YAMAHA

DIGITAL KEYBOARD
CLAVIER NUMÉRIQUE
TECLADO DIGITAL

PSS-A50

MIDI Reference
MIDI-Referenz
Référence MIDI
Referencia MIDI

EN

MIDI Functions

The explanations here cover the settings necessary for performing MIDI communication. For instructions on making these settings, refer to page 12 in the Owner's Manual.

NOTE

For instructions on how to connect this instrument to a computer, refer to the page 6 in the Owner's Manual.

MIDI Out Channel Selection

In order to perform MIDI communication between this instrument and a computer, it is necessary to match the corresponding MIDI out channel. By setting the MIDI out channels on this instrument, the setting of the keyboard or Arpeggio sequence or the program change can be transmitted over the channel number corresponding to a specified channel on the computer.

Transmit data and Channel settings

The data in the list below are transmitted over the channel number(s) automatically set based on the transmit channel for the keyboard Voice.

Keyboard Voices	Setting range: 01–16, oFF Default setting: 01
Arpeggio sequence	Keyboard Voices channel number +1
Keyboard performance recorded to this instrument	Keyboard Voices channel number +2
Arpeggio sequence recorded to this instrument	Keyboard Voices channel number +3

NOTE

- Selecting the next channel number from channel 16 returns to channel 1.
- No data is transmitted if the transmit channel for the keyboard Voice is set to "oFF."
- For instructions on recording to this instrument, refer to page 10 in the Owner's Manual.

NOTE

Panel settings (Voices, etc.) of this instrument will not be affected by MIDI messages received from a computer.

NOTE

This instrument cannot play back MIDI data (received from a computer) that includes Voices that are incompatible with this instrument.

Local Control ON/OFF

"Local Control" refers to the fact that, normally, the keyboard of the instrument controls its internal tone generator, allowing the internal Voices to be played directly from the keyboard. This situation is "Local Control On," since the internal tone generator is controlled locally by its own keyboard. Local control can be turned off, however, so that the keyboard of the instrument does not play the internal Voices, but the appropriate MIDI information is still transmitted via the 5V DC / USB TO HOST terminal when notes are played on the keyboard.

Program Change ON/OFF

The information related to Voice changes is called "program change" in MIDI. Transmitting and receiving program change messages can be enabled or disabled as desired on this instrument. For example, if the relevant transmit and receive parameters are set to on, Voice change information in this instrument can be transmitted to or received from a computer.
(However, the Voice as played from the keyboard is maintained and does not change.)

Control Change ON/OFF

Information related to non-note expressive changes is called "control change" in MIDI. Transmitting and receiving control change messages can be enabled or disabled as desired on this instrument. For example, if the relevant transmit and receive parameters are set to on, performance information on this instrument can be transmitted to or received from a computer. (However, the performance information from the instrument is maintained and does not change.)

MIDI Data Format

1 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 Master Tuning affects the panel voices and recorded data.

2 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.

NOTE

| This instrument does not support the GM format.

<MIDI Master Volume>
F0H, 7FH, 7FH, 04H, 01H, ll, 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 "ll" are ignored.)

<MIDI Master Tuning>
F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, ll, cc, F7H
- This message simultaneously changes the tuning value of all channels.
- The values of "mm" and "ll" are used for MIDI Master Tuning.
- The default value of "mm" and "ll" are 08H and 00H, respectively. Any values can be used for "n" and "cc".

3 When the recording or playback of the recorded phrase is started, an FAH message is transmitted.
When recording or playback of the recorded phrase is stopped, an FCH message is transmitted.

4 Local ON/OFF
<Local ON> Bn, 7A, 7F
<Local OFF> Bn, 7A, 00
- Value for "n" is ignored.

Precautions when Using the 5V DC / USB TO HOST Terminal

When connecting the computer to the 5V DC / USB TO HOST terminal (page 6 in the Owner's Manual), make sure to observe the following points to avoid freezing the computer and corrupting or losing the data.

- Use an A-micro B type USB cable of less than 3 meters. USB 3.0 cables cannot be used.

- Execute the following before turning the power to the instrument on/off or plugging/unplugging the USB cable to/from the 5V DC / USB TO HOST terminal.
  - Quit any open application software on the computer.
  - Make sure that data is not being transmitted from the instrument. (Data is transmitted only by playing notes on the keyboard or playing back a song.)

- While the computer is connected to the instrument, you should wait for six seconds or more between these operations: (1) when turning the power of the instrument off then on again, or (2) when alternately connecting/disconnecting the USB cable.

If the computer or the instrument freezes, restart the application software or the computer OS, or turn the power to the instrument off then on again.

MIDI Implementation Chart

Function...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1 - 16 1 - 16	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 9nH,v=0	o 9nH,v=1-127 x	
After Key's Touch Ch's	x x	x x	
Pitch Bend	o	o 0 - 24 semi	
Control Change	0,32 o 1,5,7,11 o 10 x 6 o 38 x 64 x 65 o 71,72,73,74 o 84 x 91,93 o 96,97 x 100,101 o	o o x o o o o o o o o o	Bank Select Pan Data Entry (MSB) Data Entry (LSB) Sustain Portamento Switch Sound Controller Portamento Control Effect1,3 Depth RPN Inc,Dec RPN LSB,MSB
Prog Change : True #	o 0 - 100 **************	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	x x	

Aux   :All Sound Off
       :Reset All Cntrls
Mes- :Local ON/OFF
sages:All Notes Off
       :Active Sense
       :Reset
	o
	o
	x
	o
	o
	x
		o(120,126,127)
		o(121)
		o(122)
		o(123-125)
		o
		x	

Mode 1 : OMNI ON , POLY   Mode 2 : OMNI ON ,MONO   o : Yes
Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF,MONO   x : No