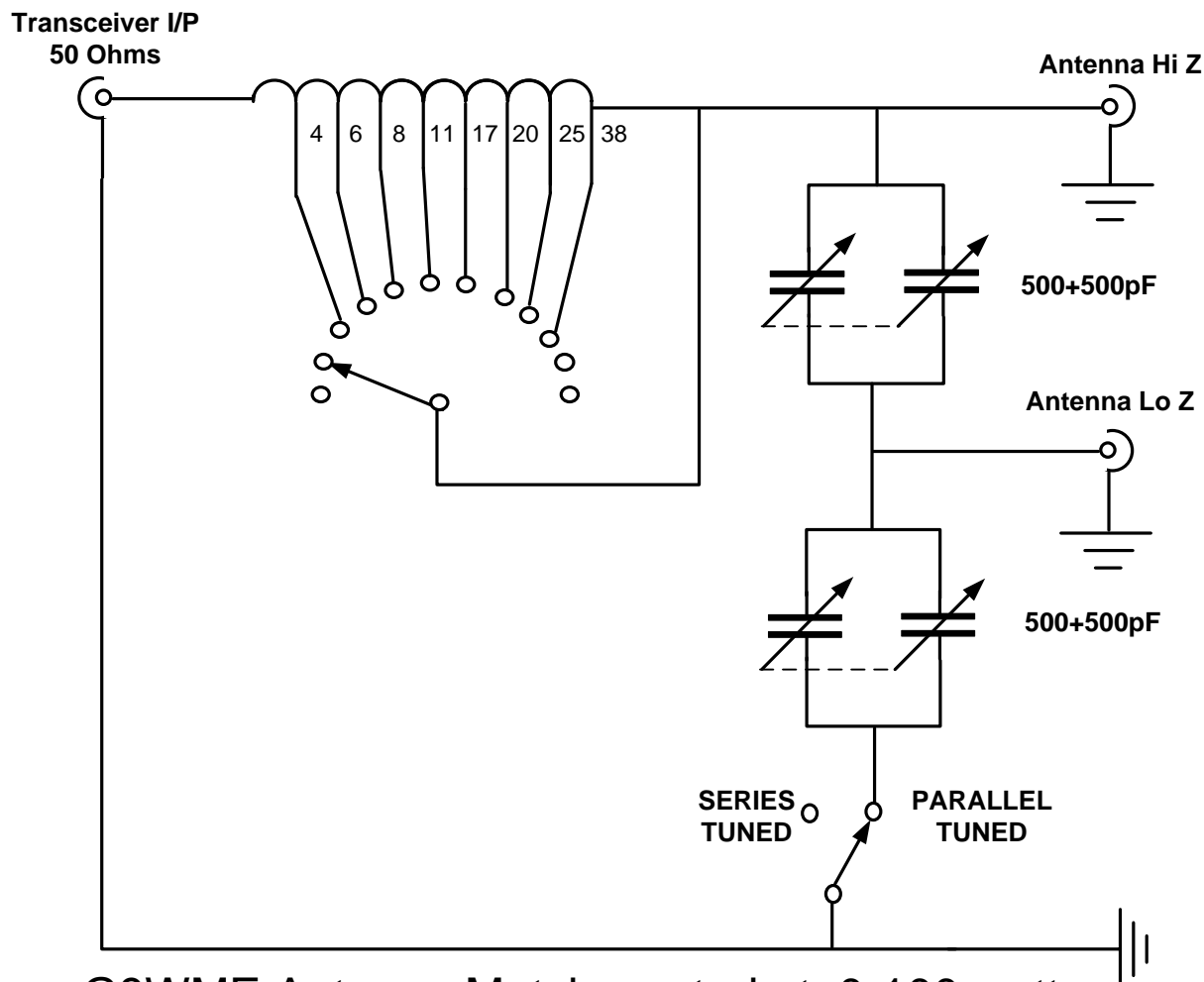


# G3WME HF ANTENNA MATCHER



**Tuner covers the Amateur radio bands 160m – 6m**



**G3WME Antenna Matcher rated at 0-100 watts**

Drawn By G8ODE Apr 2008 iss 1

## CONSTRUCTION NOTES

The matching unit uses a ceramic 30mm diameter former( ex FT101 PA Coil) with a total of 38 turns. The original spaced silvered copper wire form the HF end of the inductor. The remainder of the coil has 27 turns of close wound PVC coated multi strand (7/0.2 overall diam 1.2mm) wire. The coil taps from the HF end are coil number 4,6,8,11,17,20,25, plus another 13 turns. The BNC socket is connected to the HF end of the coil. A larger 40mm white plastic water pipe can be used if the taps are adjusted).

The capacitors are air-spaced 500+500pF domestic radio variety and the series parallel switch is a small single pole 250v 1Amp rated switch.

The Matcher works best with long end fed wires on the HF bands (160m-6m), and will tune a doublet or T-antenna on 160m. However the Matcher will not work with short lengths of wire such as a 25 ft end fed.

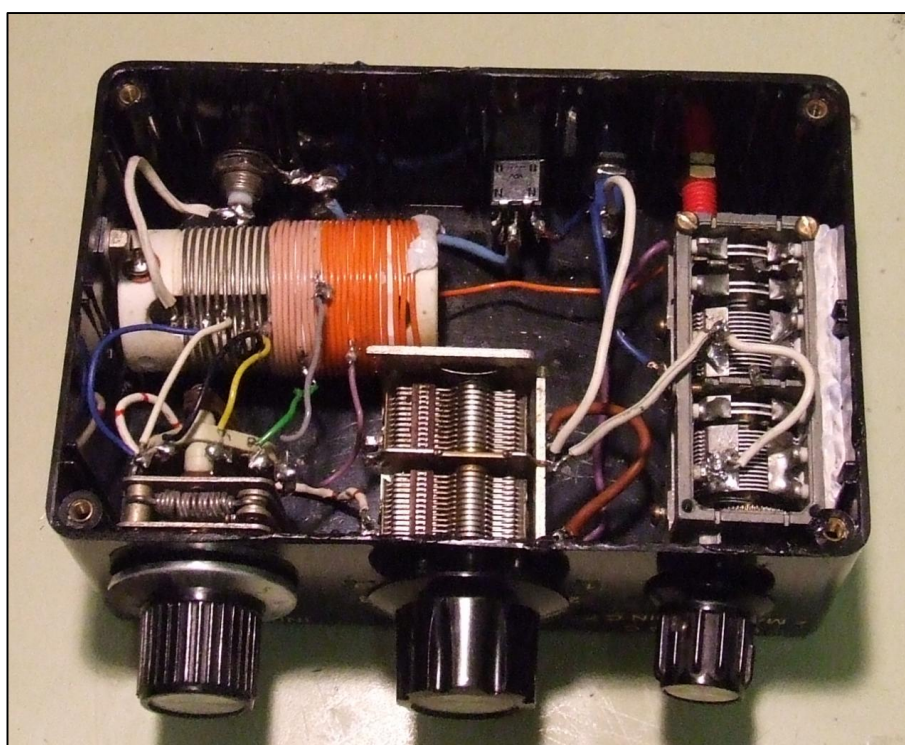
The Matcher uses a good RF earth. The G3WME QTH earth consists of two 4ft galvanised pipes 6" apart strapped together to two 10m lengths of counterpoise wire running in opposite directions at the side of the house.

Drawn By G8ODE Apr 2008 iss 1.1

# G3WME HF ANTENNA MATCHER



Photographs showing the final assembly



## PHOTOGRAPHS

**The top photo** shows the front controls of the assembled Matcher. The 12 position ceramic switch is the left hand control. The centre and far right controls are the ganged 500pF small domestic radios capacitors.

**The bottom photo** shows the underside view of the plastic case. The inductor core is a 30mm ceramic former ( but a plastic former can be used ). The inductor's HF end is wound with single core silver plated 1mm diam wire and the second half is close wound multi-strand insulated wire . The 12 position switch is used to select the taps on the inductor.

The antenna and earth connections use 4mm insulated sockets, and the input is via a 50 ohm BNC socket