INSTRUCTIONS FOR MIDI INTERFACE
ROLAND CR-68 DRUM MACHINE

These instructions are for CR-68 MIDI retrofit kits produced after 6th July 2017 – Firmware CR682102 or later.

Your CR-68 drum machine is now equipped to send and receive MIDI information. When turned on the CR-68 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 velocity data conveys accented or unaccented note data only.

The factory default settings are:
Receive channel 10 omni off / Transmit channel 10 / Stop/start receive enabled

You can return to the factory default settings at any time by turning the CR-68 on while holding the red push button pressed. Hold for a couple of seconds – then release.

If the CR-68 is already playing from its internal clock, then all MIDI clock commands are ignored. If the CR-68 is stopped, then when a MIDI Start command** is received, the CR-68 will take its timing information from the MIDI clock source. If the start button on the CR-68 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 CR-68 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 CR-68 ignore start/stop/continue/clock commands by selecting it from the programming mode described in the next paragraph, when set to disable the CR-68 will not respond to start, stop, continue or clock commands, this is to enable the CR-68 to function as a sound module in systems where MIDI clock is being used to drive other devices.

You can set the CR-68 to MIDI receive OFF, this will enable the CR-68 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 CR-68 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 and 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 just 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 CR-68 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	Not Used - - -		
G	" "		
Ab	" "		
A	" "		
Bb	" "		
B	" "		
C	ENTER key	Press and release. [Top C] MIDI note no. 96	

Program >>

1 - Bass Drum
2 - Snare Drum
3 - RimShot
4 - HiHat
5 - Cymbal
6 - Maracca
7 - Clave
8 - Hi Bongo
9 - Lo Bongo
10 - Lo Conga
11 - CowBell
12 - Not used
13 - Not used
14 - Not used
15 - Not used
16 - Not used

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 16 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 CR-68 will always transmit the assigned drum notes as follows:- Normal notes - velocity 64.
Accented notes - velocity 127. Note however that the CR-68 does not distinguish between individual sounds when responding to accent, rather it is the time-slot it happens in. So all sounds produced at that time will be accented or not accented.

6) "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.

7) When running from MIDI clock, variation fill-ins 1 to 7 produce no sound although SD & HT rolls do work as does rhythm A<->B. When running from internal clock these all work as normal.

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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