



## INSTRUCTIONS FOR MIDI INTERFACE ROLAND TR-808 DRUM MACHINE

Your TR-808 drum machine is now equipped to send and receive MIDI information. When turned on the will function normally but will also send and receive MIDI note & velocity information on the channels set in memory. It will also send and receive MIDI clock information.

The factory default settings are:

Receive channel 10 omni off

Transmit channel 10

Stop/start receive enabled

MIDI receive in velocity mode

You can return to the factory default settings at any time by turning the TR-808 on while holding the red push button pressed. Hold for a couple of seconds – then release.

If the TR-808 is already playing from its internal clock, then all MIDI clock commands are ignored. If the TR-808 is stopped, then when a MIDI Start command\*\* is received, the TR-808 will take its timing information from the MIDI clock source. If the start button on the TR-808 is then pressed, it will be ignored until a MIDI stop command has been received. \*\* (or SPP = zero + continue – see below)

Many sequencers do not send a MIDI start command and instead send a Song Position Pointer zero followed by Continue message. This is recognised by the TR-808 as a MIDI start. Continue messages received at any other time will be ignored. If however you want Continue messages to be always treated as Start, this can be selected.

You can make the TR-808 ignore start/stop/continue/clock commands by selecting it from the programming mode described in the next paragraph, when set to disable the TR-808 will not respond to start, stop, continue or clock commands, this is to enable the TR-808 to function as a sound module in systems where MIDI clock is being used to drive other devices.

You can set the TR-808 to MIDI receive OFF, this will enable the TR-808 to run in time with MIDI clock, but ignore any incoming notes.

### ***Using the red push button to program the MIDI settings***

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) SETUP 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 MIDI channel (receive or transmit) you will be automatically returned to playing mode, but after making any other assignments you will need to press the ENTER key (Top C on a 61 note keyboard) 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 four 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.

**Note:** When in **setup** and **mapping** modes the TR-808 will receive on ALL MIDI channels.

C	Receive channel	1	MIDI note number 36 [ Bottom C ]
Db	" "	2	
D	" "	3	
Eb	" "	4	
E	" "	5	
F	" "	6	
Gb	" "	7	
G	" "	8	
Ab	" "	9	
A	" "	10	(default)
Bb	" "	11	
B	" "	12	
C	" "	13	
Db	" "	14	
D	" "	15	
Eb	" "	16	
E	Receive notes OFF		This does not affect MIDI clock
F	Transmit channel	1	
Gb	" "	2	The transmit channel can be
G	" "	3	changed independently of the
Ab	" "	4	of the receive channel, and
A	" "	5	can be set even during omni
Bb	" "	6	on mode.
B	" "	7	
C	" "	8	MIDI note number 60 [ Middle C ]
Db	" "	9	
D	" "	10	(default)
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 treated as start only if Song Position Pointer is zero (default)		
Eb	Continue always treated as Start		
E	Disable start/stop/continue/clock through MIDI (In only)		
F	Enable start/stop/continue/clock 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

<b>Program &gt;&gt;</b>	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 Hi-hat
	5 - Hi Tom/Hi Conga	11 - Closed Hi-hat
	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. (N.B. this assumes programs start at 1 rather than 0)

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

3) You can assign more than one sound to the same MIDI note, all of them if you want, however MIDI out uses the same map, so all sounds would then generate the same note!

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.  
Accented notes - velocity 127.

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 63 – will play normal volume, received velocity 64 to 127 will play an 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 0Bxh – 10h - nn

Where B is Controller status (0B0 hex)

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

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

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

Where nn is 63 (3F hex) or less for mode 0 - (accent mode)

9) "MIDI CONTINUE" is treated as a "START" command if Song Position Pointer is zero. (default)  
If selected, Continue messages can always be treated as Start.

10) When the TR-808 is receiving clock via MIDI the rear panel din sync socket will also carry the decoded MIDI clock and stop start control signals - enabling another TR-808 or TB-303 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).**

*SETTING 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 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).

***These instructions are for TR-808 MIDI retrofit kits produced after 1<sup>st</sup> July 2004 – Firmware TR882150 or later. Different instructions apply to earlier TR-808 MIDI retrofit kits.***

The logo for Kenton, featuring the word "KENTON" in a bold, white, sans-serif font, centered within a solid black rectangular background.

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