Antenna Switching

Components

I published a construction article in the August 2024 edition of Practical Wireless Magazine.

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

Here is some guidance on the components I used. I have lots of components left over from projects but as they mostly come from Radionics or Mouser I can identify the part umber used by RS or Mouser to give you guidance. Beware that I do make mistakes so please check everything to your own satisfaction before buying or making anything. Prices are as at July 2023.

BNC Connectors

The BNC coax connectors are good quality Molex connectors, made to be mounted to a PCB, fitted to a panel and are specified up to 2 GHz.

I get these from Mouser under part number 73138-5033, and cost €3.18 if you buy more than 10 at a time. I see inflation kicked in since I wrote the article in July 2023.

Capacitors

I use 470n 100V Metallized polyester film capacitors as I had a bag of these from a previous project (Mouser no: MMK5474K100J04L4BULK at €0.71 each) and they have a 5mm spacing between leads. There are cheaper options if you use multilayer ceramic capacitors.

Switch

The switches I used are manufactured by Alps Alpine, costing €11 each, have the part number SRBM140700 and come from Mouser. These are professional quality switches with a shaft diameter of 6mm with an 18-tooth serration for a good interference fit.

There are a range of options under the SRBM range of switches. They come in 2, 3, 4, 5, 6 and 20 positions and there are single and double pole options.

If you look at the switch with part number SRBM160500, you could make a unit that has one input and five outputs and the sixth position to connect the input to 50R. You would only need a single switch. This could be a one antenna input to five receivers or five antennas to one receiver.

Knobs

The knobs are made by Davies Molding and have the part code 1231-L. These are a cylindrical knob with a skirt, an outside diameter of 21 mm and a height of 18 mm and made of plastic.

They have a good fit and cover the switch nut nicely. They cost about €2.50 each.

Enclosure

I use an enclosure made by Hammond Manufacturing with part number 1455T1201 and acknowledge that these are expensive at €29 each. But I am after a professional looking product.

The PCB is so accurate that you don't actually need the screws to hold the front and back panels onto the enclosure – once you tighten the 6 nuts on the back panel and the two nuts on the front panel it is very good fit.

I have no personal connection with or financial interests in Mouser or Radionics.

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