KENTON

User instructions for Kenton MIDI retrofit for
KORG PS-3100 / PS-3200 / PS-3300

These instructions are only for Korg PS3x MIDI retrofit kits produced after 21st December 2006
Firmware PS3x5100 or later.

N.B. Different instructions apply to earlier Kenton PS3x MIDI retrofit kits.

USING THE MIDI INTERFACE

When you turn on the synthesizer for the first time after installation, you will be in omni-off mode channel 1 for MIDI receive. See the following pages for other factory default settings. When you select a receive channel, this will be stored in memory and will be remembered for when you subsequently turn on the synth - all parameters listed on the next page are stored.

If you want to put the machine back to the factory default settings at any time, switch the synth on whilst holding the red push button pressed - hold for a couple of seconds then release.

MIDI Note messages received, will be played by the synth as if played on its own keyboard, notes are internally hard-wired. Other MIDI commands such as pitchbend and modulation are routed to jack sockets mounted in a box on the back of the synth. These can be patched as required to the various inputs on the front of the synth. You need 3.5mm to 3.5mm mono jack cables for this purpose.

RED PUSH BUTTON

Two modes are available by pushing the red push button during normal playing mode. Before you press the red button however, make sure that no keys are pressed on the remote MIDI keyboard otherwise the results may be unpredictable. The key presses detailed below should be entered on a remote MIDI keyboard connected directly to the MIDI IN socket of the Korg PS3x (not via a computer or patch bay).

1) SET-UP MODE
For setting MIDI channels and assignments. Give the red push button two short presses (half a second each) - then release. Follow this with a key or sequence of keys as detailed on page 2. After making a MIDI channel assignment, you will be automatically returned to playing mode but after making other assignments you will need to press the ENTER key (Top C) to return to playing mode. This is to enable you to make the multiple key presses required when re-assigning Sources to Destinations. (N.B. all set-ups are stored in non volatile memory).

2) TRANSPOSE MODE Press and hold the red push button for about four seconds - then release. Middle C will sound on the synth and continue to sound until you press a key. The key that you press on the remote keyboard will be the new middle C for MIDI IN. You can set any value up to two octaves up or down - settings outside this range will be ignored (where middle C = no transposition) . Note that transpose mode cannot be entered from set-up mode. (N.B. the transposition will be stored in non volatile memory).

The bottom four octaves on a 61 note remote keyboard are used to set "transpose" - with middle C being the transpose OFF point.

Function of keys during set-up mode:

Note	Function	Value	Notes
C	Receive channel	1 (default)	[Bottom C - MIDI note #36]
Db	" "	2	
D	" "	3	
Eb	" "	4	
E	" "	5	
F	" "	6	
Gb	" "	7	
G	" "	8	Selecting a receive channel
Ab	" "	9	will automatically put the
A	" "	10	MIDI into omni off mode.
Bb	" "	11	That is, it will receive on
B	" "	12	the selected channel only.
C	" "	13	
Db	" "	14	
D	" "	15	
Eb	" "	16	
E	Receive notes OFF		
F	Not used		
Gb	" "		
G	" "		
Ab	" "		
A	" "		
Bb	" "		
B	" "		
C	" "		[Middle C - MIDI note #60]
Db	" "		
D	" "		
Eb	" "		
E	" "		
F	" "		
Gb	" "		
G	" "		
Ab	" "		
A	" "		
Bb	" "		
B	" "		
C	" "		
Db	" "		
D	" "		
Eb	program change	**ON** (default) (PS-3200 only)	
E	" "	**OFF**	
F	Not used		
Gb	" "		
G	" "		
Ab	" "		
A	Controller Source Select	Pitch-Bend Wheel	
Bb	Controller Source Select	Mod Wheel (cc#1)	
B	Controller Source Select	Aftertouch	
C	Controller Source Select	Velocity	
Db	Controller Source Select	Controller X (assignable – default cc#16)	
D	Controller Source Select	Controller Y (assignable – default cc#17)	
Eb	Controller Source Select	MIDI Volume (cc#7)	
E	Destination **ON**	Pitch-Bend	
F	Destination **ON**	Modulation	
Gb	Destination **ON**	VCF (Filter)	
G	Destination **ON**	Resonance	
Ab	Destination **ON**	VCA (Volume)	
A	Destination **ON**	not used	
Bb	Destinations **OFF**	all destinations OFF for the currently selected controller source	
B	Reset all Sources to their default Destinations (see next page for defaults)		
C	**ENTER** key	Press & release to store & return to play mode [Top C - MIDI note #96]	

ASSIGNING MIDI CONTROL SOURCES TO DESTINATIONS

SOURCE	*DEFAULT DESTINATION (back panel box)*
Pitch-bend wheel	Pitch-bend output jack
Modulation wheel (cc#1)	Modulation output jack
Aftertouch	Aftertouch output jack
Velocity	----
Controller X (def cc#16)	Filter output jack
Controller Y (def cc#17)	Aux output jack
MIDI Volume (cc#7)	Volume output jack

1) To assign sources to destinations,
    a) press the red push button twice to enter set-up mode
    b) select a source by using one of the keys A to Eb (see table on previous page)
    c) [optionally if the source is Controller X or Y, you can assign a controller to it now – see below]
    d) select destinations OFF to de-select previous assignments for this source
    e) select destinations ON to make new assignments for this source
    f) either hit Top C to enter/exit, or select a new source and make assignments for that [go back to b]

2) Controllers X & Y can be assigned to any continuous controller (cc). By default controller X is assigned to cc#16, and controller Y is assigned to cc#17. To re-assign either of them, first press the red push button twice to enter SET-UP mode. Next press the Db or D key (see table on previous page) to select the X or Y controller source, then send a MIDI message of the required continuous controller. Then either press top C to enter / exit, or use some of the destination keys to assign what this controller will control.
 – For example to set controller Y to respond to cc#4, press the red button twice, press D, send a cc#4 message to the Korg PS3x from another synth or MIDI controller, then press top C to enter /exit. [or select another function]

3) Sources can have multiple destinations, so for example controller X could be assigned to control both filter and volume at the same time, should you want it to.

4) Where pitch-bend wheel is the source, only the bend wheel UP will affect destinations other than pitch-bend. Also where pitch-bend is the destination, sources other than pitch-bend wheel will only bend the pitch UP.

5) Receive channel setting will return you directly to playing mode, all other keys will let you stay in SET-UP mode until you press the ENTER key (Top C).

6) The ENTER key (Top C) also performs a "reset all controllers" function - OFF in most cases, but ON for volume, and centre for pitch bender.

7) If you want to put the MIDI back to the default settings at any time, switch the synth on whilst holding the red push button pressed - hold for a couple of seconds then release.

8) During set-up mode, the retrofit will receive on ALL MIDI channels.

9) List of continuous controllers (cc) recognised - (numbers in decimal)

    01 modulation wheel
    07 Main volume
    64 sustain pedal

121 reset all controllers	123 all notes off
124 omni mode off (always poly)	125 omni mode on (always poly)
126 (mono mode) = all notes off	127 (poly mode) = all notes off

    nnn Controller X (user defined where nnn = any controller) (default = cc#16)
    nnn Controller Y (user defined where nnn = any controller) (default = cc#17)

10) List of other commands recognised - (numbers in hexadecimal)

8nH notes off	9nH notes on & velocity
BnH continuous controller (see above)	CnH program change
DnH channel pressure (aftertouch)	EnH pitch-bend change
FEH active sensing	

11) Program change – you can enable or disable response to incoming program change messages by using the Eb and E keys (see list on page 2)

GENERAL INFORMATION ABOUT MIDI CONNECTIONS

Any MIDI IN should be connected to a MIDI OUT or a MIDI THRU similarly any MIDI OUT should be connected only to a MIDI IN and any MIDI THRU should also only be connected to a MIDI IN.

MIDI OUT is the signal from the synthesizer (or drum machine etc.) that is to be sent to another instrument. MIDI IN is a received signal that contains MIDI information from another synth, and MIDI THRU is an exact copy of information arriving at the MIDI IN socket. This allows several instruments to be connected together.

If you want to wire your own MIDI cables the following information may be useful.
1) Although a 5 pin connector is used, only two connections plus an
earth connection are required.
2) If you look at the din plug from the wiring side you will see that the pins are numbered. From left to right (or clockwise) these are 1 - 4 - 2 - 5 - 3.
3) The pins numbered 1 & 3 are not used.
4) The screen (earth) is connected to pin 2 (centre pin)
5) Pin 4 of one plug should be connected to pin 4 of the other
6) Pin 5 of one plug should be connected to pin 5 of the other
7) You should now have a working MIDI lead
8) It is preferable to label one end of the cable MIDI IN & the other end MIDI OUT, to avoid confusion.

WARRANTY

All Kenton MIDI Kits come with a 12 month (from purchase date) back to base warranty, (i.e. customer must arrange and pay for carriage to and from Kenton Electronics).

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