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Bid : 35666 LA9K
Meldingsnr. : 88354
Tittel : 2m antenna tuner - Low Power
Path: !LA5G!LA2D!LA1G!LA9K!

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An antenna tuner was needed between 2m transverter and Power amplifier. I designed a pi-filter type match, see Solid state design (W7ZOI at ARRL), page 52 (Power amplifiers and Matching networks - chapter 4).

Filter was designed for 50 ohm input, 75 ohm output (I presumed PA input impedance was high..).

Coil is dipped to 145MHz with 25pF paralel capacitor.

75 ohm side, caps.: 40pF trimmer with 13pF fixed in paralell (10pF will do)

50 ohm side, caps.: 40pF trimmer with 18pF fixed in paralell (20 or 22pF)

I used slug tuned coil, 1.5T from old GEC radio link (70MHz IF Equalizer), but variable coil was later experienced not important, so an airwound coil may be made experimentally.

With a home made reflectometer, 1W range, the filter was tuned to max with 75 ohm load (4x300 ohm 0.5W) - 2W cw dots.

This impedance is not so critical, and it is not at all important to use some sort of low inductance resistors!

The tuner is later adjusted for minimum reflexions to the transverter.

Later the tuner was connected between TX and PA. It was obvious that cable impedance towards transverter was really low (possibly 25 ohm). the tuner was connected between PA and transverter, 75 ohm side to transverter (as 50 ohm) and 50 ohm side to PA (as 25-35 ohm).

The tuner was aligned for minimum reflexions towards transverter maintaining maximum power output.

I used some old ceramic trimmer capacitors. My transverter has only 2W RF output and it is not important to use better components below 5-10W RF level.

73 de jan-martin

--- Slutt paa melding nr. 88354 til TECHNI fra LA8AK ---