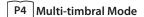# CN301 MIDI Settings Manual

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.
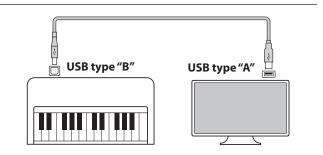
When the instrument is connected to a computer using a USB cable, the computer will recognise the instrument as a MIDI device, allowing the instrument to send and receive MIDI messages in the same manner as a normal MIDI interface.

Use a suitable USB cable to connect the USB type A port on the computer to the USB type B port on the digital piano. If there is no USB type A port on the computer, a conversion adapter may be required.

▌ MIDI use case

When connected to a computer, the digital piano can be used to record and playback performances using sequencer software running on the computer. When multi-timbral mode is enabled on the digital piano, it becomes possible to record and playback multi-track songs, with different sounds playing simultaneously on each MIDI channel.

| P4 | Multi-timbral Mode

USB type "B"   **USB type "A"**

▌ MIDI functions

The following functions are available with MIDI.

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

Transmit/receive Program Change number
Transmit/receive program change data to/from a MIDI connected musical instrument or device.

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

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

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

Multi-timbral mode setting
Receive multiple channel MIDI data from a MIDI-connected musical instrument or device. * Multi-timbral mode setting must be enabled.

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

Copyright notice

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| P8 | MIDI Implementation Chart

| ☑ | "MIDI" is a registered trademark of the Association of Musical Electronics Industry. |

▉ MIDI settings

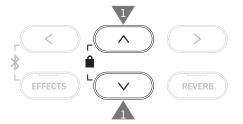| Function name	Explanation	Default setting
MIDI Channel	This setting allows the transmit/receive channel to be specified. The selected channel will function as both the transmit and receive channel. Separate transmit/receive channels cannot be specified.	1ch
Transmit Program Change Number	This function is used to transmit a program change number (ranging from 1 to 128) in order to change the sound of an external MIDI device.	1
Local Control	This setting determines whether the digital piano will play an internal sound when the keys are pressed. This setting is useful when using the digital piano to control an external MIDI device. When Local Control is set to "On", the digital piano will play an internal sound and transmit information to an external MIDI device. When Local Control is set to "Off", the digital piano will transmit information to an external MIDI device only.	On
Transmit Program Change Number ON/OFF	This setting determines whether or not the digital piano will transmit program change information when sounds are changed.	On
Multi-timbral mode	This setting determines whether or not the digital piano is able to receive MIDI information on more than one MIDI channel simultaneously. This allows the instrument to play back multitrack, multi-timbral performance data sent from an external MIDI device.	Off
Channel Mute	This setting is enabled only when Multi-timbral Mode is ON. This setting determines whether to receive information for each MIDI channel.	Play All

▉ Entering MIDI settings

1. On the Settings Menu screen, press the [UP]/[DOWN] button to select "MIDI Settings".
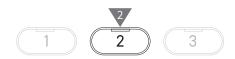
```
Setting Menus
3 Phones Settings
4 MIDI Settings
5 USB Menu
            2 ENTER 3 EXIT
```

2. Press the [2] button to enter the MIDI Settings screen.
3. Press the [UP]/[DOWN] button to select a setting.

```
MIDI Settings
6 Channel Mute
  MIDI Channel
1     5  (TRS/RCV)
2 Send PGM #
            3 BACK
```

4. Press the [LEFT]/[RIGHT] button to set the value or type.

• Pressing the [LEFT]/[RIGHT] buttons simultaneously will restore the default setting.

MIDI Channel

▉ Setting MIDI channel

With "MIDI Channel" selected, press the [LEFT]/[RIGHT] button to select the MIDI channel.

```
MIDI Settings
6 Channel Mute
  MIDI Channel
1     5  (TRS/RCV)
2 Send PGM #
            3 BACK
```

☑ • The MIDI Channel setting is effective until the power is turned off.
• The preferred MIDI Channel setting can be stored to the Startup Setting memory for automatic selection when the instrument is turned on. Please refer to Owner's Manual page 50 for more information.

Omni mode

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

• 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.)

Transmit Program Change Number

▉ Turning Transmit Program Number ON/OFF

With "Transmit PGM #" selected, press the [LEFT]/[RIGHT] button to turn the setting ON or OFF.

▉ Sending a Program Number

With "Send PGM #" selected, press the [LEFT]/[RIGHT] buttons to select the Program Number, then press the [2] button to send the selected number.

Program Numbers in the range of 1~128 can be sent.

> ☑ • The Transmit Program Number Change ON/OFF setting is effective until the power is turned off.
> • Exclusive information is not sent if the Transmit Program Change Number setting is OFF.
> • 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 be transmitted when Multi-timbral mode is set to On1 or On2.

Local Control

▉ Setting Local Control

With "Local Control" selected, press the [LEFT]/[RIGHT] button to turn the setting ON or OFF.

> ☑ • The Local Control setting is effective until the power is turned off.
> • The preferred Local Control setting can be stored to the Startup Setting memory for automatic selection when the instrument is turned on. Please refer to Owner's Manual page 50 for more information.

Multi-timbral Mode

■ Setting Multi-timbral Mode

With "Multi Timbre" selected, press the [LEFT]/[RIGHT] button to select "On1", "On2, or "Off".

```
MIDI Settings
4 Transmit PGM #
5 Multi Timbre
       On1
6 Channel Mute
            8 BACK
```

When "On1" or "Off" is set:

| P5 | The sound corresponding to the number on the left of "Program Change Number List" is selected.

When "On2" is set:

| P5 | The sound corresponding to the number on the right of "Program Change Number List" is selected.

• Whether to turn the sound ON or OFF can be set on each receive channel.

| P4 | Channel Mute

• All receive channels sound at full volume when Multi-timbral Mode is ON even in Split mode.

> ☑ The preferred Multi-timbral Mode setting can be stored to the Startup Setting memory for automatic selection when the instrument is turned on. Please refer to Owner's Manual page 50 for more information.

Channel Mute

■ Setting Channel Mute

With the desired channel selected, press the [LEFT]/[RIGHT] button to select "Play" or "Mute".

```
MIDI Settings
16 Ch 16Mute    i
1  Ch  1Mute
          Play
2  Ch  2Mute
            8 BACK
```

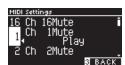> ☑ • The Channel Mute setting is effective until the power is turned off.
> • The preferred Channel Mute setting can be stored to the Startup Setting memory for automatic selection when the instrument is turned on. Please refer to Owner's Manual page 50 for more information.

Program Change Number List

Sound name	Multi-timbral mode = off/on1	Multi-timbral mode = on2		
	Program number	Program number	Bank MSB	Bank LSB
PIANO1				
SK-EX Concert Grand Piano | Concert	1	1	121	0
EX Concert Grand Piano | Concert	2	1	95	27
SK-5 Grand Piano | Classic	3	1	95	30
SK-EX Concert Grand Piano | Jazz	4	1	121	1
EX Concert Grand Piano | Standard	5	1	95	16
SK-EX Concert Grand Piano | Mellow	6	1	121	2
EX Concert Grand Piano | Mellow	7	1	95	29
PIANO2				
Upright Piano | Classic	8	1	95	25
EX Concert Grand Piano | Pop	9	1	95	28
SK-5 Grand Piano | Pop	10	1	95	31
Upright Piano | Boogie	11	1	95	26
EX Concert Grand Piano | Modern	12	2	121	0
Upright Piano | Honky Tonk	13	4	121	0
E.PIANO				
Tine Electric Piano	14	5	121	0
Reed Electric Piano	15	5	121	3
Modern Electric Piano	16	6	121	0
Tine Electric Piano 2	17	5	121	1
Modern Electric Piano 2	18	6	121	1
ORGAN				
Jazz Organ	19	18	121	0
Blues Organ	20	17	121	0
Ballad Organ	21	17	95	5
Gospel Organ	22	17	95	3
Church Organ	23	20	121	0
Diapason	24	20	95	7
Diapason Octave	25	20	95	6
Principal Octave	26	20	95	24
HARPSI & MALLETS				
Harpsichord	27	7	121	0
Clavi	28	8	121	0
Vibraphone	29	12	121	0
Marimba	30	13	121	0
Celesta	31	9	121	0
STRINGS				
Slow Strings	32	45	95	1
String Pad	33	49	95	8
Warm Strings	34	49	95	1
String Ensemble	35	49	121	0
VOCAL & PAD				
Choir	36	53	121	0
Choir 2	37	54	95	53
New Age Pad	38	89	121	0
Atmosphere	39	100	121	0
BASS & GUITAR				
Wood Bass	40	33	121	0
Electric Bass	41	34	121	0
Fretless Bass	42	36	121	0
Wood Bass & Ride	43	33	95	1
Ballad Guitar	44	26	95	6
Pick Nylon Guitar	45	25	95	3

Program Change Number List (Played only when receiving MIDI)

Sound name	Multi-timbral mode = off/on1	Multi-timbral mode = on2		
	Program number	Program number	Bank MSB	Bank LSB
Glockenspiel	-	10	121	0
Music Box	-	11	121	0
Xylophone	-	14	121	0
Tubular Bells	-	15	121	0
Church Bells	-	15	121	1
Rock Organ	-	19	121	0
Accordion	-	22	121	1
Harmonica	-	23	121	0
Nylon Acoustic Guitar	-	25	121	0
Modern Jazz Guitar	-	27	121	0
Muted Electric Guitar	-	29	121	0
Cutting Guitar	-	29	121	1
Overdrive Guitar	-	30	121	0
Finger Slap Bass	-	34	121	1
Synth Bass	-	39	121	0
Violin	-	41	121	0
Viola	-	42	121	0
Cello	-	43	121	0
Contrabass	-	44	121	0
Pizzicato	-	46	121	0
Harp	-	47	121	0
Orchestra Hit	-	56	121	0
Trumpet	-	57	121	0
Trombone	-	58	121	0
Tuba	-	59	121	0
Muted Trumpet	-	60	121	0
French Horns	-	61	121	0
Brass Section	-	62	121	0
Synth Brass	-	63	121	0
Soprano Sax	-	65	121	0
Alto Sax	-	66	121	0
Tenor Sax	-	67	121	0
Baritone Sax	-	68	121	0
Oboe	-	69	121	0
English Horn	-	70	121	0
Bassoon	-	71	121	0
Clarinet	-	72	121	0
Piccolo	-	73	121	0
Flute	-	74	121	0
Pan Flute	-	76	121	0
Square	-	81	121	0
Sine	-	81	121	2
Sawtooth	-	82	121	0
Warm Pad	-	90	121	0
Pop Set	-	1	120	0
Room Set	-	9	120	0
Analog Set	-	26	120	0
Dance Set	-	27	120	0
Ambience Set	-	33	120	0
Brush Set	-	41	120	0
Orchestra Set	-	49	120	0

☑ Can be selected only when Multi-timbral Mode is set to "On2".

MIDI Exclusive Data Format

1st 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	F0	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	26	Indicates that the piano is a CN301 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	-	Multi-timbre On 1
02	00	-	Multi-timbre On 2
0F	15 - 6C	-	Split Point : A0-C8
14	00 - 7F	-	Dual/Split balance
16	1F - 60	-	Tune, 40 : 440 Hz
17	00, 7F	-	00 : Program Change Off, 7F : Program Change On
19	00 - 03	-	Lower Octave Shift
20	00 - 7F	00 - 7F	Dual, data 2 : Main sound, data 3 : Layer sound
21	00 - 7F	00 - 7F	Split, data 2 : Upper sound, data 3 : Lower sound
25	00 - 09	00 - 0B	data2 : Temperament 00 : Equal, 01 : Pure Major, 02 : Pythagorean, 03 : Meantone, 04 : Werkmeister, 05 : Kirnberger, 07 : Pure Minor, 09 : User data3 : Key
26	00, 7F	00 - 0F	Multi-timbre, data 2 : 00 (Mute), 7F (Play), data 3 : Channel

MIDI Implementation Chart

Date : June 2022   Version : 1.0

Function		Transmit	Receive	Remarks
Basic channel	At power-up	1	1	
	Settable	1 - 16	1 - 16	
Mode	At power-up	Mode 3	Mode 1	Omni mode is on at power-up.
	Message	X	Mode 1, 3	Omni mode can be turned off through
	Alternative	*********	X	MIDI channel setting operations.
Note number		9 - 120*	0 - 127	* Including transpose
	Range	*********	0 - 127	
Velocity	Note on	O	O	
	Note off	O	O	
After touch	Key specific	X	X	
	Channel specific	X	O	
Pitch bend		X	O	
Control change	0,32	O	O	Bank Select *1
	1	X	O	Modulation
	5	X	O	Portament Time
	6,38	X	O	Data Entry
	7	O	O	Volume
	10	X	O	Panpot
	11	X	O	Expression Pedal
	64	O (Right pedal)	O	Sustain Pedal
	65	X	O	Portament
	66	O (Middle pedal)	O	Sostenuto Pedal
	67	O (Left pedal)	O	Soft Pedal
	71	X	O	Resonance
	72	X	O	Release Time
	73	X	O	Attack Time
	74	X	O	Brightness
	75	X	O	Decay Time
	76	X	O	Vibrato Speed
	77	X	O	Vibrato Depth
	78	X	O	Vibrato Delay
	91	X	O	Reverb Send Level
	93	X	O	Chorus Send Level
	100, 101	X	O	RPN LSB, MSB
Program change settable range		O (0 - 127)	O	
		*********		
Exclusive		O	O	Transmission can be selected
Common	Song position	X	X	
	Song selection	X	X	
	Tune	X	X	
Real time	Clock	X	X	
	Commands	X	X	
Other functions	Local On / Off	X	O	
	All notes Off	X	O	
	Active sensing	X	O	
	Reset	X	X	
Remarks				

Mode 1: omni mode On, Poly   Mode 2: omni mode On, Mono

Mode 3: omni mode Off, Poly   Mode 4: omni mode Off, Mono

O : Yes

X : No

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