Panther Series – ED107 PolyDAC(X) MIDI-CV

Construction of the ED107 requires the assembly of a 8 pcbs.

Constructors should refer to the Component Overlay and the Bill Of Materials for the current value of all components as well as our General Construction Notes.

ED107A - Voice Board (x4)

1. Mount the 2 surface-mount devices U101 and U102
2. Fit all remaining components to the board excluding the LED D101
3. Mount the board on to the front panel and tighten all nuts,
4. Carefully form the LED legs (D401 and D504), insert them in to the pcb,
5. Align the LEDs with their panel holes and once positioned, solder in to place,
6. The module is now ready for calibration

ED107B - Column 5

1. Fit all components to the board. Note that the 2 jacks J101 & J103 will need to be 'forced' in to position

ED107C - Column 6

1. Fit all components except J101, J102 & D102

Panther Support - Column 7

1. Fit all components

Main Board

1. Mount the surface-mount device U203
2. Fit all components

Module Assembly

1. Fit the 2 MIDI Sockets to the Front Panel ensuring that a flat of the nut is parallel to the side edges of the Front Panel
2. Insert the lens mounts in to the Front Panel
3. Mount ED107C
4. Use pieces of tinned copper wire (spent resistor legs are fine) to wire the MIDI sockets to the pcb
5. Form LED D102 and mount to the board
6. Mount the first ED107A in the VOICE 4 column
7. Mount LED D101 and solder in to place
8. Repeat for VOICE 3, VOICE 2 and then VOICE 1
9. Install ED107B and the Panther Support Board
10. Mount the Main Board ensuring that seven headers are correctly aligned

CALIBRATION

Dipswitch S101 is used to provide various options for the ED107 - PolyDAC (X). The current assignments are as follows (using firmware V3.9 or greater) :-

Switch #1: unused
Switch #2: unused
Switch #3: unused
Switch #4: OFF = Normal operation, ON = TEST mode allowing calibration of the DAC output.

- Connect a multimeter to NOTE Output CV1
- Set BEND RANGE to its minimum position
- Adjust the TUNE knob to give a reading of 0.000V
- Set Dipswitch #4 to the ON position, all 5 LEDs should come on
- Adjust the SCALE trimmer (P201) to give a reading of 10.667V
- Return Dipswitch #4 to the OFF position
- Set the BEND RANGE to its maximum position
- Connect your meter to the PITCHBEND output
- Adjust the PITCH ZERO trimpot (P101) until you get a reading of 0.00V.

General Testing

The next thing to do is to make sure that we can receive MIDI data, starting with the unit set to MIDI Channel 1 (all 4 switches on SW1 off).

Send it some notes and you should see the MIDI light flash

If you have the mode switch set to 'Poly' then as you press a note you should see the LEDs cycle, 1 then 2, then 3, then 4.

Next try Monomode 1, if you press a key you should see all 4 gate lights come on at once. Try Monomode 2 and you should see only GATE light 1 flashing as you press notes.

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 red stripe on the power cable represents pin 1 (–12V rail) on the IDC connector.

All Panther Series boards used a boxed 16-way IDC header with a polarising key. Pin 1 on the power connector is towards the bottom edge of the board.

Please pay particular attention to the orientation of the power cable when connecting to a busboard that uses open headers or if using a cable from a 3rd-party to prevent possible damage to the system.