KENTON

Instructions for using a SH-101 fitted with the Kenton filter socket kit

Setting up:

The CV & Gate sockets fitted as standard to the SH-101 are entirely suitable for use with a CV converter.

The added Kenton socket is a 3.5mm mono jack socket (mini jack). In order to connect to a Kenton converter, you will need a mini jack to mini jack lead for the filter input and two more for the CV & Gate.

Your MIDI to CV converter should be set up in the following way:
CV output should be Volts/Octave mode
Gate should be v-trig (standard gate) where zero volts = note off and +5 volts = note on
Auxiliary output should have a range of 0 to 5 volts from min to max (for filter)

Playing the sounds:

You need both CV & Gate signals to control an analogue synthesiser. The CV signal tells it what note to play (CV means control voltage). The Gate signal tells it when to play the note.

Connect the CV In of the SH-101 to the CV Out of your CV converter
Connect the Gate In of the SH-101 to the Gate Out of your CV converter
Do not connect the Filter input for now.

Provided you have connected the cables correctly, and your MIDI to CV converter is set up properly, the SH-101 will now play from your MIDI keyboard.

Note that the SH-101 will not play notes below about MIDI note #36 or above about MIDI note #96 – this is due to the design of the SH-101.

Filter:

Once you have got the notes playing correctly, connect the filter jack to an auxiliary output. This should be an output which gives a variable output between 0 and 5 volts – usually controlled by a MIDI continuous controller such as one of the standard MIDI controllers #0 – #119 or aftertouch or velocity. Kenton converters usually have the auxiliaries assigned to controller #16 by default. As the voltage is changed from 0 to +5 volts, the filter cutoff frequency will get higher, allowing more high frequency components of the signal through.
N.B. The filter input is a voltage input. It is not an *audio* input to the filter section.
For the Pro-Solo set Aux min to 0 and aux max to 50. For the Pro-2000 set aux min to 0 and aux max to +25

Troubleshooting:

1) Ensure that your CV converter is on and working, and is set to the same MIDI channel you are transmitting on.
2) Ensure that the SH-101 plays OK without any CV / Gate / Filter leads connected.
3) Check that your connecting leads are not faulty and that they have 3.5mm mono jacks on the end connected to the SH-101 (not stereo jacks).
4) Try just the Gate on it's own. You should get a note playing on the SH-101 in time with the note played on your MIDI keyboard. It will be the same note all the time without the CV lead connected.
5) Try just the CV on it's own. You will need to operate the internal sequencer of the SH-101 for this in order to trigger the notes, but the CV should follow the notes you play on your MIDI keyboard
6) Don't connect the filter input until you are sure that everything else is working OK as with certain settings, the filter can stop any sound being heard.
7) If the SH-101 sounds when you release your note and is silent while the note is pressed, you have the Gate output of your CV converter set to the wrong mode. It must be set to v-trig mode (a voltage is present at the gate output when a note is played).
8) If the tuning is wrong and the intervals between notes get bigger as you go up the scale, your CV converter is set to the wrong type of scaling. It should be set to Volt/Octave mode.

Notes on using the clock input:

The SH-101 also has a _" mono jack socket for clocking the arpeggiator fitted as standard. This can be connected to the clock output on your converter (if it has one). This will enable you to run the SH-101 in synchronisation with your sequencer. In this mode, you must program the patterns you want to play directly into the SH-101 from it's own keyboard. You cannot use the CV & Gate inputs for this purpose.

When you start your sequencer, the SH-101 will then play arpeggios in time with your sequence. You will always have to start the sequence from the top as the SH-101 will not recognise song position pointers.
For the Pro-2000, set the clock output to positive clock and the required divide rate (see Pro-2000 manual).
For the Pro-Solo, you will need to power the converter on in sync mode. Set the clock output (aux) to positive clock and the required divide rate (see Pro-2000 manual).

Troubleshooting Clock:

1) Ensure that you are using a mono jack lead, not stereo.
2) You need to make sure that the clock output is enabled on your sequencer, this is very often on a setup page or on a pull-down menu. The clock output on Kenton converters must receive a MIDI start command before they will output a clock signal, so if your SH-101 doesn't start with your sequencer, check that your converter is receiving both timing clock and a MIDI start command. You can use the analyser mode for Kenton converters. Alternatively, you may have a faulty or incorrect lead or even maybe a faulty sync input socket on the SH-101.
3) MIDI sync isn't on any particular MIDI channel, it's on a sort of global channel of its own.