



DIGITAL KEYBOARD

PSR-E453

PSR-EW400

MIDI Reference

MIDI Implementation Chart

Yamaha [DIGITAL KEYBOARD]

Date:17-Sep-2015

Model PSR-E453/PSR-EW400 MIDI Implementation Chart Version : 1.0

Function...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1 - 16 x	1 - 16 x	
Mode Default Messages Altered	3 x *****	3 x x	
Note Number : True voice	0 - 127 *****	0 - 127 0 - 127	
Velocity Note ON Note OFF	o 9nH,v=1-127 x	o 9nH,v=1-127 x	
After Key's Touch Ch's	x x	x x	
Pitch Bend	o	o	
Control Change	0,32 o 1 x 6 o 38 x 7,10 o 11 x 64 o 71-74 o 84 x 91,93 o 96,97 x 100,101 o	o o o o o o o o o o o o	Bank Select Modulation Data Entry (MSB) Data Entry (LSB) Main Volume,Pan Expression Sustain Sound Control Portamento Control Effect Depth RPN Inc,Dec RPN LSB,MSB
Prog Change : True #	o 0 - 127 *****	o 0 - 127	
System Exclusive	o	o	
Common : Song Pos. : Song Sel. : Tune	x x x	x x x	
System : Clock Real Time: Commands	o o	o o	
Aux :All Sound OFF :Reset All Cntrls :Local ON/OFF Mes- :All Notes OFF sages:Active Sense :Reset	x x x x o x	o (120,126,127) o (121) o (122) o (123-125) 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

MIDI Data Format

NOTE:

- By default (factory settings) the instrument ordinarily functions as a 16-channel multi-timbral tone generator, and incoming data does not affect the panel voices or panel settings. However, the MIDI messages listed below do affect the panel voices, auto accompaniment, and songs.
 - MIDI Master Tuning
 - System exclusive messages for changing the Reverb Type and Chorus Type.
- Messages for these control change numbers cannot be transmitted from the instrument itself. However, they may be transmitted when playing the accompaniment, song or using the Harmony effect.
- Exclusive
 - <GM System ON>
F0H, 7EH, 7FH, 09H, 01H, F7H
 - This message automatically restores all default settings for the instrument, with the exception of MIDI Master Tuning.
 - <MIDI Master Volume>
F0H, 7FH, 7FH, 04H, 01H, 11, mm, F7H
 - This message allows the volume of all channels to be changed simultaneously (Universal System Exclusive).
 - The values of “mm” is used for MIDI Master Volume. (Values for “11” are ignored.)
 - <MIDI Master Tuning>
F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, 11, cc, F7H
 - This message simultaneously changes the tuning value of all channels.
 - The values of “mm” and “11” are used for MIDI Master Tuning.
 - The default value of “mm” and “11” are 08H and 00H, respectively. Any values can be used for “n” and “cc”.

<Reverb Type>
F0H, 43H, 1nH, 4CH, 02H, 01H, 00H, mmH, 11H, F7H

- mm : Reverb Type MSB
- 11 : Reverb Type LSB

Refer to the Effect Map (page 3) for details.

<Chorus Type>
F0H, 43H, 1nH, 4CH, 02H, 01H, 20H, mmH, 11H, F7H

- mm : Chorus Type MSB
- 11 : Chorus Type LSB

Refer to the Effect Map (page 3) for details.

- When the accompaniment is started, an FAH message is transmitted. When accompaniment is stopped, an FCH message is transmitted. When the clock is set to External, both FAH (accompaniment start) and FCH (accompaniment stop) are recognized.
- Local ON/OFF
<Local ON> Bn, 7A, 7F
<Local OFF> Bn, 7A, 00
Value for “n” is ignored.

Effect map

- * When a Type LSB value is received that corresponds to no effect type, a value corresponding to the effect type (coming the closest to the specified value) is automatically set.
- * The numbers in parentheses in front of the Effect Type names correspond to the number indicated in the display.

REVERB

TYPE MSB	TYPE LSB									
	00	01	02	08	16	17	18	19	20	
000	No Effect									
001	(01)Hall1				(02)Hall2	(03)Hall3				
002	Room					(04)Room1		(05)Room2		
003	Stage				(06)Stage1	(07)Stage2				
004	Plate				(08)Plate1	(09)Plate2				
005...127	No Effect									

CHORUS

TYPE MSB	TYPE LSB									
	00	01	02	08	16	17	18	19	20	
000...063	No Effect									
064	No Effect									
065	(03)Chorus3		(02)Chorus2							
066	Celeste					(01)Chorus1				
067	Flanger			(04)Flanger1		(05)Flanger2				
068...127	No Effect									