

KENTON electronics

INSTRUCTIONS FOR MIDI INTERFACE JUPITER 6

USING THE MIDI INTERFACE

The Kenton MIDI add-on for the Jupiter 6 provides for MIDI control of the following functions :- Pitchbend, Modulation wheel, Filter cut-off, Volume, Sustain and Arpeggio sync, (receive only).

The above sets the MIDI channels for the notes and program changes ONLY, the features that the Kenton add-on gives you have a different procedure for setting the MIDI channel.

When you turn on the synthesiser for the first time, you will be in omni-on mode for receive (all channels). See page 4 for factory default settings. When you select a receive channel this will be stored in a memory on the Kenton circuit board and will be recalled when you next turn the synth on. All parameters listed on page 4 are stored.

When you set a MIDI channel (using set-up mode detailed below) the synth will receive on that channel only if it is in WHOLE mode. If it is in SPLIT mode, it will receive on two channels, the channel set, and the one above it (if you have set channel 16, the next channel will be 1). The Jupiter 6 will always transmit on channel 1 (or channels 1 and 2 if in split mode).

If you want to put the add-on features back to their 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.

RED PUSH BUTTON

There are 2 modes available from the push-button.

1) SET-UP MODE - Setting MIDI channels and assignments. Give the red push button two short presses (half a second each) - then release. Follow this with a note or sequence of notes ON THE REMOTE SYNTH as detailed on the page 4. The keyboard of the Jupiter 6 itself is not used for setting the MIDI add-on. After selecting a channel you will be automatically returned to playing mode but after making 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. set-ups are stored in non volatile memory).

2) ARPEGGIO DIVIDE RATE MODE

Press and hold the red push button for four seconds - then release. You will know this has happened because the synth will play a 3 note chord. The MIDI add-on will wait for you to send it a MIDI note in the range 36-96. The bottom four octaves are unused and will just exit this mode, but the top few notes (on the remote 61 note keyboard will set the arpeggio divide.

TOP C [96]	= ENTER (Return to normal playing
B [95]	= Clock normal - no divide (full speed)
Bb [94]	= Clock divided by 2 (half speed)
A [93]	= Clock divided by 4 (quarter speed)
Ab [92]	= Clock divided by 8 (eighth speed)
G [91]	= Set triplet on (can be used with any of above)

You will need to press TOP C (Enter) after any selection. If you want to use Triplet, you will need to set this after the divide ratio, pressing any of the divide ratios cancels Triplet.

ASSIGNING MIDI CONTROL SOURCES TO DESTINATIONS

SOURCES	DESTINATIONS	(d)=factory default
AFTERTOUCH	off / modulation (d)/ p.bend / vcf / not used	
CONTROLLER X	off / vcf (d)/ not used	
CONTROLLER Y	off / vcf / not used (d)	
VELOCITY	off (d) / vcf / vca	
MIDI VOLUME	off / vca (d)	

Sources can control more than one destination at once, but a destination can only be controlled by one source at a time. Thus if velocity is currently controlling VCF and then you switch aftertouch to VCF, velocity will then control nothing until re-assigned.

NOTES

1) Controller X can be any MIDI controller. After pressing the red push button twice to enter SET-UP mode, operate the required MIDI controller before pressing the C or Db key that will assign it to VCF or resonance. If you do not operate a controller before pressing the C or Db key, then controller X will respond to MIDI controller 16 - that is General purpose controller 1 (10 hexadecimal).

2) Controller Y can be any MIDI controller. After pressing the red push button twice to enter SET-UP mode, operate the required MIDI controller before pressing the A or Bb key that will assign it to VCF or resonance. If you do not operate a controller before pressing the A or Bb key, then controller Y will respond to MIDI controller 17 - that is General purpose controller 2 (11 hexadecimal)

3) Controller X/Y will take priority over other control messages, so if controller X/Y is the mod wheel, mod wheel messages will operate whatever controller X/Y is currently assigned to, instead of operating modulation.

4) In SET-UP mode, Receive channel and omni-on 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)

5) The ENTER key (Top C) also resets all controllers to their default values - off in most cases - on for volume - centre for pitch bender.

6) After pressing the red push button twice to enter set-up mode, the first assignment that you make for any given source (aftertouch for example) will cancel all other destinations currently assigned to that source - if you want to make multiple assignments, you will have to do this in the same set-up session, in other words, before you press top C. - For example - irrespective of what aftertouch was previously assigned to, pressing F (and release) will assign it to VCF only - to make aftertouch also bend pitch, you will have to press E (and release) before pressing the top C which will ENTER the information and store it in n.v. memory. OTHER SET-UPS WILL REMAIN UNALTERED UNLESS SPECIFICALLY CHANGED

7) Control change commands recognised - (numbers in decimal)

121 reset all controllers	01 modulation wheel
124 omni mode off (always Poly)	07 Main volume
125 omni mode on (always Poly)	94 select arpeggio div mode
	95 select set-up mode
nnn Controller X (user defined where nnn = any controller)	
nnn Controller Y (user defined where nnn = any controller)	
Controller X default = 16	Controller Y default = 17

8) Other commands recognised - (numbers in hexadecimal)

8nH	9nH velocity
BnH control change (see above)	CnH (program change) see below
DnH channel pressure (aftertouch)	EnH pitch-bend change

9) When the JUPITER 6 receives MIDI program changes, any value that MIDI had sent to the vcf will be reset to zero, so that you hear your patches as they were programmed, MIDI volume remains unaltered

10) When using SET-UP mode or ARPEGGIO DIVIDE RATE mode, it is recommended that you connect the Jupiter 6 DIRECTLY to the MIDI keyboard that you will use for setting-up. Patch bays and computers can cause problems when setting up. They do not usually cause problems during normal use - however see next note.

11) When using the Arpeggio clock in conjunction with MIDI please note the following. The Kenton add-on cannot sync the arpeggio if it isn't actually receiving the MIDI clock - this is not as silly as it sounds. There are a few points to watch for:-

- a) Some MIDI mergers and patch bays actually remove MIDI clock information from the MIDI data stream.
- b) Users of CUBASE note that the default for MIDI clock is for it NOT to be sent, you will have to go into MIDI edit and switch it on.
- c) Users of UNITOR/EXPORT on an Atari note that the MIDI clock will only come out of port A (that is the Atari's own MIDI port) unless you can re-assign it

C	Receive channel	1 [Bottom C on DX 7] MIDI note number 36
Db	" "	2
D	" "	3
Eb	" "	4
E	" "	5
F	" "	6
Gb	" "	7
G	" "	8
Ab	" "	9
A	" "	10
Bb	" "	11
B	" "	12
C	" "	13
Db	" "	14
D	" "	15
Eb	" "	16
E	Omni-on mode	(default)
F	Not Used - - -	
Gb	" "	
G	" "	
Ab	" "	
A	" "	
Bb	" "	
B	" "	
C	" "	
Db	" "	
D	" "	
Eb	" "	
E	" "	
F	" "	
Gb	" "	
G	" "	
Ab	" "	
A	" "	
Bb	" "	
B	" "	
C	" "	
Db	" "	
D	" "	
Eb	program change	OFF
E	" "	ON (default)
F	p.bend & mod wheel	OFF
Gb	p.bend	ON (default)
G	mod wheel	ON (default)
Ab	controller Y	ignored (see page 3 re controller Y)
A	"	vcf
Bb	"	not used (default)
B	controller X	ignored (see page 3 re controller X)
C	"	vcf (default)
Db	"	not used
D	aftertouch	ignored
Eb	"	modulation (default)
E	"	p.bend (up only)
F	"	vcf
Gb	"	not used
G	velocity	ignored (default)
Ab	"	vcf
A	"	vca
Bb	MIDI volume	ignored
B	"	vca (default)
C	ENTER key	Press and release. [Top C] MIDI note no. 96

MIDI CONTROL OF RED PUSH BUTTON

The red push button can be "pressed" via MIDI as MIDI switch number 95 (5Fh) for regular program mode or 94 (5Eh) for transpose mode. The selection of the push button is enough, it doesn't matter if it is being turned on or off.

In hexadecimal BX - 5F - 00 = program mode
In hexadecimal BX - 5E - 00 = transpose mode

Where X is the current MIDI channel.

[N.B. whilst in program/transpose modes the MIDI is in omni on mode]

MIDI CONNECTORS

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

MIDI OUT is the signal from the synthesiser (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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