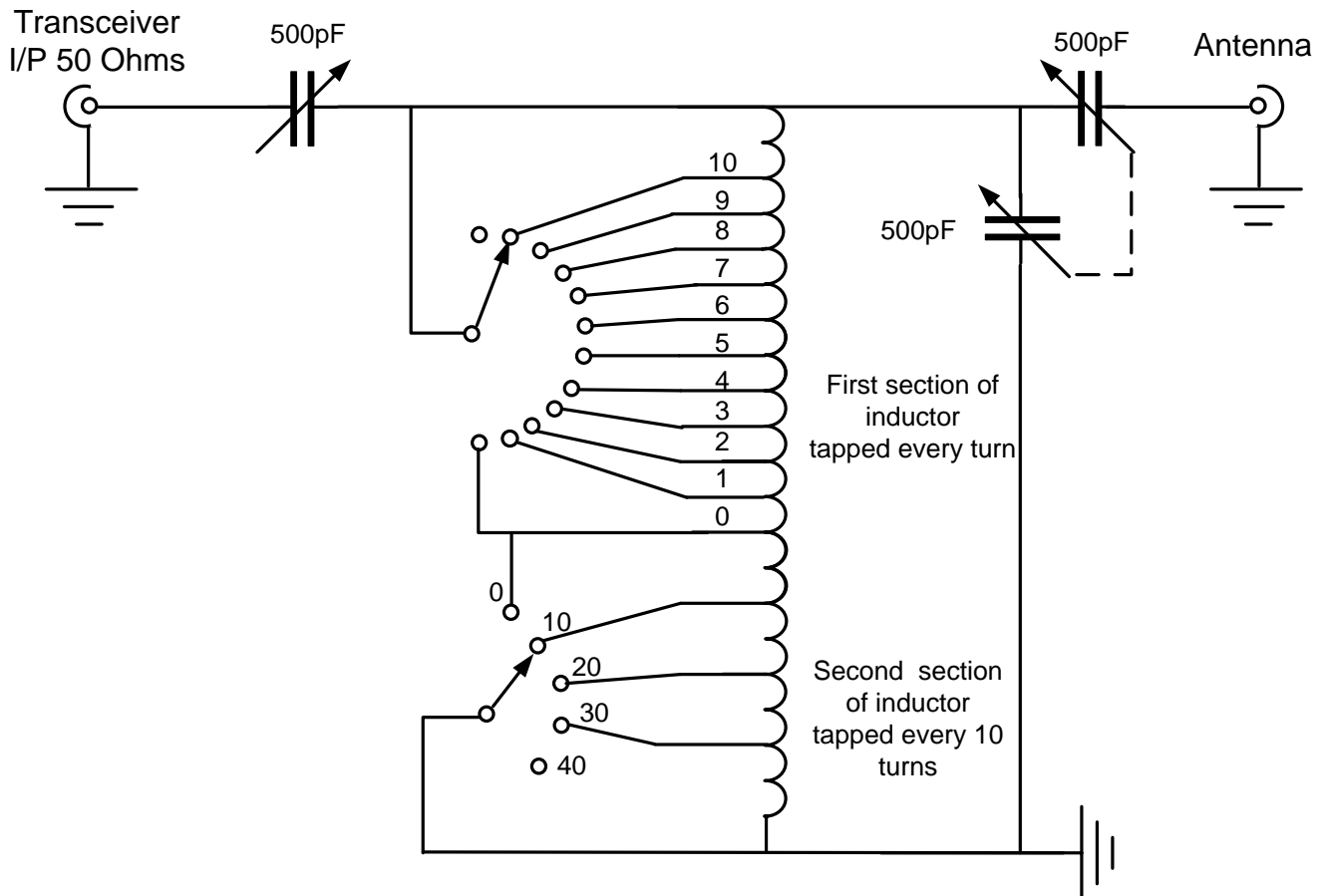


SPC HF ANTENNA TUNER – G3WME



<http://www.rsars.org.uk/ELIBRARY/docsants.htm>

Tuner covers the Amateur radio bands 160m – 6m



SPC Antenna TUNER 0-100 watts Mike G3WME

Note:- The original SPC Match was developed by W1FB as described in ARRL Handbook

NOTES

The tuner's inductor is wound on a 40mm white plastic drain pipe using black insulated multi-strand wire 24/0.2 overall diam 2.05mm. The capacitors are air-spaced 500pF of the variety used in domestic radios. The Input capacitor can have a lower voltage rating than the dual gang capacitor since it experiences lower voltages.

The RSGB handbook suggests this "linear" switching method of taps on the inductor as a substitute for a 50 turn roller coaster inductor which is usually large, difficult to find, and expensive.

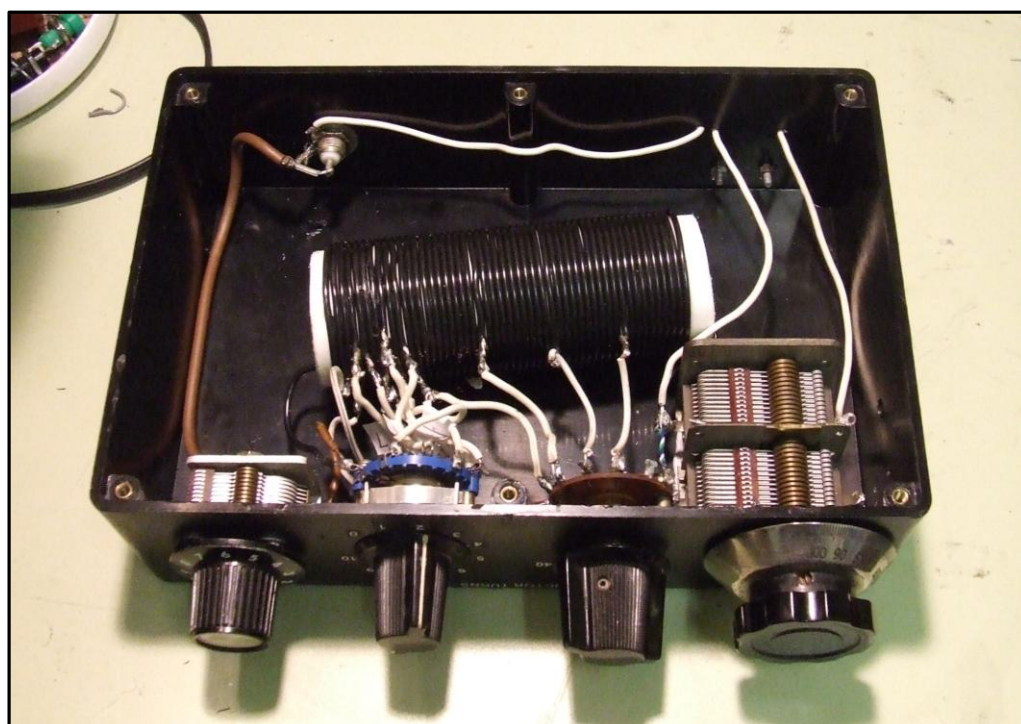
With a 133ft (40m) doublet the SPC will easily produce a good match on the 160m-6m bands using a balun connected to the antenna socket, and will also match a 130 foot inverted L end fed wire, with the aid of an RF earth, that consists of two 4ft galvanised pipes that are 6" apart, and strapped together to two 10m lengths of counterpoise wire running in opposite directions at the side of the house.

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Photographs showing the final assembly



NOTES

The top photo shows the front controls of the assembled SPC Tuner. The left hand control is the 500pF input capacitor and can be of a lower voltage rating. The far right control is the ganged 500pF capacitor and needs to be of a higher voltage rating.

The bottom photo shows the underside view of the plastic case. The inductor is wired with single core insulated wire, and stripped where the taps have to be made. The inductor core is plastic 40mm diam. white plastic pipe. The Input BNC is wired to a short piece of 50 ohm coax (coloured brown in the photo), and the earth bonding can be clearly seen running from the input BNC connector to the RF earthing point by the antenna connector and then onto the dual gang capacitor.