



**Continental
KEYBOARD**

MIDI Setting Guide

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MIDI stands for **M**usical **I**nstrument **D**igital **I**nterface, and is a world-wide standard for exchanging various types of musical data between electronic musical instruments and computers.

When MIDI cables are used to connect two or more MIDI devices, performance data can be exchanged between the devices, even if they were made by different manufacturers. A USB cable can be used to connect the VOX Continental to a personal computer.

You can use the front panel knobs and controllers on the VOX Continental to transmit MIDI information, in order to control an external MIDI device.

Since the major parameters that affect the sound are assigned by MIDI control changes, you can control these parameters from an external MIDI sequencer while you play the tone generator.

Connecting the VOX Continental to a MIDI device or computer

Note: To exchange data, you will need to set the MIDI channels on the transmitting and receiving end to the same channel.

MIDI IN connector

The VOX Continental receives MIDI messages via the MIDI IN connector, from the MIDI OUT connector of an external device when connected.

MIDI OUT connector

The VOX Continental sends MIDI messages via the MIDI OUT connector, to the MIDI IN connector of an external device when connected.

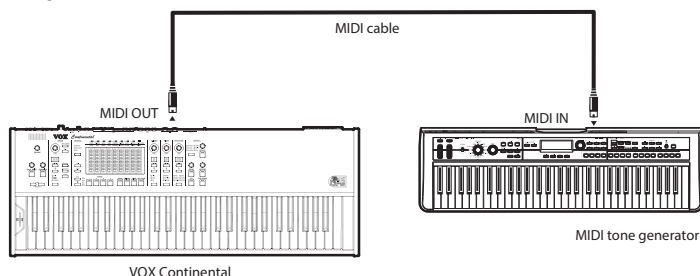
USB B port

Connect the USB A port of a Windows PC or Mac to this instrument's USB B port to transmit and receive MIDI data.

1. Using the VOX Continental as a controller

An external MIDI tone generator can be played and controlled from this instrument and its controllers.

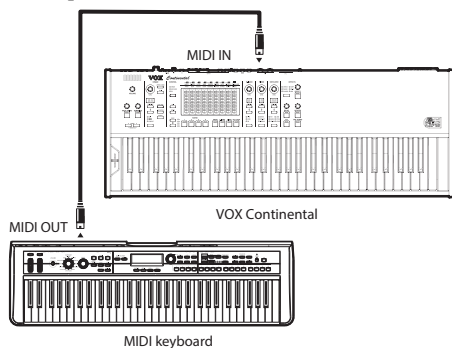
- ♦ Connect this instrument's MIDI OUT connector to your external MIDI tone generator's MIDI IN connector with a MIDI cable.



- ♦ Set this instrument's MIDI channel and the external MIDI tone generator MIDI channel to the same number.
- ♦ Turn the local control on when you want this instrument's sound to play simultaneously with the external MIDI tone generator, and off when you only want the external MIDI tone generator sounds to play.

2. Using an external MIDI keyboard as a LOWER part of an organ tone

The VOX Continental can be used as a dual keyboard organ by connecting an external MIDI keyboard. The external MIDI keyboard will be the LOWER (the lower part) and this instrument will be the UPPER (the upper part).



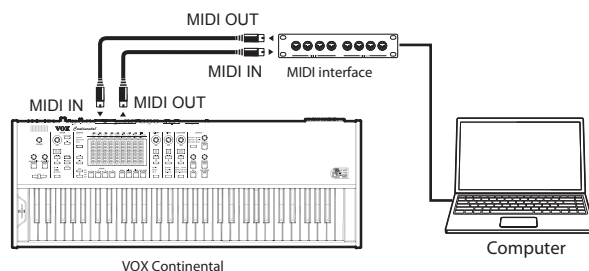
- ♦ Set this instrument's LOWER MIDI channel and the external MIDI keyboard MIDI channel to the same number.
- ♦ Switches the local control on.


3. Using a computer's DAW

You can use the VOX Continental to play recorded MIDI data that was made by controlling a DAW software synthesizer or other software, using this instrument and its controller.

When connected to a computer's DAW, typically the MIDI data transmitted from the MIDI channel set for this instrument is received by the DAW, which then echoes back to this instrument's sound generator. Turn the local control off in order to prevent both this instrument's performance and echoed-back MIDI data from sounding in duplicate.

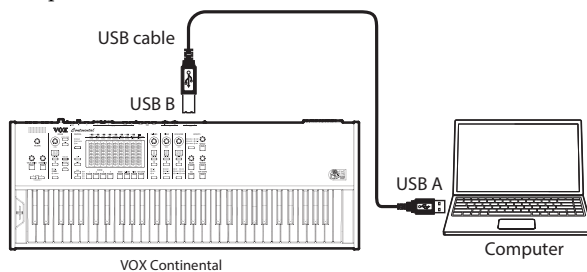
MIDI connection



- ♦ When making a MIDI connection between the VOX Continental and the computer, connect the MIDI OUT and MIDI IN connectors for both the instrument and computer using a MIDI interface.
 - ♦ Switches the local control "OFF."
-  Some MIDI interface devices may be unable to transmit or receive MIDI SysEx messages to or from this instrument.

USB connection

Since the VOX Continental supports USB-MIDI, you can connect it directly to a computer via USB cable.



- ♦ In order to make a USB connection, the VOX USB-MIDI Driver must be installed.
Download the VOX USB-MIDI Driver from the VOX website, and install it as described in the accompanying documentation.

www.voxamps.com

- ♦ Switches the local control off.

Note: This instrument is compatible with USB 2.0 devices.

MIDI settings

MIDI channel settings

Specifies the MIDI channels on which this instrument will transmit and receive (from 1–16).

(Default setting: 1)

- 1** Hold down the EXIT button and press the SCENE 2 button.
(The SCENE 2 button blinks.)
- 2** Specify the transmission MIDI channel using the ORGAN part VARIATION ▲,▼ buttons.
- 3** Push the SCENE 2 button to apply the settings.
 - ♦ Push the EXIT button to cancel the settings.

LOWER MIDI channel settings

Specifies the MIDI channels (1–16) when using an external MIDI keyboard as this instrument's organ LOWER (the lower part of the keyboard).

(Default setting: 2)

Refer to "2. Using an external MIDI keyboard as a LOWER part of an organ tone" (see page 3) for how to connect the external MIDI keyboard.

- 1** Hold down the EXIT button and press the SCENE 3 button.
(The SCENE 3 button blinks.)
- 2** Using the ORGAN part VARIATION ▲,▼ buttons, match this instrument's receiving MIDI channel to the LOWER MIDI keyboard's transmitting MIDI channel.

Note: The LOWER MIDI channel cannot be set to the same channel as the MIDI channel, shown in "MIDI channel settings" above.

- 3** Push the SCENE 3 button to apply the settings.
 - ♦ Push the EXIT button to cancel the settings.

Local control

This setting prevents notes from being sounded in duplicate when the VOX Continental is connected to a DAW and the performance data is echoed back from the sequencer. (Echo back occurs when the performance data transmitted by playing the VOX Continental is re-transmitted back to this instrument from the DAW.) In this case, switch to oF (local control off).

- 1** Hold down the EXIT button and press the DYNAMICS button.
(The DYNAMICS button blinks.)
- 2** Switch on or off using the ORGAN part VARIATION ▲, ▼ buttons.
oF: The VOX Continental and its controller will be internally disconnected from the tone generator.
This prevents echo back.
on: Select this setting when you are using this instrument by itself.
- 3** Push the DYNAMICS button to apply the settings.
 - Push the EXIT button to cancel the settings.

MIDI messages that the VOX Continental transmits and receives

In the text below, [...] indicates hexadecimal notation

MIDI channels

MIDI channels

MIDI uses sixteen channels, numbered 1–16.

MIDI messages can be exchanged when the transmitting and receiving devices are set to the same MIDI channel.

The MIDI channel will transmit and receive messages, excluding the ORGAN part CX-3 and VOX LOWER (lower part of the keyboard). This MIDI channel will be the base channel to transmit and receive MIDI data to/from this instrument.

Lower part MIDI channel

The LOWER MIDI channel is used to receive messages for the ORGAN part CX-3 and VOX LOWER (lower part of the keyboard).

MIDI messages

Various types of MIDI messages are sent and received to indicate the beginning or end of notes, and control of the sound. The following section explains the main types of MIDI message used by the VOX Continental.

Note-on/Note-off

A note-on message indicates the beginning of a note, and a note-off message indicates the end of a note.

The VOX Continental transmits a note-on when you press a key, and a note-off when you release the key. When the VOX Continental receives a note-on message, its internal sound generator will produce sound corresponding to the note number and velocity of that note-on. When it receives a note-off message, that sound will turn off.

Note-on [9n, kk, vv]

Note-off [8n, kk, vv]

(n: Channel; kk: Note Number; vv: Velocity)

Note: Although not many devices can transmit and receive note-off velocity data, the VOX Continental can.

Switching scenes

The scenes on this instrument (A1-A4, B1-B4, C1-C4 and D1-D4) can be switched using a program change message.

Program change [Cn, pp]

(n: Channel; pp: up to 16 sounds can be selected using program numbers)

The scenes on this keyboard (A1-A4, B1-B4, C1-C4 and D1-D4) correspond to program change messages [Cn, 00]–[Cn, 0F].

Program change messages will be transmitted over a MIDI channel.

Switching the scene on this instrument will transmit the program change message that corresponds to the scene number. When this instrument receives the program change message, the scene will switch to the corresponding scene number.

Controlling sounds

Bend lever

Operating the bend lever on the VOX Continental will control the sounds that you are playing, and transmit a pitch bend change message at the same time.

The effect applied will differ based on the sounds being used.

When multiple sounds are on, the order of priority is as follows.

Order of priority and sound effects

1. ORGAN: Rotary speaker slow/fast
2. E.PIANO: Tremolo on/off
3. PIANO: Disabled
4. KEY/LAYER: Pitch bend

Note: When the PIANO part and KEY/LAYER part are on, the bend lever will be disabled.

Pitch bend change [En, bb, mm]

(n: channel; bb: low position; mm: high position)

High position	Low position	Pitch bend value	Actual pitch (bend range value = +2)
127	127	8191	+2*
64	00	0	0
00	00	–8192	–2*

* The actual pitch may differ, depending on the sound settings.

When a pitch bend change message is received, operating this instrument's bend lever will bend the pitch.

Control changes

Use control change messages to control the volume and sound. This instrument transmits control change messages when the touch controller, foot controller or other controllers are operated. Also, when a control change message is received, various effects are applied according to the control change numbers to which they are allocated.

Control changes [Bn, cc, vv]

(n:channel, cc:control change no., vv:value)

Using control changes on the VOX Continental

There are 128 control changes:CC#0–CC#127. The effect or function of each control change number is defined by the MIDI specification.

Controlling the sound	CC#0–95 and CC#102–119
Editing a value or function	CC#96–101
Controlling or initializing the sound generator	CC#120–127

The VOX Continental provides for you to use control change messages (CC#0–95 and CC#102–119) to modify the sound.

Control change messages that can be used by the VOX Continental

Volume control

CC#11: Expression [Bn, 0B, vv]

When the expression pedal (included) connected to the CONTROL jack is operated, this message will be transmitted, changing the volume of the variation. In the default setting, wah is controlled when the wah effect is used. When this message is received while the pedal is connected, a similar effect to the one that is applied when operating the pedal will apply. If the pedal is not connected, this will control the volume.

Note: When using the wah effect, you can choose whether to control either the amount of wah or the volume.

This can be switched from the “wah pedal control” system setting.

Note: On the ORGAN part CX-3 type variation, this controls the volume before the rotary speaker input. This recreates the effect of an expression pedal used with drawbar organs. This controls the volume before the rotary speaker input on the VOX and COMPACT type variation as well.

CC#07: Volume [Bn, 07, vv] (Receive only)

Adjusts the volume of the variation. This controls the volume of the output line of each sound part.

Note: The variation volume settings are a combination of the LEVEL knob value of each sound part, the volume message value and the expression message value.

Note: Using a universal system exclusive master volume message allows you control the volume of all outputs, including the EFFECTS control output.

Panning (stereo position) control

CC#10: Pan [Bn, 0A, vv] (Receive only)

This controls the stereo position of the sound. This controls the panning on the output line for the ORGAN, E.PIANO, PIANO and KEY/LAYER parts.

When this message is received, the pan position will change in the range of “0” – “64” – “127”.

Controlling the pedal

CC#64 Damper pedal [Bn, 40, vv]

(Default: DAMPER jack)

When the damper pedal (DS-1H, sold separately) connected to the DAMPER jack is operated, this message will be transmitted, switching the damper effect ON/OFF.

When using the DS-1H, a half-damper effect is applied. When a damper message is received by another device, a similar effect to the one that is applied when operating the damper pedal on the VOX Continental will apply.

CC#82: Rotary Speed [Bn, 52, vv]

(Default: ROTOR SPEED jack)

When the pedal switch (Korg PS-1 or PS-3, sold separately) connected into the ROTOR SPEED jack is operated, this message will be transmitted, changing the speed of the rotary speaker simulation. When this message is received, a similar effect to the one that is applied when operating the pedal switch will apply.

Touch controller 1–9

CC#102: Touch controller 1 [Bn, 66, vv]

CC#103: Touch controller 2 [Bn, 67, vv]

CC#104: Touch controller 3 [Bn, 68, vv]

CC#105: Touch controller 4 [Bn, 69, vv]

CC#106: Touch controller 5 [Bn, 6A, vv]

CC#107: Touch controller 6 [Bn, 6B, vv]

CC#108: Touch controller 7 [Bn, 6C, vv]

CC#109: Touch controller 8 [Bn, 6D, vv]

CC#110: Touch controller 9 [Bn, 6E, vv]

When this instrument's touch sensors 1–9 are operated, this message will be transmitted, controlling the organ drawbars, KEY/LAYER sound and EQ.

Follow the CONTROL button settings to set the control parameters.

When this message is received, a similar effect to the one that is applied when operating this instrument's touch sensor will apply.

CONTROL button

CC#111: Control switch [Bn, 6F, vv]

Transmits the setting value when the CONTROL button on this instrument is pushed.

This sets what will be controlled by the touch sensors on this instrument.

3rd byte vv : Control

- 0 Organ
- 1 Key/Layer
- 2 EQ

UPPER/LOWER button

CC#112: UPPER/LOWER switch [Bn, 70, vv]

Transmits the setting value when the UPPER/LOWER button on the VOX Continental is pushed.

This sets what will be displayed and how the instrument operates when using the touch sensors to control the drawbars, or when a touch control message is received while using the drawbars.

3rd byte vv : Control

- 0 The drawbar displays and operates UPPER (the upper keyboard).
- 1 The drawbar displays and operates LOWER (the lower keyboard).

Controlling or initializing the sound generator

Special control messages are provided for initializing the sound generator. These messages are for reception only; they cannot be transmitted.

CC#123: All note off [Bn, 7B, vv]

CC#120: All sound off [Bn, 78, vv]

When the all note off message is received, all notes currently sounding on that channel will turn off.

Since the notes are turned off in the same way as when you release your hand from the keyboard, the decay portion of the notes will still be heard.

When the all sound off message is received, all sound being produced on that channel will turn off. Unlike the all note off message, this forcibly stops all sounds that are being produced, so the decay portion of the notes will not be heard.

These silencing messages are for use in emergencies. They are not for use during a performance.

CC#121: Reset all controllers [Bn, 79, vv]

When this message is received, the various changes made to effects will be reset according to the part control change messages that match that channel.

In addition to channel messages that store performance information, MIDI allows for messages to be transmitted and received between MIDI devices, including information, control commands and settings. These are called “system messages”.

Universal system exclusive (Non-real-time)

The VOX Continental uses the following five universal system exclusive messages.

3rd byte nn : Channel
 0 - F : Global Channel
 7F : Any Channel

When an inquiry message request is received, the VOX Continental will respond by transmitting an inquiry message that means “I am a Vox Continental, with system version ...”

3rd byte g	: Global Channel
6th byte 42	: KORG ID
7th byte 43	: Continental series LSB ID
8th byte 01	: Continental series MSB ID
9th byte mm	: Continental-61 member code mm = 05 Continental-73 member code mm = 0E
11th byte vv	: System Version 1st (1 -)
12th byte ww	: System Version 2nd (0 -)
13th byte xx	: System Version 3rd (0 -)

• **Master Volume** [F0, 7F, 0g, 04, 01, vv, mm, F7]

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• Master fine tuning [F0, 7F, nn, 04, 03, vv, mm, F7]

The values are:

8192 [mm, vv=40, 00] is center

4096 [mm, vv=20, 00] is -50 cents

12288 [mm, vv=60, 00] is +50 cents

When the message is received, the system setting and master tune are set.

3rd byte nn: Global Channel

0 - F : Global Channel

7F : Any Channel

• Master coarse tuning [F0, 7F, nn, 04, 04, vv, mm, F7]

Normally, only the high position of mm is be used.

The values are:

8192 [mm, vv=40, 00] is center

6656 [mm, vv=34, 00] is -12 semitones

9728 [mm, vv=4C, 00] is +12 semitones

When the message is received, transpose is set.

3rd byte nn: Global Channel

0 - F : Global Channel

7F : Any Channel

System real-time messages

Active sensing [FE]

This MIDI message is used to prevent trouble when playing, such as when the device sending a MIDI message while playing is switched OFF, when a MIDI cable is accidentally pulled out, or when there is a short. If the next message does not arrive within about 300msec or more of receiving an active sensing message, the device determines that some kind of trouble has occurred with the MIDI cable, and the sounds triggered by MIDI are stopped and the controller values are reset.

Timing clock [F8]

This message is transmitted and received in order to synchronize with other MIDI devices.

When an external MIDI timing clock message is received, this instrument will synchronize with that clock; and when a timing clock message is not received, this instrument will transmit a timing clock message based on its internal tempo.

How the VOX Continental handles control changes that are sent and received

The handling of control changes received by the VOX Continental, how the VOX Continental's controllers operate for control changes and the relationship between settings are shown below.

Note: A MIDI channel is used to send and receive control changes. When transmitting and receiving these parameters between two VOX Continentals, the variations of both the transmitting and receiving side must use the same settings.

CC#	Controls	Transmitting	Receiving	Function
0	Bank select (MSB)	-	-	-
1	Modulation wheel	-	-	-
2	Breath controller	-	-	-
3	-	-	-	-
4	Foot controller	-	-	-
5	Portamento time	-	-	-
6	Data entry (MSB)	-	-	-
7	Volume	-	O	Volume
8	Balance	-	-	-
9	-	-	-	-
10	Panpot	-	O	Pan
11	Expression	O	O	Volume / wah*
12	Effect control 1	-	-	-
13	Effect control 2	-	-	-
14..15	-	-	-	-
16	General purpose controller 1	-	-	-
17	General purpose controller 2	-	-	-
18	General purpose controller 3	-	-	-
19	General purpose controller 4	-	-	-
20...31	-	-	-	-
32	Bank select (LSB)	-	-	-
33...37	-	-	-	-
38	Data entry (LSB)	-	-	-
39...63	-	-	-	-
64	Damper	O	O	Damper
65	Portamento ON/OFF	-	-	-
66	Sostenuto ON/OFF	-	O	Sostenuto
67	Soft	-	O	Soft pedal
68...69	-	-	-	-
70...79	Sound controllers 1...10	-	-	-
80	Controller (CC#80)	-	-	-
81	Controller (CC#81)	-	-	-
82	Rotary speed	O	O	Rotary speaker SLOW/FAST
83...90	-	-	-	-
91	Effect depth 1	-	-	-
92...95	-	-	-	-

MIDI messages that the VOX Continental transmits and receives

CC#	Controls	Transmitting	Receiving	Function
96	Data increment	-	-	-
97	Data decrement	-	-	-
98	NRPN (LSB)	-	-	-
99	NRPN (MSB)	-	-	-
100	RPN (LSB)	-	-	-
101	RPN (MSB)	-	-	-
102	Touch controller 1	O	O	Drawbars, KEY/LAYER sound, EQ
103	Touch controller 2	O	O	Drawbars, KEY/LAYER sound, EQ
104	Touch controller 3	O	O	Drawbars, KEY/LAYER sound, EQ
105	Touch controller 4	O	O	Drawbars, KEY/LAYER sound, EQ
106	Touch controller 5	O	O	Drawbars, KEY/LAYER sound, EQ
107	Touch controller 6	O	O	Drawbars, KEY/LAYER sound, EQ
108	Touch controller 7	O	O	Drawbars, KEY/LAYER sound, EQ
109	Touch controller 8	O	O	Drawbars, KEY/LAYER sound, EQ
110	Touch controller 9	O	O	Drawbars, KEY/LAYER sound, EQ
111	CONTROL button	O	O	Select parameter when drawbar is operated
112	UPPER/LOWER button	O	O	Switch between UPPER/LOWER
113...119	-	-	-	-
120	All sound off	-	O	-
121	Reset all controllers	-	O	-
122	-	-	-	-
123	All notes off	-	O	-
124...127	-	-	-	-

* When “Wah pedal control” in “System Settings” is set to Auto, this controls the wah effect when used.

Appendices

Troubleshooting

If the VOX Continental does not function as you expect, check the following points.

MIDI transmit and receive is not working correctly with external devices.

- ☐ Are the MIDI cables connected correctly?
- ☐ If connecting via USB-MIDI, is the USB cable correctly plugged in to the USB B port?
- ☐ Is the VOX Continental set to transmit and receive MIDI data on the same channel as the external MIDI device?
- ☐ Are MIDI messages being transmitted and received that are compatible with the VOX Continental?

Cannot control the LOWER part of an organ with an external MIDI keyboard.

- ☐ Are the MIDI cables connected correctly?
- ☐ Did you match the external MIDI device's MIDI channel for transmitting the data, and the VOX Continental's LOWER MIDI channel?

The sound seems to be doubled.

- ☐ Make sure that the local control is switched off.

* All product names and company names are the trademarks or registered trademarks of their respective owners.

Model: VOX Continental**MIDI Implementation Chart**

Version: 1.00

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 1 – 16	1 1 – 16	Memorized
Mode	Memorized Messages Altered	3 × *****	3 ×	
Note Number:	True Voice	0 – 127 *****	0 – 127 0 – 127	Some sounds will not play across the entire note range
Velocity	Note On Note Off	○ 9n, V=1 – 127 ○ 8n, V=0 – 127	○ 9n, V=1 – 127 ○ 8n, V=0 – 127	
Aftertouch	Polyphonic (Key) Monophonic (Channel)	× ×	× ×	
Pitch Bend		○	○	
Control Change	7	×	○	Volume
	10	×	○	Panpot
	11	○	○	Expression (volume/wah)
	64	○	○	Damper
	66	×	○	Sostenuto
	67	×	○	Soft
	82	○	○	Rotary speed (SLOW/FAST)
	102 – 110	○	○	Touch controllers 1–9
	111	○	○	CONTROL button
	112	○	○	UPPER/LOWER button
	120	×	○	All Sound Off
	121	×	○	Reset All Controllers
	123	×	○	All Notes Off
Program Change	Variable Range	○ 0 – 15 *****	○ 0 – 15 0 – 15	Switches scenes
System Exclusive		○	○	*
System Common	Song Position Song Select Tune	× × ×	× × ×	
System Real Time	Clock Command	○ ×	○ ×	
Aux Messages	Local On/Off All Notes Off Active Sense Reset	× × ○ ×	× ○ ○ ×	
Notes	*: Supports device inquiry of universal system exclusive messages, master volume, master fine tuning and master coarse tuning.			

Mode 1: OMNI ON, POLY

Mode 2: OMNI ON, MONO

○ : Yes

Mode 3: OMNI OFF, POLY

Mode 4: OMNI OFF, MONO

× : No

Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.



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