

Introduction

The RC2014 Mini II Picasso is essentially an RC2014 Mini II in fancy dress. As such, the information in the Mini II Assembly Instructions and User Guide are still relevant. The schematic is the same, and the Mini II Picasso will still work with expansion modules such as the Mini II CP/M Upgrade Kit designed for the standard Mini II.

What is different, though, is the component positions, the PCB layout, component size and colour and, in some cases, the mounting of that component.

Before beginning assembly of your RC2014 Mini II Picasso, please take some time to study the PCB. A lot of time went in to the design of it, and some parts will be hidden away once components are fitted.

In addition to the information in the standard RC2014 Mini II Assembly Guide, this addendum looks at

- * Spiral Resistor Staircase
- * Sunken Chip
- * Perspex Enclosure

Spiral Resistor Staircase

To build the Spiral Resistor Staircase it is easiest to start with the resistor(s) that lie flat on the PCB. However, **only solder the end that does not go in to the shared hole.**

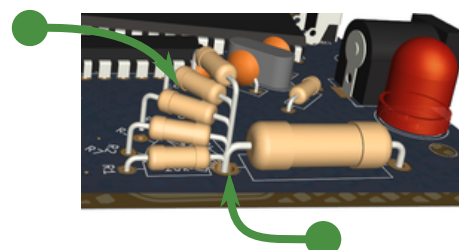
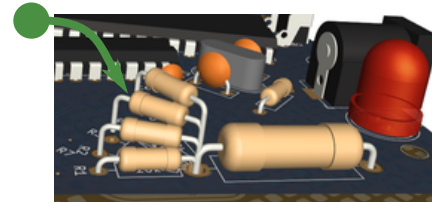
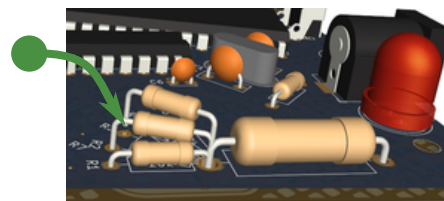
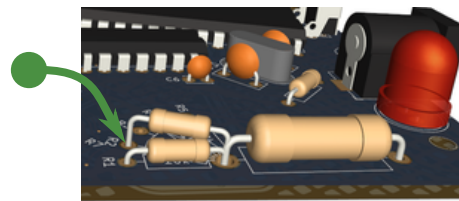
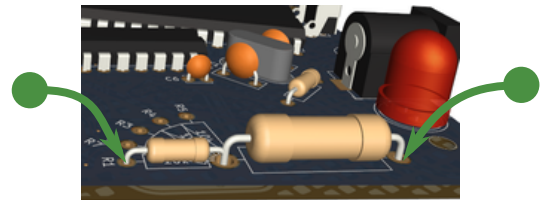
Experience has shown that it is easiest to solder all these resistors from the top side of the PCB.

Add the second resistor making sure that the end closest to the shared hole is over the top of the first resistor. With the resistor horizontal, solder the end that isn't in the shared hole.

Repeat this for the rest of the resistors ensuring that they are parallel with the PCB and just soldering the end that isn't in the shared hole.

With all resistors in place, turn the PCB over and cut the clump of leads in the shared hole almost flush with the PCB. This stump can now be soldered.

Cut the rest of the leads flush and add additional solder if required.



Sunken Chip

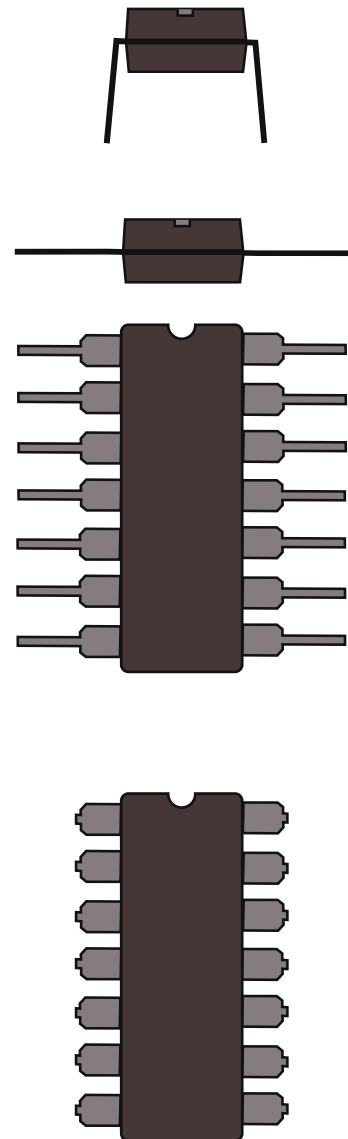
The 74HCT32 needs to be modified before fitting. This is the "sunken chip" and will be soldered from the underside. The top of the chip will be roughly in line with the top of the PCB.

Start by bending the legs of the chip out so that they are parallel. This is easiest with two wide flat objects like a couple of rulers, however, wide jaw pliers can be used too. Just try to observe good electrostatic hygiene by keeping yourself grounded or touching ground every so often.

Next trim off the skinny part of the legs close to the wide part.

To solder the chip in place, put a small blob of solder on to the pad for Pin 1. Then lay the chip over the hole and heat up the solder so the leg stump melts in to it.

Check the alignment so that all the legs line up and that the chip is centralised in the hole. Reheating the solder will allow you to adjust this. Now solder the rest of the pins to the pads.



The orientation of the chip is marked on the silkscreen and the pad for pin 1 is a different shape.

Perspex Enclosure

3 Perspex panels are included in the RC2014 Mini II Picasso edition. The one with the key hole in it is the base plate. Either the solid plate or the plate with the cutout can be used on the top, depending on whether you want access to the expansion header or not.

Screw the 6mm screws through the bottom plate in to the 10mm hex spacers. Next put the RC2014 Mini II Picasso on top so that the holes line up with the spacers below. Put the 11mm spacers on top of three corners, avoiding the one next to the LED. Then put whichever top plate you are using on the top and use the long screws to fix it in place through to the hex spacers below.



The keyhole on the base plate allows it to be hung from a screw in the wall. Perfect for using minimal desk space or hanging in an art gallery.