



Model XE-1

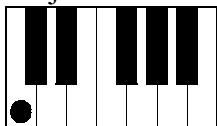
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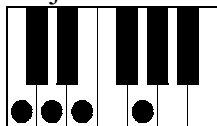
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Chord Chart (on Chord Mode is SINGLE)

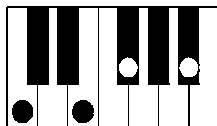
Major



Major + 9



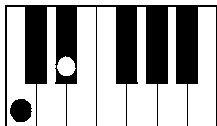
7th flat 5



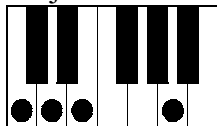
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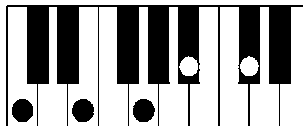
Minor



Major 6 + 9



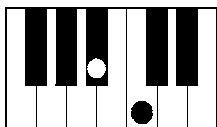
7th flat 9



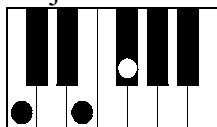
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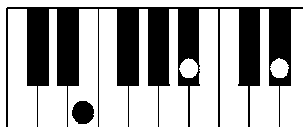
7th



Major flat 5



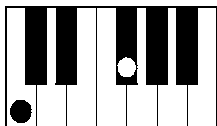
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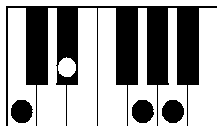
B flat / C



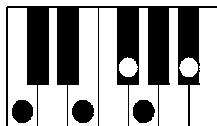
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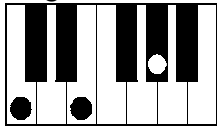
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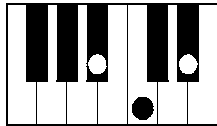
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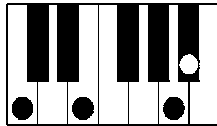
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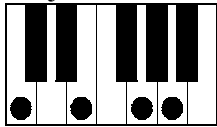
Minor 7th



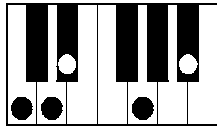
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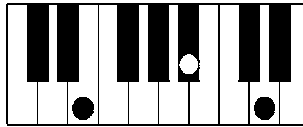
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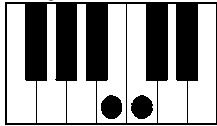
Minor 9th



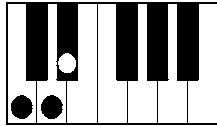
9th



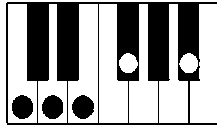
Major 7th



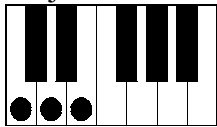
Minor + 9



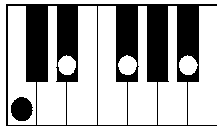
9th flat 5



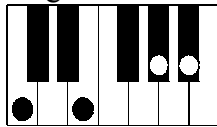
Major 9th



Minor 7th flat 5



Aug 7th



[Hammond Single Keyboard]

Date: 10-July-2000

Model: XE-1

MIDI Implementation Chart

Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 - 16 1 - 16	1 - 16 1 - 16	
Mode	Default Messages Altered	3 X *****	3 X X	
Note Number	: True Voice	6 - 126 *****	0 - 127 0 - 127	
Velocity	Note ON Note OFF	O X	O X	
After Touch	Key's Ch's	X X	X X	
Pitch Bender		O	O	
Control Change	0,32	O	O	Bank Select
	1	O	O	Modulation
	6,38	O	O	Data Entry
	7	O	O	Volume
	10	O	O	Pan
	11	O	O	Expression
	64	O	O	Hold 1
	80,81,82	O	O	Drawbar Reg. U, L, P
	84	O	O	Prochord Active
	85	O	O	Glide Active
	86	O	O	Sustain Active
	91	O	O	Reverb Send Level
	93	O	O	Chorus Send Level
	98,99	O	O	NRPN LSB, MSB
100, 101	O	O	RPN LSB, MSB	
120	O	O	All Sound Off	
121	O	O	Reset All Controllers	
Program Change	: True #	O ***** 0 - 127	O ***** 0 - 127	
System Exclusive		O	O	
System Common	: Song Position : Song Select : Tune	X X X	X X X	
System Real Time	: Clock : Commands	O OStart, Stop & Continue	X X	Rhythm/Sequencer
Aux Messages	: Local On/Off : All Notes Off : Active Sense : Reset	X O O X	X O O X	

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

O: Yes
X: No

4 Appendix
Part and MIDI Messages

	Upper 1, 2, ...& Pedal	U/L/P Keyboard	U/L/P Drawbar	Drawbar Control	Expression	Control	Chord	M.Drum/ S.E.	Drum,Perc, ...&Acc 4	Part 1-16
Note	O *5	O	O *5	X	X	X	O	O *5	O	O *5
Pitch Bend	O	O	O	X	X	X	X	X	O	O
Modulation	O	O	X	X	X	X	X	X	O	O
Volume, Pan	O	X	X	X	X	X	X	X	O	O
Expression	O*1	X	O*1	X	O*2	X	X	X	O	O*1
Hold 1	O	O	O	X	X	X	X	X	X	O
Drawbar Reg.	X	X	X	O	X	X	X	X	X	X
Prochord Active	X	X	X	X	X	O	X	X	X	X
Glide Active	O*8	O*8	X	X	X	X	X	X	X	X
Sustain Active	O*8	O*8	O*8	X	X	X	X	X	X	X
Reverb, Chorus	O	X	X	X	X	X	X	X	O	O
RPN	O *3	X	O *3	X	X	X	X	X	O *4	O *4
NRPN	X	X	X	X	X	O *6	X	X	X	O *7
All Notes Off	O	O	O	X	X	X	X	O	O	O
All Sounds Off	O	O	O	X	X	X	X	O	O	O
Reset All Ctrl.	O	O	O	X	X	X	X	X	O	O
Bank, Program	Change voice each part.	Tx. Only for external control.	X	X	X	Combination, Rhythm Preset	X	X	Change voice each part.	Change voice each part.

O=Yes
X=No

- *1: Work for each part.
- *2: Work for all parts (audio controlled).
- *3: Pitch Bend Range
- *4: Pitch Bend Range, Fine Tune & Coarse Tune
- *5: Disregards Octave, Velocity and Part On/Off Switch Settings.
- *6: Refer to Global and Preset parameter list.
- *7: Refer to Part 1-16 NRPN list.
- *8: Except Pedal Voice, Pedal Keyboard and Pedal Drawbar.

MIDI Channels In Song File

MIDI Channel	Easy Rec		Multi Rec		16 Tracks			
1	Upper Keyboard	Note, P.Bend, Mod., Sustain Active, Glide Active	1	Upper 1 / Melody	Note, P.Bend, Mod, Volume, Pan, Expression, Hold 1, Reverb, Chorus, Sustain Active, Glide Active, PB Range, Bank/Program Chg.	1	Part 1	All of channel messages at each tracks
2	Lower Keyboard		2	Upper 2 / Harm 1		2	Part 2	
3	Pedal Keyboard		3	Lower 1		3	Part 3	
4	(Part 4)	All of channel messages at each tracks	4	Lower 2 / Harm 2	4	Part 4		
5	(Part 5)		5	Pedal / Harm 3	5	Part 5		
6	(Part 6)		6	Upper Drawbar	6	Part 6		
7	(Part 7)		7	Lower Drawbar	7	Part 7		
8	(Part 8)	All of channel messages at each tracks	8	Pedal Drawbar	8	Part 8		
9	Auto Bass		9	Auto Bass	9	Part 9		
10	Drums		10	Drums	10	Part 10		
11	Percussion		11	Percussion	11	Part 11		
12	Accomp 1	Note, P.Bend, Mod, Volume, Expression, Bank/Program chg.	12	Accomp 1	Note, P.Bend, Mod, Volume, Expression, Bank/Program chg.	12	Part 12	
13	Accomp 2		13	Accomp 2		13	Part 13	
14	Accomp 3		14	Accomp 3		14	Part 14	
15	Accomp 4		15	Accomp 4		15	Part 15	
16	Manual Drum	Note	16	Manual Drum	Note	16	Part 16	
	Sound Effect	Note		Sound Effect	Note			
	Drawbar Control	CC#80 - 82		Drawbar Control	CC#80 - 82			
	Expression Pedal	CC#11		Expression Pedal	CC#11			
	Control (Others)	NRPN, SysEx, CC, Bank/Program chg.		Control (Others)	NRPN, SysEx, CC, Bank/Program chg.			

6 Appendix

MIDI Information

[Channel Voice Message]

Note Off

Status	2nd Byte	3rd Byte
8n	kk	vv
9n	kk	00

or

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 kk=Note Number: 00 - 7F(0 - 127)
 vv=Velocity(disregard): 00 - 7F(0 - 127)

Note On

Status	2nd Byte	3rd Byte
9n	kk	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 kk=Note Number: 00 - 7F(0 - 127)
 vv=Velocity: 00 - 7F(0 - 127)

Control Change

The value set by the Control Change is not reset even when Program Change messages etc. are received.

Bank Select

Status	2nd Byte	3rd Byte
Bn	00	mm
Bn	20	ll

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 mm,ll=Bank Number: 00 00 - 7F 7F
 Default Value = 00 00

When "GM System On" is received, it makes Rx. Bank Select = Off and the Bank Select is not received.

When "Full Parameter Reset" is received, it makes Rx. Bank Select = On.

This device process the Lower Byte (ll) of the Bank Number as 00.

However, when you send the Bank Select, be sure to send both Upper Byte(mm) and Lower Byte(ll).

Until you send the Program Change, the Bank Select process is reserved.

Modulation

Status	2nd Byte	3rd Byte
Bn	01	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 vv=Modulation Depth: 00 - 7F

The Modulation does not work on certain voices.

Data Entry

Status	2nd Byte	3rd Byte
Bn	06	mm
Bn	26	ll

(MSB)

(LSB)

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 mm,ll=Value for the Parameter designated by RPN/NRPN.

Volume

Status	2nd Byte	3rd Byte
Bn	07	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)
 vv=Volume: 00 - 7F(0 - 127)

Pan

Status	2nd Byte	3rd Byte
Bn	0A	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Pan: 00(Left) - 40(Center) - 7F(Right)
 Default Value = 40(64)

The Rhythm Part changes the overall pan setting of each Instrument relatively.

Expression

Status	2nd Byte	3rd Byte
Bn	0B	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Expression: 00 - 7F(0 - 127)
 Default Value = 7F(127)

You can control the volume of the Part corresponding to the MIDI Ch of the received message, independently of the volume message.

Expression message is used to express intonation of the expression pedal, crescendo or decrescendo.

Hold 1

Status	2nd Byte	3rd Byte
Bn	40	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Control Value: 00 - 7F(0 - 127) 0-63 = Off, 64-127 = On

Prochord Active

Status	2nd Byte	3rd Byte
Bn	54	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Control Value: 00 - 7F(0 - 127) 0-63 = Off, 64-127 = On

Activates "Harmony" parts during this parameter is "On".

Glide Active

Status	2nd Byte	3rd Byte
Bn	55	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Control Value: 00 - 7F(0 - 127) 0-63 = Off, 64-127 = On

Glides notes during this parameter is "On".

Sustain Active

Status	2nd Byte	3rd Byte
Bn	56	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Control Value: 00 - 7F(0 - 127) 0-63 = Off, 64-127 = On

Exchanges release rate between original instruments and sustain length.

General Effect 1 (Reverb Send Level)

Status	2nd Byte	3rd Byte
Bn	5B	vv

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

vv=Reverb Send Level: 00 - 7F(0 - 127)
 Default Value = 28(40)

You can control the Reverb Send Level of the Part corresponding to the

NRPN MSB/LSB

Status	2nd Byte	3rd Byte
Bn	63	mm
Bn	62	ll

(MSB)

(LSB)

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

mm=Upper Byte of the Parameter Number designated by NRPN[MSB].

ll=Lower Byte of same[MSB].

When 'GM System On' is received, it makes RX. NRPN=Off; it does not receive NRPN.

The value set by NRPN is not reset even if "Program Change".

"Reset All controllers", etc. are received.

NRPN- "Non Registered Parameter Number"

The expansive range named NRPN is provided in the Control Change, which function is specific on each equipment and not defined in the MIDI Standard.

When you use it, designate the parameter to control, by giving NRPN MSB and NRPN LSB (cc#98 and 99), and the set the value of the designated parameter by the Data Entry MSB(cc#6).

Once the NRPN parameter is designated, all the data entry received into the same channel after that is regarded as the change of the value of the parameter. To avoid any mis-operation, we suggest you to set RPN Null (RPN = 7F 7F), after setting the necessary parameter value.

On this sound module you can change the voice parameter by using NRPN.

RPN MSB/LSB

Status	2nd Byte	3rd Byte
Bn	65	mm
Bn	64	ll

(MSB)

(LSB)

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

mm=Upper Byte of the Parameter Number designated by RPN[MSB].

ll=Lower Byte of same[MSB].

The Value set by RPN is not reset by receiving the "Program Change", "Reset All Controllers", etc.

NRPN- "Non Registered Parameter Number"

The expansive range named RPN is provided in the Control Change, which function is specific on each equipment and not defined in the MIDI Standard.

When you use it, designate the parameter to control, by giving RPN MSB and RRN LSB(cc#101 and 100), and then set the value of the designated parameter by the Data Entry MSB(cc#6).

Once the RPN parameter is designated, all the data entry received into the same channel after that is regarded as the change of the value of the parameter. To avoid any mis-operation, we suggest you to set RPN Null, after setting the necessary parameter value.

Program Change

Status	2nd Byte
Cn	pp

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

pp=Program Number

Control Channel: Change Preset(Combination/Rhythm) instantly.

Other: The voice changes from the fresh Note On after receiving the Program Change. The already sounding voice before this change is not affected.

Pitch Bend Change

Status	2nd Byte	3rd Byte
En	ll	mm

n=MIDI Channel Number: 0 - F(Ch.1 - 16)

mm=Upper Byte

ll=Lower Byte 00 00(-8192) - 40 00(0) - 7F 7F(8191)

8 Appendix
NRPN for Part 1-16

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)	LSB (26)	
Vibrato	Rate	08	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Depth	09	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Delay	0A	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
Filter	Cut Off Frequency	20	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Resonance	21	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
Envelope	Attack Rate	63	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Decay Rate	64	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Release Rate	66	01	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
Drum Instrument	Pitch Coarse	rr	18	00 - 40 - 7F(-64 - 0 - +63) Relative		40(0)
	Level	rr	1A	00 - 7F(0 - 127) Absolute		
	Pan	rr	1C	00 - 40 - 7F(L - C - R) Absolute		
	Reverb Send Level	rr	1D	00 - 7F(0 - 127) Absolute		
	Chorus Send Level	rr	1E	00 - 7F(0 - 127) Absolute		
				<i>rr = Drum Instrument Note Number</i>		

Disregard LSB of Data Entry.

The Parameter of Relative Change relatively changes based on the preset value(40h).

The Parameter of Absolute Change sets the absolute parameter value by the value from MIDI, regardless of the preset data.

RPN for Part 1-16 and each Voice part

Parameter	RPN Adr.		DATA Range		Default
	LSB (64)	MSB (65)	MSB (06)	LSB (26)	
Pitch Bend Sensitivity	00	00	00 - 18(0 - 24 Notes)		02
Master Fine Tuning	01	00	00 00 - 40 00 - 7F 7F (-8192*100/8192 - 0 - +8191*100/8192) cent		40 00
Master Coarse Tuning	02	00	28 - 40 - 58(-24 - 0 +24 semitones)		40
RPN Null	7F	7F			

System Exclusive Message

Current Dump/Global Dump

1. Each Packet

F0	System Exclusive
55	SUZUKI ID
00	Device ID
10	Model ID MSB
0E	Model ID LSB
11	Command: Data Packet
[TYPE]	Data Type 07h= Current Dump 08h= Global Dump
[PNH]	Packet Number MSB
[PNL]	Packet Number LSB
[DATA]	128 Bytes Data 256 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
00	Device ID
10	Model ID MSB
0E	Model ID LSB
14	Command: Acknowledge
[AK]	Result: 00h=OK 05h=Check Digit Error 06h=Recieve Protected
[PNH]	Packet Number MSB
[PNL]	Packet Number LSB
F7	End of Exclusive

3. Hand shake communication

Master	Slave
Packet 0	->
	<- Acknowledge 0
Packet 1	->
	<- Acknowledge 1

This device will wait for 20ms if no acknowlededs is recieved and transmit the next data of the packet number. (One Way Transfer)

NRPN Switch

F0	System Exclusive
55	SUZUKI ID
00	Device ID
10	Model ID MSB
0E	Model ID LSB
02	Command: NRPN Sw.
[DATA]	00h=Off, 7Fh=On
F7	End Of Exclusive

When this device recives this message, switch Tx&Rx NRPN in Control channel.

Mode Setting Exclusive Message

1. Full Parameters Reset

F0	System Exclusive
55	SUZUKI ID
10	Device ID for DT1
42	Model ID for DT1
12	Command: DT1
40	Address MSB
00	Address
7F	Address LSB
[DATA]	00h= Reset Part 1 - 16 7Eh= Reset for Multi Rec. 7Fh= Reset for Easy Rec.
[SUM]	Check Sum
F7	End of Exclusive

When this device receives this message, it is reset to the initial status of Full Parameter, and gets ready for receiving the music data for the this device correctly. It takes about 50ms to process this message. Take an interval before the next message.

2. GM System On

F0	System Exclusive
7E	Universal Non-Real Time Message
7F	Device ID: Broadcast
09	General MIDI Message
01	General MIDI On
F7	End of Exclusive

When this device recieves this message, it is reset to the initial status of GM(General MIDI) Performance Level 1 and gets ready for correctly receiving the GM score(Level 1). At this time, it makes Rx.NRPN = Off, Rx.Bank Select = Off in part 1-16. It takes about 50ms to process this message. Take an interval before the next message.

Universal Real Time System Exclusive Message

These messages are only for part 1-16.

1. Master Volume

F0	System Exclusive
7F	Universal Real Time Message
7F	Device ID: Broadcast
04	Sub ID 1 Device Control Message
01	Sub ID 2 Master Volume
[LL]	Lower Byte of Master Volume
[MM]	Upper Byte of Master Volume
F7	End of Exclusive

The [LL] is treated as 00h.

2. Master Pan

F0	System Exclusive
7F	Universal Real Time Message
7F	Device ID: Broadcast
04	Sub ID 1 Device Control Message
02	Sub ID 2 Master Pan
[LL]	Lower Byte of Master Pan
[MM]	Upper Byte of Master Pan
F7	End of Exclusive

The [LL] is treated as 00h.

System Exclusive Message

These messages are only for part 1-16.

Data Set1 (DT1)

This message transmits the actual data for setting the data for equipments.

F0	System Exclusive
55	SUZUKI ID
10	Device ID for DT1
42	Model ID for DT1
12	Command: DT1
[AA]	Address MSB (Upper Byte of the Head Address of Transmitted Data)
[BB]	Address (Middle Byte)
[CC]	Address LSB (Lower Byte)
[DATA]	Data (Main portion of the Transmitted Data. Data of plural Bytes are transmitted in the order of address.)
...	
[DATA]	
[SUM]	Check Sum
F7	End of Exclusive

System Parameter

Address	Size	Data Range	Parameter	Description	Default Value	Description
40 00 04	01	00 - 7F	Master Volume (=F0 7F 7F 04 01 00 vv F7)	0 - 127	7F	127
40 00 05	01	28 - 58	Master Key-Shift	-24 - +24[semitone]		
40 00 06	01	01 - 7F	Master Pan (=F0 7F 7F 04 02 00 mm F7)	1(left) - 127(right)	40	center
40 00 7F	01	00 - 7F	Full parameter Reset			

Patch Parameter

1.Patch Common

Address	Size	Data Range	Parameter	Description	Default Value	Description
40 01 30	01	00 - 07	Reverb Macro	00: Room 1 01: Room 2 02: Room 3 03: Hall 1 04: Hall 2 05: Plate 06: Church 07: Cathedral	04	Hall 2
40 01 31	01	00 - 07	Reverb Character	0 - 7	04	4
40 01 32	01	00 - 07	Reverb Pre-LPF	0 - 7	03	3
40 01 33	01	00 - 7F	Reverb Level	0 - 127	40	64
40 01 34	01	00 - 7F	Reverb Time	0 - 127	2A	42
40 01 38	01	00 - 07	Chorus Macro	00: Chorus 1 01: Chorus 2 02: Leslie S 03: Leslie F 04: Echo 05: Flanger 06: Delay 1 07: Delay 2	01	Chorus 2
40 01 3A	01	00 - 7F	Chorus Level	0 - 127	40	64
40 01 3D	01	00 - 25	Chorus Rate	0 - 37	02	2

Reverb Macro: the parameter to set the preset Reverb Type. By changing this, the value of Character, Time, and Pre-LPF changes to the Preset value of each type.

Chorus Macro: the parameter to set the preset Chorus Type. By changing this, the value of Rate changes to the Preset of each Type.

2.Patch Block

This device has 16 PART and does various settings for each PART.

The parameter for each PART is called PATCH PARAMETER. Designate the Address by the Block Number, and not by the Part Number, to communicate the Patch Parameter Information by the Exclusive Message.

x...Block Number(0 - F) Part 1: x=1
 Part 2: x=2

 Part 9: x=9
 Part 10: x=0
 Part 11: x=A
 Part 12: x=B

 Part 16: x=F

Address	Size	Data Range	Parameter	Description	Default Value	Description
40 1x 15	01	00 - 02	Use For Rhythm Part	0 = Off 1 = Map 1 2 = Map 2		See below

This is the Parameter to set the DRUM MAP of the PART to use as the DRUM PART. You can use on this device Maximum 2 DRUM MAPS (Map 1 and Map 2) at the same time (in deffernt Parts).

The Default Value: PART 10(x = 0) --- Map 1 (1), Other PART --- Normal Instrument Voice Part (Off(0), Normal Part).

Address	Size	Data Range	Parameter	Description	Default Value	Description
40 1x 02	01	00 - 10	Rx. MIDI Channel	1 - 16, Off	Same as Part #	
40 1x 0A	01	00 - 01	Rx. NRPN	Off/On	00	Off
40 1x 16	01	28 - 58	Pitch Key Shift	-24 - +24[semitone]	40	0[semitone]
40 1x 17	02	08 - F8	Pitch Offset Fine	-12.0 - +12.0[Hz]	08 00	0[Hz]
40 1x 23	01	00 - 01	Rx. Bank Select	Off/On	01	On
40 1x 30	01	00 - 7F	Vibrato Rate (=Bn 63 01 62 08 06 vv)	-63 - 0 - +63	40	0
40 1x 31	01	00 - 7F	Vibrato Depth (=Bn 63 01 62 09 06 vv)	-63 - 0 - +63	40	0
40 1x 32	01	00 - 7F	Cut Off Freq. (=Bn 63 01 62 20 06 vv)	-63 - 0 - +63	40	0
40 1x 33	01	00 - 7F	Resonance (=Bn 63 01 62 21 06 vv)	-63 - 0 - +63	40	0
40 1x 34	01	00 - 7F	Env. Attack (=Bn 63 01 62 63 06 vv)	-63 - 0 - +63	40	0
40 1x 35	01	00 - 7F	Env. Decay (=Bn 63 01 62 64 06 vv)	-63 - 0 - +63	40	0
40 1x 36	01	00 - 7F	Env. Release (=Bn 63 01 62 66 06 vv)	-63 - 0 - +63	40	0
40 1x 37	01	00 - 7F	Vibrato Delay (=Bn 63 01 62 0A 06 vv)	-63 - 0 - +63	40	0

Drum Setup Parameter

mm: Map number (0=Map 1, 1=Map 2)

rr: Drum part note number (00h - 7Fh)

Address	Size	Data Range	Parameter	Description	Default Value	Description
41 m1 rr	01	00 - 7F	Play Note Number	Pitch Coarse		
41 m2 rr	01	00 - 7F	Level (=Bn 63 1A 62 rr 06 vv)			
41 m4 rr	01	00 - 7F	Pan (=Bn 63 1C 62 rr 06 vv)	-63(Left) - 0(C) - +63(Right)		
41 m5 rr	01	00 - 7F	Reverb Send Level (=Bn 63 1D 62 rr 06 vv)	Multiplicand of the part reverb level 0.0 - 1.0		
41 m6 rr	01	00 - 7F	Chorus Send Level (=Bn 63 1E 62 rr 06 vv)	Multiplicand of the part chorus level 0.0 - 1.0		

When the DRUM SET is changed, all the Drum Setup Parameter value is initialised (goes back to the Default value).

Global Parameters

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)		
Tune	Transpose	01	00	3A - 40 - 46(-6 - 0 - +6)		40(0)
	Drawbar Tune	01	01	00, 01(E-Tempera, Tonewheel)		00(E-Tempera)
	Master Tune	01	02	36 - 40 - 4A(A=430 - 440 - 450)		40(A=440)
Expression	Source	01	03	00 - 02(Exp.Ped, MIDI, Seq)		02(Seq)
Foot Switch	Mode 1	02	00	*6		09(Start/Stop)
	Mode 2	02	01	*6		04(Damper Upper)
Glide	Upper 1	03	00	00, 01(Off/On)		01(On)
	Upper 2	03	01	00, 01(Off/On)		01(On)
	Lower 1	03	02	00, 01(Off/On)		01(On)
	Lower 2	03	03	00, 01(Off/On)		01(On)
	Range	03	04	00, 01(Semi/Whole)		00(Semi)
	Speed	03	05	00 - 07(0 - 7)		02(3)
Damper	Upper 1	04	00	00, 01(Off/On)		01(On)
	Upper 2	04	01	00, 01(Off/On)		01(On)
	Upper Drawbar	04	02	00, 01(Off/On)		01(On)
	Lower 1	04	03	00, 01(Off/On)		01(On)
	Lower 2	04	04	00, 01(Off/On)		01(On)
	Lower Drawbar	04	05	00, 01(Off/On)		01(On)
	Pedal	04	06	00, 01(Off/On)		01(On)
	Pedal Drawbar	04	07	00, 01(Off/On)		01(On)
SES	SES On	06	00	00, 01(Off/On)		00(Off)
	Depth Rhy&Voice	06	01	00 - 02(Off, Small, Normal)		02(Normal)
	Depth Drawbar	06	02	00 - 02(Off, Small, Normal)		02(Normal)
	Effect Rhy&Voice	06	03	00, 01(Mono/Stereo)		00(Mono)
	Effect Drawbar	06	04	00, 01(Mono/Stereo)		00(Mono)
Equalizer	Rhythm & Voice On	07	00	00, 01(Off/On)		01(On)
	Drawbar On	07	01	00, 01(Off/On)		01(On)
	Group	07	02	00, 01(Off/On)		00(Off)
	R&V Freq Low	07	03	00 - 06(40 - 160 Hz)		02(63)
	R&V Freq Low-Mid	07	04	00 - 07(200 - 1kHz)		03(400)
	R&V Freq Mid-High	07	05	00 - 07(1.25k - 6.3kHz)		05(4k)
	R&V Freq High	07	06	00 - 03(8k - 16kHz)		01(10k)
	R&V Gain Low	07	07	00 - 06 - 0C(-6 - 0 - +6dB)		0B(+5)
	R&V Gain Low-Mid	07	08	00 - 06 - 0C(-6 - 0 - +6dB)		06(0)
	R&V Gain Mid-High	07	09	00 - 06 - 0C(-6 - 0 - +6dB)		03(-3)
	R&V Gain High	07	0A	00 - 06 - 0C(-6 - 0 - +6dB)		01(-5)
	Drawbar Freq Low	07	0B	00 - 06(40 - 160 Hz)		05(125)
	Drawbar Freq Low-Mid	07	0C	00 - 07(200 - 1kHz)		03(400)
	Drawbar Freq Mid-High	07	0D	00 - 07(1.25k - 6.3kHz)		05(4k)
	Drawbar Freq High	07	0E	00 - 03(8k - 16kHz)		01(10k)
	Drawbar Gain Low	07	0F	00 - 06 - 0C(-6 - 0 - +6dB)		0C(+6)
	Drawbar Gain Low-Mid	07	10	00 - 06 - 0C(-6 - 0 - +6dB)		06(0)
	Drawbar Gain Mid-High	07	11	00 - 06 - 0C(-6 - 0 - +6dB)		03(-3)
Drawbar Gain High	07	12	00 - 06 - 0C(-6 - 0 - +6dB)		00(-6)	

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)	LSB (26)	
Leslie	Off Type	08	00	00, 01(Through, Brake)	-	00(Through)
	Slow Speed Horn	08	01	00 - 09(0, 24 - 48rpm)	-	05(36)
	Slow Speed Bass	08	02	00 - 09(0, 24 - 48rpm)	-	05(36)
	Fast Speed Horn	08	03	00 - 15(0, 375 - 435rpm)	-	07(393)
	Fast Speed Bass	08	04	00 - 15(0, 375 - 435rpm)	-	07(393)
	Rise Time Horn	08	05	00 - 18(0.2 - 5.0s)	-	05(1.2)
	Rise Time Bass	08	06	00 - 18(0.5 - 12.5s)	-	0D(7.0)
	Fall Time Horn	08	07	00 - 18(0.2 - 5.0s)	-	04(1.0)
	Fall Time Bass	08	08	00 - 18(0.5 - 12.5s)	-	0F(8.0)
	Brake Time Horn	08	09	00 - 18(0.2 - 5.0s)	-	05(1.2)
	Brake Time Bass	08	0A	00 - 18(0.5 - 12.5s)	-	12(9.0)
	Volume Horn	08	0B	00 - 0C(0 - -12dB)	-	00(0)
	Volume Bass	08	0C	00 - 0C(0 - -12dB)	-	00(0)
	Mic. Angle	08	0D	00 - 06(0 - 180deg)	-	04(120)
	Mic. Distance	08	0E	00 - 08(0.3 - 2.7m)	-	01(0.6)
Touch Tempo	Division	09	00	00, 01(Eighth/Quarter note)	-	01(Quarter)
	Start	09	01	00, 01(Off/On)	-	01(On)
Auto Vari	Auto Vari On	0A	00	00, 01(Off/On)	-	00(Off)
	Mode	0A	01	00 - 02(Auto, Fill, Prog)	-	00(Auto)
	Auto Measure	0A	02	00 - 04(2, 4, 8, 12, 16)	-	01(4)
	Fill In 1	0A	03	00 - 02(Forward, Backward, Still)	-	
	Fill In 2	0A	04	00 - 02(Forward, Backward, Still)	-	
	Program Repeat	0A	05	00, 01(Off/On)	-	
16 Parts	Voice Number	2p	00	*1	*1	
	Volume	2p	01	00 - 7F	-	64
	Pan	2p	02	00 - 40 - 7F(Left-Center-Right)	-	40(Center)
	Vel.Curve	2p	03	00 - 05(Fix, Normal - Strg)	-	
	Reverb Send Level	2p	04	00 - 7F	-	28
	Chorus Send Level	2p	05	00 - 7F	-	00
	Octave Shift	2p	06	3E - 40 - 42(-2, -1, 0, +1, +2)	-	40
	Bend Range	2p	07	00 - 0C	-	02
			$p=part(0-F: 1-16)$			
Preset Load	Upper Drawbar	0B	00	00, 01(Off/On)	-	01(On)
	Lower Drawbar	0B	01	00, 01(Off/On)	-	01(On)
	Pedal Drawbar	0B	02	00, 01(Off/On)	-	01(On)
	Tempo	0B	03	00, 01(Off/On)	-	00(Off)
	Style	0B	04	00, 01(Off/On)	-	00(Off)
	Accomp	0B	05	00, 01(Off/On)	-	00(Off)
	Split	0B	06	00, 01(Off/On)	-	01(On)
	Reverb	0B	07	00, 01(Off/On)	-	01(On)
Auto Band	Chord Mode	0C	00	00 - 02(Single, Fingerd, Pianist)	-	00(Single)
	On Bass	0C	01	00, 01(Off/On)	-	00(Off)
	Auto Bass Retrigger	0C	02	00, 01(Off/On)	-	00(Off)
	Transform	0C	03	00, 01(Normal/Simple)	-	00(Normal)

for Legacy Support:

Leslie	Off Type	00	6E	00, 01(Through, Brake)		00(Through)
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ex: Master Tune to 442 on MIDI...

Bx 63 02 62 01 06 42

(x=Control Channel)

Preset Parameters

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)	LSB (26)	
MIDI	Program Change	3k	00	00 - 7F	-	00
	Bank MSB	3k	01	00 - 7F	-	00
	Bank LSB	3k	02	00 - 7F	-	00
				<i>k=0:Upper, 1:Lower, 2:Pedal</i>		
Split	Split On	0D	00	00, 01(Off/On)	-	01(On)
	Split Key	0D	01	24 - 60	-	3C(C3)
	Pedal To Lower	0D	02	00, 01(Off/On)	-	00(Off)
Orch.Voice	Part On	4p	00	00, 01(Off/On)	-	Upper 1: On Upper 2: Off Lower 1: On Lower 2: Off Pedal: On
	Voice Number	4p	01	*1	*1	
	Volume	4p	02	00 - 7F		Upper 1: 13 Upper 2: 13 Lower 1: 9 Lower 2: 9 Pedal: 10
	Pan	4p	03	00 - 40 - 7F(Left-Center-Right)	-	40(Center)
	Vel.Touch	4p	04	00, 01(Off/On)	-	01(On)
	Vel.Curve	4p	05	00 - 05(Fix, Normal - Strg)	-	01(Normal)
	Reverb Send Level	4p	06	00 - 7F	-	
	Chorus Send Level	4p	07	00 - 7F	-	00(Off)
	Sustain On	4p	08	00, 01(Off/On)	-	00(Off)
	Sustain Length	4p	09	00 - 02(Short, Mid, Long)	-	02(Long)
	Octave Shift	4p	0A	3E - 40 - 42(-2, -1, 0, +1, +2)	-	Upper 1: 40(0) Upper 2: 40(0) Lower 1: 41(+1) Lower 2: 41(+1) Pedal: 40(0)
	Bend Range	4p	0B	00 - 0C	-	02
	Modulation On	4p	0C	00, 01(Off/On)	-	01
				<i>p=0:Upper 1, 1:Upper 2, 2:Lower 1, 3:Lower 2, 4:Pedal</i>		
	Drawbar Voice	Part On	5k	00	00, 01(Off/On)	-
Voice Type		5k	01	00 - 02(Btype, Mellow, Brite) U&L 00 - 01(Normal, Muted) Pedal	-	Upper: Btype Lower: Btype Pedal: Normal
Drawbar Attack		5k	02	00 - 04(Slow, No, Soft, Norm, Max)	-	03(Normal)
Sustain On		5k	03	00, 01(Off/On)	-	00(Off)
Sustain Length		5k	04	00 - 02(Short, Mid, Long)	-	01(Mid)
Octave Shift		5k	05	3E - 40 - 42(-2, -1, 0, +1, +2)	-	Upper: 40(0) Lower: 41(+1) Pedal: 40(0)
Bend Range		5k	06	00 - 0C	-	02
Fold Back Low		5k	07	00 - 0C(C1 - C2) Upper&Lower	-	0C
Fold Back High		5k	08	2B - 30(G4 - C5) Upper&Lower	-	2B
				<i>k=0:Upper, 1:Lower, 2:Pedal</i>		

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)	LSB (26)	
Percussion Voice	Second On	0E	00	00, 01(Off/On)	-	00(Off)
	Third On	0E	01	00, 01(Off/On)	-	00(Off)
	Decay Fast	0E	02	00, 01(Off/On)	-	00(Off)
	Soft	0E	03	00, 01(Off/On)	-	00(Off)
	Touch	0E	04	00, 01(Off/On)	-	01(On)
	Velocity	0E	05	00, 01(Off/On)	-	00(Off)
	Volume	0E	06	00 - 0F(1 - 16)	-	06(7)
	Key Track	0E	07	00, 01(Off/On)	-	01(On)
	Drawbar Cancel	0E	08	00, 01(Enable 1'/Cancel 1')	-	01(On)
	Drawbar Level	0E	09	00, 01(0dB, -3dB)	-	01(-3dB)
Sound Effect	Voice Number	0F	00	-	*2	
	Volume	0F	01	00 - 7F	-	7F
	Pan	0F	02	00 - 40 - 7F(Left-Center-Right)	-	40(Center)
	Vel.Curve	0F	03	00 - 06(Off, Normal - Strg)	-	01(Normal)
	Reverb Send Level	0F	04	00 - 7F	-	28
	Chorus Send Level	0F	05	00 - 7F	-	00
Manual Drum	Manual Drum On	10	00	00, 01(Off/On)	-	00(Off)
	Volume	10	01	00 - 7F	-	7F
	Pan	10	02	00 - 40 - 7F(Left-Center-Right)	-	40(Center)
	Vel. Curve	10	03	00 - 06(Off, Normal - Strg)	-	01(Normal)
	Reverb Send Level	10	04	00 - 7F	-	28
	Chorus Send Level	10	05	00 - 7F	-	00
	Lower On	10	06	00, 01(Off/On)	-	01(On)
	Pedal On	10	07	00, 01(Off/On)	-	00(Off)
	Voice Number Lower	10	08	-	*3	0E(Ride Cymbal)
	Voice Number Pedal	10	09	-	*3	10(Crash Cymbal)
Pro Chord	Prochord On	14	00	00, 01(Off/On)	-	00(Off)
	Prochord Type	14	01	00 - 13 *4	-	01(Open)
	Part On	6c	00	00, 01(Off/On)	-	
	Voice Number	6c	01	*1	*1	
	Volume	6c	02	00 - 7F	-	69(13)
	Pan	6c	03	00 - 40 - 7F(Left-Center-Right)	-	40(Center)
	Vel.Curve	6c	04	00 - 06(Off, 1-6)	-	01(Normal)
	Reverb Send Level	6c	05	00 - 7F	-	28
	Chorus Send Level	6c	06	00 - 7F	-	00
				<i>c=0:Melody, 1:Harm1, 2:Harm2, 3:Harm3</i>		
Leslie/Vibrato	V1/C1	11	00	00, 01(Off/On)	-	00(Off)
	V2/C2	11	01	00, 01(Off/On)	-	00(Off)
	Chorus	11	02	00, 01(Off/On)	-	00(Off)
	Speed	11	03	00 - 04(6.1 - 7.25 Hz)	-	02(6.83Hz)
	Leslie On	11	04	00, 01(Off/On)	-	01(On)
	Fast	11	05	00, 01(Slow/Fast)	-	00(Slow)
	Over Drive	11	06	00 - 0F(Off, 1 - 15)	-	00(Off)

Category	Parameter	NRPN Adr.		DATA Range		Default
		LSB (62)	MSB (63)	MSB (06)	LSB (26)	
Rhythm	Style Number	12	00	*5	*5	00 00(Tradit. Waltz)
	Variation Number	12	01	00 - 03(A - D)	-	00(A)
	Tempo	12	02	MSB of 28 - 12C(BPM 40 - 300)	LSB	00 50(80)
	Volume Auto Bass	12	03	00 - 7F	-	
	Volume Auto Band	12	04	00 - 7F	-	
	Volume Rhythm	12	05	00 - 7F	-	
	Auto Band 1 On	12	06	00, 01(Off/On)	-	01(On)
	Auto Band 2 On	12	07	00, 01(Off/On)	-	01(On)
	Auto Bass On	12	08	00, 01(Off/On)	-	01(On)
	EPS On	12	09	00, 01(Off/On)	-	00(Off)
	Memory On	12	0A	00, 01(Off/On)	-	01(On)
	Memory Auto Bass	12	0B	00, 01(Off/On)	-	01(On)
	Memory Chord	12	0C	00, 01(Off/On)	-	01(On)
	Memory Lower	12	0D	00, 01(Off/On)	-	00(Off)
	Memory Prochord	12	0E	00, 01(Off/On)	-	00(Off)
	Reverb Auto Bass	12	0F	00 - 7F	-	1D(4)
	Reverb Auto Band	12	10	00 - 7F	-	00
	Reverb Rhythm	12	11	00 - 7F	-	00
	Chorus Auto Bass	12	12	00 - 7F	-	00
	Chorus Auto Band	12	13	00 - 7F	-	00
Chorus Rhythm	12	14	00 - 7F	-	00	
Reverb/Chorus	Rev. Depth Rhy&Voice	13	00	00 - 7F	-	69(13)
	Rev. Depth Drawbar	13	01	00 - 7F	-	30(7)
	Chorus Type	13	02	00 - 07	-	01(Chorus 2)
	Cho. Depth Rhy&Voice	13	03	00 - 7F	-	00
	Reverb On	13	04	00, 01(Off/On)	-	01(On)
	Rev. Type Rhythm&Voice	13	05	00 - 07(Room 1 - Cathedral)	-	04(Hall 2)
	Rev. Type Drawbar	13	06	00 - 07(Room 1 - Cathedral)	-	04(Hall 2)

for Legacy Support:

Vibrato	Mode	00	45	00 - 03(Off, 1 - 3)		
	Chorus	00	0B	00, 01(Off/On)		
Leslie	Leslie On	00	09	00, 01(Off/On)		
	Fast	00	00	00, 01(Slow/Fast)		
Sustain	Pedal Keyboard	00	1E	00 - 03(Off, Short - Long)		
Percussion Voice	Second On	00	12	00, 01(Off/On)		
	Third On	00	13	00, 01(Off/On)		

System Parameters

Category	Parameters	Data Range	Default
Switch/Key	Key Mode	Single/Double	Single
	Pedal Key Mode	Mono/Poly	Mono
	Part On Mode	Alternate/Last	Last
	Recall Rhythm Preset	Style Changed/ R.P.Pushed	Style Changed
	Demo Button	Demo/User Rhythm	Demo
Display	To Shortcut	4s, 8s, 16s, Never	2s
	Timeout Shortcut	4s, 8s, 16s, Never	8s
	Timeout Voice/Style	4s, 8s, 16s, Never	8s
MIDI System	Template	Single, Double, Seq.Easy 1, Seq.Easy 2, Seq Multi 1, Seq Multi 2, Seq 16track,Vocal	Single
	Local Control	Off/On	On
	NRPN	Off/On	Off
	Recieve Dump	Off/On	On
	Exp. Send To	Exp.Ch, Voice&Drb, ULP Kbd	Exp. Ch
	Message Internal	Off/On	Off
	Message External	Off/On	On
	Start/Stop	Rhythm/Sequencer	Rhythm
	Clock Out	Off/On	Off
Recieve Channel	Upper 1	1 - 16, Off	Off
	Upper 2	1 - 16, Off	Off
	Lower 1	1 - 16, Off	Off
	Lower 2	1 - 16, Off	Off
	Pedal	1 - 16, Off	Off
	Upper Drawbar	1 - 16, Off	Off
	Lower Drawbar	1 - 16, Off	Off
	Pedal Drawbar	1 - 16, Off	Off
	Auto Bass	1 - 16, Off	Off
	Drum	1 - 16, Off	Off
	Percussion	1 - 16, Off	Off
	Accomp. 1	1 - 16, Off	Off
	Accomp. 2	1 - 16, Off	Off
	Accomp. 3	1 - 16, Off	Off
	Accomp. 4	1 - 16, Off	Off
	M.Drum/S.E.	1 - 16, Off	Off
	Drawbar Control	1 - 16, Off	Off
	Expression Pedal	1 - 16, Off	Off
	Control	1 - 16, Off	Off
	Chord	1 - 16, Off	Off
	Upper Keyboard	1 - 16, Off	1
	Lower Keyboard	1 - 16, Off	2
	Pedal Keyboard	1 - 16, Off	3
	Part 1	1 - 16, Off	Off
	Part 2	1 - 16, Off	Off
	Part 3	1 - 16, Off	Off
	Part 4	1 - 16, Off	4
Part 5	1 - 16, Off	5	
Part 6	1 - 16, Off	6	
Part 7	1 - 16, Off	7	
Part 8	1 - 16, Off	8	
Part 9	1 - 16, Off	9	
Part 10	1 - 16, Off	10	
Part 11	1 - 16, Off	11	
Part 12	1 - 16, Off	12	
Part 13	1 - 16, Off	13	
Part 14	1 - 16, Off	14	
Part 15	1 - 16, Off	15	
Part 16	1 - 16, Off	16	

Category	Parameters	Data Range	Default
Transmit Channel	Upper 1	1 - 16, Off	Off
	Upper 2	1 - 16, Off	Off
	Lower 1	1 - 16, Off	Off
	Lower 2	1 - 16, Off	Off
	Pedal	1 - 16, Off	Off
	Upper Drawbar	1 - 16, Off	Off
	Lower Drawbar	1 - 16, Off	Off
	Pedal Drawbar	1 - 16, Off	Off
	Auto Bass	1 - 16, Off	Off
	Drum	1 - 16, Off	Off
	Percussion	1 - 16, Off	Off
	Accomp. 1	1 - 16, Off	Off
	Accomp. 2	1 - 16, Off	Off
	Accomp. 3	1 - 16, Off	Off
	Accomp. 4	1 - 16, Off	Off
	M.Drum/S.E.	1 - 16, Off	Off
	Drawbar Control	1 - 16, Off	Off
	Expression Pedal	1 - 16, Off	Off
	Control	1 - 16, Off	Off
	Chord	1 - 16, Off	Off
Upper Keyboard	1 - 16, Off	1	
Lower Keyboard	1 - 16, Off	2	
Pedal Keyboard	1 - 16, Off	3	

*1 Voice List

Group	Display	Voice Name	Data Dec		Data Hex	
			MSB	LSB	MSB	LSB
Piano	StGdPno	Stereo Grand Piano	0	0	00	00
	BrStGdPno	Bright Stereo Grand Piano	0	7	00	07
	GndPno	Acoustic Grand Piano	0	1	00	01
	BrtPno	Bright Piano	0	8	00	08
	DarkPno	Dark Piano	0	2	00	02
	HnktPno	Honkey-Tonk Piano	0	3	00	03
	PnoOct1	Octave Piano 1	3	21	03	15
	PnoOct2	Octave Piano 2	3	22	03	16
	EGndPno	Electric Grand Piano	0	4	00	04
	Hrpschrd	Harpsichord	0	5	00	05
	HrpsCoup	Coupled Harpsichord	0	9	00	09
E.Piano	ElecPno1	Electric Piano 1	0	10	00	0A
	EPnoDet1	Detuned Electric Piano 1	0	11	00	0B
	EPnoVel1	Electric Piano 1 Velocity	0	12	00	0C
	TremEPno	Tremolo Electric Piano	0	13	00	0D
	EPno60's	60's Electric Piano	0	14	00	0E
	ElecPno2	Electric Piano 2	0	15	00	0F
	EPnoDet2	Detuned Electric Piano 2	0	16	00	10
	EPnoVel2	Electric Piano 2 Velocity	0	17	00	11
	Clav	Clavi	0	6	00	06
Vibra & Mallet	Vibe	Vibraphone 1	0	18	00	12
	Vibe Ub	Vibraphone 2	0	25	00	19
	Glocken	Glockenspiel	0	19	00	13
	GlockX-66	Glockenspiel X-66	0	26	00	1A
	Celesta	Celesta	0	20	00	14
	MuscBox	Music Box	0	27	00	1B
	Tnk1Bell	Tinkle Bell	0	21	00	15
	Marimba	Marimba	0	22	00	16
	Xylophon	Xylophone	0	28	00	1C
	Chime	Tubular-Bell	0	23	00	17
	OrgnChin	Organ Chime	0	29	00	1D
	ChurBell	Church Bell	0	24	00	18
	Carillon	Carillon	0	30	00	1E
	Dulcimer	Dulcimer	0	31	00	1F
	Agogo	Agogo	0	32	00	20
	SteelDrum	Steel Drum	0	37	00	25
	WoodBlok	Wood Block	0	33	00	21
	Castanet	Castanet	0	38	00	26
	Mokugyo	Mokugyo	3	23	03	17
	MeloTom1	Melodic Tom 1	0	34	00	22
	MeloTom2	Melodic Tom 2	0	39	00	27
	SynTom	Synth Tom	0	35	00	23
	AnlgTom	Analog Tom	0	40	00	28
RevCym1	Reverse Cymbal 1	0	36	00	24	
RevCym2	Reverse Cymbal 2	0	41	00	29	
Guitar	Ny1nGtr.	Nylon-string Guitar	0	42	00	2A
	Uku1ele	Ukulele	0	49	00	31
	Ste1Gtr.	Steel-string Guitar	0	43	00	2B
	12stGtr.	12-strings Guitar	0	50	00	32
	N&Sgtr.	Nylon + Steel Guitar	0	44	00	2C
	JazzGtr.	Jazz Guitar	0	45	00	2D
	MuteGtr.	Muted Guitar	0	46	00	2E
	CtryGtr.	Country Guitar	0	51	00	33
	ClenGtr.	Clean Guitar	0	47	00	2F
	ChrsGtr.	Chorus Guitar	0	52	00	34
	HawiGtr.	Hawaiian Guitar	0	48	00	30
	OvdrGtr.	Overdrive Guitar	0	53	00	35
	DistGtr.	Distortion Guitar	0	54	00	36
	FdbkGtr.	Feedback Guitar	0	60	00	3C
	PowerGtr.	Power Guitar	0	55	00	37
	RockRhy.	Rock Rhythm	0	56	00	38
	MtDsGtr.	Muted Distortion Guitar	0	57	00	39
	FunkGtr.	Funk Guitar	0	58	00	3A
	WahGtr.	Wah Guitar	3	24	03	18
	Gtr.Harm	Guitar Harmonics	0	59	00	3B
	Gtr.Fdbk	Guitar Feedback	0	61	00	3D

Group	Display	Voice Name	Data Dec		Data Hex		
			MSB	LSB	MSB	LSB	
Accordion	Acrd .	Accordion 1/0/0	0	62	00	3E	
	Acrd ..	Accordion 1/1/0	0	63	00	3F	
	Acrd ...	Accordion 1/0/1	0	64	00	40	
	Acrd ...	Accordion 1/1/1	0	65	00	41	
	Acrd .	Accordion 0/1/0	0	66	00	42	
	Acrd ..	Accordion 0/1/1	0	67	00	43	
	Acrd .	Accordion 0/0/1	0	68	00	44	
	Acrd .:	Accordion 1/2/0	0	69	00	45	
	Acrd .:	Accordion 1/2/1	0	70	00	46	
	Acrd :	Accordion 0/2/0	0	71	00	47	
	Acrd :.	Accordion 0/2/1	0	72	00	48	
	Musette	Musette	2	19	02	13	
	Organ & Reed (Pipe)	ChurOrg1	Church Organ 1	0	73	00	49
		ChurOrg2	Church Organ 2	0	80	00	50
ChurOrg3		Church Organ 3	0	87	00	57	
Positiv1		Positive Organ 1	0	74	00	4A	
Positiv2		Positive Organ 2	0	81	00	51	
Bourdon		Bourdon 1	0	75	00	4B	
StoFlut		Bourdon 2	0	82	00	52	
StF18&4		Stopped Flute 8&4	0	89	00	59	
StF18&2		Stopped Flute 8&2	0	90	00	5A	
StF18&23		Stopped Flute 8&2 2/3	0	93	00	5D	
Diapasn		Diapason	0	76	00	4C	
Prin8&4		Principal 8&4	0	83	00	53	
PrinChrs		Principal Chorus & Mixture	0	88	00	58	
Gamba		Gamba	0	77	00	4D	
GambC1st		Gamba Celeste	0	84	00	54	
OboeHorn		Oboe	0	91	00	5B	
Trompett		Trompette	0	94	00	5E	
Mix III	Mixture III	0	78	00	4E		
Mix IV	Mixture IV	0	85	00	55		
(Reed)	Harmonica	Harmonica	0	79	00	4F	
	Melodion	Melodion	0	86	00	56	
(Analog)	ReedOrgn	Reed Organ	0	92	00	5C	
	Novacd s	Novachord sus	0	95	00	5F	
	Novacd d	Novachord dcy	0	102	00	66	
	OrgnDiar	Diapason	0	96	00	60	
	OrgnTrpt	Trumpet	0	103	00	67	
	OrgnVln	Violin	0	97	00	61	
	OrgnCelo	Cello	0	104	00	68	
	OrgnHorn	Horn	0	105	00	69	
	Kinura	Kinura	0	98	00	62	
	Theater1	Theater Organ 1	0	99	00	63	
	Theater2	Theater Organ 2	0	106	00	6A	
	Theater3	Theater Organ 3	0	100	00	64	
	VoxHumn	Vox Humana	0	101	00	65	
	(Hammond)	DrawOrgn	Drawbar Organ	0	107	00	6B
DetOrg1		Detuned Electric Organ 1	0	112	00	70	
60'sOrgn		60's Organ	0	108	00	6C	
Db60Orgn		Drawbar+60's Organ	0	113	00	71	
PercOrgn		Percussive Organ	0	109	00	6D	
DetOrg2		Detuned Electric Organ 2	0	114	00	72	
XyloOrgn		Xylo Organ	0	110	00	6E	
RockOrgn		Rock Organ	0	111	00	6F	

Group	Display	Voice Name	Data Dec		Data Hex		
			MSB	LSB	MSB	LSB	
Ethnic	Sitr	Sitar 1	0	115	00	73	
	SitrOct	Sitar 2	0	122	00	7A	
	Bando	Banjo	0	116	00	74	
	Kalimba	Kalimba	0	123	00	7B	
	Mandolin	Mandolin	0	117	00	75	
	Shamisen	Shamisen	0	118	00	76	
	Tsugaru	Tsugaru Shamisen	0	124	00	7C	
	Koto	Koto	0	119	00	77	
	Taisho1	Taisho Koto 1 (Benkei)	0	120	00	78	
	Taisho2	Taisho Koto 2 (Ran Soprano)	0	125	00	7D	
	Taisho3	Taisho Koto 3 (Ran TypeII)	0	121	00	79	
	Taisho4	Taisho Koto 4 (Ran Alto)	0	126	00	7E	
	BagPipe	Bagpipe	0	127	00	7F	
	Shanai	Shanai	1	4	01	04	
	Fiddle	Fiddle	1	0	01	00	
	Kokyu	Kokyu	1	5	01	05	
	Hitiriki	Hichiriki	1	1	01	01	
	Shyo	Shyo	1	6	01	06	
	Shinobue	Shinobue	1	2	01	02	
	Nohkan	Nohkan	1	7	01	07	
	Shakhach	Shakuhachi	1	3	01	03	
	Strings & Choir	Ulin	Violin	1	22	01	16
		UlinVib.	Violin Vibrato	1	29	01	1D
SlowUlin		Slow Violin	1	35	01	23	
Viola		Viola	1	23	01	17	
Cello		Cello	1	24	01	18	
CeloVib.		Cello Vibrato	1	30	01	1E	
StroStr1		Stereo Strings 1	1	25	01	19	
StroStr2		Stereo Strings 2	1	31	01	1F	
Str91		BBD Strings	1	26	01	1A	
Dull1Str1		Dull BBD Strings	1	32	01	20	
Str92		Strings	1	27	01	1B	
Dull1Str2		Dull Strings	1	33	01	21	
SlowStr9		Slow Strings	1	38	01	26	
DetStr9		Detuned Strings	1	39	01	27	
PizzStr9		Pizzicato Strings	1	42	01	2A	
TremStr9		Tremolo Strings	1	43	01	2B	
Orchestr		Orchestra	1	44	01	2C	
OrchHit		Orchestra Hit	1	37	01	25	
SynStr1		Synth Strings 1	1	45	01	2D	
SynStr2		Synth Strings 2	1	49	01	31	
SynStr3		Synth Strings 3	1	46	01	2E	
OrchHarp		Orchestral Harp	1	36	01	24	
OrgnHarp		Organ Harp	1	41	01	29	
ChurChor		Church Choir	1	28	01	1C	
AahChor		Aah Choir	1	34	01	22	
SlowChor		Slow Choir	1	40	01	28	
SynVox		Synth Voice	1	48	01	30	
DooVox		Doo Voice	1	47	01	2F	
BopVox		Bop Voice	1	50	01	32	
Brass		Trpet	Trumpet 1	1	51	01	33
		BritTrpet	Trumpet 2	1	58	01	3A
		SlowTrpet	Slow Trumpet	1	52	01	34
		MuteTrpet	Muted Trumpet	1	59	01	3B
	Trombone	Trombone 1	1	53	01	35	
	SynTrbn	Trombone 2	1	60	01	3C	
	MelwTrbn	Trombone 3	1	54	01	36	
	BrasSect	Brass Section 1	1	55	01	37	
	Bras&Tf.	Brass Section 2	1	61	01	3D	
	BrasFall	Brass Fall Down	1	62	01	3E	
	BrasOct	Octave Brass	3	25	03	19	
	FrHrSect	French Horns	1	56	01	38	
	FrHnClos	French Horn Closed	1	57	01	39	
	FrHnOpen	French Horn Open	1	64	01	40	
	FlugHorn	Flugel Horn	1	63	01	3F	
	SynBrs1	Synth Brass 1	1	65	01	41	
	SynBrs2	Synth Brass 2	1	66	01	42	
	SynBrs3	Synth Brass 3	1	68	01	44	
	SynBrs4	Synth Brass 4	1	69	01	45	
	AnaBrs1	Analog Brass 1	1	67	01	43	
	AnaBrs2	Analog Brass 2	1	70	01	46	

Group	Display	Voice Name	Data Dec		Data Hex		
			MSB	LSB	MSB	LSB	
Sax	SoprnSax	Soprano Sax	1	71	01	47	
	SFSxUb	Soprano Sax Vibrato	1	77	01	4D	
	AltoSaxf	Alto Sax f	1	72	01	48	
	AltoSaxp	Alto Sax p	1	78	01	4E	
	TennSaxf	Tenor Sax f	1	73	01	49	
	TnSxUb	Tenor Sax Vibrato	1	79	01	4F	
	OverSax	Overblown Sax	1	74	01	4A	
	TnSxVl	Tenor Sax Velocity	1	80	01	50	
	TennSxp1	Tenor Sax p 1	1	75	01	4B	
	TennSxp2	Tenor Sax p 2 (XT)	1	81	01	51	
	Barisax	Baritone Sax	1	76	01	4C	
	Oboe	Oboe	1	82	01	52	
	EnglHorn	English Horn	1	85	01	55	
	Bassoon	Bassoon	1	83	01	53	
	Clarinet	Clarinet	1	84	01	54	
	SlowCla.	Slow Clarinet	1	86	01	56	
	Flute	Flut1	Flute 1	1	88	01	58
		TremFlut	Flute 2 (Tremolo Flute)	1	87	01	57
		BrethFlut	Flute 3 (Breathy Flute)	1	93	01	5D
		Flut2	Flute 4 (XT)	1	94	01	5E
Piccolo		Piccolo	1	89	01	59	
Recorder		Recorder 1	1	90	01	5A	
Recorderf		Recorder 2	1	95	01	5F	
PanFlut		Pan Flute	1	91	01	5B	
BotlBlow		Bottle Blow	1	96	01	60	
Whistle		Whistle	1	92	01	5C	
Ocarina		Ocarina	1	97	01	61	
Synth	SqrLead	Square Lead	1	98	01	62	
	SawLead	Saw Lead	1	105	01	69	
	Dr.Solo	Dr.Solo	1	117	01	75	
	CalliopeLd	Calliope Lead	1	99	01	63	
	ChifLead	Chiffer Lead	1	106	01	6A	
	CharngLd	Charang Lead	1	112	01	70	
	VoxLead	Voice Lead	1	118	01	76	
	FifthLead	Fifth Lead	1	100	01	64	
	Bass&Ld	Bass & Lead	1	107	01	6B	
	BsLdVel	Bass & Lead Velocity	3	26	03	1A	
	NewAge	New Age Pad	1	101	01	65	
	WarmPad	Warm Pad	1	108	01	6C	
	Polysyn.	Polysynth Pad	1	113	01	71	
	ChorPad	Choir Pad	1	119	01	77	
	BowdPad	Bowed Pad	1	114	01	72	
	MetalPad	Metal Pad	1	120	01	78	
	HaloPad	Halo Pad	1	102	01	66	
	SweepPad	Sweep Pad	1	109	01	6D	
	IceRain	Ice Rain	1	103	01	67	
	Sndtrak	Soundtrack	1	110	01	6E	
	Crystal	Crystal	1	104	01	68	
	SynMalt	Synth Mallet	1	111	01	6F	
	Atmspher	Atmosphere	1	115	01	73	
	Bright	Brightness	1	121	01	79	
	Goblin	Goblin	1	116	01	74	
	EchoDrop	Echo Drops	1	122	01	7A	
EchoBell	Echo Bell	2	0	02	00		
EchoPan	Echo Pan	2	4	02	04		
Sci-Fi	Sci-Fi	1	127	01	7F		
Square	Square	1	123	01	7B		
Sine	Sine Wave	1	125	01	7D		
Saw	Saw	2	1	02	01		
Step8	Step 8	1	124	01	7C		
Step4	Step 4	2	2	02	02		
WhitNois	White Noise	1	126	01	7E		
PinkNois	Pink Noise	2	3	02	03		

Group	Display	Voice Name	Data Dec		Data Hex	
			MSB	LSB	MSB	LSB
Bass	AcosBas1	Acoustic Bass 1	2	5	02	05
	AcosBas2	Acoustic Bass 2	2	12	02	0C
	FnrBas1	Finger Bass 1	2	6	02	06
	FnrBas2	Finger Bass 2	2	13	02	0D
	PickBas	Picked Bass	2	7	02	07
	FrtlesBs	Fretless Bass	2	14	02	0E
	SlapBas1	Slap Bass 1	2	8	02	08
	SlapBas2	Slap Bass 2	2	15	02	0F
	SynBas1	Synth Bass 1	2	9	02	09
	SynBas2	Synth Bass 2	2	10	02	0A
	SynBas3	Synth Bass 3	2	16	02	10
	SynBas4	Synth Bass 4	2	17	02	11
	SynBas5	Synth Bass 101	2	23	02	17
	RubrBass	Rubber Bass	2	24	02	18
	Contrbas	Contrabass	2	11	02	0B
	Tuba	Tuba	2	18	02	12
	Timpani	Timpani	2	21	02	15
	Fagotto	Fagotto	2	26	02	1A
	GambPd1	Gamba Pedal	2	25	02	19
	EX Bass	EX Bass	2	22	02	16
Taisho5	Taisho Koto 5 (Ran Bass)	2	20	02	14	
Drum Set	Standard1	Standard1Set	2	27	02	1B
	Standard2	Standard2Set	2	28	02	1C
	Room	RoomSet	2	29	02	1D
	Power	PowerSet	2	30	02	1E
	Electro	ElectronicSet	2	31	02	1F
	Analog	AnalogSet	2	32	02	20
	Jazz	JazzSet	2	33	02	21
	Brush	BrushSet	2	34	02	22
	Orchestr	OrchestraSet	2	35	02	23
	SFX	SFXSet	2	36	02	24
Japanese	JapaneseSet	2	37	02	25	
Custom		Custom 1_1	1	8	01	08
		Custom 1_2	1	9	01	09
	
		Custom 1_14	1	21	01	15
		Custom 2_1	2	38	02	26
		Custom 2_2	2	39	02	27
	
		Custom 2_14	2	51	02	33

ex: Change Upper 2 to Celesta via MIDI...

Bx 63 01 62 41 06 00 26 14

(x=Control Channel)

***2 Sound Effect**

Data LSB		Sound	Playback
Dec	Hex		
0	00	SeaShore	Loop
1	01	Rain	Loop
2	02	Thunder	One-shot
3	03	Wind	Loop
4	04	Stream	Loop
5	05	Bubble	Loop
6	06	Bird Tweet 1	One-shot
7	07	Bird Tweet 2	One-shot
8	08	Dog Bark	One-shot
9	09	Horse Gallop	One-shot
10	0A	Telephone Ring 1	Loop
11	0B	Telephone Ring 2	Loop
12	0C	Door Creaking	One-shot
13	0D	Door Slam	One-shot
14	0E	Scratch	One-shot
15	0F	Wind Chime	Loop
16	10	Helicopter	Loop
17	11	Car-Engine	Loop
18	12	Car-Stop	One-shot
19	13	Car-Pass	One-shot
20	14	Car-Crash	One-shot
21	15	Siren	Loop
22	16	Train	Loop
23	17	Jet Plane	Loop
24	18	Star Ship	One-shot
25	19	Burst Noise	Loop
26	1A	Applause	Loop
27	1B	Laughing	One-shot
28	1C	Scream	One-shot
29	1D	Punch	One-shot
30	1E	Heart Beat	One-shot
31	1F	Foot Step	One-shot
32	20	Gun Shot	One-shot
33	21	Machine Gun	Loop
34	22	Laser Gun	One-shot
35	23	Explosion	One-shot
36	24	Tubler Bell	One-shot
37	25	Organ Chime	One-shot
38	26	Church Bell	One-shot
39	27	Gong Shot	One-shot
40	28	Cymbal Roll	Loop
41	29	SL Whistle	One-shot
42	2A	Steam Locomotive	Loop
43	2B	Crsh Cymbal	One-shot

Data MSB must be zero.

***3 Manual Drum**

Data LSB		Voice
Dec	Hex	
0	00	Bass Drum
1	01	Power Bass Drum
2	02	Concert Bass Drum
3	03	Jazz Bass Drum
4	04	Analog Bass Drum
5	05	Rim Shot
6	06	Snar Drum
7	07	Gated Snare Drum
8	08	Concert Snare Drum
9	09	Jazz Snare Drum
10	0A	Analog Snare Drum
11	0B	Brush Slap
12	0C	Brush Swirl
13	0D	Hand Clap
14	0E	Ride Cymbal
15	0F	Concert Cymbal
16	10	Crash Cymbal
17	11	Analog Cymbal
18	12	Close Hi-Hat
19	13	High Tom
20	14	Med Tom
21	15	Low Tom
22	16	Tambourine
23	17	Castanet
24	18	Wood Blok
25	19	Cabassa
26	1A	Sleigh Bell

Data MSB must be zero.

*ex: Set Sound Effect to Door Slam on MIDI...*Bx 63 00 62 0F 06 00 26 0D
(x=Control Channel)*ex: Set Manual Drum Lower to Jazz Snare Drum on MIDI...*Bx 63 08 62 10 06 00 26 09
(x=Control Channel)*ex: Set Foot Switch 1 to Fill In 1 on MIDI...*Bx 63 00 62 02 06 0A
(x=Control Channel)***6 Foot Switch**

Data MSB		Function
Dec	Hex	
0	00	Off
1	01	Leslie Fast/Slow
2	02	Sustain Upper
3	03	Sustain Lower
4	04	Damper Upper
5	05	Damper Lower
6	06	Damper Pedal
7	07	Prochord
8	08	Glide
9	09	Start/Stop
10	0A	Fill In 1
11	0B	Fill In 2
12	0C	Manual Drum
13	0D	Preset Foward
14	0E	Preset Backward

*5 Styles List

Category	Style Name	Data Dec		Data Hex		
		MSB	LSB	MSB	LSB	
Waltz	Traditional Waltz	0	0	00	00	
	Orchestral Waltz	0	1	00	01	
	Jazz Waltz	0	2	00	02	
	Organ Waltz	0	3	00	03	
	Theatre Waltz	0	4	00	04	
	European Walz	0	5	00	05	
	String Waltz	0	6	00	06	
	Classical Waltz	0	7	00	07	
	Viennese Waltz	0	8	00	08	
	Musette Waltz	0	9	00	09	
	German Waltz	0	10	00	0A	
	Slow Waltz	0	11	00	0B	
	Country	Country Guitar	0	12	00	0C
Country Shuffle		0	13	00	0D	
Country Rock		0	14	00	0E	
Bluegrass		0	15	00	0F	
Hoedown		0	16	00	10	
Jazz	Jazz Organ	0	17	00	11	
	Accordion Quintet	0	18	00	12	
	Afro Jazz	0	19	00	13	
	5/4	0	20	00	14	
Ballad	Swing Ballad	0	21	00	15	
	BigBand Ballad	0	22	00	16	
	Orchestra Strings	0	23	00	17	
	Organ Ballad	0	24	00	18	
	Pop Vocal	0	25	00	19	
6/8 Ballad Strings	6/8 Ballad Strings	0	26	00	1A	
	8Beat	8Beat Soft Rock	0	27	00	1B
		8Beat Ballad	0	28	00	1C
8Beat Rock		0	29	00	1D	
8Beat EasyRock		0	30	00	1E	
Dance	Disco Samba	0	31	00	1F	
	60's Dance	0	32	00	20	
	Acid Jazz	0	33	00	21	
	90's Disco	0	34	00	22	
	House	0	35	00	23	
	90's House	0	36	00	24	
	Modern Dance	0	37	00	25	
Ground Beat	0	38	00	26		
Bossa Nova	Bossa Nova	0	39	00	27	
	Jazz Bossa Nova	0	40	00	28	
	Organ Bossa	0	41	00	29	
	Modern Bossa Nova	0	42	00	2A	
	Latin Vocal	0	43	00	2B	
	Simple Bossa Nova	0	44	00	2C	
Rhumba	Rhumba	0	45	00	2D	
	Orchestral Rhumba	0	46	00	2E	
	Organ Rhumba	0	47	00	2F	
March/Polka	March 4/4	0	48	00	30	
	March 6/8	0	49	00	31	
	Concert March 4/4	0	50	00	32	
	ConcertMarch 6/8	0	51	00	33	
	Organ March	0	52	00	34	
	Polka	0	53	00	35	
	Fast Polka	0	54	00	36	
Party Polka	0	55	00	37		
Custom Style 1	Custom Style 1_1	1	40	01	28	
	Custom Style 1_2	1	41	01	29	
	
	Custom Style 1_8	1	47	01	2F	

Category	Style Name	Data Dec		Data Hex		
		MSB	LSB	MSB	LSB	
Trad	Hawaiian	0	56	00	38	
	Baroque	0	57	00	39	
	Classical Piano	0	58	00	3A	
	Bolero 4/4	0	59	00	3B	
	Broadway Show	0	60	00	3C	
	Console Riser	0	61	00	3D	
	Jumpin Dixie	0	62	00	3E	
	Foxtrot	0	63	00	3F	
	Quickstep	0	64	00	40	
	Organ Quick Step	0	65	00	41	
	Dance Band Foxtrot	0	66	00	42	
	Gypsy	0	67	00	43	
	Gospel 2beat	0	68	00	44	
	Gentle Reggae	0	69	00	45	
Reggae Shuffle	0	70	00	46		
Swing	Dance Band Swing	0	71	00	47	
	Bigband Boogie Woogie	0	72	00	48	
	Combo Swing	0	73	00	49	
	Medium Swing	0	74	00	4A	
	Fast Swing	0	75	00	4B	
	European Swing	0	76	00	4C	
Blues	Blues	0	77	00	4D	
	Contemp Blues	0	78	00	4E	
	Rock	Hard Rock	0	79	00	4F
		Euro Rock	0	80	00	50
		70's Rock Guitar	0	81	00	51
Rock'n Roll		0	82	00	52	
Rock Shuffle		0	83	00	53	
Rock 5ths		0	84	00	54	
Rock Ballad	0	85	00	55		
16Beat	16Beat Funk	0	86	00	56	
	16Beat Ballad	0	87	00	57	
	16Beat Dance	0	88	00	58	
Samba	Samba	0	89	00	59	
	Jazz Samba	0	90	00	5A	
	Latin Samba	0	91	00	5B	
	Samba Lite	0	92	00	5C	
Latin	Cha Cha Cugat	0	93	00	5D	
	Mambo Tito	0	94	00	5E	
	Contemp Salsa	0	95	00	5F	
	Chamambo	0	96	00	60	
	Rhumambo	0	97	00	61	
	Tango Bandoneon	0	98	00	62	
Continental Tango	0	99	00	63		
Disk Style 1	Disk Style 1_1	1	0	01	00	
	Disk Style 1_2	1	1	01	01	
	
	Disk Style 1_16	1	15	01	0F	
Disk Style 2	Disk Style 2_1	1	16	01	10	
	Disk Style 2_2	1	17	01	11	
	
	Disk Style 2_16	1	31	01	1F	
User Rhythm	User Rhythm 1	1	32	01	20	
	User Rhythm 2	1	33	01	21	
	
	User Rhythm 8	1	39	01	27	
Custom Style 2	Custom Style 2_1	1	48	01	30	
	Custom Style 2_2	1	49	01	31	
	
	Custom Style 2_8	1	55	01	37	

ex: Set Style to March 6/8 on MIDI...

Bx 63 00 62 12 06 00 26 31 (x=Control Channel)

*4 Prochord Type Chart

	Prochord Type	Harmony Style	Voicing	Data MSB	
				Dec	Hex
BASIC ProChord Types	Closed	Adds full chords to your right hand single finger melody, when a chord is being played with the left hand.	Currdnt registration (incl. Drawbars & Voices)	0	00
	Open	This creates the Open or Theatre-Organ style harmony. This is most effective when used on the upper half of the Upper Keyboard.		1	01
	Prochord Type	Harmony Style	Voicing		
HARMONIC ProChord Types	Duet	2-part	Flute Nylon-String Guitar	2	02
	Block 1	5-part closed	Vibraphone Acoustic Grand Piano Jazz Guitar	3	03
	Block 2	5-part closed	Clarinet Tenor Sax Vibrato Soprano Sax Vibrato	4	04
	Big Band Saxes	5-part open	Alto Sax p Tenor Sax Vibrato	5	05
	Big Band	5-part open	Trumpet Alto Sax p Trombone Tenor Sax p2	6	06
	Small Combo 1	3-part closed	Acoustic Grand Piano Vibraphone Jazz Guitar	7	07
	Small Combo 2	3-part closed	Flute 2 Acoustic Grand Piano Jazz Guitar	8	08
	Small Combo 3	3-part closed	Trumpet Clarinet Trombone	9	09
	Theatre	3-part open	Theatre Organ 1	10	0A
	Hymn	4-part hymn voicing	Church Organ 1	11	0B
	Quartet 1	4-part open	Trumpet Alto Sax f Trombone Tenor Sax	12	0C
	Quartet 2	4-part open, wide voicing	Trumpet Alto Sax f Trombone Baritone Sax	13	0D
	Jazz Brass	5-part voicing in forths	Trumpet Trombone	14	0E
	Strings	4-part closed with octave melody	Strings 2	15	0F
	Harmonic Chimes	Chime Voicing	Organ Harp	16	10
	Old Time	4-part block voicing	Acoustic Grand Piano	17	11
	4-part Closed	4-part Closed	Accordion 0/1/0	18	12
5-part Open	5-part Open	Theatre Organ 2	19	13	

ex:ProChord type to Big Band on MIDI...

Bx 63 01 62 14 06 06

(x=Control Channel)

Preset & Name List

Program Change		1	2	3	4	5	6	7	8	9	10	11	12
Bank Select MSB	Bank	Preset											
0	1	Cancel	1	2	3	4	5	6	7	8	9	10	Rhythm Preset
1	2												
2	3												
3	4												
4	5												
5	6												
6	7												
7	8												
8	9												
9	10												

ex: Change to Bank 5- Preset 3 on MIDI... Bx 00 04 Cx 03 (x=Control Channel)

Drawbar Data List

Control code: Upper 50h(80)
 Lower 51h(81)
 Pedal 52h(82)

Data Map:

Level	Upper/Lower									Pedal	
	16'	5 1/3'	8'	4'	2 2/3'	2'	1 3/5'	1 1/3'	1'	16'	8'
0	00h(0)	09h(9)	12h(18)	1Bh(27)	24h(36)	2Dh(45)	36h(54)	3Fh(63)	48h(72)	00h(0)	09h(9)
1	01h(1)	0Ah(10)	13h(19)	1Ch(28)	25h(37)	2Eh(46)	37h(55)	40h(64)	49h(73)	01h(1)	0Ah(10)
2	02h(2)	0Bh(11)	14h(20)	1Dh(29)	26h(38)	2Fh(47)	38h(56)	41h(65)	4Ah(74)	02h(2)	0Bh(11)
3	03h(3)	0Ch(12)	15h(21)	1Eh(30)	27h(39)	30h(48)	39h(57)	42h(66)	4Bh(75)	03h(3)	0Ch(12)
4	04h(4)	0Dh(13)	16h(22)	1Fh(31)	28h(40)	31h(49)	3Ah(58)	43h(67)	4Ch(76)	04h(4)	0Dh(13)
5	05h(5)	0Eh(14)	17h(23)	20h(32)	29h(41)	32h(50)	3Bh(59)	44h(68)	4Dh(77)	05h(5)	0Eh(14)
6	06h(6)	0Fh(15)	18h(24)	21h(33)	2Ah(42)	33h(51)	3Ch(60)	45h(69)	4Eh(78)	06h(6)	0Fh(15)
7	07h(7)	10h(16)	19h(25)	22h(34)	2Bh(43)	34h(52)	3Dh(61)	46h(70)	4Fh(79)	07h(7)	10h(16)
8	08h(8)	11h(17)	1Ah(26)	23h(35)	2Ch(44)	35h(53)	3Eh(62)	47h(71)	50h(80)	08h(8)	11h(17)

ex: Set Lower 8' to level 7 on MIDI... Bx 51 19 (x=Drawbar control Channel)

Part 1-16 Instruments List

PC#: Program Number VR#: Bank Select MSB(cc#0)

V: uses 2 voices T: not chromatic scale M: "Modulation" controller has no effect.

PC#	VR#	INSTRUMENT NAME	V	T	M
001	000	Acoustic Grand Piano			
	001	Octave Piano 1	*		
	002	Octave Piano 2	*		
	008	Stereo Grand Piano	*		
	016	Dark Piano			
002	000	Bright Piano			
	008	Bright Stereo Grand Piano	*		
003	000	Electric Grand Piano			
004	000	Honkey-Tonk Piano	*		
005	000	Electric Piano 1			
	001	Tremolo Electric Piano	*		
	008	Detuned Electric Piano 1	*		
	016	Elec.Piano 1 Velocity	*		
	024	60's Electric Piano			
006	000	Electric Piano 2			
	008	Detuned Electric Piano 2	*		
	016	Elec.Piano 2 Velocity	*		
007	000	Harpsichord			
	008	Coupled Harpsichord	*		
008	000	Clavi			
009	000	Celesta			
010	000	Glockenspiel			
	001	Glockenspiel X-66			
011	000	Music Box			
012	000	Vibraphone			
	001	Vibraphone 2	*		
013	000	Marimba			
014	000	Xylophone			
015	000	Tubular-Bell			
	001	Organ Chime			
	008	Church Bell			
	016	Carillon			
016	000	Dulcimer			
017	000	Drawbar Organ			
	001	Drawbar 1			
	002	Drawbar 2			
	003	Drawbar 3			
	004	Drawbar 4			
	005	Drawbar 5			
	006	Drawbar 6			
	007	Drawbar 7			
	008	Detuned Electric Organ 1	*		
	009	Drawbar 8			
	010	Drawbar 9			
	011	Drawbar 10			
	012	Drawbar 11			
	013	Drawbar 12			
	014	Drawbar 13			
	015	Drawbar 14			
	016	60's Organ			
	017	Drawbar 15			
	018	Drawbar 16			
	019	Drawbar 17			
	020	Drawbar 18			
	021	Drawbar 19			
	022	Drawbar 20			
	023	Drawbar 21			
	024	Drawbar 22			
	025	Drawbar 23			
	026	Drawbar 24			
	027	Drawbar 25			
	028	Drawbar 26			
	029	Drawbar 27			
	030	Drawbar 28			
	032	Drawbar+60's Organ	*		

PC#	VR#	INSTRUMENT NAME	V	T	M
018	000	Percussive Organ			*
	001	Drawbar 1p	*		
	002	Drawbar 2p	*		
	008	Detuned Electric Organ 2	*		
	032	Xylo Organ	*		
	033	Novachord sus (Analog)			
	034	Novachord dcy (Analog)			
	035	Vox Humana (Analog)			
	036	Diapason (Analog)			
	037	Violin (Analog)			
	038	Cello (Analog)			
	039	Trumpet (Analog)			
	040	Horn (Analog)			
	041	Kinura (Analog)			
	042	Theater Organ 1 (Analog)			
	043	Theater Organ 2 (Analog)			
	044	Theater Organ 3 (Analog)			
	045	EX Bass			
019	000	Rock Organ	*		*
020	000	Church Organ 1			
	001	Positive Organ 1			
	002	Positive Organ 2			
	008	Church Organ 2	*		
	016	Church Organ 3	*		
	024	Diapason (Pipe)			
	025	Mixture III (Pipe)			
	026	Mixture IV (Pipe)			
	027	Gamba (Pipe)			
	028	Oboe (Pipe)			
	029	Trompette (Pipe)			
	030	Bourdon 1 (Pipe)			
	031	Bourdon 2 (Pipe)			
	032	Gamba Pedal (Pipe)			
	033	Fagotto (Pipe)			
	034	Principal 8&4 (Pipe)	*		
	035	Principal Chorus & Mixture (Pipe)	*		
	036	Stopped Flute 8&4 (Pipe)	*		
	037	Stopped Flute 8&2 2/3 (Pipe)	*		
	038	Stopped Flute 8&2 (Pipe)	*		
	039	Gamba Celeste (Pipe)	*		
021	000	Reed Organ			
022	000	Accordion 0/1/1	*		
	001	Accordion 1/0/0			
	002	Accordion 0/0/1			
	003	Accordion 1/0/1	*		
	004	Accordion 1/1/1	*		
	005	Accordion 1/2/1	*		
	006	Accordion 1/2/0	*		
	007	Accordion 1/1/0	*		
	008	Accordion 0/2/0	*		
023	000	Harmonica			
	001	Melodion			
024	000	Accordion 0/2/1	*		
	001	Accordion 0/1/0			
	002	Musette	*		
025	000	Nylon-String Guitar			
	008	Ukulele			
026	000	Steel-String Guitar			
	008	12 Strings Guitar	*		
	009	Nylon+Steel Guitar	*		
	016	Mandolin			
027	000	Jazz Guitar			
	008	Hawaiian Guitar			*

PC#	VR#	INSTRUMENT NAME	V	T	M
028	000	Clean Guitar			
	008	Chorus Guitar	*		
	024	Wah Guitar			
029	000	Muted Guitar			
	001	Country Guitar			
	002	Muted Distortion Guitar			
	008	Funk Guitar			
030	000	Overdrive Guitar			
031	000	Distortion Guitar			
	008	Feedback Guitar	*		
	016	Power Guitar			
	024	Rock Rhythm	*		
032	000	Guitar Harmonics			
	008	Guitar Feedback			
033	000	Acoustic Bass 1			
	001	Acoustic Bass 2			
034	000	Finger Bass 1			
	001	Finger Bass 2			
035	000	Picked Bass			
036	000	Fretless Bass			
037	000	Slap Bass 1			
038	000	Slap Bass 2			
039	000	Synth Bass 1			
	001	Synth Bass 101			
	008	Synth Bass 3	*		
040	000	Synth Bass 2	*		
	008	Synth Bass 4	*		
	016	Rubber Bass	*		
041	000	Violin			
	002	Violin Vibrato			
	008	Slow Violin			
042	000	Viola			
043	000	Cello			
	002	Cell Vibrato			
044	000	Contrabass			
045	000	Tremolo Strings			*
046	000	Pizzicato Strings			
047	000	Orchestral Harp			
	001	Organ Harp			
048	000	Timpani			
049	000	Strings			
	001	Dull Strings			
	002	Detuned Strings	*		
	008	Orchestra	*		
	016	Stereo Strings 1	*		
	017	Stereo Strings 2	*		
050	000	Slow Strings			
051	000	Synth Strings 1			
	001	BBD Strings			
	002	Dull BBD Strings			
	008	Synth Strings 3	*		
052	000	Synth Strings 2	*		
053	000	Aah Choir			
	001	Church Choir			
	032	Slow Choir			
054	000	Doo Voice			
	001	Bop Voice			
055	000	Synth Voice	*		
056	000	Orchestra Hit			
057	000	Trumpet			
	001	Trumpet 2			
	002	Slow Trumpet			
058	000	Trombone			
	001	Trombone 2	*		
	002	Trombone 3			
059	000	Tuba			

PC#	VR#	INSTRUMENT NAME	V	T	M
060	000	Muted Trumpet			
061	000	French Horns	*		
	001	Flugel Horn			
	008	Fr Horn Closed			
	009	Fr Horn Open			
062	000	Brass Section 1			
	001	Brass Fall Down			
	008	Brass Section 2	*		
	024	Octave Brass	*		
063	000	Synth Brass 1	*		
	008	Synth Brass 3	*		
	016	Analog Brass 1	*		
064	000	Synth Brass 2	*		
	008	Synth Brass 4			
	016	Analog Brass 2	*		
065	000	Soprano Sax			
	003	Soprano Sax Vibrato			
066	000	Alto Sax f			
	008	Alto Sax p			
067	000	Tenor Sax f			
	001	Overblown Sax			
	002	Tenor Sax Velocity	*		
	003	Tenor Sax Vibrato			
	008	Tenor Sax p 1			
	009	Tenor Sax p 2			
068	000	Baritone Sax			
069	000	Oboe			
070	000	English Horn			
071	000	Bassoon			
072	000	Clarinet			
	001	Slow Clarinet			
073	000	Piccolo			
074	000	Flute 1			
	001	Flute 2			
	002	Flute 3	*		
	003	Flute 4			
075	000	Recorder			
	001	Recorder 2	*		
076	000	Pan Flute			
077	000	Bottle Blow	*		
078	000	Shakuhachi	*		
079	000	Whistle			
080	000	Ocarina			
081	000	Square Lead	*		
	001	Square			
	008	Sine Wave			
082	000	Saw Lead	*		
	001	Saw			
	002	Step 8			
	003	Step 4			
	008	Dr.Solo	*		
083	000	Calliope Lead	*		
084	000	Chiffer Lead	*		
085	000	Charang Lead	*		
086	000	Voice Lead	*		
087	000	Fifth Lead	*		
088	000	Bass & Lead	*		
	002	Bass & Lead Velocity	*		
089	000	New Age Pad	*		
090	000	Warm Pad	*		
091	000	Polysynth Pad	*		
092	000	Choir Pad	*		
093	000	Bowed Pad	*		
094	000	Metal Pad	*		*
095	000	Halo Pad	*		
096	000	Sweep Pad	*		*

PC#	VR#	INSTRUMENT NAME	V	T	M
097	000	Ice Rain	*		
098	000	Sound Track	*		*
099	000	Crystal	*		
	001	Synth Mallet			
100	000	Atmosphere	*		
101	000	Brightness	*		
102	000	Goblin	*		
103	000	Echo Drops			
	001	Echo Bell	*		
	002	Echo Pan	*		
104	000	Sci-Fi	*		
105	000	Sitar			
	001	Sitar 2	*		
106	000	Banjo			
107	000	Shamisen			
	001	Tsugaru Jamisen	*		
	002	Shamisen 2			
	003	Biwa			
108	000	Koto			
	002	17 Gen			
	003	Tohgoto			
	008	Taisho Koto (Benkei)	*		
	009	Taisho Koto (Ran Soprano)	*		
	010	Taisho Koto (Ran TYPEII)	*		
	011	Taisho Koto (Ran Alto)	*		
	012	Taisho Koto (Ran Bass)			
109	000	Kalimba			
110	000	Bag Pipe			
111	000	Fiddle			
112	000	Shanai			
	016	Hichiriki			
	017	Shyo			
	018	Shinobue			
	019	Nohkan			
	020	Kokyu			
113	000	Tinkle Bell	*		
114	000	Agogo			
115	000	Steel Drum			
116	000	Wood Block		*	
	001	Mokugyo		*	
	008	Castanet		*	
117	000	Taiko Drum		*	
	001	Shime Daiko		*	
	002	Gong		*	
	008	Concert Bass Drum		*	
118	000	Melodic Tom		*	
	008	Melodic Tom 2		*	
119	000	Synth Tom		*	
	008	Analog Tom		*	
120	000	Reverse Cymbal 1	*	*	
	001	Reverse Cymbal 2	*	*	
121	000	Guitar Fret Noise			
	001	Guitar Cutting Noise		*	
	002	String Slap		*	
122	000	Breath Noise			
	001	Flute Key Click		*	
123	000	Seashore	*	*	
	001	Rain	*	*	
	002	Thunder		*	
	003	Wind		*	*
	004	Stream	*	*	*
	005	Bubble	*	*	
	016	Pink Noise		*	
	017	White Noise		*	
124	000	Bird Tweet	*	*	
	001	Dog		*	
	002	Horse Gallop		*	
	003	Bird Tweet 2		*	*

PC#	VR#	INSTRUMENT NAME	V	T	M
125	000	Telephone Ring 1		*	
	001	Telephone Ring 2		*	
	002	Door Cleaking		*	
	003	Door Slam		*	
	004	Scratch		*	
	005	Wind Chime	*	*	
126	000	Helicopter		*	
	001	Car Engine		*	
	002	Car Stop		*	
	003	Car Pass		*	
	004	Car Crash	*	*	
	005	Siren		*	
	006	Train / SL		*	
	007	Jet Plane	*	*	*
	008	Star Ship	*	*	*
	009	Burst Noise	*	*	*
127	000	Applause	*	*	
	001	Laughing		*	
	002	Scream		*	
	003	Punch		*	
	004	Heart Beat		*	
	005	Foot Step		*	
128	000	Gun Shot		*	
	001	Machine Gun		*	
	002	Laser Gun		*	
	003	Explosion	*	*	

001	125	Custom 1-1	-	-	-
002	125	Custom 1-2	-	-	-
003	125	Custom 1-3	-	-	-
004	125	Custom 1-4	-	-	-
005	125	Custom 1-5	-	-	-
006	125	Custom 1-6	-	-	-
007	125	Custom 1-7	-	-	-
008	125	Custom 1-8	-	-	-
009	125	Custom 1-9	-	-	-
010	125	Custom 1-10	-	-	-
011	125	Custom 1-11	-	-	-
012	125	Custom 1-12	-	-	-
013	125	Custom 1-13	-	-	-
014	125	Custom 1-14	-	-	-
001	126	Custom 2-1	-	-	-
002	126	Custom 2-2	-	-	-
003	126	Custom 2-3	-	-	-
004	126	Custom 2-4	-	-	-
005	126	Custom 2-5	-	-	-
006	126	Custom 2-6	-	-	-
007	126	Custom 2-7	-	-	-
008	126	Custom 2-8	-	-	-
009	126	Custom 2-9	-	-	-
010	126	Custom 2-10	-	-	-
011	126	Custom 2-11	-	-	-
012	126	Custom 2-12	-	-	-
013	126	Custom 2-13	-	-	-
014	126	Custom 2-14	-	-	-

Drum Sets List

PC: Program Number (drum set number)

----: Make no sound

BLANK: The same percussion as Standard 1 Set

[EXC]: The percussions of same number make no sound at the same time

*: uses 2 voices(all other percussions uses 1 voice)

NOTE NUMBER			PC 001	PC 002	PC 009	PC 017	PC 025	PC 026
No.	KBD	MIDI	STANDARD 1 Set	STANDARD 2 Set	ROOM Set	POWER Set	ELECTRONIC Set	ANALOG Set
24	0	1	C	Tabla Te				Analog CHH 2 [EXC7]
25	0	1	C#	Tabla Tun				----
26	0	1	D	Tabla Ge				Analog OHH 2 [EXC7]
27	0	1	D#	High Q				
28	0	1	E	Slap				
29	0	1	F	Scratch Push				
30	0	1	F#	Scratch Pull				
31	0	1	G	Sticks				
32	0	1	G#	Square Click				
33	0	1	A	Metronome Click				
34	0	1	A#	Metronome Bell				
35	0	1	B	Standard 1 Kick Drum 2	Std 2 Kick Drum 2	Room Kick Drum 2		Analog BD 2
36	1	2	C	Standard 1 Kick Drum 1	Std 2 Kick Drum 1	Room Kick Drum 1	MONDO Kick	Elec BD
37	1	2	C#	Side Stick				Analog BD 1
38	1	2	D	Standard 1 Snare Drum 1	Std 2 Snare Drum 1	Room Snare Drum 1	Gated SD	Elec SD
39	1	2	D#	Hand Clap				Analog SD 1
40	1	2	E	Standard 1 Snare Drum 2	Std 2 Snare Drum 2	Room Snare Drum 2	Gated SD	Analog SD 2
41	1	2	F	Low Tom 2		Room Low Tom 2	Room Low Tom 2	Elec Low Tom 2
42	1	2	F#	Closed Hi-hat [EXC1]				Analog Low Tom 2
43	1	2	G	Low Tom 1		Room Low Tom 1	Room Low Tom 1	Elec Low Tom 1
44	1	2	G#	Pedal Hi-hat [EXC1]				Analog Low Tom 1
45	1	2	A	Mid Tom 2		Room Mid Tom 2	Room Mid Tom 2	Elec Mid Tom 2
46	1	2	A#	Open Hi-hat [EXC1]				Analog Mid Tom 2
47	1	2	B	Mid Tom 1		Room Mid Tom 1	Room Mid Tom 1	Elec Mid Tom 1
48	2	3	C	High Tom 2		Room High Tom 2	Room High Tom 2	Elec High Tom 2
49	2	3	C#	Crash Cymbal 1				Analog High Tom 2
50	2	3	D	High Tom 1		Room High Tom 1	Room High Tom 1	Elec High Tom 1
51	2	3	D#	Ride Cymbal 1				Analog Cymbal
52	2	3	E	Chinese Cymbal			Revs. Cymbal *	Analog High Tom 1
53	2	3	F	Ride Bell				
54	2	3	F#	Tambourine				
55	2	3	G	Splash Cymbal				
56	2	3	G#	Cowbell				Analog Cowbell
57	2	3	A	Crash Cymbal 2				
58	2	3	A#	Vibra-slap				
59	2	3	B	Ride Cymbal 2				
60	3	4	C	High Bongo				
61	3	4	C#	Low Bongo				
62	3	4	D	Mute High Conga				Analog Hi Conga
63	3	4	D#	Open High Conga				Analog Mid Conga
64	3	4	E	Low Conga				Analog Low Conga
65	3	4	F	High Timbale				
66	3	4	F#	Low Timbale				
67	3	4	G	High Agogo				
68	3	4	G#	Low Agogo				
69	3	4	A	Cabasa				
70	3	4	A#	Maracas				Analog Maracas
71	3	4	B	Short Hi Whistle [EXC2]				
72	4	5	C	Long Low Whistle [EXC2]				
73	4	5	C#	Short Guiro [EXC3]				
74	4	5	D	Long Guiro [EXC3]				
75	4	5	D#	Claves				Analog Claves
76	4	5	E	High Wood Block				
77	4	5	F	Low Wood Block				
78	4	5	F#	Mute Cuica [EXC4]				
79	4	5	G	Open Cuica [EXC4]				
80	4	5	G#	Mute Triangle [EXC5]				
81	4	5	A	Open Triangle [EXC5]				
82	4	5	A#	Shaker				
83	4	5	B	Jingle Bell				
84	5	6	C	Bell Tree				
85	5	6	C#	Castanets				
86	5	6	D	Mute Surdo [EXC6]				
87	5	6	D#	Open Surdo [EXC6]				
88	5	6	E				----	
89	5	6	F				----	
90	5	6	F#				----	
91	5	6	G	Suzu			----	
92	5	6	G#	Finger Snap				
93	5	6	A	Snare Drum Roll				

NOTE NUMBER			PC 033	PC 041	PC 049	PC 057	PC 065
No.	KBD	MIDI	JAZZ Set	BRUSH Set	ORCHESTRA Set	SFX Set	JAPANESE Set
27	0	1	D#			-----	-----
28	0	1	E			Pedal Hi-hat [EXC1]	-----
29	0	1	F			Open Hi-hat [EXC1]	-----
30	0	1	F#			Ride Cymbal	-----
31	0	1	G				-----
32	0	1	G#				-----
33	0	1	A				-----
34	0	1	A#				-----
35	0	1	B	Jazz BD 2	Jazz BD 2	Concert BD 2	-----
36	1	2	C	Jazz BD 1	Jazz BD 1	Concert BD 1	-----
37	1	2	C#				-----
38	1	2	D	Jazz SD 1	Brush Tap	Concert SD	-----
39	1	2	D#		Brush Slap	Castanets	High Q
40	1	2	E	Jazz SD 2	Brush Swirl	Concert SD	Slap
41	1	2	F		Br. Low Tom 2	Timpani F	Scratch Push [EXC7]
42	1	2	F#			Timpani F#	Scratch Pull [EXC7]
43	1	2	G		Br. Low Tom 1	Timpani G	Sticks
44	1	2	G#			Timpani G#	Square Click
45	1	2	A		Br. Mid Tom 2	Timpani A	Metronome Click
46	1	2	A#			Timpani A#	Metronome Bell
47	1	2	B		Br. Mid Tom 1	Timpani B	Guitar sliding finger
48	2	3	C		Br. High Tom 2	Timpani c	Guitar cutting noise (down)
49	2	3	C#			Timpani c#	Guitar cutting noise (up)
50	2	3	D		Br. High Tom 1	Timpani d	String slap of double bass
51	2	3	D#			Timpani d#	Fl. Key Click
52	2	3	E			Timpani e	Laughing
53	2	3	F			Timpani f	Screaming
54	2	3	F#				Punch
55	2	3	G				Heart Beat
56	2	3	G#				Footsteps 1
57	2	3	A			Concert Cymbal 2	Footsteps 2
58	2	3	A#				Applause *
59	2	3	B			Concert Cymbal 1	Door Creaking
60	3	4	C				Door
61	3	4	C#				Scratch
62	3	4	D				Windchime *
63	3	4	D#				Car-Engine
64	3	4	E				Car-Stop
65	3	4	F				Car-Pass
66	3	4	F#				Car-Crash *
67	3	4	G				Siren
68	3	4	G#				Train
69	3	4	A				Jetplane *
70	3	4	A#				Helicopter
71	3	4	B				Starship *
72	4	5	C				Gun Shot
73	4	5	C#				Machine Gun
74	4	5	D				Lasergun
75	4	5	D#				Explosion *
76	4	5	E				Dog
77	4	5	F				Horse-Gallop
78	4	5	F#				Birds *
79	4	5	G				Rain *
80	4	5	G#				Thunder
81	4	5	A				Wind
82	4	5	A#				Seashore *
83	4	5	B				Stream *
84	5	6	C				Bubble *
85	5	6	C#			-----	Ohdaiko 3
86	5	6	D				Daibyoushi
87	5	6	D#				Okedoh
88	5	6	E			-----	Kotsuzumi Ta
89	5	6	F			-----	Two
90	5	6	F#			-----	Three
91	5	6	G			-----	Atarigane 2
92	5	6	G#			-----	Konchiki 1
93	5	6	A			-----	Konchiki 2
94	5	6	A#			-----	Konchiki 3
95	5	6	B			-----	Snare Drum Roll
						-----	Sohban
						-----	Bonsho
						-----	Dora

Keyboard	61 keys with Initial touch
Display	240 x 64 dots graphics LCD with LED back light
Drawbars	9-Upper, 9-Lower, 2-Bass
Percussion	2nd, 3rd, Soft, Fast
Sound generator	PCM Voices: VASE II Drawbars Voices: VASE II & DRB
Maximum polyphony	PCM Voices:32, Drawbar Voices: 32
Drawbar Effects	Leslie: 2 Rotor Digital Leslie- On/Off, Fast/Slow Vibrato/Chorus: V1, V2, V3, C1, C2, C3
Effects	Reverb: 8 types, Chorus: 8 types S.E.S. (Sound Expansion System) Echo for Mic Input
PCM Voices	275 preset voices + 28 user voices, 11 Drum-sets Upper compatible of GM (General MIDI Level 1).
Drawbar Voices	B-Type, Mellow, Brite (Upper and Lower) Normal, Muted (Pedal)
Equalizer	2 Sections (Rhythm & Voice, Drawbar) 4 elements Parametric
Presets	10 Banks (10 Presets each), 100 Rhythm Presets
Rhythms & Styles	100 Preset Styles 2 x 16 Disk Style, 2 x 8 Custom Style, 8 User Rhythm Variation A, B, C, D, Auto Vari, Start/Stop, Touch Start, Intro/Ending, Fill-in 1, Fill-in 2, Autoband 1, Autoband 2, Autobass, Memory Touch Tempo Easy Play System, Manual Drum, Sound Effect
Pro Chord	20
Controls	Split, Transpose, Pitch bend, Modulation wheel, Tempo wheel, Demo, Display contrast
Volume	Master Volume
Disk drive	3.5 inch 2DD/2HD Song, Set-up, Style, Upgrade
External memory slot	CompactFlash Memory Card (8M-128M Bytes) Song, Set-up, Style, Whole
Sequencer	3 modes (Easy, Multi, 16 tracks) SMF (Standard MIDI File)
Terminals	Line out: L(mono)/R, Line in: L/R, Mic: In/Out, Mic volume, Echo volume, Headphone, Expression pedal (EXP-100F) with Foot switch, Foot switch, External Leslie 11-pin, Leslie volume, Computer interface(PC1, PC2, Mac), MIDI: IN1/IN2/OUT/THRU
Speakers	2 x Woofer 13cm, 2 x Tweeter 5cm
Amplifier Output	2 x 50W
Dimension	W x H x D: 1098mm x 235mm x 481mm
Weight	35kg
Accessories	Music-rest, AC-Cord
Options	MIDI Keyboard XLK-1 MIDI Pedalboard XPK-100 Expression Pedal EXP-100F Stand STE-1 Foot Switch FS-9H

