

Owl Strip-board Layout

The strip circuit board has copper tracks on one side of the board only – the ‘track side’. Components are fitted on the plain side of the board with the component leads pushed through the holes. The leads are soldered to the track on the other (track) side of the board. The size of the circuit board you use can be different from the one I used. The board must have at least 16 copper strips of 40 holes long.

The two pictures **show the layout from the plain side of the board** and the component placing.

The black dots (8) are wire connections for input, output and power supply. I suggest using solder pins in the ‘Bill of Materials’ for these wire anchor points. The black lines are wire links (22).

I used one 16 pin and one 8 pin socket for the ICs. You do not need to use the sockets, but I prefer to use them because I can turn on the power and make measurements before inserting the ICs. The ICs must be fitted the correct way round. The ICs and sockets are usually marked with a notch at one end. I have shown the position of the notch on the two pictures. If there is no notch on the ICs, then pin1 is marked by a depressed circle in the plastic; this is at the notched end.

The track side of the board needs a few cuts in the track (I have suggested in the ‘Bill of Materials’ a suitable spot cutter). There are 25 track cuts. These cuts are marked by the red dots on the second picture.

When you make the track cuts, check carefully that you have cut away the full width of the track and that there are no loose ‘whiskers’ of track left that may cause short circuits to adjacent tracks.

The following pages show details of how to:

- 1. Position the components on the strip-board**
- 2. Place cuts in the strip track**

Once having cut the tracks and fitted the components it’s time to turn on. Nothing should get hot. The only item which may become mildly warm is the 1k0 resistor, R8, when the LED is on. Whether the LED turns on when you are importing or exporting power depends on the clip-on Owl current sense. If you find the LED lights up when power is being imported and you wish it to light when power is exported, just unclip the sensor and fit it the other way round so that the cable runs through it in the opposite direction.

If you are having problems with the circuit I am quite happy for you to drop me an email. I may not be able to reply immediately as I will be taking a few weeks away. It is not wise to leave an plain email address on a website as the automatic Spam trawlers soon pick it up. I’m sure it is sufficient to say that the website base address of fowlerelectronics.co.uk can be used with ‘solarpv at’ to complete a working address.



