# Panther Series – CGS33E 4x4 Matrix Mixer

Constructors should refer to the Component Overlay and the Bill Of Materials for the current value of all components.

Construction of this module using the CGS33 boards is slightly more fiddlier than for normal Panther modules and the following points and sequence of assembly need to be borne in mind during construction.

CGS33_A Board
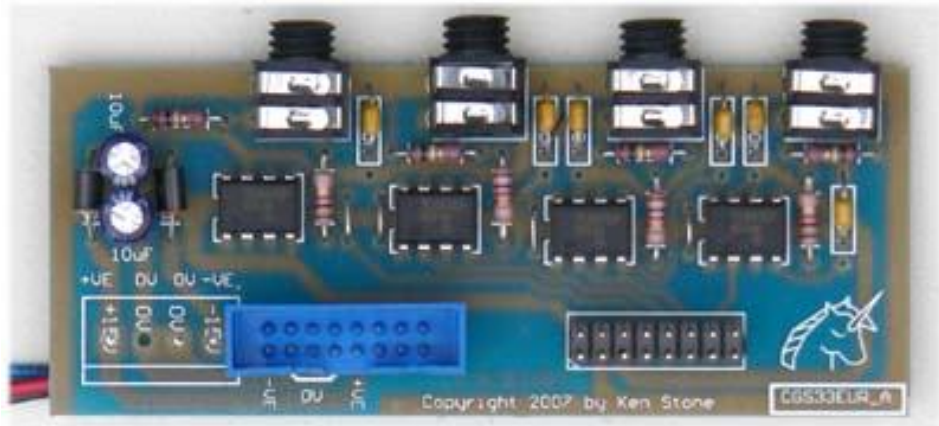
1. Assemble the CGS33_A board not forgetting the wire links (x4). Do not fit the jacks (x4) at this point.
2. The boxed header fits in the position nearest the CGS logo on the pcb with the opening facing the edge of the board.
3. There is provision for 2 links ('5' & '6') next to this connector but they are not required in this build

CGS33_B Board

1. Assemble each of the CGS33_B boards excluding the jack and switch. There is one wire link on each of these 4 boards.
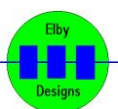
Power Connection

The Panther Series of modules have been designed to be compatible with the popular Doepfer range of EuroRack modules and consequently uses a matching connector.

The CGS33_A board uses an open header so please pay particular attention to the orientation of the power cable when connecting the power cable.

Calibration

The CGS33E does not require any calibration and should work as soon as power is applied.
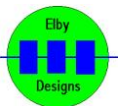

Using the CGS733 Front Panel

Pre-Panel Assembly

1. Take 1 jack. Looking at the front of the jack with the legs pointing down, cut the 2 left-hand legs flush to the shoulder of the pins. This jack fits in the position for `IN 1' on the CGS33_A board.
2. Position 3 unmodified jacks in to positions `IN 2', `IN 3' & `IN 4' and the modified jack in to position `IN 1'.
3. Carefully offer the assembly up to the front panel and lightly secure each of the jacks in to position, making sure that the jacks sit reasonably square to the board. Solder the jacks in to position
4. Take 4 jacks. Looking at the front of the jacks with the legs pointing down cut the nearest leg on the left flush to the shoulder. These jacks fit in to the OUT positions of the 4 CGS33_B boards
5. Position a jack in to the location on the board noting that you will need to form the legs slightly to allow all the pins to be inserted.
6. Offer the assembly up to the front panel and loosely secure at least one pot and the jack. Solder the jack in to position.
7. Remove the assembly and repeat steps (1) to (6) for the other 3 boards.

Panel Assembly

1. Cut the supplied wire in to 12 pieces each 25mm long
2. Mount a switch in to the position for OUT 4 ensuring that the switch toggle runs vertical.
3. Mount one of the CGS33_B assemblies and then take 3 of the previously cut wires and solder the 3 legs of the switch to their respective position on the pcb.
4. Repeat steps (2) to (3) for the 3 remaining CGS33_B assemblies.
5. Mount the CGS33_A assembly.
6. Finally, install the special CGS733 IDC Cable with the red stripe towards the bottom of the module. Start by inserting the connector in to the `OUT 1' assembly first, then proceed to `OUT 2', ` OUT 3' and then `OUT 4'. Finally, fit the remaining connector to the CGS33_A assembly.