4 Way Remote Antenna switch

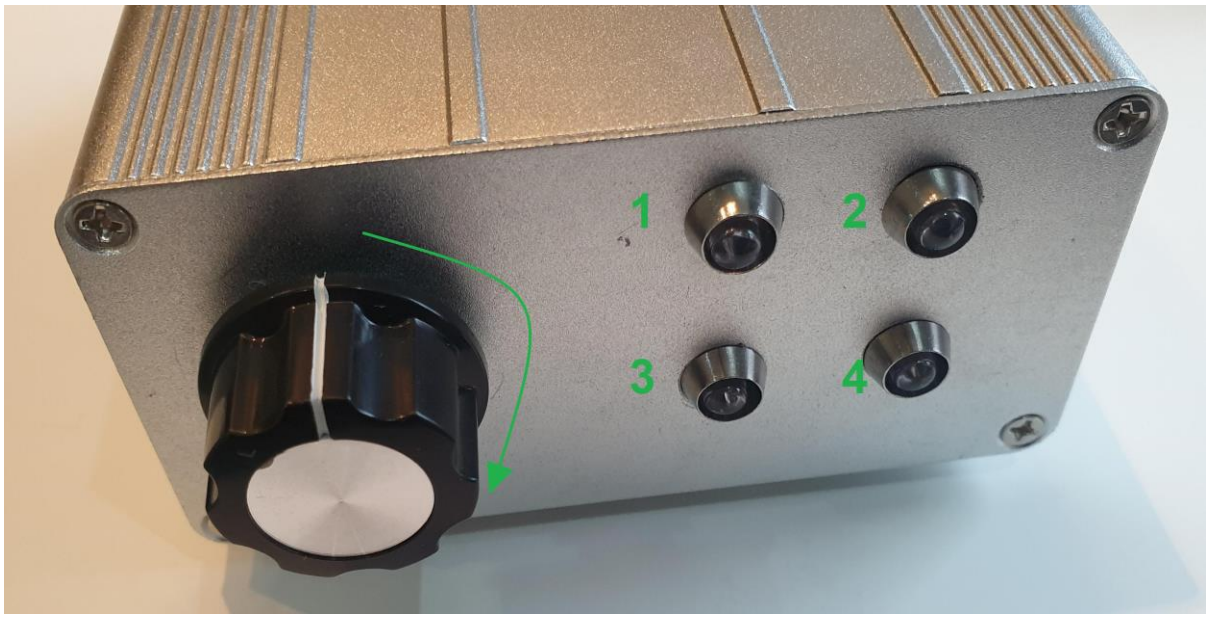
By GM6DX

The switch unit is in two parts. The first part is the control unit which contains the rotary switch, the second part is the relay unit.

3kW PEP rating.

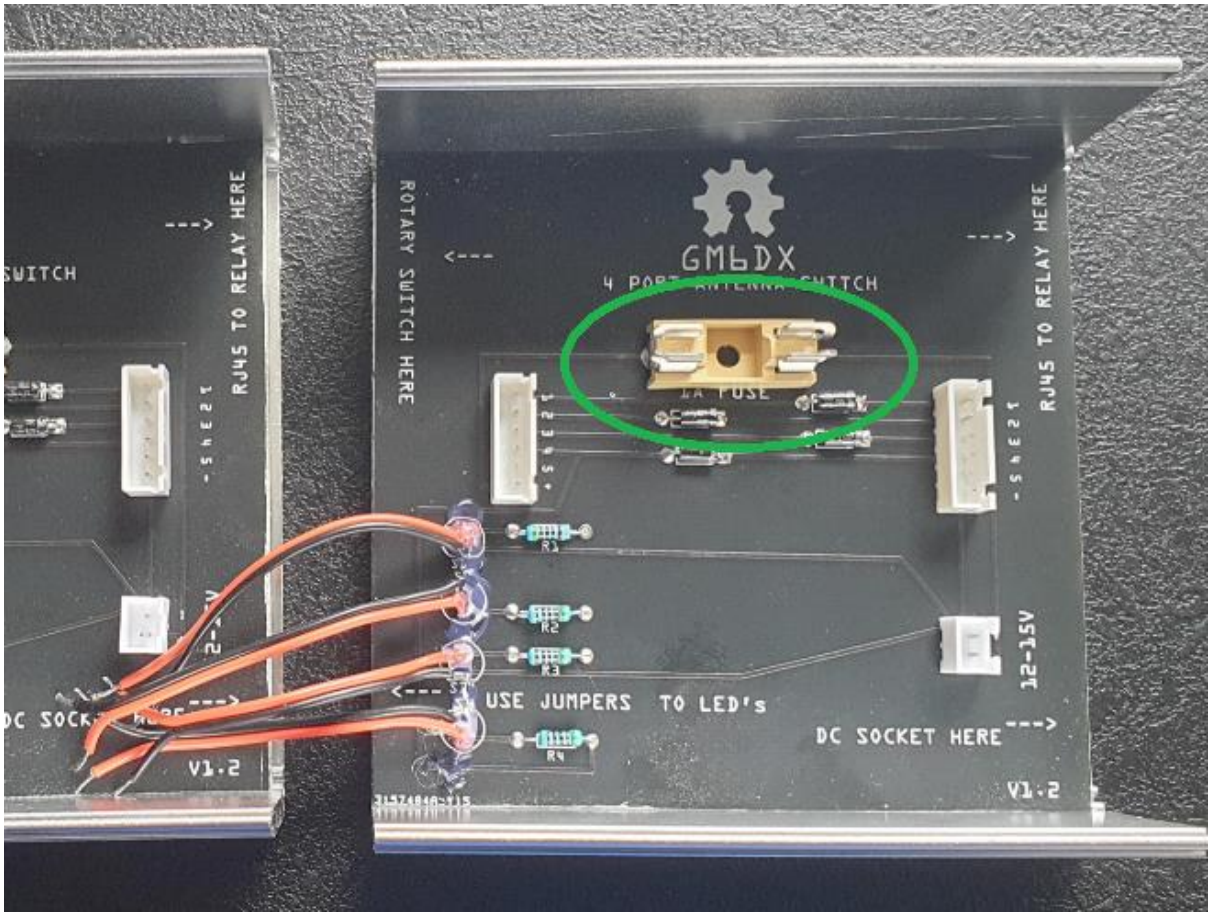
CONTROL UNIT

The control unit case is made from aluminium.

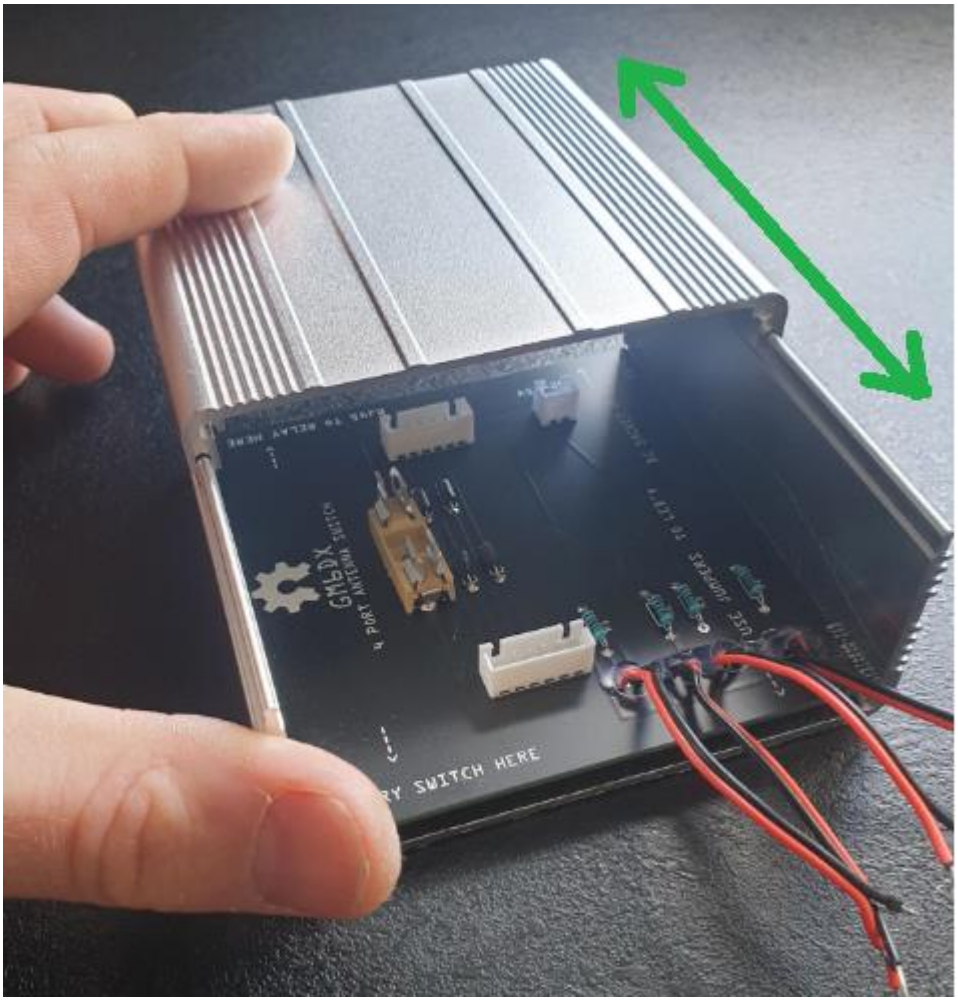


You rotate the switch clockwise to select from antenna port 1, 2, 3 and 4. You can see the port numbers on the image above.

The switch will rotate all the way around to the 11 o'clock position so please keep this in mind if you see no LED lights on.



Inside the box is a 1A glass fuse. Should you connect the switch unit to the voltage source, turn the switch and no LED’s light up then please check the glass fuse.



Remove the four screws on both face plates and slide the top cover off, this will allow you access to the PCB containing the fuse.

At the rear of the unit is a DC jack. This takes a 2.5 x 5.5 mm DC jack. The centre connection is positive and can take a voltage range of 12 – 15V DC. So running this off your radios power supply is an easy solution. Of course a DC wall adapter could be used.

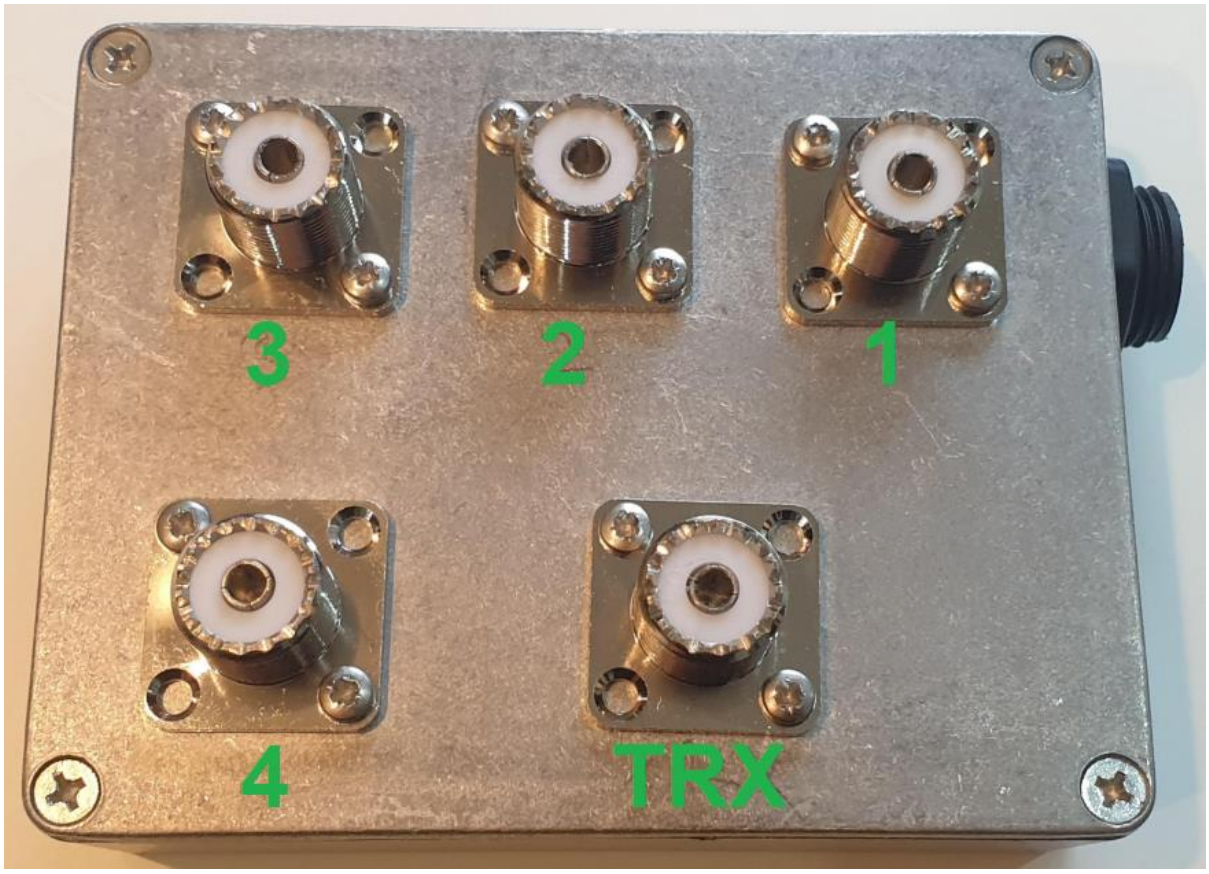
The RJ45 connection facilitates the connection of a CAT 5 / 6 cable from the control unit to the relay unit. No special cable is needed here you can uses a standard cat cable, I use shielded cat cable to prevent any RFI issues.

Although the fuse may seem annoying it was added after testing when shortening of a DC cable occurred. Remember to check the fuse, if your DC outlet is providing voltage and when the switch is turned no LED’s emit light.

LED COLOUR WILL VARY

RELAY UNIT

The relay unit is constructed from a cast aluminium box.

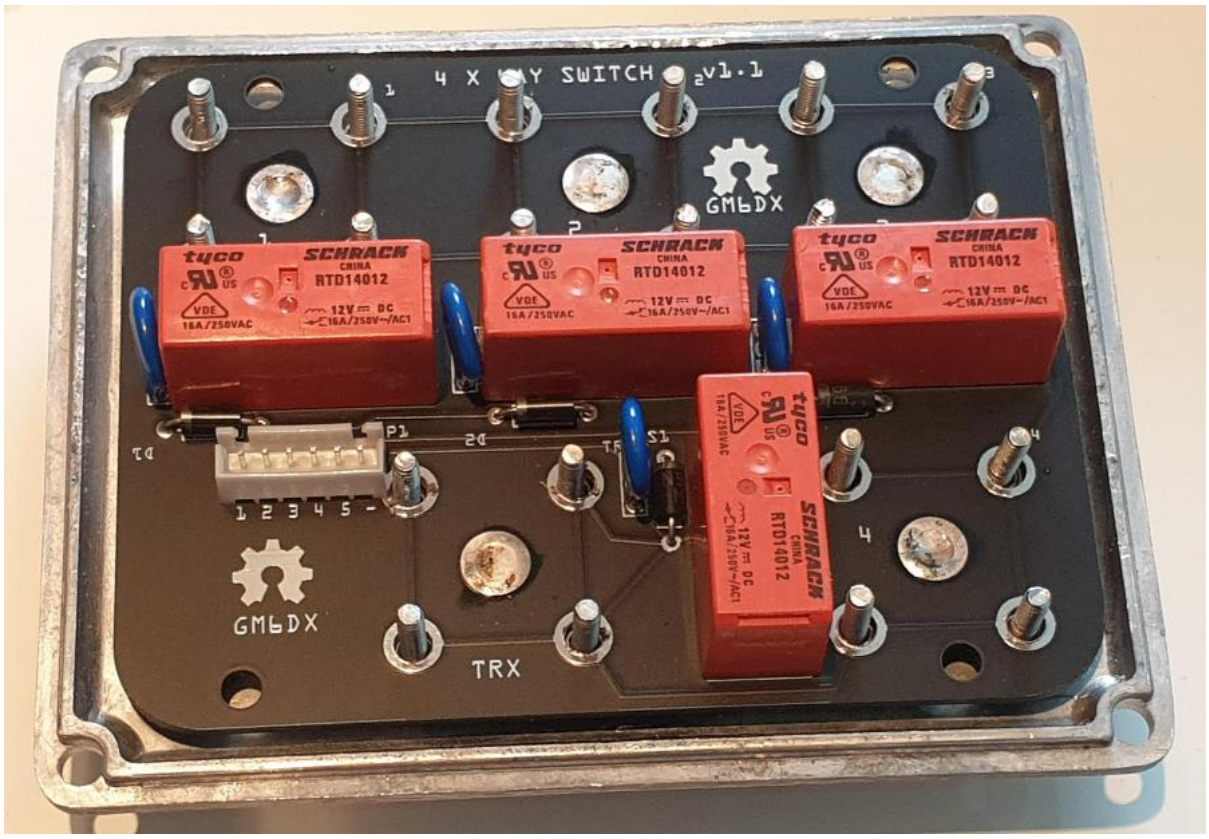


Here you can see the antenna port numbers and the port which goes to your transceiver / amplifier (TRX).

The case bottom is attached with 4 screws which has a rim in the inside to prevent water ingress. My advice is, if this is an outside install then you **WILL** need to tape up and seal the so239 connections and the RJ45 connection to prevent water ingress. A strip of tape around the lid connection and box is also a good idea.

The box has no mounting holes however, you can unscrew the lid and drill holes in the case if you want to bolt the relay unit to a bracket or to a pole etc., there's limited room inside but will facilitate a bolt head or nut. Please ensure you check prior to drilling any holes in the case.

The relay unit has a RJ45 socket for the standard Cat cable connection, please ensure this is taped / sealed for external use.



The PCB is attached to the lid. Short cables go from the RJ45 to the lid so please be careful if separating for drill mounting hole etc.

Any question please ask. ***Billy GM6DX***