

KENTON

electronics

INSTRUCTIONS FOR MIDI INTERFACE ROLAND TR-808 DRUM MACHINE

USING THE MIDI INTERFACE

Your TR-808 drum is now equipped to send and receive MIDI information. When turned on the machine will function normally, sending out and receiving MIDI note & velocity information on the channels set in memory. The factory channel settings are: receive chan 10 omni off transmit chan 10 and Stop/start TX/RX enabled Clock information is always sent and Start/stop information is sent and received if enabled. (Not channel sensitive)

YOU CAN RETURN TO THE FACTORY MIDI SETTINGS BY SWITCHING THE MACHINE ON WHILST HOLDING THE RED BUTTON PRESSED (hold for a couple of seconds)

With the rear panel switch set to normal (up) the TR-808 drum will run from its own internal clock and will send out MIDI timing information at a rate determined by the tempo control. With the rear panel switch in the down position however, it will run from MIDI sync at the rate set by the MIDI device connected. If no MIDI timing information is present then the TR-808 drum will not run.

Some drum machines/sequencers may not send start/stop codes, in this case pressing the start switch on the TR-808, will make it wait until MIDI clock/sync is present.

You can make the TR-808 ignore start/stop codes by selecting it from the programming mode described in the next paragraph, when set to disable the TR-808 will neither respond to, nor send start/stop codes - when enabled (the default condition) start/stop codes will be both sent and received.

RED PUSH BUTTON

Two modes are available by pushing the red push button. Before you do press the red button however, make sure the TR-808 drum is not playing, otherwise the results may be unpredictable.

1) SET-UP MODE - Setting MIDI channels and assignments (start-stop etc)

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 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. (N.B. set-ups are stored in non volatile memory).

2) MAPPING MODE - assigning MIDI notes to sounds

Press the red button hold for about six seconds - then release. Follow this (on the remote keyboard) with a program change number, then any MIDI note. The drum sound specified by that program change number will be mapped to the key you pressed. You may keep assigning drum sounds to keys in the same fashion (program then key). When you have assigned all the sounds that you want to, press any invalid program change number (12 and above), you will then be automatically returned to normal play mode. On page 3 is a list of which program numbers correspond to what drum sounds.

N.B. The red button can be "pressed via MIDI - see last page.

C	Receive channel	1	[Bottom C] MIDI note number 36
Db	" "	2	
D	" "	3	
Eb	" "	4	
E	" "	5	
F	" "	6	
Gb	" "	7	
G	" "	8	Selecting a receive channel will automatically put the MIDI into omni off mode. That is, it will receive on the selected channel only.
Ab	" "	9	
A	" "	10	
Bb	" "	11	
B	" "	12	
C	" "	13	
Db	" "	14	
Eb	" "	15	
E	Omni on mode		
F	Transmit channel	1	
Gb	" "	2	The transmit channel can be changed independently of the of the receive channel, and can be set even during omni on mode.
G	" "	3	
Ab	" "	4	
A	" "	5	
Bb	" "	6	
B	" "	7	
C	" "	8	[Middle C] MIDI note number 60
Db	" "	9	default
D	" "	10	
Eb	" "	11	
E	" "	12	
F	" "	13	
Gb	" "	14	
G	" "	15	
Ab	" "	16	
A	Not Used - - -		
Bb	" "		
B	" "		
C	" "		
Db	" "		
D	" "		
Eb	" "		
E	" "		
F	" "		
Gb	" "		
G	" "		
Ab	" "		
A	" "		
Bb	" "		
B	" "		
C	" "		
Db	" "		
D	Continue message ignored		
Eb	Continue treated as Start	not true continue (default)	
E	Disable start and stop through MIDI (both In and Out)		
F	Enable start and stop through MIDI (default)		
Gb	Set mode 1	velocity sensitive receive mode (default)	
G	Set mode 0	two level receive (normal/accnt)	
Ab	" "		
A	" "		
Bb	" "		
B	" "		
C	ENTER key	Press and release. [Top C] MIDI note no. 96	

Program >>	1 - Bass Drum	7 - hand ClAP/MARacas
	2 - Snare Drum	8 - Cow Bell
	3 - Low Tom/Low Conga	9 - CYmbal
	4 - Mid Tom/Mid Conga	10 - Open Hihat
	5 - Hi Tom/Hi Conga	11 - Closed Hihat
	6 - Rim Shot/Claves	

1) Above is a list of how program numbers are used in MAPPING MODE. No matter how the sounds are assigned, these program numbers always belong to the same sound.

2) Any program number above 11 will terminate Mapping mode and return you to normal play mode.

3) If you assign more than one sound to the same MIDI note, only the most recent one will sound - the original sound on that note will then be "unassigned" until it has been given a new assignment.

4) Assignments are stored in non volatile memory.

5) The TR-808 will always transmit the assigned drum notes as follows:- Normal notes - velocity 64 (40 hex).
Accented notes - velocity 127 (7F hex).

6) Receive Mode 1 - (factory default setting). The TR-808 will play the assigned note at the incoming velocity.

7) Receive Mode 0 - The TR-808 will play the assigned note in two ways only received velocity 1 to 79 (1 to 4F hex)
- will play normal volume received velocity 80 to 127 (50 to 7F hex) will play accented sound which is adjustable by the Accent control on the TR-808 This mode is provided so that patterns/songs sent from the TR-808 to a separate sequencer and stored, can be played back exactly as if they were in the TR-808.

8) Modes 0/1 can be changed from within a song/sequence by sending a "General purpose controller 1" message.
In hexadecimal 0Bx - 10 - nn

Where B is Controller status (0B0 hex)

Where x is the current MIDI receive channel (0 to F hex)

Where 10 is controller number 16 (10 hex) [general purpose controller 1]

Where nn is more than 64 (40 hex) for mode 1 - (velocity mode)

Where nn is less than 64 (40 hex) for mode 0 - (accent mode)

9) "MIDI CONTINUE" is enabled as a factory default but it can be disabled (see table on previous page) - when enabled "CONTINUE" is treated as a "START" command.

10) When the TR-808 is receiving clock via MIDI (rear panel switch down) the rear panel din sync socket will also carry the decoded MIDI clock and stop start control signals - enabling another TR-808 or TB303 to run in sync with the incoming MIDI.

11) For the TR-808 to run correctly from MIDI sync, you will need to use PRE-SCALE setting number 3 (quarter notes).

TO SET PRE-SCALE - set pre-scale switch to 3 - set to pattern write 1st part - select pattern you want to change - press start button - press clear/pre-scale button until change is heard - press stop - reset to pattern play - done.

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 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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