INSTRUCTIONS FOR MIDI INTERFACE

ROLAND TR808 DRUM MACHINE

Your TR808 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 16 omni off transmit chan 1 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 TR808 drum will run from it's 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 TR808 drum will not run.

Some drum machines/sequencers may not send start/stop codes, in this case pressing the start switch on the TR808, will make it wait until Midi clock/sync is present.

You can make the TR808 ignore start/stop codes by selecting it from the programming mode described in the next paragraph, when set to disable the TR808 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 TR808 drum is not playing, otherwise the results may be unpredictable.

1) SET-UP MODE - setting MIDI channel/stop-start etc.
Give the red push button a short press (half a second) - then release. Follow this with a MIDI note (a key on a DX7 D50 etc.) or sequence of notes as detailed on page 3. Note that after selecting a channel or other function, top C will need to be pressed to return the unit to playing mode.
2) MAPPING MODE - assigning MIDI notes to sounds.
Press the red button hold for a couple of seconds - then release. Follow this with any MIDI note (a key on a DX7 D50 etc.) followed by a program change number (or vice versa). The sound specified by that program change number will be mapped to the key you pressed.
You will then be automatically returned to normal play mode - thus to map another sound you will need to press the button again.
On page 3 is a list of which program numbers correspond to what sound

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

C	Receive channel	1	Bottom C - Midi note no. 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	(factory default)	
E	not used			
F	Omni on mode			
Gb	not used			
G	not used			
Ab	not used			
A	not used			
Bb	not used			
B	not used			
C	Transmit channel	1	(default) Middle C - Midi note no. 60	
Db	"	2		
D	"	3		
Eb	"	4		
E	"	5		
F	"	6		
Gb	"	7		
G	"	8		The transmit channel can be
Ab	"	9		changed independently of the
A	"	10		of the receive channel, and
Bb	"	11		can be set even during omni
B	"	12		on mode.
C	"	13		
Db	"	14		
D	"	15		
Eb	"	16		
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	not used			
Db	not used			
D	not used			
Eb	not used			
E	Disable start and stop through midi (both in & out)			
F	Enable start and stop through midi (factory default)			
Gb	Set mode 1 - velocity sensitive receive mode (factory default)			
G	Set mode 0 - two level receive (normal/accent)			
Ab	not used			
A	not used			
Bb	not used			
B	not used			
C	ENTER KEY - Press and release. Top C - Midi note no. 96			

Program number use in Mapping mode

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

1) No matter how the sounds are assigned, these program numbers always belong to the same sound.
2) Any other program number will abort Assign mode
3) If you assign more than one sound to the same MIDI note, only the lowest numbered will sound.

RECEIVE MODES 0 & 1

The TR808 will always transmit the assigned drum notes with velocity
64 (40 hex) normal notes
127 (7F hex) accented notes

Mode 1 - (factory default setting)
The TR808 will play the assigned note at the incoming velocity

Mode 0 -
The TR808 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 TR808
This mode is provided so that patterns/songs sent from the TR808 to a separate sequencer and stored, can be played back exactly as if they were in the TR808

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

When the TR808 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 TR808 or TB303 to run in sync with the incoming midi also.

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 receive channel.
[n.b. whilst in set-up/mapping 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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