SDR Receiver – Part 1

Making PCB's

I published a construction article in the January 2021 edition 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, 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

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

- Either copy the gerber zip and send it to your favourite PC supplier;
- modify the schematic to suit your needs and components you might have;
- change the layout to accommodate the cheaper audio transformer options;
- change the op-amps to even lower-noise SMD devices;
- make everything SMD; and
- add a BPF(s) or even an oscillator to the PCB.

This was the second version of the design as I had a lot to learn about these types of receivers and tried a few different topographies, types of components, different amplifier topologies, various options, etc.

There are no modifications required to the V2 PCB. While some of the component hole spacing's are not perfect, everything can be easily made to fit, 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.

Samuel