MIDI Overview

The term MIDI is an acronym for Musical Instrument Digital Interface, an international standard for connecting musical instruments, computers, and other devices to allow the exchange of performance data.

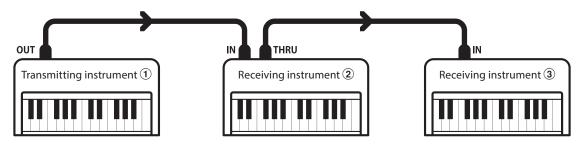
MIDI Terminals

MIDI terminal	Function
MIDI IN	Receiving note, program change, and other data.
MIDI OUT	Sending note, program change, and other data.

MIDI channels

MIDI uses channels to exchange data back and forth between MIDI devices. There are receive (MIDI IN) and transmit (MIDI OUT) channels. Most musical instruments or devices with MIDI functions are equipped with both MIDI IN and OUT jacks and are capable of transmitting and receiving data via MIDI. The receive channels are used to receive data **from** another MIDI device, and the transmit channels are used to transmit data **to** another MIDI device.

The illustration below shows three musical instruments, connected together using MIDI.



Transmitting instrument 1 sends transmit channel and keyboard information to receiving instruments 2/3.

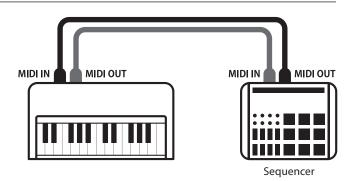
The information arrives at the receiving instruments 2/3.

Receiving instruments 2/3 will respond to MIDI data that is sent if their receive channel is the same as the transmit channel of the transmitting instrument 1. If the channels do not match, the receiving instruments 2/3 will not respond to any data that is sent.

For both receiving and transmitting, channels 1-16 can be used.

Recording/playing with a sequencer

When connected to a sequencer (or a computer running MIDI sequencing software), the CS11/CS8 digital piano can be used to record and playback multi-track songs, with separate sounds playing simultaneously on each channel.



MIDI Functions

The CS11/CS8 digital piano supports the following MIDI functions:

Transmit/receive note information

Transmit/receive note information to/from a MIDI-connected musical instrument or device.

Transmit/receive channel settings

Specify transmit/receive channels within the range of 1 to 16.

Transmit/receive exclusive data

Transmit/receive front panel or menu function settings as exclusive data.

Multi-timbral mode setting

Receive multiple channel MIDI data from a MIDI-connected musical instrument or device.

Transmit/receive program change information

Transmit/receive program change data to/from a MIDIconnected musical instrument or device.

Transmit/receive pedal data

Transmit/receive sustain, sostenuto, and soft pedal data to/ from a MIDI-connected musical instrument or device.

Receive volume data

Receive MIDI volume data sent from a MIDI-connected musical instrument or device.

* Please refer to the 'MIDI Implementation Chart' on page 10 for further information regarding the MIDI capabilities of the CS11/CS8 digital piano.

MIDI Settings

No.	Setting	Description	Default setting		
1	MIDI Channel	Specify the channel that is used to transmit/receive MIDI information.	1		
2	Send PGM Change #	PGM Change # Send a MIDI program change number from 1 to 128.			
3	Local Control Specify whether internal sounds will be heard when the keyboard is pressed.		On		
4	Trans. PGM Change	Specify whether program change data is sent when sounds are changed.	On		
5	Multi-timbral Mode	Specify whether the instrument can receive Multi-timbral MIDI information.	Off		
6	Channel Mute	Specify which channels (1-16) are activated to receive MIDI information.	Play All		

* Default settings will be shown in the first LCD display illustration (i.e. Step 1) for each setting explanation below.

Entering the MIDI Settings menu

While the normal playing mode screen is shown in the LCD display:

Press the **2** FUNCTION button (EDIT).

The Function menus will be shown in the LCD display.

Press the \checkmark or \blacktriangle buttons to select the MIDI Settings menu.



Press the **2** FUNCTION button (ENTER) again to enter the MIDI Settings menu.

Selecting and adjusting the desired setting

After entering the MIDI Settings menu:

Press the \checkmark or \blacktriangle buttons to move the selection cursor over the desired setting.

Press the ◀ or ► buttons to adjust the selected setting.

* To reset the current setting to the default value, press the ◀ and ► buttons simultaneously.



MIDI Settings

MIDI Channel

The MIDI Channel setting allows the transmit/receive channel to be specified. The selected channel will function as both the transmit and receive channel (separate transmit/receive channels cannot be specified).

1. Selecting the MIDI Channel setting

After entering the MIDI Settings menu (page 2):

Press the ▼ or ▲ buttons to select the MIDI Channel setting.

<u>Channel Mute</u> MIDI Chani Send PGM 3 BACK

2. Changing the MIDI Channel value

Press the ◀ or ▶ buttons to increase or decrease the value of the MIDI Channel setting.

- * The MIDI Channel value can be adjusted within the range of 1~16.
- * To reset the MIDI Channel setting to the default value, press the ◄ and ▶ buttons simultaneously.
- * Any changes made to the MIDI Channel setting will remain until the power is turned off.
- * Preferred MIDI Channel settings can be stored to a Registration memory for convenient recall. Please refer to CS11/CS8 Owner's Manual page 32 for more information.

3. Exiting the MIDI Channel setting

Press the B FUNCTION button (BACK) to exit the MIDI Channel setting and return to the Function Menus screen.

Omni mode

When the CS11/CS8 digital piano is turned on, the instrument is automatically set to 'omni mode on', allowing MIDI information to be received on all MIDI channels (1-16). When the MIDI Channel setting is used to specify a transmit/receive channel, the instrument will be set to 'omni mode off'.

Multi-timbral mode and Split/Dual modes

Using Split mode with Multi-timbral mode enabled

Notes played in the lower section of the keyboard will be transmitted on the channel that is 1 channel higher than the specified channel. For example, if the MIDI channel is set to 3, notes played in the lower section of the keyboard will be transmitted on channel 4.

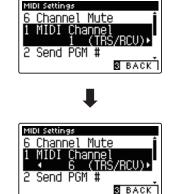
Using Dual mode with Multi-timbral mode enabled

Notes played will be transmitted on two channels: the specified channel and the channel that is 1 channel higher.

For example, if the MIDI channel is set to 3, notes played on the keyboard will be transmitted on channels 3 and 4.

* If the specified MIDI channel is 16, the lower section / layered part will be transmitted on channel 1.





MIDI Settings

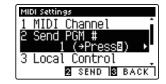
2 Send Program Change Number

The Send Program Change Number function is used to send a Program Change Number (1-128) to the connected MIDI device.

1. Selecting the Send Program Change Number function

After entering the MIDI Settings menu (page 2):

Press the \checkmark or \blacktriangle buttons to select the Send Program Change Number function.



2. Specifying and transmitting a Program Change Number

Press the ◀ or ► buttons to decrease or increase the Program Change Number.

* The program change number can be set within the range of 1-128.

Press the **2** FUNCTION button (SEND) to send the specified Program Change Number.





3. Exiting the Send Program Change Number function

Press the **B** FUNCTION button (BACK) to exit the Send Program Change Number function and return to the Function Menus screen.

3 Local Control

The Local Control setting determines whether the instrument will play an internal sound when the keys are pressed. This setting may be useful when using the CS11/CS8 digital piano to control an external MIDI device that is connected to the instrument's amplifier/speakers.

Local Control setting

Local Control	Description
Off	The instrument will transmit information to an external MIDI device only.
On (default)	The instrument will play an internal sound and transmit information to an external MIDI device.

1. Selecting the Local Control setting

After entering the MIDI Settings menu (page 2):

Press the ▼ or ▲ buttons to select the Local Control setting.



2. Changing the Local Control setting

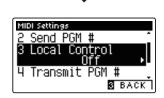
Press the \blacktriangleleft or \blacktriangleright buttons to turn the Local Control setting on or off.

- * To reset the Local Control setting to the default setting, press the
 ◄ and ► buttons simultaneously.
- * Any changes made to the Local Control setting will remain until the power is turned off.
- * Preferred Local Control settings can be stored to a Registration memory for convenient recall. Please refer to CS11/CS8 Owner's Manual page 32 for more information.

3. Exiting the Local Control setting

Press the **E** FUNCTION button (BACK) to exit the Local Control setting and return to the Function Menus screen.





4 Transmit Program Change Numbers

The Transmit Program Change Numbers setting determines whether the CS11/CS8 digital piano will transmit program change information via MIDI when the instrument's panel buttons are pressed.

Transmit Program Change Numbers setting

Transmit PGM# Multi-timbral setting		Effect of pressing panel buttons		
On (default)	Off, On1	SOUND buttons will send PGM# shown in the left column*.		
On	On2	SOUND buttons will send PGM# shown in the right column*.		
Off Off		Program Change information will not be transmitted via MIDI.		

* Please refer to the 'Program Change Number List' on page 134 of "CS11/CS8 Owner's Manual".

1. Selecting the Transmit Program Change Numbers setting

After entering the MIDI Settings menu (page 2):

Press the \checkmark or \blacktriangle buttons to select the Transmit Program Change Numbers setting.



2. Changing the Transmit Program Change Numbers setting

Press the ◀ or ► buttons to turn the Transmit Program Change Numbers setting on or off.

- * To reset the Transmit Program Change Numbers setting to the default setting, press the ◀ and ► buttons simultaneously.
- * Any changes made to the Transmit Program Change Numbers setting will remain until the power is turned off.
- * Preferred Transmit Program Change Numbers settings can be stored to a Registration memory for convenient recall. Please refer to CS11/ CS8 Owner's Manual page 32 for more information.





3. Exiting the Transmit Program Change Numbers setting

Press the **B** FUNCTION button (BACK) to exit the Transmit Program Change Numbers setting and return to the Function Menus screen.

Omni mode

- When using Dual or Split mode, On/Off information and sound type settings for are transmitted as exclusive data, however program change numbers will not be transmitted.
- Program change numbers will also be transmitted when Multi-timbral mode is set to On1 or On2.

5 Multi-timbral Mode

The Multi-timbral Mode setting determines whether or not the CS11/CS8 digital piano is able to receive MIDI information on more than one MIDI channel simultaneously. This allows the instrument to play back multi-track, multi-timbral performance data sent from an external MIDI device.

Multi-timbral Mode setting

Multi-timbral Mode	Selected sound
Off (default)	The sound shown in the left column is selected*.
On1	The sound shown in the left column is selected*.
On2	The sound shown in the right column is selected*.

* Please refer to the 'Program Change Number List' on page 134 of "CS11/CS8 Owner's Manual".

MIDI Settings

<u>4 Transmit PGM #</u>

Channel Mute

Πt

S BACK

Multi Tim

1. Selecting the Multi-timbral Mode setting

After entering the MIDI Settings menu (page 2):

Press the \blacktriangledown or \blacktriangle buttons to select the Multi-timbral Mode setting.

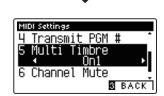
2. Changing the Multi-timbral Mode setting

Press the ◀ or ► buttons to change turn the Multi-timbral Mode setting.

* To reset the Multi-timbral Mode setting to the default setting, press the ◄ and ► buttons simultaneously.

- * Any changes made to the Multi-timbral Mode setting will remain until the power is turned off.
- * Preferred Multi-timbral Mode settings can be stored to a Registration memory for convenient recall. Please refer to CS11/CS8 Owner's Manual page 32 for more information.





3. Exiting the Multi-timbral Mode setting

Press the **B** FUNCTION button (BACK) to exit the Multi-timbral Mode setting and return to the Function Menus screen.

MIDI Settings

6 Channel Mute

The Channel Mute setting determines which MIDI channels (1-16) are activated to receive MIDI information when Multi-timbral mode is enabled.

* This setting is only available when the Multi-timbral Mode setting is set to 'On1' or 'On2'.

1. Selecting the Channel Mute setting

After entering the MIDI Settings menu (page 2):

Press the \checkmark or \blacktriangle buttons to select the Channel Mute setting.

Press the 2 FUNCTION button (EDIT).



The Channel Mute selection screen will be shown in the LCD display.

2. Selecting and playing/muting channels

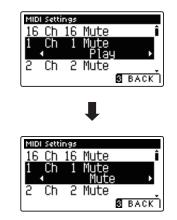
Press the \checkmark or \blacktriangle buttons to select the desired MIDI channel.

Press the ◀ or ► buttons to alternate between 'Play' and 'Mute' states.

- * To reset the Channel Mute setting to the default value, press the
 ◄ and ► buttons simultaneously.
- * Any changes made to the Channel Mute setting will remain until the power is turned off.
- * Preferred Channel Mute settings can be stored to a Registration memory for convenient recall. Please refer to CS11/CS8 Owner's Manual page 32 for more information.

3. Exiting the Channel Mute function

Press the **B** FUNCTION button (BACK) to exit the Channel Mute adjustment screen and return to the MIDI Settings menu.



MIDI Exclusive Data Format

1	lst byte	2nd byte	3rd byte	4th byte	5th byte	6th byte	7th byte	8th byte	9th byte	10th byte
	1	2	3	4	5	6	7	8	9	10

Byte	ID	Description		
1	FO	Start code		
2	40	Kawai ID number		
3	00 - 0F	MIDI channel		
4	10, 30	Function code (30 when setting Multi-timbre On/Off)		
5	04	Indicates that the instrument is an electric piano		
6	02	Indicates that the piano is a CA/ES model		
7	data 1			
8	data 2	See table below		
9	data 3			
10	F7	End code		

data 1	data 2	data 3	Function		
00	00	-	Multi-timbre Off		
01	00	-	Aulti-timbre On 1		
02	00	-	Multi-timbre On 2		
0F	00 - 7F	-	Split Point		
14	00 - 7F	-	Dual/Split balance		
16	1F - 60	-	Tune, 40: 440 Hz		
17	00, 7F	-	00: Program Change Off, 7F: Program Chage On		
18	00 - 07	-	00: Light, 01: Normal, 02: Heavy, 03: Off, 04: Light +, 05: Heavy +, 06: User1, 07: User2		
19	00 - 03	-	Lower Octave Shift		
20	00 - 3B	00 - 3B	Dual data 2: Main sound 2: Laura sound		
20	00 - 4F *	00 - 4F *	- Dual, data 2: Main sound, 3: Layer sound		
21	00 - 3B	00 - 3B	Calif. data 2. Una ar sound, data 2. Lawar sound		
21	21 00 - 4F * 00 - 4F *		Split, data 2: Upper sound, data 3: Lower sound		
22	00 - 3B 00 - 3		Four Llands, date 2: Diskt cound, date 2: Loft cound		
22	00 - 4F *	00 - 4F *	Four Hands, data 2: Right sound, data 3: Left sound		
25	00 - 08	00 - 0B	data 2: Temperament, data 3: Key		
26	00, 7F	00 - 0F	Multi-timbre channel mute, data 2:00 (mute On), 7F (mute Off), data 3: Channel		

* CS11 only.

[DIGITAL PIANO] Kawai CS11/CS8

MIDI Implementation Chart

Date: November 2015 Version: 1.0

Function		Transmitted	Section	Remarks
Basic	Default	1 - 16	1 - 16	
Channel	Changed	1 - 16	1 - 16	
	Default	Mode 3	Mode 1	* The default for the OMNI mode
Mode	Messages	Х	Mode 1, 3	is ON. Specifying MIDI channels auto-
	Altered	****		matically turns it OFF.
Note		21 - 108**	0 - 127	** The value depends on the
Number	True Voice	****	0 - 127	Transpose setting.
	Note ON	0	0	
Velocity	Note OFF	0	0	
	Кеу	Х	Х	
After Touch	Channel	Х	х	
Pitch Bend		Х	Х	
Control Change	0, 32 7 10 11 64 66 67	O X X O (Right pedal) O (Middle pedal) O (Left pedal)		Bank Select Volume Pan Pot Expression Pedal Sustain Pedal Sostenuto Pedal Soft Pedal
Program Change	True #	0 0 - 127	0 0 - 127 *** 0 - 127	*** Refer to the Program Change Number List on page 134 of "CS11/CS8 Owner's Manual".
System Exclusive		0	0	On/Off Selectable
	Song Position	х	х	
Common	Song Select	X	Х	
	Tune	Х	X	
System	Clock	Х	Х	
Real Time	Commands	0	х	
	Local ON/OFF	Х	0	
Others	All Note OFF	х	0 (123-127)	
ULHEIS	Active Sense	х	0	
	Reset	Х	х	
Notes			1	1

Mode 1 : OMNI ON , POLYMode 2 : OMNI ON , MONOMode 3 : OMNI OFF, POLYMode 4 : OMNI OFF, MONO