

HAMMOND



Sh **PRO**

**CUSTOM
SETS**

CUSTOM SETS

The SK PRO allows you to Record certain Parameters into macro-settings called Custom Tone Wheels, Custom Pipes, Custom Pedal Registrations and Custom Leslie Cabinets. 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.

NOTE: None of the Custom Parameter settings will be remembered unless they are Recorded in one of the Custom Sets.

◆ CUSTOM PEDAL REGISTRATION

This allows you to select and create Custom Pedal Registrations (registrations for the Pedal Drawbars).

◆ CUSTOM PIPE

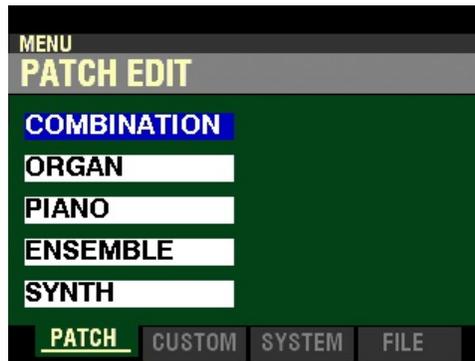
This allows you to select or create Custom Pipes. A Custom Pipe includes assignment of Pipe Voices to the Drawbars as well as Volume settings, Chiff settings, etc.

These four Custom Sets will be explained in this chapter of the Guide.

◆ Registering a CUSTOM EDIT FUNCTION Mode Page to a FAVORITE

You can register any of the CUSTOM SETS to FAVORITE buttons by using the APP MENU. To do this:

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



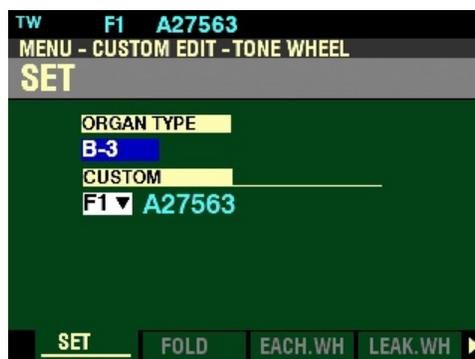
The “COMBINATION” box should be highlighted.

2. Press the PAGE “▶” button once.



You are now in the CUSTOM EDIT FUNCTION Mode.

3. Use the DIRECTION “▼” and “▲” buttons to select the CUSTOM EDIT Page you want to work with and press the ENTER button once. For example, if you select TONE WHEEL and press the ENTER button, the Information Center Display will look like this:



- Use the DIRECTION “◀” and “▶” to select a Page within one of the CUSTOM EDIT FUNCTION Modes you want to access using a FAVORITE button.
- When you have selected a Page, Press and Hold the MANUAL “☰” button. The Information Center Display should now look like this:



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



- Use the VALUE knob to select the number of the FAVORITE you want to use to access the Page you have selected, then press the DIRECTION “▼” button to highlight the REGISTER icon:



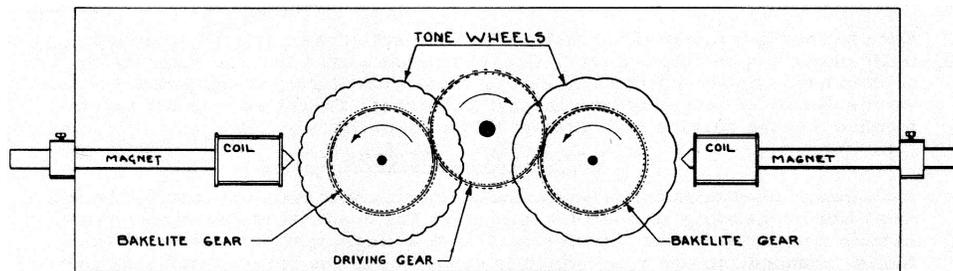
- Press the ENTER button. You will see a message, “Recording...” then “Completed.” You can now access your FUNCTION Mode Page by holding the SHIFT button while pressing the numbered FAVORITE button.

◆ CUSTOM TONE WHEEL FUNCTION Mode Page

This FUNCTION Mode allows you to select from among a library of different Tone Wheel settings so that each of the Hammond 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. Every tone wheel that produces 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 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.

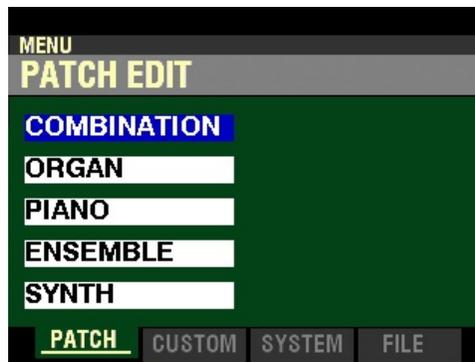
◆ What Is “Motor Noise?”

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.

To access the CUSTOM EDIT - TONE WHEEL FUNCTION Mode, do the following:

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



You are now in the CUSTOM EDIT - TONE WHEEL FUNCTION Mode. You may now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting below.

◆ SET

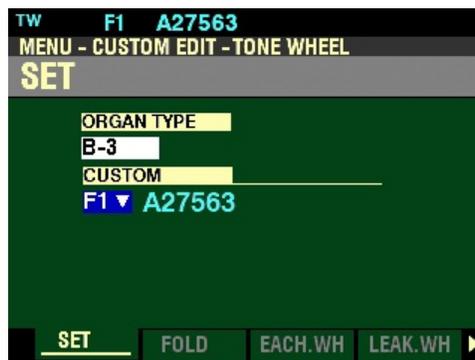
ORGAN TYPE

This Parameter allows you to select the ORGAN Type to edit.

Turn the VALUE knob to select A-100, B-3, C-3, or Mellow.

CUSTOM SET

After you have made your selection, press the DIRECTION “▼” button to access the choices for the selected ORGAN Type:



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 make your selection.

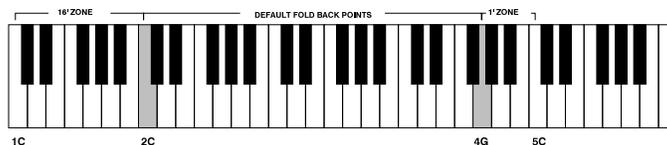
From the screen shown at the bottom of the previous page, press the PAGE "▶" button *once*. Page 2 of the CUSTOM EDIT - TONE WHEEL FUNCTION Mode should now display. The Information Center Display should look like this:



◆ 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.



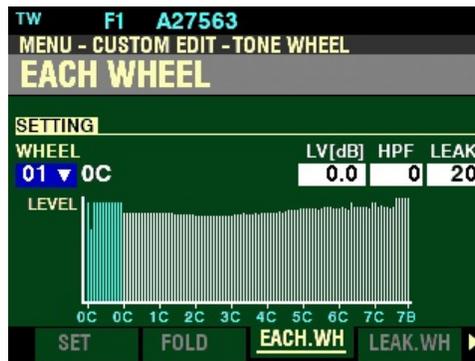
This Parameter allows you to set the Upper and Lower frequency limits of the Drawbars.

Use the DIRECTION "◀" and "▶" buttons to select either "LOW" or "HIGH." "LOW" refers to the lower limit of the Sub-Fundamental Drawbar while "HIGH" 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 right to move the Fold Back point higher.

Turn the VALUE knob to the left to move the Fold Back point lower.

From the screen shown on the previous page, press the PAGE “▶” button once. Page 3 of the CUSTOM EDIT - TONE WHEEL FUNCTION Mode should now display. The Information Center Display should look like this:

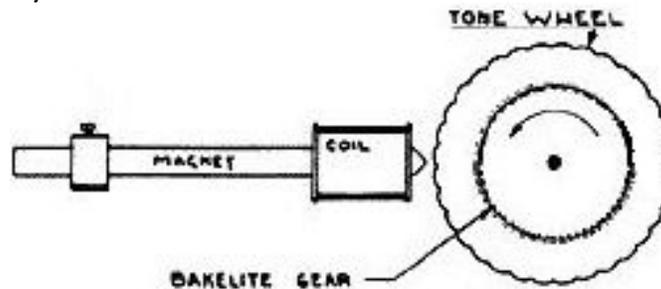


◆ EACH WHEEL

This Parameter Menu 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 25, there is one tone wheel for each frequency. The number of tone wheels which generate actual frequencies varies with the model. 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.

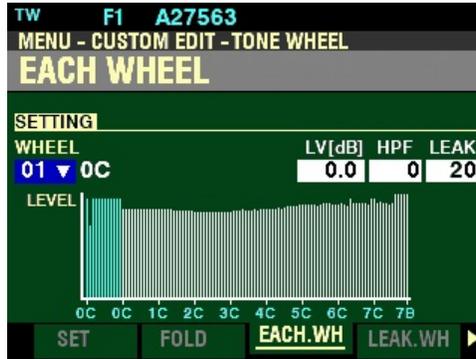
As explained previously, each tone has a magnetized rod associated with it. When the tone wheels rotate, a very small electrical current is generated in the coil each time a high spot passes the magnet. The strength of the current determines the loudness of the resulting musical note.

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.

Selecting a Tone Wheel to Edit

If you followed the instructions on the previous pages, you should now see the EACH WHEEL FUNCTION MODE Page. The box to the right of WHEEL” should be highlighted.



Notice that the number on the left below “WHEEL” is highlighted. This number represents the currently selected Tone Wheel.

Using the VALUE knob to select Tone Wheels:

Turning the VALUE knob will allow you to scroll through the Tone Wheels. You can select from 1 (“1C”) through 96 (“8B”). Turn the VALUE Control until you find the number you want.

Using the Drawbars and Keyboard to select Tone Wheels:

If you want to find a certain Tone Wheel quickly, you can use the Drawbars and the playing keys to select it.

Each individual Drawbar will play a different portion of the Tone Wheels. The data chart below shows how the Tone Wheels are allocated to each Drawbar

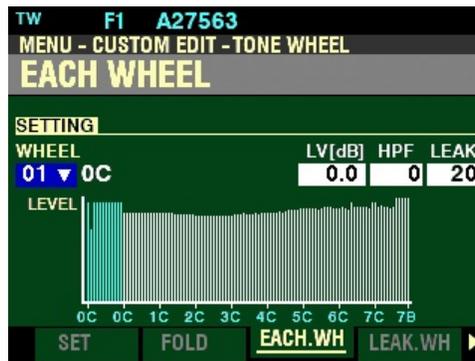
Drawbar Voice Options	
Drawbar	Tone Wheels
16'	+Wheels 1 ~ 61
5 1/3'	Wheels 20 ~ 80
8'	Wheels 13 ~73
4'	Wheels 25 ~ 85
2 2/3	*Wheels 32 ~ 92
2'	*Wheels 37 ~ 96
1 3/5	*Wheels 41 ~ 96
1 1/3	Wheels 44 ~ 96
1'	*Wheels 49 ~ 96

+ - 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.

TRY THIS:

1. Make sure all the Drawbars are “OFF” (pushed in).
2. Make sure the Information Center Display shows Screen 3 of the CUSTOM EDIT - TONE WHEEL FUNCTION Mode. The Information Center Display should look similar to this:



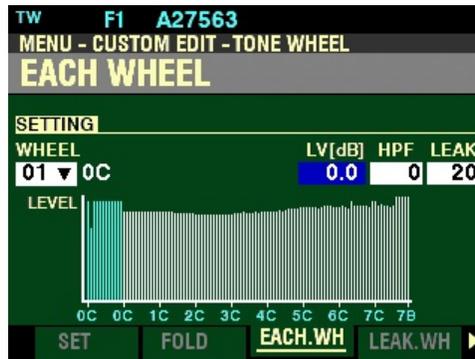
Notice that the number on the left below “WHEEL” is highlighted. This number represents the currently selected Tone Wheel.

3. Press and Hold a note on the manual.
4. While holding down a key, move a Drawbar - for example, the first black ($2 \frac{2}{3}$) Drawbar.

The number shown in the Information Center Display will be the number of the Tone Wheel associated with that key and that Drawbar. You can now edit the selected Tone Wheel.

After you have selected a Tone Wheel to edit, you can change the characteristics of that Tone Wheel. This is explained starting on the next page.

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



The box underneath “LV(dB)” should be highlighted.

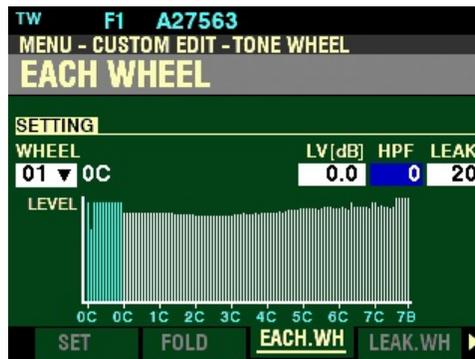
LV(dB) - Tone Wheel Level

This Parameter allows you to adjust the volume or level of the selected Tone Wheel. You can 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 above screen, press the DIRECTION “▶” button once.



The box underneath “HPF” should be highlighted.

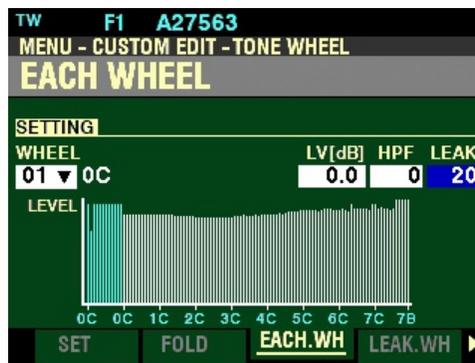
HPF - High-Pass Filter

This Parameter allows you to adjust the level of the High-Pass Filter (HPF). You can 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 boost the low frequencies.

Turn the VALUE knob to the left to reduce the low frequencies.

From the screen shown at the bottom of the previous page, 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 can select from. A higher value will result in more Leakage.

Turn the VALUE knob to the right to boost the high frequencies.

Turn the VALUE knob to the left to reduce the high frequencies.

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.”

◆ Creating your own 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.

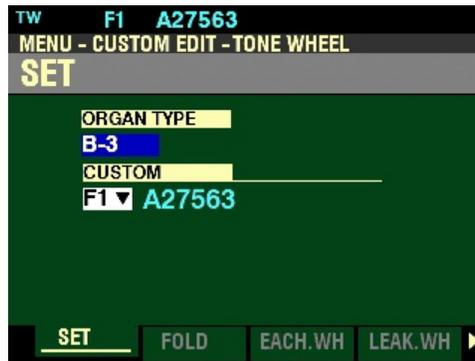
Because of these many factors - again, some real, some contrived - and because different people therefore mean different things when they say "Hammond Sound" or "B-3 Sound," the Custom Tone Wheel feature is included to allow you to find the nearest approximation of what you want your "Hammond Sound" 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.

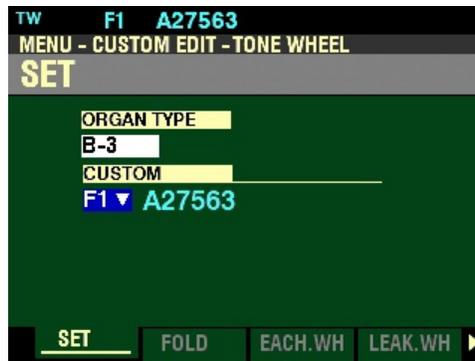
◆ Recording a Custom Tone Wheel

TRY THIS:

1. Access the CUSTOM EDIT - TONE WHEEL FUNCTION Mode using the procedure described on page 30. You should now see Page 1 of the CUSTOM EDIT - TONE WHEEL FUNCTION Mode. The box underneath “ORGAN TYPE” should be highlighted



2. Turn the VALUE knob to select the Organ Type you want to modify (A-100, B-3, C-3, or Mellow).
3. Press the DIRECTION “▼” button to move the cursor to the box underneath “CUSTOM.” It should be highlighted.



4. Turn the VALUE knob to select the Custom Set you want to modify
5. Make whatever changes you want to the editable Parameters. For a complete list of the Parameters that can be modified for a Custom Tone Wheel set, consult the Appendix of this Guide.

- When you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this:



Turn the VALUE knob to select the Custom Tone Wheel Number.

- When you have made your selection, use the DIRECTION “▼” button to move the cursor to the “RECORD” box.



- 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 on the next page explains the function of each of the buttons.

NAMING PARAMETERS		
Parameter	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.

- When you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in succession for approximately 1 second each:

Recording...

Completed.

◆ CUSTOM LESLIE FUNCTION Mode Page

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 different Custom Leslie Cabinets. These are Factory Cabinets (indicated by an “F”) 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 LESLIE FUNCTION Mode to modify the sonic characteristics of one of the “F” Cabinets. After you have made all of your changes, you can Record them as a “U” Leslie Cabinet.

NOTE: For a list of the Factory Leslie Cabinets consult the APPENDIX on page 591. For a complete list of Leslie Parameters consult the APPENDIX on page 593.

TRY THIS:

1. From any of the PLAY Mode screens, press the MENU/EXIT button once. 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 once. The Information Center Display should now look similar to this:



You are now in the CUSTOM EDIT - LESLIE FUNCTION Mode. You may 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 shown on the previous page, you should now see the **CABINET FUNCTION MODE** Page. The box underneath “CUSTOM” should be highlighted.



This FUNCTION Mode Page 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.

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 155, 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 once. 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	
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.

From the screen shown on the previous page, press the PAGE “▶” button once.



The box to the right of “FAST SPEED” should be highlighted.

◆ ROTOR

FAST SPEED - HORN / DRUM

This Parameter allows you to set the rotor speed for the “FAST” or Tremolo Mode. You can select “0” (no rotation) or a value between 200 and 500rpm.

Use the DIRECTION “◀” and “▶” buttons to select either “HORN” or “DRUM.”

Turn the VALUE knob to select the Speed setting you prefer.

NOTE: 372rpm is the factory setting for the FAST Speed for both the Horn and Bass Rotors 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” should be highlighted.

SLOW SPEED - HORN / DRUM

This Parameter allows you to set the rotor speed for the “SLOW” or Chorale Mode. You can select “0” (no rotation) or a value between 20 and 120rpm.

Use the DIRECTION “◀” and “▶” buttons to select HORN or DRUM

Turn the VALUE knob to select the Speed setting you prefer.

From the above screen, press the DIRECTION “▼” button once.



The box to the right of “RISE TIME” 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 can 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.

Turn the VALUE knob to select the Rise Time you prefer.

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



The box to the right of “FALL TIME” 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 can 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.

Turn the VALUE knob to select the Fall Time you prefer.

From the above screen, press the PAGE “▶” button once.



The box to the right of “BRAKE TIME” 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 can 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.”

Turn the VALUE knob to select the Brake Time you prefer.

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 - HORN / DRUM

These allow you to adjust the time to start changing the speed, when the Mode is switched. You can select from 0 (no delay) to 1.0 second. The Horn and Drum rotors have the same settings.

Use the DIRECTION “◀” and “▶” buttons to select HORN or DRUM.

Turn the VALUE knob to select the Delay Time you prefer.

From the above screen, press the PAGE “▶” button once.



The box to the right of “VOLUME” 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 can select -Inf and from -76 to 0 decibels (db). -Inf is silent.

Use the DIRECTION “◀” and “▶” buttons to select HORN, DRUM or SUB.

Turn the VALUE knob to select the Volume you prefer.

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 “WIDTH” should be highlighted.



WIDTH - HORN / DRUM

This Parameter allows you to adjust the distance between Left and Right Microphones. You can 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.

Turn the VALUE knob to select the Width you prefer.

From the abovescreen, press the DIRECTION “▼” button once. The box to the right of “WIDTH” 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 can select from -50 to +50 centimeters (cm).

Use the DIRECTION “◀” and “▶” buttons to select HORN or DRUM.

Turn the VALUE knob to select the Offset you prefer.

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 “DISTANCE” should be highlighted.



DISTANCE - HORN / DRUM

This Parameter allows you to replicate distance settings between a Leslie Speaker and the microphones. You can 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

Turn the VALUE knob to select the Distance setting you prefer.

◆ Recording a Custom Leslie Cabinet

TRY THIS:

1. Access the CUSTOM EDIT - LESLIE FUNCTION Mode using the procedure described on page 344. You should now see Page 1 of the CUSTOM EDIT - LESLIE FUNCTION Mode. The box underneath “CUSTOM” should be highlighted



2. Make whatever changes you want to the editable Parameters. For a complete list of the Parameters that can be modified for a Custom Leslie Cabinet, consult the Appendix of this Guide.
6. When you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this:



Turn the VALUE knob to select the Custom Tone Wheel Number..

7. When you have made your selection, use the DIRECTION “▼” button to move the cursor to the “RECORD” box.



- 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 on the next page explains the function of each of the buttons.

NAMING PARAMETERS		
Parameter	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.

- When you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in succession for approximately 1 second each:

Recording...

Completed.

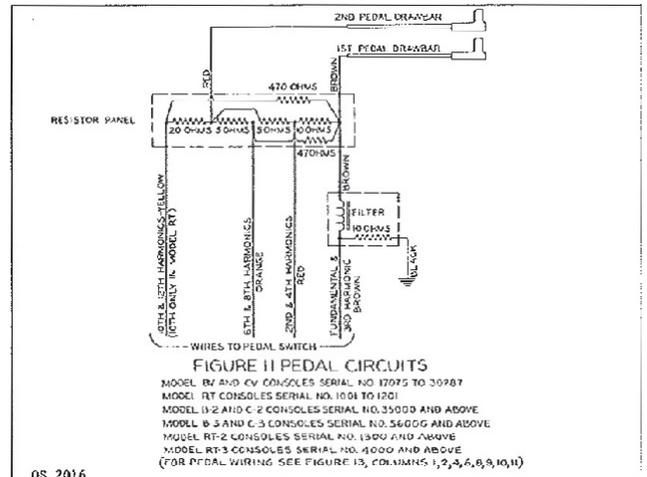
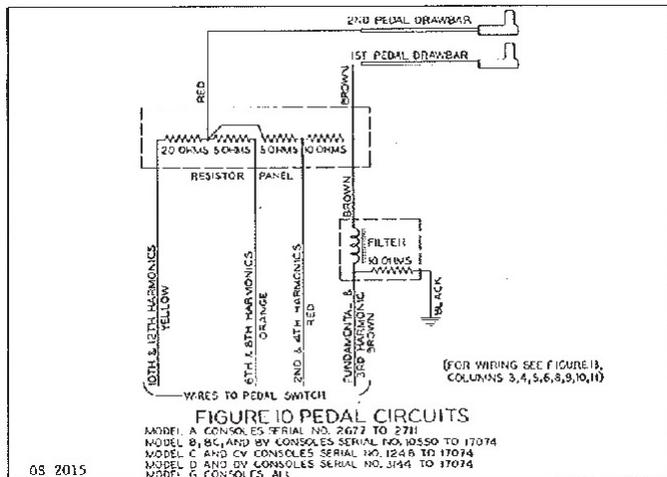
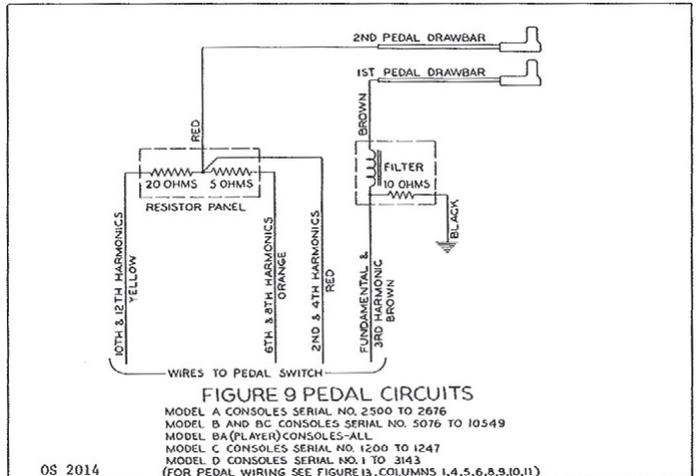
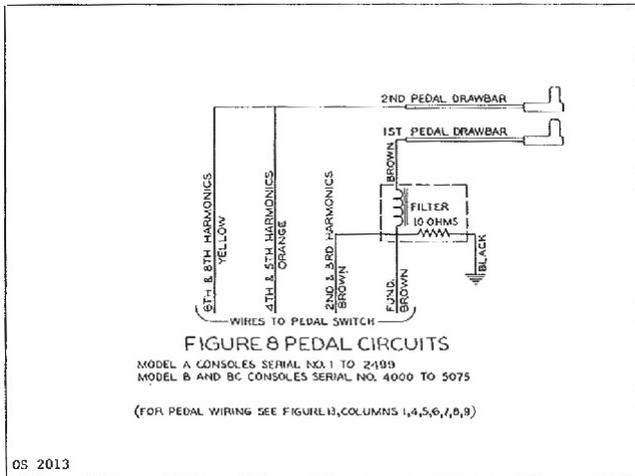
After the above message disappears, your Custom Leslie Cabinet has been Recorded.

◆ CUSTOM PEDAL REGISTRATION FUNCTION Mode Page

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.



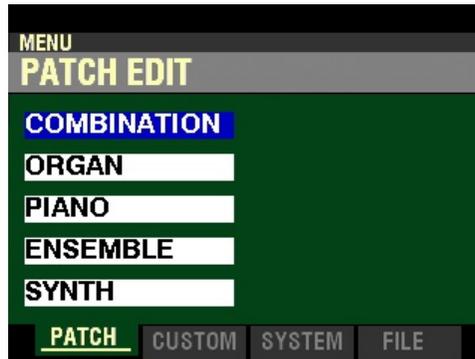
The Custom Pedal Registrations cannot be Recorded as individual Patch Parameters; however, a Custom Pedal Registration can be Recorded as part of an ORGAN Patch.

The SK PRO has 3 different Factory Custom Pedal Registrations, indicated by an F which are permanently written in memory. You can create and Record up to 3 User Custom Pipes which will be indicated by a U.

To create and Record a Custom Pedal Registration, use the CUSTOM PEDAL REG. FUNCTION Mode 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.

TRY THIS:

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



The "COMBINATION" box should be highlighted.

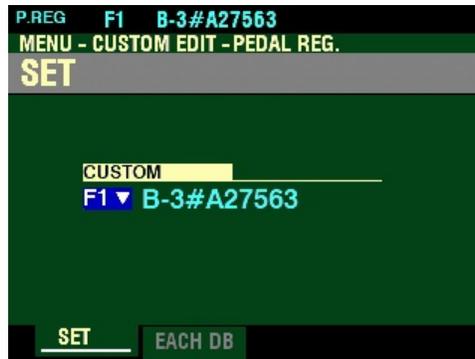
2. Press the PAGE "▶" button once. You will now see the CUSTOM EDIT FUNCTION Mode



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



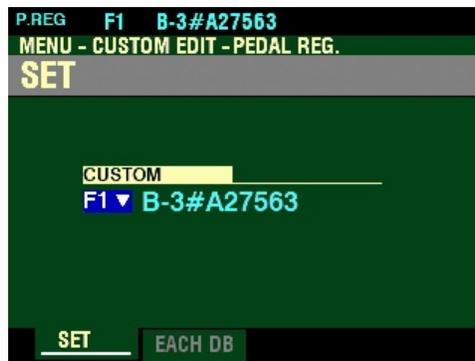
4. Press the ENTER button once. The Information Center Display should now look like this:



You are now in the CUSTOM EDIT - PEDAL REG. Mode. You may now use the DIRECTION and PAGE buttons in conjunction with the VALUE knob to make various changes. These changes are explained starting below.

◆ SET

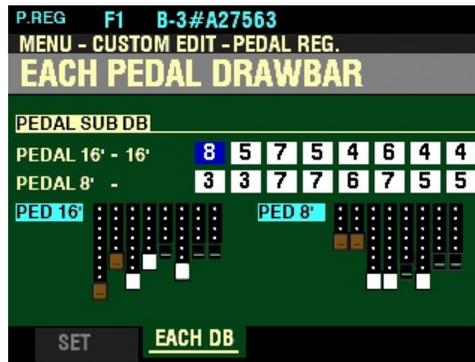
If you followed the instructions shown on the previous two pages, the Information Center Display should look like this. The box underneath “CUSTOM” should be highlighted.



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 DIRECTION “▼” 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 can select from 0 (no volume or Off) to 8 (maximum volume).

Use the DIRECTION “▼” and “▲” buttons to move the cursor to the Pedal Drawbar you wish to edit.

Use the DIRECTION “◀” and “▶” buttons to move the cursor to 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.

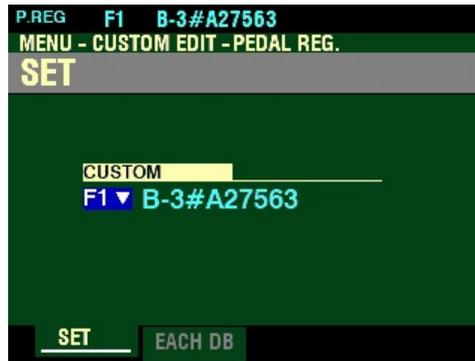
NOTE: The Drawbars on the Control Panel cannot be used to adjust the PEDAL DRAWBAR settings.

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

TRY THIS:

1. Access the CUSTOM EDIT - PEDAL REG. FUNCTION Mode using the procedure described on page 356. You should now see Page 1 of the CUSTOM EDIT - PEDAL REG. FUNCTION Mode. The box underneath “CUSTOM” should be highlighted



2. Turn the VALUE knob to select the Custom Set you want to modify
3. Make whatever changes you want to the editable Parameters. For a complete list of the Parameters that can be modified for a Custom Pedal Registration, consult the Appendix of this Guide.
4. When you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this:



Turn the VALUE knob to select the Custom Pedal Registration.

5. When you have made your selection, use the DIRECTION “▼” button to move the cursor to the “RECORD” box.



6. 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 on the next page explains the function of each of the buttons.

NAMING PARAMETERS		
Parameter	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 <u>2</u> 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.

7. When you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in succession for approximately 1 second each:

Recording...

Completed.

After the above message disappears, your Custom Pedal Registration has been Recorded.

◆ CUSTOM PIPE FUNCTION Mode Page

This FUNCTION Mode allows you to select or edit the characteristics of the Pipe Voices.

◆ What Are “CUSTOM PIPES?”

The Parameters described on these pages are grouped in macro-settings called Custom PIPES. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pipe can be Recorded as part of an ORGAN Patch.

The SK PRO has 3 different Factory Custom Pipes, indicated by an “F” which are permanently written in memory. 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 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.

TRY THIS:

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

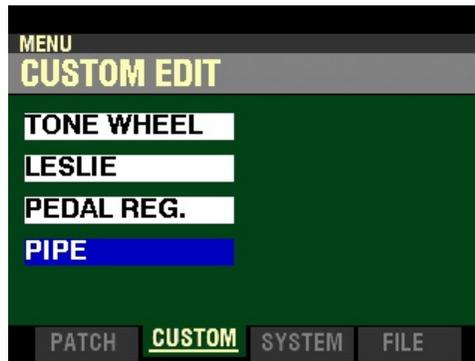


The “COMBINATION” box should be highlighted.

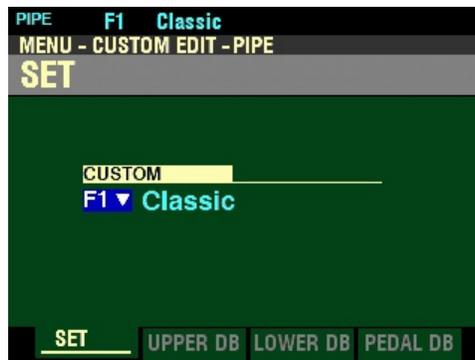
2. Press the PAGE “▶” button once. You will now see the CUSTOM EDIT FUNCTION Mode



3. Press the DIRECTION “▼” button three times. The Information Center Display should now look like this:



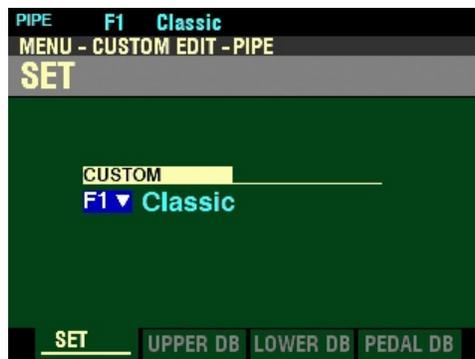
4. Press the ENTER button once. The Information Center Display should now look like this:



You are now in the CUSTOM EDIT - PIPE FUNCTION Mode. You may 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.

◆ SET

If you followed the instructions shown on the previous two pages, the Information Center Display should look like this. The box underneath “CUSTOM” should be highlighted.



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.

Classic - (classical or liturgical pipe organ):

UPPER:

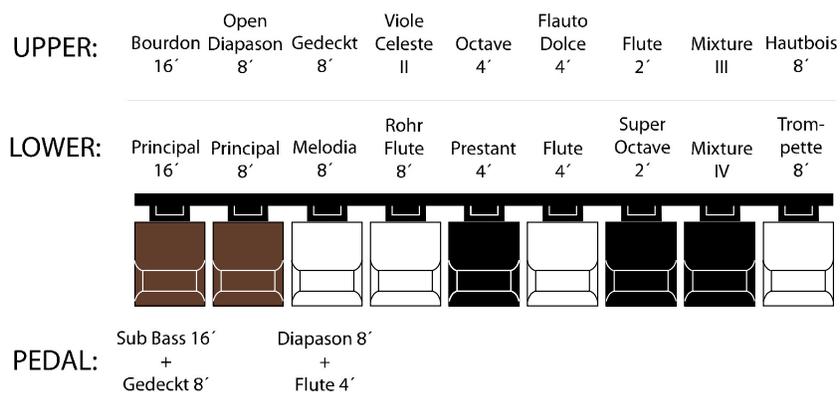
Bourdon 16'
 Open Diapason 8'
 Gedeckt 8'
 Voix Celeste 8'
 Octave 4'
 Flute Dolce 4'
 Flute 2'
 Mixture 3 ranks
 Hautbois 8'

LOWER:

Principal 16'
 Principal 8'
 Melodia 8'
 Rohr Flute 8'
 Prestant 4'
 Flute 4'
 Super Octave 2'
 Mixture 4 ranks
 Trompette 8'

PEDAL:

Sub Bass 16' & Gedeckt 8'
 Diapason 8' & Flute 4'



Theatre 1 (patterned after Wurlitzer “Style D” theatre pipe organ):

UPPER:

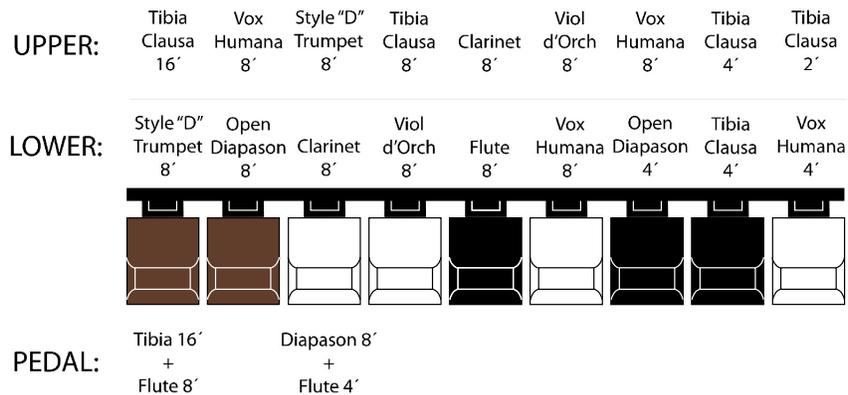
- Tibia Clausa 16'
- Vox Humana 16'
- Style “D” Trumpet 8'
- Tibia Clausa 8'
- Clarinet 8'
- Viol d’Orchestre 8'
- Vox Humana 8'
- Tibia Clausa 4'
- Tibia Clausa 2'

LOWER:

- Style “D” Trumpet 8'
- Open Diapason 8'
- Clarinet 8'
- Viol d’Orchestre 8'
- Flute 8'
- Vox Humana 8'
- Open Diapason 4'
- Tibia Clausa 4'
- Vox Humana 4'

PEDAL:

- Tibia 16' + Flute 8'
- Diapason 8' + Flute 4'



Theatre 2 (patterned after Wurlitzer “Style 260 Special” theatre pipe organ):

UPPER:

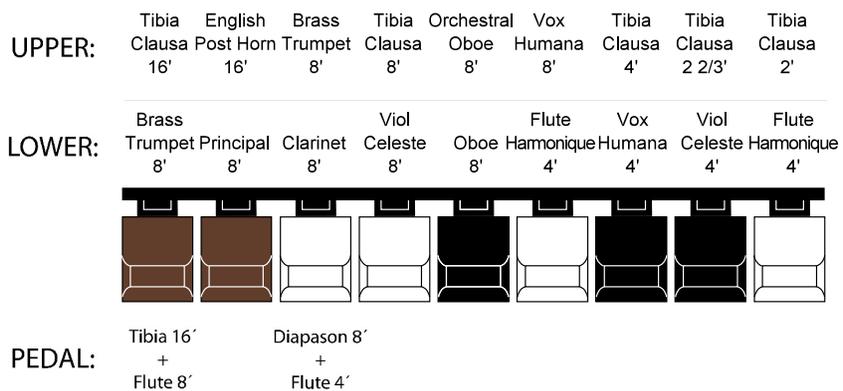
- Tibia Clausa 16'
- English Post Horn 16'
- Brass Trumpet 8'
- Tibia Clausa 8'
- Orchestral Oboe 8'
- Vox Humana 8'
- Tibia Clausa 4'
- Tibia Clausa 2²/₃'
- Tibia Clausa 2'

LOWER:

- Brass Trumpet 8'
- Principal 8'
- Clarinet 8'
- Viol Celeste 8'
- Oboe 8'
- Flute Harmonique 8'
- Vox Humana 4'
- Viol Celeste 4'
- Flute Harmonique 4'

PEDAL:

- Tibia 16' + Flute 8'
- Diapason 8' + Flute 4'



◆ STOP SET

From the screen shown on page 363, press the PAGE “▶” button once. The box underneath “STOP” should be highlighted.

	STOP	VOL[dB]	FTG	TUNE
UPPER 1	S04▼	-4.5	16'	0
UPPER 2	S01▼	-2.5	8'	0
UPPER 3	S06▼	-1.5	8'	0
UPPER 4	S10▼	-5.5	8'	0
UPPER 5	S02▼	-8.0	4'	0
UPPER 6	S05▼	-9.5	4'	0

UPPER 1 S04 : [Classic] Bourdon 1

SET UPPER DB LOWER DB PEDAL DB

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 DIRECTION “◀” and “▶” buttons to select UPPER, LOWER or PEDAL Stop Sets.

Use the DIRECTION “▼” and “▲” buttons to move up and down through the Drawbar assignments. You can select from 1 through 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	Cornoepan
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	
Description	Function
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 367, press the DIRECTION "▶" button once. The box underneath "VOL(db)" should be highlighted.

	STOP	VOL[db]	FTG	TUNE
UPPER 1	S04▼	-4.5	16'	0
UPPER 2	S01▼	-2.5	8'	0
UPPER 3	S06▼	-1.5	8'	0
UPPER 4	S10▼	-5.5	8'	0
UPPER 5	S02▼	-8.0	4'	0
UPPER 6	S05▼	-9.5	4'	0

UPPER 1 S04 : [Classic] Bourdon 1

SET UPPER DB LOWER DB PEDAL DB

VOL(db) - Pipe Voice Volume

This Parameter allows you to adjust the Volume of the selected Pipe Voice. You can select a Volume setting from 0 (softest) to 127 (loudest).

Use the DIRECTION "◀" 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.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	STOP	VOL[dB]	FTG	TUNE ▶
UPPER 1	S04▼	-4.5	16'	0
UPPER 2	S01▼	-2.5	8'	0
UPPER 3	S06▼	-1.5	8'	0
UPPER 4	S10▼	-5.5	8'	0
UPPER 5	S02▼	-8.0	4'	0
UPPER 6	S05▼	-9.5	4'	0
UPPER 1 S04 : [Classic] Bourdon 1				
SET	UPPER DB	LOWER DB	PEDAL DB	

FTG - Pipe Voice Footage

This Parameter allows you to select the Footage or pitch in which the selected Pipe Voice will sound. You can select “32,” “16,” “5 $\frac{1}{3}$,” “8,” “4,” “2 $\frac{2}{3}$,” “2,” “1 $\frac{3}{5}$,” “1 $\frac{1}{3}$ ” or “1.”

Turn the VALUE knob to make your selection..

From the above screen, press the DIRECTION “▶” button once. The box underneath “TUNE” should be highlighted.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	STOP	VOL[dB]	FTG	TUNE ▶
UPPER 1	S04▼	-4.5	16'	0
UPPER 2	S01▼	-2.5	8'	0
UPPER 3	S06▼	-1.5	8'	0
UPPER 4	S10▼	-5.5	8'	0
UPPER 5	S02▼	-8.0	4'	0
UPPER 6	S05▼	-9.5	4'	0
UPPER 1 S04 : [Classic] Bourdon 1				
SET	UPPER DB	LOWER DB	PEDAL DB	

TUNE - Pipe Voice Detune

This Parameter allows you to detune each individual Pipe Voice. You can select from -50 to +50 cents or one quarter-step sharp or flat.

Use the DIRECTION “◀” 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.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	VOL[dB]	FTG	TUNE	TREM ▶
UPPER 1	-4.5	16'	0	On
UPPER 2	-2.5	8'	0	On
UPPER 3	-1.5	8'	0	On
UPPER 4	-5.5	8'	0	On
UPPER 5	-8.0	4'	0	On
UPPER 6	-9.5	4'	0	On

UPPER 1 S04 : [Classic] Bourdon 1

SET UPPER DB LOWER DB PEDAL DB

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 DIRECTION “◀” 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 144, 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.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	FTG	TUNE	TREM	CHIFF ▶
UPPER 1	16'	0	On	Soft
UPPER 2	8'	0	On	Loud
UPPER 3	8'	0	On	Loud
UPPER 4	8'	0	On	Soft
UPPER 5	4'	0	On	Loud
UPPER 6	4'	0	On	Loud

UPPER 1 S04 : [Classic] Bourdon 1

SET UPPER DB LOWER DB PEDAL DB

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 DIRECTION “◀” and “▶” buttons to select UPPER, LOWER or PEDAL Stop Sets.

Select the Chiff setting you want by doing the following:

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.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	TUNE	TREM	CHIFF	C.OFF ▶
UPPER 1	0	On	Soft	-25
UPPER 2	0	On	Loud	-28
UPPER 3	0	On	Loud	0
UPPER 4	0	On	Soft	-35
UPPER 5	0	On	Loud	-23
UPPER 6	0	On	Loud	-23
UPPER 1 S04 : [Classic] Bourdon 1				
SET	UPPER DB	LOWER DB	PEDAL DB	

C.OFF - Pipe Voice Cutoff

This Parameter allows you to set the brightness of each individual Pipe Voice by setting its Filter Cutoff point.

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.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	TREM	CHIFF	C.OFF	PAN ▶
UPPER 1	On	Soft	-25	L16
UPPER 2	On	Loud	-28	L24
UPPER 3	On	Loud	0	L20
UPPER 4	On	Soft	-35	L12
UPPER 5	On	Loud	-23	L8
UPPER 6	On	Loud	-23	L10
UPPER 1 S04 : [Classic] Bourdon 1				
SET	UPPER DB	LOWER DB	PEDAL DB	

PAN - Pipe Voice Pan

This Parameter allows you to simulate different placements of pipe ranks.

Use the DIRECTION “◀” 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 on the previous page, press the DIRECTION “▶” button once. The box underneath “IMAGE” should be highlighted.

PIPE F1 Classic				
MENU - CUSTOM EDIT - PIPE				
UPPER STOP SET				
	←CHIFF	C.OFF	PAN	IMAGE
UPPER 1	Soft	-25	L16	LtoR
UPPER 2	Loud	-28	L24	LtoR
UPPER 3	Loud	0	L20	LtoR
UPPER 4	Soft	-35	L12	LtoR
UPPER 5	Loud	-23	L8	LtoR
UPPER 6	Loud	-23	L10	LtoR

UPPER 1 S04 : [Classic] Bourdon 1

SET UPPER DB LOWER DB PEDAL DB

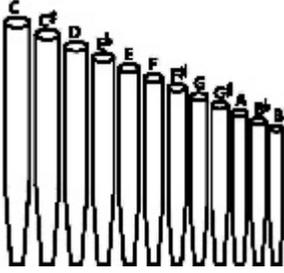
IMAGE - Pipe Voice Imaging

This Parameter allows you to simulate different arrangements of pipes.

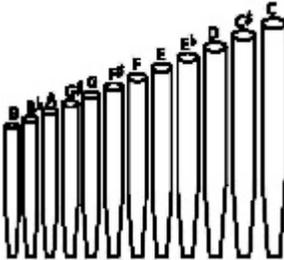
What Is “Pipe Imaging?”

The pipes of a pipe organ are arranged into sets called ranks. Each rank 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.)

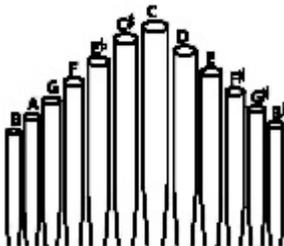
The pipes of each rank are supported by an assembly called a chest. The pipes can be arranged in many different ways on the chest. The pipe arrangement chosen by the maker depends on several things - aesthetics, musical, etc. - but the four most common ones are shown on the next page.



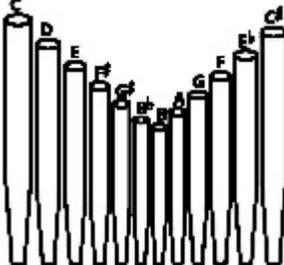
Left to Right - The pipes producing lower pitches are on the left. Playing notes chromatically going up on the keyboard will cause the pipes on the left to sound first.



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 above two pipe placement schemes are sometimes referred to as “C-C#” placement due to chromatic notes being separated.

The SK PRO gives you five different Pipe Imaging choices. The data chart below explains them.

Pipe Image Settings	
Description	Function
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 DIRECTION “◀” and “▶” buttons to select UPPER, LOWER or PEDAL Stop Sets.

Turn the VALUE knob to make your selection.

◆ Recording a Custom Pipe

TRY THIS:

1. Access the CUSTOM EDIT - PIPE Mode using the procedure described on page 362. You should now see Page 1 of the CUSTOM EDIT - PIPE FUNCTION Mode. The box underneath “CUSTOM” should be highlighted



2. Turn the VALUE knob to select the Custom Set you want to modify
3. Make whatever changes you want to the editable Parameters. For a complete list of the Parameters that can be modified for a Custom Pipe, consult the Appendix of this Guide.
4. When you have completed your edits, press the red RECORD button. The Information Center Display will look similar to this:

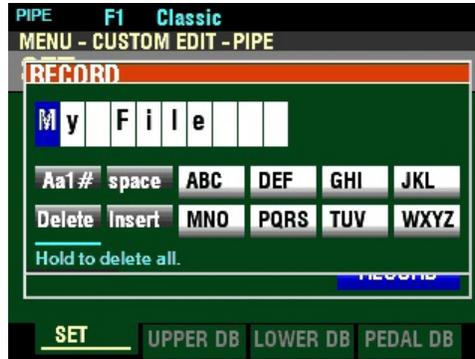


Turn the VALUE knob to select the Custom Tone Wheel Number..

5. When you have made your selection, use the DIRECTION “▼” button to move the cursor to the “RECORD” box.



6. Press the ENTER button. The Information Center Display will look similar:



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 PARAMETERS		
Parameter	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.

7. When you have finished the Naming procedure, press the ENTER button to complete the Recording procedure. You will see the following messages flash in succession for approximately 1 second each:

Recording...

Completed.

After the above message disappears, your Custom Pipe has been Recorded.

***** THIS PAGE INTENTIONALLY LEFT BLANK TO PRESERVE PAGE FORMATTING *****