

# HAMMOND



*Sk* **PRO**

## APPENDIX

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## 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		SysEx Address			SysEx Length	Data
		MSB (63)	LSB (62)	MSB to LSB				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 0E, 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
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 "n" means; 8: Ex Zone 1 9: Ex Zone 2 A: Ex Zone 3	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)
	Bank Select MSB	1n	04	00	1n	04	01	00 - 7F (0 - 127)
	Bank Select LSB	1n	05	00	1n	05	01	00 - 7F (0 - 127)
	Program Change	1n	06	00	1n	06	01	00 - 7F (0 - 127)
	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	ContmporaryGospel
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	StylD'TrumpSolo
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
Envelope		25	01	00	25	01	01	00 - 20 00: Contact 01 - 0F: Release 1 - 15 10 - 1E: Attack and Release 1 - 15
Percussion	Custom Sub Drawbars	25	02	00	25	02	01	00 - 05 (U1 - P3)
	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 Plano 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 Mkl
F025	E. Piano	EP Tine Mkl Pan
F026	E. Piano	EP Tine Mkl Phase
F027	E. Piano	EP Tine Mkl Chorus
F028	E. Piano	EP Tine Mkl 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

Patch #	Category	Name
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

Patch #	Category	Name
F107	Guitar	Nylon Guitar
F108	Guitar	Steel Guitar
F109	Guitar	Nylon&Steel Gtrs
F110	Guitar	StelGrDuo 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

Patch #	Category	Name
F160	Wind	Trumpet Muted
F161	Wind	Trombone Str
F162	Wind	Trombone Muted
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

Patch #	Category	Name
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
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

Patch #	Category	Name
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
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 WITnC&WindChm
F300	Percussion	OH WITnF&WindChm

◆ PIANO / ENSEMBLE PATCH PARAMETERS

Category	Parameter	NRPN		SysEx Address			SysEx Length	Data Data length 01 uses MSB only, length 02 uses MSB and LSB.
		MSB (63)	LSB (62)	MSB to 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: Duer             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)
	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)
LFO1, LFO2 "x" means; 3: LFO1 4: LFO2	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)
	On	s5	00	00	s5	00	01	00, 01 (Off, On)
Overdrive	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 Length	Data Data length 01 uses MSB only, length 02 uses MSB and LSB.
		MSB (63)	LSB (62)	MSB to 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 Strw D Str
		3	GndPf StrwDSt 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	Hapsichord	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 Norm
		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
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
8	SFX	1	Sine
		2	White Noise
		3	Rain
		4	TelephoneRingSus
		5	TelephoneRingRel
		6	E. Driver Sus

	Category		Name
9	Wind	7	E. Driver Rel
		1	Trumpet Str
		2	Trumpet Vib
		3	Trumpet Muted
		4	Tp. Fall Sus
		5	Tp. Fall Atk
		6	Tp. Grs Up Sus
		7	Trumpet Sectr.
		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		
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 Griss
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

	Category		Name
15	Free Reed	11	Osc. Sync D
		1	Accordion
		2	Acnd SubOcr
		3	Reed Organ
		4	Melodion B-24
		5	Melodion M-37
		6	Melodion M-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
16	Percussion	14	Harm FM
		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 Lev1 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	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-Cornoepen
45	P-Reserved
46	P-Reserved

C Classical  
 T Theatre  
 P Pedal

◆ ProChord VOICINGS

The diagram shows five systems of chord voicings. Each system consists of a treble clef staff and a bass clef staff. The notes are represented by black dots, and fingerings are indicated by numbers 1-4. Some notes are grouped with brackets and have additional markings like 'all the componets'.

- System 1:** Close, Open, Duet, Block, Big Band Sax. Bass clef: all the componets.
- System 2:** Big Band, Small Combo, Theatre, Hymn, Quartet 1. Bass clef: 4.
- System 3:** Quartet 2, Jazz Brass, Strings, Harmonic Chime, Old Time. Bass clef: 4.
- System 4:** 4 Part Closed, 5 Part Open.

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.

## ◆ 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			SysEx Length	Data	Description
		MSB	to	LSB			
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			SysEx Length	Data	Description
		MSB	to	LSB			
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			SysEx Length	Data	Description
		MSB	to	LSB			
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 Length	Data
		MSB (63)	LSB (62)	MSB to LSB				
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
	Mode Foot Ring	07	01	00	07	01	01	00: Off
	Mode Leslie Tip	07	02	00	07	02	01	01: Leslie S/F Alt
	Mode Leslie Ring	07	03	00	07	03	01	02: Leslie S/F Mom
		03: Leslie S/F Tri						
Leslie Switch Device	07	04	00	07	04	01	04: TW Brake 05: Favorite Fwd 06: Favorite Rev 07: Spring Shock 08: MFX2 Delay Time 09: Org U&L Sustain 0A: Pedal To Lower 0B-23: Bass 1C - 3C 24: ProChord	
User Button	Mode	08	00	00	08	00	01	00 - 0E
		08	00	00	08	00	01	00: Off 01: Pedal Sustain 02: Org U Sustain 03: Org L Sustain 04: TW Brake 05: Spring Shock 06: MFX2 Delay Time 07: Organ MFX1 08: Organ MFX2 09: Piano MFX1 0A: Piano MFX2 0B: Ens MFX1 0C: Ens MFX2 0D: Synth MFX1 0E: Synth MFX2
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
		04	00	00	04	00	01	00: Off 01: Piano Stereo 02: Ensemble Stereo 03: Synth Stereo
		04	01	00	04	01	01	00 - 02 (1, 3, 1+Line)
		04	02	00	04	02	01	00, 01 (Off, On)
		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 Length	Data	
		MSB (63)	LSB (62)	MSB to LSB					
MIDI Common	MIDI In Mode	--	--	--	--	--	--	00 - 09 00: Upper 01: Lower 02: Pedal 03: Lower+Pedal 04: Upper+Pedal	05: Organ Upper 06: Piano 07: Ensemble 08: Synth 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			SysEx Length	Data	Default	Description
		MSB	0b	0n				
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 Channel	Default Changed	*1 1 - 16	*1 1 - 16	*1: Upper = 1, Lower = 2, Pedal = 3 when MIDI "Basic" Template is loaded.
Mode	Default Messages Altered	3 X *****	3 X 1	Switched by MIDI In Mode.
Note Number	: True Voice	12 - 120 (61 key)*2 4 - 124 (73 key) *****	0 - 127  0 - 127	*2: with oct. shift
Velocity	Note ON Note OFF	O O	O O	
After Touch	Key's Ch's	X X	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 Change	: True #	O 0 - 127	O 0 - 99, 127	
System Exclusive		O	O	
System Common	: Song Position : Song Select : Tune	X X X	X X X	
System Real Time	: Clock : Commands	X X	X X	
Aux Messages	: All Sounds Off	X	O	(120)
	: Reset All Controllers	O	O	(121)
	: Local On/Off	X	X	
	: All Notes Off	O	O	
	: Active Sense : Reset	O X	O 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)

O: Yes

\*2: For Rx. only.

X: No

### ◆ DRAWBAR DATA LIST

Part	Control Number								
	16'	5 1/3'	8'	4'	2 2/3'	2'	1 3/5'	1 1/3'	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)	-	-	-	-	-	-

  

Value	Level								
	0	1	2	3	4	5	6	7	8
	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

#### NRPN SWITCH

F0	Suzuki Exclusive
55	SUZUKI ID
dd	Device ID
10	Model ID MSB
24	Model ID LSB
02	Command: NRPN Sw.
[DATA]	00H = Off, 7FH = On
F7	End Of Exclusive

When this device receives this message, Tx & Rx NRPN is switched in the Control channel.

#### 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.