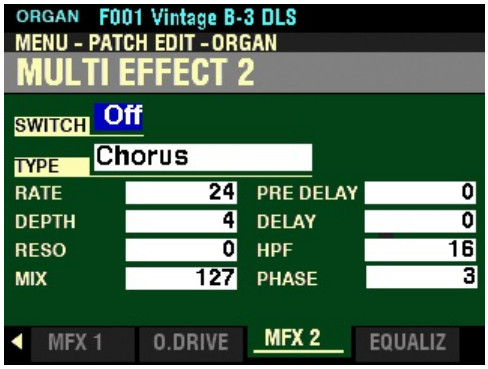


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

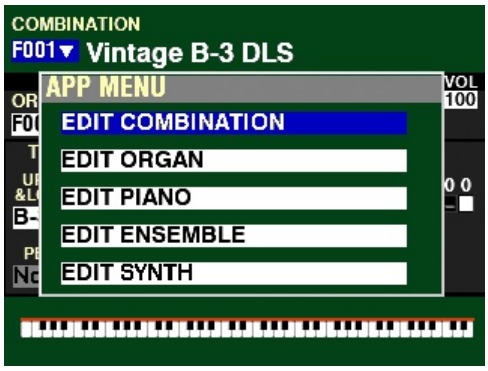
4. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the ORGAN Voice Section using the APP MENU:

1. If the ORGAN button in the ALLOCATE button section is not "ON," press it to turn it "ON."

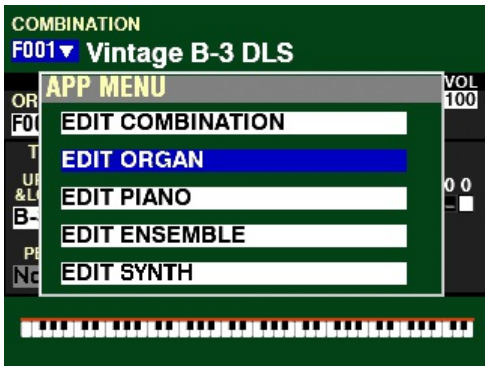
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "☰" button. The Information Center Display should now look like this:



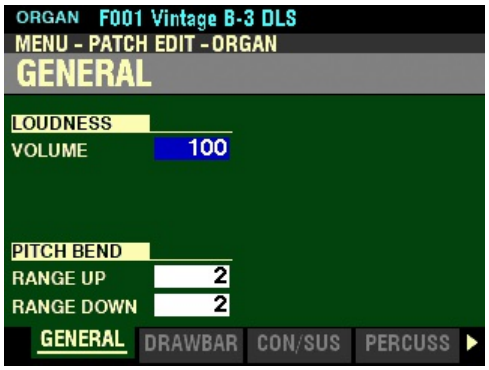
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

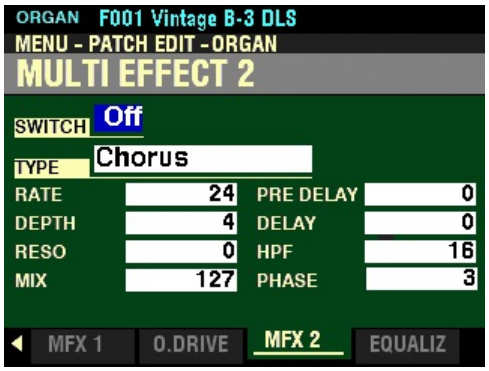
3. Release the MANUAL "☰" button and press the DIRECTION "▼" button to highlight the "EDIT ORGAN" box.



4. Press the ENTER button. The Information Center Display should now look like this:



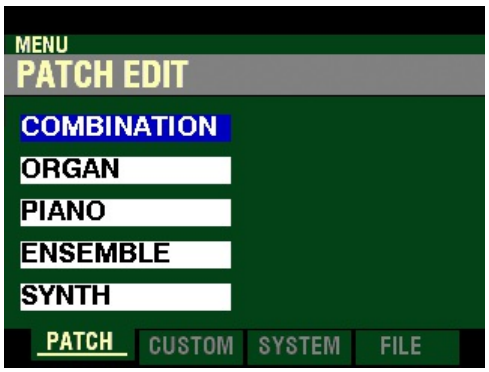
5. Press the PAGE "▶" button nine times. The Information Center Display should now look like this:



You are now in the MULTI EFFECT 2 Page of the PATCH EDIT -ORGAN FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the ORGAN sounds.

♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the MENU / EXIT, DIRECTION and PAGE buttons:

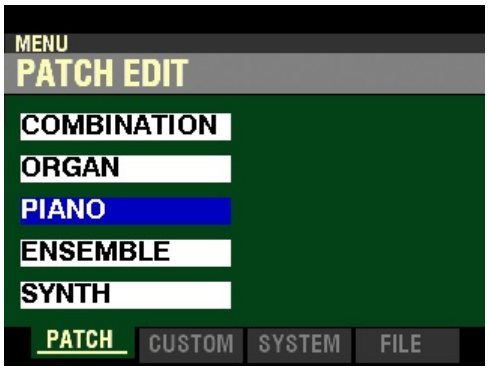
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

PIANO Voice Section:

2. Press the DIRECTION "▼" button two times to highlight the "PIANO" box.

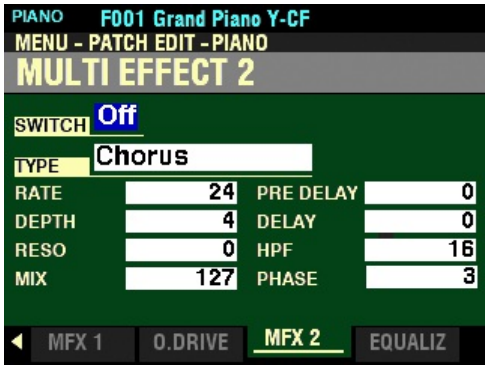


3. Press the ENTER button. The Information Center Display should now look like this:



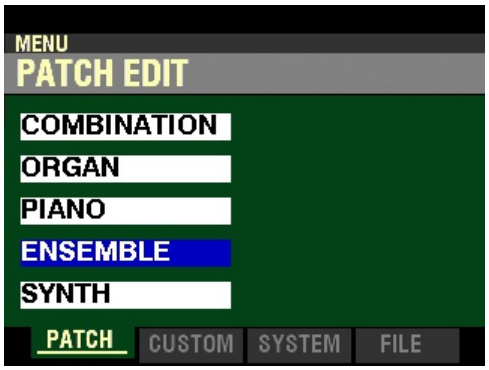
The GENERAL Page of the PATCH EDIT -PIANO FUNCTION Mode should now display.

4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



ENSEMBLE Voice Section:

2. Press the DIRECTION "▼" button three times to highlight the "ENSEMBLE" box.



3. Press the ENTER button. The Information Center Display should now look like this:



The GENERAL Page of the PATCH EDIT -ENSEMBLE FUNCTION Mode should now display.

4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



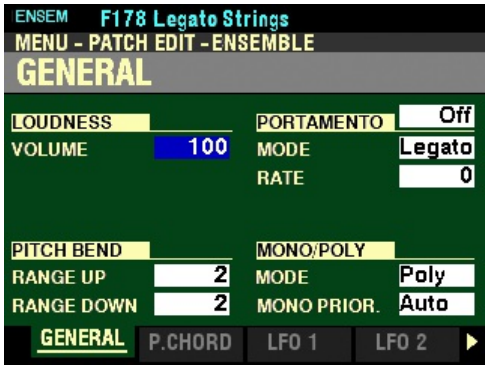
♦Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the Shortcut:

1. Press and Release the EDIT button in either the PIANO or ENSEMBLE Voice Section, depending on which Section you want to edit. The Information Center Display should now look like this:

PIANO Voice Section:

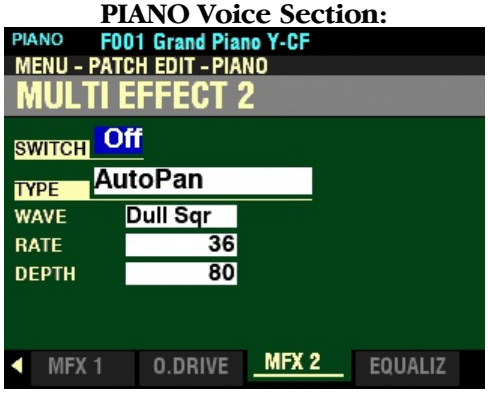


ENSEMBLE Voice Section:



2. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:

PIANO Voice Section:



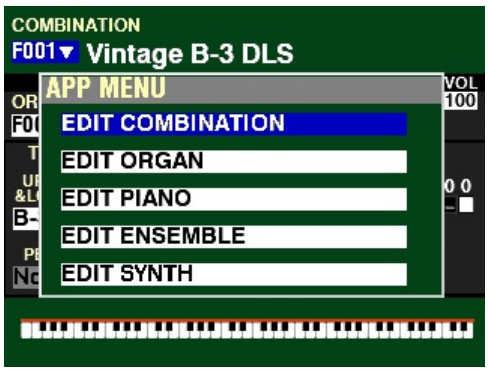
ENSEMBLE Voice Section:



♦Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the APP MENU:

1. Press the PIANO or ENSEMBLE button in the ALLOCATE button section to turn the Voice Section you wish to edit "ON."

2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:

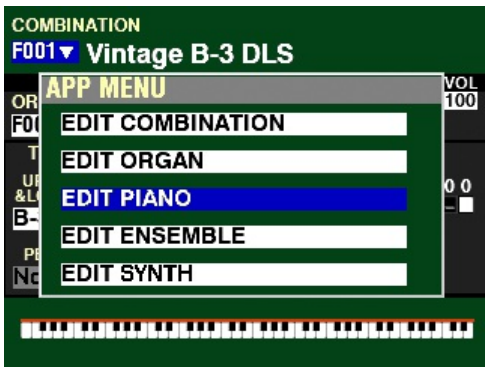


The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

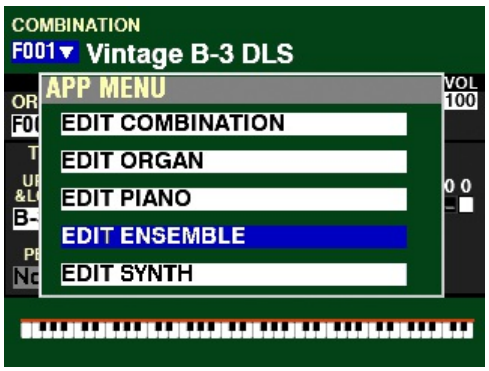
PIANO Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT PIANO" box.



ENSEMBLE Voice Section:

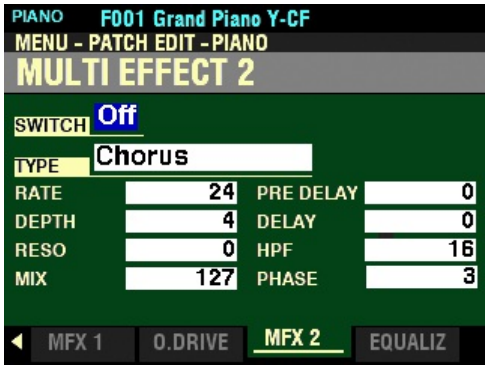
3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the"EDIT ENSEMBLE" box.



4. Press the ENTER button. The Information Center Display should now look like this:



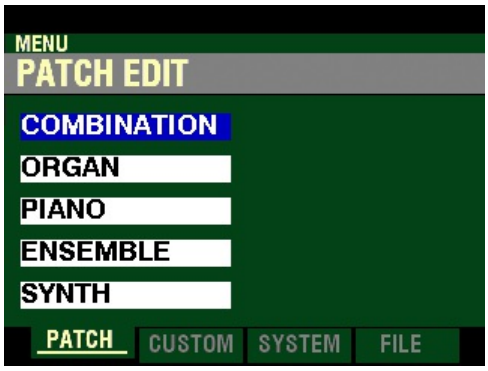
5. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



You are now in The MULTI EFFECT 2 Page of the PATCH EDIT -PIANO or ENSEMBLE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the PIANO or ENSEMBLE sounds.

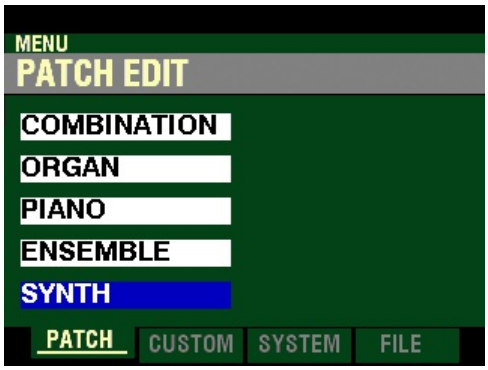
♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the MONO SYNTH Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

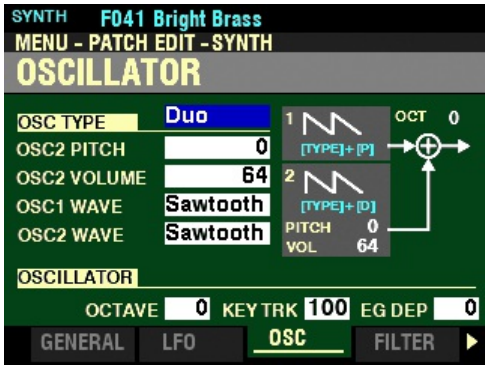


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button four times to highlight the "SYNTH" box.

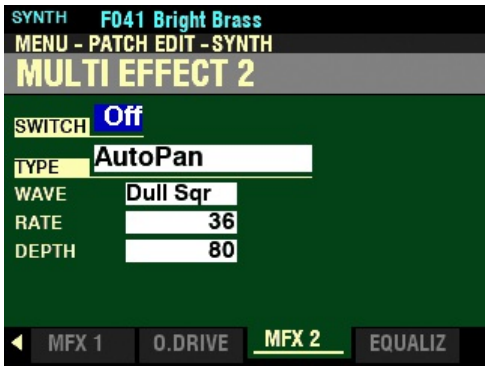


3. Press the ENTER button. The Information Center Display should now look like this:



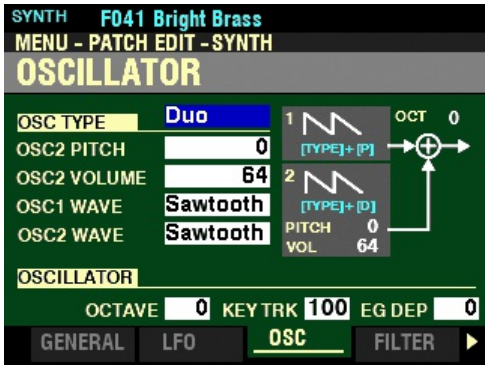
The OSCILLATOR Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

4. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



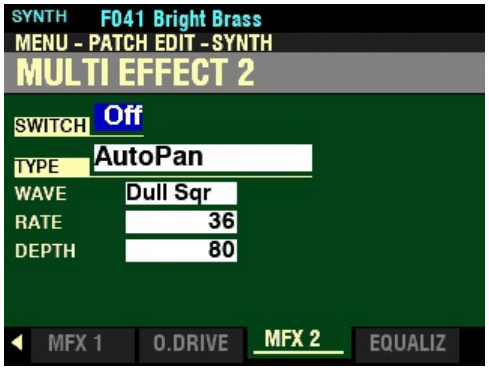
♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the MONO SYNTH Voice Section using the Shortcut:

1. Press and Release the HOLD TO EDIT button in the MONO SYNTH Section. After you release the button, the Information Center Display should look like this:



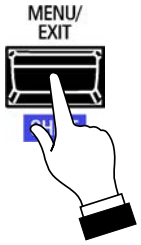
The OSCILLATOR Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

2. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



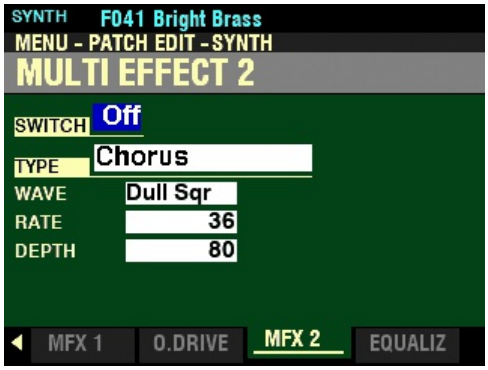
♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the MONO SYNTH Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the knobs or sliders in the MONO SYNTH Voice Section. You will see one of the Pages in the PATCH EDIT -SYNTH FUNCTION Mode.
3. Release the SHIFT button.

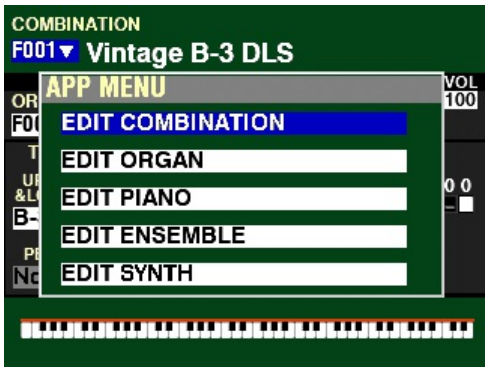
4. Press the PAGE "▶" button repeatedly until the Information Center Display looks like this:



♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the MONO SYNTH Voice Section using the APP MENU:

1. Press the SYNTH button in the ALLOCATE button section to turn the MONO SYNTH Voice Section "ON."

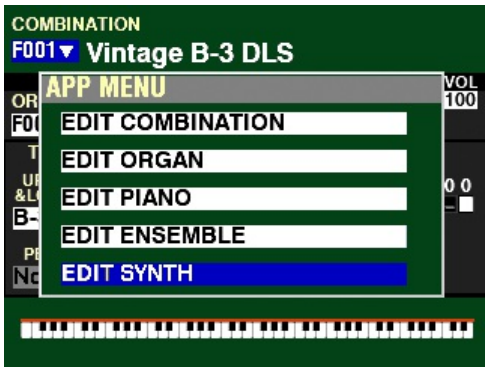
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "🖹" button. The Information Center Display should now look like this:



The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

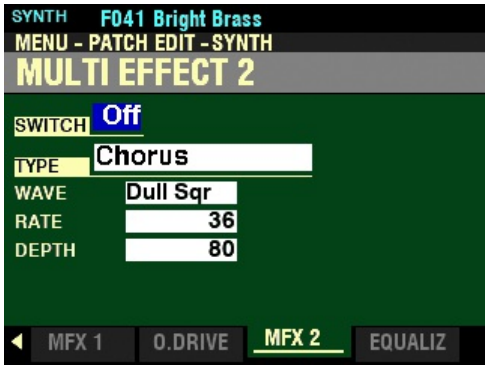
3. Release the MANUAL "🖹" button and press the DIRECTION "▼" button to highlight the "EDIT SYNTH" box.



4. Press the ENTER button. The Information Center Display should now look like this:



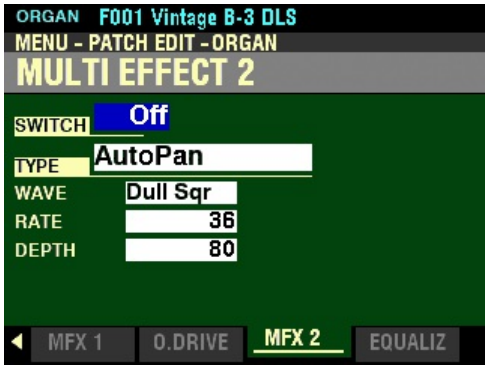
5. Press the PAGE "▶" button seven times. The Information Center Display should now look like this:



You are now in the MULTI EFFECT 2 Page of the PATCH EDIT -SYNTH FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the MONO SYNTH.

NOTE: The **MULTI EFFECT 2** Parameters are identical for all Voice Sections. To avoid confusing repetition, the ORGAN Voice Section will be used as the basis for the explanations of these Parameters.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "SWITCH" should be highlighted.

♦ SWITCH

This Parameter allows you to turn MULTI EFFECT 2 On or Off.

NOTE: This is a "MASTER ON / OFF" for MULTI EFFECT 2.

Turn the VALUE knob to turn MULTI EFFECT 2 On or Off.

For the following explanations, turn the MULTI EFFECT SWITCH On. This is so you may select and hear the changes to the characteristics for the selected MULTI EFFECT 2 as you make them.

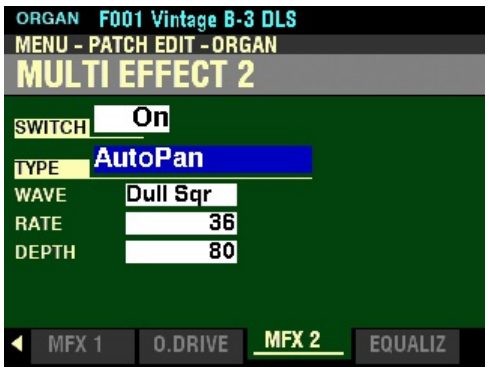
AutoPan

This MULTI EFFECT will smoothly shift or "pan" the sound back and forth between Left and Right channels.

> **NOTE:** This Parameter requires that both Left and Right channels be connected via the LINE OUT jacks on the Accessory Panel.

> **NOTE:** This Parameter does **not** affect the digital Leslie.

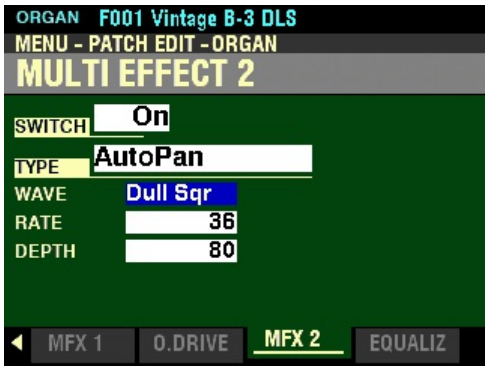
From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "AutoPan."



Make sure the box to the right of "SWITCH" displays On, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the AutoPan MULTI EFFECT as you make them.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "WAVE" should be highlighted.

WAVE

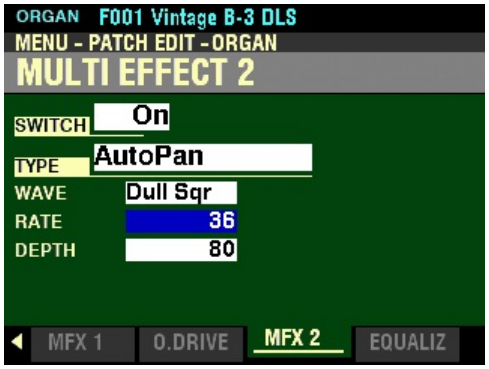
This Parameter allows you to select which waveform will be used to modulate the panning effect. The data chart below shows the options you may select.

AUTOPAN LFO WAVE Options

Setting	Description
Triangle	Triangle wave, which will move the sound smoothly back and forth from Left to Right.
Square	Square wave, which will cause the sound to move suddenly from Left to Right.
L to R	The sound will move smoothly from left to right.
S&H	Sample & Hold, which will cause the sound to move from Left to Right randomly.
DullSqr	Dull Square wave - similar to Square wave, but with a smoother transition from Left to Right.

Turn the VALUE knob to select the option you want.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

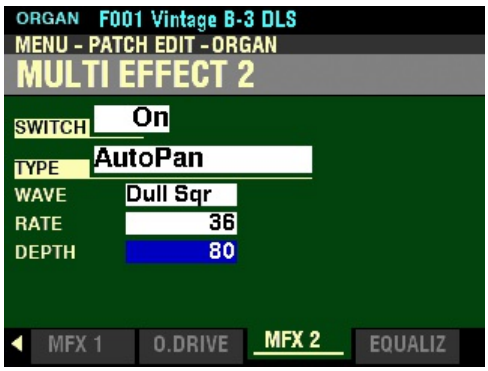
RATE

This Parameter allows you to adjust the rate at which the sound moves from channel to channel. You may select from 0 (slowest rate) to 127 (fastest rate).

Turn the VALUE knob to the right to increase the Rate.

Turn the VALUE knob to the left to decrease the Rate

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

DEPTH

This Parameter allows you to adjust the intensity or depth of the panning effect. You may select from 0 (no modulation) to 127 (maximum modulation).

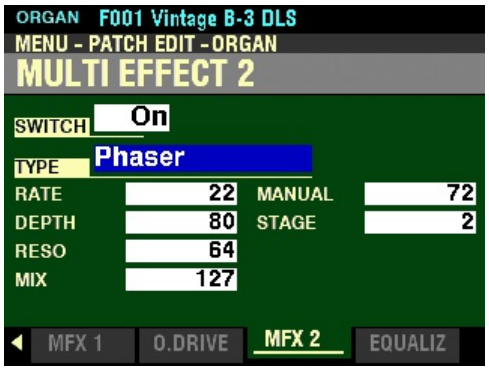
Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

Phaser

Phaser will create the effect of splitting an audio signal into two paths and varying their phase relationship to each other, resulting in an alternately hollow and full-bodied sound. It can be described as a "swooshing" or "twisting" effect.

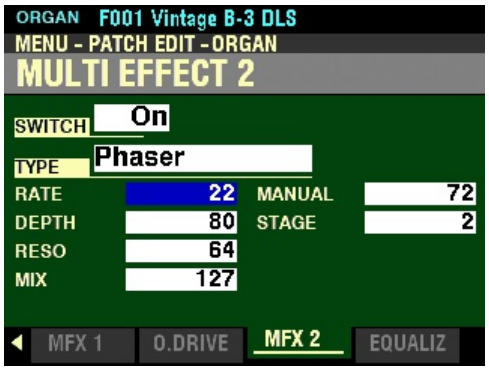
From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Phaser."



Make sure the box to the right of "SWITCH" displays On, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the Phaser MULTI EFFECT as you make them.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

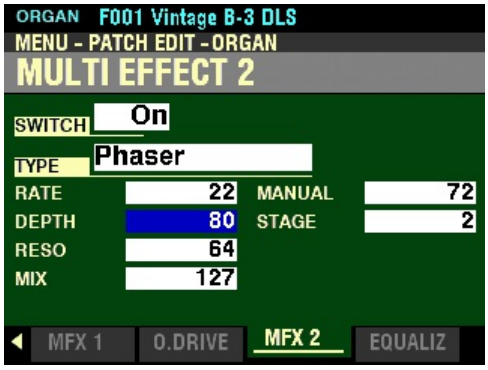
RATE

This Parameter allows you to adjust the rate at which the sound moves in and out of phase. You may select from 0 (slowest rate) to 127 (fastest rate).

Turn the VALUE knob to the right to increase the Rate.

Turn the VALUE knob to the left to decrease the Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

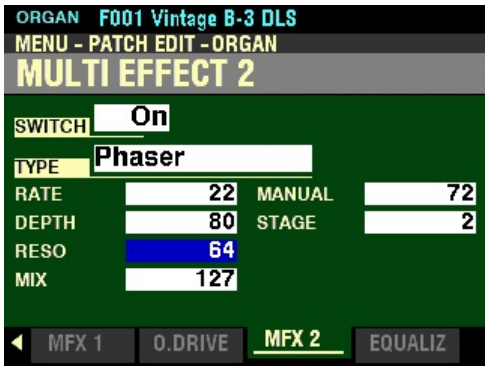
DEPTH

This Parameter allows you to adjust the intensity or depth of the phasing effect. You may select from 0 (no phasing) to 127 (maximum phasing).

Turn the VALUE knob to the right to increase the amount of Phasing.

Turn the VALUE knob to the left to decrease the amount of Phasing.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RESO" should be highlighted.

RESO

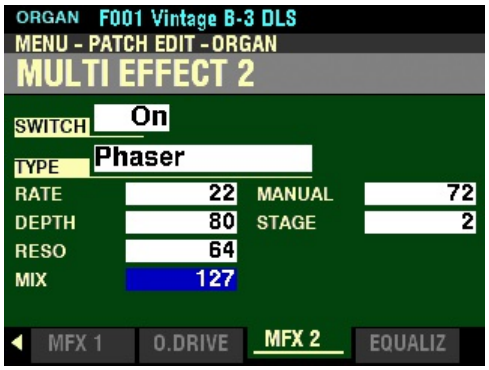
This Parameter allows you to adjust the amount of feedback or "resonance" of the Phaser effect. You may select from 0 (minimum resonance) to 127 (maximum resonance).

NOTE: At the maximum setting, the feedback will be so pronounced that individual notes will no longer be recognizable as musical pitches.

Turn the VALUE knob to the right to increase the amount of Resonance.

Turn the VALUE knob to the left to decrease the amount of Resonance.

*From the screen shown at the bottom of the previous page, **press the DIRECTION "▼" button once.***



The box to the right of "MIX" should be highlighted.

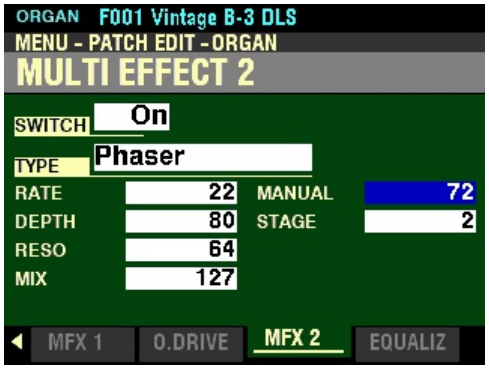
MIX

This Parameter allows you to adjust the balance between the phased sound and "dry" (no phaser effect) sound. You may select from 0 (only the "dry" or unmodulated sound with no Phaser effect at all) to 127 (the Phaser effect and the dry signal are at equal volumes)

Turn the VALUE knob to the right to increase the amount of Phaser effect.

Turn the VALUE knob to the left to decrease the amount of Phaser effect.

From the above screen, use the DIRECTION "▲" and "▶" buttons to highlight the box to the right of "MANUAL."



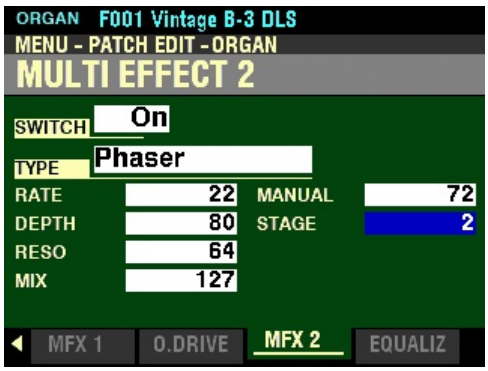
MANUAL

This Parameter allows you to adjust the central frequency of the Phaser effect. You may select from 0 (lowest frequency) to 127 (highest frequency).

Turn the VALUE knob to the right to increase the Frequency.

Turn the VALUE knob to the left to decrease the Frequency.

From the screen shown at the bottom of the previous page press the DIRECTION "▼" button once.



The box to the right of "STAGE" should be highlighted.

STAGE

This Parameter allows you to adjust the complexity or "stage" of the phasing. You may select, 2, 4, 6, 8 or 10. A higher value creates more complex effects.

Turn the VALUE knob to the right to increase the amount of Staging.

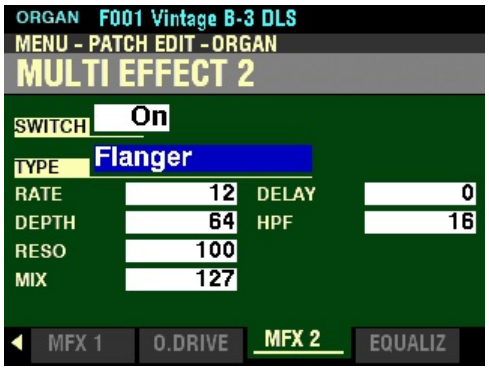
Turn the VALUE knob to the left to decrease the amount of Staging.

Flanger

"Flanging" occurs when two identical signals are mixed together, and one of the signals is time-delayed by a very small amount. The small time delay produces peaks and valleys in the harmonic structure of the sound, resulting in a sweeping effect sometimes referred to colloquially as a "Jet Airplane" sound.

The term, "Flanger" derives from the means originally used to produce this effect. Two tape machines running at exactly the same speed would play the same material into a third machine, and an engineer would drag his finger along the "flange" or outer edge of the tape reel on one of the machines, thereby causing the small time delay and creating the sweeping effect.

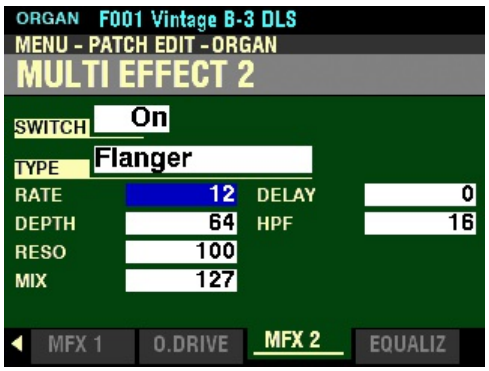
From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Flanger."



Make sure the box to the right of "SWITCH" displays <u>On</u>. otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the <u>Flanger</u> MULTI EFFECT as you make them.

From the above screen, press the DIRECTION "▼" button <u>once</u>.



The box to the right of "RATE" should be highlighted.

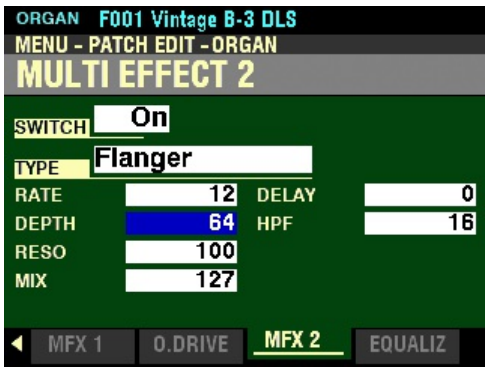
RATE

This Parameter allows you to set the rate of the Flange effect. You may select from <u>0</u> (slowest rate) to <u>127</u> (fastest rate).

Turn the VALUE knob to the <u>right</u> to <u>increase</u> the Rate.

Turn the VALUE knob to the <u>left</u> to <u>decrease</u> the Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

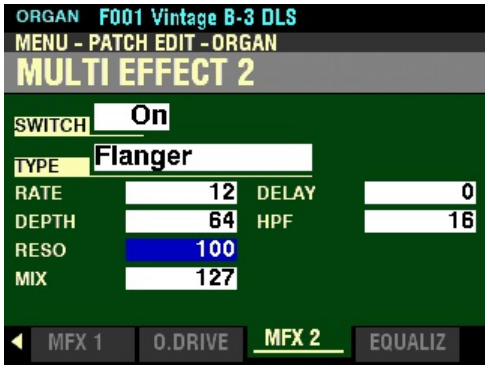
DEPTH

This Parameter allows you to set the depth of the Flange effect. You may select from 0 (minimum depth) to 127 (maximum depth).

Turn the VALUE knob to the right to increase the Depth.

Turn the VALUE knob to the left to decrease the Depth.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RESO" should be highlighted.

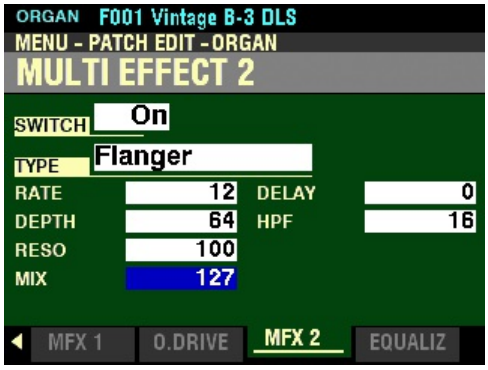
RESO

This Parameter allows you to adjust the amount of resonance or "feed-back." of the Flange effect. You may select from 0 (minimum resonance) to 127 (maximum resonance). At higher values, the sound becomes increasingly distorted.

Turn the VALUE knob to the right to increase the amount of Resonance.

Turn the VALUE knob to the left to decrease the amount of Resonance.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MIX" should be highlighted.

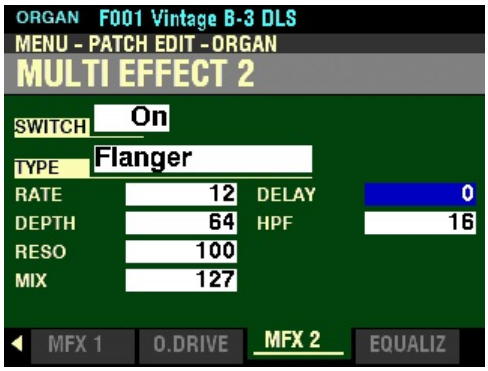
MIX

This Parameter allows you to adjust the balance between the "dry" sound and the Flange effect. You may select from 0 ("dry" sound only - no Flange effect) to 127 (the dry sound and the Flanged sound are at equal levels).

Turn the VALUE knob to the right to increase the amount of Flanged signal.

Turn the VALUE knob to the left to decrease the amount of Flanged signal.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "DELAY."



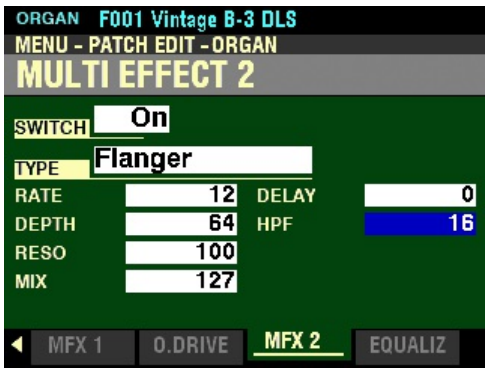
DELAY

This Parameter allows you to set the delay of the Flange effect. You may select from 0 (minimum delay) to 127 (maximum delay).

Turn the VALUE knob to the right to lengthen the Delay.

Turn the VALUE knob to the left to shorten the Delay.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "HPF" should be highlighted.

HPF

This Parameter allows you to adjust the frequency limit beyond which the Flange effect is applied. You may select from 0 (the effect is added to all frequencies) to 127 (the effect is added to the upper frequencies only).

Turn the VALUE knob to the right to raise the frequency limit.

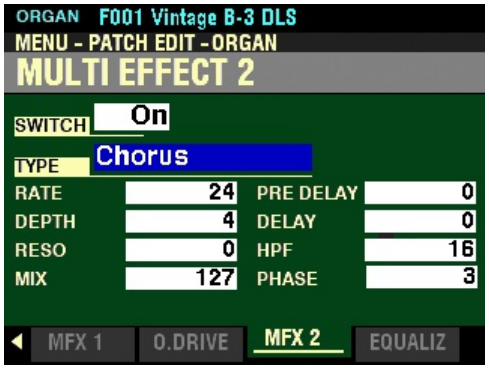
Turn the VALUE knob to the left to lower the frequency limit.

Chorus

"Chorus" refers to a shimmering, non-periodic enhancement of the sound. It is intended to be similar to several instruments sounding in unison, and is helpful when a thicker tonal texture is desired.

> **NOTE:** Do not confuse this Chorus with the Hammond Vibrato/Chorus effect. The **CHORUS** MULTI EFFECT, as mentioned, is non-periodic or "random" sounding. With the Hammond Vibrato/Chorus, a "cycle" is clearly audible. The parameters described below DO NOT affect the Hammond Vibrato/Chorus.

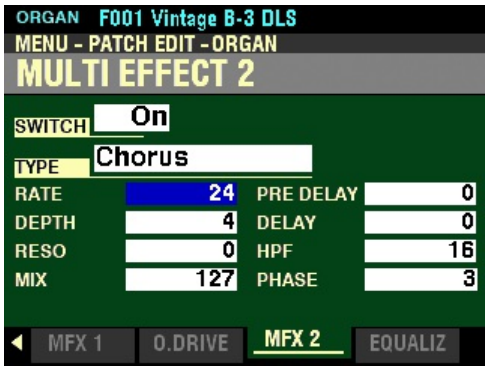
From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Chorus."



Make sure the box to the right of "SWITCH" displays On, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the Chorus MULTI EFFECT as you make them.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RATE" should be highlighted.

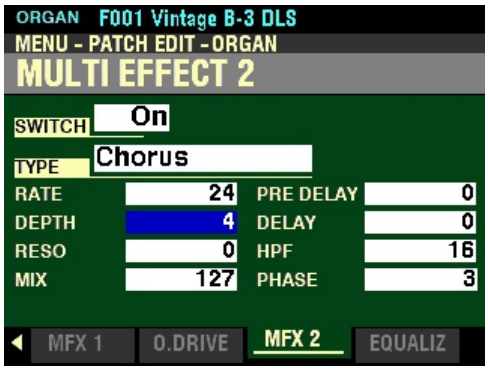
RATE

This Parameter allows you to adjust the rate of the Chorus effect. You may select from 0 (slowest rate) to 127 (fastest rate).

Turn the VALUE knob to the right to increase the Chorus Rate.

Turn the VALUE knob to the left to decrease the Chorus Rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DEPTH" should be highlighted.

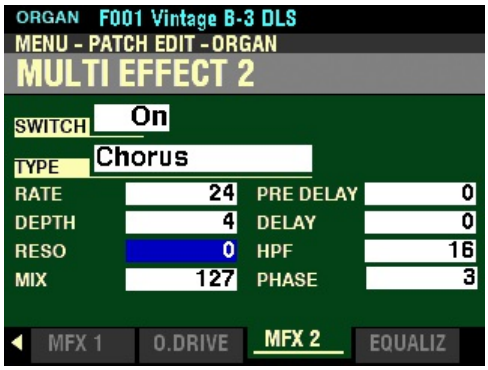
DEPTH

This Parameter allows you to adjust the intensity or depth of the Chorus effect. You may select from 0 (minimum Chorus) to 127 (maximum Chorus).

Turn the VALUE knob to the right to increase the amount of Chorus.

Turn the VALUE knob to the left to decrease the amount of Chorus.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "RESO" should be highlighted.

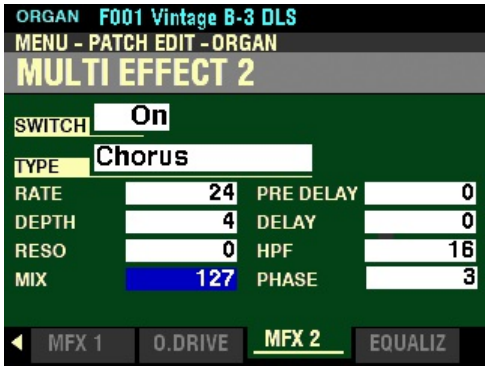
RESO

This Parameter allows you to adjust the amount of resonance or "feed-back." You may select from 0 (minimum resonance) to 127 (maximum resonance). At higher number settings the sound is modulated to an extreme amount.

Turn the VALUE knob to the right to increase the amount of Resonance.

Turn the VALUE knob to the left to decrease the amount of Resonance.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MIX" should be highlighted.

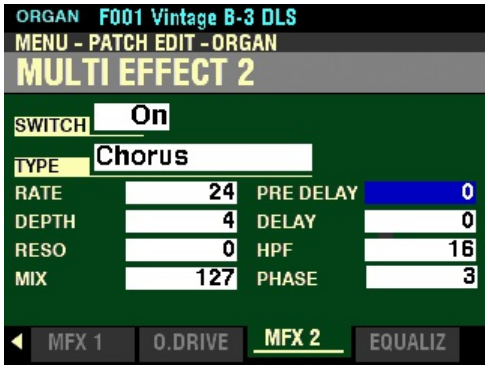
MIX

This Parameter allows you to adjust the volume balance between the "dry" and the effect sound. You may select from 0 to 127. At 0, only the "dry" is heard. The effect level becomes greater as the value increases. At 127 the ratio between the "dry" and the effect sounds becomes 1:1.

Turn the VALUE knob to the right to increase the amount of Phasing.

Turn the VALUE knob to the left to decrease the amount of Phasing.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "PRE DELAY"



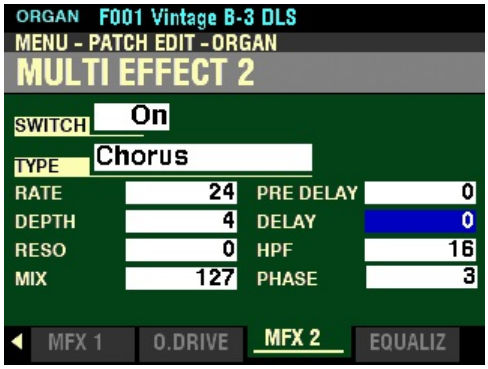
PRE DELAY

This Parameter allows you to delay the signal for a channel even if the source is Monaural. You may select from 0 to 127. A higher value creates a time difference between Left and Right to the effect sound.

Turn the VALUE knob to the right to increase the Pre-Delay.

Turn the VALUE knob to the left to decrease the Pre-Delay.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "DELAY" should be highlighted.

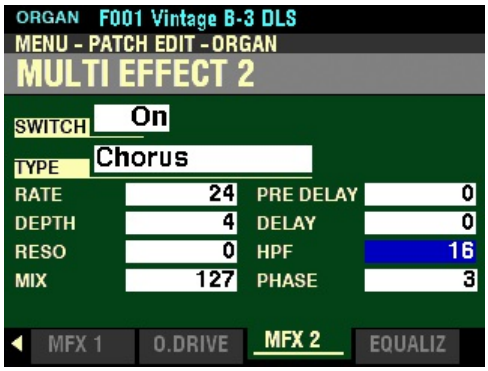
DELAY

This Parameter allows you to control the delay of the effect sound. You may select from 0 to 127. The delay becomes greater as the value increases.

Turn the VALUE knob to the right to increase the amount of Delay.

Turn the VALUE knob to the left to decrease the amount of Delay.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "HPF" should be highlighted.

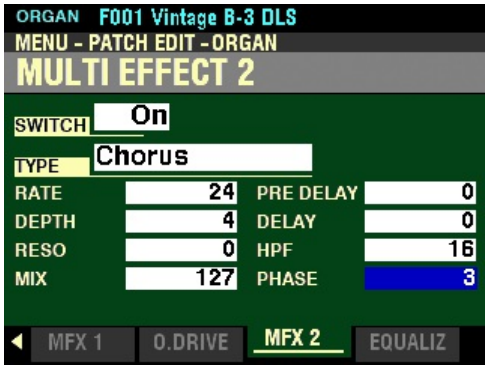
HPF

Controls the frequency range of the effect. You may select from 0 (the effect is added to all frequencies) to 127 (the effect is the effect is added only to the high frequencies). As the value is increased, the effect is added to the higher frequencies.

Turn the VALUE knob to the right to narrow the frequency range to the high frequencies only.

Turn the VALUE knob to the left to broaden the frequency range to include lower frequencies.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "PHASE" should be highlighted.

PHASE

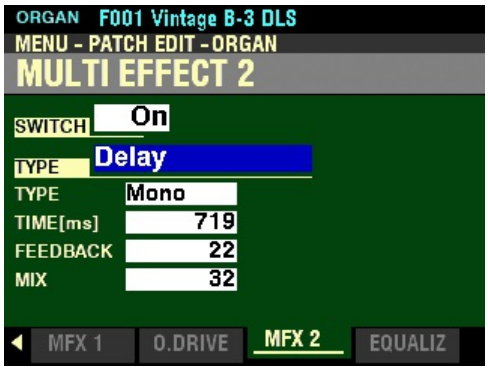
This Parameter allows you to select the algorithm of the Chorus effect. You may select 2 (two-phase) or 3 (three phase).

Turn the VALUE knob to select the option you want.

Delay

"Delay" allows you to add echo effects.

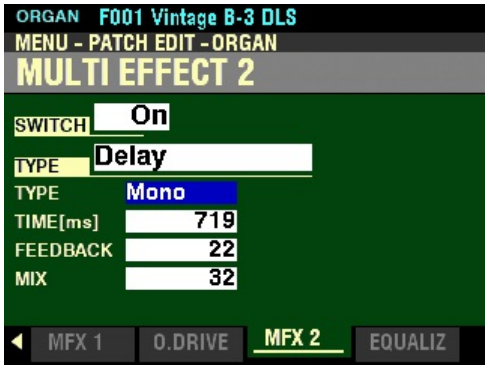
From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "TYPE and turn the VALUE knob so that the highlighted box displays "Delay."



Make sure the box to the right of "SWITCH" displays <u>On</u>, otherwise you will not hear the selected MULTI EFFECT or the changes you make to it.

You can now select and hear the changes to the characteristics for the <u>Delay</u> MULTI EFFECT as you make them.

From the above screen, press the DIRECTION "▼" button <u>once</u>.



The box to the right of "TYPE" should be highlighted.

TYPE

This Parameter allows you to select the directionality or Type of the Delay. The data chart below shows the options you may select.

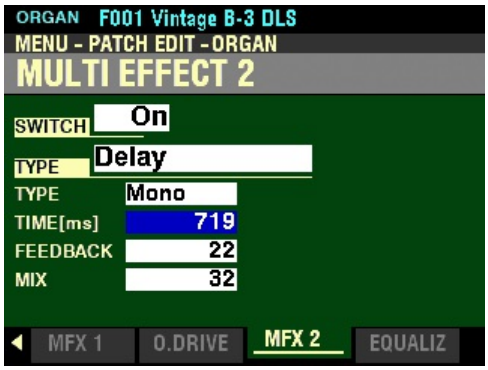
DELAY TYPE Options	
Setting	**Description**
Mono	A simple, non-directional echo.
*RtoL	The echo repeats gradually pan from Right to Left.
*LtoR	The echo repeats gradually pan from Left to Right.

Turn the VALUE knob to select the option you want.

NOTE: The **<u>RtoL</u>** and **<u>LtoR</u>** effects require that both LINE OUT jacks be connected.

NOTE: Do not confuse this Parameter with the DELAY Parameter in the COMPONENT Page of the PIANO / ENSEMBLE EDIT Menu (explained in the **<u>PIANO</u> / <u>ENSEMBLE</u> <u>VOICE</u> <u>SECTIONS</u>** chapter of this Guide starting on page 367).

From the screen shown in the middle of the previous page, press the DIRECTION "▼" button once.



The box to the right of "TIME[ms]" should be highlighted.

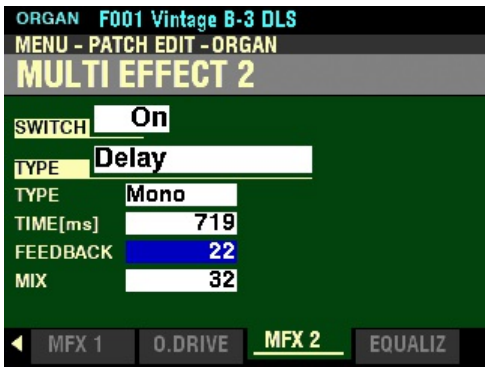
TIME

This Parameter allows you to adjust the amount of time between the original sound and the first echo repeat, as well as the amount of time between each successive repetition. You may select from 10 to 1000 milliseconds.

Turn the VALUE knob to the right to increase the Delay Time.

Turn the VALUE knob to the left to decrease the Delay Time.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "FEEDBACK" should be highlighted.

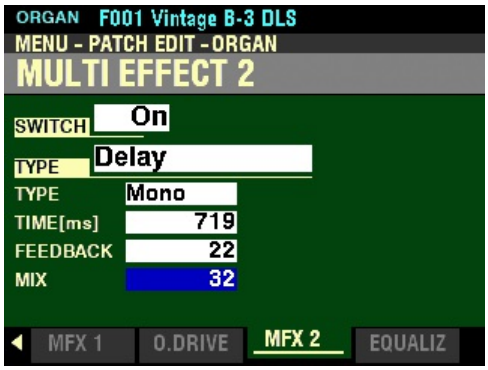
FEEDBACK

This Parameter allows you to control the number of repetitions added to the original sound. You may select from 0 (minimum number of echo repeats) to 127 (maximum number of echo repeats).

Turn the VALUE knob to the right to increase the number of echo repetitions.

Turn the VALUE knob to the left to decrease the number of echo repetitions.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "MIX" should be highlighted.

MIX

This Parameter allows you to adjusts the balance between the echo repeats and the "dry" (no Delay) sound. You may select from 0 (only the "dry" sound with no Delay effect at all) to 127 (only the echo repeats are heard with no dry sound).

NOTE: At a setting of **64** the "dry" or original sound and the echo repetitions are equally balanced.

Turn the VALUE knob to the right to emphasize the Delay repeats.

Turn the VALUE knob to the left to emphasize the "dry" sound.

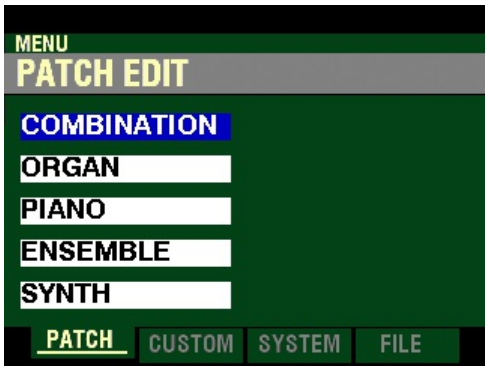
◆ EQUALIZER

This FUNCTION Mode Page allows you to adjust the settings for the Equalizer in each Voice Section.

NOTE: You can customize the tone quality of your Hammond SK PRO either by adjusting the frequency curves of each Voice Section separately or using the MASTER EQUALIZER to tailor the sound of all Voice Sections simultaneously. Pressing and Holding the MASTER EQUALIZER button will Shortcut to the MASTER EQUALIZER FUNCTION Mode Page but **not** to the EQUALIZER FUNCTION Mode Pages for the individual Voice Sections. For more information about the MASTER EQUALIZER please consult the **SPECIAL UTILITY FEATURES** chapter of this Guide starting on page 768.

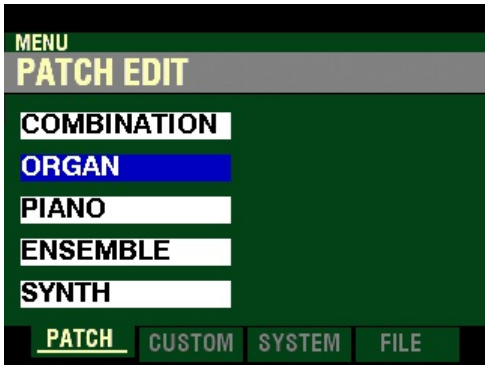
♦ Accessing the EQUALIZER FUNCTION Mode Page for the ORGAN Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

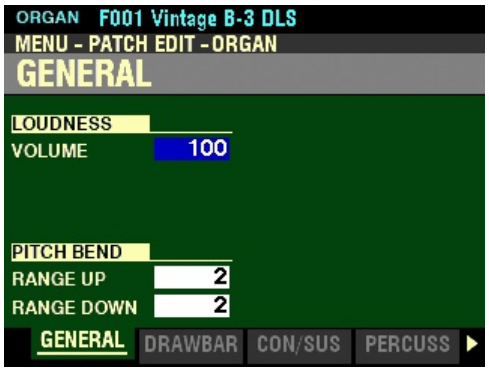


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button once to highlight the "ORGAN" box.

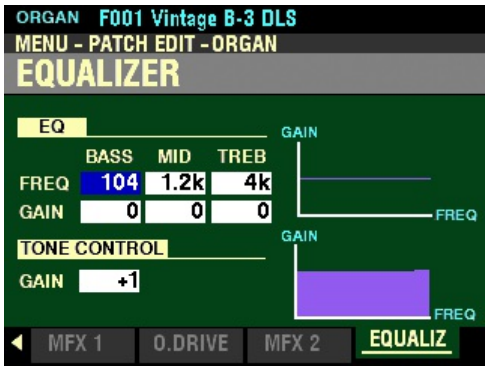


3. Press the ENTER button. The Information Center Display should now look like this:



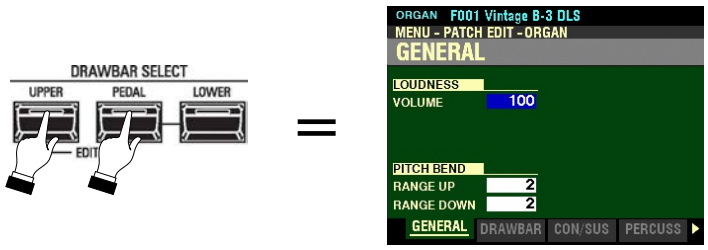
The GENERAL Page of the PATCH EDIT -ORGAN FUNCTION Mode should now display.

4. Press the PAGE "▶" button ten times. The Information Center Display should now look like this:



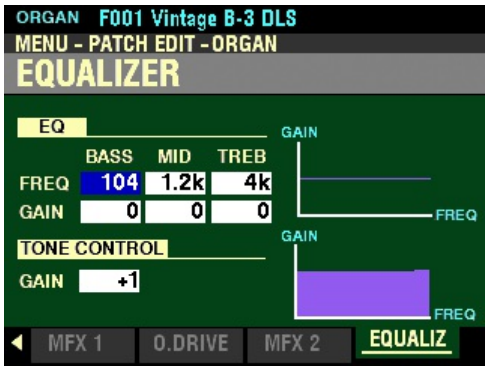
♦ Accessing the EQUALIZER FUNCTION Mode Page for the ORGAN Voice Section using the Shortcut:

1. Press the UPPER and PEDAL DRAWBAR buttons together.



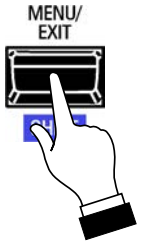
2. When the above screen displays, Release the UPPER and PEDAL DRAWBAR buttons.

3. Press the PAGE "▶" button ten times. The Information Center Display should now look like this:

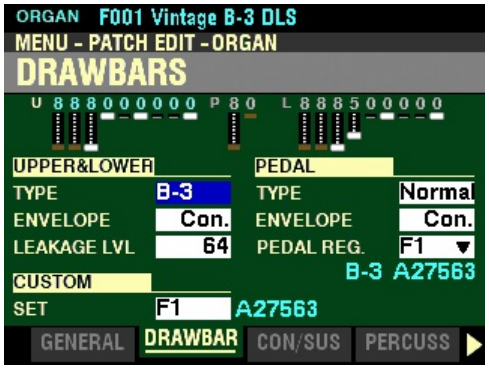


♦ Accessing the MULTI EFFECT 2 FUNCTION Mode Page for the ORGAN Voice Section using the SHIFT button:

1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.

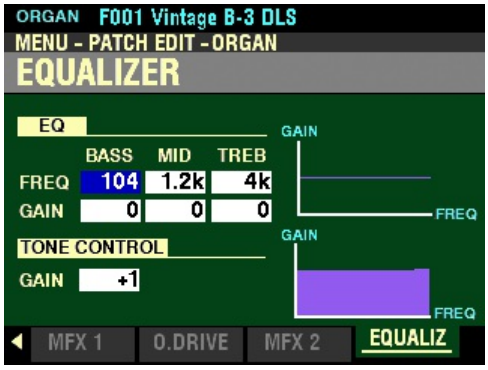


2. While holding the SHIFT button, move any of the 9 Drawbars. The Information Center Display will look similar to this:



3. Release the SHIFT button.

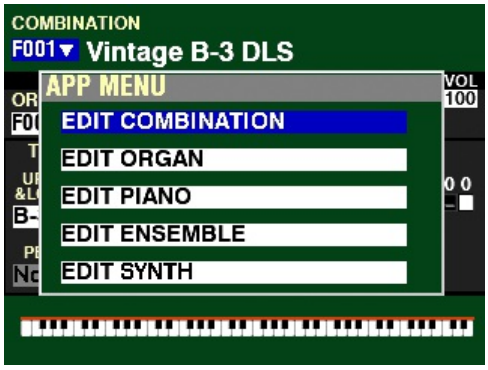
4. Press the PAGE "▶" button nine times. The Information Center Display should now look like this:



♦Accessing the EQUALIZER FUNCTION Mode Page for the ORGAN Voice Section using the APP MENU:

1. If the ORGAN button in the ALLOCATE button section is not "ON," press it to turn it "ON."

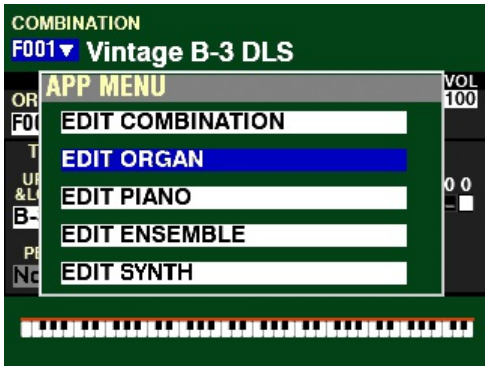
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "🖹" button. The Information Center Display should now look like this:



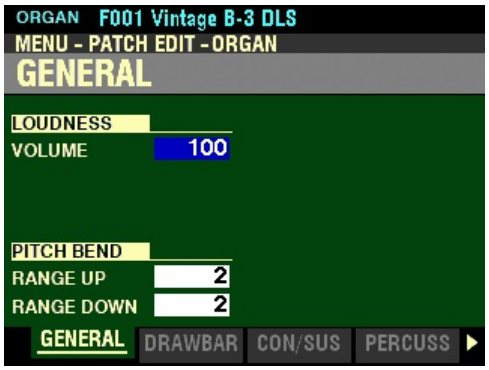
The"EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

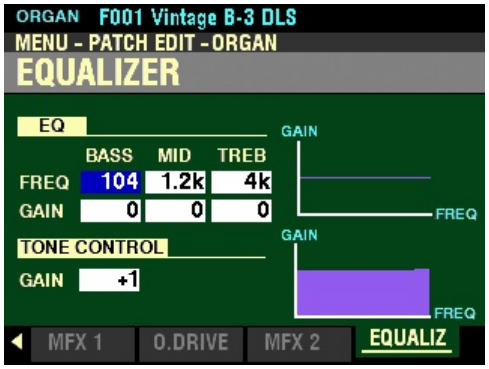
3. Release the MANUAL "🖹" button and press the DIRECTION "▼" button to highlight the "ORGAN" box.



4. Press the ENTER button. The Information Center Display should now look like this:



5. Press the PAGE "▶" button ten times. The Information Center Display should now look like this:

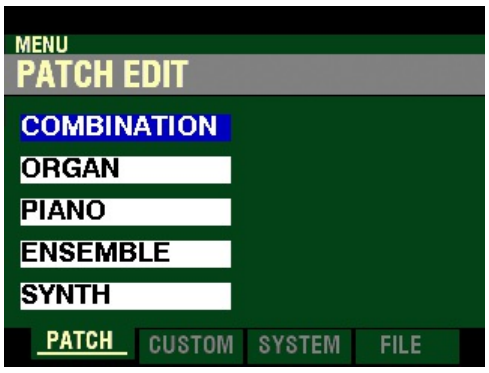


You are now in the EQUALIZER Page of the PATCH EDIT -ORGAN FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the ORGAN sounds.

NOTE: The violet-colored shapes on the right side of the screen are visual representations of the shapes of the selected Parameters. You will see their shapes change in response to the edits you make.

♦ Accessing the EQUALIZER FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the MENU / EXIT, DIRECTION and PAGE buttons:

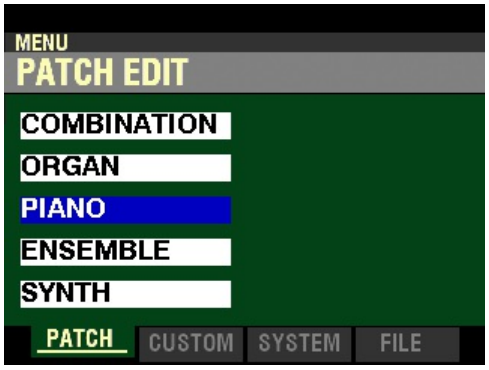
1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

PIANO Voice Section:

2. Press the DIRECTION "▼" button two times to highlight the "PIANO" box.



3. Press the ENTER button. The Information Center Display should now look like this:



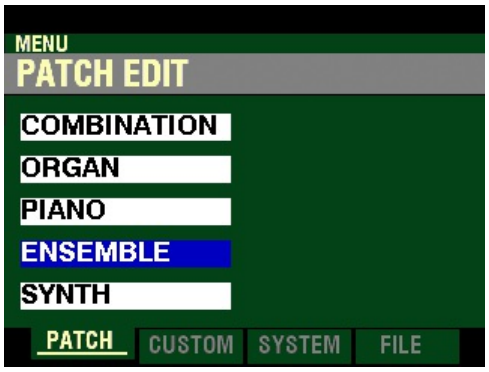
The GENERAL Page of the PATCH EDIT -PIANO FUNCTION Mode should now display.

4. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:

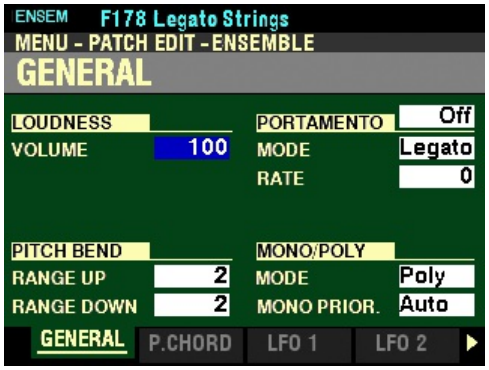


ENSEMBLE Voice Section:

2. Press the DIRECTION "▼" button three times to highlight the "ENSEMBLE" box.

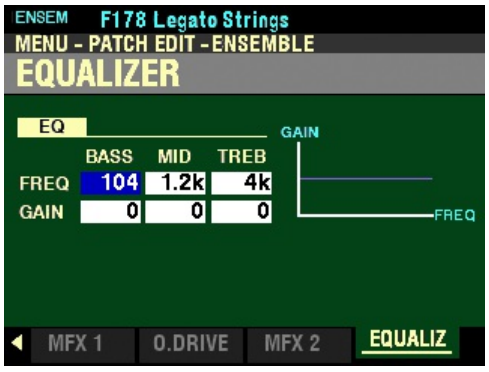


3. Press the ENTER button. The Information Center Display should now look like this:



The GENERAL Page of the PATCH EDIT -ENSEMBLE FUNCTION Mode should now display.

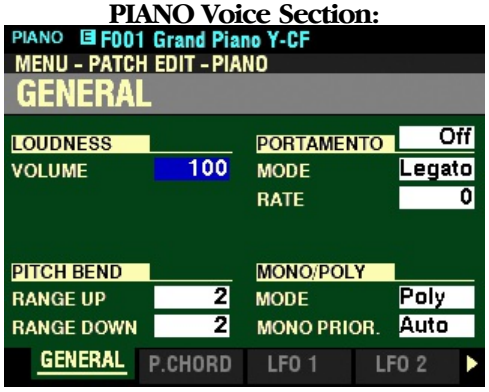
4. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



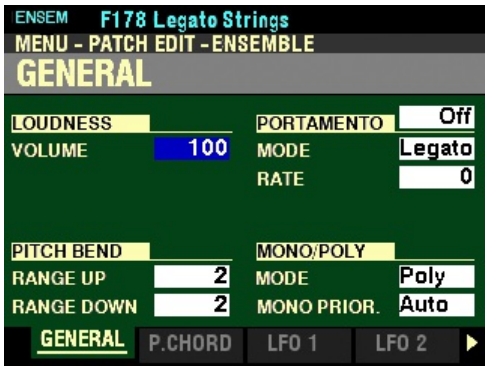
♦Accessing the EQUALIZER 2 FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the Shortcut:

1. Press and Release the EDIT button in either the PIANO or ENSEMBLE Voice Section, depending on which Section you want to edit. The Information Center Display should now look like this:

PIANO Voice Section:

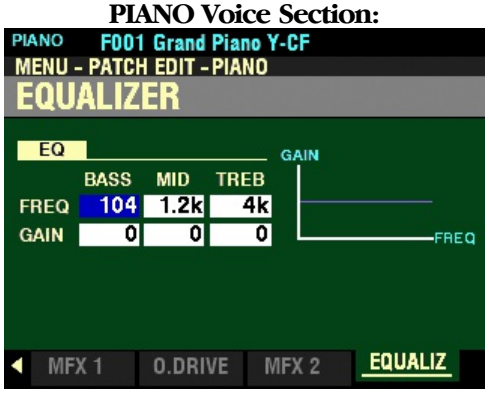


ENSEMBLE Voice Section:

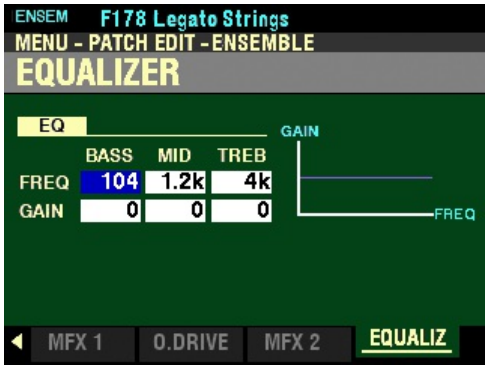


2. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:

PIANO Voice Section:



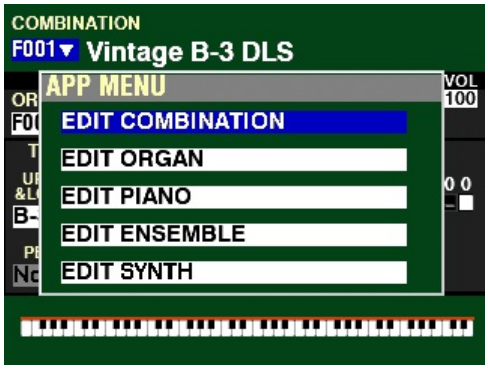
ENSEMBLE Voice Section:



♦Accessing the EQUALIZER FUNCTION Mode Page for the PIANO / ENSEMBLE Voice Sections using the APP MENU:

1. Press the PIANO or ENSEMBLE button in the ALLOCATE button section to turn the Voice Section you wish to edit "ON."

2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:

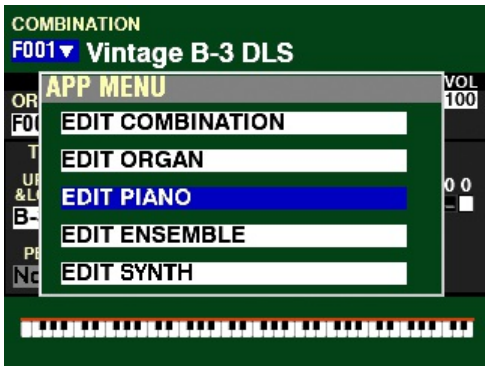


The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

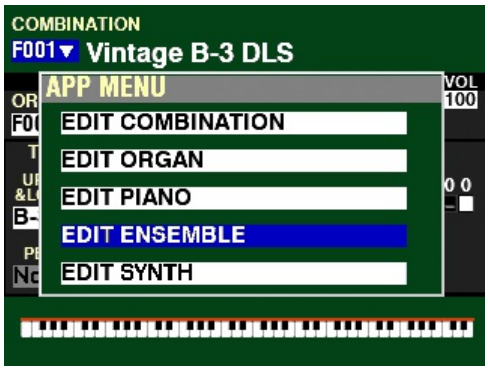
PIANO Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT PIANO" box.



ENSEMBLE Voice Section:

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the"EDIT ENSEMBLE" box.



4. Press the ENTER button. The Information Center Display should now look like this:



The GENERAL Page of the PATCH EDIT -PIANO or ENSEMBLE FUNCTION Mode should now display.

5. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:

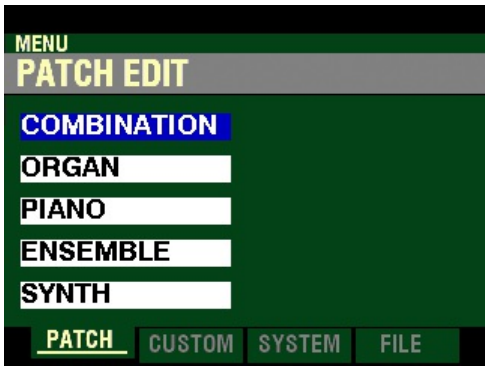


You are now in the EQUALIZER Page of the PATCH EDIT -PIANO or ENSEMBLE FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the PIANO or ENSEMBLE sounds.

NOTE: The violet-colored shapes on the right side of the screen are visual representations of the shapes of the selected Parameters. You will see their shapes change in response to the edits you make.

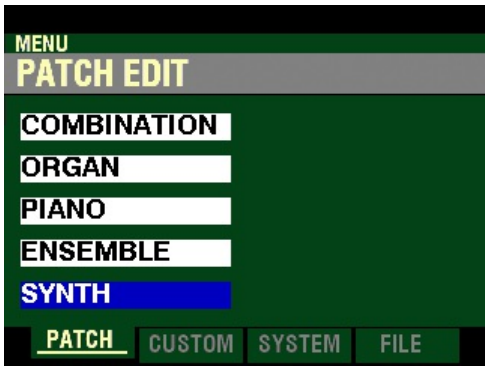
♦ Accessing the EQUALIZER FUNCTION Mode Page for the MONO SYNTH Voice Section using the MENU / EXIT, DIRECTION and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

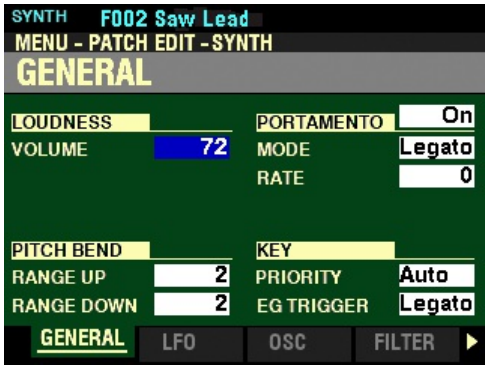


The "COMBINATION" box should be highlighted.

2. Press the DIRECTION "▼" button four times to highlight the "SYNTH" box.

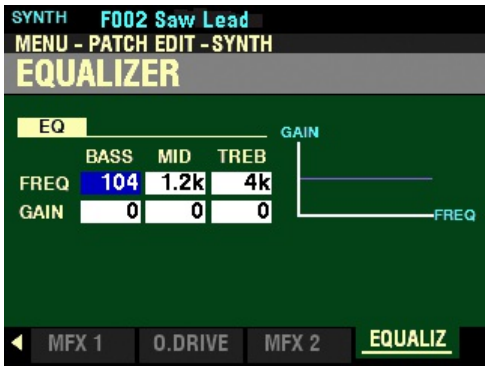


3. Press the ENTER button. The Information Center Display should now look like this:



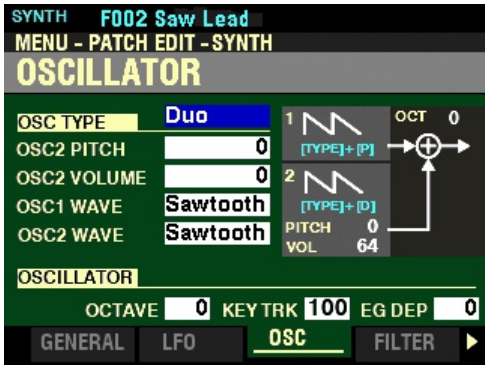
The GENERAL Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

4. Press the PAGE "▶" button ten times. The Information Center Display should now look like this:



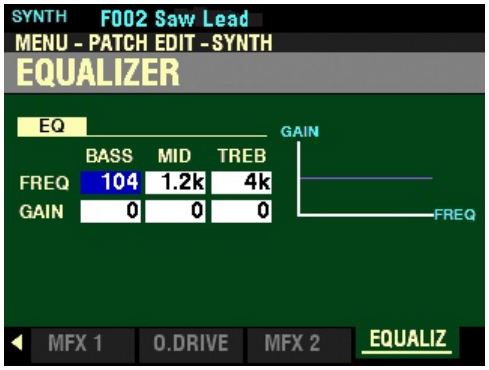
♦ Accessing the EQUALIZER FUNCTION Mode Page for the MONO SYNTH Voice Section using the Shortcut:

1. Press and Release the HOLD TO EDIT button in the MONO SYNTH Section. After you release the button, the Information Center Display should look like this:



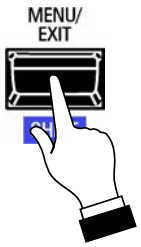
The OSCILLATOR Page of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

2. Press the PAGE "▶" button eight times. The Information Center Display should now look like this:



♦ Accessing the EQUALIZER FUNCTION Mode Page for the MONO SYNTH Voice Section using the SHIFT button:

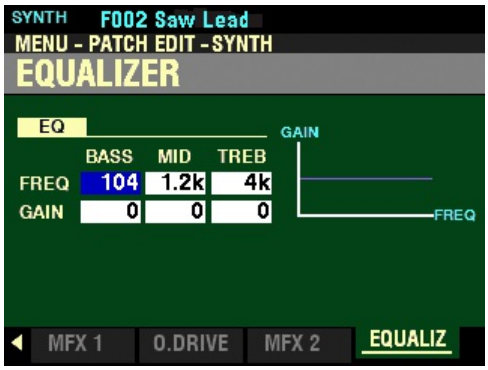
1. From any of the PLAY Mode Pages, Press and Hold the SHIFT button.



2. While holding the SHIFT button, move any of the knobs or sliders in the MONO SYNTH Voice Section. You will see one of the screens in the PATCH EDIT -SYNTH FUNCTION Mode Page.

3. Release the SHIFT button.

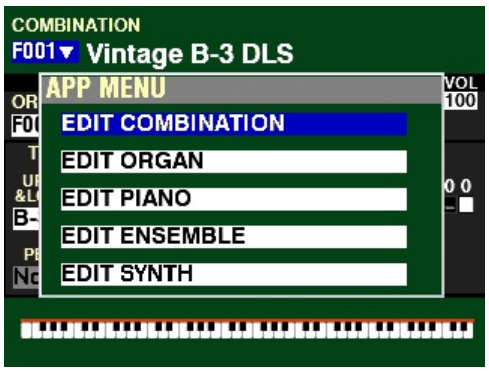
4. Press the PAGE "▶" button repeatedly until the Information Center Display looks like this:



♦ Accessing the EQUALIZER FUNCTION Mode Page for the MONO SYNTH Voice Section using the APP MENU:

1. Press the SYNTH button in the ALLOCATE button section to turn the MONO SYNTH Voice Section "ON."

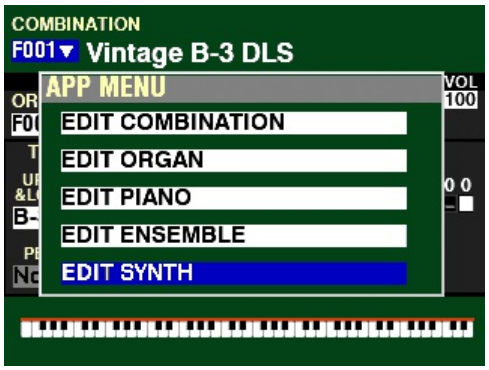
2. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



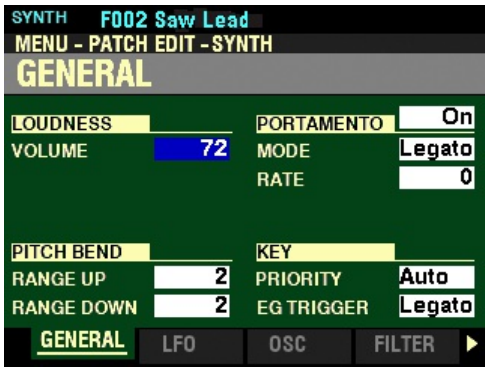
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

3. Release the MANUAL "▤" button and press the DIRECTION "▼" button to highlight the "EDIT SYNTH" box.

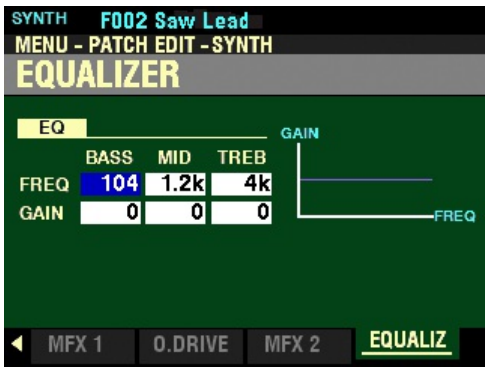


4. Press the ENTER button. The Information Center Display should now look like this:



The first screen of the PATCH EDIT -SYNTH FUNCTION Mode should now display.

5. Press the PAGE "▶" button ten times. The Information Center Display should now look like this:



You are now in Page 11 of the PATCH EDIT -SYNTH FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes to the characteristics of the MONO SYNTH.

NOTE: The **EQUALIZER** Parameters are identical for all Voice Sections except for one additional Parameter in the ORGAN Voice Section. To avoid confusing repetition, the ORGAN Voice Section will be used as the basis for the explanations of these Parameters.

NOTE: The violet-colored shapes on the right side of the screen are visual representations of the shapes of the selected Parameters. You will see their shapes change in response to the edits you make.

BASS - Bass Central Frequency Adjust and Gain

These Parameters allow you to adjust the central frequency and amount of the Bass frequency band. You may select from 20Hz to 200Hz.

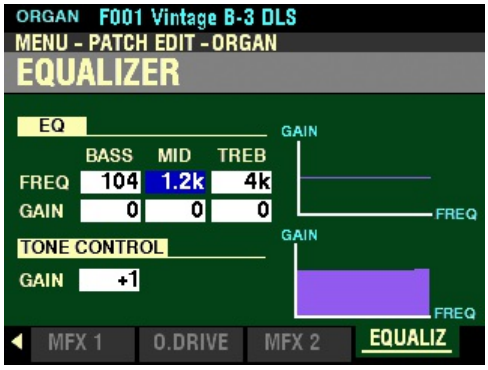
Use the DIRECTION "▲" and "▼" buttons to select either FREQ or GAIN for the Bass frequencies.

When you have made your selection:

Turn the VALUE knob to the right to increase the setting.

Turn the VALUE knob to the left to decrease the setting.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MID" should be highlighted.

MID - Midrange Central Frequency Adjust, Gain and Resonance ("Q")

These Parameters allow you to adjust the central frequency, amount and resonance of the Midrange frequency band. You may select from 250Hz to 3.1kHz.

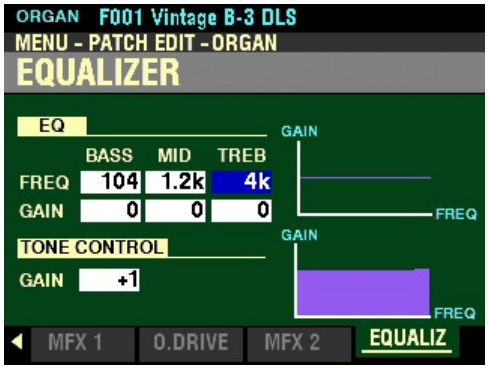
Use the DIRECTION "▲" and "▼" buttons to select either FREQ or GAIN for the Midrange frequencies.

When you have made your selection:

Turn the VALUE knob to the right to increase the setting.

Turn the VALUE knob to the left to decrease the setting.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "TREB" should be highlighted.

TREB - Treble Central Frequency Adjust and Gain

These Parameters allow you to adjust the central frequency and amount of the Treble frequency band. You may select from 4.0kHz ~ 8.0kHz .

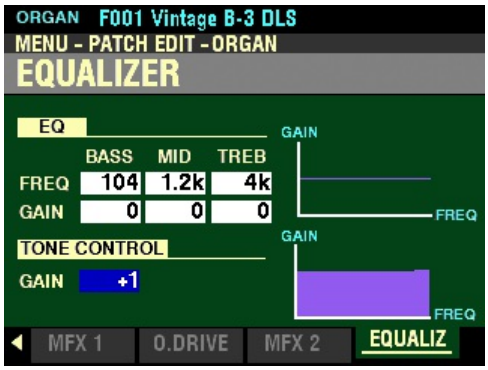
Use the DIRECTION "▲" and "▼" buttons to select either FREQ or GAIN for the Treble frequencies.

When you have made your selection:

Turn the VALUE knob to the right to increase the setting.

Turn the VALUE knob to the left to decrease the setting.

If you are editing the EQUALIZER for the ORGAN Voice Section, you will see an additional Parameter, "TONE CONTROL." From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "TONE CONTROL" should be highlighted.

TONE CONTROL

This Parameter duplicates the performance of the tone control on the AO-28 preamp of a B-3 or C-3 or the AO-29 preamp on an A-100. Its purpose is, to cut the overall treble above 200Hz gently. You may select from -9 to +9. At 0, the effect becomes neutral, -5, is a moderate amount of treble cut and -9 is the maximum amount.

NOTE: A setting of **-1** corresponds to the maximum setting of the B-3/C-3/A-100 tone control.

NOTE: The tone control found on the B-3/C-3, was only available at **minus** settings, but this Parameter allows you to select **plus** settings as well.

NOTE: The sound may distort if gains are raised too high. Adjust accordingly.

NOTE: This Parameter is **not** available for the **Pipe** Organ Type.

Turn the VALUE knob to the right to increase the setting.

Turn the VALUE knob to the left to decrease the setting.

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HAMMOND

Sk PRO

SPECIAL PERFORMANCE FEATURES

SPECIAL PERFORMANCE FEATURES

Your Hammond SK PRO has a number of Special Performance Features which enable you to change various characteristics of the sound or change how an Expression Pedal or Foot Switch will work. This chapter explains each of these in detail.

◆ OCTAVE



This feature allows you to change the Octave of the selected Part.

The OCTAVE buttons (shown above) allow you to select which Part will receive an Octave setting.

The data chart below shows the options you may select.

OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

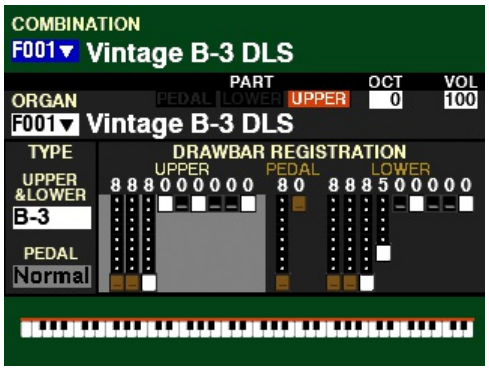
NOTE: The Octave settings controlled by the OCTAVE buttons are independent of the OCTAVE Parameters in the **COMBINATION** FUNCTION Mode. If you want to change the Octave setting of individual Voice Sections, you can do so either from the OCTAVE Parameters in the PLAY screen or from the SETTING Page of the **COMBINATION** FUNCTION Mode.

The following pages will explain how to change the Octave of the UPPER, LOWER and PEDAL Parts.

♦ Changing the Octave for the UPPER Part:

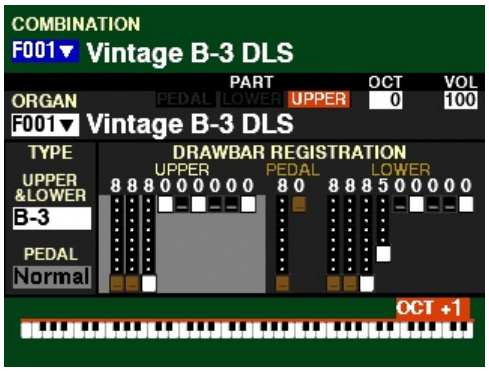
TRY THIS:

1. Make sure the instrument is un-transposed or playing in "concert" pitch (TRANSPOSE button LED not lit) and Combination F001 is selected. The Information Center Display should look like this:



Notice the box underneath "OCT" displays 0.

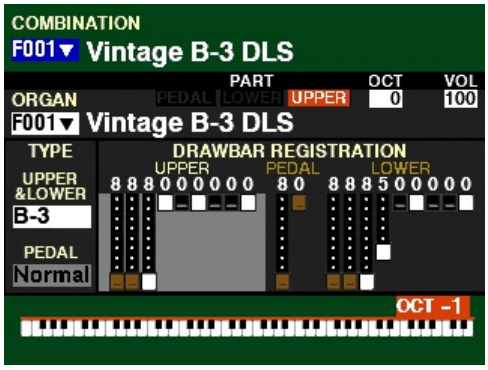
2. Press the UP button once. The Information Center Display should show the following:



Notice there is now a red box to the right of the keyboard icon at the bottom of the screen: OCT +1, The UPPER Part will now sound one octave higher. The UP button LED will also light.

3. Press the DOWN button once. The red OCT +1 box will disappear and the UPPER Part will now play at the normal octave. The UP button LED will also turn "OFF."

4. Press the DOWN button once more. The Information Center Display should show the following:



Notice there is now a red box to the right of the keyboard icon at the bottom screen: OCT -1, The UPPER keyboard will now sound one octave lower. The DOWN button LED will also light.

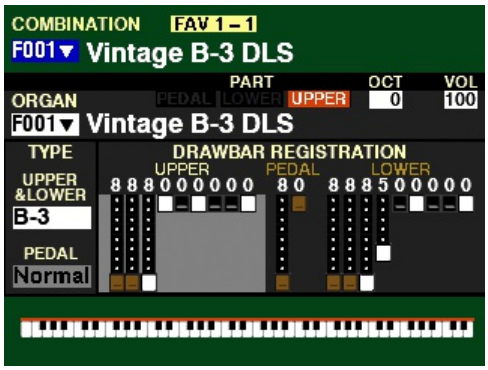
5. To return the instrument to concert pitch, press the UP button once. The red OCT -1 box will disappear and the UPPER Part will now play at the normal octave. The DOWN button LED will also turn "OFF."

♦ Changing the Octave for the LOWER Part:

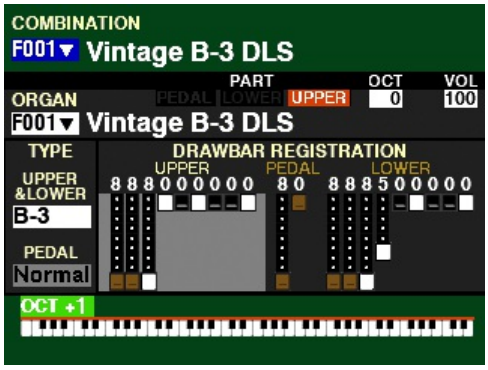
NOTE: The SPLIT button must be "ON" (orange LED lit) in order to hear these changes.

TRY THIS:

1. Make sure the instrument is un-transposed or playing in "concert" pitch (TRANSPOSE" button LED not lit) and Combination F001 is selected. The Information Center Display should look like this:



2. Press and Hold the LOWER button and press the UP button once. The Information Center Display should show the following:

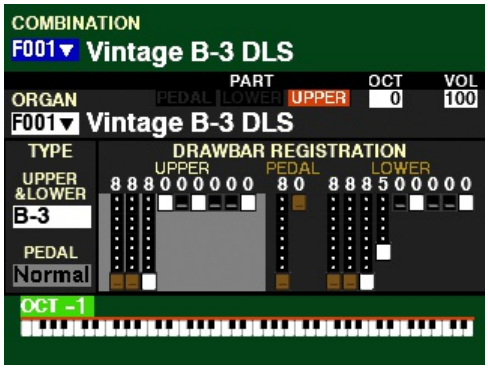


Notice there is now a green box to the left of the keyboard icon at the bottom of the screen: OCT +1, The LOWER Part will now sound one octave higher. The UP button LED will also light.

3. Release the UP button. The UP button LED will turn "OFF" and the LOWER button LED will remain lit.

4. Press and Hold the LOWER button and press the DOWN button once. The green box OCT +1 will disappear and the LOWER Part will now play at the normal octave. The LOWER button LED will turn "OFF."

5. Press and Hold the LOWER button and press the DOWN button once more. The Information Center Display should show the following:



Notice there is now a green box to the left of the keyboard icon at the bottom of the screen: OCT -1, The LOWER Part will now sound one octave lower. The DOWN button LED will also light.

6. Release the DOWN button. The DOWN button LED will turn "OFF" and the LOWER button LED will remain lit.

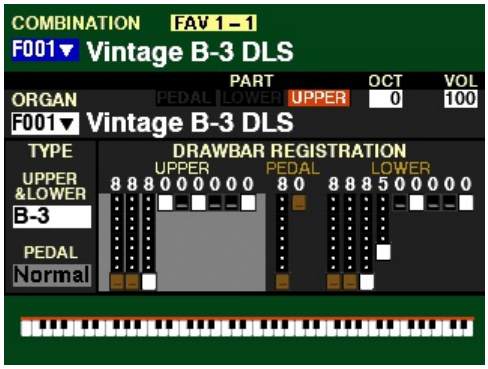
7. To return the instrument to concert pitch, Press and Hold the LOWER button and press the UP button once. The green box will disappear and the LOWER Part will now play at the normal octave. The LOWER button LED will turn "OFF."

♦ Changing the Octave for the PEDAL Part:

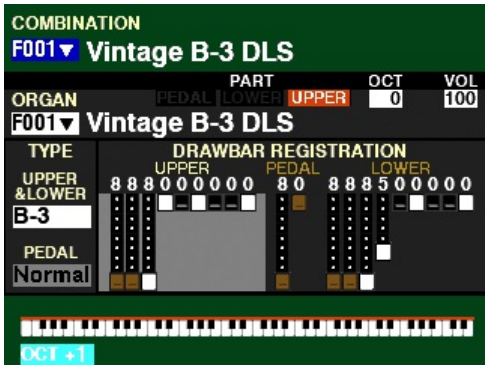
NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) or a MIDI Pedal clavier must be connected in order to hear these changes.

TRY THIS:

1. Make sure the instrument is un-transposed or playing in "concert" pitch (TRANSPOSE" button LED not lit) and Combination F001 is selected. The Information Center Display should look like this:



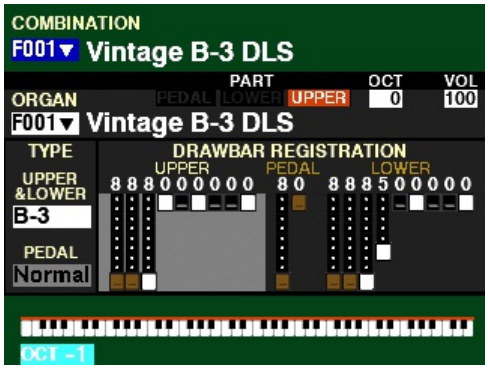
2. Press and Hold the PEDAL button and press the UP button once. The Information Center Display should show the following:



Notice there is now a light blue box at the bottom of the display on the left OCT +1 The PEDAL Part will now sound one octave higher.

3. Press and Hold the PEDAL button and press the DOWN button once. The light blue box will disappear and the PEDAL Part will now play at the normal octave.

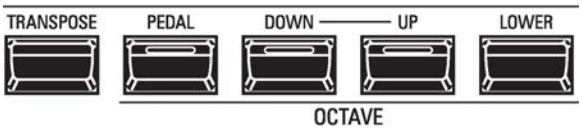
4. Press and Hold the PEDAL button and press the DOWN button once more. The Information Center Display should show the following:



Notice there is now a light blue box at the bottom of the display on the left OCT -1. The PEDAL Part will now sound one octave higher.

5. To return the PEDAL Part to concert pitch, Press and Hold the PEDAL button and press the UP button once. The light blue box will disappear and the PEDAL Part will now play at the normal octave.

◆ TRANSPOSE (Key Select)



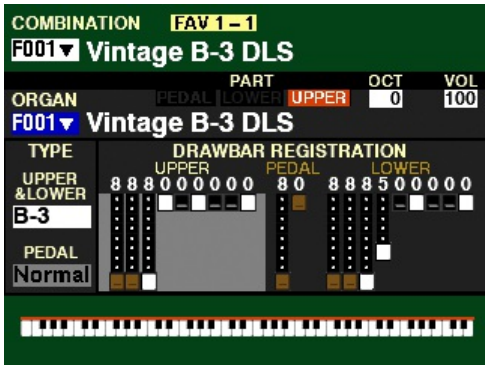
This feature allows you to shift the musical key of the entire instrument. This is useful if you have a piece of music written in one key but which needs to sound in another key; for example, a song written and played in C Major, could sound in G Major. TRANSPOSE will step either up or down six (6) semitones or half-steps from the center position.

The TRANSPOSE feature consists of the TRANSPOSE button, plus the DOWN and UP buttons to the right of the TRANSPOSE button. The DOWN button allows you to transpose lower and the UP button allows you to transpose higher.

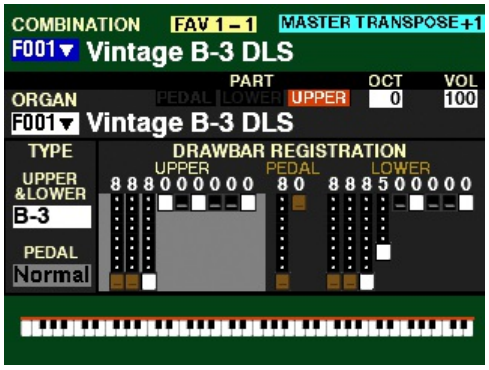
TRY THIS:

1. Make sure the instrument is un-transposed or playing in "concert" pitch (TRANSPOSE button LED not lit).

2. Press and Hold the TRANSPOSE button and look at the Information Center Display. The upper right portion of the screen should be blank.



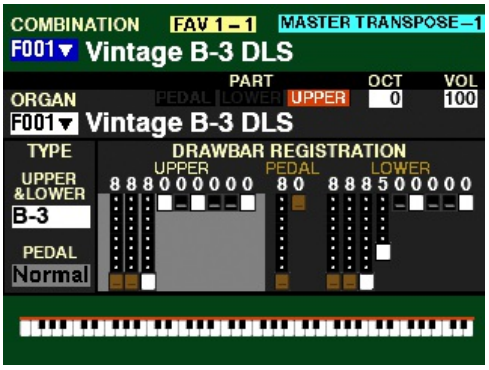
3. While continuing to hold the TRANSPOSE button, press the UP button once. The Information Center Display should show the following:



Notice the message at the upper right of the display ("+1"). You have now transposed the entire instrument up one half-step - when you press a "C" note you will hear the note "C#" above it.

4. Now Press and Hold the TRANSPOSE button and press the DOWN button until the message at the upper right of the display disappears. The instrument is now back to concert pitch.

5. While continuing to hold the TRANSPOSE button, press the DOWN button once. The Information Center Display should show the following:



Notice the message at the upper right of the display (-1). You have now transposed the entire instrument down one half-step - when you depress a "C" note you will hear the note "B" below it.

6. To return the instrument to concert pitch, Press and Hold the TRANSPOSE button and press the UP button until the message at the upper right of the display disappears.

NOTE: You can also transpose the entire instrument by using the MASTER TRANSPOSE feature in the **SOUND** FUNCTION Mode. This is explained in the **SPECIAL UTILITY FEATURES** chapter of this Guide on page 767.

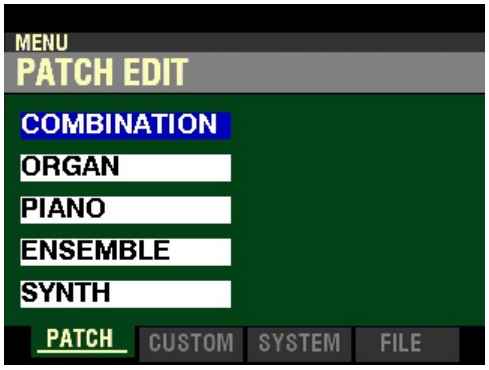
NOTE: If you Save a Setup with the instrument transposed using the MASTER TRANSPOSE, the transposition setting will be Recorded. If you Load the Setup to the instrument, the transposition setting will load along with the rest of the information contained in the Setup. For more information about Setups, please consult the **USING MEMORY** chapter of this Guide starting on page 816.

◆ CONTROL FUNCTION Mode Page

This FUNCTION Mode Page allows you to select the parameters for the various Controls that you prefer.

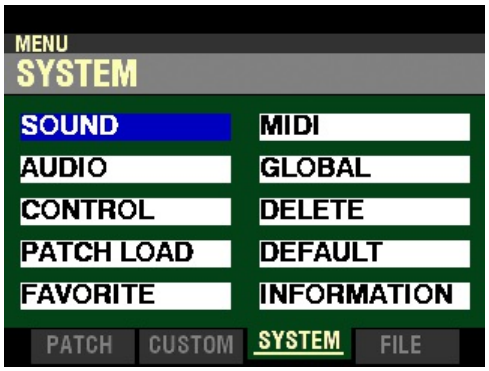
Accessing the CONTROL FUNCTION Mode Page using the MENU / EXIT button:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



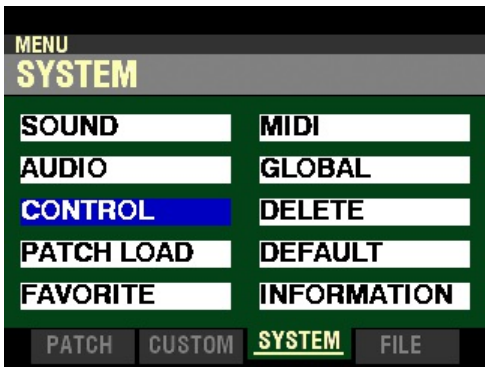
The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times. The Information Center Display should now look like this:



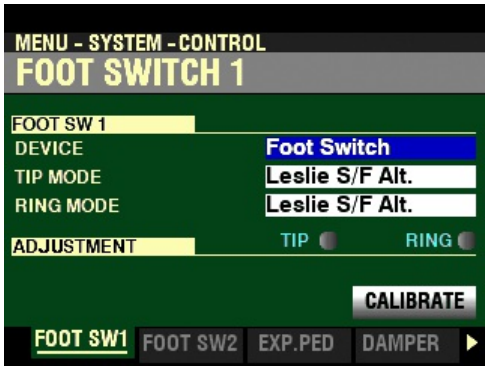
This is the SYSTEM Menu. The "SOUND" box should be highlighted.

3. Press the DIRECTION "▼" button two times. The Information Center Display should now look like this:



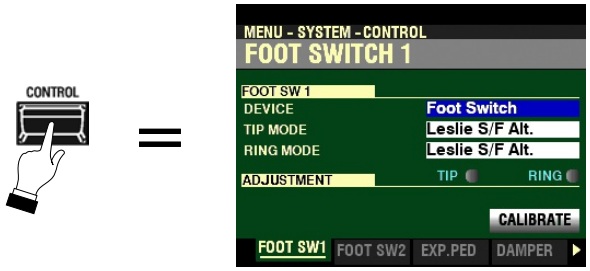
The "CONTROL" box should now be highlighted.

4. Now press the ENTER button. The Information Center Display should now display Page 1 of the CONTROL FUNCTION Mode:



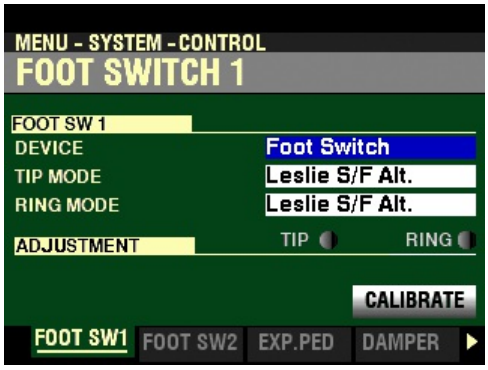
Accessing the CONTROL FUNCTION Mode Page using the Shortcut:

Press the CONTROL button. This will cause Page 1 of the CONTROL FUNCTION Mode to display.



You can now use the PAGE and DIRECTION buttons in conjunction with the VALUE knob to make changes to the characteristics of the various Controls. Theses changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "DEVICE" should be highlighted.

♦ FOOT SW 1

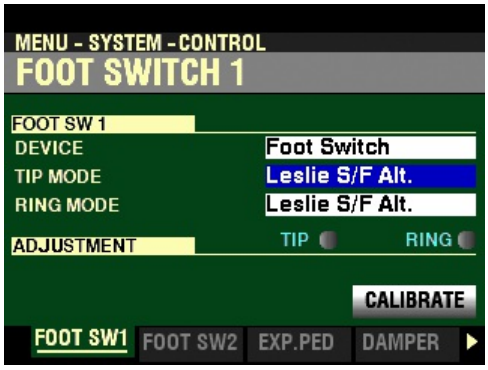
DEVICE

The FOOT SW 1 jack on the SK PRO is set up to accept different types of devices. The data chart below shows the options you may select.

FOOT SWITCH 1 DEVICE SELECT Options	
Setting	**Description**
Foot Switch	A conventional foot switch such as the Hammond FS-9H.
Leslie	A CU-1 speed switch ("half-moon" style switch available as an optional accessory) which allows you to select the Leslie Speeds.

Turn the VALUE knob to select the option you want.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "TIP MODE"should be highlighted.

This Parameter allows you to select functions for a connected Foot Switch. This is explained in more detail starting on the next page.

TIP MODE / RING MODE

What Is "TRS?"

A typical momentary Foot Switch will connect to an instrument such as the SK PRO by means of a plug similar to the one shown below.



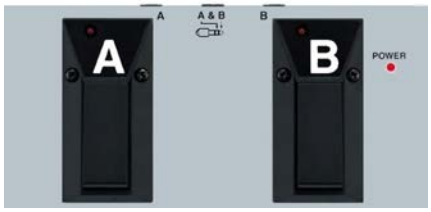
TRS is an acronym for Tip-Ring-Sleeve, and refers to the fact that a connecting plug can have more than one connector. This means that more than one Foot Switch can be connected to the SK instrument, thereby allowing you to control more than one function using the same Foot Switch jack. If you wish to do this, you will need a Stereo Adapter which has a Stereo plug and two (2) Mono jacks.

NOTE: This type of adapter is also called a "splitter."



Insert the Stereo plug into the FOOT SW jack on the SK instrument and connect a Foot Switch to each of the Mono input jacks. In most cases, the Left (L) input jack will access the Tip function while the Right ® will access the Ring function.

You can also use a TRS cable to connect a dual-switch (example shown below) to one of the FOOT SW jacks.

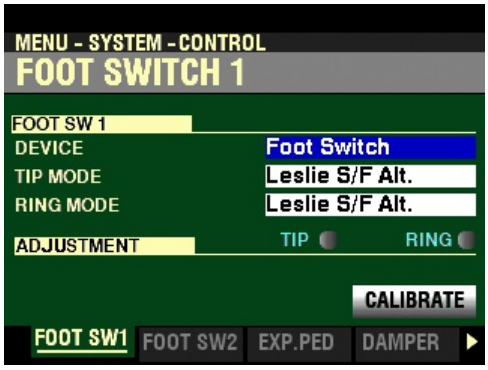


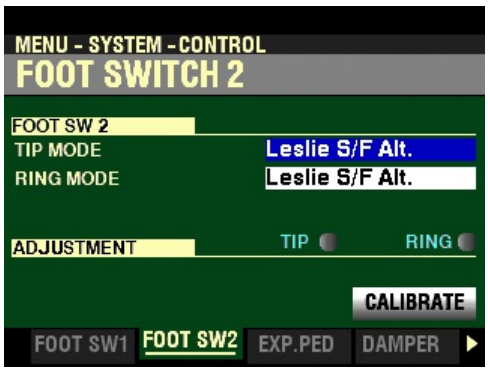
If you do this, one of the switches will be assigned to Tip mode and the other to Ring mode. However, if you use a dual-switch which allows you to select either Latching or Momentary operation, be sure to select Momentary to use the switch with the SK PRO.

NOTE: The plug-in receptacles on some commercially available adaptors may be marked "TIP" or "A" and "RING" or "B" for easier identification. Follow these markings when setting up your Foot Switches.

ADJUSTMENT

In both the FOOT SWITCH 1 and FOOT SWITCH 2 screens, you will see two small indicators "TIP" and "RING."



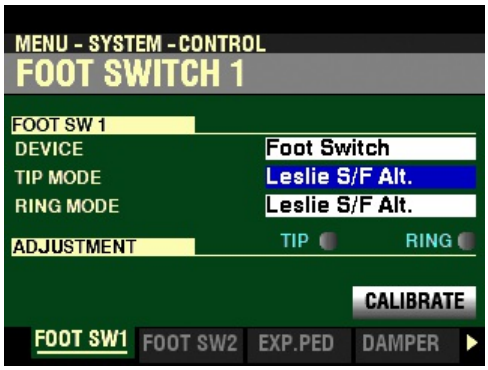


The SK PRO is compatible with two Foot Switches connected to a stereo "splitter" or dual foot switch assembly. Therefore, the FOOT SW1 or FOOT SW2 jacks both monitor TIP and RING respectively. These will light in accordance with the type of Foot Switch connected to either the FOOT SW1 or FOOT SW2 jack.

On a monaural "TS" (Tip-Sleeve" foot switch (such as the Hammond FS-9H), "RING" is not recognized and is part of "SLEEVE." Therefore, when the FS-9H is connected to the foot switch jack, "RING" is recognized as connected and the "RING" indicator will light.

NOTE: If you connect a Foot Switch while the power to the instrument is "OFF," the polarity of the connected Foot Switch(es) is/are automatically detected when the power to the instrument is turned "ON." However, if you have connected Foot Switches or a Damper Pedal while the instrument is "ON" and it is not working correctly, you can calibrate them by following the procedures described on pages 666 and 675.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "TIP MODE"should be highlighted.

There are 14 settings for the Foot Switches. The data chart below explains each one.

FOOT SWITCH Options	
Setting	**Description**
Off	Pressing the Foot Switch will have no effect.
Leslie S/F ALT	Allows you to use the Foot Switch to switch back and forth between Leslie Slow and Fast Rotor Speeds. Each time the Foot Switch is pressed and released, the Leslie Rotors will change speeds.
Leslie S/F MOM	Allows you to use the Foot Switch to switch Leslie Rotor Speeds. When the Foot Switch is pressed and held, the Leslie Rotors will go at Fast speed. When the Foot Switch is not engaged, the Leslie Rotors go at Slow speed.
Leslie S/F TRI	Allows you to use the Foot Switch to switch back and forth between Leslie Slow and Fast Rotor Speeds similar to the ALT mode. Additionally, if the Foot Switch is pressed and held for longer than 1 second, the Leslie Rotors will go to the Off or Stop position.
Tone Wheel Brake	Allows you to bend the pitch in a manner similar to a vintage tone-wheel organ.
*Favorite Fwd	Allows you to use the Foot Switch to move **forward** through the Favorites.
*Favorite Rev	Allows you to use the Foot Switch to move **backward** through the Favorites.
+Spring Shock	Allows you to use the Foot Switch to add the sound of a Spring Reverb unit being jostled.
Delay	Allows you to adjust the Delay Time of the Effects, at the interval of pressing the Foot Switch. The delay is heard while the Foot Switch is held down.
Organ U&L Sustain	Allows you to add Sustain to the UPPER/LOWER Keyboard(s) of the ORGAN Section.
Pedal To Lower	Allows you to use the Foot Switch to turn PEDAL TO LOWER "ON."
++Bass 1C ~ Bass 3C	Allows you to use the Foot Switch to play a specific Pedal note.
ProChord	Allows you to add ProChord harmony.
To Manual (Version 2.0)	Allows you to switch between MANUAL and the current Combination or Favorite.

* - By selecting "Favorite Fwd, Rev,"Favorites can be selected sequentially by using the Foot Switch to advance either forward or backward. Also, if either "1" or "10" are selected, the sequence will "roll over" to the next numbered Bank

+ - "Spring Shock" occurs when the springs in a spring reverb unit move around and strike the reverb tank, resulting in a loud "bang" Some modern and progressive music uses this as a musical effect.

++ - Many jazz and blues organists provide a bass line with the left hand on the Lower Manual and strike one Pedal note at the onset of each bass note to give the effect of a plucked string bass (called a "thump").

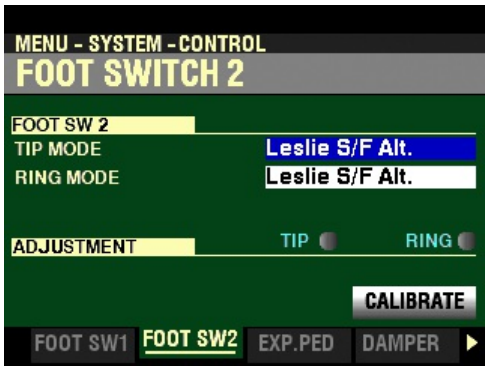
NOTE: All of the above functions can be set for either **TIP** or **RING** MODE. However, RING MODE will have no effect if only one Foot Switch is connected to the FOOT SW jack. You can then use **TIP** MODE to select the function you want.

Use the DIRECTION "▲" and "▼" buttons to select either TIP MODE or RING MODE.

Turn the VALUE knob to select the Foot Switch setting you want.

♦ FOOT SWITCH 2

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "TIP MODE" should be highlighted.

This FUNCTION Mode Page allows you to select the Function of devices connected to the FOOT SW 2 jack.

This Page is identical to the FOOT SWITCH 1 Page with one exception: The DEVICE Parameter is not included in the FOOT SWITCH 2 Page because the FOOT SW 2 jack will not accept a Leslie Speed switch (Leslie CU-1 - available as an optional accessory). If you wish to use a Leslie switch to control the speed of the Leslie rotors, plug the Leslie switch into the FOOT SW 1 jack and select Leslie as the DEVICE as shown on page 661.

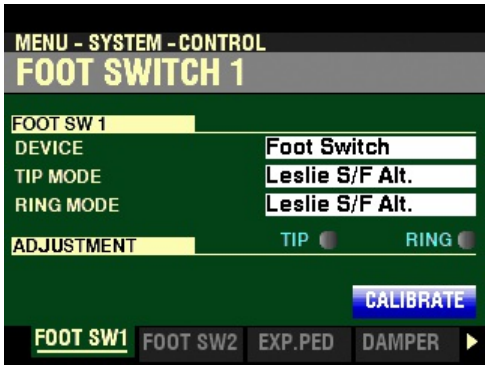
CALIBRATE (POLARITY)

Some Foot Switches, such as the Hammond FS-9H, are "normally-open" (make contact when pressed) while others are "normally-closed" (break contact when pressed). The CALIBRATE Parameter allows you to calibrate the polarity of a Foot Switch so that it will function correctly with the SK PRO.

To calibrate a Foot Switch for the SK PRO, do the following:

NOTE: Do not press the Foot Switch while performing this operation.

1. From any of the FOOT SWITCH 1 or FOOT SWITCH 2 Pages, press the DIRECTION "▼" button repeatedly until the "CALIBRATE" box is highlighted:



2. Press the ENTER button. You will see the following message in the display for approximately ½ second:

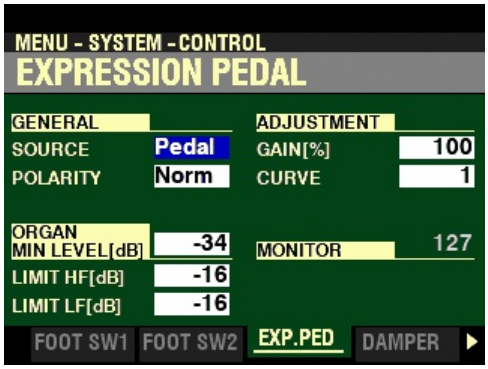


After the above message disappears, the connected Foot Switch is set to work properly with the SK PRO.

♦ EXPRESSION PEDAL

This FUNCTION Mode Page allows you to control how a connected Expression Pedal will function.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "SOURCE" should be highlighted.

You are now in the portion of the CONTROL FUNCTION Mode which pertains to Expression settings.

The following pages will explain how to set the Expression parameters to your preference.

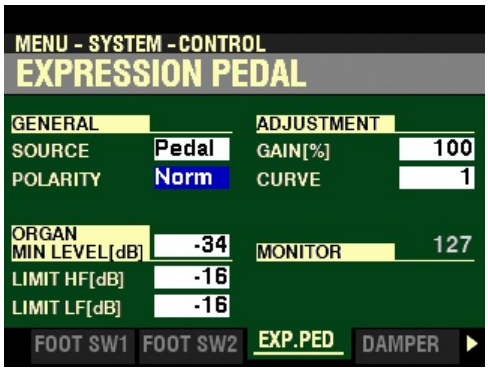
SOURCE

This Parameter allows you to select the source of expression control. The data chart below shows the options you may select.

EXPRESSION SOURCE Options	
Setting	**Description**
Exp. Pedal	Instrument volume is controlled by a connected Expression Pedal.
MIDI	MIDI Expression Data (CC#11) will be received at the UPPER Internal Channel
Both	A connected Expression Pedal will control both instrument volume and MIDI Expression data.

Turn the VALUE knob to select Exp. Pedal, MIDI or Both.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "POLARITY" should be highlighted.

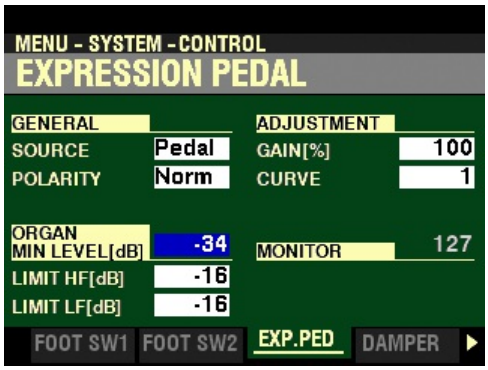
POLARITY

This Parameter allows you to set the polarity type of a connected Expression Pedal. The data chart below shows the options you may select.

EXPRESSION PEDAL POLARITY Options	
Setting	**Description**
Normal	An Expression Pedal such as Hammond EXP-50, EXP-50J, etc.
Reverse	An Expression Pedal with reverse polarity

Turn the VALUE knob to select Normal or Reverse.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ORGAN MIN LEVEL" should be highlighted.

ORGAN MINIMUM LEVEL

This Parameter allows you to set the amount of volume for the ORGAN Voice Section when the Expression Pedal is "closed" or set at its minimum position. You may select from -40 to 0 db as well as Off.

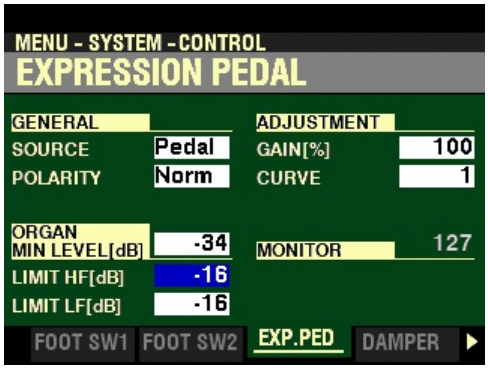
Turn the VALUE knob to the right to increase the Minimum Level.

Turn the VALUE knob to the left to decrease the Minimum Level.

NOTE: This Parameter does **not** affect the other Voice Sections.

NOTE: At a setting of **0** or **Off** there will still be a small amount of Volume when the Expression Pedal is closed. This is the normal setting for an organ such as a vintage Hammond Organ.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "LIMIT HF" should be highlighted.

EXPRESSION LIMIT

On many home audio components, there is a control called Loudness This is intended to correct an anomaly of the human ear whereby high and low frequencies appear to be lacking at low volume levels. The SK PRO incorporates a Loudness algorithm similar to the one found on home audio. At lower volume levels, both high and low frequencies are boosted so that a flatter frequency response will be perceived by the ear.

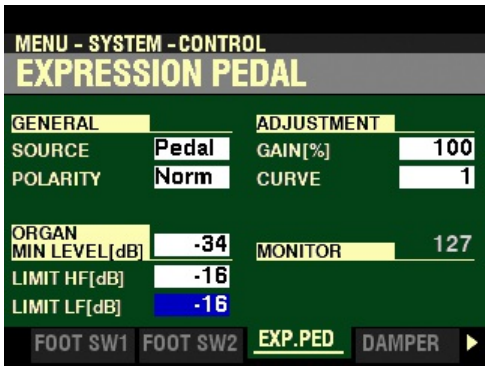
LIMIT HF

This Paramketer allows you to adjust the amount of High Frequencies (above 800Hz) that will be heard when the Expression Pedal is set at minimum. You may select Off (no sound), or from 0db to -40db (minus 40 decibels).

Turn the VALUE knob to the right to increase the High Frequencies.

Turn the VALUE knob to the left to decrease the High Frequencies.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LIMIT LF" should be highlighted.

LIMIT LF

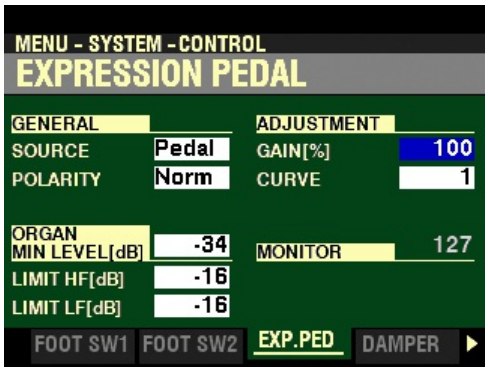
This Parameter allows you to adjust the amount of Low Frequencies (below 800Hz) that will be heard when the Expression Pedal is set at minimum. You may select Off (no sound), or from 0db to -40db (minus 40 decibels).

Turn the VALUE knob to the right to increase the Low Frequencies.

Turn the VALUE knob to the left to decrease the Low Frequencies.

NOTE: The default settings for the ORGAN MIN LEVEL and LIMIT Parameters are designed to replicate the performance of the Expression Pedal on a vintage Hammond Organ such as B-3, C-3, etc. Therefore, as noted on the previous page, there will still be a small amount of Volume when the Expression Pedal is closed. If you want no sound to be heard at the minimum setting of the Expression Pedal, set both of the LIMIT Parameters to **0**.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box to the right of "GAIN."



GAIN

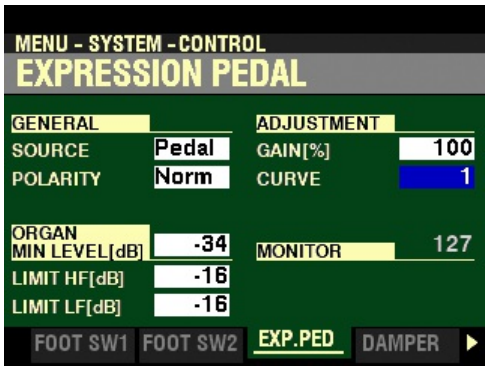
This Parameter allows you to adjust the range of a connected Expression Pedal. You may select from 70% to 130%.

Turn the VALUE knob to the right to increase the amount of Gain.

Turn the VALUE knob to the left to decrease the amount of Gain.

NOTE: The amount of audible change may differ depending on the specific Expression Pedal used. Use this Parameter to obtain the desired response from your particular pedal.

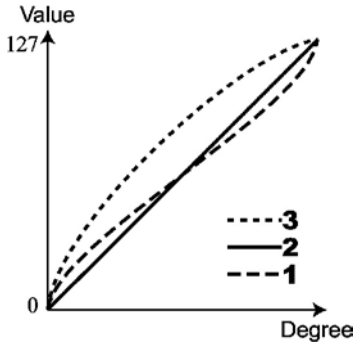
From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "CURVE" should be highlighted.

CURVE

This Parameter allows you to set the "curve" or change of expression value corresponding to the angle of the Expression Pedal when depressed. You may select 3 different Expression Curves. (see the illustration below).



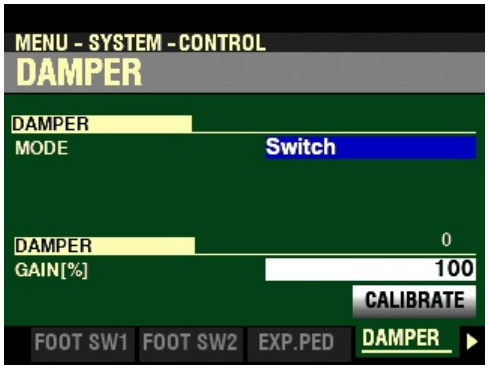
Turn the VALUE knob to select the option you want.

NOTE: The default CURVE Parameter setting is designed to replicate the performance of the Expression Pedal on a vintage Hammond Organ such as B-3, C-3, etc.

MONITOR - Expression Monitor

This is merely a way to display the current Expression Value, with 0 being minimum Expression and 127 being maximum Expression. The Expression Monitor can be useful as a troubleshooting aid if you either don't hear any sound or can't change the volume using a connected Expression Pedal.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "MODE" should be highlighted.

♦ DAMPER Functions

You can connect a foot switch to use as a Damper or piano-type Sustain pedal. This FUNCTION Mode Page allows you to select Parameters for the Damper Pedal.

MODE

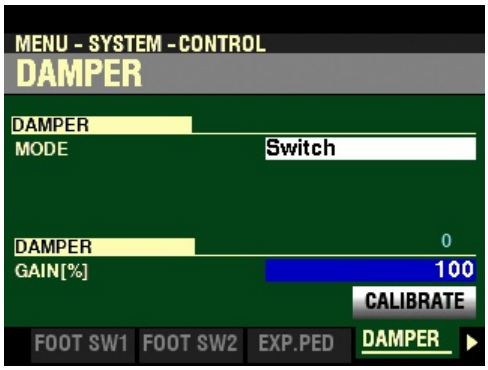
This Parameter allows you to adjust the type of Damper Pedal to connect. The data chart below shows the options you may select.

DAMPER PEDAL TYPE Options	
Setting	**Description**
Switch	Use a "switch" type pedal such as VFP1
Half-Y	Use a Type-Y "potentiometer" switch
Half-R	Use a Type-R "potentiometer" switch
Half-K	Use a Type-K "potentiometer" switch

Turn the VALUE knob to select the option you want.

NOTE: The SK PRO implements "half-damping;" however, damper pedals from different manufacturers have their own unique specifications for implementing half-damping. Therefore, three different Parameter settings are provided for the three most common damper pedals.

From the screen shown on the previous page, press the DIRECTION"▼" button once.



The box to the right of "GAIN[%]" should be highlighted.

GAIN

This Parameter allows you to adjust the range of a connected Damper Pedal. You may select from 70% to 130%; however, the amount of audible change may differ depending on the specific Damper Pedal used. Use this Parameter to obtain the desired response from your particular pedal.

Turn the VALUE knob to the right to increase the Gain or Range.

Turn the VALUE knob to the left to decrease the Gain or Range.

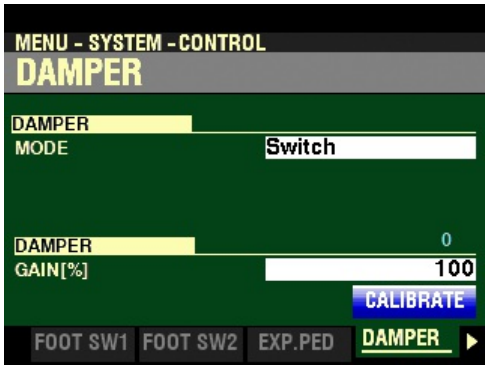
CALIBRATE (POLARITY)

This Parameter allows you to configure the polarity of a Damper Pedal to work properly with the SK PRO.

To calibrate a Damper Pedal for the SK PRO, do the following:

NOTE: Do not press the Damper Pedal while performing this operation.

1. With the DAMPER FUNCTION Mode Page displaying, press the DIRECTION "▼" button repeatedly until the box, "CALIBRATE" is highlighted:

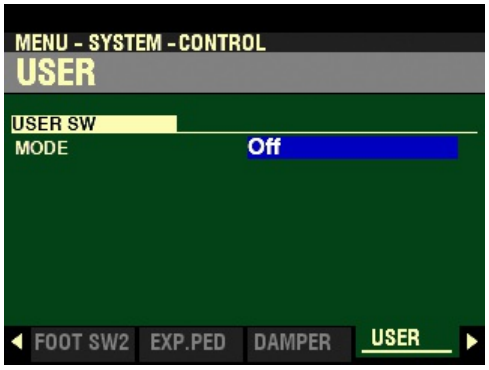


2. Press the ENTER button. You will see the following message in the display for approximately ½ second:



After the above message disappears, the connected Damper Pedal is set to work properly with the SK PRO.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "MODE" should be highlighted.

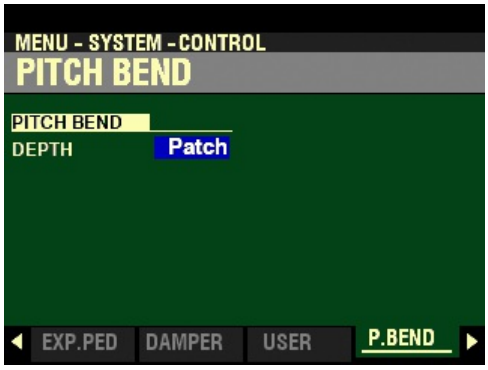
♦ USER

This FUNCTION Mode Page allows you to select different functions for the USER button. The data chart below shows the options you may select.

USER BUTTON Options	
Setting	**Description**
Off	The USER button will have no function
Pedal Sustain	Allows you to turn Pedal Sustain "ON" or "OFF."
Organ Upper Sustain	Allows you to turn Organ Upper Sustain "ON" or "OFF
Organ Lower Sustain	Allows you to turn Organ Lower Sustain "ON" or "OFF
Tone Wheel Brake	Allows you to bend the pitch in a manner similar to a vintage tone-wheel organ.
Spring Shock	Allows you to produce the effect of a Spring Reverb unit being jostled.
MFX 2 Delay Time	Allows you to adjust the Delay Time of the Effects, at the interval of pressing the USER button. The delay is heard while the USER button is held down
MFX 1, MFX 2	Allows you to turn each Section Effect "ON" or "OFF"

Turn the VALUE knob to select the option you want.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "DEPTH" should be highlighted.

♦ PITCH BEND

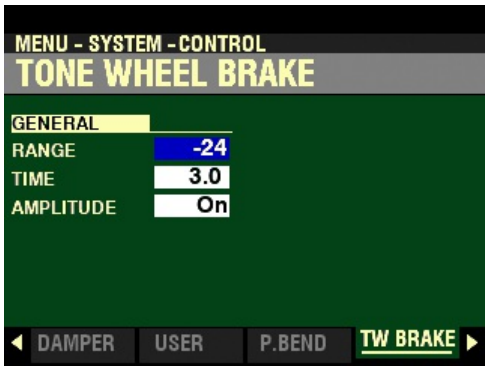
DEPTH

This Parameter allows you to adjust how the Pitch Bend Wheel will respond when a Combination or Patch is selected. The data chart below shows the options you may select.

PITCH BEND DEPTH Options	
Setting	**Description**
Patch	The Pitch Bend Wheel will bend the pitch according to the value specified for the Combination or Patch
0 ~ 12	The Pitch Bend Wheel will bend the pitch by semitones. This setting takes priority over the Combination or Patch settings.

Turn the VALUE knob to select Patch or 0 ~ 12.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "RANGE" should be highlighted.

♦ TONE WHEEL BRAKE

On a vintage B-3/C-3/A-100, the synchronous motor running the tone generator turns at a constant speed; therefore "pitch bending" is not possible. However, some jazz players discovered that by turning the RUN switch "OFF" then quickly back "ON" again, a pseudo-"pitch-bend" effect could be created. These Parameters allows you to recreate this effect.

You can access the Tone Wheel Brake in two ways:

1. Using a connected Foot Switch, or
2. Pressing the USER button.

More information can be found on pages 664 and 676.

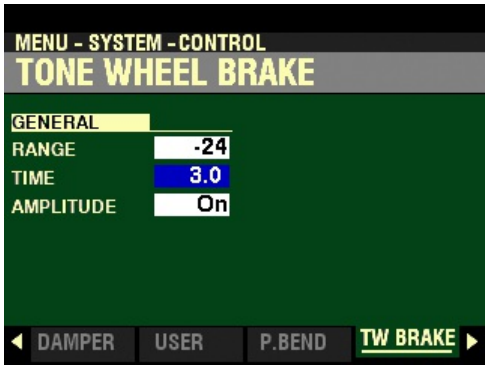
RANGE

This Parameter allows you to adjust the range of the pitch change. You may select from -24 to +12 semitones.

Turn the VALUE knob to the right to increase the Range.

Turn the VALUE knob to the left to decrease the Range.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "TIME" should be highlighted.

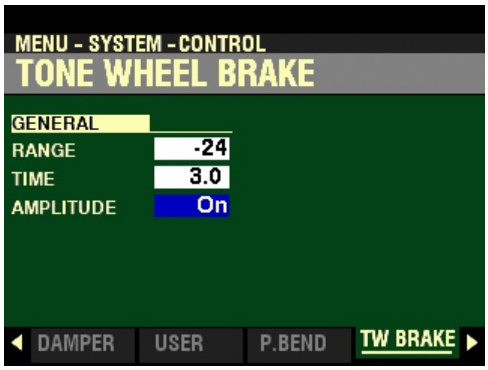
TIME

This Parameter allows you to adjust the rate at which the pitch changes. You may select from 0.1 to 5 seconds.

Turn the VALUE knob to the right to increase the rate.

Turn the VALUE knob to the left to decrease the rate.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "AMPLITUDE" should be highlighted.

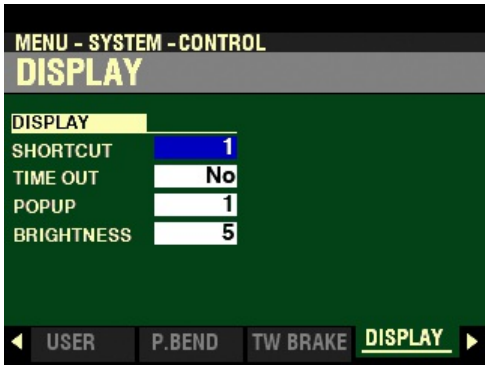
AMPLITUDE

This Parameter allows you to adjust whether the Volume changes along with the pitch. The data chart below shows the options you may select.

AMPLITUDE Options	
Setting	**Description**
Off	The Pitch will change but not the Volume.
On	The Pitch and Volume will change together.

Turn the VALUE knob to turn this Parameter On or Off.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "SHORTCUT" should be highlighted.

♦ DISPLAY

This FUNCTION Mode Page allows you to select how the Information Center Display will function.

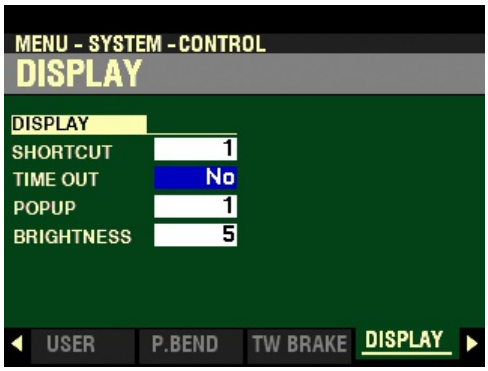
SHORTCUT

As explained in the INFORMATION CENTER DISPLAY of this Guide, several of the FUNCTION Mode Pages can be accessed by Pressing and Holding a button associated with that Page. This Parameter allows you to select how long a button must be held before the FUNCTION Mode Page controlled by that button appears. The data chart below shows the options you may select.

SHORTCUT AMOUNT Options	
Setting	**Description**
0, 1, 2	The Shortcut will appear when the button is held for the selected time (O, 1 or 2 seconds).
No	The Shortcut feature is disabled.

Turn the VALUE knob to select 0, 1, 2 or No.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box to the right of "TIME OUT" should be highlighted.

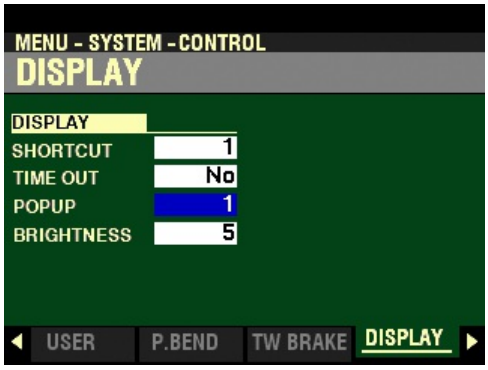
TIME OUT

This Parameter allows you to select how long the Information Center Display will continue to display a FUNCTION Mode Page via a "Shortcut" before reverting to the previous screen. The data chart below shows the options you may select.

TIME OUT Options	
Setting	**Description**
4, 8, 16	The FUNCTION Mode Page will display for the selected duration (in seconds).
NEVER	The FUNCTION Mode Page will continue to display until another Page is selected.

Turn the VALUE knob to select 4, 8, 16 or No.

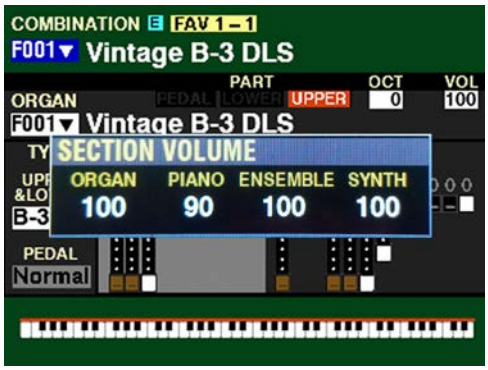
From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "POPUP" should be highlighted.

POPUP

Moving a knob or slider on the SK PRO may cause a small status screen showing the value represented by the knob or slider to appear momentarily (see the illustration below). This small screen is referred to as a POPUP.

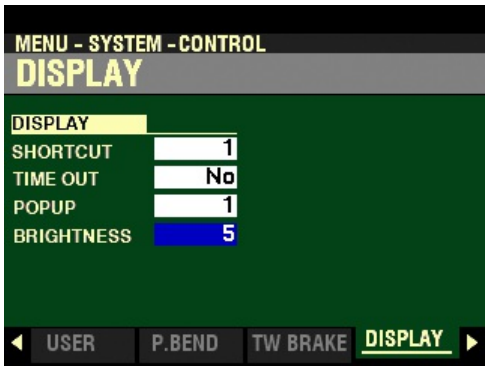


All of the knobs and sliders (except the MASTER VOLUME and ORGAN VOLUME knobs) will cause a POPUP to appear when moved. This Parameter allows you to select the interval at which a POPUP is displayed when you move a knob or slider. You may select from No (no POPUP will be displayed if a control is moved) or from 0.5 to 2.0 seconds.

Turn the VALUE knob to the right to increase the time.

Turn the VALUE knob to the left to decrease the time.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "BRIGHTNESS" should be highlighted.

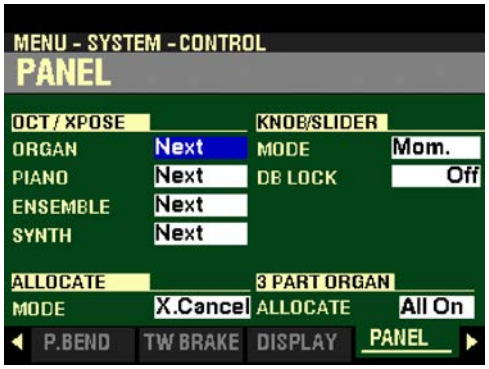
BRIGHTNESS

This Parameter allows you to adjust the brightness of the backlight of the display. You may select from 0 (dull display) to 10 (very bright display). The default setting is 5.

Turn the VALUE knob to the right to increase the brightness.

Turn the VALUE knob to the left to decrease the brightness.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once.



The box to the right of "ORGAN" should be highlighted

♦ PANEL

This FUNCTION Mode Page allows you to adjust the performance of the various controls on the Control Panel.

OCT. XPOSE

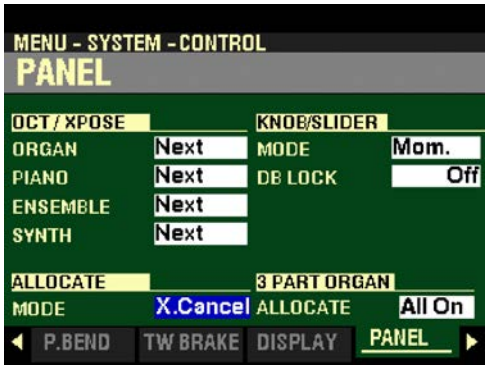
This Parameter allows you to adjust how the OCTAVE DOWN / UP buttons control Octave selection or Transposition. The data chart below shows the options you may select.

OCTAVE / TRANSPOSE Options	
Setting	**Description**
Every	The Octave or Transposition will change while keys are pressed and held.
Next	If a key or keys are pressed and held and the Octave or Transposition is changed, the key(s) must be released and pressed again before the Octave or Transposition takes effect.

Use the DIRECTION "▲" and "▼" buttons to select ORGAN, PIANO, ENSEMBLE or SYNTH.

Turn the VALUE knob to select Every or Next for each Voice Section.

From the screen shown on the previous page, press the DIRECTION "▼" button repeatedly until the box to the right of "MODE" is highlighted.



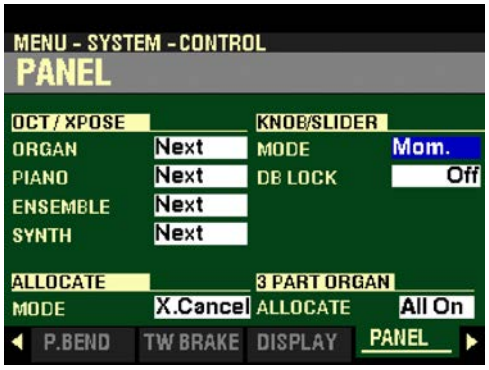
ALLOCATE MODE

This Parameter allows you to select the performance of the ALLOCATE buttons. The data chart below shows the options you may select.

ALLOCATE BUTTON MODE Options	
Setting	**Description**
Additive	The ALLOCATE buttons will turn "ON" and "OFF" individually.
X.Cancel	"Cross-Canceling" - When one ALLOCATE button is turned "ON," any other ALLOCATE buttons that are "ON" will turn "OFF" If an ALLOCATE button is already "ON," Pressing and Holding it while turning another ALLOCATE button "ON" will light both buttons.

Turn the VALUE knob to select Additive or X Cancel.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "MODE."



KNOB / SLIDER

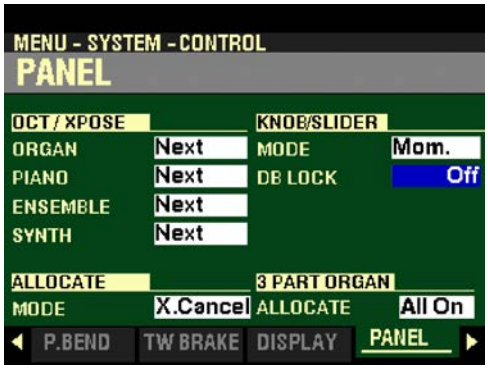
MODE

This Parameter allows you to adjust how a value is affected when a knob or slider is moved. The data chart below shows the options you may select.

KNOB / SLIDER MODE Options	
Setting	**Description**
Mom	When a knob or slider is moved, the value will change immediately.
Across	When a knob or slider is moved the value will not change until the current value is arrived at by the movement of the knob or slider, at which point the value will change.

Turn the VALUE knob to select Mom or Access.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "MODE".



DB LOCK (Version 2.0)

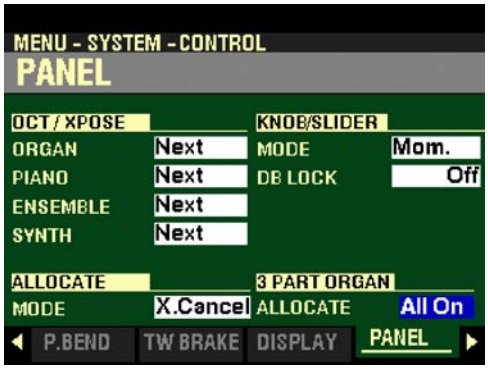
This Parameter allows you to disable control of Drawbar Registrations using the physical Drawbars. The data chart below shows the options you may select

KNOB / SLIDER DB LOCK Options	
Setting	**Description**
Off	When a Drawbar is moved, the Drawbar Registration will change.
On	When a Drawbar is moved, the Drawbar Registration will not change.

Turn the VALUE knob to turn this Parameter On or Off.

NOTE: If the MANUAL button is "ON," this Parameter will have no effect.

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "ALLOCATE" should be highlighted.

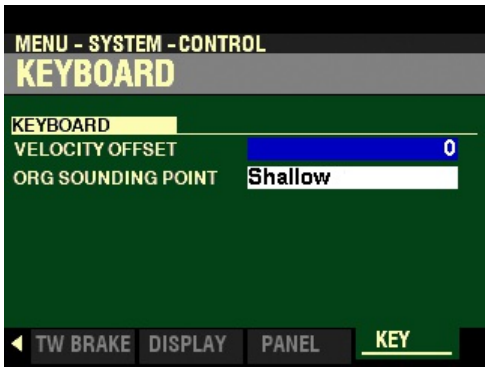
3PART ORGAN

This Parameter allows you to select how the 3PART ORGAN button interacts with the ORGAN ALLOCATE button. The data chart below shows the options you may select.

3PART ORGAN ALLOCATE Options	
Setting	**Description**
No	The 3PART ORGAN button has no effect on the ORGAN ALLOCATE button.
All On	When the 3PART ORGAN button is turned "ON," all ORGAN Parts turn "ON," the SPLIT button turns "ON" and other Voice Sections are turned "OFF." Use this setting to allow 3PART ORGAN to convert the SK PRO into a vintage Hammond Organ with two manuals and pedals instantly.

Turn the VALUE knob to select No or All On.

From the screen shown on the previous page, press the PAGE "▶" button once.



The box to the right of "VELOCITY OFFSET" should be highlighted.

KEYBOARD

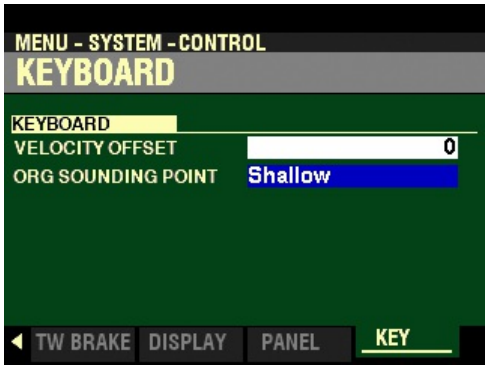
VELOCITY OFFSET

This Parameter allows you to adjust the keyboard velocity to your personal taste or playing style. You may select from -32 to +32 with 0 being the normal setting. Use the "minus" numbers for a heavy Press and the "plus" numbers for a lighter Press.

Turn the VALUE knob to the right to make the Press lighter

Turn the VALUE knob to the left to make the Press heavier.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "ORG SOUNDING POINT" should be highlighted.

ORGAN SOUNDING POINT

This Parameter allows you to set the point along the key travel at which sound is produced by the ORGAN Voice Section. The data chart below shows the options you may select.

ORGAN SOUNDING POINT Options	
Setting	**Description**
Shallow	The ORGAN Section sounds at a shallower key depth than the other Voice Sections.
Deep	The ORGAN Section sounds at the same key depth as the other Voice Sections.

Turn the VALUE knob to select Shallow or Deep.

NOTE: If other Voice Sections are allocated along with the ORGAN Section (ALLOCATE buttons "ON"), the sounding point of the ORGAN Section will automatically be set at **Deep**.

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HAMMOND

Sk PRO

MIDI
(incl. INT. /EXT. ZONES)

MIDI

◆ A Word About What MIDI Can Do

The letters MIDI stand for Musical Instrument Digital Interface. MIDI is an international standard for allowing electronic musical instruments equipped with MIDI capability to exchange performance information. For example, a synthesizer can be used to communicate with a drum machine, an electronic piano can interface with a computer, and so forth. Additionally, since MIDI is an international standard recognized and implemented by all musical instrument manufacturers worldwide, instruments made by different manufacturers can communicate with each other via MIDI.

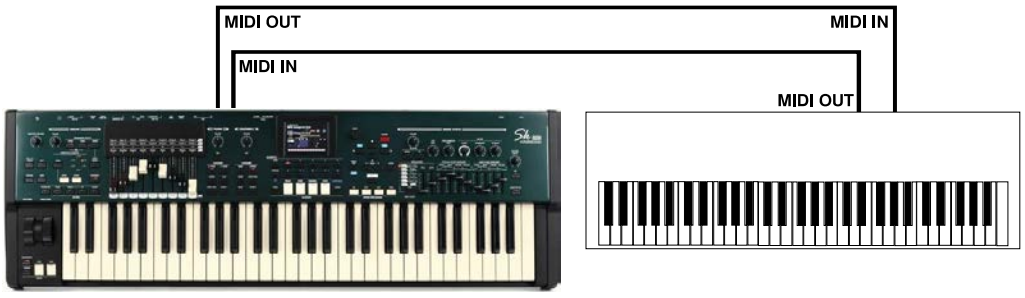
◆ MIDI Connections

♦ MIDI IN and MIDI OUT

In order to allow communication to take place, all MIDI-equipped instruments have at least two MIDI jacks - MIDI IN and MIDI OUT. MIDI IN is for receiving MIDI data from another instrument, while MIDI OUT is for sending MIDI data out to another instrument.



In the example above, the keyboard(s) of the sending or transmitting instrument (MIDI OUT) are being used to control the sound generators of the receiving instrument (MIDI IN). When a key is played on the sending instrument, the corresponding note will play on the receiving instrument as though the appropriate key had been pressed on the receiving instruments's keyboard. When the key is released on the sending instrument, the tone being played by the receiving instrument will stop. (This is called "Note On / Note Off" data.) The instrument receiving the MIDI data is called a MIDI slave and the sending instrument is called the MIDI master. This is the most basic MIDI hookup.

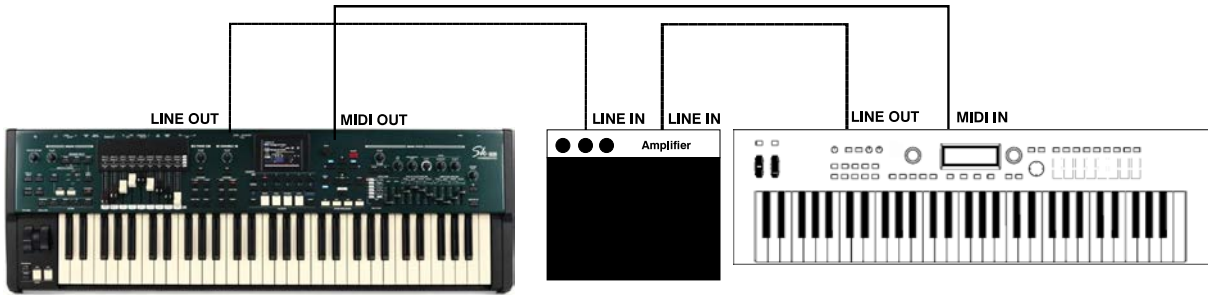


The above is an example of two-way communication between two MIDI-equipped devices. In this example, the keyboard(s) of either instrument can be used to control the sound generators of the other.

NOTE: In some MIDI tutorials, you can also see references to **Main** and **Secondary** or **Source** and **Destination**.

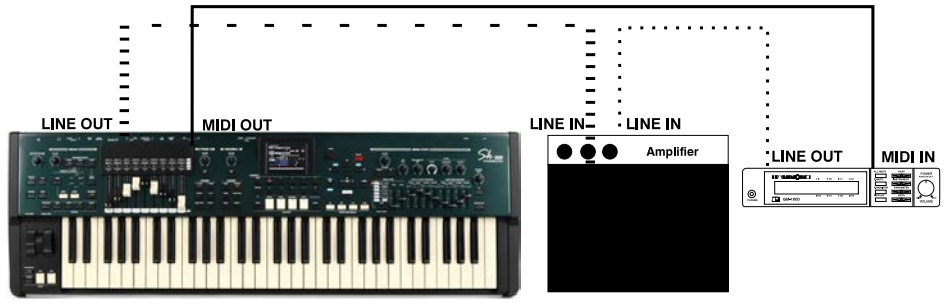
◆ Audio and MIDI Connections

♦ Example: A synthesizer



If you connect the MIDI OUT jack of the SK PRO to the MIDI IN jack on the synthesizer and the synthesizer's LINE OUTPUT jack to the organ's LINE IN jack, you can play both instruments simultaneously from the SK PRO keyboard.

♦ Example: A sound module



Note that the LINE OUT or AUDIO OUT signal connection is made to an external amplifier. The LINE OUT audio connection from the module, of course, could also be connected to the LINE IN of the SK-PRO.

◆ USB MIDI

In addition to the DIN MIDI ports, your SK PRO also has two (2) USB (Universal Serial Bus) ports - one marked TO FLASH DRIVE, the other marked TO HOST. USB and TO FLASH DRIVE are covered in more detail in the USING MEMORY chapter of this Guide.

In recent years, USB has become the standard interface for connecting computers and instruments to peripheral devices as well as to each other. In the late 1990's a standard was adopted to allow MIDI transmission over USB.

♦ Some USB MIDI Basics

Unlike 5-pin DIN MIDI connections, USB MIDI allows two-way communication between devices using a single cable - one cable carries both MIDI IN and MIDI OUT data. Also, the bandwidth of a USB MIDI connection is much higher than a DIN-MIDI connection. This means that a single USB cable can support 16 virtual MIDI ports with 16 channels each for a total of 256 MIDI channels, as opposed to a single physical MIDI port capable of only 16 channels.

USB MIDI is useful primarily if you want to interface your SK PRO with a DAW (Digital Audio Workstation). on a computer. Although it is possible to connect two MIDI instruments (such as two SK PRO's) together, doing so requires the two instruments to be connected to each other via a special interface device or "router."

♦ Connecting the SK PRO to a computer via USB MIDI



If you want to use your SK PRO to control a DAW, you can do so by connecting the USB HOST port on the SK PRO to an open USB port on your computer.

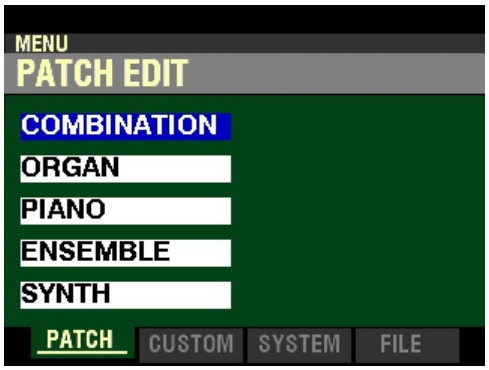
NOTE: The SK PRO is compliant with **USB AUDIO Class 1.0**, the generic device driver which comes pre-installed on both PC and Mac computers. This means you can use the USB TO HOST Port to connect the SK PRO to a computer and transmit and receive a MIDI data stream without an exclusive device driver.

◆ MIDI FUNCTION Mode

This FUNCTION Mode allows you to set the overall MIDI parameters for the instrument.

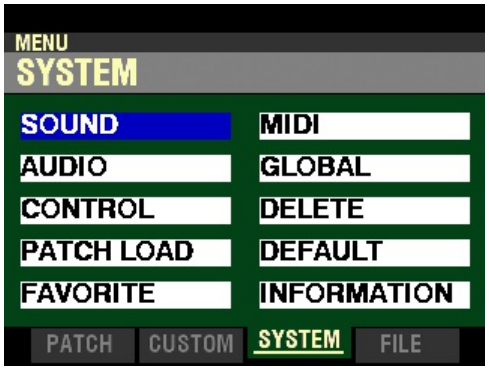
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

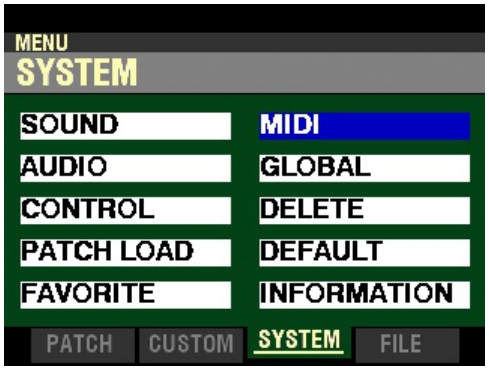


The "COMBINATION" box should be highlighted.

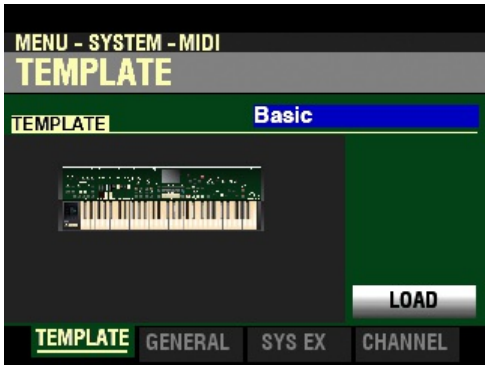
2. Press the PAGE "▶" button two times. The word "SOUND" should be highlighted.



3. Press the DIRECTION "▶" button. The Information Center Display should now look like this:



4. Press the ENTER button. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to change the MIDI performance of your SK PRO. This is explained starting below.

◆ How MIDI Works on the SK PRO:

◆ INTERNAL and EXTERNAL ZONES

Your SK PRO can function in a large variety of MIDI environments. In addition to transmitting basic MIDI information such as Note On/Note Off and Note Velocity, the SK PRO also can transmit Program Changes, Control Changes, NRPN and System Exclusive (SyxEx) codes.

It is also possible to use the SK PRO as a MIDI Master or Controller Keyboard for layering or multi-timbral (playing more than one sound at the same time). The following paragraphs explain this in more detail.

♦ INTERNAL ZONES

The internal sounds of the instrument - both Drawbars and Extra Voices - will play on what are called the Internal Zones. The Internal Zones transmit Note On/Note Off and Velocity data from the UPPER, LOWER and PEDAL Parts. These channels will both send (MIDI OUT) and receive (MIDI IN) data, and are therefore used when recording and playing back sequences.

NOTE: The UPPER Zone, in addition to Note On/Note Off and Velocity, also is used for transmitting Controller data.

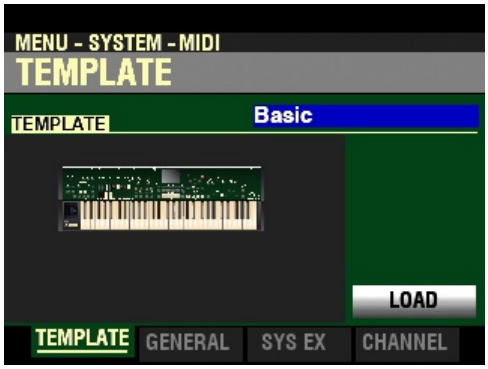
♦ EXTERNAL ZONES

The External Zones allow you to use the SK PRO as a MIDI Master or Controller Keyboard. These allow you to play additional sounds from another MIDI instrument such as a sound module. The External Zones transmit but do not receive MIDI data - in other words, they are MIDI OUT only.

There are three (3) External Zones which can be assigned to the UPPER, LOWER or PEDAL Parts. In addition, different configurations can be saved to different Patches - for example, one Patch can have all three External Zones assigned to UPPER, another Patch can have one External Zone each for UPPER, LOWER and PEDAL, etc.

The features available for the Zones are found in the COMBINATION FUNCTION Mode. This is explained fully both in this chapter and in the COMBINATIONS / PATCHES / BUNDLES / FAVORITES chapter of this Guide.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "TEMPLATE"should be highlighted.

♦ TEMPLATE

What Is a "MIDI Template?"

Because MIDI can be used with such a wide variety of devices - such as synthesizers, sound modules, sequencers, etc. - there are a number of features associated with MIDI, such as Program Change, Controller Change, etc., that allow each MIDI setup to be optimized for the best results in each application. However, making all of these settings manually can be quite time-consuming and error-prone.

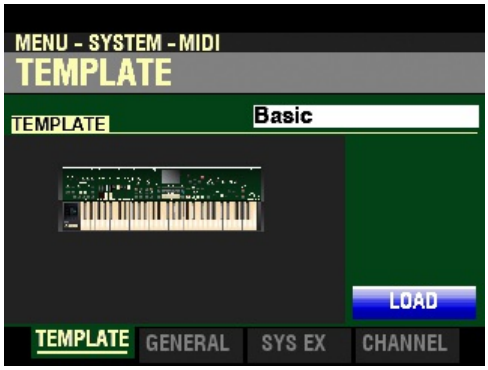
Therefore, your SK PRO contains a number of pre-formatted settings for the various MIDI parameters which represent the most ideal settings for each MIDI environment. A group of these settings is called a MIDI Template.

This Parameter Menu Page allows you to select the MIDI Template you want to use.

To select a MIDI Template, do the following:

1. Use the VALUE knob to see the various Template settings.

2. After you have made your selection, press the DIRECTION "▼" button to highlight the "LOAD" box:



3. Press the ENTER button. The MIDI parameters will be set according to the Template you selected.

IMPORTANT NOTE: For a complete listing of the MIDI Templates for the SK PRO, please consult the next two pages. In addition to the specific Parameter settings, the chart also contains explanations for the performing environment each Template is designed for. Therefore please read the descriptions carefully to determine the best setting for your particular setup.

MIDI Templates - SK PRO

Template		Basic	2 Man Lower	2 Man Upper
Messages	MIDI IN	Sequence	Lower	Upper
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1	1 (disregarded, off)	1 (disregarded, off)
	Rx. Lower	2	2 (disregarded, off)	2 (disregarded, off)
	Rx. Pedal	3	3 (disregarded, omni)	3 (disregarded, omni)
Comments		Record and Playback between the SK PRO (stand alone) and external sequencer.	Play with expanded LOWER Keyboard into the MIDI IN Port. (*1) Your performance will be transmitted from the MIDI OUT Port and recorded by an external sequencer.	Play with expanded UPPER Keyboard into the MIDI IN Port. Same as (*1).

Template		Pedal KBD	3 KBD Lower	3 KBD Upper
Messages	MIDI IN	Pedal	Low + Ped	Up + Ped
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1 (disregarded, off)	1	1
	Rx. Lower	2 (disregarded, off)	2	2
	Rx. Pedal	3 (disregarded, omni)	3	3
Comments		Play with expanded Pedalboard into the MIDI IN Port. Same as (*1).	Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) into the MIDI IN Port. Same as (*1).	Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) into the MIDI IN Port. Same as (*1).

Template		Organ Upper	Piano	Ensemble
Messages	MIDI IN	Organ Upper	Piano	Ensemble
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1 (disregarded, off)	1 (disregarded, off)	1 (disregarded, off)
	Rx. Lower	2 (disregarded, off)	2 (disregarded, off)	2 (disregarded, off)
	Rx. Pedal	3 (disregarded, off)	3 (disregarded, off)	3 (disregarded, off)
Comments		Play the ORGAN Section Upper directly by expanded MIDI keyboard into the MIDI IN Port.	Play the PIANO Section directly by expanded MIDI keyboard into the MIDI IN Port.	Play the ENSEMBLE Section directly by expanded MIDI keyboard into the MIDI IN Port.

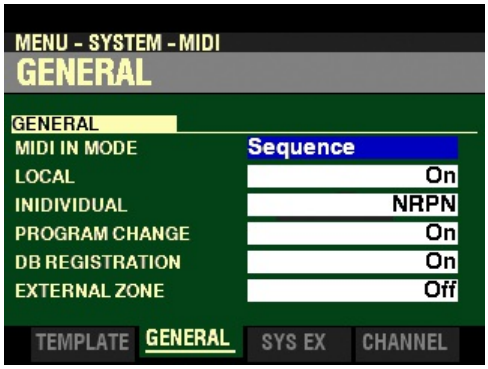
MIDI Templates - SK PRO

Template		Synth	EXZ	EXZ 2 Man Lower
Messages	MIDI IN	Synth	Sequence	Lower
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	On	On
Transmit Channel	Tx. Upper	1	Off	Off
	Tx. Lower	2	Off	Off
	Tx. Pedal	3	Off	Off
	Rx. Upper	1 (disregarded, off)	Off	Off
	Rx. Lower	2 (disregarded, off)	Off	Off
	Rx. Pedal	3 (disregarded, off)	Off	Off
Comments		Play the MONO SYNTH Section directly by expanded MIDI keyboard into the MIDI IN Port.	(*2) Control the MIDI equipment by using External Zones and MIDI OUT Port.	Play with expanded LOWER Keyboard into the MIDI IN Port. Same as (*2).

Template		ExZ 2 Man Upper	EXZ Pedal KBD	EXZ 3 KBD Lower
Messages	MIDI IN	Upper	Pedal	Low + Ped
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	On	On	On
Transmit Channel	Tx. Upper	Off	Off	Off
	Tx. Lower	Off	Off	Off
	Tx. Pedal	Off	Off	Off
	Rx. Upper	Off	1 (disregarded, off)	1
	Rx. Lower	Off	2 (disregarded, off)	2
	Rx. Pedal	Off	3 (disregarded, omni)	3
Comments		Play with expanded UPPER Keyboard into the MIDI IN Port. Same as (*2).	Play with expanded Pedalboard into the MIDI IN Port. Same as (*2).	Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) into the MIDI IN Port. Same as (*2).

Template		EXZ 3 KBD Upper
Messages	MIDI IN	Up + Ped
	Local Control	On
	NRPN	On
	Program Change	On
	Drawbar Registration	On
	External Zone	On
Transmit Channel	Tx. Upper	Off
	Tx. Lower	Off
	Tx. Pedal	Off
	Rx. Upper	1
	Rx. Lower	2
	Rx. Pedal	3
Comments		Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) into the MIDI IN Port. Same as (*2).

From the screen shown on page 694, press the PAGE "▶" button once.



♦ GENERAL

This Page allows you to set the MIDI Parameters which affect how the entire instrument will function in a MIDI environment. It consists of several screens.

NOTE: This is separate from **General MIDI**, which is explained in the **Appendix** starting on page 859

Use the DIRECTION "▲" and "▼" buttons to move up and down among the various screens.

MIDI IN MODE

This Parameter allows you to set how incoming MIDI data (external MIDI device connected via the MIDI IN port) is handled. The data chart below shows the options you may select.

MIDI IN MODE Options	
Setting	**Description**
Upper / Lower / Pedal	Incoming MIDI data will sound the Sections allocated to the (UPPER / LOWER / PEDAL) keyboard ignoring the MIDI Channel, and is re-transmitted to both MIDI OUT and USB-MIDI.
Upper + Pedal / Lower + Pedal	Incoming MIDI data will sound the Sections allocated to (UPPER + PEDAL / LOWER + PEDAL) keyboards on the assigned MIDI Channels, and is re-transmitted to both MIDI OUT and USB MIDI.
Organ Upper / Piano / Ensemble / Synth	Incoming MIDI data plays the selected Voice Section. Data is not retransmitted.
Sequence	Incoming MIDI data plays UPPER, LOWER and PEDAL Parts, but is not retransmitted.

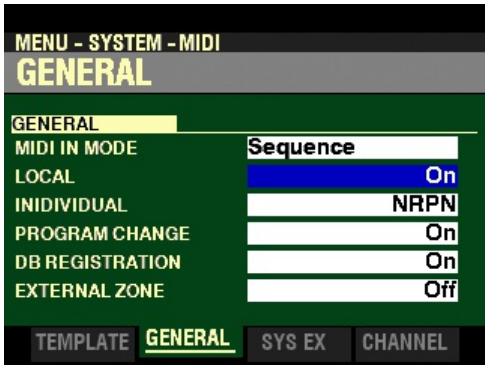
NOTE: The ORGAN Section will play from an UPPER Keyboard only.

NOTE: The SPLIT does not function when the MIDI IN mode is set at "Upper / Lower," "Lower + Pedal" or "Upper + Pedal"

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LOCAL" should be highlighted.

LOCAL - MIDI Local Control

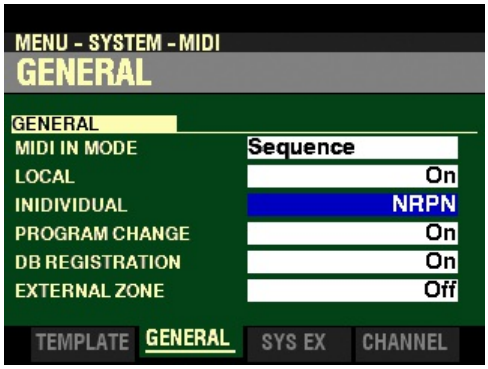
This Parameter allows you to turn Local Control "ON" or "OFF." The data chart below explains the options.

LOCAL CONTROL Options	
Setting	**Description**
On	The SK PRO will play both its internal sounds and the sounds from a connected MIDI device.
Off	The SK PRO will play only the sounds from a connected MIDI device (synthesizer, sound module, Digital Audio Workstation or hardware sequencer) and the SK PRO's internal sounds are silenced.

Turn the VALUE knob to turn this Parameter On or Off..

NOTE: Even if LOCAL is "ON," MIDI messages sent from an external MIDI device to the SK PRO will play.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "INDIVIDUAL" should be highlighted.

INDIVIDUAL

This Parameter allows you to select how Individual Parameters are transmitted. Individual Parameters are used to control Section Volume, Leslie Fast, etc. The data chart below shows the options you may select.

INDIVIDUAL PARAMETERS Options	
Setting	**Description**
Off	Individual Parameters are not transmitted.
NRPN	Individual Parameters are transmitted via NRPN.
Sys Ex	Individual Parameters are transmitted via System Exclusive.

Turn the VALUE knob to select Off, NRPN or Sys Ex.

NOTE: The SK PRO always receives Individual Parameters via System Exclusive Messages regardless of the setting of this Parameter.

WHAT IS "NPRN?"

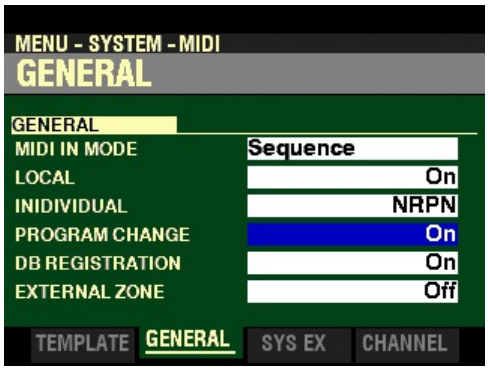
"NRPN," or Non-Registered Parameter Number, is an expanded control change message, each function of which is implemented differently by different manufacturers. The Hammond SK PRO uses NRPN to control parameters such as Percussion 2nd and 3rd Harmonic ON/OFF, Vibrato or Chorus ON/OFF, etc. Most of the buttons on the SK PRO have NRPN Controller numbers assigned to them When NRPN is "ON," NRPN codes are transmitted and received along with other MIDI data. When NRPN is "OFF," NRPN codes will not be transmitted or received but other MIDI data such as Note On/Note Off, Note Velocity, etc. will continue to be transmitted and received.

NOTE: To see a complete list of all NRPN codes transmitted and recognized by the SK PRO, consult the APPENDIX.

WHAT IS "SYSTEM EXCLUSIVE?"

Most MIDI messages are ones that are universally recognized by all instruments which implement MIDI. Examples are Note On/Note Off/Note Velocity data, Program Changes, Controller Changes, etc. However, there is a provision within the MIDI standard called System Exclusive (often abbreviated SysEx or Sysx) which allows for individual manufacturers to create MIDI messages to be sent and received which are unique to that manufacturer. These messages are determined by each manufacturer; therefore they will be different for each make, and sometimes they will differ from model to model from a particular manufacturer.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "PROGRAM CHANGE" should be highlighted.

PROGRAM CHANGE

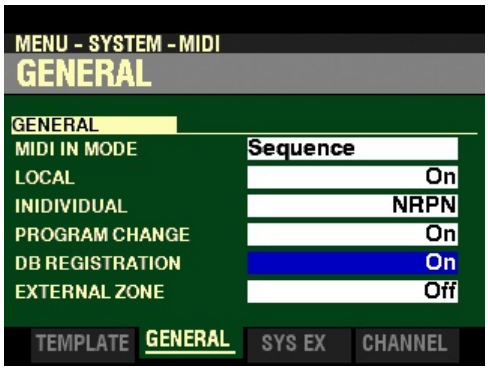
Program is the MIDI term for a particular sound or effect, such as Piano, Trumpet, Thunder, etc. Each MIDI program is assigned a number from 1 through 127, and these numbers are transmitted to a connected MIDI device such as a sound module. In this way, changes in sound, or what organists refer to as registration, can be made.

This Parameter allows you to turn Program Change On or Off. The data chart below explains the options.

PROGRAM CHANGE Options	
Setting	**Description**
On	The SK PRO will send and receive Program Changes out to or from a connected MIDI device
Off	Program Changes are not transmitted or received.

Turn the VALUE knob to turn this Parameter On or Off..

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "DB REGISTRATION" should be highlighted.

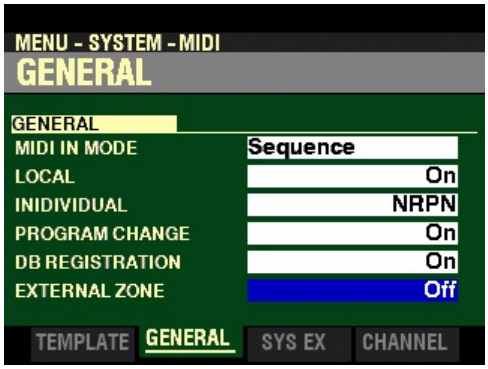
DB REGISTRATION

This Parameter allows you to select whether you want to transmit the current Drawbar registration to a connected MIDI device such as a sequencer, another Hammond Organ or keyboard, etc. The data chart below explains the options.

DRAWBAR REGISTRATION Options	
Setting	**Description**
On	The SK PRO will send Drawbar Data out to a connected MIDI device.
Off	Drawbar Data will not be transmitted.

Turn the VALUE knob to turn this Parameter On or Off..

From the screen shown at the bottom of the previous page, press the DIRECTION "▼" button once.



The box to the right of "EXTERNAL ZONE" should be highlighted.

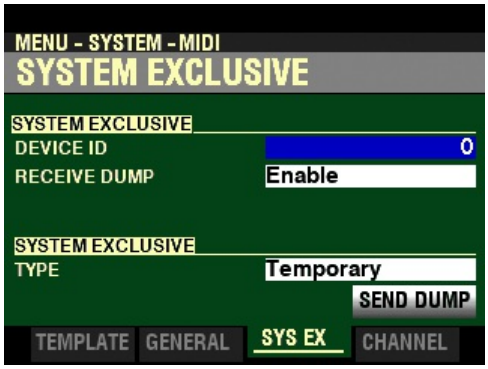
EXTERNAL ZONE

This is a Master Parameter which allows you to select whether you want to transmit External Zone data to a connected MIDI device. The data chart below explains the options.

EXTERNAL ZONE Options	
Setting	**Description**
On	The SK PRO will send External Zone out to a connected MIDI device.
Off	External Zone data will not be transmitted.

Turn the VALUE knob to turn this Parameter On or Off..

From the screen shown on the previous page, press the PAGE "▶" button once.



The SYSTEM EXCLUSIVE FUNCTION Mode Page contains several different functions. Use the DIRECTION "▲" and "▼" buttons to move up and down among the various functions.

MIDI Instrument ID

This Parameter allows you to set the Device ID when transmitting System Exclusive messages.

What Is a "Device ID?"

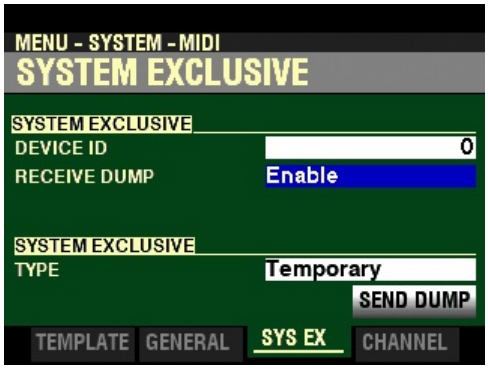
In order to facilitate communication between MIDI devices from different manufacturers, the MIDI Manufacturer's Association (MMA) assigns each maker of MIDI devices a unique ID number. This ID number is treated as part of the System Exclusive information and is embedded in the firmware of each device from a particular manufacturer. This allows different MIDI instruments to identify each other and to transmit and receive MIDI information which may be unique to a particular maker.

Turn the VALUE knob to select the Device ID.

NOTE: Hammond's Device ID number is **17**.

NOTE: If you perform a MIDI Dump to a non-Hammond instrument, you can be required to know the Device ID of the device to which you are Dumping. As explained above, each manufacturer of MIDI devices is assigned a unique ID number by the MMA.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "RECEIVE DUMP" should be highlighted.

MIDI RECEIVE DUMP ENABLE / DISABLE

The MIDI Dump Parameters are for use when you want to record and save a musical performance to a connected MIDI Data recorder.

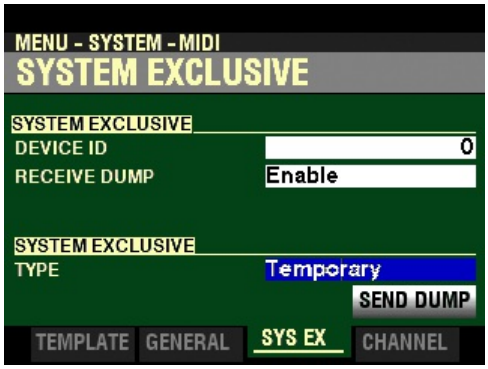
On the SK PRO, the total onboard memory can be transmitted and received as a series of System Exclusive (SysEx) messages called a Memory Dump. This Parameter allows you to select whether or not you want System Exclusive messages received as part of a Sequence. The data chart below shows the options you may select.

MIDI RECEIVE DUMP Options	
Setting	**Description**
Enable	Sysx data will be received.
Disable	Sysx data will not be received.

Turn the VALUE knob to select Enable or Disable.

IMPORTANT NOTE: If you attempt to receive a Data Dump to the SK PRO when **Disable** is displayed, the Information Center Display will flash, "Data Protect !" This ensures that you do not overwrite data accidentally.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "TYPE" should be highlighted.

Temporary Dump Send

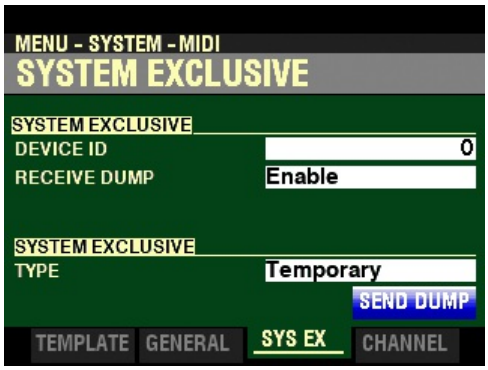
This Parameter allows you to transmit the current registration to a connected MIDI data recorder.

NOTE: A "MIDI data recorder" can be an external hardware device, or a **D**igital **A**udio **W**orkstation or **DAW**, which is a software program installed on a computer.

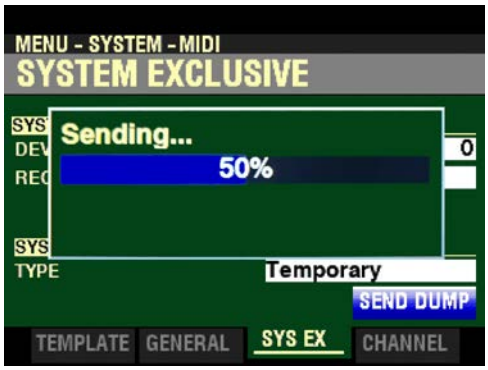
NOTE: It is recommended that you perform this operation prior to recording a sequence to ensure that your sequence will play back with the correct settings.

1. Make sure that the MIDI recorder is ready to receive data (RECORD).

2. Press the DIRECTION "▼" button to highlight the "SEND DUMP" box.



3. Press the ENTER button to start the data dump to the MIDI Data recorder. The Information Center Display will show:



When all information has been sent, the Information Center Display will display:

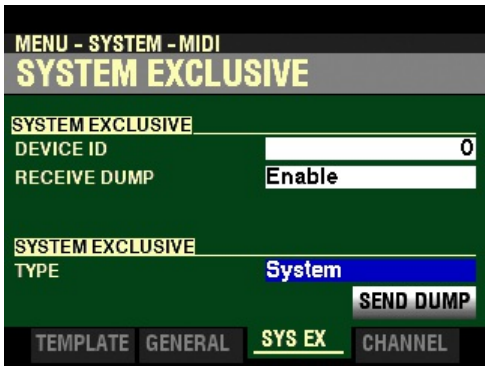


4. Press the MENU / EXIT button. The "Completed." message will disappear.

5. Press the PLAY button to return to PLAY Mode.

System Dump Send

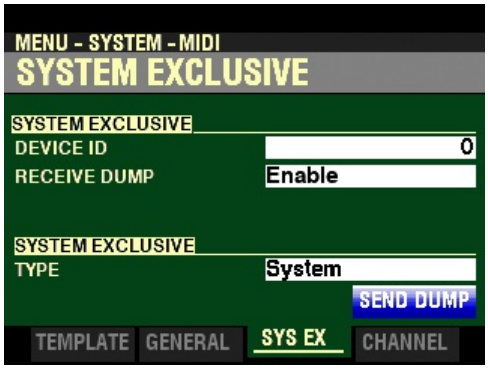
From the SYSTEM EXCLUSIVE FUNCTION Mode Page, turn the VALUE knob so that the box to the right of "TYPE" displays "System."



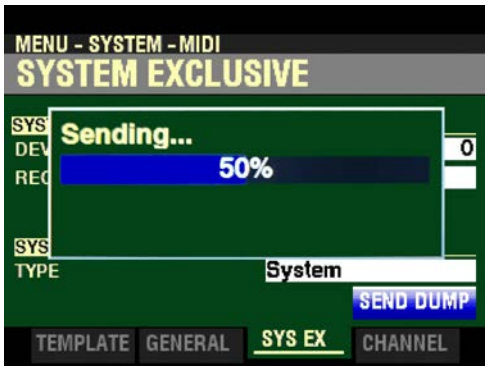
This Parameter allows you to transmit all of the settings to a connected MIDI recorder.

To transmit your settings, do the following

1. Make sure that the MIDI recorder is ready to receive data (RECORD).
2. Press the DIRECTION "▼" button to highlight the "SEND DUMP" box.



3. Press the ENTER button to start the data dump to the MIDI Data recorder. The Information Center Display will show:



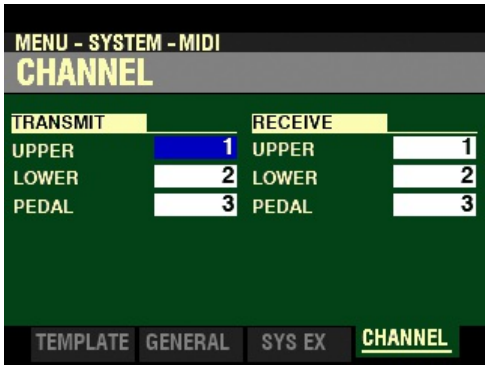
When all information has been sent, the Information Center Display will show:



4. Press the MENU / EXIT button. The "Completed." message will disappear.

5. Press the PLAY button to return to PLAY Mode.

From the screen shown at the bottom of page 707, press the PAGE "▶" button once.



The CHANNEL FUNCTION Mode Page should now display.

MIDI TRANSMIT

This Menu Page allows you to select on which MIDI Channel each Part will transmit. You may select from 1 through 16 as well as Off.

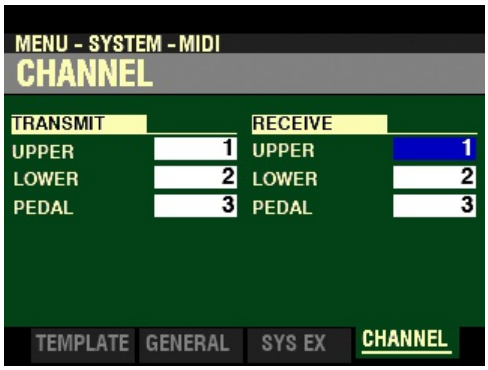
Use the DIRECTION "▲" and "▼" buttons to move up and down among UPPER, LOWER and PEDAL.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Channels.

Turn the VALUE knob to the left to scroll backward through the Channels.

From the above screen, press the PAGE "▶" button once.



MIDI RECEIVE

This Menu Page allows you to select on which MIDI Channel each Part will receive. You may select from 1 through 16 as well as Off.

Use the DIRECTION "▲" and "▼" buttons to move up and down among UPPER, LOWER and PEDAL.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Channels.

Turn the VALUE knob to the left to scroll backward through the Channels.

NOTE: As explained previously, Hammond's standard protocol is to transmit and receive **UPPER**, **LOWER** and **PEDAL** MIDI data on MIDI Channels **1**, **2** and **3** respectively.

◆ INTERNAL and EXTERNAL ZONES

As explained on page 694, the Internal and External Channels of the instrument are referred to as Zones. The features available for the Zones are found in the COMBINATION FUNCTION Mode. This is explained starting below.

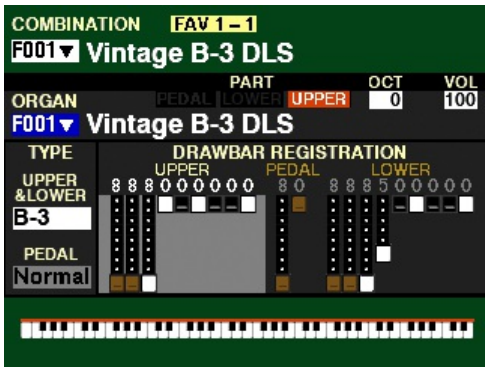
♦ INTERNAL ZONES

This Page allows you to change the characteristics of the Internal or Keyboard Zones of your SK PRO. All of these Parameters can be Recorded to a Combination.

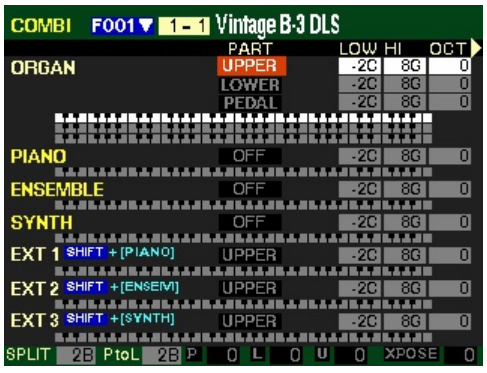
PLAY Mode - INTERNAL / EXTERNAL ZONES Page

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look similar to this:

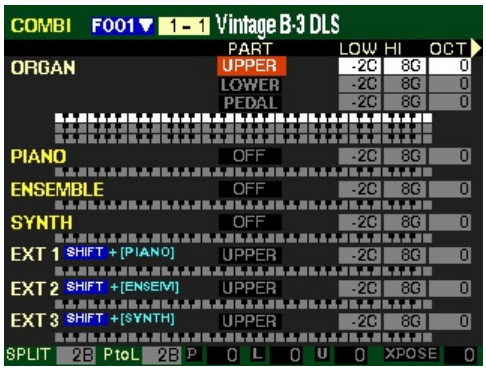


2. From the above screen, press either the PLAY button once or the PAGE "◀" or "▶" button two times until the Information Center Display looks similar to this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the Internal Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "COMBI" should be highlighted.

Notice the Keyboard graphics.

The top three keyboards represent the ORGAN Voice Section. The top keyboard represents the UPPER Part, the middle one represents the LOWER Part and the bottom keyboard represents the PEDAL Part.

The next three keyboards represent the PIANO, ENSEMBLE and MONO SYNTH Voice Sections.

The bottom three keyboards represent the External Zones, which will be explained later in this chapter.

COMBI (Combination)

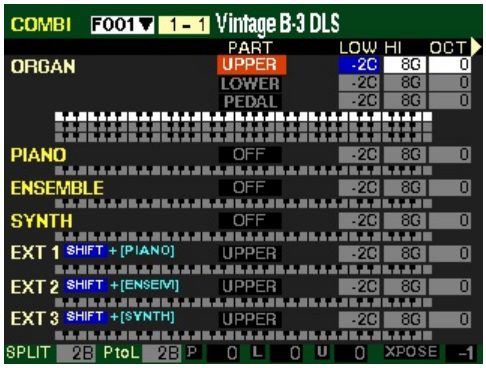
This Parameter allows you to use the VALUE knob to scroll through the Combinations.

Turn the VALUE knob to the right to scroll forward through the Combinations.

Turn the VALUE knob to the left to scroll backward through the Combinations.

NOTE: **Combinations** are covered in more detail in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 56.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "LOW" should be highlighted.

LOW - Internal Zone Lower Note Limit

This Parameter allows you to set the Lower Note Limit for the selected Internal Zone. You may select from -2C to 8G.

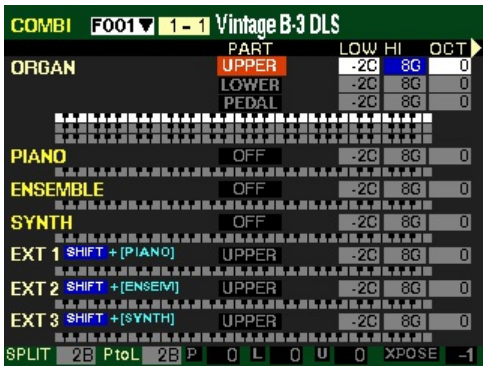
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to locate the Lower Note Limit for the selected Internal Zone higher.

Turn the VALUE knob to the left to locate the Lower Note Limit for the selected Internal Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "HI" should be highlighted.

HIGH - Internal Zone Upper Note Limit

This Parameter allows you to set the Upper Note Limit for the selected Internal Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

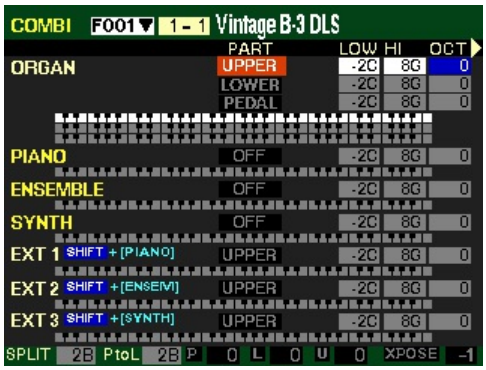
When you have made your selection:

Turn the VALUE knob to the right to locate the Upper Note Limit for the selected Internal Zone higher.

Turn the VALUE knob to the left to locate the Upper Note Limit for the selected Internal Zone lower.

NOTE: The Upper Limit number **cannot** be lower than the Lower Limit number.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - Internal Zone Octave

This Parameter allows you to determine the Octave or pitch at which the Internal Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

INTERNAL ZONE OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

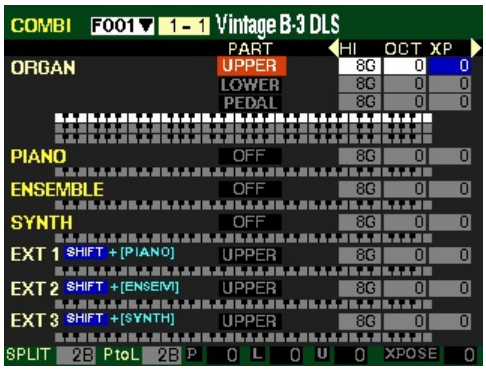
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected Internal Zone.

Turn the VALUE knob to the left to lower the Octave of the selected Internal Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XP" should be highlighted.

XP - Internal Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected Internal Zone by half-steps. You may select from -6 (down six half-steps) to +6 (up six half-steps). At 0 there is no transposition.

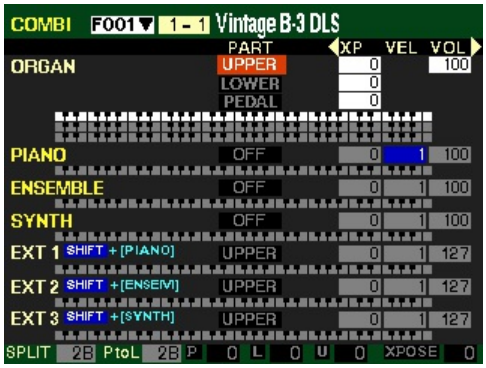
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected Internal Zone higher.

Turn the VALUE knob to the left to transpose the selected Internal Zone lower.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box underneath "VEL."



VEL - Internal Zone Velocity

This Parameter allows you to select how the selected Internal Zone will respond to key velocity. The data chart below shows the options you may select.

VELOCITY CURVE Options	
Setting	**Description**
Off	Standard "organ" touch - the notes play at a fixed velocity ("100") regardless of a light or heavy keystroke.
1	This is the most exaggerated velocity curve, most like an acoustic piano
2	Less exaggerated than "1."
3	Less exaggerated than "2."
4	This is the smallest change of response to key velocity.

Use the DIRECTION "▲" and "▼" buttons to move up and down among PIANO, ENSEMBLE and SYNTH.

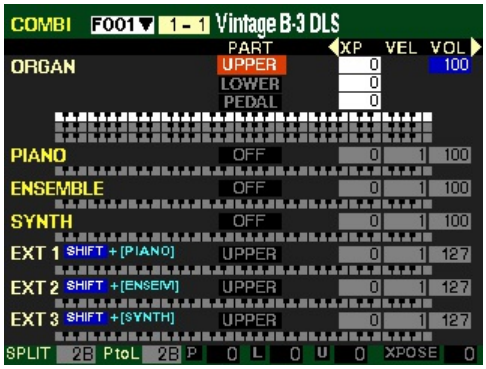
When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the choices.

Turn the VALUE knob to the left to scroll backward through the choices.

NOTE: This Parameter is **not** available for the ORGAN Voice Section.

From the screen shown on the previous page, use the DIRECTION buttons to highlight the box underneath "VOL."



VOL - Internal Zone Volume

This Parameter allows you to control the volume (Controller #7) of the sound controlled by the selected Internal Zone. You may select from 0 (no volume) through 127 (maximum volume).

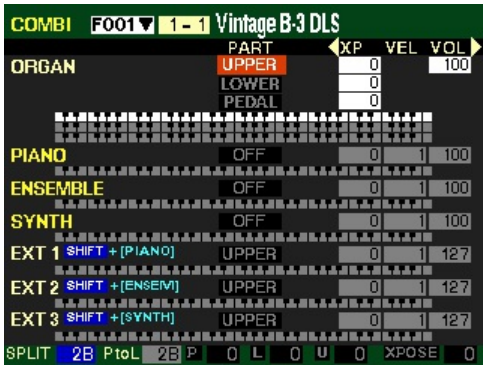
Use the DIRECTION "▲" and "▼" buttons to move up and down among ORGAN (UPPER, LOWER and PEDAL), PIANO, ENSEMBLE and SYNTH.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected Internal Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected Internal Zone.

From the screen shown at the bottom of the previous page, use the DIRECTION buttons to highlight the box to the right of "SPLIT."



SPLIT - Keyboard Split Point

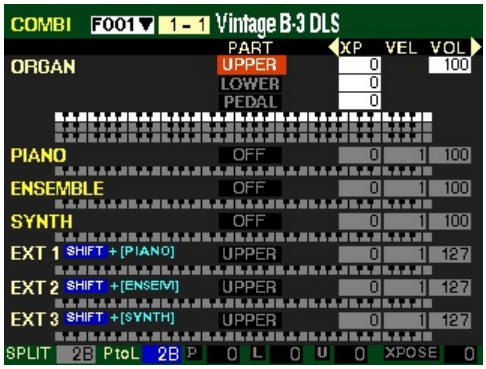
NOTE: If the SPLIT button is not "ON" (orange LED lit), this Parameter will be "greyed out." However, you can still change the SPLIT Point by following the procedure described below.

This Parameter allows you to change the SPLIT Point. You may select from 1C (the lowest note on the keyboard) to 6C (the highest note on the keyboard).

Turn the VALUE knob to the right to locate the SPLIT Point higher on the keyboard.

Turn the VALUE knob to the left to locate the SPLIT Point lower on the keyboard.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "PtoL" should be highlighted.

NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) in order to hear the effect of this Parameter setting.

PtoL - PEDAL TO LOWER Limit

This Parameter allows you to set the range of the Pedal tones when PEDAL TO LOWER is "ON." You may select from 1C (the lowest note on the keyboard) to 3C (the third "C" on the keyboard).

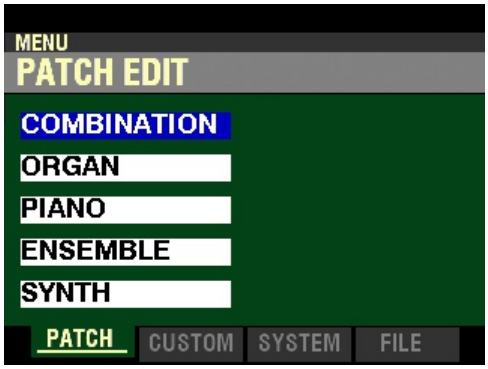
Turn the VALUE knob to the right to locate the PEDAL TO LOWER Limit higher on the keyboard.

Turn the VALUE knob to the left to locate the PEDAL TO LOWER Limit lower on the keyboard.

NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) in order to hear the effect of this Parameter setting.

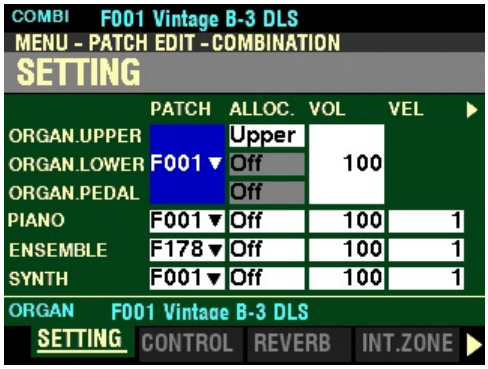
Accessing the INTERNAL ZONE FUNCTION Mode Page using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

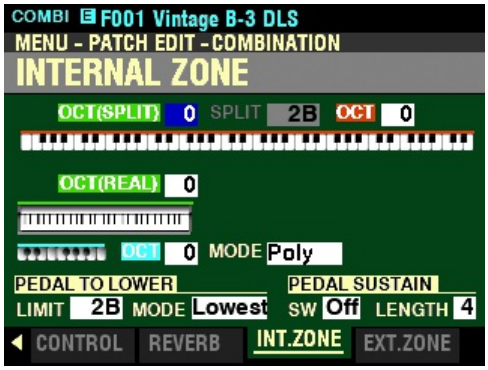


The "COMBINATION" box should be highlighted.

2. Press the ENTER button. The Information Center Display should now look like this:

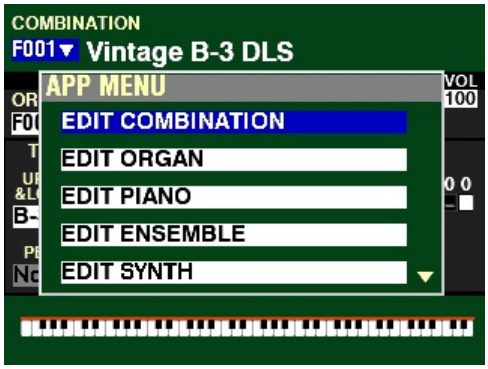


3. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



Accessing the INTERNAL ZONE FUNCTION Mode Page using the APP MENU:

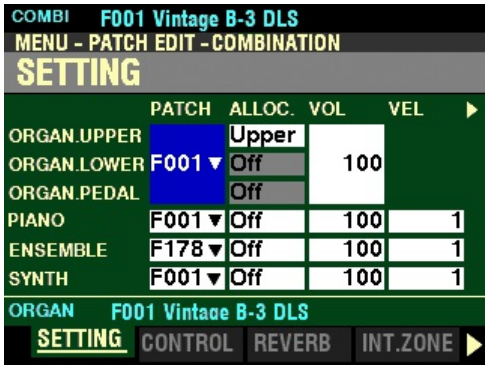
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



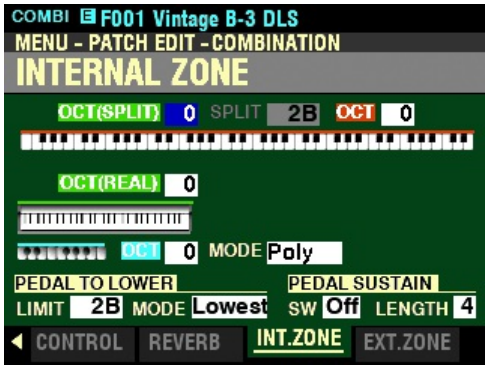
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:

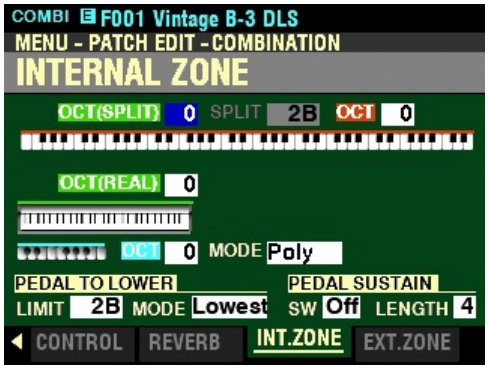


3. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the Internal Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "OCT(SPLIT)" should be highlighted.

Notice the three Keyboard graphics. The top keyboard represents the SK PRO, the middle one represents a connected MIDI keyboard used as part of an expanded MIDI system and the small one on the left either a connected MIDI pedal clavier such as the Hammond XPK-130G or the lower two octaves of the LOWER Keyboard when PEDAL TO LOWER is active.

NOTE: If the SPLIT button is "ON," the top keyboard will show the UPPER Part and the LOWER Part as well as the SPLIT Point.

OCT(SPLIT) - Lower Octave Setting for SPLIT

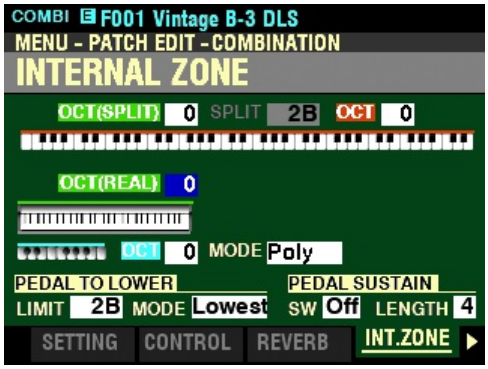
This Parameter allows you to set the octave for the LOWER Part when the SPLIT button is "ON." The data chart below shows the options you may select.

LOWER OCTAVE Options - SPLIT	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



OCT(REAL) - Lower Octave Setting for Expanded Keyboard

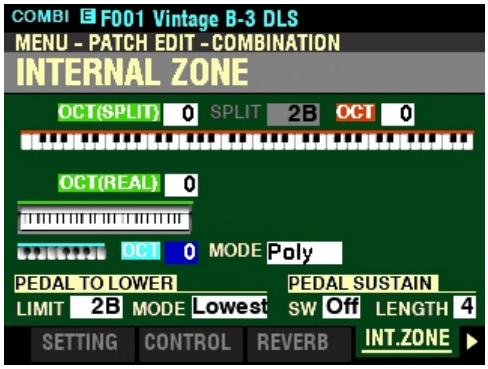
The term OCTAVE(REAL) refers to a connected MIDI keyboard being used to play the LOWER Part. This Parameter allows you to set the octave for the LOWER Part when a connected MIDI keyboard is used for the LOWER Part. The data chart below shows the options you may select.

LOWER OCTAVE Options - REAL	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



OCT PEDAL - Pedal Octave Setting

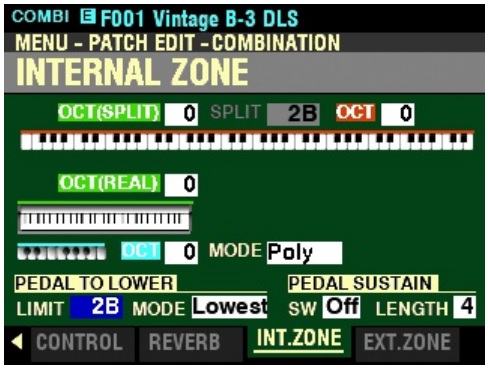
This Parameter allows you to set the octave for the PEDAL Part. The data chart below shows the options you may select.

PEDAL OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right to raise the Octave.

Turn the VALUE knob to the left to lower the Octave.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box to the right of "LIMIT" should be highlighted.

PEDAL TO LOWER LIMIT

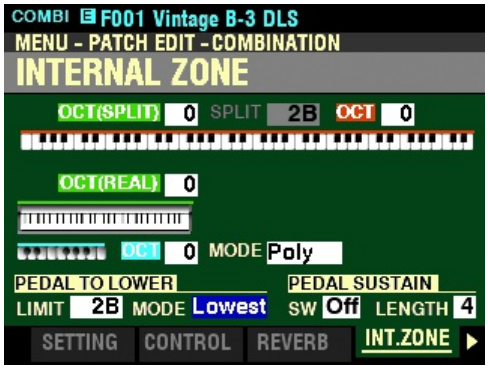
This Parameter allows you to set the range of the Pedal tones when PEDAL TO LOWER is "ON" (orange LED lit). You may select from 1C (the lowest note on the keyboard) to 3C (the third "C" on the keyboard). The default setting is 2B (bottom two octaves of the keyboard).

Turn the VALUE knob to the right to locate the PEDAL TO LOWER Limit higher on the keyboard.

Turn the VALUE knob to the left to locate the PEDAL TO LOWER Limit lower on the keyboard.

NOTE: The PEDAL TO LOWER button must be "ON" (orange LED lit) in order to hear the effect of this Parameter setting.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "MODE" should be highlighted.

PEDAL TO LOWER MODE

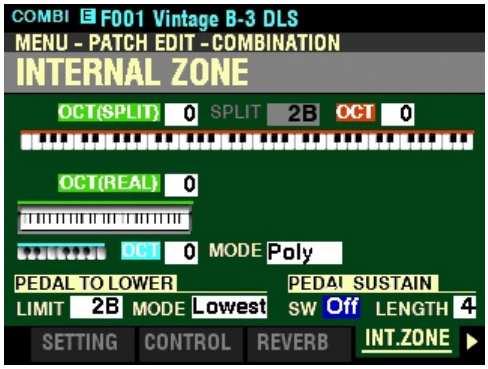
This Parameter allows you to select how the PEDAL TO LOWER feature works. The data chart below shows the options you may select.

PEDAL TO LOWER MODE Options	
Setting	**Description**
Lowest	The bass note will sound the lowest note played if multiple notes are depressed.
Chord	The keyboard is scanned for Chord Root and Chord Type and plays an appropriate bass note. For example, if the notes "G," "C" and "E" are played, it will be interpreted as a C major chord and the bass note will sound the note "C."
Poly	The bass tone will sound on all notes depressed.

NOTE: To hear the effects of the PEDAL TO LOWER MODE setting, press both the SPLIT and PEDAL TO LOWER buttons "ON" (LEDs lit) and play keys on the LOWER Part.

Turn the VALUE knob to select Lowest, Chord or Poly.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



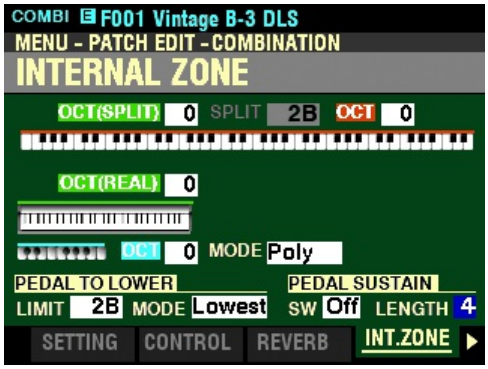
The box to the right of "SW" should be highlighted.

SW - Pedal Sustain Switch

This Parameter allows you to you to turn Pedal Sustain "ON" or "OFF." When this feature is active, the Pedal tones will smoothly decay upon release, much in the manner of a string bass.

Turn the VALUE knob to turn Pedal Sustain On or Off.

From the above screen, press the DIRECTION "▶" button once.



The box to the right of "LENGTH" should be highlighted.

LENGTH - Pedal Sustain Length

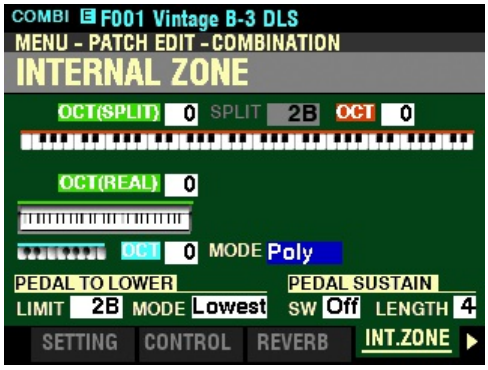
This Parameter allows you to adjust the amount of Pedal Sustain, or length of time the Pedal note will continue to sound after the pedal is released. You may select from 1 (shortest) to 5 (longest).

Turn the VALUE knob to the right to lengthen the Pedal Sustain.

Turn the VALUE knob to the left to shorten the Pedal Sustain.

NOTE: The PEDAL SUSTAIN switch must be **On** in order to hear the effect of this Parameter.

From the screen shown at the bottom of the previous page, press the DIRECTION "▲" button once.



The box to the right of "MODE" should be highlighted.

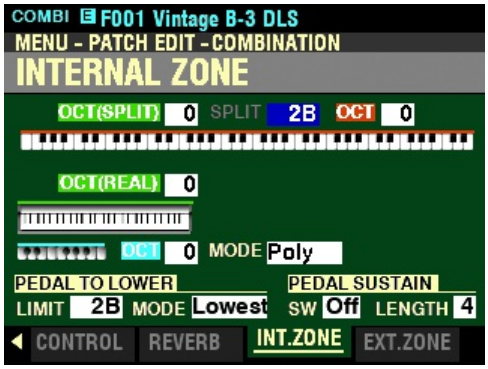
PEDAL MODE

This Parameter allows you to select the playing mode of the Pedals. The data chart below shows the options you may select.

PEDAL MODE Options	
Setting	**Description**
Poly	Polyphonic - more than one pedal note can sound at a time, as on a vintage organ.
Mono	Monophonic low-note select - if more than one pedal is played only the lowest note will sound.

Turn the VALUE knob to select Poly or Mono.

From the above screen, press the DIRECTION "▲" button once.



The box to the right of "SPLIT" should be highlighted.

SPLIT - Keyboard SPLIT Point

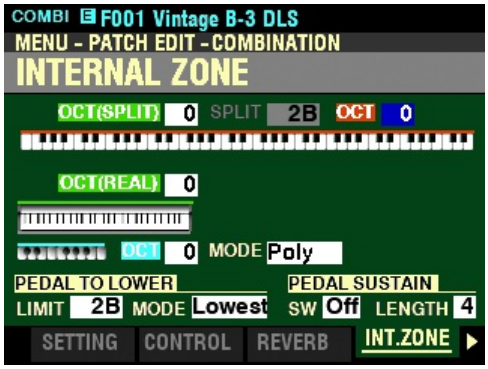
NOTE: If the SPLIT button is not "ON" (orange LED lit), this Parameter will be "greyed out." However, you can still change the SPLIT Point by following the procedure described below.

This Parameter allows you to change the SPLIT Point. You may select from 1C (the lowest note on the keyboard) to 6C (the highest note on the keyboard).

Turn the VALUE knob to the right to locate the SPLIT Point higher on the keyboard.

Turn the VALUE knob to the left to locate the SPLIT Point lower on the keyboard.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box to the right of "OCT" should be highlighted.

OCT - Upper Octave Setting

This Parameter Menu Page allows you to select the Octave range in which the UPPER Part will play. The data chart below shows the options you may select.

UPPER OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

Turn the VALUE knob to the right or press the OCTAVE UP button on the Control Panel to raise the Octave.

Turn the VALUE knob to the left or press the OCTAVE DOWN button on the Control Panel to lower the Octave.

♦ EXTERNAL ZONES

The External Zone Parameters allow you to change the characteristics of the External Zones of your SK PRO. All of these Parameters can be Recorded to a Combination.

There are two ways to access the External Zone Parameters:

1. From the PLAY Mode, or
2. From the EXTERNAL ZONE FUNCTION Mode Page.

The following pages explain this in more detail.

♦ Using External Zones

The External Zones present the most flexible method for using the SK PRO to control an external MIDI instrument (synthesizer, sound module, digital workstation or a MIDI-equipped Hammond Organ or Keyboard).

Please consult the Owner's Manual or Reference Guide for your particular instrument or software for information regarding the Program Numbers and Bank Numbers for specific sounds, plus Controller Numbers for specific functions.

IMPORTANT NOTE: Hammond's standard protocol is to transmit and receive **UPPER**, **LOWER** and **PEDAL** MIDI data on MIDI Channels **1**, **2** and **3** respectively. If you connect the SK PRO to the MIDI device you want to control, all MIDI messages from the SK PRO - Note On/Note Off, Program Changes, Controller Changes, etc. - will be "mirrored" on the connected device. Please consult the MIDI Template portion of this chapter (starting on page 695) and select the correct **EXZ** Template BEFORE you set the EXTERNAL ZONE parameters below.

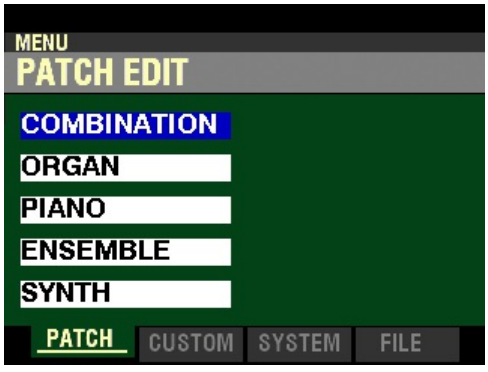
NOTE: Both Internal and External Zones are also covered in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide.

EXTERNAL ZONE MASTER ON / OFF

As will be explained, External Zones can be turned "ON" or "OFF" individually for UPPER, LOWER and PEDAL. However, in order for MIDI data to be transmitted from External Zones, the MASTER ON / OFF Parameter must be set to On. If it is set to Off, no External Zone data will be transmitted even if individual External Zones are "ON."

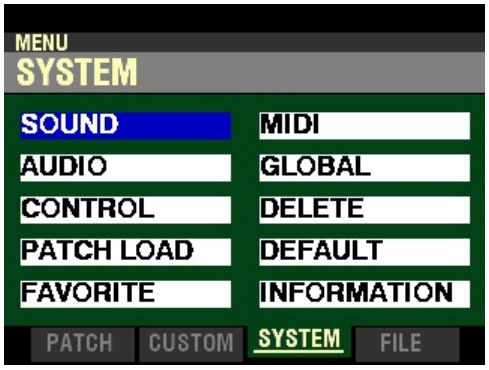
To enable transmission of External Zone MIDI data, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

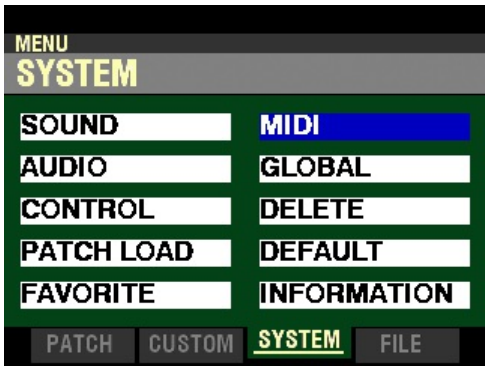


The "COMBINATION" box should be highlighted.

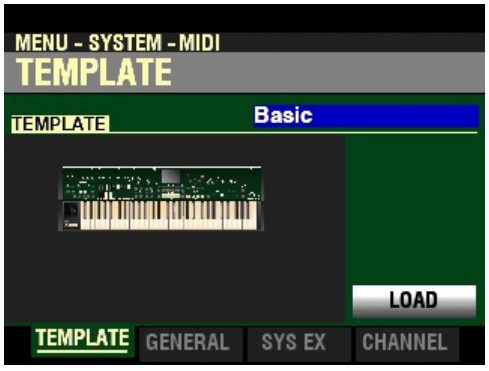
2. Press the PAGE "▶" button two times. The word "SOUND" should be highlighted.



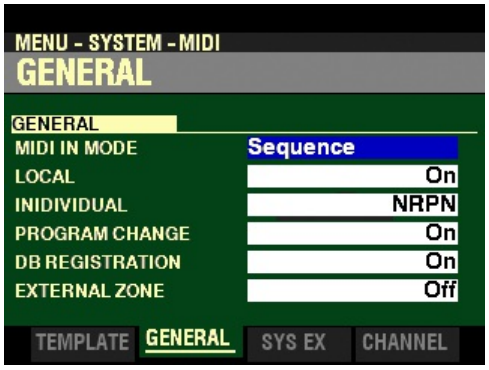
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



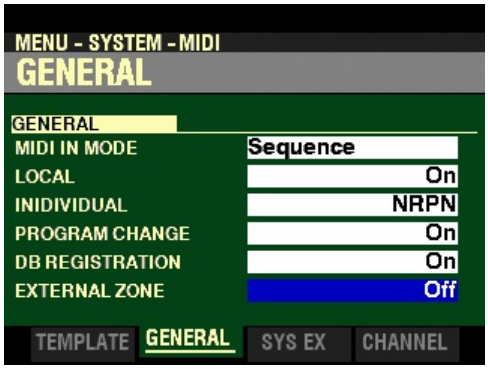
4. Press the ENTER button. The Information Center Display should now look like this:



5. Press the PAGE "▶" button once. The Information Center Display should now look like this:



6. Press the DIRECTION "▼" button five times. The Information Center Display should now look like this:



This is the Master Parameter which allows you to select whether to transmit External Zone data. The data chart below shows the options you may select.

MIDI EXTERNAL ZONE Options

Setting	Description
On	External Zone data will be transmitted to a connected MIDI device.
Off	No External Zone data is transmitted.

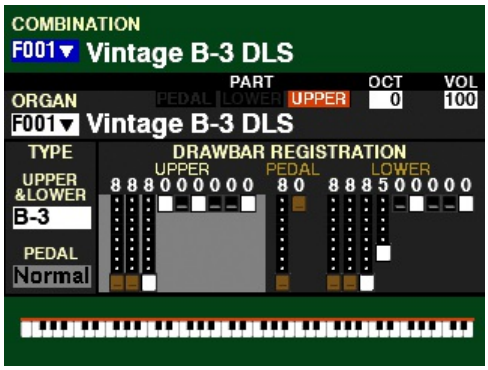
Turn the VALUE knob to turn this Parameter On or Off. To allow MIDI data transmission from the External Zones, turn this Parameter On.

NOTE: Both Internal and External Zones are also covered in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide.

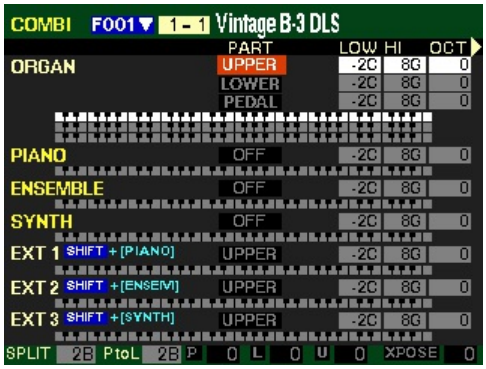
PLAY Mode - INTERNAL / EXTERNAL ZONES Page

TRY THIS:

1. After the power to the SK PRO has been turned "ON" and the operating system finishes loading, the Information Center Display will look similar to this:

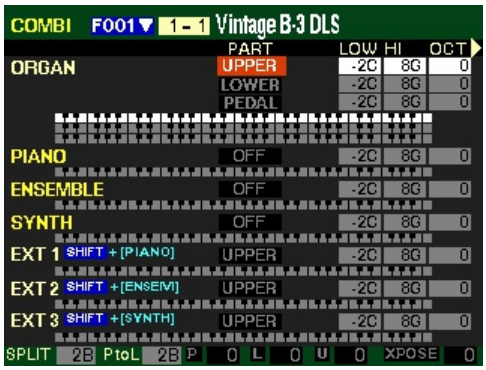


2. From the above screen, press either the PLAY button or either of the PAGE buttons once. The Information Center Display should now look similar to this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the External Zones of your SK PRO. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.

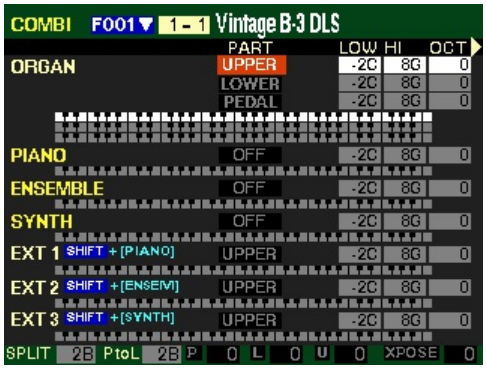


The box to the right of "COMBI" should be highlighted.

Notice the three Keyboard graphics. The top keyboard represents the UPPER Part, the middle one represents the LOWER Part and the bottom keyboard represents the PEDAL Part.

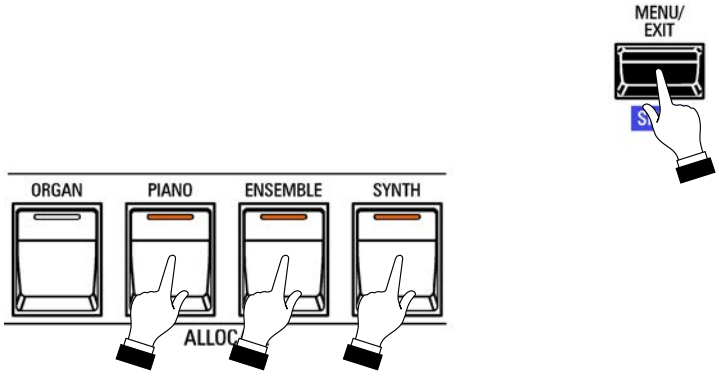
SPECIAL NOTE:

If the EXTERNAL ZONES Parameter in the SYSTEM -MIDI - GENERAL FUNCTION Mode Page (described on pages 727 to 729) is set to Off, the Information Center Display will look similar to this:



Notice all the boxes are "greyed out." This indicates that no External Zone MIDI data will be transmitted even if the Allocate Parameters are set to UPPER, LOWER or PEDAL.

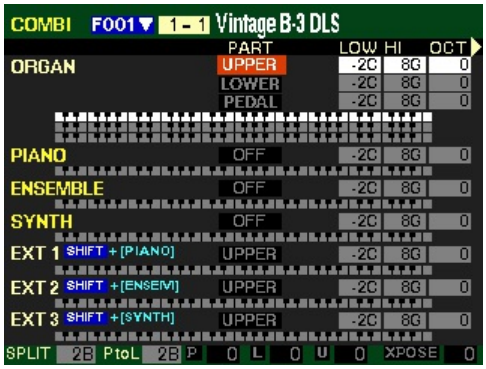
To enable the External Zones to transmit MIDI data, Press and Hold the SHIFT button and press one of the ALLOCATE buttons shown in the illustration below to turn the selected Zone On or Off.



The data chart on the next page shows how the External Zones are controlled by the PERCUSSION buttons.

EXTERNAL ZONE SWITCH Settings	
ALLOCATE button	**Function**
PIANO	Use this button to select the Part for EXTERNAL ZONE 1.
ENSEMBLE	Use this button to select the Part for EXTERNAL ZONE 2.
SYNTH	Use this button to select the Part for EXTERNAL ZONE 3.

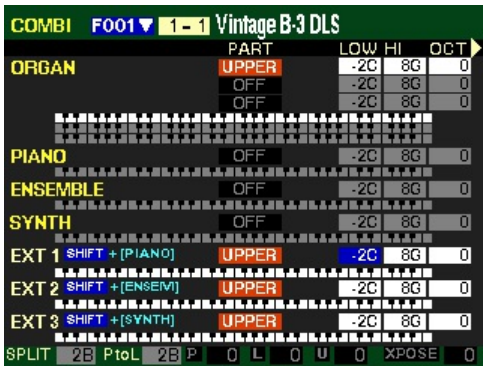
After doing the procedure described on the previous page to enable the External Zones, the Information Center Display will look like this:



Notice the External Zone keyboards are now showing white. This lets you know that External Zone data will be transmitted to a connected MIDI Device.

NOTE: You can enable each of the External Zones separately; however, for purposes of explanation all three of the External Zones will be shown as **On**, meaning the keyboards will be shown **white**.

From the above screen, press the DIRECTION "▼" button repeatedly until the Information Center Display looks like this:



The box underneath "LOW" should be highlighted.

LOW - External Zone Lower Note Limit

This Parameter allows you to set the Lower note limit for the selected External Zone. You may select from -2C to 8G.

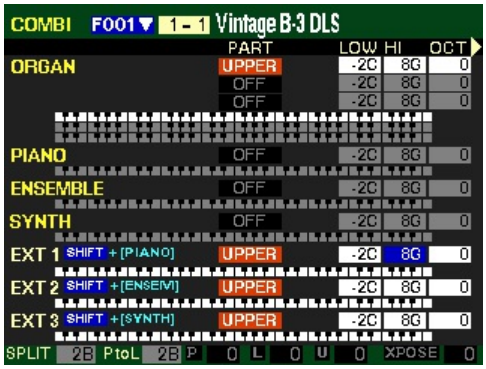
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "HI" should be highlighted.

HI - External Zone Upper Note Limit

This Parameter allows you to set the Upper note limit for the selected External Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

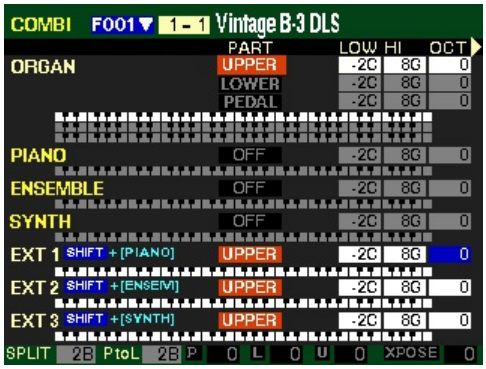
When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

NOTE: The Upper Limit number **cannot** be lower than the Lower Limit number.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - External Zone Octave

This Parameter allows you to determine the Octave or pitch at which the selected External Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

EXTERNAL ZONE OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

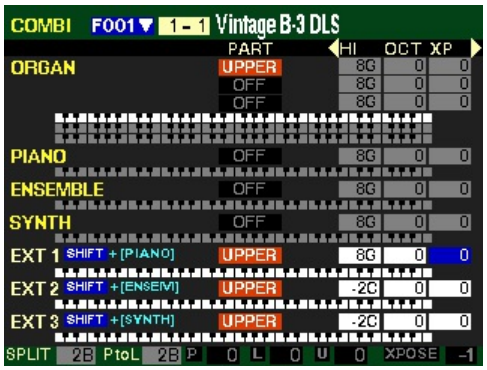
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected External Zone.

Turn the VALUE knob to the left to lower the Octave of the selected External Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XP" should be highlighted.

XP - External Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected External Zone by half-steps. You may select from -6 (down six half-steps) to +6 (up six half-steps). At 0 there is no transposition.

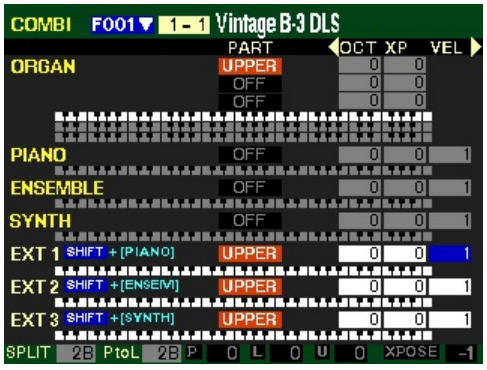
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected External Zone higher.

Turn the VALUE knob to the left to transpose the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

VEL - External Zone Velocity

This Parameter allows you to sets the character of the velocity to send to this zone. Th e setting range is Off and 1 to 4. At Off, the velocity is fixed at 100. The "press" (velocity response) of the keyboard progresses from 1 (heavier) through 4 (lighter).

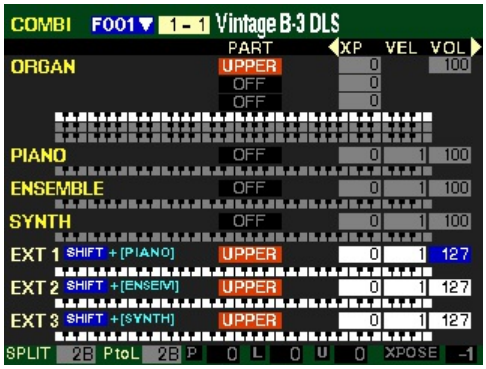
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to make the velocity response for the selected External Zone lighter.

Turn the VALUE knob to the left to make the velocity response for the selected External Zone heavier.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

VOL - External Zone Volume

This Parameter allows you to control the Volume (Controller #7) of the sound controlled by the selected External Zone. You may select from 0 (no volume) through 127 (maximum volume).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

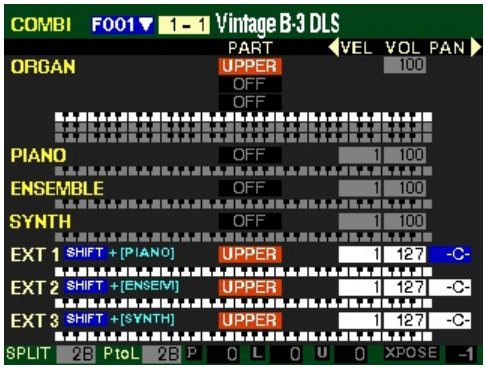
When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 742 and 758.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PAN" should be highlighted.

PAN - External Zone Pan

This Parameter allows you to set the directionality or Pan setting (Controller #10). You may select from L63 (the sound plays entirely through the Left channel), through to 0 (the sound is heard equally through both channels) and on through R63 (the sound plays entirely through the Right channel).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

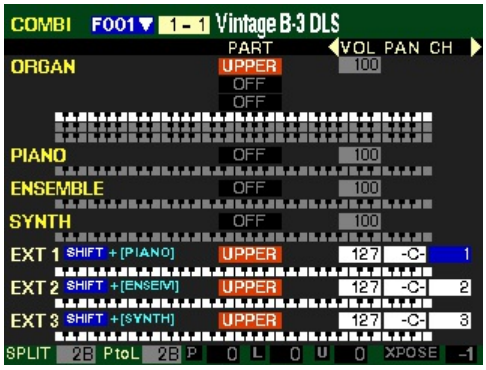
When you have made your selection:

Turn the VALUE knob to the right to emphasize the Right channel for the selected External Zone.

Turn the VALUE knob to the left to emphasize the Left channel for the selected External Zone.

NOTE: In order to hear the effect of this Parameter, the sound controlled from the External Zone must be connected via Stereo (both Left and Right channel) outputs.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "CH" should be highlighted.

CH - External Zone Channel

This Parameter allows you to select the MIDI Channel on which MIDI data from the selected External Zone will be transmitted. You may select from 1 through 16.

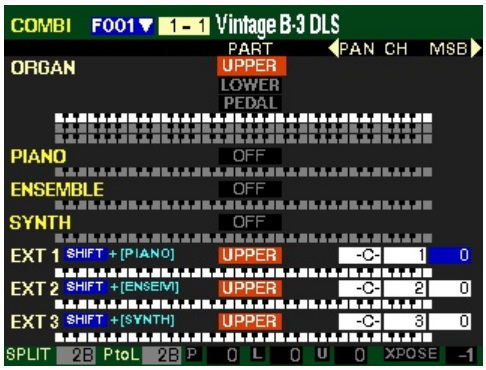
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Channels for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Channels for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MSB" should be highlighted.

The next two Parameters allow you to perform a Bank Select to give you access to more sounds. For a fuller explanation of Bank Select, consult page 861 of the APPENDIX chapter of this Guide.

BNK-M - External Zone Bank Select MSB

This Parameter allows you to set the value for Controller #0 (Most Significant Byte) for the selected External Zone. You may select from 0 through 127.

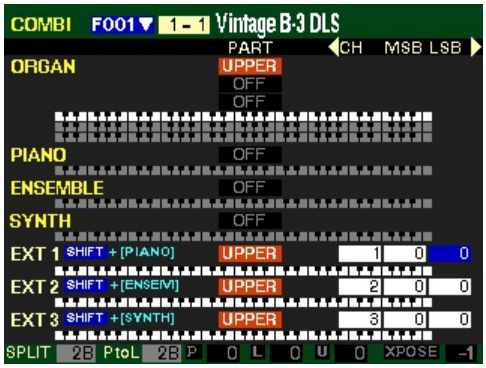
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the values for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the values for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "LSB" should be highlighted.

BNK-L - External Zone Bank Select (LSB)

This Parameter allows you to set the value for Controller #32 (Least Significant Byte) for the selected External Zone. You may select from 0 through 127.

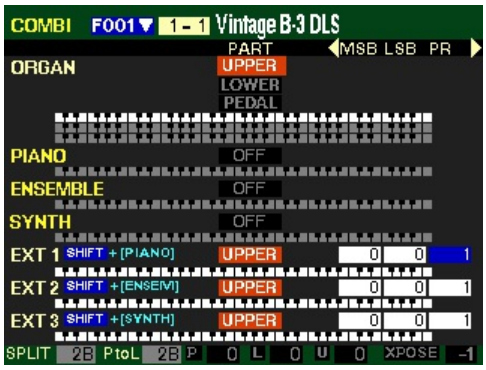
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the numbers for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PRG" should be highlighted.

PR - External Zone Program Number

This Parameter allows you to select from the Program Number, and therefore the Voice, for the selected External Zone. You may select from 1 through 128.

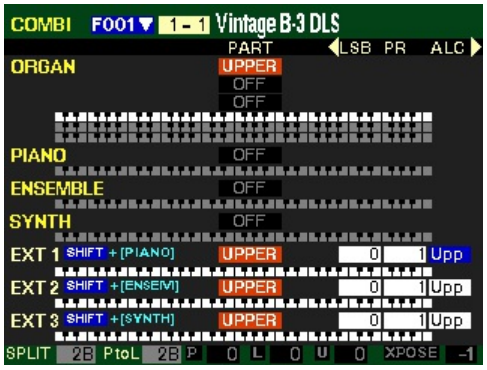
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Program Numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Program Numbers for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



External Zone Allocation

This Parameter allows you to select the Part from which the selected External Zone will play. The data chart below shows the options you may select.

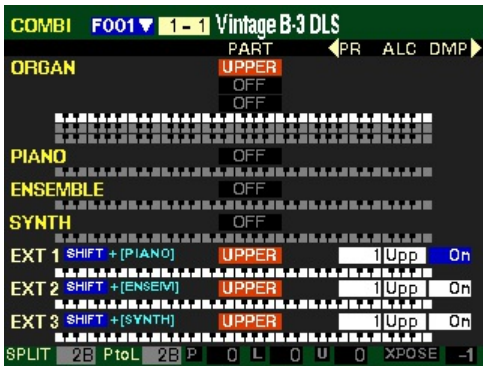
EXTERNAL ZONE ALLOCATION Options	
Setting	**Description**
Upp	The selected External Zone will play from the UPPER Part.
Low	The selected External Zone will play from the LOWER Part.
Ped	The selected External Zone will play from the PEDAL Part.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select Upp, Low or Ped.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "DMP" should be highlighted.

DMP - External Zone Damper

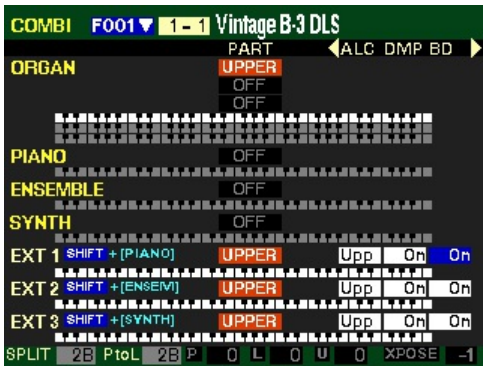
This Parameter allows you to select whether you want to send Damper (Controller #64) information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Damper On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "BD" should be highlighted.

BD - External Zone Pitch Bend

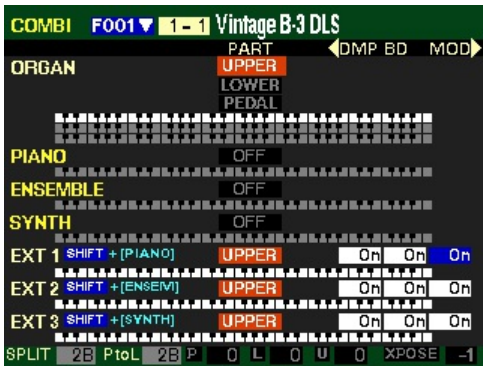
This Parameter allows you to select whether you want to send Pitch Bend information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Pitch Bend On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MOD" should be highlighted.

MOD - External Zone Modulation Wheel

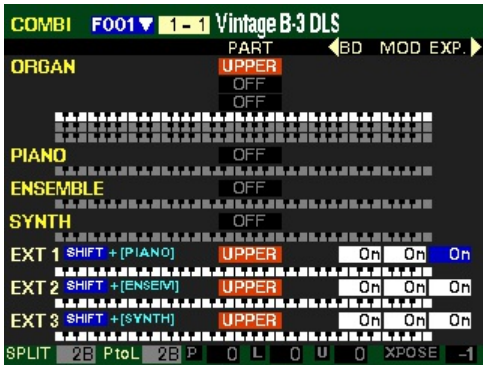
This Parameter allows you to select whether you want to send information from the Modulation Wheel as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Modulation On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "EXP" should be highlighted.

EXP - External Zone Expression ON/OFF

This Parameter allows you to select whether a connected Expression Pedal will affect the selected Zone.

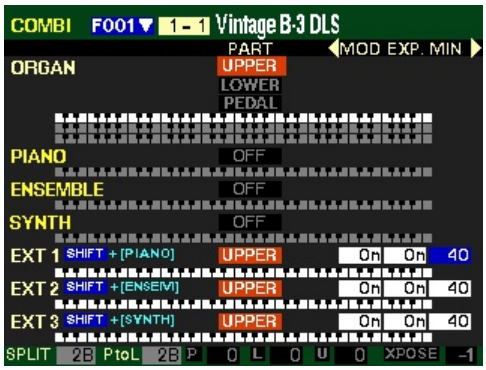
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Expression On or Off for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MIN" should be highlighted.

E.MIN - External Zone Minimum Volume

This Parameter allows you to adjust the Volume level when the Expression Pedal is "closed," or set at minimum. You may select from 0 through 63. At 0 no sound will be heard.

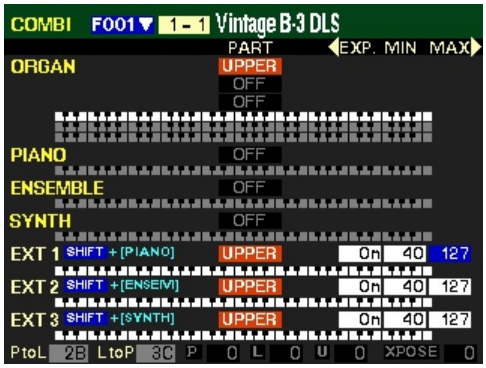
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "MAX" should be highlighted.

E.MAX - External Zone Maximum Volume

This Parameter allows you to adjust the volume level when the Expression Pedal is all the way "open," or set at maximum. You may select from 64 through 127.

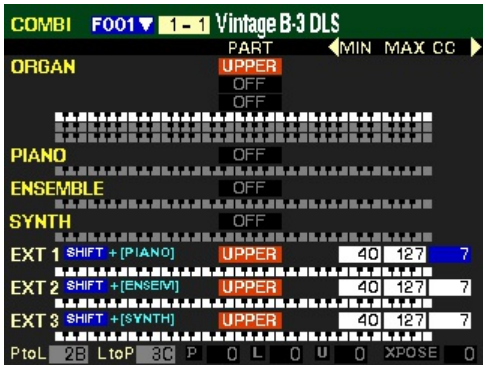
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to increase the Volume setting for the selected External Zone.

Turn the VALUE knob to the left to decrease the Volume setting for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "CC" should be highlighted.

CC - External Zone Expression Control Number

This Parameter allows you to select how you want to control the level of the selected External Zone. You may select either 7 (Controller #7 or Volume) or 11 (Controller #11 or Expression).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select 7 or 11 for the selected External Zone.

What Is the Difference Between "Volume" and "Expression?"

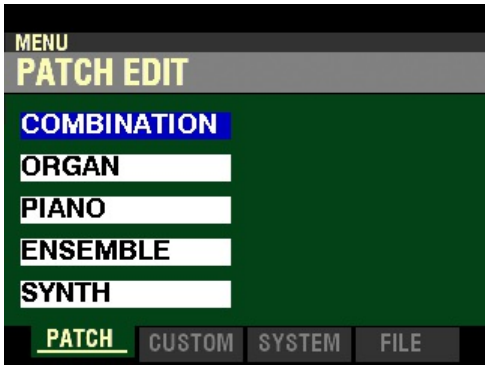
In purely technical terms, Volume and Expression are identical - both control loudness or sound level. The difference lies with how they are customarily used in MIDI applications, particularly in creating and playing back MIDI sequences.

The generally accepted protocol is to use Controller #7 (Volume) to set the overall or absolute level of a voice or sound, and use Controller #11 (Expression) to make variations (such as crescendi or diminuendi) against the overall level set by Controller #7. This is recommended particularly if you want to use your SKX PRO as a MIDI input device to record a sequence.

NOTE: In order for the External Zone Volume feature to work, the Expression Control Number must be set to **7** (Volume). If this parameter is set to **11** (Expression), changing the External Zone Volume setting will have no effect.

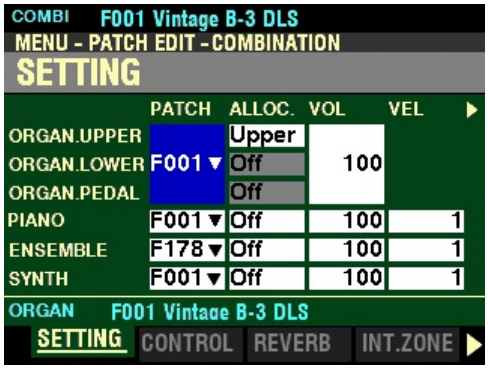
Accessing the EXTERNAL ZONE FUNCTION Mode Page using the MENU / EXIT and PAGE buttons:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

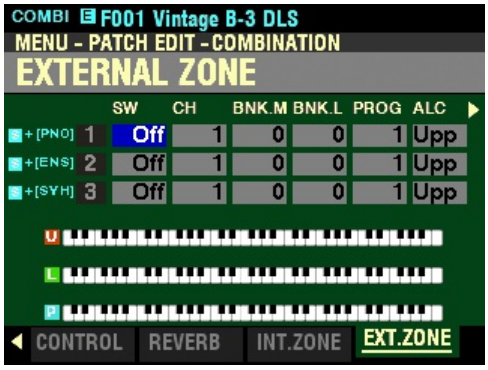


The "COMBINATION" box should be highlighted.

2. Press the ENTER button. The Information Center Display should now look like this:

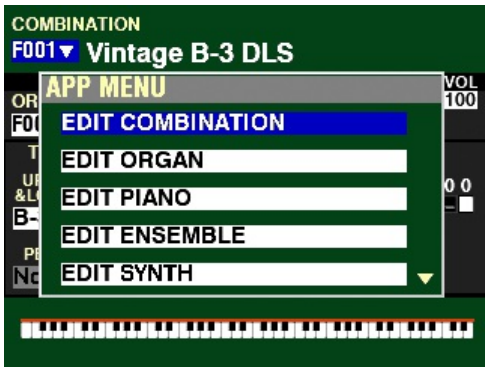


3. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



Accessing the EXTERNAL ZONE FUNCTION Mode Page using the APP MENU:

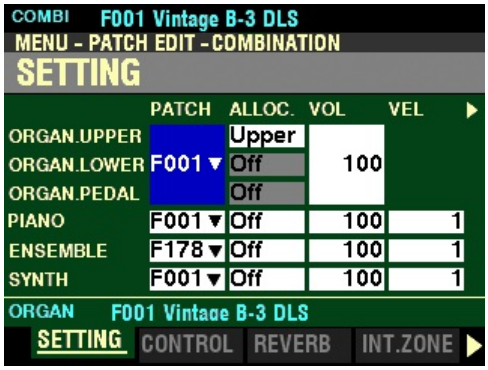
1. From any of the PLAY Mode Pages, Press and Hold the MANUAL "▤" button. The Information Center Display should now look like this:



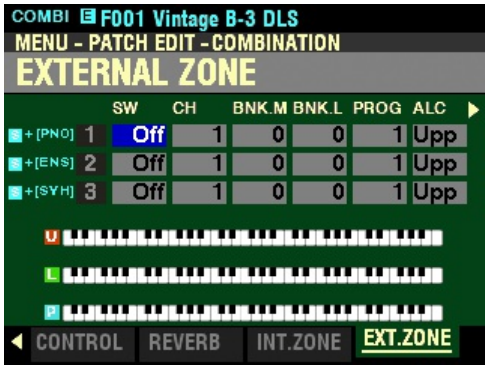
The "EDIT COMBINATION" box should be highlighted.

NOTE: The APP MENU may not display all Voice Sections, depending on which Voice Sections are active for the selected Combination or which ALLOCATE buttons are "ON" (LED lit). If the Voice Section you want is not displaying, press the PLAY button, press the ALLOCATE button for the Voice Section you want to turn "ON" (LED lit), then repeat Steps 1 and 2 above.

2. Release the MANUAL "▤" button and press the ENTER button. The Information Center Display should now look like this:

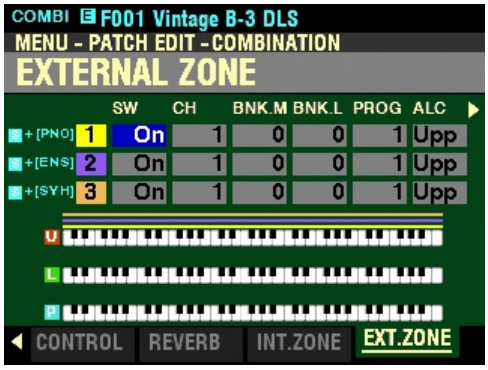


3. Press the PAGE "▶" button four times. The Information Center Display should now look like this:



You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make changes to the External Zones of your SK PRO. These changes are explained starting below.

NOTE: The External Zone Parameters are identical for all three External Zones; therefore for the sake of brevity only the Parameters for External Zone **1** (yellow box) will be shown and described.



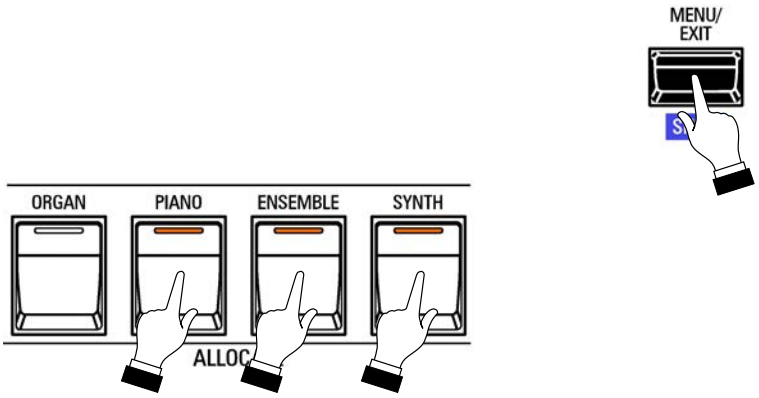
SW - External Zone Switch

This Parameter allows you to turn the selected External Zone "ON" (MIDI information will be transmitted) or "OFF" (no MIDI information will be transmitted).

You can turn the External Zones "ON" or "OFF" in one of two ways:

1. Use the DIRECTION buttons to highlight the EXTERNAL ZONE SW box you want and turn the VALUE knob to turn the selected Zone On or Off.

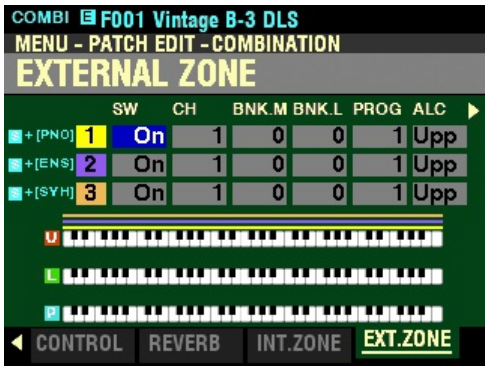
2. Press and Hold the SHIFT button and press one of the ALLOCATE buttons shown in the illustration below to turn the selected Zone On or Off.



NOTE: You can Press and Hold the SHIFT button to enable External Zones when the above screen is displaying. If the above screen is not displaying the PIANO, ENSEMBLE and SYNTH buttons function normally.

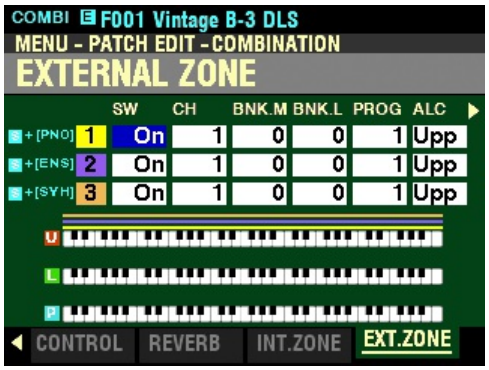
SPECIAL NOTE:

If the EXTERNAL ZONES Parameter in the SYSTEM -MIDI - GENERAL FUNCTION Mode Page (described on pages 100 to 102) is set to Off, the Information Center Display will look similar to this:



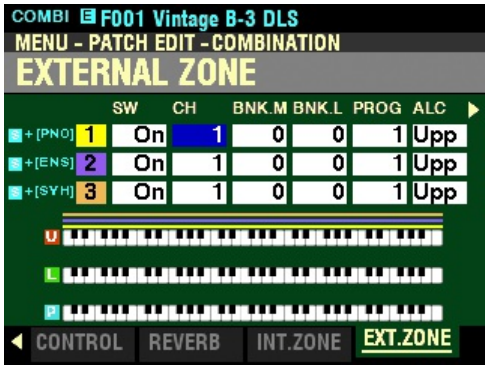
Notice that all the boxes are "greyed out." This indicates that no External Zone MIDI data will be transmitted even if the SW settings are set to On.

If the MIDI EXTERNAL ZONES Parameter is On, the Information Center Display will look similar to this:



The boxes are now showing white. This lets you know that External Zone data will be transmitted to a connected MIDI Device. Use the SW Parameters to control MIDI transmission for External Zones 1, 2 and 3 separately.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "CH" should be highlighted.

CH - External Zone Channel

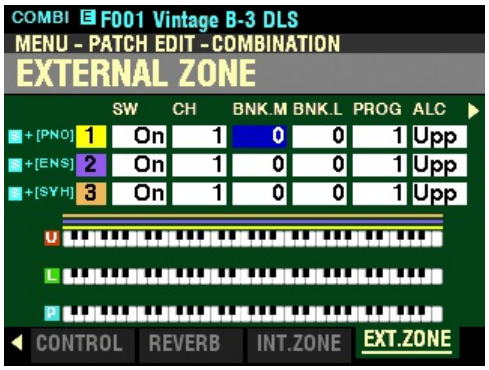
This Parameter allows you to select the MIDI Channel on which MIDI data from the selected External Zone will be transmitted. You may select from 1 through 16.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select the MIDI Channel for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "BNK-M" should be highlighted.

The two Parameters described on this page allow you to perform a Bank Select to give you access to more sounds. For a fuller explanation of Bank Select, consult page 861 of the APPENDIX chapter of this Guide.

BNK-M - External Zone Bank Select MSB

This Parameter allows you to set the value for Controller #0 (Most Significant Byte) for the selected External Zone. You may select from 0 through 127.

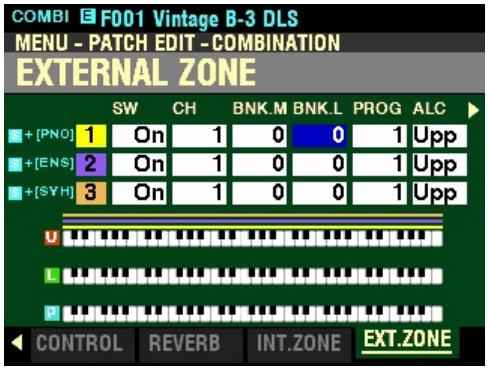
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the values for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the values for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "BNK-L" should be highlighted.

BNK-L - External Zone Bank Select (LSB)

This Parameter allows you to set the value for Controller #32 (Least Significant Byte) for the selected External Zone. You may select from 0 through 127.

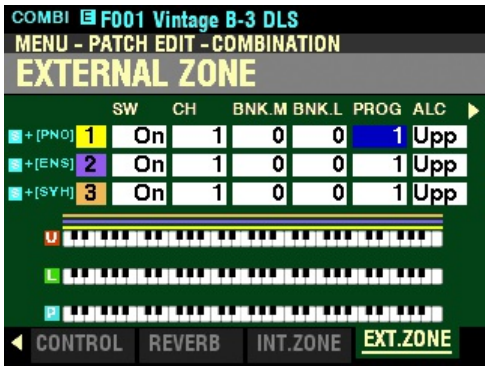
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the numbers for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "PROG" should be highlighted.

PROG - External Zone Program Number

This Parameter allows you to select from the Program Number, and therefore the Voice, for the selected External Zone. You may select from 1 through 128.

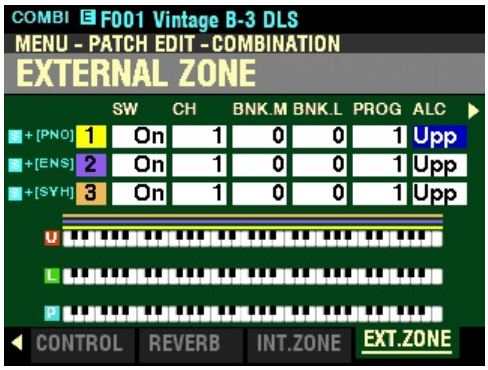
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to scroll forward through the Program Numbers for the selected External Zone.

Turn the VALUE knob to the left to scroll backward through the Program Numbers for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "ALC" should be highlighted.

ALC - External Zone Allocate

This Parameter allows you to select which Part will control the selected External Zone.

The data chart below explains each of the settings in more detail.

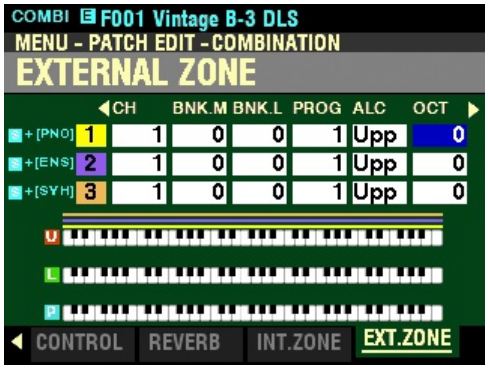
EXTERNAL ZONE ALLOCATE Options	
Setting	**Description**
Upp	Use this setting to allocate the selected External Zone to the UPPER Keyboard.
Low	Use this setting to allocate the selected External Zone to the LOWER Keyboard.
Ped	Use this setting to allocate the selected External Zone to the PEDAL Part. (NOTE: The PEDAL Part will play either from a connected MIDI pedal clavier or from the LOWER Keyboard when PEDAL TO LOWER is activated.)
Off	Use this setting if you have external MIDI instruments connected and you do not wish to send Note messages (Note On, Note Off and Note Velocity), but you still want to transmit MIDI Program Changes or Controller Changes.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select Upp, Low, Ped or Off.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "OCT" should be highlighted.

OCT - External Zone Octave

This Parameter allows you to determine the Octave or pitch at which the External Zone will sound. Use this Parameter if an external sound plays in a pitch range other than the one you find desirable.

The data chart below shows the options you may select.

EXTERNAL ZONE OCTAVE Options	
Setting	**Description**
-2	The sound is two octaves below the regular pitch.
-1	The sound is one octave below the regular pitch.
0	The sound is at normal pitch.
+1	The sound is one octave above the regular pitch.
+2	The sound is two octaves above the regular pitch.

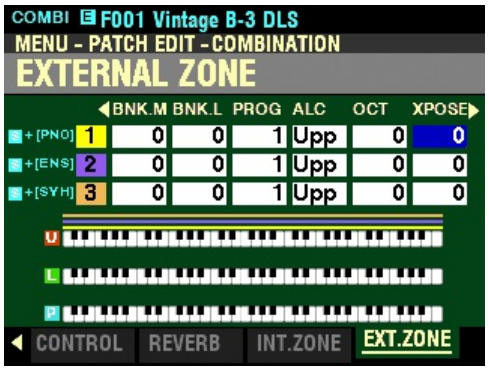
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to raise the Octave of the selected External Zone.

Turn the VALUE knob to the left to lower the Octave of the selected External Zone.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box underneath "XPOSE" should be highlighted.

XPOSE - External Zone Transpose

This Parameter allows you to adjust the sounding pitch of the selected External Zone by half-steps o. You may select from -63 (down five octaves and a third) to 63 (up five octaves and a third). At 0 there is no transposition.

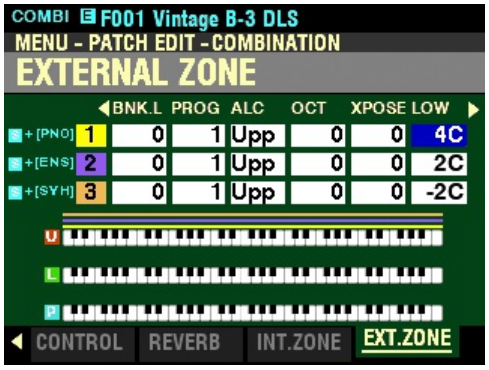
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to transpose the selected External Zone higher.

Turn the VALUE knob to the left to transpose the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "LOW" should be highlighted.

LOW - External Zone Lower Note Limit

This Parameter allows you to set the Lower note limit for the External Zone. You may select from -2C to 8G.

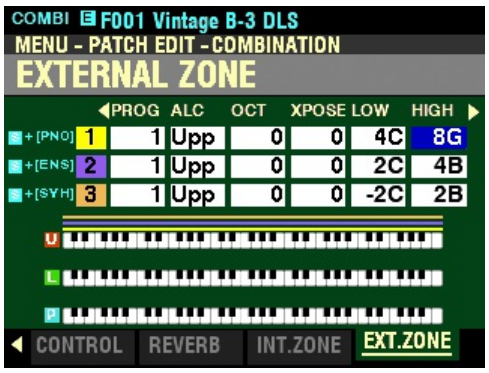
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "HIGH" should be highlighted.

HIGH - External Zone Upper Note Limit

This Parameter allows you to set the Upper note limit for the External Zone. You may select from -2C to 8G.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

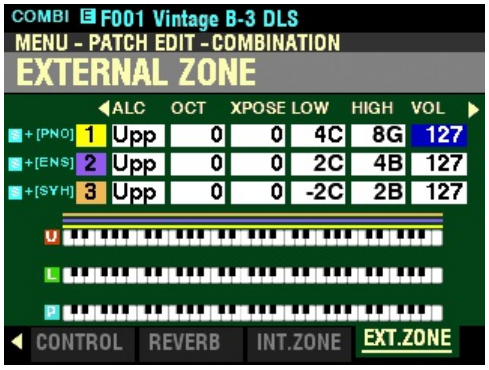
When you have made your selection:

Turn the VALUE knob to the right to locate the note limit for the selected External Zone higher.

Turn the VALUE knob to the left to locate the note limit for the selected External Zone lower.

NOTE: The Upper Limit number **cannot** be lower than the Lower Limit number.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VOL" should be highlighted.

VOL - External Zone Volume

This Parameter allows you to control the volume (Controller #7) of the sound controlled by the selected External Zone. You may select from 0 (no volume) through 127 (maximum volume).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

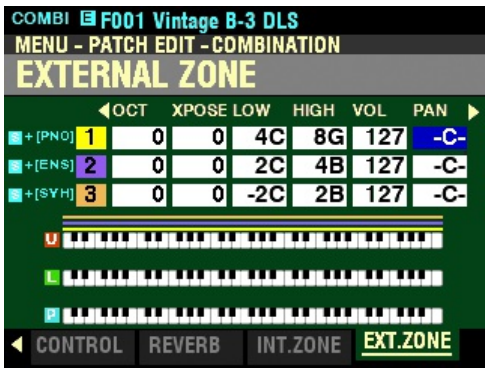
When you have made your selection:

Turn the VALUE knob to the right to increase the volume for the selected External Zone.

Turn the VALUE knob to the left to decrease the volume for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this Parameter will have no effect.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "PAN" should be highlighted.

PAN - External Zone Pan

This Parameter allows you to set the directionality or Pan setting (Controller #10). You may select from L63 (the sound plays entirely through the Left channel), through to -C- (the sound is heard equally through both channels) and on through R63 (the sound plays entirely through the Right channel).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

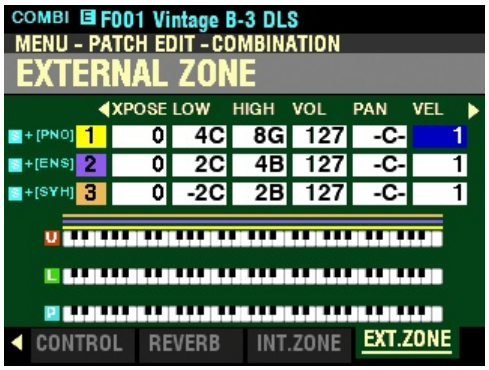
When you have made your selection:

Turn the VALUE knob to the right to emphasize the Right channel for the selected External Zone.

Turn the VALUE knob to the left to emphasize the Left channel for the selected External Zone.

NOTE: In order to hear the effect of this Parameter, the sound controlled from the External Zone must be connected via **Stereo** (both Left and Right channel) outputs.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "VEL" should be highlighted.

VEL - External Zone Velocity

This Parameter allows you to sets the character of the velocity to send to this zone. Th e setting range is Off and 1 to 4. At Off, the velocity is fixed at 100. The "press" (velocity response) of the keyboard progresses from 1 (heavier) through 4 (lighter).

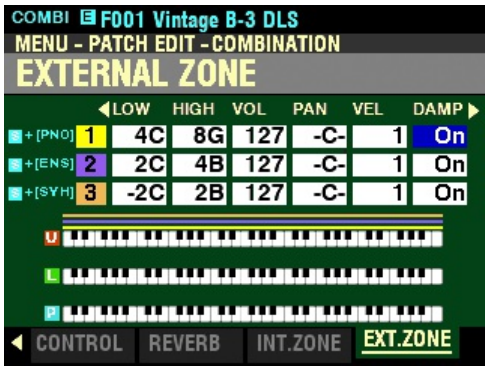
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to make the velocity response for the selected External Zone lighter.

Turn the VALUE knob to the left to make the velocity response for the selected External Zone heavier.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "DAMP" should be highlighted.

DAMP - External Zone Damper

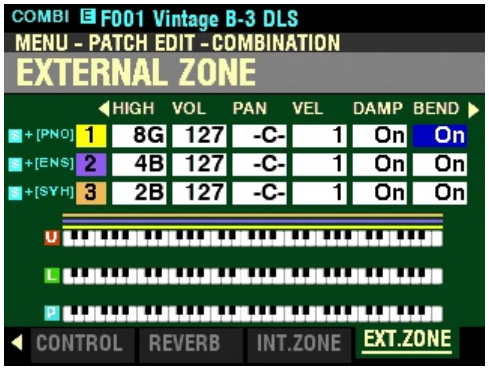
This Parameter allows you to select whether you want to send Damper (Controller #64) information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Damper On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "BEND" should be highlighted.

BEND - External Zone Pitch Bend

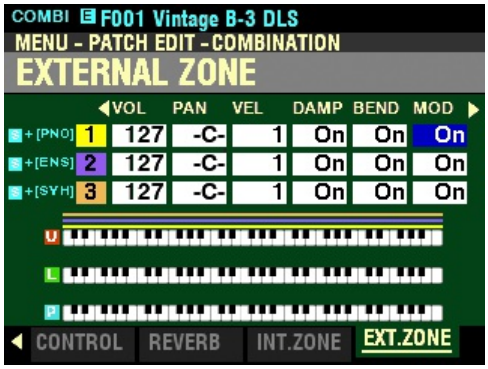
This Parameter allows you to select whether you want to send Pitch Bend information as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Pitch Bend On or Off for the selected External Zone.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "MOD" should be highlighted.

MOD - External Zone Modulation Wheel

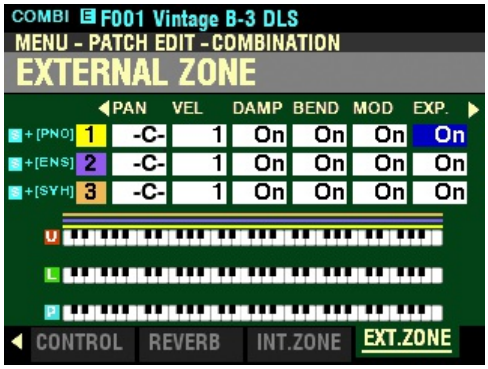
This Parameter allows you to select whether you want to send information from the Modulation Wheel as part of the selected External Zone.

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Modulation Wheel transmission On or Off for the selected External Zone.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "EXP" should be highlighted.

EXP - External Zone Expression ON/OFF

This Parameter allows you to select whether a connected Expression Pedal will affect the selected Zone.

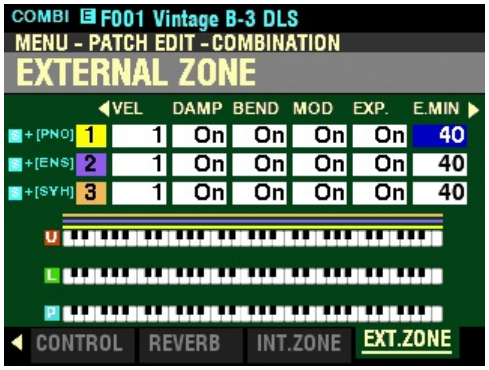
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to turn Expression On or Off for the selected External Zone.

NOTE: In order for this Parameter to work, the Expression Control Number must be set to **7** (Volume). If the Expression Control Number is set to **11** (Expression), changing this parameter will have no effect. Expression Control Number is explained on pages 742 and 758.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "E.MIN" should be highlighted.

E.MIN - External Zone Minimum Volume

This Parameter allows you to adjust the volume level for the selected External Zone when the Expression Pedal is "closed," or set at minimum. You may select from 0 through 63. At 0 no sound will be heard. At 127 the selected Voice Section will sound at its maximum level regardless of the setting of the connected Expression Pedal.

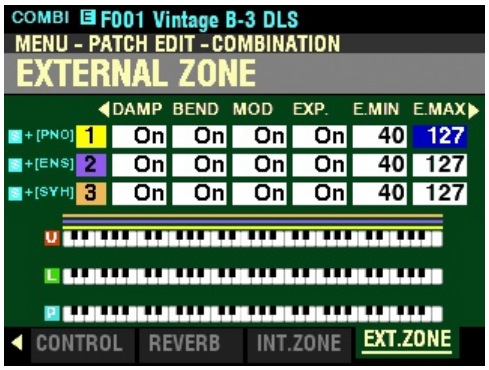
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to set the Minimum Volume for the selected External Zone higher.

Turn the VALUE knob to the left to set the Minimum Volume for the selected External Zone lower.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "E.MAX" should be highlighted.

E.MAX - External Zone Maximum Volume

This Parameter allows you to adjust the volume level for the selected External Zone when the Expression Pedal is all the way "open," or set at maximum. You may select from 64 through 127.

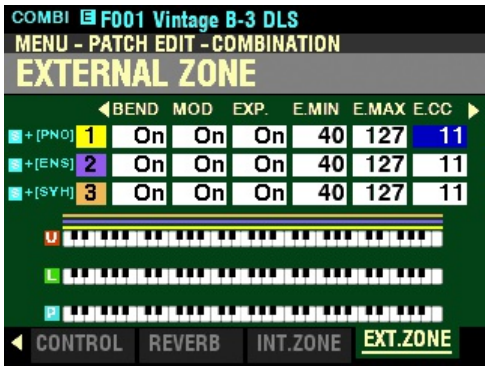
Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to the right to set the Maximum Volume for the selected External Zone higher.

Turn the VALUE knob to the left to set the Maximum Volume for the selected External Zone lower.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "E.CC" should be highlighted.

E.CC - External Zone Expression Control Number

This Parameter allows you to select how you want to control the level of the selected External Zone. You may select either 7 (Controller #7 or Volume) or 11 (Controller #11 or Expression).

Use the DIRECTION "▲" and "▼" buttons to move up and down among External Zones, 1, 2 and 3.

When you have made your selection:

Turn the VALUE knob to select 7 or 11 for the selected External Zone.

What Is the Difference Between "Volume" and "Expression?"

In purely technical terms, Volume and Expression are identical - both control loudness or sound level. The difference lies with how they are customarily used in MIDI applications, particularly in creating and playing back MIDI sequences.

The generally accepted protocol is to use Controller #7 (Volume) to set the overall or absolute level of a voice or sound, and use Controller #11 (Expression) to make variations (such as crescendi or diminuendi) against the overall level set by Controller #7. This is recommended particularly if you want to use your SKX PRO as a MIDI input device to record a sequence.

NOTE: In order for the External Zone Volume feature to work, the Expression Control Number must be set to **7** (Volume). If this parameter is set to **11** (Expression), changing the External Zone Volume setting will have no effect.

♦ MIDI All Notes Off and Parameter Reload ("MIDI Panic")

MIDI plays notes from an external instrument by sending two commands - "Note On" which starts the note playing, and "Note Off" which releases the note and stops it from playing. These two commands are always sent in pairs.

Once in a while, a Note Off command may not follow a Note On command, causing a note or notes to cipher, or sound continuously (the phenomenon popularly referred to a "stuck notes"). In this case, you need to send a MIDI command to the receiving instrument to clear the ciphering notes.

To do this, press the DIRECTION "▲" and "▼" buttons simultaneously.



Doing this will send a "MIDI All Notes Off" as well as a "MIDI Reset All Controllers" command to the receiving instruments. The stuck notes will be turned off and the settings for the External Zones will be reset, then the External Zone settings will be re-sent. Normal playing can then be resumed.

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HAMMOND

Sk PRO

SPECIAL UTILITY FEATURES

SPECIAL UTILITY FEATURES

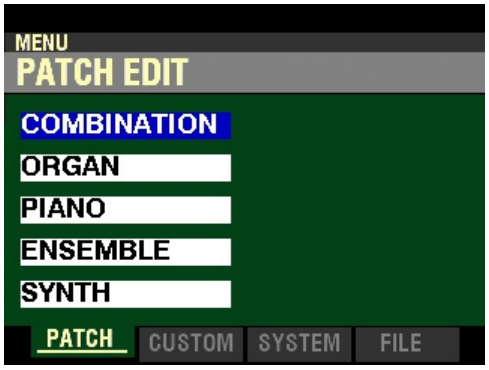
◆ AUDIO FUNCTION Mode

This FUNCTION Mode allows you to see which audio connections are active

NOTE: The AUDIO connections are all on the Accessory Panel on the rear of the instrument and are explained in the **INTRODUCTION** chapter of this Guide starting on page 6.

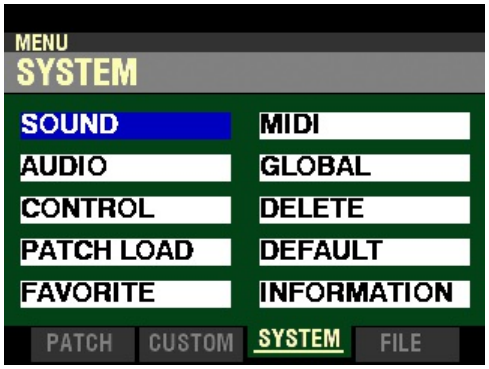
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

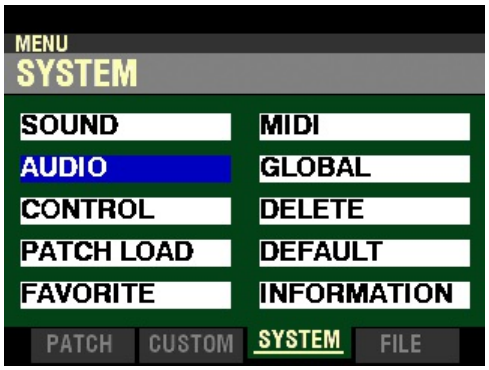


The "COMBINATION" box should be highlighted.

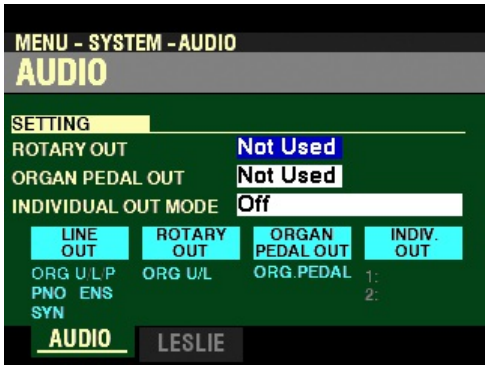
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



3. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



4. Press the ENTER button. The Information Center Display should now look like this:



You are now in the AUDIO FUNCTION Mode.

♦ SETTING

This allows you to see which audio connections are active. The following paragraphs explain this in more detail.

ROTARY OUT

This Parameter allows you to select the status of the ROTARY OUT jack. The data chart below shows the options you may select.

ROTARY OUT Options	
Setting	**Description**
Not Used	No audio signal will be sent from the ROTARY OUT jack
Used	ORGAN Tone Wheel and Transistor Organ tones will be sent out from the ROTARY OUT jack. The ORGAN tones will not be sent out from the LINE OUT jacks.

Turn the VALUE knob to select Not Used or Used.

NOTE: This Parameter does **not** affect the **Pipe** ORGAN tones.

ORGAN PEDAL OUT

This Parameter allows you to select the status of the ORGAN PEDAL OUT jack. The data chart below shows the options you may select.

ORGAN PEDAL OUT Options	
Setting	**Description**
Not Used	No audio signal will be sent from the ORGAN PEDAL OUT jack.
Used	The PEDAL tones from the ORGAN Section will be sent out from the ORGAN PEDAL OUT jack. Use this jack to connect a powered sub-woofer to increase the bass, or to bypass the Leslie for the PEDAL tones.

Turn the VALUE knob to select Not Used or Used.

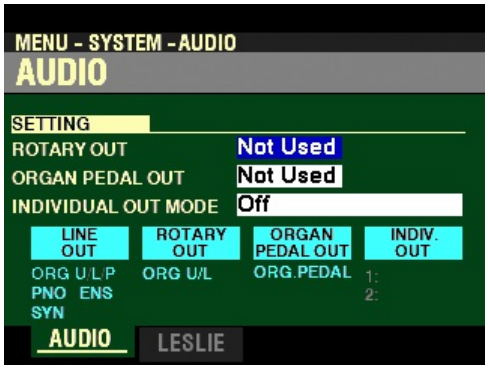
INDIVIDUAL OUT MODE

This Parameter allows you to select the status of the INDIVIDUAL OUT jacks. The data chart below shows the options you may select.

INDIVIDUAL OUT Options	
Setting	**Description**
Off	No audio signal will be sent to either of the INDIVIDUAL OUT jacks.
Piano Stereo	A stereo audio signal is sent from the PIANO Voice Section to the INDIVIDUAL OUT jacks - Left (INDIVIDUAL OUT 1) and Right (INDIVIDUAL OUT 2).
Ensemble Stereo	A stereo audio signal is sent from the ENSEMBLE Voice Section to the INDIVIDUAL OUT jacks - Left (INDIVIDUAL OUT 1) and Right (INDIVIDUAL OUT 2).
Synth Stereo	A stereo audio signal is sent from the MONO SYNTH Voice Section to the INDIVIDUAL OUT jacks - Left (INDIVIDUAL OUT 1) and Right (INDIVIDUAL OUT 2).
Piano/Ensemble	An audio signal is sent from the PIANO Voice Section to the INDIVIDUAL OUT 1 jack and a separate audio signal is sent from the ENSEMBLE Voice Section to the INDIVIDUAL OUT 2 jack.
Piano/Synth	An audio signal is sent from the PIANO Voice Section to the INDIVIDUAL OUT 1 jack and a separate audio signal is sent from the MONO SYNTH Voice Section to the INDIVIDUAL OUT 2 jack.
Ensemble/Synth	An audio signal is sent from the ENSEMBLE Voice Section to the INDIVIDUAL OUT 1 jack and a separate audio signal is sent from the MONO SYNTH Voice Section to the INDIVIDUAL OUT 2 jack.

Turn the VALUE knob to select the option you want.

SPECIAL NOTE: Notice the four light blue boxes in the AUDIO SETTING screen.



When you select settings for the three AUDIO SETTING Parameters, you will see the characters underneath each blue box change in accordance with each setting you make. For example, if you select Used for the ORGAN PEDAL OUT jack you will see the P underneath the LINE OUT and ORGAN PEDAL OUT boxes disappear. This indicates the ORGAN PEDAL tones are no longer being sent to the LINE OUT jacks but are instead going to the ORGAN PEDAL OUT jack. In this way you can connect a subwoofer to the ORGAN PEDAL OUT jack for very deep pedal tones.

NOTE: If the INDIVIDUAL OUT jacks are used, the selected Section(s) will not sound through the LINE OUT jacks. Also, no Effects such as Reverb will sound through the INDIVIDUAL OUT jacks. This is so you can use a separate Effects box for the Voice Section you want to sound through an INDIVIDUAL OUT jack.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box to the right of "CHANNEL" should be highlighted.

♦ EXT. LESLIE

This Parameter allows you to select the routing of audio channels to Leslie Speaker connected to the instrument via the 11-pin interface. The data chart below shows the options you may select.

EXT.LESLIE Options	
Setting	**Description**
1	If a single channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel regardless of the status of the BYPASS button.
3	If a multi-channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel only if the BYPASS button is "ON." If the BYPASS button is "OFF," the audio from the Tone Wheel / Transistor Organs is sent to the Stationary Channel(s).
1 + :Line	If a single channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel and the audio from the other Voice Sections will be sent to the LINE OUT jacks and can be heard through a connected amplifier or speaker system.

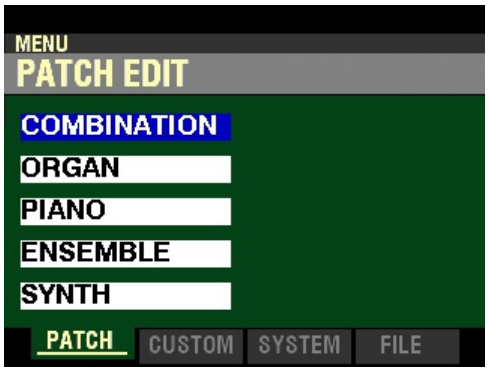
Turn the VALUE knob to select the option you want.

◆ SOUND FUNCTION Mode

This FUNCTION Mode allows you to adjust the sound qualities which affect the entire instrument (MASTER TUNE, MASTER TRANSPOSE, and MASTER EQUALIZER).

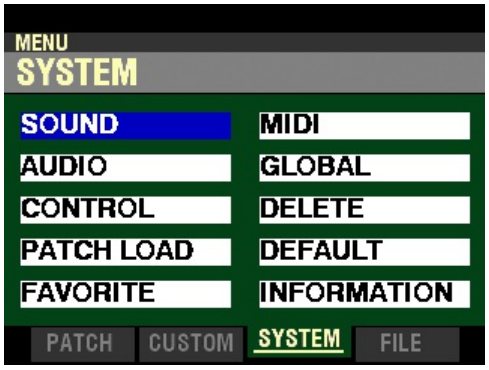
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

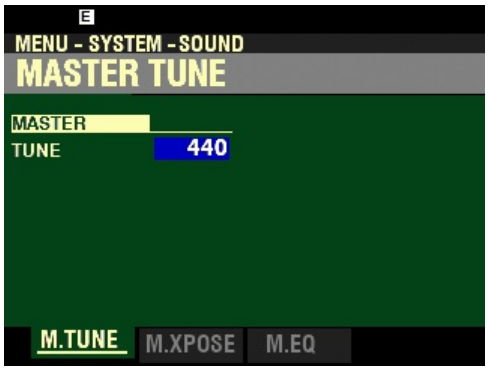
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



3. Press the ENTER button. The Information Center Display should now look like this:



If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "TUNE" should be highlighted.

♦ MASTER TUNE

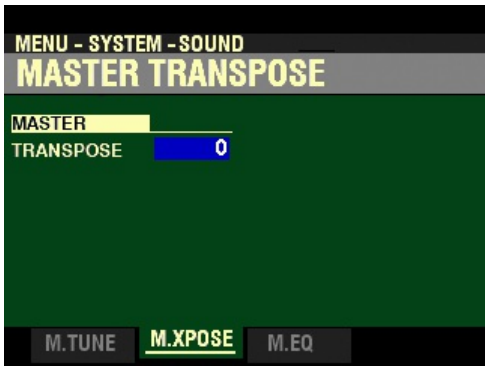
This FUNCTION Mode Page allows you to change the overall tuning pitch of the entire instrument. The reference pitch is "A-440." The selectable range is from A-430 to A-450.

NOTE: The term "Hz" is an abbreviation for **Hertz**, and refers to the frequency of a pitch measured in cycles per second. The note reference commonly used is "A440," meaning that a note consisting of 440 Hertz will be the pitch "A." This is the international standard used to tune most musical instruments.

Turn the VALUE knob to the right to raise the pitch.

Turn the VALUE knob to the left to lower the pitch.

From the above screen, press the PAGE "▶" button once.



The box to the right of "TRANSPOSE" should be highlighted.

♦ MASTER TRANSPOSE

This FUNCTION Mode Page allows you to shift the musical key of the entire instrument. This is useful if you have a piece of music written in one key but which needs to sound in another key; for example, a song written and played in C Major, could sound in G Major. TRANSPOSE will step either up or down six (6) semitones or half-steps from the center position.

Turn the VALUE knob to the right to transpose the instrument up.

Turn the VALUE knob to the left to transpose the instrument down.

NOTE: The MASTER TRANSPOSE Parameter is linked to the TRANSPOSE button, plus the DOWN and UP buttons to the right of the TRANSPOSE button. For more information please consult the **SPECIAL PERFORMANCE FEATURES** chapter of this Guide starting on page 657.

From the screen shown in the middle of the previous page, press the PAGE "▶" button once.



The box to the right of "EQ" should be highlighted.

♦ MASTER EQUALIZER

This FUNCTION Mode Page allows you to customize the tone quality of the entire instrument.

What Is "Equalization?"

"Equalization" is a term used by sound engineers to describe changes or alterations they make to the character of sound. For example, if a piano is being "miked," (its sound output being picked up by a microphone) and the tone needs to sound brighter or to have more bass, a sound engineer can increase or decrease the level of individual "frequency bands," as they are called, to achieve just the desired effect. The "BASS" and "TREBLE" tone controls on a home stereo amplifier can be said to be a very elementary type of equalization. However, a true equalizer allows you control over more areas of the frequency range than just "highs" and "lows." The Equalizer functions of your SKX PRO have this capability.

Master Equalizer ON/OFF

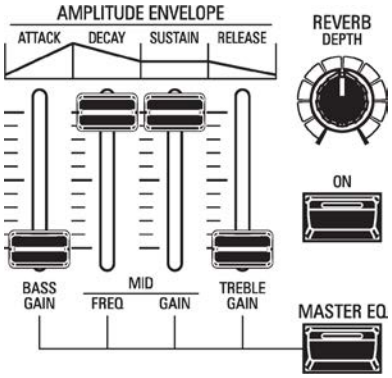
This Parameter allows you to turn the Master Equalizer "ON" or "OFF."



Press the MASTER EQ button to turn the Master Equalizer "ON" or "OFF."

NOTE: When the above screen is displaying, you can also turn the VALUE knob to turn the Master Equalizer **On** or **Off**.

Master Equalizer Slider Controls (Software Version 1.6 and up)



These controls allow you to adjust the Gain for the Bass, Mid and Treble frequency bands and to adjust the crossover frequency for the Mid frequency band.

Moving these sliders while Pressing and Holding the MASTER EQ button will change the Parameters. You will see the indicators on the right of the display change in response to the movements of the sliders.

NOTE: Moving any of these sliders while Pressing and Holding the MASTER EQ button will cause a **POPUP** screen to display showing the current setting. For more information about POPUPs please consult page 682.

From the screen shown on the previous page, press the DIRECTION "▼" button once.



The box underneath "BASS" should be highlighted.

FREQ

These Parameters allow you to adjust the central frequency of the BASS, MID and TREBLE frequency bands.

BASS - Bass Central Frequency

This Parameter allows you to adjust the central frequency of the Bass frequency band. You may select from 20Hz to 200Hz.

Turn the VALUE knob to the right to raise the central frequency.

Turn the VALUE knob to the left to lower the central frequency.

From the above screen, press the DIRECTION "▶" button once.



The box underneath "MID" should be highlighted.

MID - Midrange Central Frequency

This Parameter allows you to adjust the central frequency of the Midrange frequency band. You may select from 250Hz to 3.1kHz.

Turn the VALUE knob to the right to raise the central frequency.

Turn the VALUE knob to the left to lower the central frequency.

Or,

Press and Hold the MASTER EQ button and move the MID FREQ slider up to raise the central frequency.

Press and Hold the MASTER EQ button and move the MID FREQ slider down to lower the central frequency.

From the screen shown at the bottom of the previous page, press the DIRECTION "▶" button once.



The box underneath "TREB" should be highlighted.

TREB - Treble Central Frequency

This Parameter allows you to adjust the central frequency and amount of the Treble frequency band. You may select from 4.0kHz to 8.0kHz.

Turn the VALUE knob to the right to raise the central frequency.

Turn the VALUE knob to the left to lower the central frequency.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "GAIN" and underneath "BASS."



The box to the right of "GAIN" and underneath "BASS" should be highlighted.

GAIN

This Parameter allows you to adjust the amount of the BASS, MID and TREBLE frequency bands.

BASS - Bass Gain

These Parameters allow you to adjust the amount of the Bass frequency band. You may select from -9 to +9.

Turn the VALUE knob to the right to increase the amount.

Turn the VALUE knob to the left to decrease the amount.

Or,

Press and Hold the MASTER EQ button and move the BASS GAIN slider up to increase the amount.

Press and Hold the MASTER EQ button and move the BASS GAIN slider down to decrease the amount.

From the screen shown in the middle of the previous page, press the DIRECTION "▶" button once.



The box to the right of "GAIN" and underneath "MID" should be highlighted.

MID - Midrange Gain

This Parameter allows you to adjust the amount of the Midrange frequency band. You may select from -9 to +9.

Turn the VALUE knob to the right to increase the amount.

Turn the VALUE knob to the left to decrease the amount.

Or,

Press and Hold the MASTER EQ button and move the MID GAIN slider up to increase the amount.

Press and Hold the MASTER EQ button and move the MID GAIN slider down to decrease the amount.

From the screen shown on the previous page, press the DIRECTION "▶" button once.



The box to the right of "GAIN" and underneath "TREB" should be highlighted.

TREB - Treble Gain

This Parameter allows you to adjust the amount of the Treble frequency band. You may select from -9 to +9.

Turn the VALUE knob to the right to increase the amount.

Turn the VALUE knob to the left to decrease the amount.

Or,

Press and Hold the MASTER EQ button and move the TREBLE GAIN slider up to increase the amount.

Press and Hold the MASTER EQ button and move the TREBLE GAIN slider down to decrease the amount.

From the above screen, use the DIRECTION buttons to highlight the box to the right of "Q."



MID Q - Resonance

This Parameter allows you to adjust the resonance of the Middle frequency band. You may select from 0 to 63.

Turn the VALUE knob to the right to increase the resonance amount.

Turn the VALUE knob to the left to decrease the resonance amount.

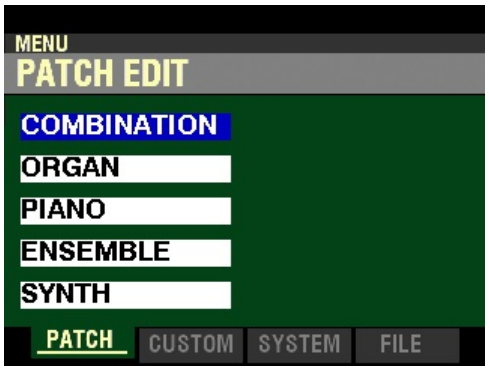
◆ GLOBAL FUNCTION Mode

This FUNCTION Mode allows you to control certain Parameters which affect the entire instrument.

♦ POWER AUTO OFF

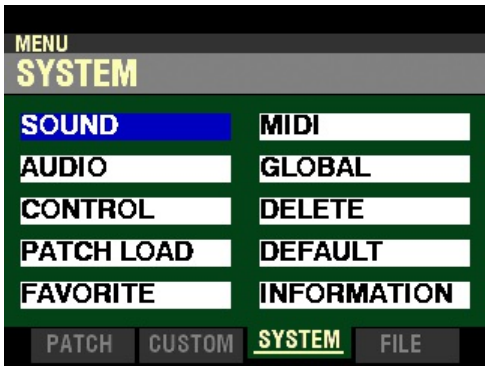
For safety reasons, the SKX PRO is equipped with a POWER AUTO OFF feature which turns the power to the instrument "OFF" if no keys are controls are touched within a 30-minute period. This FUNCTION Mode Page allows you to enable or disable this feature.

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

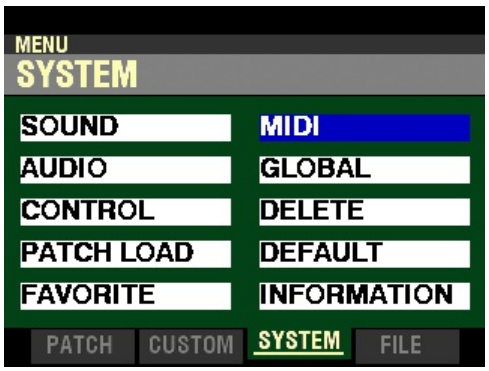


The "COMBINATION" box should be highlighted.

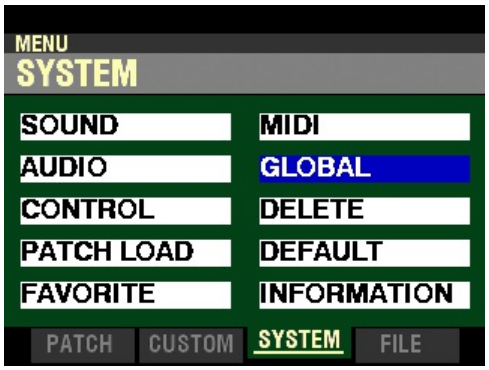
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



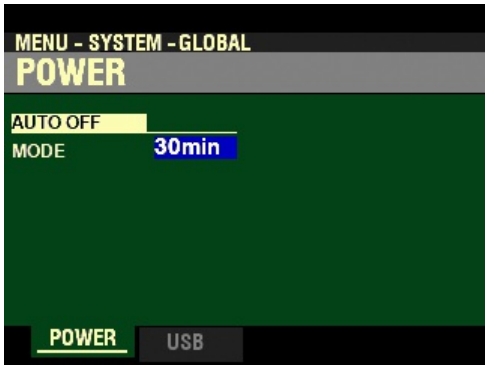
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



4. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:



The data chart below shows the options you may select.

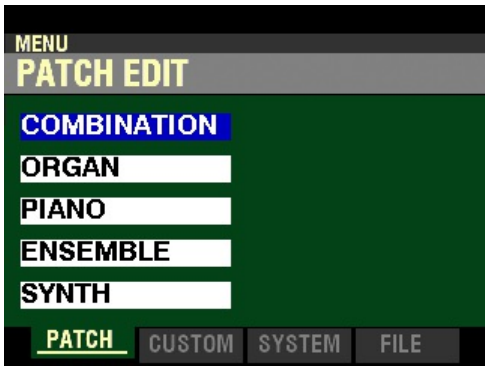
POWER AUTO OFF Options	
Setting	**Description**
30min	The AC power to the instrument will turn "OFF" after 30 minutes have elapsed with no keys or buttons being pressed.
Disable	The instrument will turn "ON" or "OFF" with the AC Power Switch but not turn "OFF" automatically.

Turn the VALUE knob to select 30min or Disable.

♦ USB

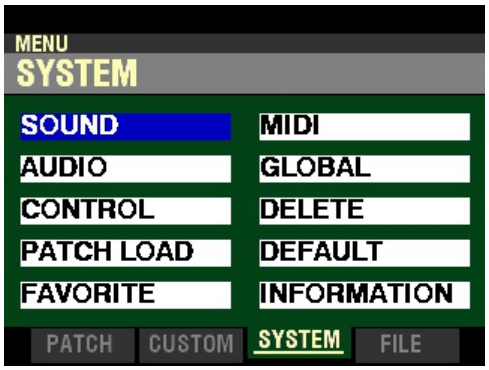
This FUNCTION Mode Page allows you to select whether you want to use the TO HOST USB Port for MIDI Data or to treat the SKX PRO Memory as a Mass Storage Device, and to select the type of host computer which is connected to the instrument via the USB TO HOST port.

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

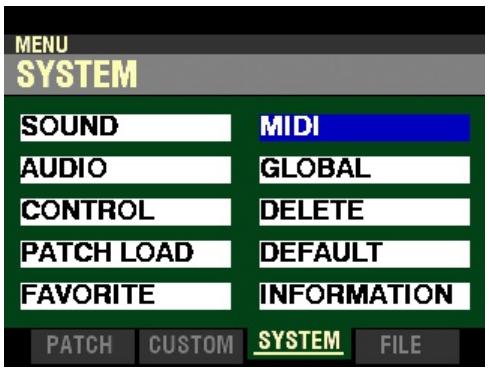


The "COMBINATION" box should be highlighted.

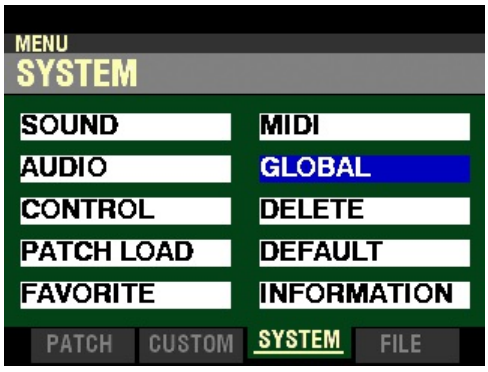
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



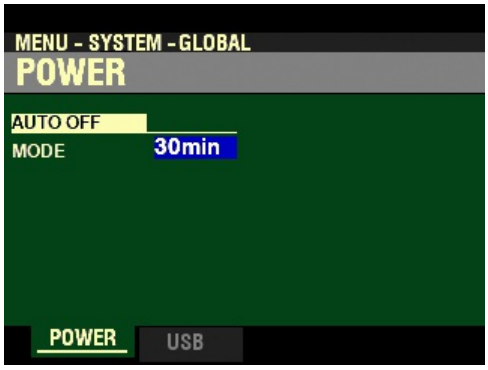
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



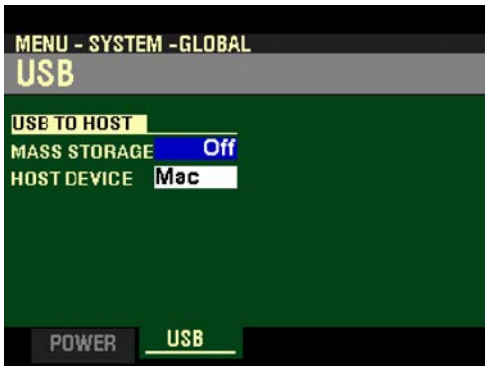
4. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:

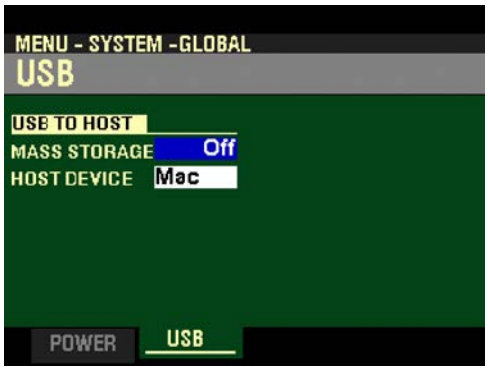


6. Press the PAGE "▶" button once. The Information Center Display should now look like this:



You are now in the SYSTEM -GLOBAL - USB FUNCTION Mode. You can now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting on the next page.

If you followed the instructions on the previous pages, you should see the screen shown below.



The box to the right of "MASS STORAGE" should be highlighted.

MASS STORAGE

This Parameter allows you to select whether you want to use the TO HOST USB Port for MIDI Data or to treat the SKX PRO Memory as a Mass Storage Device. The data chart below shows the options you may select.

USB TO HOST - MASS STORAGE Options	
Setting	**Description**
On	A connected host computer will treat the Internal Memory of the SKX PRO as an external Mass Storage device. You can Load or Save files from/to the instrument's Internal Memory.
Off	The USB TO HOST Port will transmit and receive MIDI Data.

Turn the VALUE knob to turn this Parameter On or Off.

From the above screen, press the DIRECTION "▼" button once.



The box to the right of "HOST DEVICE" should be highlighted.

HOST DEVICE (Version 2.0)

This Parameter allows you to select the type of host computer which is connected to the instrument via the USB TO HOST Port so that the instrument will communicate correctly with the host computer. The data chart below shows the options you may select.

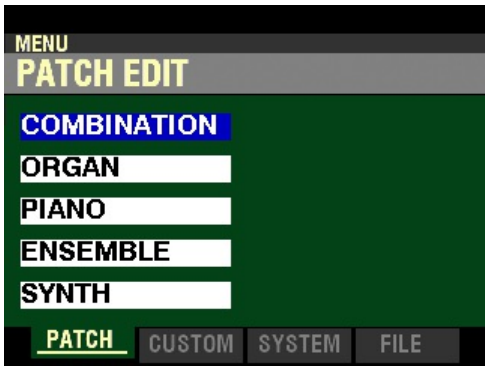
USB TO HOST - HOST DEVICE Options	
Setting	**Description**
Mac	Use this setting if you are connected to an Apple Mac computer (macOS).
Win	Use this setting if you are connected to a PC (Microsoft Windows) computer.

Turn the VALUE knob to select Mac or Win.

◆ INFORMATION FUNCTION Mode

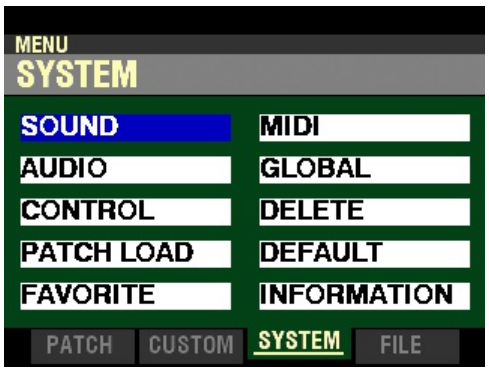
This FUNCTION Mode allows you to see critical Information about the instrument.

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

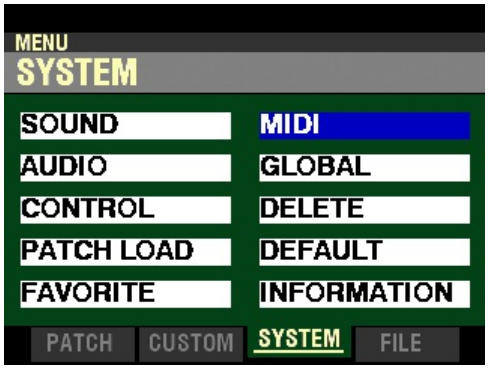


The "COMBINATION" box should be highlighted.

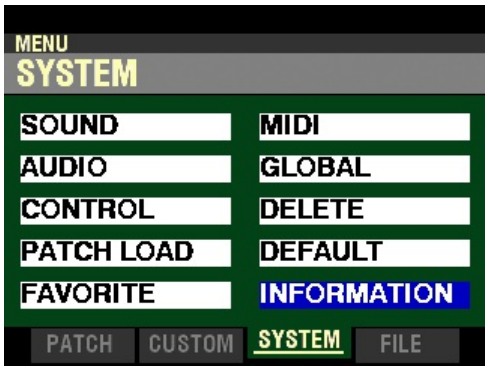
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



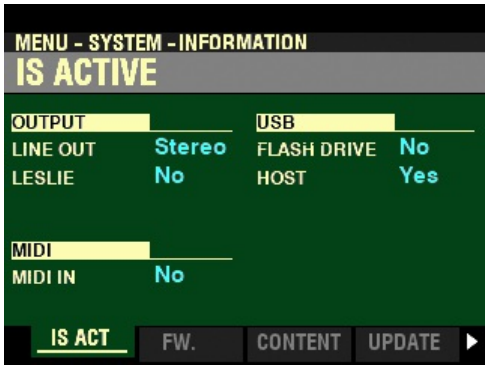
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



4. Press the DIRECTION "▼" button four times. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:



♦ IS ACTIVE

This FUNCTION Mode Page allows you to see which peripheral devices are connected.

The data charts below explain the different screen messages.

LINE OUT	
Mono	Only the L/MONO jack is connected.
Stereo	Both the L/MONO and R jacks are connected.

NOTE: The full effect of the sounds produced by the SKX PRO is best heard in Stereo (both LINE OUT jacks connected to two sound sources physically separated). If only the L/MONO jack is connected, the “Pan” function will not be heard.

LESLIE	
No	A Leslie Speaker cabinet is not connected via the 11-pin Leslie socket.
Yes	A Leslie Speaker cabinet is connected via the 11-pin Leslie socket.

MIDI IN	
No	A MIDI device is not connected via the MIDI IN Port.
Yes	A MIDI device is connected via the MIDI IN Port.

NOTE: This shows the receiving condition of the “Active Sense” message. It may display “No” even if connected if the connected device cannot send an Active Sense message (such as the XPK-100 Pedal clavier).

USB FLASH DRIVE	
No	A USB Flash Drive is not present at the TO FLASH DRIVE Port.
Yes	A USB Flash Drive is present at the TO FLASH DRIVE Port.

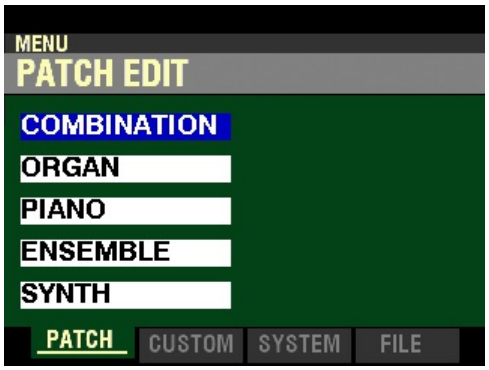
NOTE: Use this Parameter to determine if a USB Flash Drive is compatible with the SKX PRO.

USB TO HOST	
No	A USB cable is not connected to the TO HOST port.
Yes	A USB cable is connected to the TO HOST port.

♦ VERSION - FIRMWARE

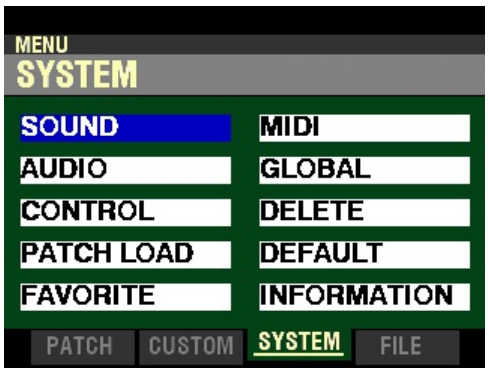
This FUNCTION Mode Page allows you to see the versions of the main system software.

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

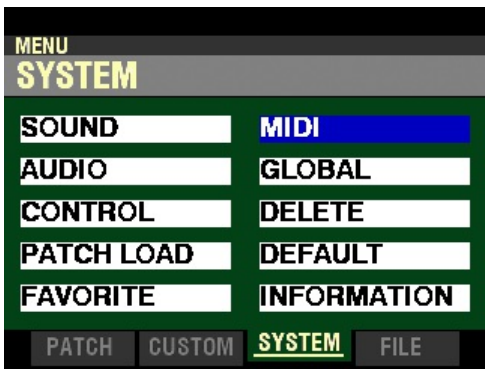


The "COMBINATION" box should be highlighted.

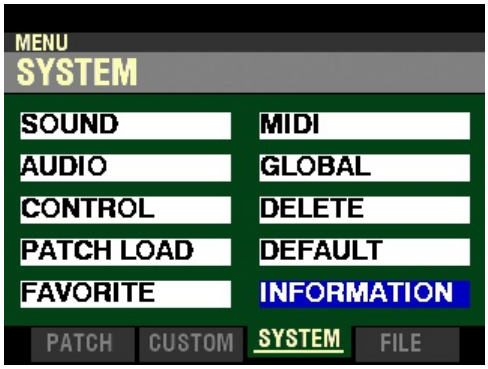
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



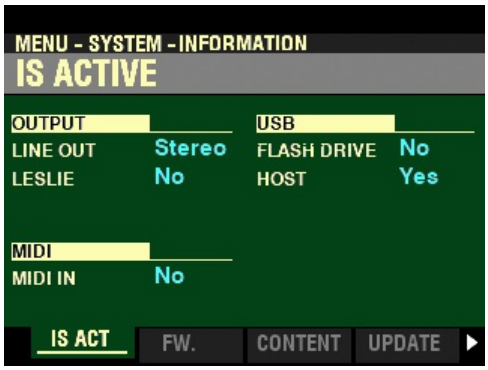
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



4. Press the DIRECTION "▼" button four times. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:



6. Press the PAGE "▶" button once. The Information Center Display will show the current software for the main system (see the date chart below).

VERSION - FIRMWARE	
Software Module	**Description**
RELEASE	Release number
MAIN	Main Processor
SUB	Sub Processor
KEYSCAN	Keyscan Processor
PANEL	Control Processor

♦ VERSION - CONTENTS

This FUNCTION Mode Page allows you to see the versions of the Voice Cells.

From the screen shown at the bottom of the previous page, press the PAGE "▶" button once. The Information Center Display will show the versions of the Voice Cells (see the date chart below).

You will see an arrow in the lower right corner of the screen indicating more contents below the displayed area. Use the DIRECTION "▼" button to scroll down and see the entire list of Voice Cells.

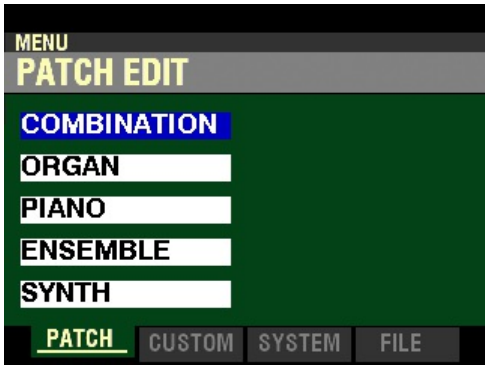
VERSION - CONTENTS	
Software Module	**Description**
F.CONTENT	Factory Contents. This is integrated pre-loaded data. The details are listed below.
TW.ORGAN	Tone Wheel Organ
TR.ORGAN 1	Transistor Organ 1
TR.ORGAN 2	Transistor Organ 2
PIPE	Pipe Organ
PEDAL DB.	Pedal Drawbars
A.PIANO	Acoustic Piano
HARPSI	Harpsichord
CHRO.PERC	Chromatic Percussion (xylophone, marimba, etc.)
ETHNIC	Ethnic instruments (banjo, shamisen, etc.)
WIND	Wind instruments (aereophones)
CHOIR	Choir & Voices
BASS	Bass Voices
FREE REED	Free Reed Voices (accordion, harmonica, etc.)
E.PIANO	Electric Piano
CLAV	Clav Voices
GUITAR	Guitar Voices
SFX	Special Effects (telephone, white noise, etc.)
STRINGS	String Voices
SYNTH PAD	Synth Accompaniment Voices (Fantasia, Soundtrack, etc.)
SYNTH LEAD	Synth Melody Voices (square lead, saw lead, etc.)
PERCUSSION	Drum & Percussion Voices (Ride Cymbal, Wind Chime, etc.)

♦ DEFAULT FUNCTION Mode

This FUNCTION Mode allows you to initialize all or part of the SKX PRO to factory-default settings.

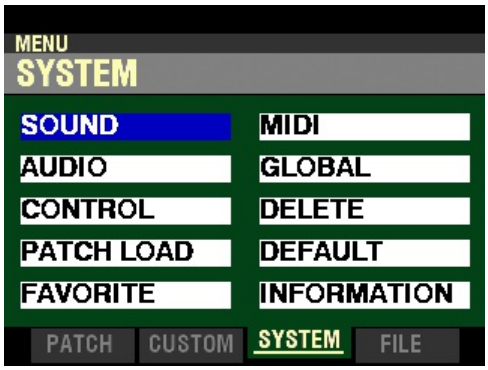
To access the DEFAULT Edit Menu, do the following:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

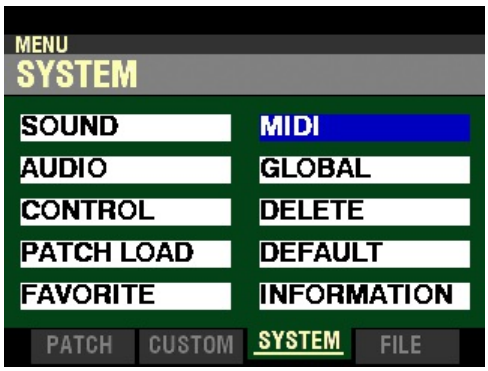


The "COMBINATION" box should be highlighted.

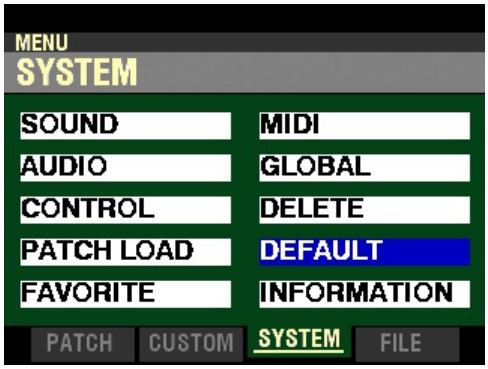
2. Press the PAGE "▶" button two times to highlight the "SOUND" box.



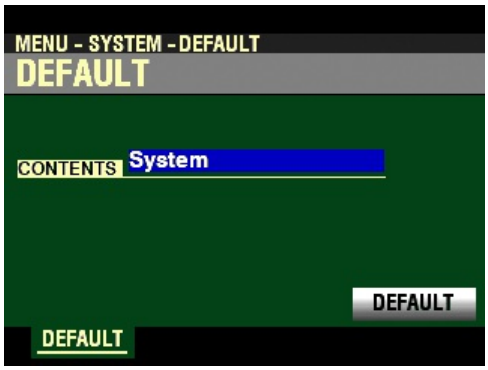
3. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



4. Press the DIRECTION "▼" button three times. The Information Center Display should now look like this:



5. Press the ENTER button. The Information Center Display should now look like this:



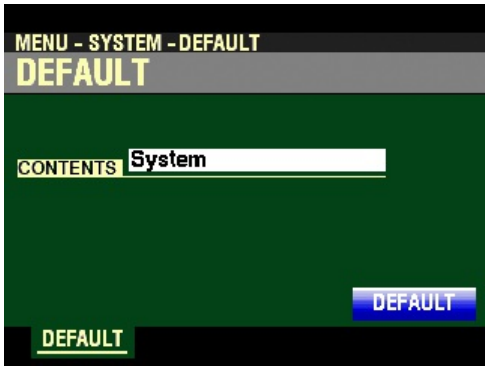
WARNING!: Doing any of the following procedures will erase all parameters, settings and registrations, returning the instrument to the original Hammond factory default settings.

The data chart below shows the options you may select.

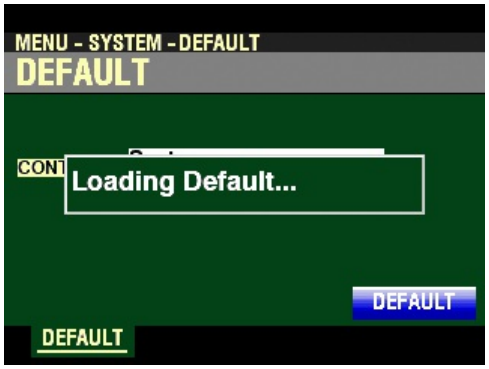
DEFAULT Options	
Setting	**Description**
System	Resets the System Parameters only.
All	Resets the entire instrument.

Turn the VALUE knob to select System or All.

6. After you have made your selection, press the DIRECTION "▼" button once to highlight the "DEFAULT" box.



7. Press the ENTER button. You will see the following messages flash in the display for approximately 1 second each:





NOTE: If you DO NOT wish to Reset, press either the PLAY or the MENU / EXIT button.

NOTE: You can also perform a DEFAULT ALL by turning the power "ON" while Pressing and Holding the red RECORD button.

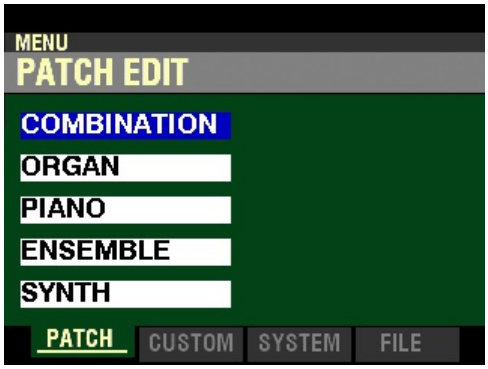
NOTE: Please consult page 792 for a list of System Parameters.

◆ SYSTEM APP MENU

When you are editing SYSTEM Parameters, you can access the APP MENU to register Pages to a FAVORITE button for quicker access. The following paragraphs will explain this in more detail.

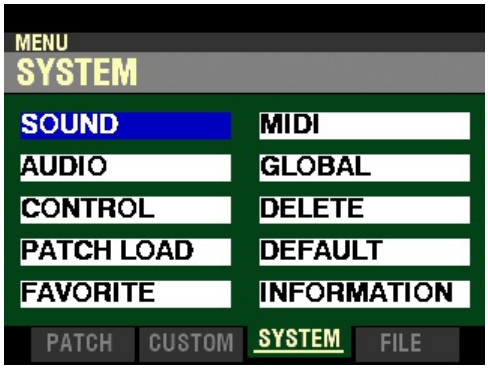
TRY THIS:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button two times. The Information Center Display should now look like this:

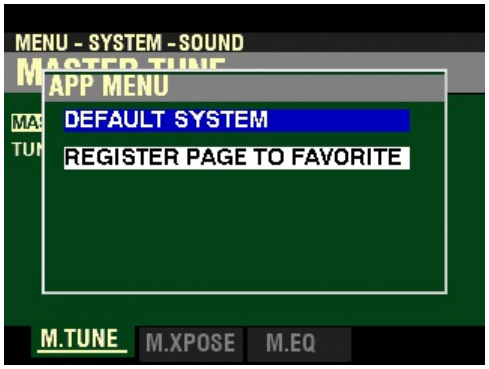


3. Use the DIRECTION buttons to select the SYSTEM FUNCTION Mode Page you want to work with and press the ENTER button. The SYSTEM APP MENU can be used for any of the FUNCTION Modes in the SYSTEM Menu; however, for this example, press the ENTER button to select the SOUND FUNCTION Mode. The Information Center Display should look like this:



This is Page 1 of the SOUND FUNCTION Mode.

4. Press and Release the MANUAL "☰" button. The Information Center Display should now look like this:



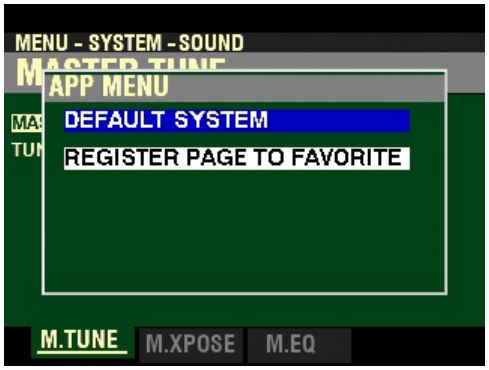
This is the APP MENU for the FUNCTION Mode Pages in the SYSTEM Menu.

♦ DEFAULT SYSTEM

This allows you to initialize all or part of the SKX PRO to factory-default settings.

To access the DEFAULT Edit Menu, do the following:

1. Access the SYSTEM APP MENU using the procedure described on the previous pages. The Information Center Display should now look similar to this:

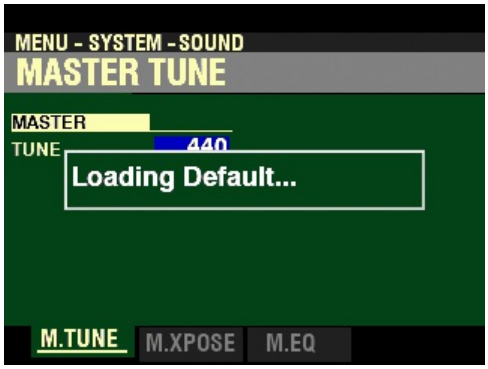


2. Press the ENTER button. The Information Center Display should now look like this:



WARNING!: Doing the following procedures will erase all parameters, settings and registrations, returning the instrument to the original Hammond factory default settings.

3. Press the ENTER button. You will see the following messages flash in the display for approximately 1 second each:





NOTE: If you DO NOT wish to Reset, press either the PLAY or the MENU / EXIT button.

NOTE: You can also perform a DEFAULT ALL by turning the Power "ON" while Pressing and Holding the red RECORD button.

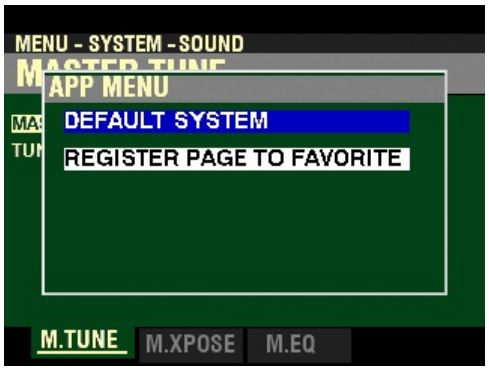
NOTE: Please consult page 792 for a list of System Parameters.

♦ REGISTER PAGE TO FAVORITE

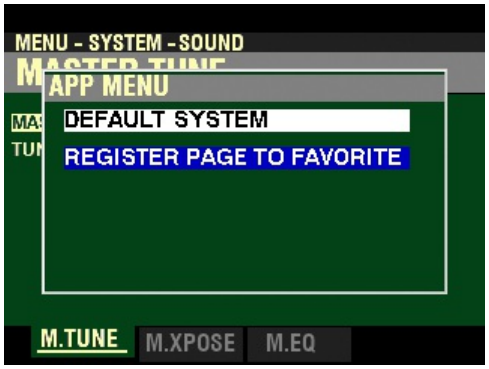
This allows you to register the current Page to one of the FAVORITE buttons for quick access.

To register a Page from the SYSTEM FUNCTION Mode to a FAVORITE, do the following:

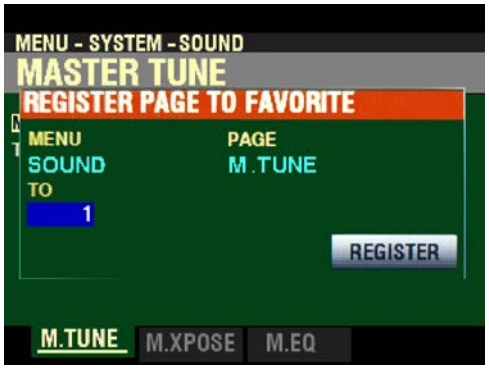
1. Access the SYSTEM APP MENU using the procedure described on the previous pages. The Information Center Display should now look similar to this:



2. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:

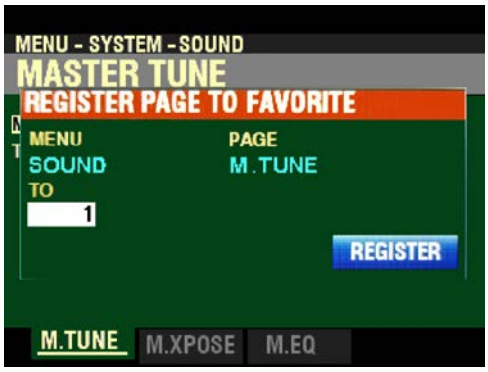


3. From the above screen, press the ENTER button. The Information Center Display should look similar to this:



4. Use the VALUE knob to select which FAVORITE button you want to use to recall the selected Page. You may select from 1 to 10.

5. After you have made your selection, press the DIRECTION "▼" button to highlight the "REGISTER" box.

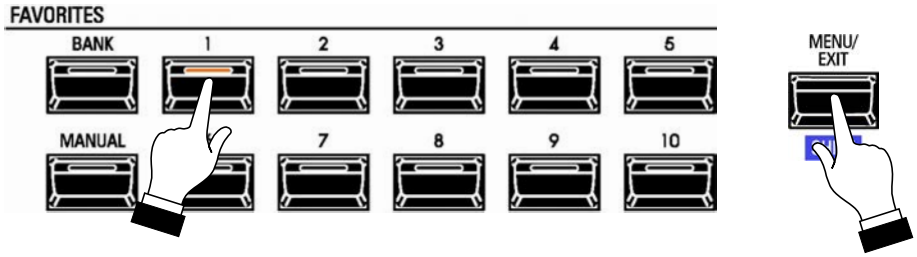


6. Press the ENTER button. You will see the messages "Recording..." and "Completed." flash in the display for approximately 1 second each.

NOTE: If you DO NOT wish to register the selected Page, press the MENU / EXIT or PLAY button instead of the ENTER button.

You have now registered a FUNCTION Mode Page to a FAVORITE button. In this way, you can access Menu Pages you use frequently with a single button-press. If you wish, you can register up to 100 Pages to the FAVORITE buttons by utilizing the 10 available Favorite Banks.

To access a Page or screen saved to a FAVORITE button, Press and Hold the SHIFT button and press the numbered FAVORITE button where the Page is registered.



NOTE: More information regarding FAVORITES and Favorite Banks can be found in the **COMBINATIONS / PATCHES / BUNDLES / FAVORITES** chapter of this Guide starting on page 163.

♦ SYSTEM PARAMETER LIST

Category	Parameter	NRPN		SysEx Address			SysEx	Data
		MSB (63)	LSB (62)	MSB to LSB			Length	
Tune	Master Tune	01	00	00	01	00	02	032E - 0338 - 0342 (A= 430 - 440 - 450 Hz)
	Transpose	01	01	00	01	01	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6 semitones)
	Velocity Offset	01	02	00	01	02	02	3F 60 - 40 00 - 40 20 (-32 ±0 - +32)
	Pitch Bend Depth	01	03	00	01	03	01	00 - 0D (Patch, ±0 - ±12 semitones)
	Organ Sounding Point	01	04	00	01	04	01	00, 01 (Shallow, Deep)
	TW Brake Range	01	05	00	01	05	02	3F 68 - 40 00 - 40 0C (-24 - ±0 - +12 semitones)
	TW Brake Time	01	06	00	01	06	01	00 - 31 (0.1 - 5.0 sec)
	TW Brake Amp	01	07	00	01	07	01	00, 01 (Off, On)
	Transpose Act Organ	01	08	00	01	08	01	00, 01 (Every, Next)
	Transpose Act Pinao	01	09	00	01	09	01	00, 01 (Every, Next)
	Transpose Act Ensemble	01	0A	00	01	0A	01	00, 01 (Every, Next)
	Transpose Act Synth	01	0B	00	01	0B	01	00, 01 (Every, Next)
Expression	Source	02	00	00	02	00	01	00 - 02 (Pedal, MIDI, Both)
	Min. Level	02	01	00	02	01	01	00 - 29 (Off, -40 - ±0dB)
	Min. Limit LF	02	02	00	02	02	01	00 - 29 (Off, -40 - ±0dB)
	Min. Limit HF	02	03	00	02	03	01	00 - 29 (Off, -40 - ±0dB)
	Pedal Type	02	06	00	02	06	01	00, 01 (H or R, Y or K)
	Gain	02	07	00	02	07	01	00 - 3C (70 - 130 %)
	Curve	02	08	00	02	08	01	00 - 02 (Audio, Linear, Capacitor)
Damper	Pedal Type	03	03	00	03	03	01	00 - 03 (Switch, HalfY, HalfR, HalfK)
	Gain	03	04	00	03	04	01	00 - 3C (70 - 130 %)
Foot Switch	Mode Foot Tip	07	00	00	07	00	01	00 - 24 00: Off 07: Spring Shock 01: Leslie S/F Alt 08: MFX2 Delay Time 02: Leslie S/F Mom 09: Org U&L Sustain 03: Leslie S/F Tri 0A: Pedal To Lower 04: TW Brake 0B-23: Bass 1C - 3C 05: Favorite Fwd 24: ProChord 06: Favorite Rev
	Mode Foot Ring	07	01	00	07	01	01	
	Mode Leslie Tip	07	02	00	07	02	01	
	Mode Leslie Ring	07	03	00	07	03	01	
	Leslie Switch Device	07	04	00	07	04	01	00, 01 (Foot Switch, Leslie Switch)
User Button	Mode	08	00	00	08	00	01	00 - 0E 00: Off 08: Organ MFX2 01: Pedal Sustain 09: Piano MFX1 02: Org U Sustain 0A: Piano MFX2 03: Org L Sustain 0B: Ens MFX1 04: TW Brake 0C: Ens MFX2 05: Spring Shock 0D:Synth MFX1 06: MFX2 Delay Time 0E: Synth MFX2 07: Organ MFX1
Display	Short Cut	--	--	--	--	--	--	00 - 03 (0, 1, 2 sec, No)
	Time Out	--	--	--	--	--	--	00 - 03 (4, 8, 16 sec, No)
	Pop Up	--	--	--	--	--	--	00 - 03 (No, 5, 10, 20 sec)
	Auto Power Off	--	--	--	--	--	--	00, 01 (Disable, 30min)
	Knobs	--	--	--	--	--	--	00, 01 (Every, Across)
	USB Mass Storage	--	--	--	--	--	--	00, 01 (Off, On)
Audio	Individual Out	04	00	00	04	00	01	00 - 06 00: Off 04: Piano / Ensemble 01: Piano Stereo 05: Piano / Synth 02: Ensemble Stereo 06: Ensemble / Synth 03: Synth Stereo
	Ext. Leslie Ch.	04	01	00	04	01	01	00 - 02 (1, 3, 1+Line)
	Use Rotary Out	04	02	00	04	02	01	00, 01 (Off, On)
	Use Pedal Out	04	03	00	04	03	01	00, 01 (Off, On)
Master Equalizer	On	05	00	00	05	00	01	00, 01 (Off, On)
	Bass Gain	05	01	00	05	01	01	00 - 09 - 12 (-9 - ±0 +9)
	Mid Gain	05	02	00	05	02	01	00 - 09 - 12 (-9 - ±0 +9)
	Treble Gain	05	03	00	05	03	01	00 - 09 - 12 (-9 - ±0 +9)
	Bass Freq	05	04	00	05	04	01	00 - 18 (20 - 308Hz)
	Mid Freq	05	05	00	05	05	01	00 - 0F (250 - 3.1kHz)
	Treble Freq	05	06	00	05	06	01	00 - 13 (3.0k - 8.0kHz)
	Mid Q	05	07	00	05	07	01	00 - 3F (0 - 63)
MIDI Common	MIDI In Mode	--	--	--	--	--	--	00 - 09 00: Upper 05: Organ Upper 01: Lower 06: Piano 02: Pedal 07: Ensemble 03: Lower+Pedal 08: Synth 04: Upper+Pedal 09: Sequencer
	Local Control	--	--	--	--	--	--	00, 01 (Off, On)
	TRx NRPN	--	--	--	--	--	--	00, 01 (Off, On)
	TRx Program Change	--	--	--	--	--	--	00, 01 (Off, On)
	TRx Drawbar Regi	--	--	--	--	--	--	00, 01 (Off, On)
	Tx Multi Contact	--	--	--	--	--	--	00, 01 (Off, On)
	Rx Multi Contact	--	--	--	--	--	--	00, 01 (Off, On)
	Tx External Zone	--	--	--	--	--	--	00, 01 (Off, On)
	Device ID	--	--	--	--	--	--	00 - 7F (0 - 127)
	Rx Dump	--	--	--	--	--	--	00, 01 (Off, On)
MIDI Channel	Tx Upper	--	--	--	--	--	--	00 - 0F (1 - 16)
	Tx Lower	--	--	--	--	--	--	00 - 0F (1 - 16)
	Tx Pedal	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Upper	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Lower	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Pedal	--	--	--	--	--	--	00 - 0F (1 - 16)
Patch Load	Organ - Link L/P	60	01	00	60	01	01	00, 01 (Off, On)
	Combi - Int Zone	60	02	00	60	02	01	00, 01 (Off, On)
	Combi - Ext Zone	60	03	00	60	03	01	00, 01 (Off, On)
	Organ - Organ Effect	60	04	00	60	04	01	00, 01 (Off, On)
	Organ - Animation	60	05	00	60	05	01	00, 01 (Off, On)
	Combi - Reverb	60	06	00	60	06	01	00, 01 (Off, On)
	Organ - Drawbar	60	07	00	60	07	01	00, 01 (Off, On)
	Organ - Percussion	60	08	00	60	08	01	00, 01 (Off, On)
	Organ - Registration	60	09	00	60	09	01	00, 01 (Off, On)
	Combi - Piano	60	0A	00	60	0A	01	00, 01 (Off, On)
	Combi - Ensemble	60	0B	00	60	0B	01	00, 01 (Off, On)
	Combi - Synth	60	0C	00	60	0C	01	00, 01 (Off, On)
	Combi - Organ	60	0D	00	60	0D	01	00, 01 (Off, On)

HAMMOND

Sk PRO

USING MEMORY

USING MEMORY

◆ Using a USB Flash Drive

Your Hammond SK PRO is equipped with two (2) USB Ports:

1. USB TO FLASH DRIVE, and
2. USB TO HOST.

"USB" is an acronym for Universal Serial Bus), which is a method developed in the mid-1990s for allowing connection, communication and power supply between computers and electronic devices. There have been several revisions to the USB protocol since it was first introduced which are distinguished from one another by version numbers. As with software version numbers, the higher the number the more recent the revision. The version supported by the SK PRO is USB 3.0.

Many different USB-compatible electronic devices - digital cameras, GPS navigation systems, etc. - are now available; however, the USB Port on the SK PRO designed for use with a USB Flash Drive (example pictured below):



A USB Flash Drive is so-called because it includes what is called flash memory with an integrated Universal Serial Bus (USB) interface. USB Flash Drives are available in many different memory capacities; however, 1 or 2 Gigabytes (Gb) will be enough for the applications unique to the SK PRO.

The term, "drive" is not technically accurate since no moving parts are involved; however, since the same types of operations are used with a USB Flash Drive as for an old-style floppy disk drive, the "drive" terminology is still used - much in the same manner as the term "Patch" is used even though modern-day synthesizer- type instruments do not utilize patch cords.

On the SK PRO, a USB Flash Drive allows you to:

1. Save Patches, Setups and Custom Sets,
2. Load previously stored Patches, Setups or Custom Sets from a USB Flash Drive into the SK PRO,
3. Delete previously stored Patches, Setups or Custom Sets from a USB Flash Drive,
4. Install software upgrades to the SK PRO operating system.

The following pages will explain how to do each operation.

♦ Preparing a USB Flash Drive for use with the SK PRO

In order to use a USB Flash Drive with the SK PRO, several special directories or Folders have to be created on the Flash Drive itself. The SK PRO has a facility that automatically creates these directories for you. The following paragraphs will explain how to do this.

1. Locate a USB Flash Drive you want to use with the SK PRO.

2. After you have located a suitable Flash Drive, insert it into the TO FLASH DRIVE Port of the SK PRO. You will see the following message flash in the display for approximately 1 to 3 seconds:



When the above message disappears, the USB Flash Drive is ready for use with the SK PRO.

♦ Formatting a USB Flash Drive in the SK PRO

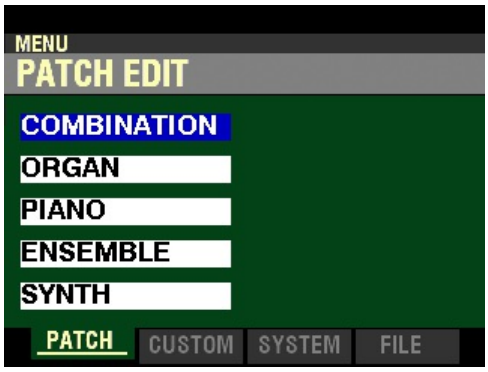
Most USB Flash Drives currently available are "pre-formatted" - usually, inserting the drive into the SK PRO and creating the folders and sub-folders described above will be all that is necessary. However, there may be occasions where you will need to Format a Flash Drive manually. The following paragraphs will explain this in detail.

1. Locate a USB Flash Drive which either is empty or which does not have data you want to save. The Formatting procedure will erase any data which may already be on the drive.

2. After you have located a suitable Flash Drive, insert it into the TO FLASH DRIVE Port of the SK PRO. You will see the following message flash in the display for approximately 1to 3 seconds:

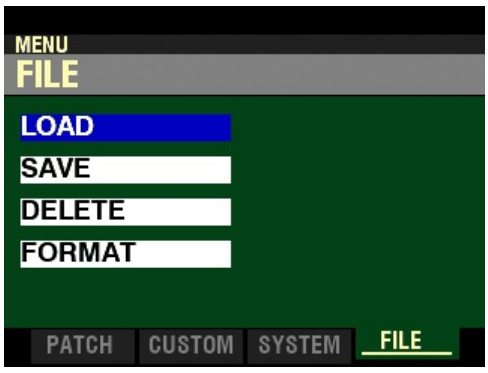


3. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

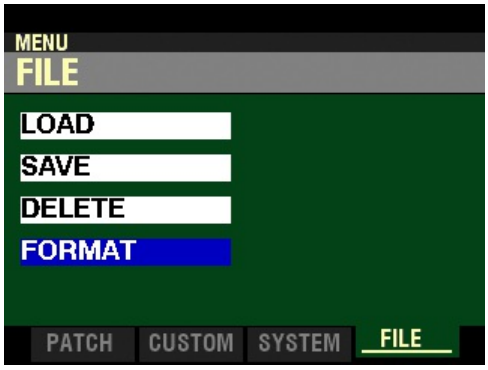


The "COMBINATION" box should be highlighted.

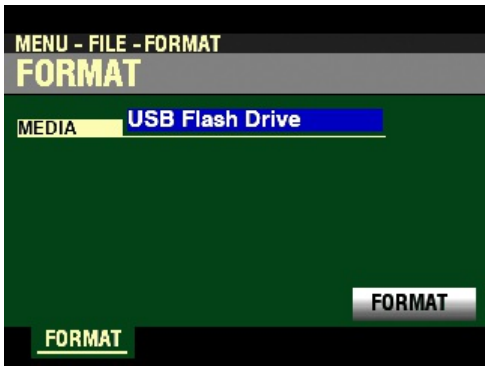
4. Press the PAGE "▶" button three times to highlight the "LOAD" box.



5. Press the DIRECTION "▼" button three times. The Information Center Display should now look like this:

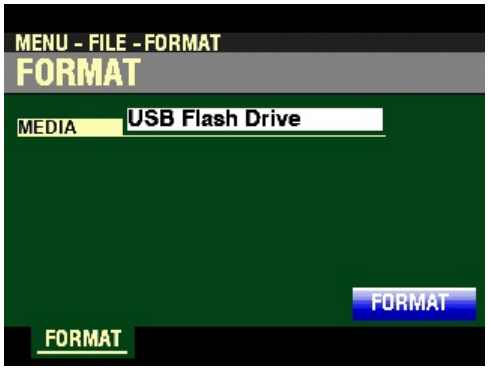


6. Press the ENTER button. The Information Center Display should now look like this:



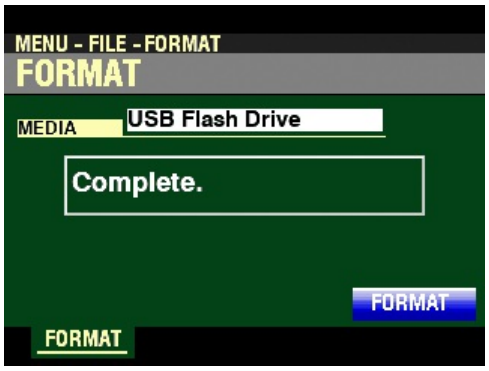
NOTE: If the box to the right of "MEDIA" displays **Internal Memory**, turn the VALUE knob so the box reads **USB Flash Drive**.

7. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



If there is any data on the USB Flash Drive, formatting the drive will erase it. Therefore if you DO NOT wish to format the USB Flash Drive, press either the MENU / EXIT or PLAY Touch buttons.

If you wish to proceed with the formatting operation, from the above screen press the ENTER button. The Information Center Display will display "Formatting...," then after approximately 30 seconds the following message will display:



The USB Flash Drive will be formatted and ready for use.

◆ SPECIAL NOTE - Macintosh computers

If you are using a Macintosh-based system with your SK PRO, you may find it necessary to Format the USB Flash Drive you wish to use in your computer prior to using it with your instrument. The SK PRO will not recognize USB Flash Drives formatted in a Macintosh-specific format such as APFS. A Flash Drive must be Formatted as MS DOS or ExFAT to be used with your SK PRO.

To Format a USB Flash Drive on a Macintosh computer for use with an SK PRO, do the following:

1. Insert the USB Flash Drive into an open USB Port on your Macintosh computer.

   If you receive a message on your computer screen that the inserted USB Drive is not recognized, follow the steps below.

2. Go to the Utilities Folder in the Applications Folder on your Home Drive.

3. Launch the Disk Utility App inside the Utilities folder.

4. Locate the inserted USB Flash Drive in the list on the left side of the Disk Utility Screen, under External, and select it.

   SPECIAL NOTE: Be sure not to perform this procedure on any other drives shown in the Disk Utility list. Unrecoverable data loss can occur on your Home Drive, Time Machine Drive, or any other drive attached to your computer.

5. After you have selected the correct Drive, select Erase in the Disk Utility Window. A Dialogue will appear.

6. Name your Drive-we suggest "SK PRO."

7. Select ExFAT or MS-DOS (Fat).

8. If there is an option entitled Scheme, select Master Boot Record.

9. Click "ERASE" in the lower right corner of the dialogue box.

After formatting, your Drive will appear on your desktop. Your Macintosh computer will recognize this Drive, and you can use it for any downloads from the Hammond website, as well as for backing up your SK PRO.

NOTE: Use the above procedure **only** on USB Drives you want to use in your SK PRO. It is not recommended to use drives formatted in this way for regular Macintosh uses.

♦ Preparing a USB Flash Drive to Update the Software

1. Go to the Hammond website (http://hammondorganco.com) and select Support

2. When the Support page finishes loading, select Downloads from either of the two links on the page.

3. When the Downloads page finishes loading, select System Downloads from either of the two links on the page.

4. On the left side of the System Downloads page you will see information about the latest system software upgrade and a link to a file named "skproReleaseX.zip." The number of the release will be the latest software available.

5. Click on the link and select "Save Link As..." A dialog box will appear asking to what location you want to save the .ZIP file. It is recommended that you save the .ZIP file to your hard drive.

What Is A "ZIP" File?

When working with computer operations which involve several files, such as software installations or upgrades, it is frequently necessary to combine the individual files into one file, called an archive, and to compress the files so that the resulting archive file is smaller in size. Originally this was done so that all the necessary data would fit onto a floppy disk or installation CD; in recent years it is done so that if it is necessary to download data from the Internet, the download will take less time.

There are several methods of compressing files; however, the most common is the .ZIP format, support for which is built into both PC and Mac operating systems. On a PC, the name "compressed folders" is given to .ZIP files, while Mac OS X 10.3 includes .ZIP file support under the name "Archive Utility."

6. After the .ZIP file has finished downloading, go to the directory on your hard drive which contains the .ZIP file and extract the contents of the file. It is recommended that you allow the extraction utility to determine the folder which will contain the extracted files.

7. After the .ZIP file is finished extracting, open the folder which contains the extracted files. You should see a number of files with the extension, ."SYS."

8. Insert a USB Flash Drive that has been formatted for use with the SK PRO into an open USB port on your computer.

9. Open the "hammond" directory on the USB Drive, then the "sk_pro" sub-directory. You will see a folder labeled "system." The "system" folder is the one to which you will copy the system software files.

10. From the folder on your hard drive containing the extracted files select the files with a .SYS extension and copy them to the "system" folder on your USB Drive (see the illustration below).



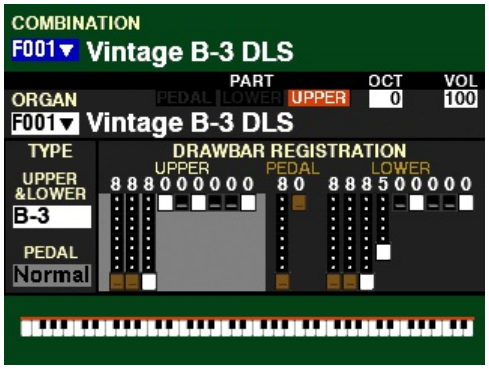
You have now prepared the USB Flash Drive with all the necessary information for upgrading your SK PRO with the latest system software. The following pages will explain in detail how to upgrade the SK PRO with the new software.

♦ Installing a software upgrade to the SK PRO from a USB Flash Drive

1. Make sure the power to the SK PRO is "OFF."

2. Turn the power to the SK PRO "ON." Wait until the operating system finishes loading (approximately 55 seconds).

   The Information Center Display will show the following:

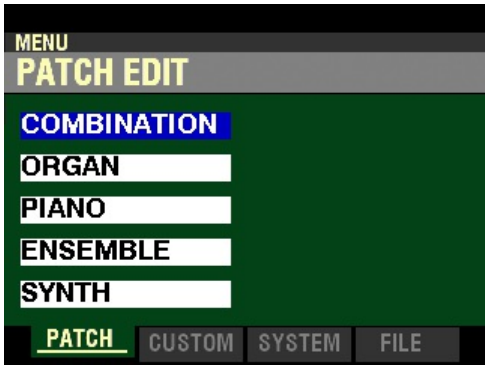


3. Insert the USB Flash Drive containing the system upgrade software into the TO FLASH DRIVE Port of the SK PRO. You will see the following message flash in the display for approximately 1 second:



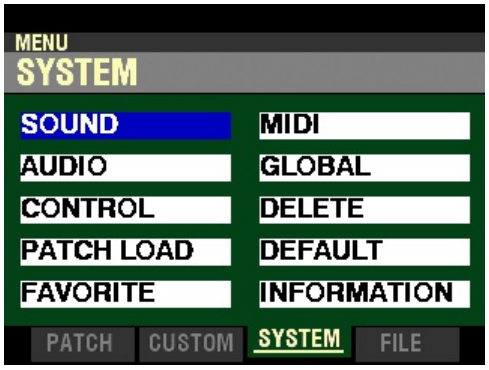
   The amount of time necessary to upgrade the system software will depend upon the software modules to be updated. The range is from 2 to 15 minutes.

4. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

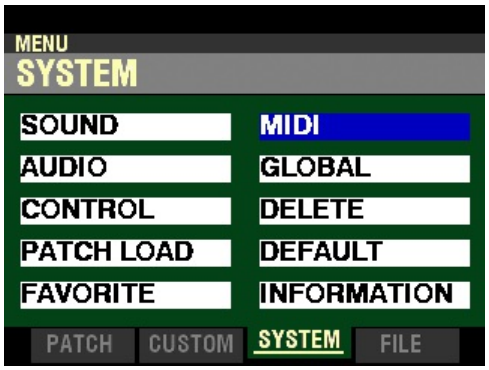


   The "COMBINATION" box should be highlighted.

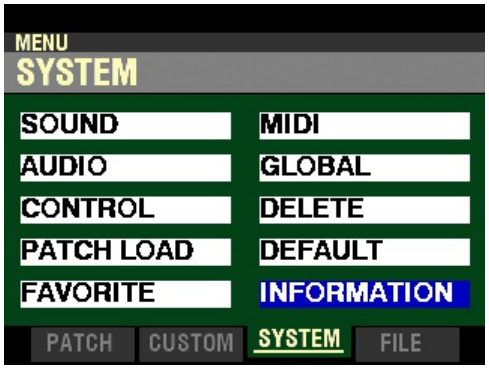
5. Press the PAGE "▶" button two times to highlight the "SOUND" box.



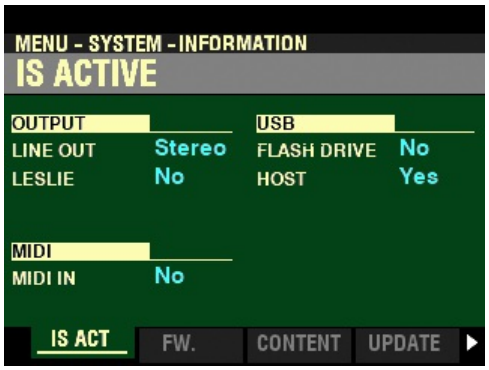
6. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



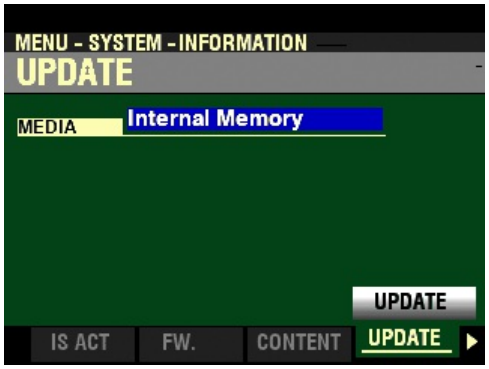
7. Press the DIRECTION "▼" button four times. The Information Center Display should now look like this:



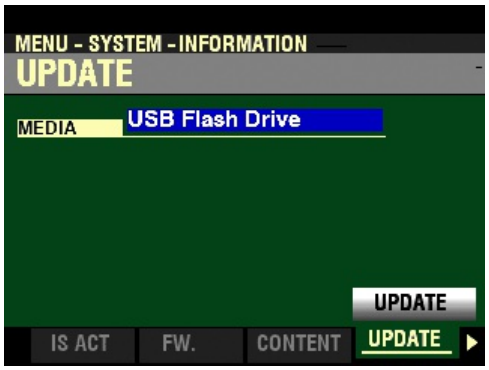
8. Press the ENTER button. The Information Center Display should now look like this:



9. Press the PAGE "▶" button three times. The Information Center Display should now look like this:

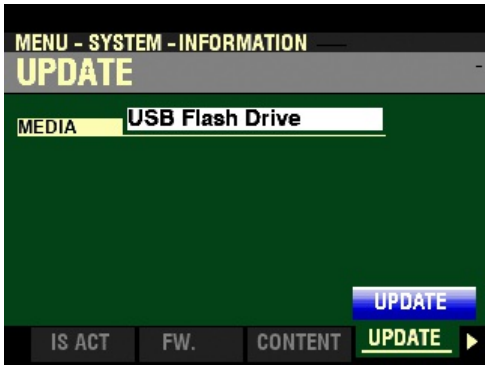


NOTE: If the box to the right of "MEDIA" displays **Internal Memory**, turn the VALUE knob so the box reads **USB Flash Drive**.

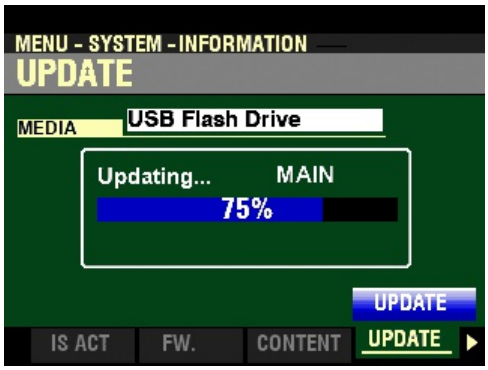


NOTE: If you wish to update the software from a USB Flash Drive, make sure a USB Flash Drive is inserted in the **TO FLASH DRIVE** Port; otherwise you will not be able to select **USB Flash Drive** using the VALUE knob.

10. After you have made your selection, press the DIRECTION "▼" button. The Information Center Display should now look like this:

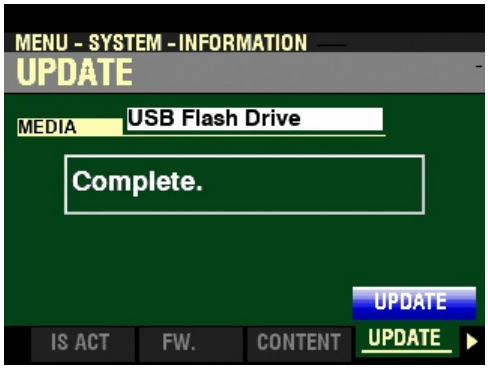


11. Press the ENTER button. You will see a screen similar to this:



During the Update procedure you will see status bars in the middle of the screen as the different software modules are loaded and installed.

When the system software has finished upgrading, the Information Center Display will show:



12. Turn the power to the SK PRO "OFF" then back "ON." Wait for the system to load. When the system has finished loading your SK PRO will be ready to play with the updated software.

◆ Using Internal Memory

In addition to memory available from a USB Flash Drive, your Hammond SK PRO contains Internal Memory which is accessible via the USB TO HOST port. The following pages will explain how to use this feature.

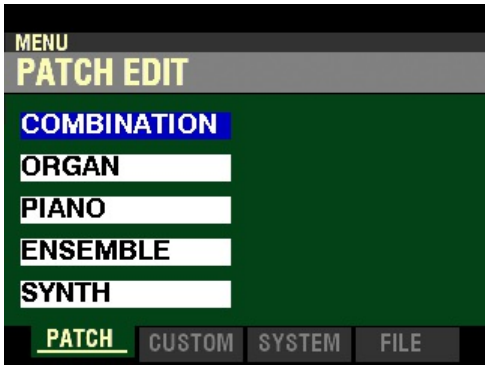
♦ USB - USB TO HOST

In order to make use of the Internal Memory of the SK PRO:

1. Connect the computer you want to use as the Host to the TO HOST (see the figure below).

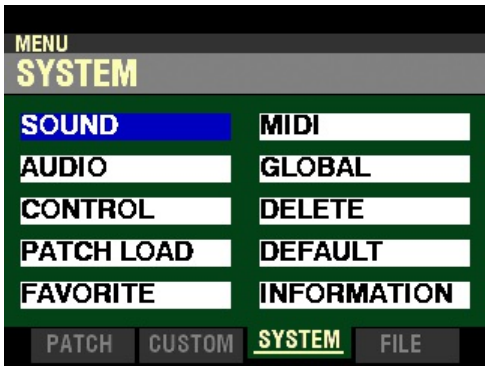


2. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

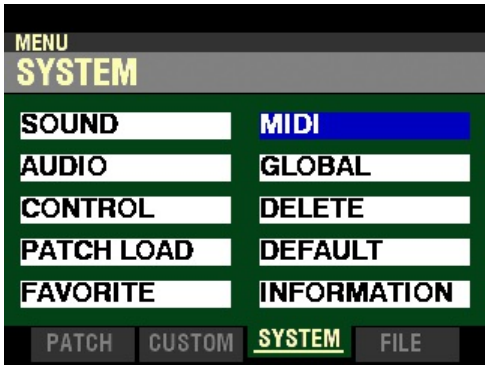


The "COMBINATION" box should be highlighted.

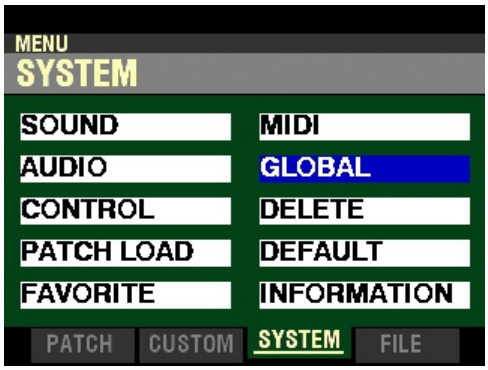
3. Press the PAGE "▶" button two times to highlight the "SOUND" box.



4. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



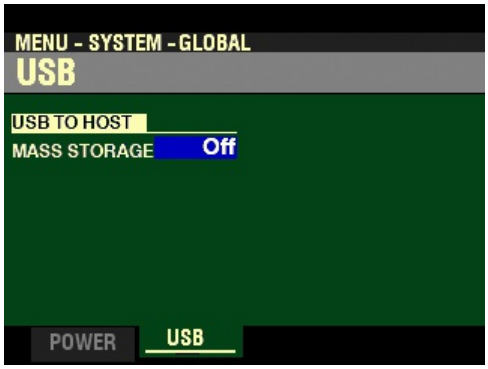
5. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



6. Press the ENTER button. The Information Center Display should now look like this:



7. Press the PAGE "▶" button once. The Information Center Display should now look like this:



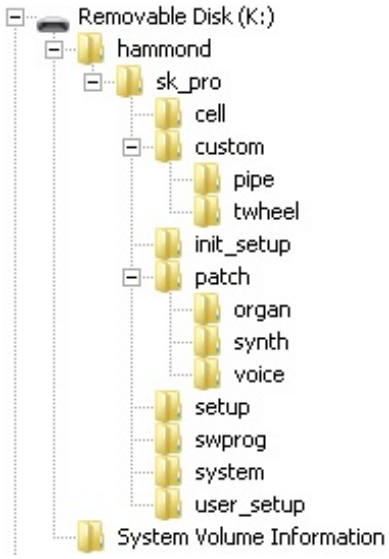
The data chart below shows the options you may select.

USB TO HOST - MASS STORAGE Options	
Setting	**Description**
On	A connected host computer will treat the Internal Memory of the SK PRO as an external Mass Storage device. You can Load or Save files from/to the instrument's Internal Memory.
Off	The USB TO HOST Port will transmit and receive MIDI Data.

8. Turn the VALUE knob to turn this Parameter On or Off. If you wish to use the Internal Memory of the SK PRO, select On. This will allow you to access the SK PRO's Internal Memory from a computer connected to the instrument via the USB TO HOST port.

Your host computer will now recognize the SK PRO's Internal Memory as a Mass Storage device and assign it a drive letter as if it were a USB Flash Drive, HDD/SSD disk, or SD card. The drive letter assigned will be an "open" drive letter not currently in use by your computer or other Storage Devices connected to your computer.

IMPORTANT NOTE: The SK PRO's Internal Memory contains a number of folders and sub-folders needed for performing various operations (shown below). DO NOT re-name or delete these folders or attempt to format the Internal Memory from your computer. Doing so may cause a serious malfunction.



IMPORTANT NOTE: Do **not** disconnect the USB connection from the SK PRO while **Mass Storage** is set to **On**. Select **Off** for Mass Storage, then disconnect the USB cable from the SK PRO.

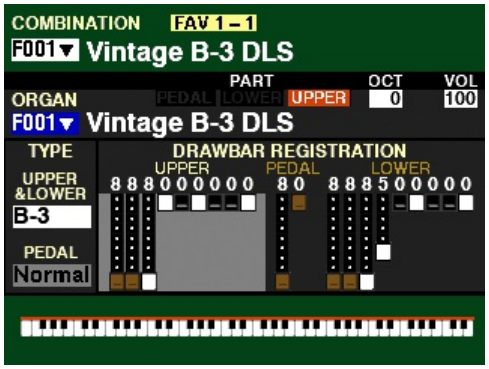
♦ Installing a software upgrade to the SK PRO from Internal Memory

1. Make sure the power to the SK PRO is "OFF."

2. Make sure the SK PRO is connected to the computer you wish to use as the Host via the USB TO HOST port.

3. Turn the power to the SK PRO "ON." Wait until the operating system finishes loading (approximately 55 seconds).

   The Information Center Display will show the following:



4. Make sure the USB MASS STORAGE Parameter from the USB FUNCTION Mode Page is set to "On" This procedure is described on pages 805 to 807.

5. Go to the Hammond website (http://hammondorganco.com) and select Support

6. When the Support page finishes loading, select Downloads from either of the two links on the page.

7. When the Downloads page finishes loading, select System Downloads from either of the two links on the page.

8. On the left side of the System Downloads page you will see information about the latest system software upgrade and a link to a file named "skproReleaseX.zip." The number of the release will be the latest software available.

9. Click on the link and select "Save Link As..." A dialog box will appear asking to what location you want to save the .ZIP file. It is recommended that you save the .ZIP file to your hard drive.

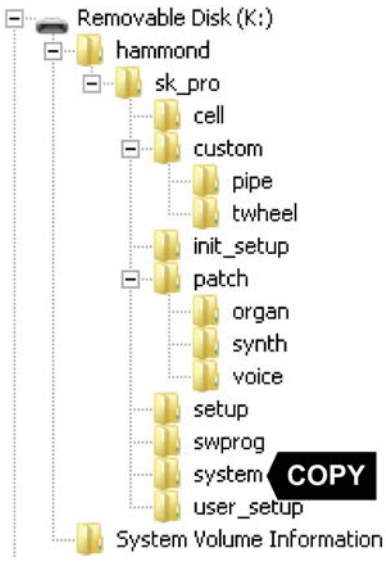
   NOTE: .ZIP files are explained fully on page 799.

10. After the .ZIP file has finished downloading, go to the directory on your hard drive which contains the .ZIP file and extract the contents of the file. It is recommended that you allow the extraction utility to determine the folder which will contain the extracted files.

11. After the .ZIP file is finished extracting, open the folder which contains the extracted files. You should see a number of files with the extension, ."SYS."

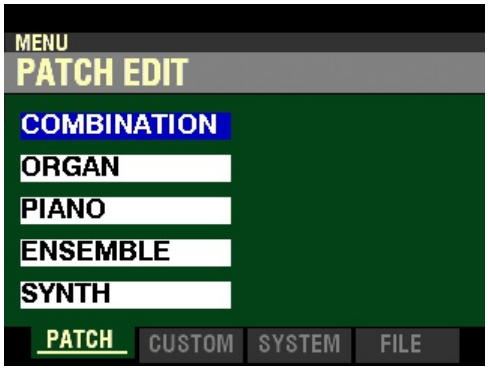
12. On the computer you are using as a Host, find the drive letter assigned to the Internal Memory of the SK PRO and open it. Open the "hammond" directory, then the "sk_pro" sub-directory. You will see a folder labeled "system." The "system" folder is the one to which you will copy the system software files.

13. From the folder on your hard drive containing the extracted files select the files with a .SYS extension and copy them to the "system" folder on the Internal Memory (see the illustration below).



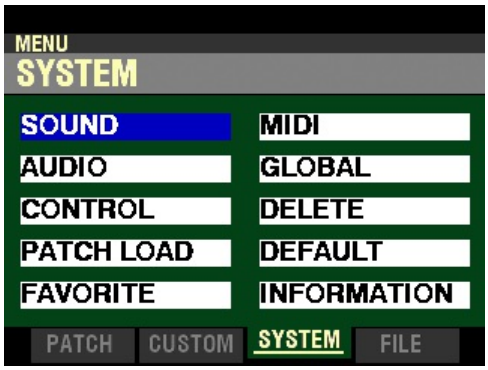
You have now prepared the Internal Memory with all the necessary information for upgrading your SK PRO with the latest system software. The following pages will explain in detail how to upgrade the SK PRO with the new software.

14. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:



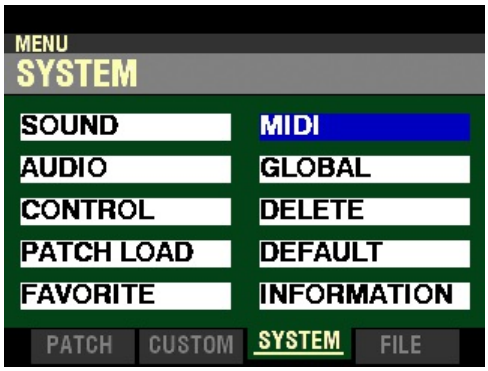
The "COMBINATION" box should be highlighted.

15. Press the PAGE "▶" button two times to highlight the "SOUND" box.

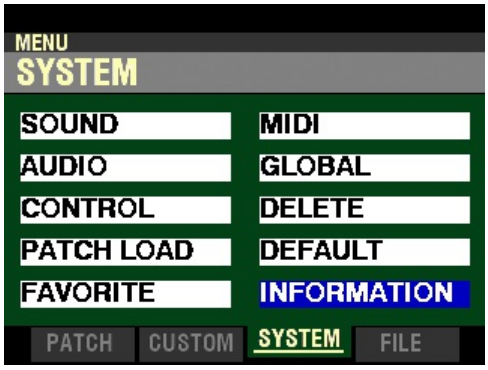


You are now in the SYSTEM Menu.

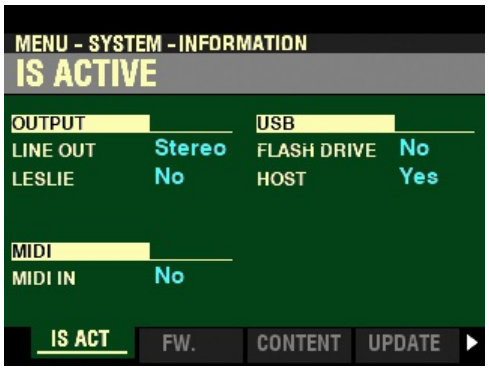
16. Press the DIRECTION "▶" button once. The Information Center Display should now look like this:



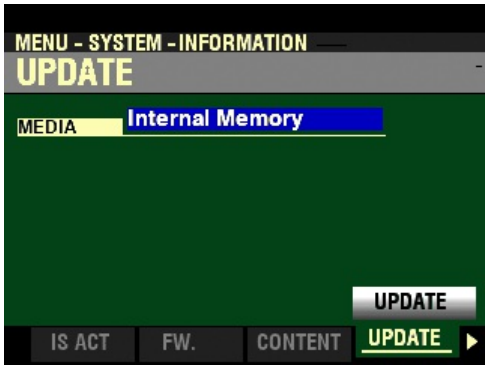
17. Press the DIRECTION "▼" button four times. The Information Center Display should now look like this:



18. Press the ENTER button. The Information Center Display should now look like this:

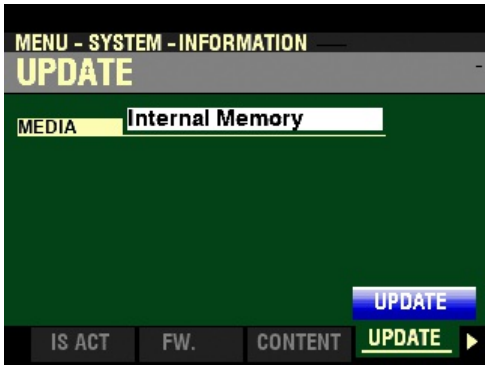


19. Press the PAGE "▶" button three times. The Information Center Display should now look like this:

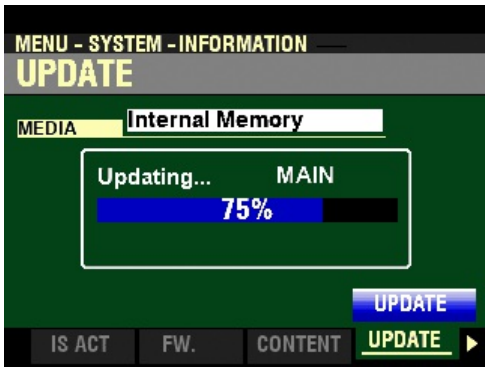


NOTE: If the box to the right of "MEDIA" displays **USB Flash Drive**, turn the VALUE knob so the box reads **Internal Memory**.

20. After you have made your selection, press the DIRECTION "▼" button to highlight "UPDATE."

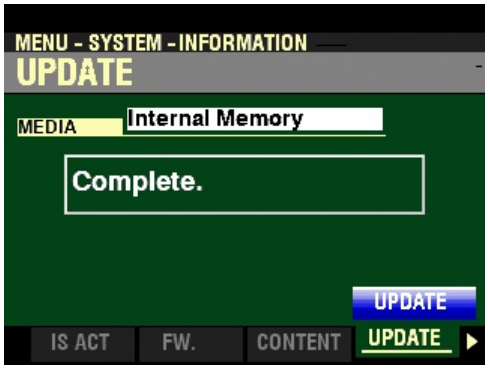


21. Press the ENTER button. You will see a screen similar to this:



During the Update procedure you will see status bars in the middle of the screen as the different software modules are loaded and installed.

When the system software has finished upgrading, the Information Center Display will show:



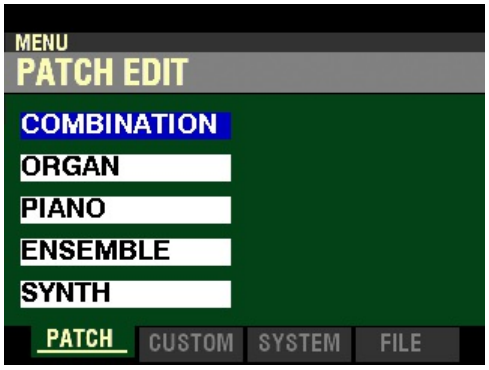
22. Turn the power to the SK PRO "OFF" then back "ON." Wait for the system to load. When the system has finished loading your SK PRO will be ready to play with the updated software.

◆ Formatting the Internal Memory of the SK PRO

You can use the Internal Memory of the SK PRO to store Update files, Patches, Setups and Custom Sets. However, after you have been working with a number of files for a period of time, you may occasionally want to clear the Internal Memory in order to "start fresh" and work with a new set of files. The following paragraphs will explain how to Format the SK PRO's Internal Memory.

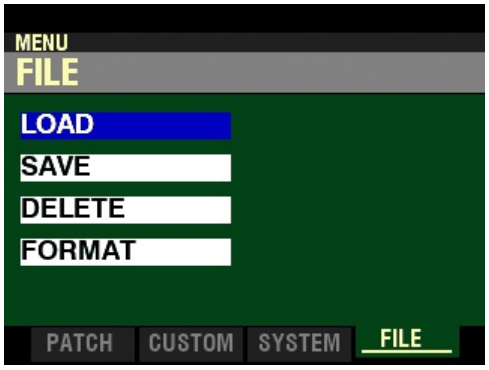
1. Follow the steps described on pages 805 to 807 to access the SK PRO's Internal Memory.

2. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

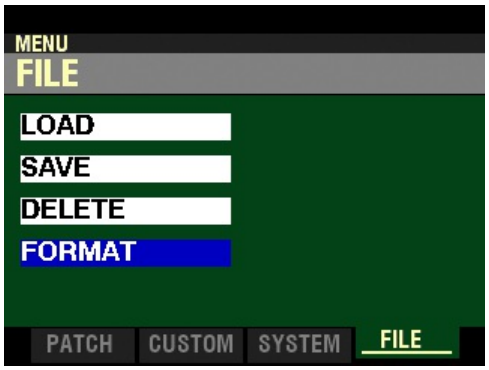


The "COMBINATION" box should be highlighted.

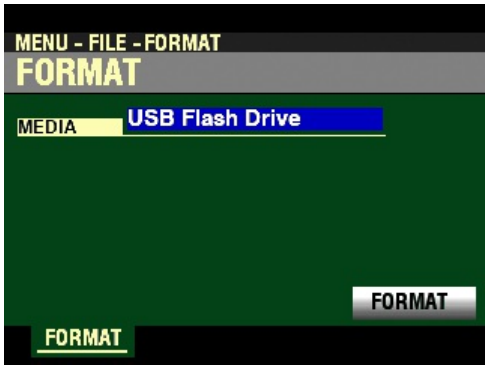
3. Press the PAGE "▶" button <u>three</u> times. The Information Center Display should now look like this:



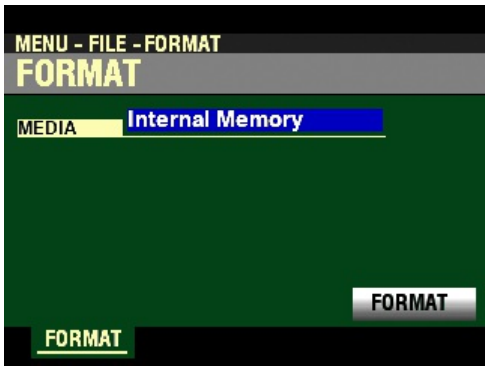
4. Press the DIRECTION "▼" button <u>three</u> times. The Information Center Display should now look like this:



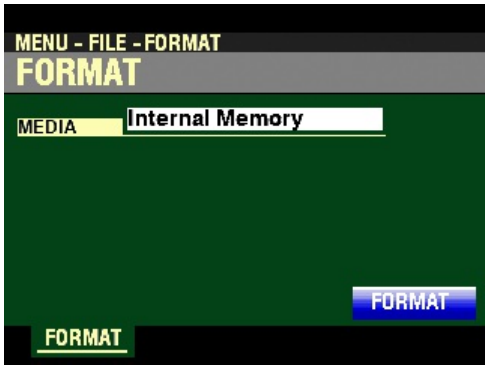
5. Press the ENTER button. The Information Center Display should now look like this:



NOTE: If the box to the right of "MEDIA" displays **USB Flash Drive**, turn the VALUE knob so the box reads **Internal Memory**.

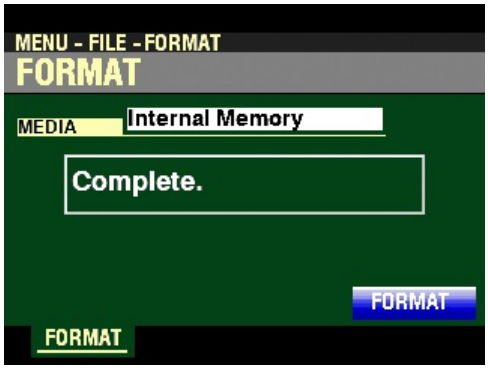


6. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:



If there is any data in the Internal Memory, formatting will erase it. Therefore if you DO NOT wish to format the Internal Memory, press either the MENU / EXIT or PLAY Touch buttons.

7. If you wish to proceed with the formatting operation, from the screen shown at the bottom of the previous page press the ENTER button. The Information Center Display will display "Formatting...," then the following message will display:



The Internal Memory will be formatted and ready for use.

IMPORTANT NOTE: The **Format** operation described on the previous pages will erase any files contained in the memory; however, the folder structure will be retained. The SK PRO requires these folders to perform operations such as Loading, Saving, or Deleting files or Updating the system software. Therefore, DO NOT attempt to format the Internal Memory from your computer or re-name/delete any of these folders. Doing so may cause a serious malfunction.

◆ FILE FUNCTION Mode

Your Hammond SKX PRO instrument gives you the ability to save Files either to a USB Flash Drive or to the instrument's internal memory for later use. You can Save Setups, Patches or Custom Sets.

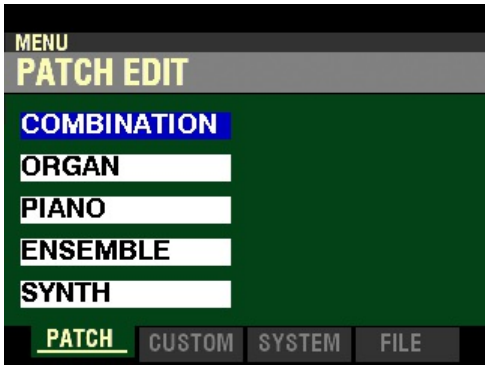
♦ What Is A "Setup?"

As explained in previous sections of this Guide, your SKX PRO can be customized in a number of different ways - you can create and Record your own Combinations, Patches, Custom Sets , etc. After you have made your changes, you can either Save individual Patches and Custom Tone Wheels or Custom Pipes, or Save your edits and custom settings as a Setup. In this way you can customize the instrument in several different ways and Save each series of edits as a separate Setup. This makes it easy to configure the instrument the way you want without having to re-create all your custom settings manually each time you play.

♦ Saving a Setup, Patch or Custom Set

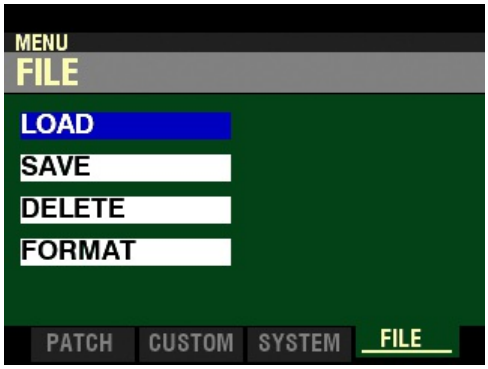
After you have customized your SKX PRO, you can save your settings as a Setup. To do this:

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now like this:

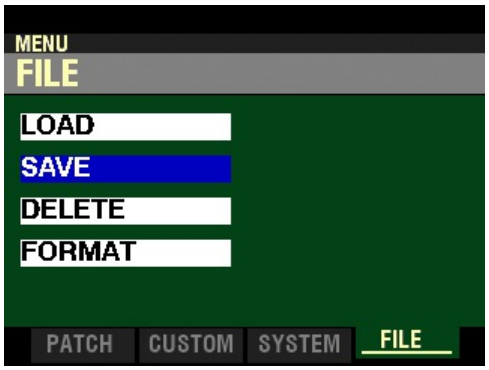


The "COMBINATION" box should be highlighted.

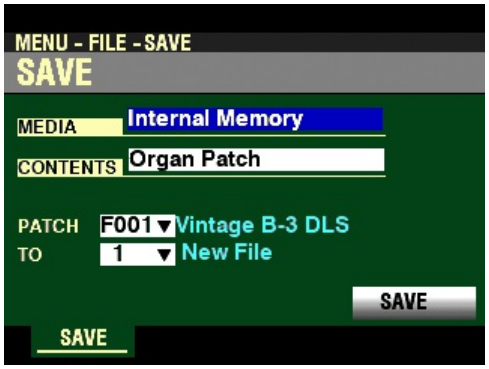
2. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



3. Press the DIRECTION "▼" button once. The Information Center Display should now look like this:

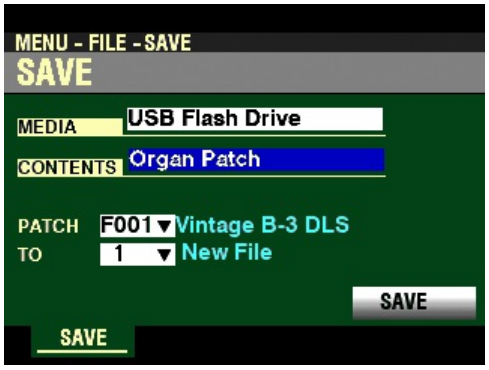


4. Press the ENTER button. The Information Center Display should now look similar to this:



5. Use the VALUE knob to select where to Save. You may select either Internal Memory (the instrument's internal memory) or USB Flash Drive. If you wish to Save a file to a USB Flash Drive, make sure a USB Flash Drive is inserted in the TO FLASH DRIVE Port; otherwise you will not be able to select USB Flash Drive using the VALUE knob.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the box to the right of "CONTENTS" and use the VALUE knob to select the type of file to Save.

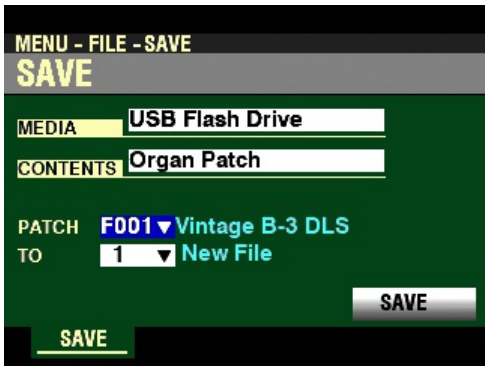


The data chart below shows the options you may select.

SAVE Options	
Contents	**Description**
Setup	Setup file.
Organ Patch	User Patch in the ORGAN Voice Section.
Piano/Ensemble Patch	User Patch in the PIANO / ENSEMBLE Voice Sections
Synth Patch	User Patch in the MONO SYNTH Voice Section
Tone Wheel	Custom Tone Wheel
Pipe	Custom Pipe

Turn the VALUE knob to select the option you want.

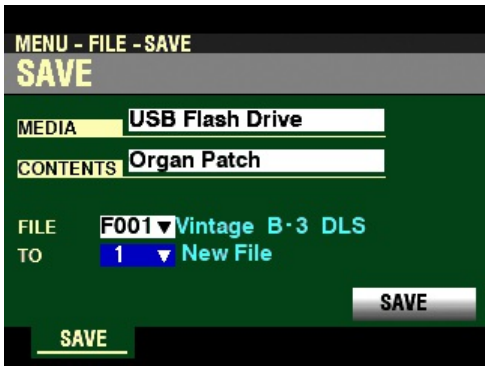
7. After you have selected the type of file to Save, press the DIRECTION "▼" button to highlight the next box down. It may say PATCH or CUSTOM depending on the type of file you are Saving. Use the VALUE knob to select the file you want to Save.



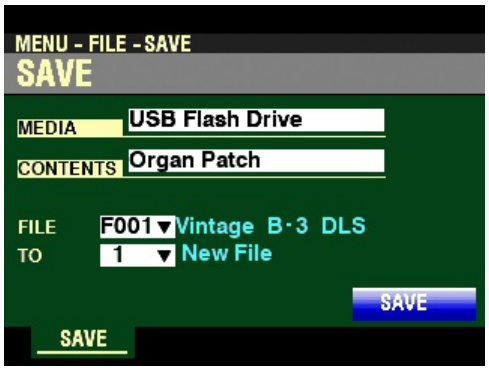
NOTE: The number of boxes below the "CONTENTS" box will be different depending on the type of file being Saved. **Setup** will display only the **TO** box (the file destination). **Organ Patch**, **Piano/Ensemble Patch**, **Synth Patch** and **Pipe** will display two boxes - the Patch or Custom Number to be Saved and the **TO** box. **Tone Wheel** will have an additional box, **DB TYPE**, which will allow you to select which Drawbar Organ Type to Save the Custom Tone Wheel to. For more information consult the **CUSTOM SETS** chapter of this Guide.

NOTE: Because the **Setup** option will have only the "TO" box, if you are Saving a Setup, skip Step 7.

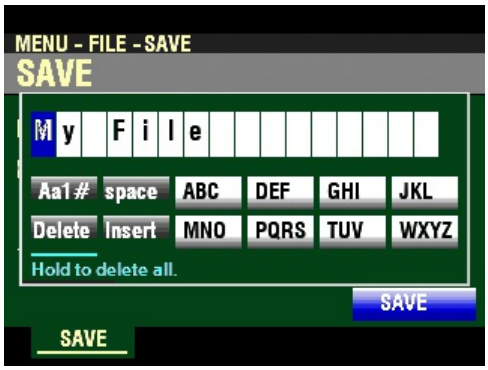
8. After you have selected the file to Save, press the DIRECTION "▼" button to highlight the box to the right of "TO" and use the VALUE knob to select where to Save the selected file. Select a file location marked New File if you do not wish to overwrite an existing file.



9. After you have selected where to Save the selected file, press the DIRECTION "▼" button to highlight the "SAVE" box.



10. Press the ENTER button The Information Center Display will look similar to this:



This is the screen you will use to Name your file. You can use the FAVORITE buttons and the BANK and MANUAL buttons. The data chart below explains the function of each button.

NAMING Options		
Character	**Button**	**Description**
Aa1	BANK	Changes the character type (Capital and lower-case letters, numbers, special characters).
Delete	MANUAL	Deletes the character at the cursor.
space	FAVORITE 1	Replaces the character at the cursor with a space.
Insert	FAVORITE 6	Inserts a space at the cursor.
ABC, etc.	FAVORITES 2 ~ 5, 7 ~ 10.	Use these to cycle through and select the characters for the highlighted location. Each successive touch will cause the next character to display - for example, touching the Number **2** button will display **A**, touching it again will display **B** and touching it a third time will display **C**.

You can also turn the VALUE knob to select characters. If you wish to do this, use the DIRECTION "◀" and "▶" buttons to move back and forth through the characters.

11. After you have finished the Naming procedure, press the ENTER button to complete the Saving procedure. You will see the following messages flash in the display for approximately 1 second each:



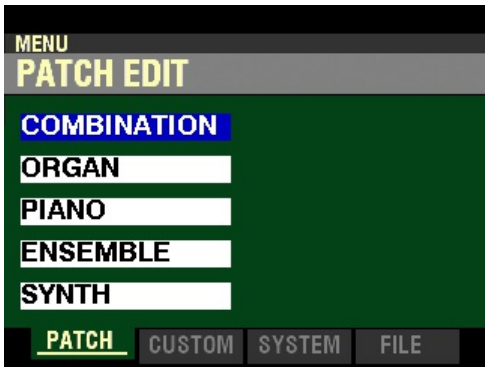


When the above messages disappear, your file has been Saved.

NOTE: If you DO NOT wish to Save the selected file, press the MENU / EXIT or PLAY button instead of the ENTER button.

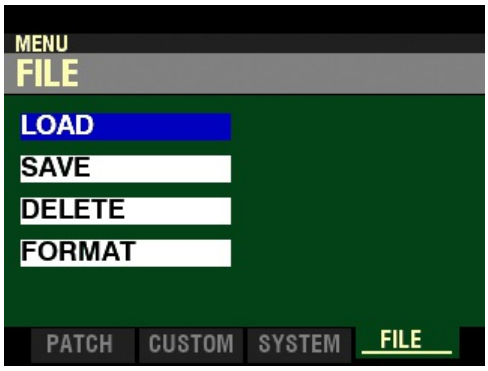
♦ Loading a Setup, Patch or Custom Set

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should look like this:

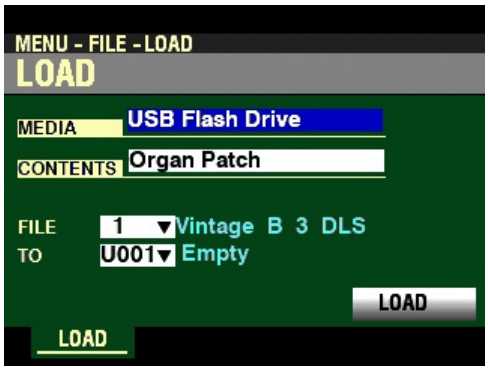


The "COMBINATION" box should be highlighted.

2. Press the PAGE "▶" button three times. The Information Center Display should now look like this:

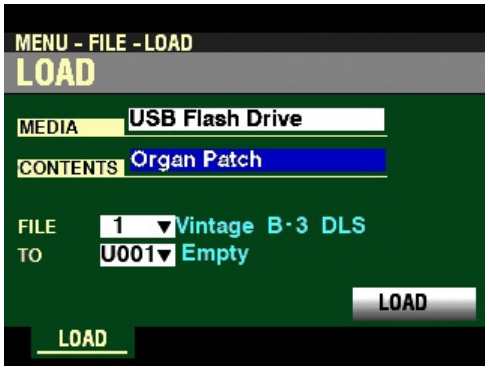


3. Press the ENTER button. The Information Center Display should now look similar to this:



4. Use the VALUE knob to select the media from which to Load. You may select either Internal Memory (the instrument's internal memory) or USB Flash Drive. If you wish to Load a file from a USB Flash Drive, make sure a USB Flash Drive is inserted in the TO FLASH DRIVE Port; otherwise you will not be able to select USB Flash Drive using the VALUE knob.

5. After you have made your selection, press the DIRECTION "▼" button to highlight the box to the right of "CONTENTS" and use the VALUE knob to select the type of file to Load.

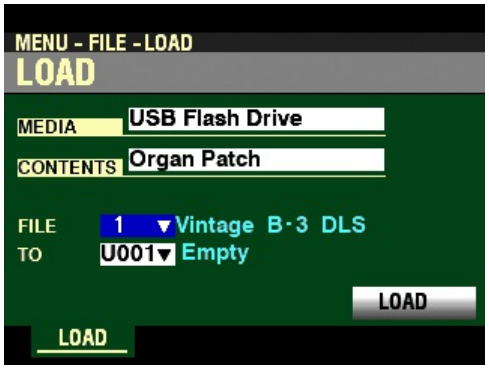


The data chart below shows the options you may select.

LOAD Options	
Contents	**Description**
Setup	Setup file.
Organ Patch	User Patch in the ORGAN Voice Section.
Piano/Ensemble Patch	User Patch in the PIANO / ENSEMBLE Voice Sections
Synth Patch	User Patch in the MONO SYNTH Voice Section
Tone Wheel	Custom Tone Wheel
Pipe	Custom Pipe

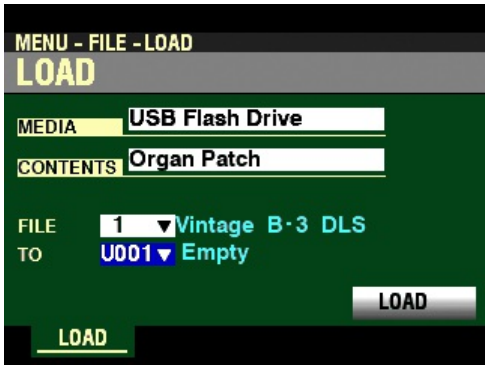
Turn the VALUE knob to select the option you want.

6. After you have selected the type of file to Load, press the DIRECTION "▼" button to highlight the box to the right of "FILE" and use the VALUE knob to select the file you want to Load.



NOTE: The **Tone Wheel** option will have an additional box, **DB TYPE**, which will allow you to select which Drawbar Organ Type to Load the Custom Tone Wheel from. For more information consult the **CUSTOM SETS** chapter of this Guide.

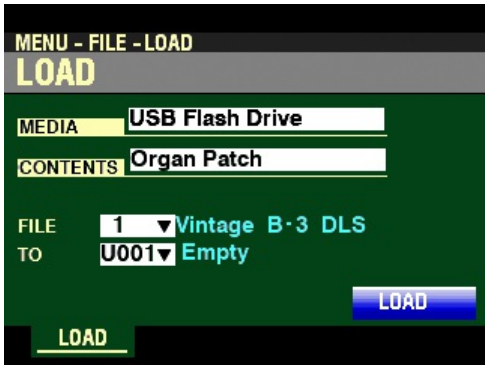
7. After you have selected the file to Load, press the DIRECTION "▼" button to highlight the box to the right of "TO" and use the VALUE knob to select where to Load the selected file.



NOTE: The **Setup** option will not have the "TO" box. If you are Loading a Setup, skip Step 7.

NOTE: If the "TO" location displays **Empty**, there is no File to Load.

8. After you have selected where to Load the selected file, press the DIRECTION "▼" button to highlight the "LOAD" box.



9. Press the ENTER button to complete the Loading procedure. You will see the following messages flash in the display for approximately 1 second each:



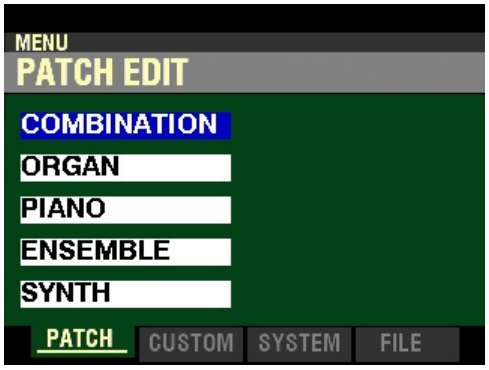


When the above messages disappear, your file has been Loaded.

NOTE: If you DO NOT wish to Load the selected file, press the MENU / EXIT or PLAY button instead of the ENTER button.

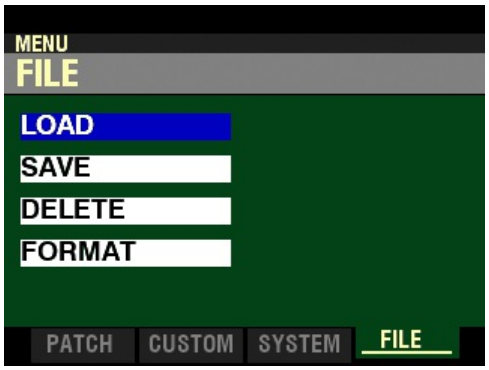
♦ Deleting a Setup, Patch or Custom Set

1. From any of the PLAY Mode Pages, press the MENU / EXIT button. The Information Center Display should now look like this:

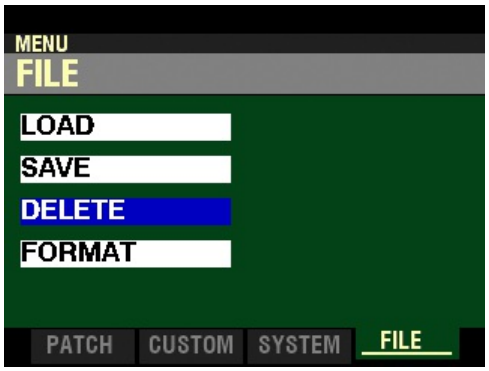


The "COMBINATION" box should be highlighted.

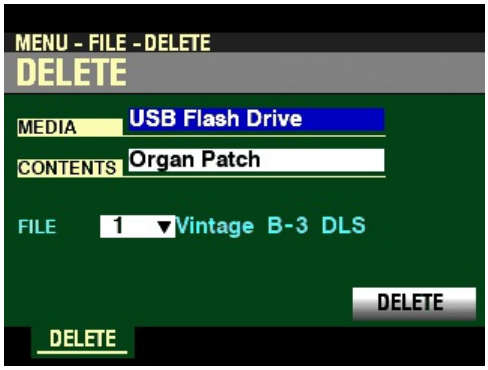
2. Press the PAGE "▶" button three times. The Information Center Display should now look like this:



3. Press the DIRECTION ""▼" button two times. The Information Center Display should now look like this:

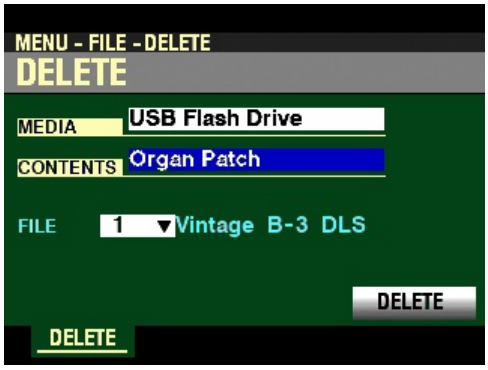


4. Press the ENTER button. The Information Center Display should now look similar to this:



5. Use the VALUE knob to select the media from which to Delete. You may select either Internal Memory (the instrument's internal memory) or USB Flash Drive. If you wish to Delete a file from a USB Flash Drive, make sure a USB Flash Drive is inserted in the TO FLASH DRIVE Port; otherwise you will not be able to select USB Flash Drive using the VALUE knob.

6. After you have made your selection, press the DIRECTION "▼" button to highlight the box to the right of "CONTENTS" and use the VALUE knob to select the type of content to Delete.

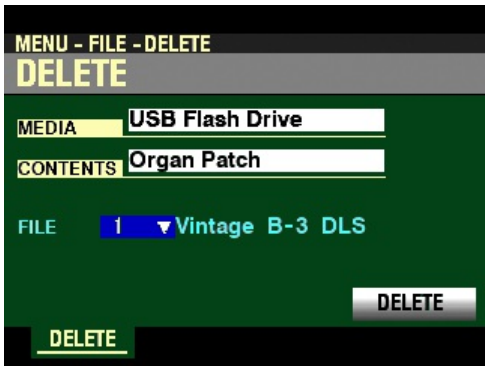


The data chart below shows the options you may select.

DELETE Options	
Contents	**Description**
Setup	Setup file.
Organ Patch	User Patch in the ORGAN Voice Section.
Piano/Ensemble Patch	User Patch in the PIANO / ENSEMBLE Voice Sections.
Synth Patch	User Patch in the MONO SYNTH Voice Section.
Tone Wheel	Custom Tone Wheel.
Pipe	Custom Pipe.

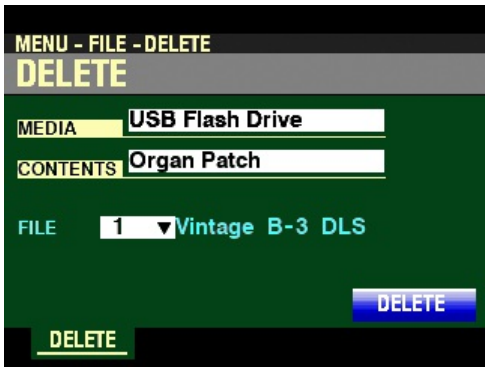
Turn the VALUE knob to select the option you want.

7. After you have made your selection, press the DIRECTION "▼" button to highlight the box to the right of "FILE" and use the VALUE knob to select the file you want to Delete.



NOTE: If a file location displays **No File**, there is no File to Delete.

8. Press the DIRECTION "▼" button to highlight the "DELETE" box.



9. Press the ENTER button to complete the Deleting procedure. You will see the following messages flash in the display for approximately 1 second each:





When the above messages disappear, your file has been Deleted.

NOTE: If you DO NOT wish to Delete the selected file, press the MENU / EXIT or PLAY button instead of the ENTER button.

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APPENDIX

APPENDIX

◆ FACTORY COMBINATIONS

Category	#	Name
Main Features	F001	Vintage B-3 DLS
	F002	Classic Gospel
	F003	ClasOrg Tutti
	F004	Console Riser
	F005	A. Piano D
	F006	Piano & Strings
	F007	A.Bass / A.Piano
	F008	Soul Line
	F009	Symphonic Ens
	F010	Macrocosmos
Tone Wheel Organ	F011	Vintage C-3 JOS
	F012	VintageB-3Squabl
	F013	Vintage B-3 McGr
	F014	VintageB-3Groove
	F015	X-66 Ballad
	F016	Edelweiss
	F017	Spanish
	F018	Old Days
	F019	Euro Bigband
	F020	Swedish Love
Transistor/Pipe Organ	F021	ClasOrg PrnChors
	F022	ClasOrg StgCelest
	F023	TheaOrg Ballad
	F024	TheaOrg StylDTrpt
	F025	TheaOrg Tibias
	F026	Purple
	F027	Emerson
	F028	Some Lovin'
	F029	Booker
	F030	Rock 1
Piano / Chro Perc / Keys	F031	Grand Piano Y-CF
	F032	Pop Piano CF
	F033	Upright Piano
	F034	Honky-Tonk Piano
	F035	Electric Grand
	F036	HP Old Time Prchd
	F037	EP Tine Mk1
	F038	Harpsichord Back
	F039	Clav.AC
	F040	Accordion LMMH
Strings / Choir	F041	Legato Strings
	F042	Section Strings
	F043	Synth Str.Bright
	F044	Synth Str.Mellow
	F045	Chamber Ensemble
	F046	Choir Aah
	F047	Violin
	F048	Sol. Strings
	F049	Taped Strings
	F050	Vocal & Str. Prchd

Category	#	Name
Wind	F051	Horn Rock Band
	F052	Trumpet Vib
	F053	Alto Sax Vib
	F054	Jazz Brass Prchd
	F055	Harm Chro Vib
	F056	Flute Vib
	F057	Pan Pipes
	F058	M12 Brazz
	F059	M12 Horn Ens
	F060	M12 Box Brass
Synth / Bass	F061	Fantasia Pad
	F062	Warm Pad
	F063	Phasing Pad
	F064	Oct Saw Ld
	F065	Sync Up&Down Ld
	F066	Trancy Ld
	F067	Acoustic Bass
	F068	Finger Bass Jz
	F069	Big Funk
	F070	Timpani Roll/Hit
Famous Tunes	F071	Lady Green Eyes
	F072	Do You Know
	F073	Vibrating Good
	F074	Satin White
	F075	Craft Work
	F076	Jan's Hammer
	F077	Wonder 4 Th City
	F078	Woven Dream
	F079	Your Rhythm Mix
	F080	Jumped!
Famous Tunes	F081	Vienna
	F082	Vienna Bridge
	F083	99 Nena
	F084	Pop Muzik
	F085	Electric Friends
	F086	Don't You Go
	F087	Follow Your & Me
	F088	Manfred's Light
	F089	Green Monday
	F090	Ph. D I won't
Famous Tunes	F091	I'm Ready
	F092	Won't Get Fooled
	F093	Blinding Lights
	F094	Lovefool
	F095	California Girl
	F096	Hot Stuff
	F097	Galway Girl
	F098	Last Christmas
	F099	Treasure
	F100	Zankoku Tenshi

◆ COMBINATION PARAMETERS

Category	Parameter	NRPN MSB (63)	NRPN LSB (62)	SysEx Address MSB to LSB			SysEx Length	Data Data length 01 uses MSB only, length 02 uses MSB and LSB.
Name		--	--	--	--	--	--	16 letters
Portamento	On	--	--	--	--	--	01	00, 01 (Off, On)
Reverb	On	10	00	00	10	00	01	00, 01 (Off, On)
	Type (P/E/S)	10	01	00	10	01	01	00 - 07 00: Room 1 05: Church 01: Room 2 06: Plate 02: Ballroom 07: Spring 03: Hall 1 04: Hall 2
	Depth	10	02	00	10	02	01	00 - 7F (0 - 127)
	Time (P/E/S)	10	03	00	10	03	01	00 - 7F (0 - 127)
	Pre-LPF (P/E/S)	10	04	00	10	04	01	00 - 7F (0 - 127)
	Type (Organ)	10	06	00	10	06	01	Same as P/E/S
	Time (Organ)	10	07	00	10	07	01	00 - 7F (0 - 127)
	Pre-LPF (Organ)	10	08	00	10	08	01	00 - 7F (0 - 127)
Organ Upper	Patch	11	00	00	11	00	02	00 00 - 00 63, 00 64 - 01 47, 01 48 - 02 2B (B001 - B100, U001 - U100, F001 - F100)
	Octave	11	01	00	11	01	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Transpose	11	02	00	11	02	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6)
	Allocate	11	03	00	11	03	01	00 - 03 (Off, Upper, Lower, Pedal)
	Key Range Low	11	04	00	11	04	01	00 - 7F: note number
	Key Range High	11	05	00	11	05	01	00 - 7F: note number
	Volume	11	06	00	11	06	01	00 - 7F (0 - 127)
	Expression Minimum	11	07	00	11	07	01	00 - 7F (0 - 127)
	P. Bend Range	11	08	00	11	08	01	00 - 0E (Patch, 0 - 12)
	Mod. Mode	11	09	00	11	09	01	00 - 03 (Off, OD, MFx1, MFx2)
	Damper Enable	11	0A	00	11	0A	01	00, 01 (Off, On)
	Reverb Send Level	11	0B	00	11	0B	01	00 - 7F (0 - 127)
	3 Part Organ	11	0C	00	11	0C	01	00, 01 (Off, On)
Organ Lower	Octave	12	01	00	12	01	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Transpose	12	02	00	12	02	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6)
	Allocate	12	03	00	12	03	01	00 - 03 (Off, Upper, Lower, Pedal)
	Key Range Low	12	04	00	12	04	01	00 - 7F: note number
	Key Range High	12	05	00	12	05	01	00 - 7F: note number
	Damper Enable	12	0A	00	12	0A	01	00, 01 (Off, On)
Organ Pedal	Octave	13	01	00	13	01	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Transpose	13	02	00	13	02	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6)
	Allocate	13	03	00	13	03	01	00 - 03 (Off, Upper, Lower, Pedal)
	Key Range Low	13	04	00	13	04	01	00 - 7F: note number
	Key Range High	13	05	00	13	05	01	00 - 7F: note number
	Damper Enable	13	0A	00	13	0A	01	00, 01 (Off, On)
Piano, Ensemble, Synth "s" means; 4: Piano 5: Ensemble 6: Synth	Patch	1s	00	00	1s	00	02	Piano / Ensemble: 00 00 - 03 0F, 03 10 - 06 1F (U001 - U400, F001 - F400) Mono Synth: 00 00 - 00 63, 00 64 - 01 47, 01 48 - 02 2B (B001 - B100, U001 - U400, F001 - F100)
	Octave	1s	01	00	1s	01	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Transpose	1s	02	00	1s	02	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6)
	Allocate	1s	03	00	1s	03	01	00 - 03 (Off, Upper, Lower, Pedal)
	Key Range Low	1s	04	00	1s	04	01	00 - 7F: note number
	Key Range High	1s	05	00	1s	05	01	00 - 7F: note number
	Volume	1s	06	00	1s	06	01	00 - 7F (0 - 127)
	Expression Minimum	1s	07	00	1s	07	01	00 - 7F (0 - 127)
	P. Bend Range	1s	08	00	1s	08	01	00 - 0E (Patch, 0 - 12)
	Mod. Mode	1s	09	00	1s	09	01	00 - 04 (Off, Mod, OD, MFX1, MFX2, Leslie)
	Damper Enable	1s	0A	00	1s	0A	01	00, 01 (Off, On)
	Reverb Send Level	1s	0B	00	1s	0B	01	00 - 7F (0 - 127)
	Velocity Curve	1s	0D	00	1s	0D	01	00 - 04 (Off, 1 - 4)
Internal Zones	Octave Upper	17	00	00	17	00	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Octave Lower	17	01	00	17	01	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Octave Pedal	17	02	00	17	02	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Octave Real Lower	17	03	00	17	03	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Split On	17	04	00	17	04	01	00, 01 (Off, On)
	SPLIT Point	17	05	00	17	05	01	00 - 7F: note number
	Pedal to Lower On	17	06	00	17	06	01	00, 01 (Off, On)
	Pedal to Lower Upper Limit	17	07	00	17	07	01	00 - 7F: note number
	Pedal to Lower Mode	17	08	00	17	08	01	00 - 02 (Lowest, Chord, Poly)
	Pedal Sustain On	17	09	00	17	09	01	00, 01 (Off, On)
	Pedal Sustain Length	17	0A	00	17	0A	01	00 - 04 (1 - 5)
	Pedal Key Mono/Poly	17	0B	00	17	0B	01	00, 01 (Mono, Poly)

Category	Parameter	NRPN		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				Data length 01 uses MSB only, length 02 uses MSB and LSB.
	On	1n	00	00	1n	00	01	00, 01 (Off, On)
	MIDI Channel	1n	01	00	1n	01	01	00 - 0F (1 - 16)
External Zones	Octave	1n	02	00	1n	02	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Transpose	1n	03	00	1n	03	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6)
"n" means;	Bank Select MSB	1n	04	00	1n	04	01	00 - 7F (0 - 127)
8: Ex Zone 1	Bank Select LSB	1n	05	00	1n	05	01	00 - 7F (0 - 127)
9: Ex Zone 2	Program Change	1n	06	00	1n	06	01	00 - 7F (0 - 127)
A: Ex Zone 3	Allocate	1n	07	00	1n	07	01	00 - 03 (Off, Upper, Lower, Pedal)
	Key Range Low	1n	08	00	1n	08	01	00 - 7F: note number
	Key Range High	1n	09	00	1n	09	01	00 - 7F: note number
	Volume	1n	0A	00	1n	0A	01	00 - 7F (0 - 127)
	Expression Enable	1n	0B	00	1n	0B	01	00, 01 (Off, On)
	P. Bend Enable	1n	0C	00	1n	0C	01	00, 01 (Off, On)
	Mod. Enable	1n	0D	00	1n	0D	01	00, 01 (Off, On)
	Damper Enable	1n	0E	00	1n	0E	01	00, 01 (Off, On)
	Pan	1n	0F	00	1n	0F	01	00 - 40 - 7F (Left - Center - Right)
	Velocity Curve	1n	10	00	1n	10	01	00 - 04 (Off, Hard - Easy)
	Expression Minimum	1n	11	00	1n	11	01	00 - 3F (0 - 63)
	Expression Maximum	1n	12	00	1n	12	01	40 - 7F (64 - 127)
	Expression CC	1n	13	00	1n	13	01	00, 01, 02 (Off, 7, 11)

◆ ORGAN PATCHES

Patch #	Category	Name
F001	Jazz	Vintage B-3 DLS
F002	Jazz	Vintage C-3 JOS
F003	Jazz	VintageB-3Squabl
F004	Jazz	VintageB-3Groove
F005	Jazz	Vintage B-3 McG
F006	Jazz	Vintage B-3+Echo
F007	Jazz	Organ Ballad
F008	Jazz	Jerry C
F009	Jazz	Lee Bee
F010	Jazz	Full Spin
F011	Gospel	Classic Gospel
F012	Gospel	Slow Gospel
F013	Gospel	ContmpraryGospel
F014	Gospel	Shout Gospel
F015	Gospel	Quiet Praise
F016	Gospel	Reflective Praise
F017	Gospel	Dramatic Praise
F018	Gospel	Total Praise
F019	Gospel	Meditasion
F020	Gospel	Full Gospel
F021	Classic Pipe	Principal Chorus
F022	Classic Pipe	Flute Chorus
F023	Classic Pipe	Gamba Celeste
F024	Classic Pipe	Baroque
F025	Classic Pipe	Stopped Flutes
F026	Classic Pipe	Diapasons 8′&4′
F027	Classic Pipe	Bourdon 16′&Prin2′
F028	Classic Pipe	Flutes w/Trem
F029	Classic Pipe	Oboe Solo
F030	Classic Pipe	Sforzando
F031	Theatre Pipe	Tibias & Vox
F032	Theatre Pipe	Tibia 8′&4′
F033	Theatre Pipe	StylDTrumptSolo
F034	Theatre Pipe	Oboe 8′&Tibia 4′
F035	Theatre Pipe	Tibias 16′&4′
F036	Theatre Pipe	BrassTrumpetSolo
F037	Theatre Pipe	Strings&Voxes
F038	Theatre Pipe	Tibia 16′8′2′&Vox
F039	Theatre Pipe	FullTibias&Voxes
F040	Theatre Pipe	FullComb+Posthrn
F041	Rock	Purple
F042	Rock	Emerson
F043	Rock	Some Lovin'
F044	Rock	Booker
F045	Rock	Rock 1
F046	Rock	Rock 2
F047	Rock	Rock 3
F048	Rock	Full 1
F049	Rock	Full 2
F050	Rock	Full Overdrive

Patch #	Category	Name
F051	Tibia	DB Tibia 8'&4'
F052	Tibia	DB Tibia 8'&2'
F053	Tibia	DB Tibia & Vox
F054	Tibia	DB Tibia 8'4'& 2'
F055	Tibia	DB Tibia 16'&8'
F056	Tibia	DB Tibia 16 &4'
F057	Tibia	DB Tibia 16'8'4'
F058	Tibia	DB Tibia 1684&2'
F059	Tibia	DB Tibia 168421'
F060	Tibia	DB Full Tibia
F061	Lo & Hi	Lo & Hi 1
F062	Lo & Hi	Lo & Hi 2
F063	Lo & Hi	Lo & Hi 3
F064	Lo & Hi	Odd Harmonic
F065	Lo & Hi	Pop Solo
F066	Lo & Hi	Perc 16'&4'
F067	Lo & Hi	Solo 16'&2'
F068	Lo & Hi	Cute Solo
F069	Lo & Hi	Eddie's Wind
F070	Lo & Hi	Full Hammond
F071	Pop	Sylvia
F072	Pop	Lady
F073	Pop	Yeh Yeh
F074	Pop	Season Time
F075	Pop	On a Clear Day
F076	Pop	Twee motten
F077	Pop	Toccata Live
F078	Pop	Je t'aime moi
F079	Pop	Early Bird
F080	Pop	Bluesette
F081	Vx	Vx Mellow
F082	Vx	Vx Bright
F083	Vx	Vx Mixture
F084	Farf	Farf Flute
F085	Farf	Farf Brass
F086	Farf	Farf Reeds
F087	Farf	Farf Strings
F088	Farf	Farf Full
F089	Ace	Ace Flute
F090	Ace	Ace Reeds
F091	Ace	Ace Strings
F092	Contemp	Summer Samba
F093	Contemp	Dancing Days
F094	Contemp	Pipe Mixture
F095	Contemp	California Girl
F096	Contemp	Won't Get Fooled
F097	TW Basic	Master Comp
F098	TW Basic	Sweet Carpet
F099	TW Basic	DB Reed
F100	TW Basic	DB Diapason

◆ ORGAN PATCH PARAMETERS

Category	Parameter	NRPN		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				
Name	Patch Name	--	--	--	--	--	--	16 letters
Volume	Patch Volume	24	14	00	24	14	01	00 - 7F (0 - 127)
Upper Registration	16′	--	--	00	21	00	01	00 - 08 (0 - 8)
	5 1/3′	--	--	00	21	01	01	00 - 08 (0 - 8)
	8′	--	--	00	21	02	01	00 - 08 (0 - 8)
	4′	--	--	00	21	03	01	00 - 08 (0 - 8)
	2 2/3′	--	--	00	21	04	01	00 - 08 (0 - 8)
	2′	--	--	00	21	05	01	00 - 08 (0 - 8)
	1 3/5′	--	--	00	21	06	01	00 - 08 (0 - 8)
	1 1/3′	--	--	00	21	07	01	00 - 08 (0 - 8)
	1′	--	--	00	21	08	01	00 - 08 (0 - 8)
Lower Registration	16′	--	--	00	22	00	01	00 - 08 (0 - 8)
	5 1/3′	--	--	00	22	01	01	00 - 08 (0 - 8)
	8′	--	--	00	22	02	01	00 - 08 (0 - 8)
	4′	--	--	00	22	03	01	00 - 08 (0 - 8)
	2 2/3′	--	--	00	22	04	01	00 - 08 (0 - 8)
	2′	--	--	00	22	05	01	00 - 08 (0 - 8)
	1 3/5′	--	--	00	22	06	01	00 - 08 (0 - 8)
	1 1/3′	--	--	00	22	07	01	00 - 08 (0 - 8)
	1′	--	--	00	22	08	01	00 - 08 (0 - 8)
Pedal Registration	16′	--	--	00	23	00	01	00 - 08 (0 - 8)
	8′	--	--	00	23	01	01	00 - 08 (0 - 8)
Lower and Upper	ORGAN Type	24	00	00	24	00	01	00 - 07 00: A-100 04: Vx 01: B-3 05: Farf 02: C-3 06: Ace 03: Mellow 07: Pipe
	Envelope	24	01	00	24	01	01	00 - 20 00: Contact 01 - 0F: Release 1 - 15 10 - 1E: Attack and Release 1 - 15
	Contact Offset Time	24	02	00	24	02	01	00 - 40 - 7F (-64 - 0 - +63)
	Contact Damping	24	03	00	24	03	01	00 - 1F (0 - 31)
	Leakage Level	24	04	00	24	04	01	00 - 7F (0 - 127)
	Custom TW A-100	24	05	00	24	05	01	00 - 05 (U1 - F3)
	Custom TW B-3	24	06	00	24	06	01	00 - 05 (U1 - F3)
	Custom TW C-3	24	07	00	24	07	01	00 - 05 (U1 - F3)
	Custom TW Mellow	24	08	00	24	08	01	00 - 05 (U1 - F3)
	Custom Pipe	24	0A	00	24	0A	01	00 - 05 (U1 - F3)
	Tone Control	24	0B	00	24	0B	01	00 - 09 - 12 (-9 - ±0 +9)
	Contact Delay Velocity On	24	0C	00	24	0C	01	00, 01 (Off, On)
	Contact Delay Velocity Depth	24	0D	00	24	0D	01	00 - 7F (0 - 127)
	Pitch Bend Depth Plus	24	0E	00	24	0E	01	00 - 0C (0 - 12)
	Pitch Bend Depth Minus	24	0F	00	24	0F	01	00 - 18 (0 - 24)
	Sustain Upper On	24	10	00	24	10	01	00, 01 (Off, On)
	Sustain Upper Length	24	11	00	24	11	01	00 - 04 (1 - 5)
	Sustain Lower On	24	12	00	24	12	01	00, 01 (Off, On)
	Sustain Lower Length	24	13	00	24	13	01	00 - 04 (1 - 5)
Pedal	Type	25	00	00	25	00	01	00, 01 (Normal, Muted)
	Envelope	25	01	00	25	01	01	00 - 20 00: Contact 01 - 0F: Release 1 - 15 10 - 1E: Attack and Release 1 - 15
	Custom Sub Drawbars	25	02	00	25	02	01	00 - 05 (U1 - P3)
Percussion	On	26	00	00	26	00	01	00, 01 (Off, On)
	Harmonic	26	01	00	26	01	01	00, 01 (Second, Third)
	Fast Decay	26	02	00	26	02	01	00, 01 (Slow, Fast)
	Volume Soft	26	03	00	26	03	01	00, 01 (Normal, Soft)
	Level at Soft	26	04	00	26	04	01	00 - 63 (0 - 127)
	Level at Normal	26	05	00	26	05	01	00 - 63 (0 - 127)
	Decay at Fast	26	06	00	26	06	01	00 - 18 (0 - 24)
	Decay at Normal	26	07	00	26	07	01	00 - 18 (0 - 24)
	Touch	26	08	00	26	08	01	00, 01 (Off, On)
	1' Cancel	26	09	00	26	09	01	00, 01 (Off, On)
	Drawbar Level	26	0A	00	26	0A	01	00, 01 (0, Soft)

Category	Parameter	NRPN		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				
Animation	Leslie Bypass	27	00	00	27	00	01	00, 01 (Off, On)
	Leslie Stop	27	01	00	27	01	01	00, 01 (Off, On)
	Leslie Fast	27	02	00	27	02	01	00, 01 (Off, On)
	Custom Cabinet	27	03	00	27	03	01	00 - 0F (U1 - P8)
	Vibrato Upper	27	04	00	27	04	01	00, 01 (Off, On)
	Vibrato Lower	27	05	00	27	05	01	00, 01 (Off, On)
	Vibrato Mode	27	06	00	27	06	01	00 - 05 (V1 - C3)
	Vibrato Pedal On	27	07	00	27	07	01	00, 01 (Off, On)
	Vibrato Model	27	08	00	27	08	01	00 - 02 (Big Box, Small Box, Metal Box)
	Vibrato Rate	27	09	00	27	09	01	00 - 99 (5.78 - 7.90 Hz)
	Vibrato Chorus Mix	27	0A	00	27	0A	01	00 - 7F (0 - 127)
	Vibrato Rate	27	0E	00	27	0E	01	00 - 7F (0 - 127)
	Vibrato Tremulant	27	0F	00	27	0F	01	00 - 7F (0 - 127)
	Leslie On Reverb	27	10	00	27	10	01	00, 01 (Off, On)
Transformer	Drive Level	28	00	00	28	00	01	00 - 7F (0 - 127)
	Hysteresis	28	01	00	28	01	01	00 - 7F (0 - 127)
	Depth Upper	28	02	00	28	02	01	00 - 7F (0 - 127)
	Depth Percussion	28	03	00	28	03	01	00 - 7F (0 - 127)
	Depth Lower	28	04	00	28	04	01	00 - 7F (0 - 127)
	Depth Pedal	28	05	00	28	05	01	00 - 7F (0 - 127)
	On	28	06	00	28	06	01	00, 01 (Off, On)
Overdrive	On	29	00	00	29	00	01	00, 01 (Off, On)
	Type	29	01	00	29	01	01	00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp)
	Drive Level	29	02	00	29	02	01	00 - 7F (0 - 127)
	Exp. Control On	29	03	00	29	03	01	00, 01 (Off, On)
	Crossover Freq	29	04	00	29	04	01	00 - 7F (400Hz - 14.7kHz)
	Blend	29	05	00	29	05	01	00 - 7F (0 - 127)
Effect 1, Effect 2 "x" means; A: Effect 1 B: Effect 2	On	2x	00	00	2x	00	01	00, 01 (Off, On)
	Type	2x	01	00	2x	01	01	00 - 03 for Effect1, 00 - 04 for Effect 2 00: Tremolo 00: Auto Pan 01: Wah-Wah 01: Phaser 02: Ring Mod 02: Flanger 03: Compressor 03: Chorus 04: Delay
	Param 1	2x	02	00	2x	02	01	00 - 7F (0 - 127)
	Param 2	2x	03	00	2x	03	01	00 - 7F (0 - 127)
	Param 3	2x	04	00	2x	04	01	00 - 7F (0 - 127)
	Param 4	2x	05	00	2x	05	01	00 - 7F (0 - 127)
	Param 5	2x	06	00	2x	06	01	00 - 7F (0 - 127)
	Param 6	2x	07	00	2x	07	01	00 - 7F (0 - 127)
	Param 7	2x	08	00	2x	08	01	00 - 7F (0 - 127)
	Param 8	2x	09	00	2x	09	01	00 - 7F (0 - 127)
Equalizer	Bass Gain	2C	00	00	2C	00	01	00 - 09 - 12 (-9 - ±0 +9)
	Mid Gain	2C	01	00	2C	01	01	00 - 09 - 12 (-9 - ±0 +9)
	Treble Gain	2C	02	00	2C	02	01	00 - 09 - 12 (-9 - ±0 +9)
	Bass Freq	2C	03	00	2C	03	01	00 - 18 (20 - 308Hz)
	Mid Freq	2C	04	00	2C	04	01	00 - 0F (250 - 3.1kHz)
	Treble Freq	2C	05	00	2C	05	01	00 - 13 (3.0k - 8.0kHz)

◆ PIANO / ENSEMBLE PATCHES

Patch #	Category	Name
F001	A. Piano	Grand Piano Y-CF
F002	A. Piano	Grand Piano StwD
F003	A. Piano	GP Y & LegatoStr
F004	A. Piano	GP S & LegatoStr
F005	A. Piano	GP Y & Warm Pad
F006	A. Piano	GP S & Warm Pad
F007	A. Piano	Upright Piano
F008	A. Piano	Honky-Tonk PIano
F009	A. Piano	Pop Piano CF
F010	A. Piano	HP OldTime PrChd
F011	A. Piano	Electric Grand
F012	A. Piano	Electric Grand Comp
F013	A. Piano	ElecGrand & Pad
F014	A. Piano	Toy PIano Kw1
F015	A. Piano	Toy Piano Kwi Pan
F016	A. Piano	Toy Piano Sch
F017	A. Piano	Toy Piano Sch MoDly
F018	A. Piano	Toy Piano S&K
F019	A. Piano	Slow Atk Y-CF
F020	A. Piano	Slow Atk StwD
F021	A. Piano	Stadium Grand
F022	A. Piano	Rehearsal Room
F023	A. Piano	Compressed Grand
F024	E. Piano	EP Tine MkI
F025	E. Piano	EP Tine MkI Pan
F026	E. Piano	EP Tine MkI Phase
F027	E. Piano	EP Tine MkI Chorus
F028	E. Piano	EP Tine MkI OD
F029	E. Piano	EP Tine MkII
F030	E. Piano	EP Tine MkII Pan
F031	E. Piano	EP Tine MkII Phase
F032	E. Piano	EP Tine MkII Chorus
F033	E. Piano	Tine MkII OD
F034	E. Piano	EP Reed 200A
F035	E. Piano	EP Reed 200A Trem
F036	E. Piano	EP Reed 200A Phase
F037	E. Piano	EP Reed 200A OD
F038	E. Piano	EP FM
F039	E. Piano	EP FM Pan
F040	E. Piano	EP FM Phase
F041	E. Piano	EP FM Chorus
F042	E. Piano	EP FM + GrandPno
F043	E. Piano	80's Layer Piano
F044	E. Piano	Reed Pno+FM Pno
F045	E. Piano	Space Mk II + FM
F046	E. Piano	Mk I&LegatoStrings
F047	E. Piano	Compressed Mk1
F048	E. Piano	GW Tine Mk2
F049	Harpsichord	Harpsi Back
F050	Harpsichord	Harpsi Back Cpl
F051	Harpsichord	Harpsi Front
F052	Harpsichord	Harpsi Buff
F053	Harpsichord	Harpsi PCD
F054	Harpsichord	Harpsi & Recorder
F055	Harpsichord	Harpsi OD
F056	Clav.	Clav. AC
F057	Clav.	Clav. AD
F058	Clav.	Clav. BC
F059	Clav.	Clav. BD
F060	Clav.	Clav. AC Wah
F061	Clav.	Clav. AD Wah
F062	Clav.	Clav. BC Wah
F063	Clav.	Clav. BD Wah
F064	Clav.	Clav. AC PdWah
F065	Clav.	Clav. AD PdWah
F066	Clav.	Clav. BC PdWah
F067	Clav.	Clav. BD PdWah
F068	Clav.	Clav. RealLove
F069	Clav.	Pulse Clav.
F070	Clav.	Clav Hard OD
F071	Clav.	Clav Bass
F072	Clav.	Clav&Reed 200
F073	ChroPerc	Xylophone
F074	ChroPerc	Mixing Bowl
F075	ChroPerc	Xylo Duo Prchd
F076	ChroPerc	Xylo 4tet Prchd
F077	ChroPerc	Marimba Normal
F078	ChroPerc	Marimba Trem
F079	ChroPerc	Marimba Sustain
F080	ChroPerc	MarimbaDuo Prchd
F081	ChroPerc	Marimba4tet Prchd
F082	ChroPerc	Xylo + Marimba
F083	ChroPerc	Glockenspiel
F084	ChroPerc	GlockenspielX-66
F085	ChroPerc	Vibraphone
F086	ChroPerc	Tubular Bells
F087	ChroPerc	Tubular Bells FM
F088	ChroPerc	Tubular Bells TW
F089	ChroPerc	Church Bells
F090	ChroPerc	Music Box
F091	ChroPerc	Tonechimes
F092	ChroPerc	TonechimesDamped
F093	ChroPerc	Hand Bells
F094	ChroPerc	HandBells Damped
F095	ChroPerc	TnchmsHymn Prchd
F096	ChroPerc	TchmHrmChm Prchd
F097	ChroPerc	HnBl&Tchm4tet Prchd
F098	ChroPerc	Wine Glass
F099	ChroPerc	WG Lawrence
F100	ChroPerc	Digi Bell 1
F101	ChroPerc	Digi Bell 2
F102	ChroPerc	Rather Be Prchd
F103	ChroPerc	Cathedral Chimes
F104	ChroPerc	Marimba + Glock
F105	ChroPerc	Organ Harp
F106	ChroPerc	Vibraharp
F107	Guitar	Nylon Guitar
F108	Guitar	Steel Guitar

Patch #	Category	Name
F109	Guitar	Nylon&Steel Gtrs
F110	Guitar	StelGtDuo Prchd
F111	Guitar	12-String Guitar
F112	Guitar	Jazz Guitar
F113	Guitar	Jazz Guitar Oct
F114	Guitar	PedalSteelGuitar
F115	Guitar	Orchestral Harp
F116	Guitar	OH WholeTone C
F117	Guitar	OH WholeTone F
F118	Guitar	PizzicatoStrings
F119	Guitar	PizzStr + Glock
F120	Guitar	NylonGtr+Tine EP
F121	Guitar	SteelGtr+Tine EP
F122	Ethnic	Dulcimer
F123	Ethnic	Sitar
F124	Ethnic	Banjo
F125	Ethnic	Koto
F126	Ethnic	Pan Pipes
F127	Ethnic	SteelGtr&Dulcimer
F128	Ethnic	PanPipe&Recorder
F129	Ethnic	Koto & Pan Pipes
F130	SFX	Zap
F131	SFX	Rain
F132	SFX	Telephone
F133	SFX	Flanging Noise
F134	SFX	Burst Noise
F135	SFX	Sine PrChd
F136	SFX	WhiteNoisePedWah
F137	SFX	Sine RingMod
F138	Wind	Horn Rock Band
F139	Wind	Unison Sax
F140	Wind	Ceddin Deden
F141	Wind	M12 Box Brass
F142	Wind	M12 Brazz
F143	Wind	M12 Horn Ens
F144	Wind	SynBrs Bird Low
F145	Wind	SynBrs Bird Oct
F146	Wind	SynBrs GX
F147	Wind	Flute Prchd
F148	Wind	BigBandSax Prchd
F149	Wind	BigBand Prchd
F150	Wind	Unison Brs FD
F151	Wind	Unison Brs GUp
F152	Wind	Quartet 1 Prchd
F153	Wind	Quartet 2 Prchd
F154	Wind	Jazz Brass Prchd
F155	Wind	MutedCombo1Prchd
F156	Wind	Muted Combo2Prchd
F157	Wind	Trumpet Str
F158	Wind	Trumpet Vib
F159	Wind	Trumpet Section
F160	Wind	Trumpet Muted
F161	Wind	Trombone Str
F162	Wind	Trombone Muted

Patch #	Category	Name
F163	Wind	Flute Vib
F164	Wind	Taped Flute
F165	Wind	Recorder
F166	Wind	Synth Whistle
F167	Wind	Alto Sax Str
F168	Wind	Alto Sax Vib
F169	Wind	Tenor Sax Str
F170	Wind	Tenor Sax Vib
F171	Wind	Bari Sax Str
F172	Wind	Tp & Tb Str
F173	Wind	Tp & Tb Vib
F174	Wind	Tp & Tb Mute
F175	Wind	Ed's OB Brazz
F176	Wind	Ray's Flute
F177	Wind	SaxQuartet Prchd
F178	Strings	Legato Strings
F179	Strings	Legato Strgs Oct
F180	Strings	LgatoSt Op Prchd
F181	Strings	Section Strings
F182	Strings	Section Str Oct
F183	Strings	SectStr Op Prchd
F184	Strings	Synth Str.Bright
F185	Strings	Synth Str.Mellow
F186	Strings	Sol. Strings
F187	Strings	Sol. Strings Oct
F188	Strings	Taped Strings
F189	Strings	Glass Harp
F190	Strings	Violin
F191	Strings	TapedChoir&Strings
F192	Strings	Synth Stringz
F193	Strings	TapedStrg&SynStr
F194	Strings	TapedStrg&SecStr
F195	Strings	SectStrings&Violin
F196	Choir	Choir Aah
F197	Choir	Choir Doo
F198	Choir	Vocal
F199	Choir	Vocal&Strg Prchd
F200	Choir	Vcal&Choir Prchd
F201	Choir	Taped Choir
F202	Choir	TapedChoir Prchd
F203	Choir	TapedChoir&Flute
F204	Choir	Space Choir
F205	Synth Pad	Fantasia Pad
F206	Synth Pad	Harp Pad
F207	Synth Pad	Warm Pad
F208	Synth Pad	Choir Pad
F209	Synth Pad	Soundtrack
F210	Synth Pad	Wind Bell
F211	Synth Pad	PWM Pad
F212	Synth Pad	Sweep Pad
F213	Synth Pad	Sample&Hold Pad
F214	Synth Pad	Phasing Pad
F215	Synth Pad	Chime Pad
F216	Synth Pad	Rattle Pad

Patch #	Category	Name
F217	Synth Pad	2.2 Pad
F218	Synth Pad	Shimmer Pad
F219	Synth Pad	It's A Miracle
F220	Synth Pad	Zan-Te Pong
F221	Synth Pad	Fantasia&Strings
F222	Synth Pad	SynthPad&M12Brss
F223	Synth Pad	SynthPad&TapedSt
F224	Bass	Acoustic Bass
F225	Bass	AcouBass&RideCym
F226	Bass	AcouBass & Brush
F227	Bass	AcouBass & Drums
F228	Bass	Finger Bass Jz
F229	Bass	Finger Bass Pr
F230	Bass	Pick Bass Jz
F231	Bass	Pick Bass Jz OD
F232	Bass	Pick Bass Pr
F233	Bass	Pick Bass Pr OD
F234	Bass	Slap Bass
F235	Bass	Slap Bass Delay
F236	Bass	FM Bass
F237	Bass	Timpani Normal
F238	Bass	Timpani Roll
F239	Bass	Legato Strg Bass
F240	Bass	Symphonic Bass
F241	Bass	ElecPiano Bass
F242	Bass	FingBas+HarmStacc
F243	Bass	AcouBass & Trbn
F244	Bass	Pick Bass Sp1
F245	Bass	Pick Bass&Pulse66
F246	Bass	ElecPiano Bass Vel
F247	Bass	AcousticBass+FM
F248	Synth Lead	Square Ld Bright
F249	Synth Lead	Square Ld Mellow
F250	Synth Lead	Saw Ld
F251	Synth Lead	Fifth Ld
F252	Synth Lead	Sync Ld U&D
F253	Synth Lead	Sync Ld D
F254	Synth Lead	Noise Ld
F255	Synth Lead	OPZ LFO Ld
F256	Synth Lead	Lucy Arp
F257	Synth Lead	Gimme^3 Ld
F258	Synth Lead	Tel Line Ld
F259	Synth Lead	Hot Stuff Ld
F260	Synth Lead	Take On Ld
F261	Synth Lead	B.Light Ld
F262	Synth Lead	Unison Ld
F263	Synth Lead	UnisonNoise Ld
F264	Synth Lead	Chocolate Seq
F265	Synth Lead	Puttin'RitzPrchd
F266	Synth Lead	Synth Ralf
F267	Synth Lead	Pulse75&Alto Sax
F268	Synth Lead	Saw & M12 Brass
F269	Synth Lead	Pulse80+Violin
F270	Synth Lead	SquareDuet Prchd

Patch #	Category	Name
F271	Free Reed	Accordion M
F272	Free Reed	Accordion LM
F273	Free Reed	Accordion LMH
F274	Free Reed	Accordion LMMH
F275	Free Reed	Accordion MMM
F276	Free Reed	Reed Organ
F277	Free Reed	Reed Organ Oct
F278	Free Reed	Harm Single
F279	Free Reed	Harm Chro Norm
F280	Free Reed	Harm Chro Vib
F281	Free Reed	Harm Chro OD
F282	Free Reed	Harm FM
F283	Free Reed	Melodion S-32
F284	Free Reed	Melodion PRO-44
F285	Free Reed	Melodion M-37
F286	Free Reed	Melodion M-37Twin
F287	Free Reed	MelodionM37ODWah
F288	Free Reed	Melodion B-24
F289	Free Reed	Melodion 2 Prchd
F290	Free Reed	Melodion 3 Prchd
F291	Free Reed	Melodion 4 Prchd
F292	Free Reed	MelodnP44+HarChr
F293	Free Reed	MelodnB24+Marimba
F294	Free Reed	HarChrVb+AltoSax
F295	Percussion	Ride Cymbal
F296	Percussion	Brush Snare Drum
F297	Percussion	Wind Chime
F298	Percussion	Tone Tang
F299	Percussion	OH WlTnC&WindChm
F300	Percussion	OH WlTnF&WindChm
F301	ChroPerc	Celesta
F302	ChroPerc	Celesta Ens.
F303	Wind	Trumpet Loud
F304	Wind	French Horn
F305	Wind	Fr+M12 Horn Ens.
F306	Ethnic	Pop Koto
F307	Ethnic	Pop Koto Delay
F308	Ethnic	Taisho Koto
F309	Ethnic	TaishoKoto PrChd
F310	Ethnic	Taisho Koto Trem
F311	Ethnic	Kyo Koto
F312	Ethnic	Kyo Koto Ens.
F313	Bass	Bs. Org 500 Brs
F314	Bass	Bs. Org 500 Str
F315	Bass	Bs. Org 500 Wood

◆ PIANO / ENSEMBLE PATCH PARAMETERS

Category	Parameter	NRPN		SysEx Address			SysEx	Data
		MSB (63)	LSB (62)	MSB to LSB			Length	Data length 01 uses MSB only, length 02 uses MSB and LSB.
Name	Patch Name	--	--	--	--	--	--	16 letters
Volume "s" means; 3: Piano 4: Ensemble	Patch Volume	s1	07	00	s1	07	01	00 - 7F (0 - 127)
Category	Category	--	--	--	--	--	01	00 - 0F 00: A. Piano 08: Wind 01: E. Piano 09: Strings 02: Harpsi 0A: Choir 03: Clav. 0B: Syn. Pad 04: Chro. Perc. 0C: Bass 05: Guitar. 0D: Syn. Lead 06: Ethnic 0E: Free Reed 07: SFX 0F: Percussion
Portamento	On	s1	00	00	s1	00	01	00, 01 (Off, On)
	Mode	s1	01	00	s1	01	01	00, 01 (Every, Legato)
	Rate	s1	02	00	s1	02	01	00 - 7F (0 - 127)
	Mono/Poly	s1	03	00	s1	03	01	00 - 02 (Mono, Poly, PolySus)
	Mono Priority	s1	04	00	s1	04	01	00 - 04 (Auto, Last, High, Low, First)
	Pitch Bend Range Up	s1	05	00	s1	05	01	00 - 0C (0 - 12)
	Pitch Bend Range Down	s1	06	00	s1	06	01	00 - 18 (0 - 24)
ProChord	On	s2	00	00	s2	00	01	00, 01 (Off, On)
	Mode	s2	01	00	s2	01	01	00 - 10 00: Closed 09: Quartet 1 01: Open 0A: Quartet 2 02: Duet 0B Jazz Brass 03: Block 0C: Strings 04: Big Band Saxes 0D: Harmonic Chimes 05: Big Band 0E: Old Time 06: Small Combo 0F: Part 4 Closed 07: Theatre 10: Part 5 Open 08: Hymn
	Disabled	s2	02	00	s2	02	01	00, 01 (Single, Unison)
LFO1, LFO2 "x" means; 3: LFO1 4: LFO2	Trigger Mode	sx	00	00	sx	00	01	00, 01 (Note, Free)
	Waveform	sx	01	00	sx	01	01	00 - 06 (Triangle, Square, Rectangle, Saw Down, Saw Up, S&H, Fluctuation)
	Rate	sx	03	00	sx	03	01	00 - 7F (0 - 127)
	Delay Time	sx	05	00	sx	05	01	00 - 7F (0 - 127)
	Attack Rate	sx	06	00	sx	06	01	00 - 7F (0 - 127)
	Attack Rate Key Track	sx	07	00	sx	07	01	00 - 7F (0 - 127)
Overdrive	On	s5	00	00	s5	00	01	00, 01 (Off, On)
	Type	s5	01	00	s5	01	01	00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp)
	Drive Level	s5	02	00	s5	02	01	00 - 7F (0 - 127)
	Exp. Control On	s5	03	00	s5	03	01	00, 01 (Off, On)
	Crossover Freq	s5	04	00	s5	04	01	00 - 7F (400Hz - 14.7kHz)
	Blend	s5	05	00	s5	05	01	00 - 7F (0 - 127)
Effect 1, Effect 2 "x" means; 6: Effect 1 7: Effect 2	On	sx	00	00	sx	00	01	00, 01 (Off, On)
	Type	sx	01	00	sx	01	01	00 - 03 for Effect1, 00 - 04 for Effect 2 00: Tremolo 00: Auto Pan 01: Wah-Wah 01: Phaser 02: Ring Mod 02: Flanger 03: Compressor 03: Chorus 04: Delay
	Param 1	sx	02	00	sx	02	01	00 - 7F (0 - 127)
	Param 2	sx	03	00	sx	03	01	00 - 7F (0 - 127)
	Param 3	sx	04	00	sx	04	01	00 - 7F (0 - 127)
	Param 4	sx	05	00	sx	05	01	00 - 7F (0 - 127)
	Param 5	sx	06	00	sx	06	01	00 - 7F (0 - 127)
	Param 6	sx	07	00	sx	07	01	00 - 7F (0 - 127)
	Param 7	sx	08	00	sx	08	01	00 - 7F (0 - 127)
	Param 8	sx	09	00	sx	09	01	00 - 7F (0 - 127)
Equalizer	Bass Gain	s8	00	00	s8	00	01	00 - 09 - 12 (-9 - ±0 +9)
	Mid Gain	s8	01	00	s8	01	01	00 - 09 - 12 (-9 - ±0 +9)
	Treble Gain	s8	02	00	s8	02	01	00 - 09 - 12 (-9 - ±0 +9)
	Bass Freq	s8	03	00	s8	03	01	00 - 18 (20 - 308Hz)
	Mid Freq	s8	04	00	s8	04	01	00 - 0F (250Hz - 3.1kHz)
	Treble Freq	s8	05	00	s8	05	01	00 - 13 (3.0k - 8.0kHz)

Category	Parameter	NRPN		SysEx Address			SysEx	Data
		MSB (63)	LSB (62)	MSB to LSB			Length	Data length 01 uses MSB only, length 02 uses MSB and LSB.
Component 1 - 4 "x" means; 9: Component 1 A: Component 2 B: Component 3 C: Component 4	On	sx	00	00	sx	00	01	00, 01 (Off, On)
	Key Range Low	sx	01	00	sx	01	01	00 - 7F: note number
	Key Range High	sx	02	00	sx	02	01	00 - 7F: note number
	Velocity Range Low	sx	03	00	sx	03	01	01 - 7F (1 - 127)
	Velocity Range High	sx	04	00	sx	04	01	01 - 7F (1 - 127)
	Velocity Depth	sx	05	00	sx	05	01	00 - 7F (0 - 200 %)
	Velocity Offset	sx	06	00	sx	06	01	00 - 40 - 7F (-64 - ±0 - +63)
	Note Delay Source	sx	07	00	sx	07	01	00 - 03 (Component 1 - 4)
	Note Delay Mode	sx	08	00	sx	08	01	00 - 02 (Note On, Off Vel, Off Env)
	Note Off Threshold	sx	09	00	sx	09	01	00 - 7F (0 - 127)
	Note On Delay Time	sx	0A	00	sx	0A	01	00 - 7F (0 - 127)
	Note Off Delay Time	sx	0B	00	sx	0B	01	00 - 7F (0 - 127)
	Pitch EG Key Track Attack	sx	0C	00	sx	0C	01	00 - 7F (0 - 127)
	Pitch EG Key Track Decay	sx	0D	00	sx	0D	01	00 - 7F (0 - 127)
	Pitch EG Key Track Slope	sx	0E	00	sx	0E	01	00 - 7F (0 - 127)
	Pitch EG Key Track Release	sx	0F	00	sx	0F	01	00 - 7F (0 - 127)
	Pitch EG Vel Track Attack	sx	10	00	sx	10	01	00 - 7F (0 - 127)
	Pitch EG Vel Track Release	sx	11	00	sx	11	01	00 - 7F (0 - 127)
	Pitch EG Attack Rate	sx	12	00	sx	12	01	00 - 7F (0 - 127)
	Pitch EG Decay Rate	sx	13	00	sx	13	01	00 - 7F (0 - 127)
	Pitch EG Breakpoint Level	sx	14	00	sx	14	01	00 - 7F (0 - 127)
	Pitch EG Slope Rate	sx	15	00	sx	15	01	00 - 7F (0 - 127)
	Pitch EG Sustain Level	sx	16	00	sx	16	01	00 - 7F (0 - 127)
	Pitch EG Release Rate	sx	17	00	sx	17	01	00 - 7F (0 - 127)
	Filter EG Key Track Attack	sx	18	00	sx	18	01	00 - 7F (0 - 127)
	Filter EG Key Track Decay	sx	19	00	sx	19	01	00 - 7F (0 - 127)
	Filter EG Key Track Slope	sx	1A	00	sx	1A	01	00 - 7F (0 - 127)
	Filter EG Key Track Release	sx	1B	00	sx	1B	01	00 - 7F (0 - 127)
	Filter EG Vel Track Attack	sx	1C	00	sx	1C	01	00 - 7F (0 - 127)
	Filter EG Vel Track Release	sx	1D	00	sx	1D	01	00 - 7F (0 - 127)
	Filter EG Attack Rate	sx	1E	00	sx	1E	01	00 - 7F (0 - 127)
	Filter EG Decay Rate	sx	1F	00	sx	1F	01	00 - 7F (0 - 127)
	Filter EG Breakpoint Level	sx	20	00	sx	20	01	00 - 7F (0 - 127)
	Filter EG Slope Rate	sx	21	00	sx	21	01	00 - 7F (0 - 127)
	Filter EG Sustain Level	sx	22	00	sx	22	01	00 - 7F (0 - 127)
	Filter EG Release Rate	sx	23	00	sx	23	01	00 - 7F (0 - 127)
	Amp EG Key Track Attack	sx	24	00	sx	24	01	00 - 7F (0 - 127)
	Amp EG Key Track Decay	sx	25	00	sx	25	01	00 - 7F (0 - 127)
	Amp EG Key Track Slope	sx	26	00	sx	26	01	00 - 7F (0 - 127)
	Amp EG Key Track Release	sx	27	00	sx	27	01	00 - 7F (0 - 127)
	Amp EG Vel Track Attack	sx	28	00	sx	28	01	00 - 7F (0 - 127)
	Amp EG Vel Track Release	sx	29	00	sx	29	01	00 - 7F (0 - 127)
	Amp EG Attack Rate	sx	2A	00	sx	2A	01	00 - 7F (0 - 127)
	Amp EG Decay Rate	sx	2B	00	sx	2B	01	00 - 7F (0 - 127)
	Amp EG Breakpoint Level	sx	2C	00	sx	2C	01	00 - 7F (0 - 127)
	Amp EG Slope Rate	sx	2D	00	sx	2D	01	00 - 7F (0 - 127)
	Amp EG Sustain Level	sx	2E	00	sx	2E	01	00 - 7F (0 - 127)
	Amp EG Release Rate	sx	2F	00	sx	2F	01	00 - 7F (0 - 127)
	Amp EG Coef Attack	sx	30	00	sx	30	01	00 - 7F (0 - 127; Exponential - Linear)
	Amp EG Coef Decay&Slope	sx	31	00	sx	31	01	00 - 7F (0 - 127; Exponential - Linear)
	Amp EG Coef Release	sx	32	00	sx	32	01	00 - 7F (0 - 127; Exponential - Linear)
	Osc Waveform Category	sx	34	00	sx	34	01	00 - 0F (1 - 16)
	Osc Waveform Number	sx	35	00	sx	35	02	00 00 - 01 7F (1 - 256)
	Osc Transpose	sx	36	00	sx	36	02	3F 41 - 40 00 - 40 3F (-63 - ±0 - +63 semitones)
	Osc Fine Tune	sx	37	00	sx	37	02	3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 cents)
	Osc Pitch Key Track	sx	38	00	sx	38	02	3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %)
	Osc Stretch Tune Depth	sx	39	00	sx	39	01	00 - 7F (0 - 127)
	Osc Pitch Bend On	sx	3A	00	sx	3A	01	00, 01 (Off, On)
	Osc LFO1 Depth	sx	3C	00	sx	3C	01	00 - 7F (0 - 127)
	Osc LFO1 Mod Depth	sx	3D	00	sx	3D	01	00 - 7F (0 - 127)
	Osc LFO2 Depth	sx	3E	00	sx	3E	01	00 - 7F (0 - 127)
	Osc LFO2 Mod Depth	sx	3F	00	sx	3F	01	00 - 7F (0 - 127)
	Osc Pitch EG Depth	sx	40	00	sx	40	02	3F 40 - 40 00 - 40 3F (-64 - ±0 - +63)
	Osc Pitch EG Vel Track	sx	41	00	sx	41	01	00 - 64 (0 - 100 %)
	Filter Mode	sx	44	00	sx	44	01	00, 01 (LP12, HP12)
	Filter Cutoff Freq	sx	45	00	sx	45	01	00 - 7F (0 - 127)
	Filter Resonance	sx	46	00	sx	46	01	00 - 7F (0 - 127)
	Filter Cutoff Key Track	sx	47	00	sx	47	02	3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %)
	Filter EG Vel Track	sx	48	00	sx	48	01	00 - 7F (0 - 100 %)
	Filter LFO1 Depth	sx	49	00	sx	49	01	00 - 7F (0 - 127)
	Filter LFO1 Mod Depth	sx	4A	00	sx	4A	01	00 - 7F (0 - 127)
	Filter LFO2 Depth	sx	4B	00	sx	4B	01	00 - 7F (0 - 127)
	Filter LFO2 Mod Depth	sx	4C	00	sx	4C	01	00 - 7F (0 - 127)
	Filter Cutoff EG Depth	sx	4E	00	sx	4E	02	3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %)
	Amp Level Vel Depth	sx	4F	00	sx	4F	02	3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %)
	Amp Level	sx	51	00	sx	51	01	00 - 7F (0 - 127)
	Amp Pan	sx	52	00	sx	52	01	00 - 40 - 7F (Left - Center - Right)
	Amp Pan Image	sx	53	00	sx	53	01	00 - 04 (Fixed, L-R, R-L, Pyramid, Inverted)
	Amp LFO1 Depth	sx	54	00	sx	54	01	00 - 7F (0 - 127)
	Amp LFO1 Mod Depth	sx	55	00	sx	55	01	00 - 7F (0 - 127)
	Amp LFO2 Depth	sx	56	00	sx	56	01	00 - 7F (0 - 127)
	Amp LFO2 Mod Depth	sx	57	00	sx	57	01	00 - 7F (0 - 127)
	Output Bus	sx	58	00	sx	58	01	00, 01 (Effect, Dry)

◆ PIANO / ENSEMBLE WAVEFORM LIST

Category		Name	
1	A. Piano	1	GrandPf Yam CF3
		2	GrandPf Stw D St
		3	GndPf StwDSt Rel
		4	UpUf Regular
		5	UpUf Honky
		6	Electric Grand
		7	Toy Pf Kaw
		8	Toy Pf Kaw Rel
		9	Toy Pf Sch
		10	Toy Pf Sch Rel
		11	Pop Piano CF
2	E. Piano	1	EP Tine Mk1 On
		2	EP Tine Mk1 Off
		3	EP Tine Mk2 On
		4	EP Reed 200A
		5	E.Piano FM
		6	E.Piano FM Cho
		7	EP Tine Mk1 Soft
		8	EP Reed Soft
3	Harpsichord	1	Hpsichrd Back
		2	Hpsichrd Front
		3	Hpsichrd Buff
		4	Hpsi Off
4	Clav	1	Clav AC
		2	Clav AD
		3	Clav BC
		4	Clav BD
		5	Clav Off
5	Chro. Perc.	1	Xylophone YX
		2	Marimba YM Norm
		3	Marimba YM Trem
		4	Glockenspiel
		5	Glock. X-66
		6	Vibraphone YV
		7	Tublar Bells
		8	Tub Bells FM
		9	Tub Bells TW
		10	Church Bell
		11	Wine Glass
		12	Tonechimes
		13	Hand Bells
		14	Syn. Celesta
		15	Digi Bell 1
		16	Digi Bell 2
		17	Crystal
		18	Music Box
		19	Celesta
6	Guitar	1	Nylon-Str Gt.
		2	Steel-Str Gt.
		3	12Str Gt. A
		4	12Str Gt. B
		5	Jazz Gt.
		6	Pedal Steel Gt
		7	Orch Harp
		8	OH Whole Tone C
		9	OH Whole Tone F
		10	Pizzicato Str.
7	Ethnic	1	Dulcimer
		2	Sitar
		3	Tanpura
		4	Banjo
		5	Soh
		6	Pan Pipes
		7	Taisho Koto Lo
		8	Taisho Koto Hi
		9	Taisho Koto ChrA
		10	Taisho Koto ChrB
		11	TaiKoto ChdTremA
		12	TaiKoto ChdTremB
		13	Soh Toki
8	SFX	1	Sine
		2	White Noise
		3	Rain
		4	TelephoneRingSus
		5	TelephoneRingRel
		6	E. Driver Sus
		7	E. Driver Rel
9	Wind	1	Trumpet Str
		2	Trumpet Vib
		3	Trumpet Muted
		4	Tp. Fall Sus
		5	Tp. Fall Atk
		6	Tp. Grs Up Sus
		7	Trumpet Sect.
		8	Trombone Str
		9	Trombone Muted
		10	Tb. Fall Sus
		11	Tb. Fall Atk
		12	Flute Str
		13	Flute Vib
		14	Flute Atk
		15	Alto Sax Str
		16	Alto Sax Vib
		17	Tenor Sax Str
		18	Tenor Sax Vib
		19	Bari Sax Str
		20	Recorder
		21	Flute Taped
		22	M12 Box Brass 1
		23	M12 Box Brass 2
		24	M12 Brazz 1
		25	M12 Brazz 2
		26	M12 Horn Ens 1
		27	M12 Horn Ens 2
		28	Trumpet Loud
		29	French Horn
10	Strings	1	Str. Legato
		2	Str. Section
		3	Synth Str. Mlw
		4	Synth Str. Bri
		5	Sol. Str.
		6	Violins Taped
		7	Violin
		8	Glass Harp St
		9	Glass Harp Mono
11	Choir	1	Choir Aah CM
		2	Choir Doo CM
		3	Vocal CM Tn/S
		4	Choir Taped
12	Synth Pad	1	PWM
		2	EPFM Pad
		3	WG Pad Bright
		4	WG Pad Mellow
		5	Noise Choir
13	Bass	1	Acoustic Bs On
		2	Acoustic Bs Off
		3	Finger Bs Jz
		4	Finger Bs Pr
		5	Pick Bs Jz
		6	Pick Bs Pr
		7	Slap Bs Jz
		8	FM Bass
		9	Timpani Single
		10	Timpani Roll
		11	Timpani Gliss
		12	Fretless Bs
		13	EB-500 Brass
		14	EB-500 Strings
		15	EB-500 Wood
14	Synth Lead	1	Square
		2	Pulse 66%
		3	Pulse 75%
		4	Pulse 80%
		5	Sawtooth
		6	Kinura
		7	Lucy
		8	Even Bars
		9	OPZ LFO
		10	Osc. Sync U/D
		11	Osc. Sync D
15	Free Reed	1	Accordion
		2	Acdn SubOct
		3	Reed Organ
		4	Melodion B-24
		5	Melodion —37
		6	Melodion —37Oct
		7	Melodion PRO-44
		8	Melodion S-32
		9	Harm Single
		10	Harm Chro Norm
		11	Harm Chro Vib
		12	Harm BsChro
		13	Harm Bass Stacc
		14	Harm FM
16	Percussion	1	Ride Cymbal
		2	Crash Cymbal
		3	Crash Cymbal Lp
		4	Wind Chime
		5	Wind Chime Lp
		6	Tone Tang
		7	Jazz BD
		8	Jazz SD
		9	Jazz SD&BD Rnd
		10	Brush SD Swl On
		11	Brush SD Swl Off
		12	Brsh SD Tap/Slap
		13	Brush SD&BD Rnd

◆ MONO SYNTH PATCHES

Patch #	Name
F001	Sine Lead
F002	Saw Lead
F003	Fat Saw w/Chorus
F004	Wild Chorus
F005	SW Synth #1
F006	Staircase 4dg
F007	FM Flute
F008	LeadSqu w/Chor
F009	Synth Trombone
F010	Quartersteps
F011	B-3 Perc Synth
F012	Tuned White Noise
F013	Basic Syn Bass
F014	PHAT Bass
F015	Ed's OB Bass
F016	Chirp Bass
F017	Melodic Solo 1
F018	Perc. Bass
F019	Florian Bass
F020	Hard Solo
F021	Autobahn
F022	Oxygene
F023	Magnetic
F024	Electric Friends
F025	Don't You Go
F026	Blue Monday
F027	Get Enough
F028	Tainted Love
F029	Sweet Dreams
F030	West End Girls
F031	99 Luftballons
F032	You Want Me
F033	Vienna
F034	Pop Muzik Perc
F035	Don't Go Bass
F036	Noise 1
F037	Noise 2
F038	Special PF
F039	Special VG
F040	Aliens
F041	Bright Brass
F042	MG Lead
F043	F. P. Cress.
F044	Spacious Saw Ld
F045	Funny Ld
F046	Oct Saw Ld
F047	Oct Sqr Ld
F048	4th Saw Ld
F049	4th Sqr Ld
F050	I'm Ready

Patch #	Name
F051	Lucky Man
F052	Takarajima
F053	Gut Daze
F054	Sweep Bass
F055	Reso Sweep Bass
F056	Oct. Sweep Bass
F057	Arpie Bass
F058	Chameleon Bass
F059	Rock With You Ld
F060	Beep Ld
F061	Belly Ld
F062	Over Mod Ld
F063	Material Ld
F064	Cool Bass
F065	Metallic Bass
F066	FM Horn
F067	FM Reed
F068	Square Ld
F069	Sqr Alt Oct Ld
F070	Popcorn Ld
F071	Pulse Ld
F072	PWM Tri Ld
F073	PWM S/H Ld
F074	PWM Frac Ld
F075	Square Bass
F076	Sync Up Ld
F077	Sync Down Ld
F078	Sync Up&Down Ld
F079	Sync S/H Ld
F080	Sync Frac Ld
F081	Trancy Ld
F082	Out Of Tune Ld
F083	Sweep Trancy Ld
F084	Sqr With Saw Ld
F085	Saw With Sqr Ld
F086	Noise Ld
F087	Chip Perc.
F088	Falling Noise
F089	Upward Noise
F090	Wind
F091	Seashore
F092	Pitch S/H
F093	Glass Crash
F094	Launch
F095	Percussive Saw
F096	Oct&Vibrato Ld
F097	Glass Crash
F098	Unison Bass
F099	Sqr+Saw Oct Bass
F100	Big Drift

◆ MONO SYNTH PATCH PARAMETERS

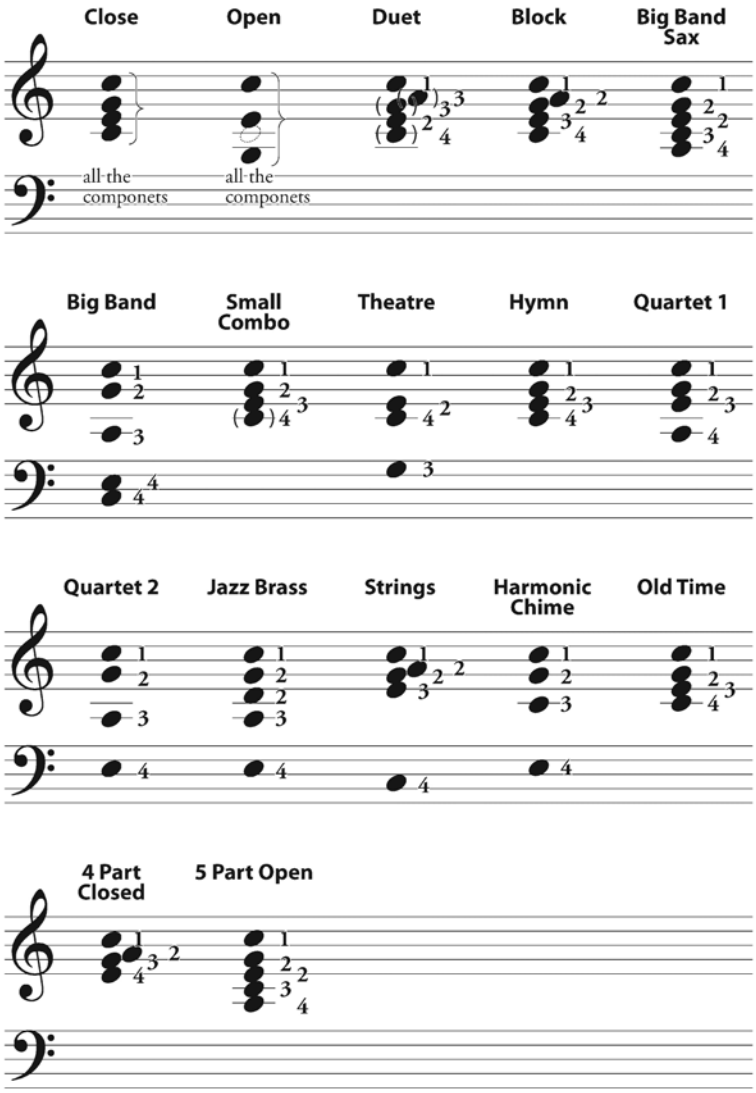
Category	Parameter	NRPN		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				Data length 01 uses MSB only, length 02 uses MSB and LSB.
Common	Patch Name	--	--	--	--	--	10	16 letters
	Volume	51	00	00	51	00	01	00 - 7F (0 - 127)
	Portamento On	51	01	00	51	01	01	00, 01 (Off, On)
	Portamento Mode	51	02	00	51	02	01	00, 01 (Every, Legato)
	Portamento Rate	51	03	00	51	03	01	00 - 7F (0 - 127)
	LFO Trigger Mode	51	04	00	51	04	01	00, 01 (Note, Free)
	LFO Waveform	51	05	00	51	05	01	00 - 05 (Tri, Sqr, Rect, Saw, S/H, Fluc)
	LFO Rate	51	06	00	51	06	01	00 - 7F (0 - 127)
	LFO Delay Time	51	07	00	51	07	01	00 - 7F (0 - 127)
	LFO Attack Rate	51	08	00	51	08	01	00 - 7F (0 - 127)
	LFO Rate Key Track	51	09	00	51	09	01	00 - 7F (0 - 127)
Oscillator	Osc Note Priority	51	0A	00	51	0A	01	00 - 03 (Auto, Last, High, Low)
	Osc Octave	51	0E	00	51	0E	02	3F 7E - 40 00 - 40 02 (-2 - ±0 - +2)
	Osc Type	51	10	00	51	10	01	00 - 05 00: Duo 03: Sync 01: Unison 04: FM 02: Pulse 05: Noise
	Osc Modifier 1	51	11	00	51	11	01	00 - 7F (0 - 127)
	Osc Modifier 2	51	12	00	51	12	01	00 - 7F (0 - 127)
	Osc Modifier 3	51	13	00	51	13	01	00 - 02 (0 - 2)
	Osc Modifier 4	51	14	00	51	14	01	00 - 02 (0 - 2)
	Osc Pitch Key Track	51	15	00	51	15	01	00 - 40 - 7F (-100 - ±0 - +100 cent/note)
	Osc Pitch Bend Range Up	51	16	00	51	16	01	00 - 0C (0 - 12)
	Osc Pitch Bend Range Down	51	17	00	51	17	01	00 - 18 (0 - 24)
	Osc Pitch LFO Depth	51	18	00	51	18	01	00 - 7F (0 - 127)
	Osc Pitch LFO Mod Depth	51	19	00	51	19	01	00 - 7F (0 - 127)
	Osc Pitch EG Depth	51	1A	00	51	1A	01	00 - 40 - 7F (-64 - ±0 - +63)
Filter	Filter Mode	51	1B	00	51	1B	01	00 - 03 (LP12, LP24, HP12, HP24)
	Filter Drive	51	1C	00	51	1C	01	
	Filter Cutoff Freq	51	1D	00	51	1D	01	00 - 7F (0 - 127)
	Filter Resonance	51	1E	00	51	1E	01	00 - 7F (0 - 127)
	Filter Key Track	51	1F	00	51	1F	01	00 - 40 - 7F (-100 - ±0 - +100 cent/note)
	Filter EG Depth	51	20	00	51	20	01	00 - 40 - 7F (-64 - ±0 - +63)
	Filter Levl Vel Track	51	21	00	51	21	01	00 - 7F (0 - 127)
	Filter LFO Depth	51	22	00	51	22	01	00 - 7F (0 - 127)
	Filter LFO Mod Depth	51	23	00	51	23	01	00 - 7F (0 - 127)
Amplifier	Amp Level	51	24	00	51	24	01	00 - 7F (0 - 127)
	Amp Level Vel Depth	51	25	00	51	25	01	00 - 7F (0 - 127)
	Amp LFO Depth	51	27	00	51	27	01	00 - 7F (0 - 127)
	Amp LFO Mod Depth	51	28	00	51	28	01	00 - 7F (0 - 127)
Envelope Generator	EG Trigger Mode	51	29	00	51	29	01	00, 01 (Every, Legato)
	Env Filter Attack	51	2A	00	51	2A	01	00 - 7F (0 - 127)
	Env Filter Decay	51	2B	00	51	2B	01	00 - 7F (0 - 127)
	Env Filter Sustain	51	2C	00	51	2C	01	00 - 7F (0 - 127)
	Env Filter Release	51	2D	00	51	2D	01	00 - 7F (0 - 127)
	Env Amp Attack	51	2E	00	51	2E	01	00 - 7F (0 - 127)
	Env Amp Decay	51	2F	00	51	2F	01	00 - 7F (0 - 127)
	Env Amp Sustain	51	30	00	51	30	01	00 - 7F (0 - 127)
	Env Amp Release	51	31	00	51	31	01	00 - 7F (0 - 127)
Overdrive	On	52	00	00	52	00	01	00, 01 (Off, On)
	Type	52	01	00	52	01	01	00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp)
	Drive Level	52	02	00	52	02	01	00 - 7F (0 - 127)
	Exp. Control On	52	03	00	52	03	01	00, 01 (Off, On)
	Crossover Freq	52	04	00	52	04	01	00 - 7F (400Hz - 14.7kHz)
	Blend	52	05	00	52	05	01	00 - 7F (0 - 127)
Effect 1, Effect 2 "x" means; 3: Effect 1 4: Effect 2	On	5x	00	00	5x	00	01	00, 01 (Off, On)
	Type	5x	01	00	5x	01	01	00 - 03 for Effect1, 00 - 04 for Effect 2 00: Tremolo 00: Auto Pan 01: Wah-Wah 01: Phaser 02: Ring Mod 02: Flanger 03: Compressor 03: Chorus 04: Delay
	Param 1	5x	02	00	5x	02	01	00 - 7F (0 - 127)
	Param 2	5x	03	00	5x	03	01	00 - 7F (0 - 127)
	Param 3	5x	04	00	5x	04	01	00 - 7F (0 - 127)
	Param 4	5x	05	00	5x	05	01	00 - 7F (0 - 127)
	Param 5	5x	06	00	5x	06	01	00 - 7F (0 - 127)
	Param 6	5x	07	00	5x	07	01	00 - 7F (0 - 127)
	Param 7	5x	08	00	5x	08	01	00 - 7F (0 - 127)
	Param 8	5x	09	00	5x	09	01	00 - 7F (0 - 127)
Equalizer	Bass Gain	55	00	00	55	00	01	00 - 09 - 12 (-9 - ±0 +9)
	Mid Gain	55	01	00	55	01	01	00 - 09 - 12 (-9 - ±0 +9)
	Treble Gain	55	02	00	55	02	01	00 - 09 - 12 (-9 - ±0 +9)
	Bass Freq	55	03	00	55	03	01	00 - 18 (20 - 308Hz)
	Mid Freq	55	04	00	55	04	01	00 - 0F (250 - 3.1kHz)
	Treble Freq	55	05	00	55	05	01	00 - 13 (3.0k - 8.0kHz)

◆ PIPE ORGAN STOPS

#	Pipe Voice
1	C-Open Diapason
2	C-Principal
3	C-Diapason
4	C-Bourdon 1
5	C-Bourdon 2
6	C-Gedeckt
7	C-Rohr Flute
8	C-Flute Hamonic
9	C-Flautino
10	C-Voix Cele II
11	C-Clarinet
12	C-Hautbois
13	C-Oboe
14	C-Vox Humana
15	C-Trompette
16	C-Cornet V
17	C-Mixture III
18	C-Mixture IV
19	C-Reserve
20	C-Reserve
21	C-Reserve
22	T-Tibia Clausa
23	T-Brass Saxophone
24	T-Brass Trumpet
25	T-Clarinet
26	T-Brs E.PostHorn
27	T-Orchestral Oboe
28	T-Style D Trumpet
29	T-Viol d'Orchestle
30	T-Vox Humana
31	T-Viol Celeste
32	T-Reserved
33	T-Reserved
34	P-CotVln 32' & Brdn 16'
35	P-CtlBmb 32' & Prn 16'
36	P-CntBrdn 32' & Flte 16'
37	P-Trompette 16'
38	P-Fagott 16'
39	P-SubBs 16' & Gedeckt 8'
40	P-Diapason 8' & Flute 4'
41	P-PrnChors 8' & Mixt IV
42	P-Tibia 16' & Flute 8'
43	P-Diap 16' & PostHorns
44	P-Cornopean
45	P-Reserved
46	P-Reserved

C Classical
T Theatre
P Pedal

◆ ProChord VOICINGS



The chord voicings for the **Small Combo**, **Hymn**, and **Old Time** patterns are somewhat similar; however, the passing chords are different corresponding to the harmonic style for each pattern.

◆ ProChord CHORD TYPES

The date chart below shows the 26 ProChord chord types. The root of the chord will be the first character displayed ©, D, E, F, G, A, B). The root C is shown in the chart.

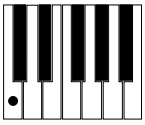
ProChord CHORD TYPES	
Chord Type	**Displayed as**
C Major	C
C Major 6th	C6
C Major 6th add 9	C69
C Major 7th	CM7
C Major 9th	CM9
C Major ♭5	CM-5
C Major add 9	CM+9
C Minor	Cm
C Minor 6th	Cm6
C Minor 7th	Cm7
C Minor 7th ♭5	Cm7-5
C Minor 9th	Cm9
C Minor add 9	Cm+9
C 7th	C7
C 7Th ♭5	C7-5
C 7th ♭9	C7-9
C 7th ♯9	C7#9
C 7th ♯11	C7#11
C 7th add 13	C7+13
C 9th	C9
C 9th ♯5	C9#5
C suspended 4th	Csus4
C 7th suspended 4th	C7sus4
C Diminished	Cdim
C Augmented	Caug
C Augmented 7th	Caug7

◆ ProChord Chords - Basic Chord Types

NOTE: In addition to the method shown below, the entire chord can also be played to produce the same result.

Major Chords

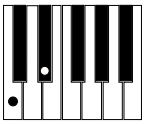
To play a Major chord, play the key that is the NAME of the chord you are playing. For example, to play a C Major chord, Play a "C" key on the LOWER Part (left of the SPLIT Point).



Minor Chords

Minor Chords are formed by Pressing and holding two keys. To play a “C” Minor Chord, first Press and Hold the key that is the NAME of the chord. Second, determine the note which is a minor third above the key you are holding by counting three (3) keys to the right not including the key you are holding. For a C Minor Chord, this note is "E♭":

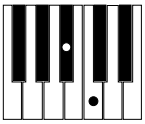
1. C
2. E♭



Seventh Chords

Forming a Seventh Chord requires Pressing and holding two keys. To play a "C" Seventh Chord, play the key that is the NAME of the chord. To determine the second key, count two (2) keys to the left of the first key (B♭ if you are playing a C Seventh Chord). Do not include the first key in your count.

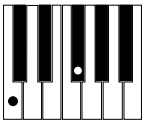
1. C
2. B♭



Diminished Chords

Forming a Diminished Chord requires Pressing and holding two keys. To play a "C" Diminished Chord, play the key that is the NAME of the chord. To determine the second key, count six (6) keys either to the left or the right of the first key (G♭ if you are playing a C Diminished Chord). Do not include the first key in your count.

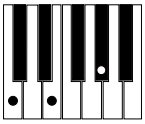
1. C
2. G♭



Augmented Chords

Forming an Augmented Chord requires Pressing and holding three keys. To play a "C" Augmented Chord, play the key that is the NAME of the chord. Next, count four (4) keys to the right. Finally, count four (4) more notes to the right of the key you just added. For a C Augmented Chord, these three notes are:

1. C
2. E
3. G♯



◆ CUSTOM SETS

CUSTOM TONE WHEELS

A-100

F1: #35564
A-102, serial number #35564.

F2: Shiny
Leakage tones with even overtones.

F3: Mixture
Harmonized leakage tones.

B-3

F1: A27563
B-3, serial number #A27563.

F2: #364839
B-3, serial number #364839.

F3: Mixture
Harmonized leakage tones.

C-3

F1: C155596
C-3, serial number #C155596.

F2: Shiny
Leakage tones with even overtones.

F3: Mixture
Harmonized leakage tones.

Mellow

F1: Full Flats
"Flat" frequency response.

F2: Husky
Emphasizes upper and lower frequencies.

F3: Flute Lead
Boosts middle frequencies.

CUSTOM SUB DRAWBARS

F1: B-3 A27563

F2: B-3 #364839

F3: A-100 #33339

Each Custom setting replicates the organ shown above.

CUSTOM LESLIE CABINETS

122 Gentle
Replicates 122 cabinet (Large body, peaking horn driver) heard from a distance, rear.

122 Wild
Replicates 122 cabinet heard from a closer distance, front.

31H-Type
Replicates 31H cabinet heard from a distance, rear.

147 Gentle
Replicates 147 cabinet (Large body, wide range) heard from a distance.

147 Wild
Replicates 147 cabinet heard from a closer distance, front.

145 Gentle
Replicates 145 cabinet (Middle body, slightly narrow range) heard from a distance, rear.

145 Wild
Replicates 145 cabinet heard from a closer distance, front.

PR-40
Replicates a Hammond tone cabinet.

CUSTOM PIPES

Classic
Classical or Liturgical stops.

Theatre 1
Theatre stops based on Wurlitzer Style 210.

Theatre 2
Theater stops based on Wurlitzer Style 260 Special.

◆ CUSTOM TONE WHEEL PARAMETERS

Category	Parameter	SysEx Address MSB to LSB			SysEx Length	Data	Description
Temporary Tone Wheels	Name	--	--	--	--	(10 characters)	
	Foldback Low	10	00	01	01	00 - 0C (TW#01 - #12)	
	Foldback High	10	00	02	01	00 - 05 (TW#91 - #96)	
	Wheel Level	10	01	tt	02	00 00 - 01 41 (0 - 193: -inf, -92.0 - +4.0[dB])	tt: Tone Wheel number; 00 - 0B (#01 - #12), 0C - 17 (#F01 - F12), 18 - 66 (#13 - #91), 67 - 6B (#F92 - #F96)
	Wheel HPF	10	02	tt	01	00 - 7F (0 - 127)	
	Leak Trim	10	03	tt	01	00 - 7F (0 - 127)	tt: Fundamental TW #; 00 - 54 (#01 - #73)
	Matrix Level	20	nn	0g	02	00 00 - 01 41 (0 - 193: -inf, -92.0 - +4.0[dB])	nn: Note number g: Footage(0 = 16', 1 = 5 1/3'... 8 = 1')
	Leak Level	30	tt	ll	02	00 00 - 01 41 (0 - 193: -inf, -92.0 - +4.0[dB])	tt: Fundamental TW #; 00 - 54 (#01 - #73) ll: Leaking TW #; 48 - 66 (#61 - #91)

◆ CUSTOM PEDAL REG PARAMETERS

Category	Parameter	SysEx Address MSB to LSB			SysEx Length	Data	Description
Temporary Pedal Sub Drawbars	Name	--	--	--	--	(10 characters)	
	Normal 16' - 16'	50	00	01	01	00 - 08 (0 - 8)	
	Normal 16' - 5 1/3'	50	00	02	01	00 - 08 (0 - 8)	
	Normal 16' - 8'	50	00	03	01	00 - 08 (0 - 8)	
	Normal 16' - 4'	50	00	04	01	00 - 08 (0 - 8)	
	Normal 16' - 2 2/3'	50	00	05	01	00 - 08 (0 - 8)	
	Normal 16' - 2'	50	00	06	01	00 - 08 (0 - 8)	
	Normal 16' - 1 3/5'	50	00	07	01	00 - 08 (0 - 8)	
	Normal 16' - 1 1/3'	50	00	08	01	00 - 08 (0 - 8)	
	Normal 8' - 16'	50	00	09	01	00 - 08 (0 - 8)	
	Normal 8' - 5 1/3'	50	00	0A	01	00 - 08 (0 - 8)	
	Normal 8' - 8'	50	00	0B	01	00 - 08 (0 - 8)	
	Normal 8' - 4'	50	00	0C	01	00 - 08 (0 - 8)	
	Normal 8' - 2 2/3'	50	00	0D	01	00 - 08 (0 - 8)	
	Normal 8' - 2'	50	00	0E	01	00 - 08 (0 - 8)	
	Normal 8' - 1 3/5'	50	00	0F	01	00 - 08 (0 - 8)	
	Normal 8' - 1 1/3'	50	00	10	01	00 - 08 (0 - 8)	

◆ CUSTOM PIPE PARAMETERS

Category	Parameter	SysEx Address MSB to LSB			SysEx Length	Data	Description
Pipes	Name	--	--	--	--	(10 characters)	
	Assign	40	01	pp	02	00 00 - 00 2D (C-Open Diapason - P-Cornopean)	pp: Pipe Stop number 00 - 13 (#01 - #20)
	Tremulant	40	02	pp	01	00, 01 (Off, On)	
	Footage	40	03	pp	01	00 - 09 (32' - 1')	
	Volume	40	04	pp	02	00 00 - 01 41 (0 - 193: -inf, -92.0 - +4.0[dB])	
	Detune	40	05	pp	02	3F 4E - 40 00 - 40 32 (-50 - ±0 - +50[cent])	
	Chiff	40	06	pp	01	00 - 03 (Off, Soft, Normal, Loud)	
	Cut Off Frequency	40	07	pp	02	3F 01 - 40 00 (-127 - 0)	
	Pan - Direction	40	08	pp	01	00 - 40 - 7F (L64 - Center - R63)	
	Pan - Imaging	40	09	pp	01	00 - 04 (Fixed, L-R, R-L, Pyramid, Inverted Pyramid)	

◆ CUSTOM LESLIE PARAMETERS

Category	Parameter	NRPN		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				Data length 01 uses MSB only, length 02 uses MSB and LSB.
Cabinet	Name	--	--	--	--	--	--	(10 Characters)
	Speaker	06	17	00	06	17	01	00 - 07 00: 145 Front 04: 122 Front 01: 145 Rear 05: 122 Rear 02: 147 Front 06: Cone Type 03: 147 Rear 07: PR-40
	Slow Speed Horn	06	01	00	06	01	02	00 00, 00 01 - 00 65 (0, 20 - 120 rpm)
	Slow Speed Drum	06	02	00	06	02	02	00 00, 00 01 - 00 65 (0, 20 - 120 rpm)
	Fast Speed Horn	06	03	00	06	03	02	00 00, 00 01 - 02 2D (0, 200 - 500 rpm)
	Fast Speed Drum	06	04	00	06	04	02	00 00, 00 01 - 02 2D (0, 200 - 500 rpm)
	Rise Time Horn	06	09	00	06	09	01	00 - 24 (0.8 - 12.5 sec)
	Rise Time Drum	06	0A	00	06	0A	01	00 - 23 (1.0 - 12.5 sec)
	Fall Time Horn	06	0B	00	06	0B	01	00 - 24 (0.8 - 12.5 sec)
	Fall Time Drum	06	0C	00	06	0C	01	00 - 23 (1.0 - 12.5 sec)
	Brake Time Horn	06	0D	00	06	0D	01	00 - 24 (0.8 - 12.5 sec)
	Brake Time Drum	06	0E	00	06	0E	01	00 - 23 (1.0 - 12.5 sec)
	Delay Time Horn	06	0F	00	06	0F	01	00 - 05 (0.0 - 1.0 sec)
	Delay Time Drum	06	10	00	06	10	01	00 - 05 (0.0 - 1.0 sec)
	Mic. Width Horn	06	11	00	06	11	01	00 - 64 (0 - 100 cm)
	Mic. Width Drum	06	12	00	06	12	01	00 - 64 (0 - 100 cm)
	Mic. Center Horn	06	05	00	06	05	01	0E - 40 - 72 (-50 - ±0 - +50 cm)
	Mic. Center Drum	06	06	00	06	06	01	0E - 40 - 72 (-50 - ±0 - +50 cm)
	Mic. Distance Horn	06	07	00	06	07	02	00 1E - 01 48 (30 - 200 cm)
	Mic. Distance Drum	06	08	00	06	08	02	00 1E - 01 48 (30 - 200 cm)
	Level Horn	06	13	00	06	13	01	00, 01 - 4D (-Inf, -76 - 0 dB)
	Level Drum	06	14	00	06	14	01	00, 01 - 4D (-Inf, -76 - 0 dB)
	Level Sub Bass	06	15	00	06	15	01	00, 01 - 4D (-Inf, -76 - 0 dB)

◆ SYSTEM PARAMETERS

Category	Parameter	NRPN		SysEx Address			SysEx	Data
		MSB (63)	LSB (62)	MSB to LSB			Length	
Tune	Master Tune	01	00	00	01	00	02	032E - 0338 - 0342 (A= 430 - 440 - 450 Hz)
	Transpose	01	01	00	01	01	02	3F 7A - 40 00 - 40 06 (-6 - ±0 - +6 semitones)
	Velocity Offset	01	02	00	01	02	02	3F 60 - 40 00 - 40 20 (-32 ±0 - +32)
	Pitch Bend Depth	01	03	00	01	03	01	00 - 0D (Patch, ±0 - ±12 semitones)
	Organ Sounding Point	01	04	00	01	04	01	00, 01 (Shallow, Deep)
	TW Brake Range	01	05	00	01	05	02	3F 68 - 40 00 - 40 0C (-24 - ±0 - +12 semitones)
	TW Brake Time	01	06	00	01	06	01	00 - 31 (0.1 - 5.0 sec)
	TW Brake Amp	01	07	00	01	07	01	00, 01 (Off, On)
	Transpose Act Organ	01	08	00	01	08	01	00, 01 (Every, Next)
	Transpose Act Pinao	01	09	00	01	09	01	00, 01 (Every, Next)
	Transpose Act Ensemble	01	0A	00	01	0A	01	00, 01 (Every, Next)
	Transpose Act Synth	01	0B	00	01	0B	01	00, 01 (Every, Next)
Expression	Source	02	00	00	02	00	01	00 - 02 (Pedal, MIDI, Both)
	Min. Level	02	01	00	02	01	01	00 - 29 (Off, -40 - ±0dB)
	Min. Limit LF	02	02	00	02	02	01	00 - 29 (Off, -40 - ±0dB)
	Min. Limit HF	02	03	00	02	03	01	00 - 29 (Off, -40 - ±0dB)
	Pedal Type	02	06	00	02	06	01	00, 01 (H or R, Y or K)
	Gain	02	07	00	02	07	01	00 - 3C (70 - 130 %)
	Curve	02	08	00	02	08	01	00 - 02 (Audio, Linear, Capacitor)
Damper	Pedal Type	03	03	00	03	03	01	00 - 03 (Switch, HalfY, HalfR, HalfK)
	Gain	03	04	00	03	04	01	00 - 3C (70 - 130 %)
Foot Switch	Mode Foot Tip	07	00	00	07	00	01	00 - 24 00: Off 07: Spring Shock 01: Leslie S/F Alt 08: MFX2 Delay Time 02: Leslie S/F Mom 09: Org U&L Sustain 03: Leslie S/F Tri 0A: Pedal To Lower 04: TW Brake 0B-23: Bass 1C - 3C 05: Favorite Fwd 24: ProChord 06: Favorite Rev
	Mode Foot Ring	07	01	00	07	01	01	
	Mode Leslie Tip	07	02	00	07	02	01	
	Mode Leslie Ring	07	03	00	07	03	01	
	Leslie Switch Device	07	04	00	07	04	01	00, 01 (Foot Switch, Leslie Switch)
User Button	Mode	08	00	00	08	00	01	00 - 0E 00: Off 08: Organ MFX2 01: Pedal Sustain 09: Piano MFX1 02: Org U Sustain 0A: Piano MFX2 03: Org L Sustain 0B: Ens MFX1 04: TW Brake 0C: Ens MFX2 05: Spring Shock 0D: Synth MFX1 06: MFX2 Delay Time 0E: Synth MFX2 07: Organ MFX1
Display	Short Cut	--	--	--	--	--	--	00 - 03 (0, 1, 2 sec, No)
	Time Out	--	--	--	--	--	--	00 - 03 (4, 8, 16 sec, No)
	Pop Up	--	--	--	--	--	--	00 - 03 (No, 5, 10, 20 sec)
	Auto Power Off	--	--	--	--	--	--	00, 01 (Disable, 30min)
	Knobs	--	--	--	--	--	--	00, 01 (Every, Across)
	USB Mass Storage	--	--	--	--	--	--	00, 01 (Off, On)
Audio	Individual Out	04	00	00	04	00	01	00 - 06 00: Off 04: Piano / Ensemble 01: Piano Stereo 05: Piano / Synth 02: Ensemble Stereo 06: Ensemble / Synth 03: Synth Stereo
	Ext. Leslie Ch.	04	01	00	04	01	01	00 - 02 (1, 3, 1+Line)
	Use Rotary Out	04	02	00	04	02	01	00, 01 (Off, On)
	Use Pedal Out	04	03	00	04	03	01	00, 01 (Off, On)
Master Equalizer	On	05	00	00	05	00	01	00, 01 (Off, On)
	Bass Gain	05	01	00	05	01	01	00 - 09 - 12 (-9 - ±0 +9)
	Mid Gain	05	02	00	05	02	01	00 - 09 - 12 (-9 - ±0 +9)
	Treble Gain	05	03	00	05	03	01	00 - 09 - 12 (-9 - ±0 +9)
	Bass Freq	05	04	00	05	04	01	00 - 18 (20 - 308Hz)
	Mid Freq	05	05	00	05	05	01	00 - 0F (250 - 3.1kHz)
	Treble Freq	05	06	00	05	06	01	00 - 13 (3.0k - 8.0kHz)
	Mid Q	05	07	00	05	07	01	00 - 3F (0 - 63)

Category	Parameter	NRPN		SysEx Address			SysEx	Data
		MSB (63)	LSB (62)	MSB to LSB			Length	
MIDI Common	MIDI In Mode	--	--	--	--	--	--	00 - 09 00: Upper 05: Organ Upper 01: Lower 06: Piano 02: Pedal 07: Ensemble 03: Lower+Pedal 08: Synth 04: Upper+Pedal 09: Sequencer
	Local Control	--	--	--	--	--	--	00, 01 (Off, On)
	TRx NRPN	--	--	--	--	--	--	00, 01 (Off, On)
	TRx Program Change	--	--	--	--	--	--	00, 01 (Off, On)
	TRx Drawbar Regi	--	--	--	--	--	--	00, 01 (Off, On)
	Tx Multi Contact	--	--	--	--	--	--	00, 01 (Off, On)
	Rx Multi Contact	--	--	--	--	--	--	00, 01 (Off, On)
	Tx External Zone	--	--	--	--	--	--	00, 01 (Off, On)
	Device ID	--	--	--	--	--	--	00 - 7F (0 - 127)
	Rx Dump	--	--	--	--	--	--	00, 01 (Off, On)
MIDI Channel	Tx Upper	--	--	--	--	--	--	00 - 0F (1 - 16)
	Tx Lower	--	--	--	--	--	--	00 - 0F (1 - 16)
	Tx Pedal	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Upper	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Lower	--	--	--	--	--	--	00 - 0F (1 - 16)
	Rx Pedal	--	--	--	--	--	--	00 - 0F (1 - 16)
Patch Load	Organ - Link L/P	60	01	00	60	01	01	00, 01 (Off, On)
	Combi - Int Zone	60	02	00	60	02	01	00, 01 (Off, On)
	Combi - Ext Zone	60	03	00	60	03	01	00, 01 (Off, On)
	Organ - Organ Effect	60	04	00	60	04	01	00, 01 (Off, On)
	Organ - Animation	60	05	00	60	05	01	00, 01 (Off, On)
	Combi - Reverb	60	06	00	60	06	01	00, 01 (Off, On)
	Organ - Drawbar	60	07	00	60	07	01	00, 01 (Off, On)
	Organ - Percussion	60	08	00	60	08	01	00, 01 (Off, On)
	Organ - Registration	60	09	00	60	09	01	00, 01 (Off, On)
	Combi - Piano	60	0A	00	60	0A	01	00, 01 (Off, On)
	Combi - Ensemble	60	0B	00	60	0B	01	00, 01 (Off, On)
	Combi - Synth	60	0C	00	60	0C	01	00, 01 (Off, On)
	Combi - Organ	60	0D	00	60	0D	01	00, 01 (Off, On)

FAVORITES

Category	Parameter	SysEx Address MSB to LSB			SysEx Length	Data	Default	Description
Favorites	Assign	73	0b	0n	02	00 00 - 00 63 (B001 - B100), 00 64 - 01 47 (U001 - U100), 01 48 - 02 2B (F001 - F100)	same as Combination#	b: Bank 0 - 9 (1 - 10) n: Number 0 - 9 (1 - 10)

Example Set 5-2 at U005 via System Exclusive.....F0 55 dd 10 24 13 73 04 01 00 68 F7 (dd = Device ID)

◆ MIDI TEMPLATES

Template		Basic	2 Man Lower	2 Man Upper
Messages	MIDI IN	Sequence	Lower	Upper
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1	1 (disregarded, off)	1 (disregarded, off)
	Rx. Lower	2	2 (disregarded, off)	2 (disregarded, off)
	Rx. Pedal	3	3 (disregarded, omni)	3 (disregarded, omni)
Comments		Record and Playback between the SK PRO (stand alone) and external sequencer.	Play with expanded LOWER Keyboard to the MIDI IN port. (*1) Your performance will be transmitted from the MIDI OUT Port and recorded by an external sequencer.	Play with expanded UPPER Keyboard to the MIDI IN port. Same as (*1).

Template		Pedal KBD	3 KBD Lower	3 KBD Upper
Messages	MIDI IN	Pedal	Low + Ped	Up + Ped
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1 (disregarded, off)	1	1
	Rx. Lower	2 (disregarded, off)	2	2
	Rx. Pedal	3 (disregarded, omni)	3	3
Comments		Play with expanded Pedalboard to the MIDI IN Port. Same as (*1).	Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) to the MIDI IN Port. Same as (*1).	Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) to the MIDI IN Port. Same as (*1).

Template		Organ Upper	Piano	Ensemble
Messages	MIDI IN	Organ Upper	Piano	Ensemble
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	Off	Off
Transmit Channel	Tx. Upper	1	1	1
	Tx. Lower	2	2	2
	Tx. Pedal	3	3	3
	Rx. Upper	1 (disregarded, off)	1 (disregarded, off)	1 (disregarded, off)
	Rx. Lower	2 (disregarded, off)	2 (disregarded, off)	2 (disregarded, off)
	Rx. Pedal	3 (disregarded, off)	3 (disregarded, off)	3 (disregarded, off)
Comments		Play the ORGAN Section Upper directly by expanded MIDI keyboard to the MIDI IN port.	Play the PIANO Section directly by expanded MIDI keyboard to the MIDI IN port.	Play the ENSEMBLE Section directly by expanded MIDI keyboard to the MIDI IN port.

Template		Synth	EXZ	EXZ 2 Man Lower
Messages	MIDI IN	Synth	Sequence	Lower
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	Off	On	On
Transmit Channel	Tx. Upper	1	Off	Off
	Tx. Lower	2	Off	Off
	Tx. Pedal	3	Off	Off
	Rx. Upper	1 (disregarded, off)	Off	Off
	Rx. Lower	2 (disregarded, off)	Off	Off
	Rx. Pedal	3 (disregarded, off)	Off	Off
Comments		Play the MONO SYNTH Section directly by expanded MIDI keyboard to the MIDI IN port.	(*2) Control the MIDI equipment by using External Zones and MIDI OUT Port.	Play with expanded LOWER Keyboard to the MIDI IN port. Same as (*2).

Template		ExZ 2 Man Upper	EXZ Pedal KBD	EXZ 3 KBD Lower
Messages	MIDI IN	Upper	Pedal	Low + Ped
	Local Control	On	On	On
	NRPN	On	On	On
	Program Change	On	On	On
	Drawbar Registration	On	On	On
	External Zone	On	On	On
Transmit Channel	Tx. Upper	Off	Off	Off
	Tx. Lower	Off	Off	Off
	Tx. Pedal	Off	Off	Off
	Rx. Upper	Off	1 (disregarded, off)	1
	Rx. Lower	Off	2 (disregarded, off)	2
	Rx. Pedal	Off	3 (disregarded, omni)	3
Comments		Play with expanded UPPER Keyboard to the MIDI IN port. Same as (*2).	Play with expanded Pedalboard to the MIDI IN port. Same as (*2).	Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) to the MIDI IN port. Same as (*2).

Template		EXZ 3 KBD Upper
Messages	MIDI IN	Up + Ped
	Local Control	On
	NRPN	On
	Program Change	On
	Drawbar Registration	On
	External Zone	On
Transmit Channel	Tx. Upper	Off
	Tx. Lower	Off
	Tx. Pedal	Off
	Rx. Upper	1
	Rx. Lower	2
	Rx. Pedal	3
Comments		Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) to the MIDI IN port. Same as (*2).

◆ MIDI INFORMATION

MIDI IMPLEMENTATION

CHANNEL VOICE MESSAGES

Note Off

Status	2nd Byte	3rd Byte
8nH	kkH	vvH, or
9nH	kkH	00H

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
kk=Note Number: 00H - 7FH (0 - 127)
vv=Velocity(disregard): 00H - 7FH (0 - 127)

Note On

Status	2nd Byte	3rd Byte
9nH	kkH	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
kk=Note Number: 00H - 7FH (0 - 127)
vv=Velocity: 00H - 7FH (0 - 127)

Control Change

Bank Select (CC#0, 32)

Status	2nd Byte	3rd Byte
BnH	00H	mmH
BnH	20H	llH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm,ll=Bank Number: 00H 00H = Bundle
01H 00H = User
02H 00H = Factory
64H 00H - 6DH 00H= Bank [1] to [10]

Disregards if the received number is empty.

Expression (CC#11)

Status	2nd Byte	3rd Byte
BnH	0BH	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Expression: 00H - 7FH (0 - 127)

Spring Shock (CC#48)

Status	2nd Byte	3rd Byte
BnH	30H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Velocity: 00H - 7FH (0 - 127)

TW Brake (CC#49)

Status	2nd Byte	3rd Byte
BnH	31H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

Damper (CC#64)

Status	2nd Byte	3rd Byte
BnH	40H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

Portamento Switch (CC#65)

Status	2nd Byte	3rd Byte
BnH	41H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

Sustain (CC#69-adds Sustain to Upper and Lower ORGAN Parts)

Status	2nd Byte	3rd Byte
BnH	45H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

ProChord Active (CC#84)

Status	2nd Byte	3rd Byte
BnH	54H	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

Activates "Harmony" parts for ORGAN Section when this Parameter is "On."

Leslie Fast (CC#92)

Status	2nd Byte	3rd Byte
BnH	5CH	vvH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

This control change is only for receive.

NRPN MSB/LSB (CC#98, 99)

Status	2nd Byte	3rd Byte
BnH	63H	mmH
BnH	62H	llH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm=upper byte of the Parameter number specified by NRPN
ll=lower byte of the Parameter number specified by NRPN

Data Entry (CC#6, 38)

Status	2nd Byte	3rd Byte
BnH	06H	mmH
BnH	26H	llH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm,ll=the value of the Parameter specified by NRPN

Program Change

Status	2nd Byte
CnH	ppH

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
pp=Program Number: 00H - 63H = Patch #0 to 99
64H - 6DH = Favo. Number [1] to [10]
7FH = [Manual]

Example of operation

ex: select Combi F016
Bx 00 02 Bx 20 00 Cx 0F (x=Upper Channel)

ex: select Favorite Bank[2], Number[6]
Bx 00 65 Bx 20 00 Cx 69 (x=Upper Channel)

ex: select Manual
Cx 7F (x=Upper Channel)

CHANNEL MODE MESSAGES

All Sounds Off (CC#120)

Status	2nd Byte	3rd Byte
BnH	78H	00H

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
When this message is received, all currently-sounding notes on the corresponding channel will be turned off immediately.

Reset All Controllers (CC#121)

Status	2nd Byte	3rd Byte
BnH	79H	00H

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
When this message is received, the following controllers will be set to their reset values.
Expression: 127, TW Brake: 0, Damper: 0
NRPN: unset; previously set data will not change

All Notes Off (CC#123)

Status	2nd Byte	3rd Byte
BnH	7BH	00H

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
When All Notes Off is received, all notes on the corresponding channel will be turned off. However if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

◆ MIDI IMPLEMENTATION CHART

Stage Keyboard
Model: SK PRO

Date: 12-Nov-2020
Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic	Default	*1	*1	*1: Upper = 1, Lower = 2, Pedal = 3 when MIDI "Basic" Template is loaded.
Channel	Changed	1 - 16	1 - 16	
	Default	3	3	
Mode	Messages	X	X	
	Altered	*****	1	Switched by MIDI In Mode.
Note		12 - 120 (61 key)*2 4 - 124 (73 key)	0 - 127	*2: with oct. shift
Number	: True Voice	*****	0 - 127	
Velocity	Note ON	O	O	
	Note OFF	O	O	
After Touch	Key's	X	X	
	Ch's	X	X	
Pitch Bend		O	O	
Control Change	0, 32	O	O	Bank Select MSB, LSB
	1	O	O	Modulation
	6, 38	O	O	Data Entry MSB, LSB
	7	O	X	Volume
	10	O	X	Pan
	11	O	O	Expression
	12 - 20	O	O	Drawbar Reg. Upper
	21 - 29	O	O	Drawbar Reg. Lower
	33, 35	O	O	Drawbar Reg. Pedal
	48	O	O	Spring Shock
	49	O	O	TW Brake
	64	O	O	Damper
	65	O	O	Portamento Sw
	69	O	O	Sustain
	84	O	O	ProChord Active
	92	X	O	Leslie Fast
	98, 99	O	O	NRPN LSB, MSB
Program		O	O	
Change	: True #	0 - 127	0 - 99, 127	
System Exclusive		O	O	
System	: Song Position	X	X	
	: Song Select	X	X	
Common	: Tune	X	X	
System	: Clock	X	X	
Real Time	: Commands	X	X	
	: All Sounds Off	X	O	(120)
	: Reset All Controllers	O	O	(121)
Aux	: Local On/Off	X	X	
Messages	: All Notes Off	O	O	
	: Active Sense	O	O	
	: Reset	X	X	

Mode 1: OMNI ON, POLY Mode 2: OMNI ON, MONO
Mode 3: OMNI OFF, POLY Mode 4: OMNI OFF, MONO

O: Yes
X: No

◆ MIDI CHANNELS AND MESSAGES

		External Zone (Tx. only)	Upper Keyboard	Lower Keyboard	Pedal Keyboard	Sections (Rx. only)
Note		O	O	O	O	O
Pitch Bend		O	O	X	X	O
Modulation		O	O	X	X	O
Volume, Pan	(7, 10)	O	X	X	X	X
Expression	(11)	O	O *1	X	X	X
Damper	(64)	O	O	O	O	O
Portamento	(65)	X	O	X	X	X
Sustain	(69)	X	O	X	X	X
Drawbar Reg.		X	12 - 20 (Upper) 21 - 29 (Lower) 33, 35 (Pedal)	X	X	X
Spring Shock	(48)	X	O	X	X	X
TW Brake	(49)	X	O	X	X	X
ProChord Active	(84)	X	O	X	X	X
Leslie Fast	(92)	X	O *2	X	X	X
RPN	(100, 101)	X	X	X	X	X
NRPN	(98, 99)	X	O	X	X	X
All Notes Off	(123)	O	O	X	X	X
All Sounds Off	(120)	X	O *2	X	X	X
Reset All Ctrl.	(121)	O	O	X	X	X
After Touch		X	X	X	X	X
Bank Select	(0, 32)	Change the voice for each zone.	Combination#	X	X	X
Program Change				X	X	X

*1: For all Sections/Parts (audio controlled)

*2: For Rx. only.

O: Yes

X: No

◆ FACTORY COMBINATION - MIDI PROGRAM CHANGE CODES

Category	Number	Name	Program Number	MSB	LSB
Main Features	F001	Vintage B-3 DLS	1	2	0
	F002	Classic Gospel	2	2	0
	F003	ClasOrg Tutti	3	2	0
	F004	Console Riser	4	2	0
	F005	A. Piano D	5	2	0
	F006	Piano & Strings	6	2	0
	F007	A.Bass / A.Piano	7	2	0
	F008	Soul Line	8	2	0
	F009	Symphonic Ens	9	2	0
	F010	Macrocosmos	10	2	0
Tone Wheel Organ	F011	Vintage C-3 JOS	11	2	0
	F012	VintageB-3Squabl	12	2	0
	F013	Vintage B-3 McGr	13	2	0
	F014	VintageB-3Groove	14	2	0
	F015	X-66 Ballad	15	2	0
	F016	Edelweiss	16	2	p
	F017	Spanish	17	2	0
	F018	Old Days	18	2	0
	F019	Euro Bigband	19	2	0
	F020	Swedish Love	20	2	0
Transistor/ Pipe Organ	F021	ClasOrg PrnChors	21	2	0
	F022	ClasOrg StgCelest	22	2	0
	F023	TheaOrg Ballad	23	2	0
	F024	TheaOrg StylDTrpt	24	2	0
	F025	TheaOrg Tibias	25	2	0
	F026	Purple	26	2	0
	F027	Emerson	27	2	0
	F028	Some Lovin'	28	2	0
	F029	Booker	29	2	0
	F030	Rock 1	30	2	0
Piano/ Chro. Percussion/ Keyboards	F031	Grand Piano Y-CF	31	2	0
	F032	Pop Piano CF	32	2	0
	F033	Upright Piano	33	2	0
	F034	Honky-Tonk Piano	34	2	0
	F035	Electric Grand	35	2	0
	F036	HP Old Time Prchd	36	2	0
	F037	EP Tine Mk1	37	2	0
	F038	Harpsichord Back	38	2	0
	F039	Clav.AC	39	2	0
	F040	Accordion LMMH	40	2	0
Strings/ Choir	F041	Legato Strings	41	2	0
	F042	Section Strings	42	2	0
	F043	Synth Str.Bright	43	2	0
	F044	Synth Str.Mellow	44	2	0
	F045	Chamber Ensemble	45	2	0
	F046	Choir Aah	46	2	0
	F047	Violin	47	2	0
	F048	Sol. Strings	48	2	0
	F049	Taped Strings	49	2	0
	F050	Vocal & Str. Prchd	50	2	0

Category	Number	Name	Program Number	MSB	LSB
Wind	F051	Horn Rock Band	51	2	0
	F052	Trumpet Vib	52	2	0
	F053	Alto Sax Vib	53	2	0
	F054	Jazz Brass Prchd	54	2	0
	F055	Harm Chro Vib	55	2	0
	F056	Flute Vib	56	2	0
	F057	Pan Pipes	57	2	0
	F058	M12 Brazz	58	2	0
	F059	M12 Horn Ens	59	2	0
	F060	M12 Box Brass	60	2	0
Synth / Bass	F061	Fantasia Pad	61	2	0
	F062	Warm Pad	62	2	0
	F063	Phasing Pad	63	2	0
	F064	Oct Saw Ld	64	2	0
	F065	Sync Up&Down Ld	65	2	0
	F066	Trancy Ld	66	2	p
	F067	Acoustic Bass	67	2	0
	F068	Finger Bass Jz	68	2	0
	F069	Big Funk	69	2	0
	F070	Timpani Roll/Hit	70	2	0
Famous Tunes	F071	Lady Green Eyes	71	2	0
	F072	Do You Know	72	2	0
	F073	Vibrating Good	73	2	0
	F074	Satin White	74	2	0
	F075	Craft Work	75	2	0
	F076	Jan's Hammer	76	2	0
	F077	Wonder 4 Th City	77	2	0
	F078	Woven Dream	78	2	0
	F079	Your Rhythm Mix	79	2	0
	F080	Jumped!	80	2	0
Famous Tunes	F081	Vienna	81	2	0
	F082	Vienna Bridge	82	2	0
	F083	99 Nena	83	2	0
	F084	Pop Muzik	84	2	0
	F085	Electric Friends	85	2	0
	F086	Don't You Go	86	2	0
	F087	Follow Your & Me	87	2	0
	F088	Manfred's Light	88	2	0
	F089	Green Monday	89	2	0
	F090	Ph. D I won't	90	2	0
Famous Tunes	F091	I' m Ready	91	2	0
	F092	Won't Get Fooled	92	2	0
	F093	Blinding Lights	93	2	0
	F094	Lovefool	94	2	0
	F095	California Girl	95	2	0
	F096	Hot Stuff	96	2	0
	F097	Galway Girl	97	2	0
	F098	Last Christmas	98	2	0
	F099	Treasure	99	2	0
	F100	Zankoku Tenshi	100	2	0

◆ USER COMBINATION - MIDI PROGRAM CHANGE CODES

Category	Number	Name	Program Number	MSB	LSB
User Defined	U001	User Defined	1	1	0
	U002	User Defined	2	1	0
	U003	User Defined	3	1	0
	U004	User Defined	4	1	0
	U005	User Defined	5	1	0
	U006	User Defined	6	1	0
	U007	User Defined	7	1	0
	U008	User Defined	8	1	0
	U009	User Defined	9	1	0
	U010	User Defined	10	1	0
User Defined	U011	User Defined	11	1	0
	U012	User Defined	12	1	0
	U013	User Defined	13	1	0
	U014	User Defined	14	1	0
	U015	User Defined	15	1	0
	U016	User Defined	16	1	p
	U017	User Defined	17	1	0
	U018	User Defined	18	1	0
	U019	User Defined	19	1	0
	U020	User Defined	20	1	0
User Defined	U021	User Defined	21	1	0
	U022	User Defined	22	1	0
	U023	User Defined	23	1	0
	U024	User Defined	24	1	0
	U025	User Defined	25	1	0
	U026	User Defined	26	1	0
	U027	User Defined	27	1	0
	U028	User Defined	28	1	0
	U029	User Defined	29	1	0
	U030	User Defined	30	1	0
User Defined	U031	User Defined	31	1	0
	U032	User Defined	32	1	0
	U033	User Defined	33	1	0
	U034	User Defined	34	1	0
	U035	User Defined	35	1	0
	U036	User Defined	36	1	0
	U037	User Defined	37	1	0
	U038	User Defined	38	1	0
	U039	User Defined	39	1	0
	U040	User Defined	40	1	0
User Defined	U041	User Defined	41	1	0
	U042	User Defined	42	1	0
	U043	User Defined	43	1	0
	U044	User Defined	44	1	0
	U045	User Defined	45	1	0
	U046	User Defined	46	1	0
	U047	User Defined	47	1	0
	U048	User Defined	48	1	0
	U049	User Defined	49	1	0
	U050	User Defined	50	1	0

Category	#	Name	Program Number	MSB	LSB
User Defined	U051	User Defined	51	1	0
	U052	User Defined	52	1	0
	U053	User Defined	53	1	0
	U054	User Defined	54	1	0
	U055	User Defined	55	1	0
	U056	User Defined	56	1	0
	U057	User Defined	57	1	0
	U058	User Defined	58	1	0
	U059	User Defined	59	1	0
	U060	User Defined	60	1	0
User Defined	U061	User Defined	61	1	0
	U062	User Defined	62	1	0
	U063	User Defined	63	1	0
	U064	User Defined	64	1	0
	U065	User Defined	65	1	0
	U066	User Defined	66	1	p
	U067	User Defined	67	1	0
	U068	User Defined	68	1	0
	U069	User Defined	69	1	0
	U070	User Defined	70	1	0
User Defined	U071	User Defined	71	1	0
	U072	User Defined	72	1	0
	U073	User Defined	73	1	0
	U074	User Defined	74	1	0
	U075	User Defined	75	1	0
	U076	User Defined	76	1	0
	U077	User Defined	77	1	0
	U078	User Defined	78	1	0
	U079	User Defined	79	1	0
	U080	User Defined	80	1	0
User Defined	U081	User Defined	81	1	0
	U082	User Defined	82	1	0
	U083	User Defined	83	1	0
	U084	User Defined	84	1	0
	U085	User Defined	85	1	0
	U086	User Defined	86	1	0
	U087	User Defined	87	1	0
	U088	User Defined	88	1	0
	U089	User Defined	89	1	0
	U090	User Defined	90	1	0
User Defined	U091	User Defined	91	1	0
	U092	User Defined	92	1	0
	U093	User Defined	93	1	0
	U094	User Defined	94	1	0
	U095	User Defined	95	1	0
	U096	User Defined	96	1	0
	U097	User Defined	97	1	0
	U098	User Defined	98	1	0
	U099	User Defined	99	1	0
	U100	User Defined	100	1	0

◆ GENERAL MIDI

♦ What Is "General MIDI?"

With the advent of the newer General MIDI (GM) standard, it is now easier for someone to connect two or more brands of MIDI devices and use them. As an example, before General MIDI different manufacturers assigned different program numbers to different sounds. If, for example, Program Number 4 is Strings on a "brand X" MIDI device and Program Number 4 is Trumpet on a "brand Y" device, and you sent MIDI Program Number 4 from a keyboard you were playing to each device, you would hear Strings from one and Trumpet from the other. However, you wanted both units to play Strings.

The General MIDI addition to the original MIDI specification was created so that generic Standard MIDI Files created on a sequencer or notation application may be played back on another device while preserving the integrity of the original selection. It follows a standard that assigns 128 instrument sounds to specific numbers. There are sixteen specific families or types of instruments and eight instruments within each group. A separate group of percussion sounds is usually available on MIDI channel 10, and they are assigned to specific notes on a MIDI keyboard.

GENERAL MIDI VOICE GROUPS			
Piano	Chromatic Percussion	Organ	Guitar
Bass	Strings	Ensemble	Brass
Reed	Pipe	Synth Lead	Synth Pad
Synth F/X	Ethnic	Percussive	Sound F/X

NOTE: The **General MIDI** information provided here is to assist you when transmitting to a MIDI device such as a sound module or synthesizer, particularly if you are using **External Zones**. The MIDI mapping of the SK PRO is "product-specific" and so is **not** compatible with General MIDI.

♦ General MIDI Instrument Chart

Here is the list of General MIDI voices followed by their Program Numbers.

NOTE: These Program Numbers apply to outgoing MIDI data only. Also, they apply only to MIDI data transmitted to a MIDI device implementing General MIDI.

	Instrume
1	Grand
2	Bright
3	Electric
4	Honky
5	Electric
6	Electric
7	Harpsicho
8	Clavi
9	Celesta
10	Glockensp
11	Music Box
12	Vibraphon
13	Marimba
14	Xylophone
15	Tubular
16	Dulcimer
17	Drawbar
18	Percussiv
19	Rock
20	Church
21	Reed
22	French
23	Harmonic
24	Tango
25	Nylon
26	Steel
27	Jazz
28	Clean
29	Muted
30	Overdrive
31	Distortion
32	Guitar

Progr	Instrument
33	Wood Bass
34	Fingered
35	Pick Bass
36	Fretless
37	Slap Bass 1
38	Slap Bass 2
39	Synth Bass
40	Synth Bass
41	Violin
42	Viola
43	Cello
44	Double
45	Tremolo
46	Pizzicato
47	Harp
48	Timpani
49	Strings 1
50	Strings 2
51	Synth
52	Synth
53	Choir Aahs
54	Choir Oohs
55	Synth Choir
56	Orchestral
57	Trumpet
58	Trombone
59	Tuba
60	Muted
61	French
62	Brass
63	Synth Brass
64	Synth Brass

Progr	Instrumen
65	Soprano
66	Alto Sax
67	Tenor Sax
68	Baritone
69	Oboe
70	English
71	Bassoon
72	Clarinet
73	Piccolo
74	Flute
75	Recorder
76	Pan Flute
77	Blown
78	Shakahac
79	Whistle
80	Ocarina
81	Square
82	Sawtooth
83	Calliope
84	Chiff Lead
85	Charanga
86	Voice
87	Fifth Lead
88	Bass &
89	New Age
90	Warm Pad
91	Poly Synth
92	Choir Pad
93	Bowed
94	Metal Pad
95	Halo Pad
96	Sweep

Progr	Instrumen
97	Ice Rain
98	Soundtrack
99	Crystal
100	Atmospher
101	Brightness
102	Goblin
103	Echo
104	Sci-Fi
105	Sitar
106	Banjo
107	Shamisen
108	Koto
109	Kalimba
110	Bagpipe
111	Fiddle
112	Shanai
113	Tinkle Bell
114	Agogo
115	Steel Drum
116	Wood
117	Taiko
118	Melodic
119	Synth Tom
129	Reverse
121	Guitar Fret
122	Breath
123	Seashore
124	Bird Tweet
125	Telephone
126	Helicopter
127	Applause
128	Gunshot

The General MIDI logo looks like this:

Any MIDI device with this logo will conform to the General MIDI Standard.

Any MIDI device that conforms to the General MIDI Standard will assign a specific number to each instrument, and will have at least a 24-note polyphonic capability.

What Is "Bank Select?"

"Bank Select" is closely related to "Program Change." As explained on page 859, General MIDI provides for a variety of different sounds, called Programs and grouped by instrument type. However, General MIDI only allows 128 separate Programs and does not allow for variations of instruments. Thus, if you want, say, an Acoustic Piano, you would have no choice but to use the one Acoustic Piano sound provided for by General MIDI, whereas actual acoustic pianos differ greatly in sound and timbral character.

In order to satisfy the requirement for different variations in tone quality within a specific sound category, several methods have been devised to allow one Program Number to represent multiple varieties or Variations of a basic sound such as Piano, Vibes, Trumpet, etc. The method employed on the SK PRO provides the means to have up to 16,384 different sounds instead of only 128. This is accomplished by providing up to 128 banks of voices for each of the 128 Program Numbers in General MIDI (128 × 128 = 16,384). It should be noted that this is a theoretical limit - the actual number is typically much less (anywhere from 300 ~ 900 sounds and/or drum samples).

A method called Bank Select is used to select the different sound banks. It does this by sending two additional Controller Numbers ahead of the Program Number so that the instrument will know which sound to play. Controller #32 (Bank Select LSB - Least Significant Bit) is used to select a particular bank scheme or "family," while Controller #0 (Bank Select MSB - Most Significant Bit) is used to set a particular voice variation within that bank. For more information about Bank Select on the SK PRO consult page 861 of the APPENDIX chapter of this Guide.

SPECIAL NOTE: The number of available voices will depend on the particular MIDI instrument you are using. Please consult the documentation provided with the MIDI instrument you are using to find which additional voices are available. This information will usually be found in either the Owner's Manual or an additional Reference Guide.

◆ DRAWBAR DATA LIST

Part	Control Number								
	16′	5⅓′	8′	4′	2⅔′	2′	1⅗′	1⅓′	1′
Upper	0CH(12)	0DH(13)	0EH(14)	0FH(15)	10H(16)	11H(17)	12H(18)	13H(19)	14H(20)
Lower	15H(21)	16H(22)	17H(23)	18H(24)	19H(25)	1AH(26)	1BH(27)	1CH(28)	1DH(29)
Pedal	21H(33)	-	23H(35)	-	-	-	-	-	-

	Level								
	0	1	2	3	4	5	6	7	8
Value	00 - 0FH (0 - 15)	10 - 1FH (16 - 31)	20 - 2FH (32 - 47)	30 - 3FH (48 - 63)	40 - 4FH (64 - 79)	50 - 5FH (80 - 95)	60 - 6FH (96 - 111)	70 - 7EH (112-126)	7FH (127)

ex: Set Lower 8′ to level 7 via MIDI. Bx 17 70 (x=Upper Channel)

◆ SYSTEM EXCLUSIVE MESSAGES

MEMORY DUMP

1. Each Packet (139 Bytes)

F0	System Exclusive
55	SUZUKI ID
dd	Device ID (refer to page 157)
10	Model ID MSB
24	Model ID LSB
11	Command: Data Packet
[TYPE]	Data Type 07H, 08H = Temp. Dump 0AH = System Dump
[PNH]	Packet Number MSB
[PNL]	Packet Number LSB
[DATA]	64 Bytes Data 128 Bytes nibblized ASCII ex: 7EH = 37H, 45H
[CHD]	Check Digit Lower 7 bits of XOR [DATA]
F7	End Of Exclusive

2. Acknowledge

F0	System Exclusive
55	SUZUKI ID
dd	Device ID
10	Model ID MSB
24	Model ID LSB
14	Command: Acknowledge
[TYPE]	Data Type
[AK]	Result 00H = OK 05H = Check Digit Error 06H = Receive Protected
[PNH]	Packet Number MSB
[PNL]	Packet Number LSB
F7	End Of Exclusive

3. # of Packets

Temp. Dump: 46
System Dump: 11

DUMP REQUEST (RX. ONLY)

F0	System Exclusive
55	SUZUKI ID
dd	Device ID
10	Model ID MSB
24	Model ID LSB
12	Command: Dump Request
[TYPE]	Data Type 07H = Temp. Dump 0AH = System Dump
F7	End Of Exclusive

INDIVIDUAL PARAMETERS

F0	Suzuki Exclusive
55	SUZUKI ID
dd	Device ID
10	Model ID MSB
24	Model ID LSB
02	Command: Individual Parameters
[DATA]	00H = Off, 01H = NRPN, 02H = SysEx.
F7	End Of Exclusive

Set the way to transmit Individual Parameters.

DATA SET (RX. ONLY)

F0	System Exclusive
55	SUZUKI ID
dd	Device ID
10	Model ID MSB
24	Model ID LSB
13	Command: Data Set
aa	Address MSB
bb	Address
cc	Address LSB
[DATA]	Data (Flexible bytes)
F7	End Of Exclusive

IDENTITY REQUEST (RX. ONLY)

F0	System Exclusive
7E	Universal non real-time
dd	Device ID
06	Sub ID #1
01	Sub ID #2
F7	End Of Exclusive

IDENTITY REPLY (TX. ONLY)

F0	System Exclusive
7E	Universal non real-time
dd	Device ID
06	Sub ID #1
02	Sub ID #2
55	SUZUKI ID
00 10	Device Family code
00 24	Device Family number
00 00	
00 00	
F7	End Of Exclusive

When Identity Request is received, Identity Reply will be transmitted.

Hammond maintains a policy of continuously improving and upgrading its instruments and therefore reserves the right to change specifications without notice. Although every attempt has been made to insure the accuracy of the descriptive contents of this Guide, total accuracy cannot be guaranteed. Should the player require further assistance, inquiries should first be made to your Authorized Hammond Dealer. If you still need further assistance, contact Hammond at the following addresses:

In the United States contact:	In Europe and the U.K. contact:	All other countries contact:
HAMMOND SUZUKI USA, Inc.	HAMMOND SUZUKI EUROPE B.V	HAMMOND SUZUKI Ltd.
219 W Wrightwood Ave	Ir. D.S. Tuynmanweg 4A	25-12, Ryoke 2 Chome
Elmhurst , IL, 60126-1112	4131 PN Vianen	Hamamatsu 430-0852
UNITED STATES	THE NETHERLANDS	(Shizuoka)
		JAPAN

Technical materials are available and can be obtained by mailing a request to the appropriate address listed above marked ATTENTION: SERVICE DEPARTMENT.

Manufacturer:
SUZUKI MUSICAL INSTRUMENT MFG. CO., Ltd
25-12, Ryoke 2 Chome
Hamamatsu 430-0852 (Shizuoka)
JAPAN



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