

MIDI Clocking:

MIDI clocking is enabled when a MIDI Start message is received. After that, MIDI clock messages must be received to clock the CR-78. Clocks are treated as 24 PPQ, so 96 of them will step through a measure. When a MIDI Stop message is received, after the fade out, MIDI clocking mode is disabled, and playing will stop. If Fade Out is set to Long, and the controlling device stops sending MIDI clocks after it sends MIDI Stop, the fade out will be faster than normal. If long fade out is desired with MIDI clocking, insure that the controlling device continues sending MIDI clocks after sending the Stop message.

MIDI Module Mode:

To enable MIDI module mode, press Waltz, Shuffle, and Slow Rock together, so that they will stay in the "In" position. It may be easier to get them all to stay in by using just two fingers instead of three. In this mode, the Variation rotary switch selects the MIDI channel. (This switch is only read when the mode is entered) Rhythm (A<>B) selects channel 1, and channel numbers increase by one for each clockwise click. Channels 1-11 can be selected. The "Off" position of this switch is not used in this mode. To exit this mode, cancel the three selected rhythm switches. Pressing Start/Stop in this mode may interrupt operation briefly, but will be otherwise ignored.

Drum sounds can be triggered by the following MIDI Note On messages:

Note Number (decimal)	Sound
36 C	Bass Drum
38 D	Snare Drum
40 E	Rim Shot
41 F	High Hat
43 G	Cymbal
45 A	Maracas
47 B	Claves
48 C	Cow Bell
50 D	High Bongo
52 E	Low Bongo
53 F	Low Conga
55 G	Tambourine L
57 A	Tambourine H
59 B	Guiro, sounds while note is on
60 C	Raises Guiro pitch while note is on

All sounds are triggered by Note On and end automatically, except for Guiro, which will sound until Note Off is received. Note Off messages must be sent for every Note On before the sound can be re-triggered.

The Tempo LED will light when a mapped "Note On" message is received, and will turn off when a mapped "Note Off" message is received.

Velocity controls the accent function. If the velocity value is above 64 decimal, accent will be triggered along with the sound. The front panel accent amount control functions normally.

Programs:

15 programs can now be saved and recalled. At least one program switch must be depressed to enable a program. One, two, three, or four program switches can be depressed at once to select up to 15 different programs. Getting all four switches to stay in is a little tricky, but two or three is easy. Use the same switch combination either for editing or playing a program.

Programs can now be edited using the front panel controls. This requires being in Program Edit mode, which is enabled by pressing Shuffle, Slow Rock, and Swing together, so that they will stay in the "In" position. To exit this mode, cancel the three selected rhythm switches.

In Program Edit mode, operation is very similar to using a WS-1. Pressing Clear with "All" selected, clears the entire selected program. Pressing Clear with "Memory" selected, clears the track associated with the currently selected instrument (if any). The Manual variation trigger pushbutton is used to enter either a note, or a rest. If the Auto/Manual switch is in the Auto position, a note is entered. If the switch is in the Manual position, a rest is entered. After the operation has taken place, the sounds currently stored for this step are played, including a new sound if one was entered. If no sounds are stored for this beat, the cow bell is heard. This sound simply confirms that the switch press was registered and that there are no sounds stored for this step. Up to four instruments/tracks can be recorded in each program.

In Program Edit mode, the Measure switch is used to set the number of steps/measure as follows:

2	24 steps/meas
4	48 steps/meas
8	8 steps/meas
12	12 steps/meas
16	16 steps/meas

Sounds are only entered in the program when the All/Play/Memory switch is in the Memory position. If the Auto/Manual switch is in the Manual position, you can step through the pattern using the Variation pushbutton switch.

You can jump back to the start of the pattern by momentarily selecting "All".

When you are at the start of the pattern, the Tempo LED will light.

If you press Clear with the switch in the Play position, the first measure of the pattern will be copied into the second measure. If you want both measures to be the same, you can just enter the first one, then copy it.