

## **INSTRUCTIONS FOR MIDI INTERFACE**

### **ROLAND TB-303 BASSLINE**

Place the Bassline on top of the MIDI unit & plug the D - connector into the TB303, set both toggle switches on the back of the Bassline to the down position, set the MIDI switch & power switch on the MIDI unit to the down position also, and you are ready to go.

#### **USING THE MIDI INTERFACE - - -**

When you turn on the MIDI unit for the first time, you will be in omni-on mode for receive (all channels). When you select a receive channel or other set-up, this will be stored in non volatile memory to be recalled when you next turn on the synth - all settings 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 unit on whilst holding the red push button pressed - hold for a couple of seconds then release. See next page for factory default settings.

#### **RED PUSH BUTTON**

Two modes are available by pushing the red push button. The keyboard notes required for set-up & transpose modes should be sent via MIDI from an external keyboard. (DX7/D50 etc. etc.)

1) SET-UP MODE - Setting MIDI channels and assignments. Give the red push button a short press (half a second) - then release. Follow this with a note or sequence of notes (on the remote keyboard) as detailed on page 2. After selecting a channel or other assignment you will need to press the ENTER key (Top C) to return to playing mode. (N.B. set-ups are stored in non volatile memory).

#### **2) TRANSPOSE MODE -**

Press and hold the red push button for four seconds - then release. Middle C will sound on the synth and continue to sound until you press a key (on the remote keyboard). The note that you press will become 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. Note that transpose mode cannot be entered from set-up mode.

MIDI SWITCH (on when switch is down)  
Connects filter/accent/slide/gate signals to the TB303

FILTER SWITCH (on when switch is down)  
Filter can be controlled by velocity, any controller, or aftertouch by selecting whilst in SET-UP mode. (see above & next page)

ACCENT SWITCH (on when switch is down)  
Accent is controllable only by velocity - a velocity of 80 and above will cause the note to be accented.

PITCH BEND RANGE  
Received pitch bend can be adjusted from zero to one octave using this control.

C	Receive channel 1 [Bottom C on DX-7] Midi note 36 (24h)	
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	Omni-on mode (default)	
F	Not used --	
Gb	Not used --	
G	Not used --	
Ab	Not used --	
A	Not used --	
Bb	Not used --	
B	Not used --	
C	Not used -- [Middle C] MIDI note 60 (3Ch)	
Db	Not used --	
D	Not used --	
Eb	Not used --	
E	Not used --	
F	Not used --	
Gb	Not used --	
G	Not used --	
Ab	Not used --	
A	Not used --	
Bb	Not used --	
B	Not used --	
C	Lowest note takes precedence	
Db	Newest note takes precedence (default)	
D	Highest note takes precedence	
Eb	Not used --	
E	Not used --	
F	p.bend wheel off	
Gb	p.bend ON (default)	
G	Not used --	
Ab	Not used --	
A	Not used --	
Bb	Not used --	
B	controller X - ignored (default) (see page 3 re controller X)	
C	" - VCF	
Db	" - ***	
D	aftertouch - ignored	
Eb	" - Not used (default)	
E	" - p.bend (up only)	
F	" - vcf	
Gb	" - ***	
G	velocity - ignored	
Ab	" - vcf (default)	
A	" - ***	
Bb	Not used --	
B	Not used --	
C	ENTER key - Press and release. [ Top C ] MIDI note no. 96	

## NOTES

- 1) Controller X can be any MIDI controller.  
After pressing the red push button to enter SET-UP mode, operate the required MIDI controller before pressing the Bb key that will assign it. If you do not operate a controller before pressing the Bb key, then controller X will default to MIDI controller 4 - (foot controller)
- 2) Controller X will take priority over other control messages, so if controller X is the mod wheel, mod wheel messages will operate the filter.
- 3) Control change commands recognised - (numbers in decimal)  
123 all notes off  
124 omni mode off (always poly) 64 sustain pedal  
125 omni mode on (always poly) 65 portamento (slide)  
126 (mono mode) = all notes off 94 select transpose mode  
127 (poly mode) = all notes off 95 select set-up mode  
nnn Controller X (user defined where nnn = any controller)
- 4) Other commands recognised - (numbers in hexadecimal)  
8nH notes off 9nH notes on & velocity  
BnH control change (see above)  
DnH channel pressure (aftertouch) EnH pitch-bend change  
FEH active sensing
- 5) The left switch added to the TB303 - when this switch is down, the TB303 will draw its power from the MIDI unit.  
The right switch added to the TB303 - when this switch is down, the TB303 will play the incoming MIDI note. (CV switch)
- 6) The MIDI switch on the MIDI unit - when down the TB303 can be controlled by MIDI - when up the TB303 is disconnected from the MIDI unit except for CV and power (switches on TB303)  
Thus if the MIDI switch is off & so are the switches on the TB303, then the TB303 is completely detached (electrically) from the MIDI unit.
- 7) If you want to run the TB303 from MIDI sync, you will need to connect a 5 pin din lead from the sync socket of the MIDI unit to the sync socket on the TB303. The din socket provides normal din sync. N.B. A MIDI lead is not suitable for this purpose.
- 8) The slide facility is turned on & off by MIDI controller 65, (portamento control)

## MIDI CONTROL OF RED PUSH BUTTON

The red push button can be "pressed" via MIDI as MIDI switch number 95 (5Fh) for SET-UP 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 = SET-UP mode

In hexadecimal BX - 5E - 00 = TRANSPOSE mode

Where X is the current MIDI channel. ( n.b. for MIDI channel 1 - X=0 )

[n.b. whilst in set-up/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.

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