SDR Receiver – Part 3

Making PCB's

I published a construction article in the March 2022 publication of Practical Wireless Magazine.

Electronic viewing of the magazine, as part of a subscription, is here: https://pocketmags.com/eu/practical-wireless-magazine

I use EADYEDA (easyeda.com) to capture my schematic diagrams and if I am making a PCB then to produce the bill of materials and produce the gerber file.

There is a link between EASYEDA and the PCB manufacturer (jlcpcb.com) so the gerber file is passed seamlessly between the two. You can get immediate quotes although you must buy at least 5 of each PCB.

Here is the link to the open source: https://oshwlab.com/samuel.ritchie.8/main-board_copy_copy

Once you have made a copy of the schematic and the PCB you can just have identical PCBs produced or you can:

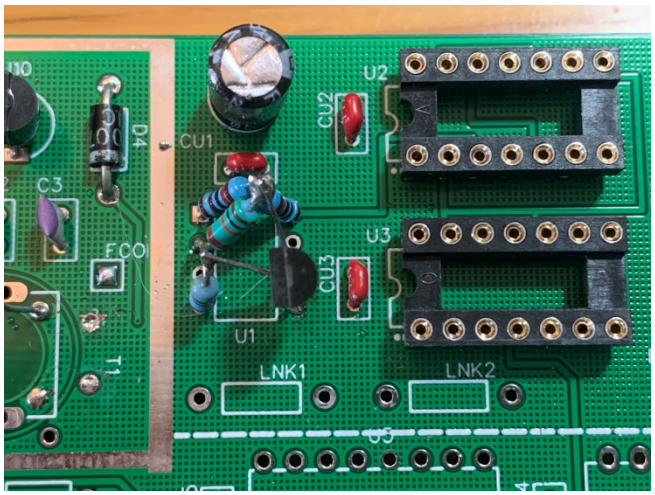
- copy the gerber zip and send it to your favourite PC supplier;
- modify the schematic to get rid of the unwanted components to make the PCB smaller and cheaper;
- change the layout to suit your needs and components you might have; and
- make everything SMD.

Modifications

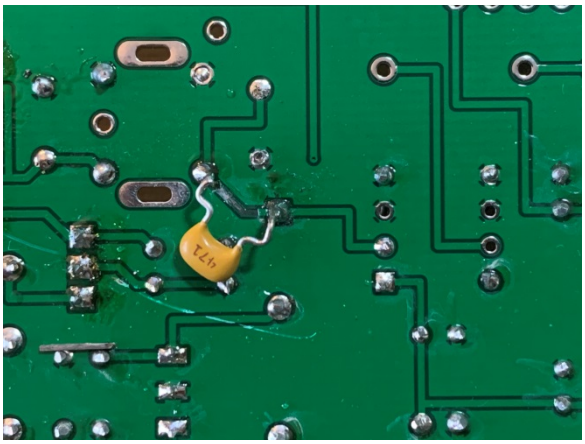
The circuit in the PW article has a lot of components stripped out that appear on the schematic on EasyEDA at the link above. All of the components used to play with different inductors (like T1) and all the components used to play with the huff-puff concept where removed from the schematic in the magazine but still appear in the schematic on EasyEDA.

The major difference that required some hardwiring was the removal of U1 a MAX913 and replacing it with C11, Q2 and a few resistors (R11, R13, R14 & R15).

In the picture below you can see how I added the transistor and the resistors in the holes for U6.



C11 is mounted underneath the board and requires the track between L3 pin 4 and U6 pin 2 (4) to be cut and C11 mounted to bridge the cut. This is shown below.



Otherwise all components are orientated as per the silkscreen and all/most of the component designators are in the right positions.

I have no personal connection with or financial interests in EasyEDA or JLCPCB.

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