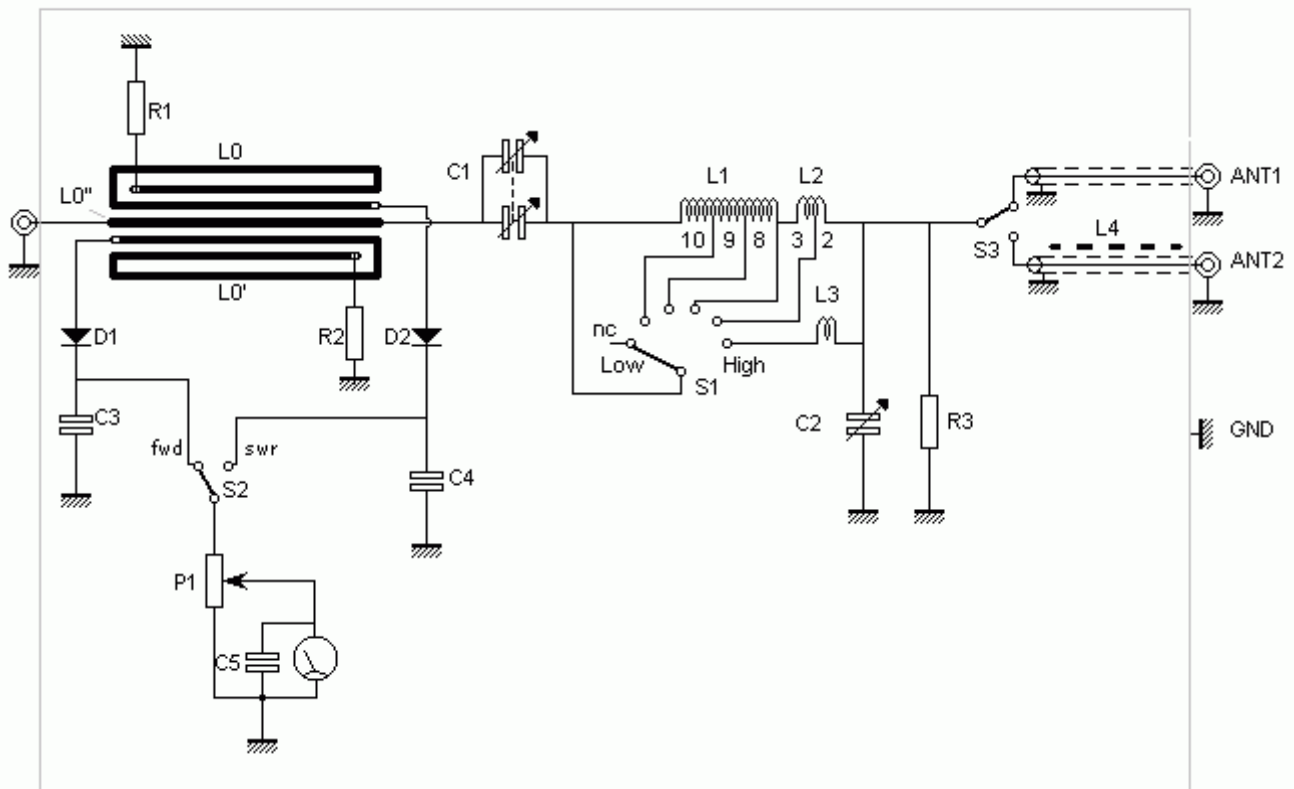


# HF/6M Antenna Tuner Preselector and Aerial Switcher



## Parts list

- aluminium box of 200mm X 130mm X 70mm
- 3 female PL 259 chassis
- Analog Meter (as sensitive as possible and calibrate the scale with a good SWR meter)
- C1 = variable capacitor of +/- 2 x 500 pF (air spaced)(1kv). C1 isolated from the ground!
- C2 = variable capacitor +/- 280pF (air spaced)
- S1 = 6 pos. switch
- S2 = mini toggle switch
- S3 = solid 380v/10A toggle switch
- P1 = 10k log variable resistor
- D1, D2 = 2 germanium diodes AA15,AA109 etc.
- R1, R2 = 50 Ohm (2 x 1/4watt 100 Ohm parallel)
- R3 = 4k7 1watt carbon
- C3,C4 = 4n7
- C5 = 22nF
- L1 = 1,5mm insulated copper wire, 27 turns close together, 19mm outside diameter (16mm inside) taps at 10, 9 and 8
- L2 = 1,5mm insulated copper wire, 5 turns with 1mm space, 19mm outside diameter (16mm inside) tap at turn 3
- L3 = 1 mm insulated copper wire, 4 turns no space, 9mm outside diameter (7mm inside)
- L4 = RG-58 coax wound around a 8 cm long carbon rod and fixed with tape

- L0 & L0' = 1,5 turns approx. 6 cm as long as the centre part L0" which is 1 mm separated. you also can use self-adhesive copper tape instead of wire or a toroid.
- L0" = 6 cm long copper wire (or copper line of 5 mm wide if you use a PCB)  
(L0, L0' and L0" makes out the SWR meter which is laid out as in the schematic fig1)

### Specifications

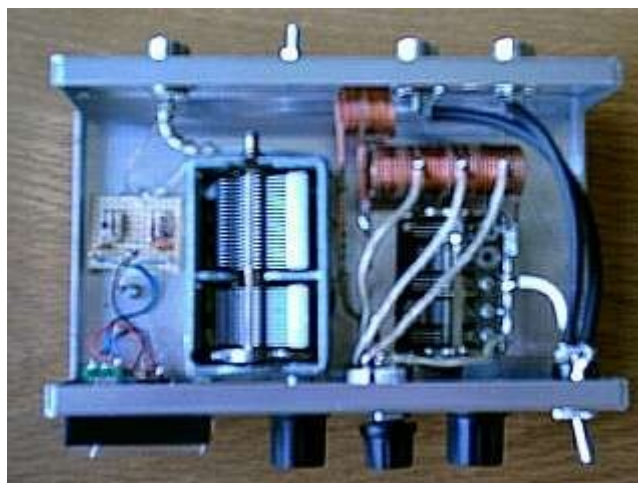
- long wave, medium wave and shortwave preselector tuner lets you boost your favorite stations while rejecting images, intermod and other phantom signals on your shortwave receiver.
- frequency range: 2Mc...52Mc  
180m band depending on the mismatch of the antenna used and/or maximum inductance. Experimenting with the coils can be desirable.
- 150 Watt +-
- switchable between two antenna's
- choke antenna output
- band-pass type (harmonic filter)
- pre-selector
- SWR meter (if needed, else you can simply leave it out HI)

### Revision 2 notes:

- improved SWR bridge
- R3: to drain any possible static build-up on your antenna

### Revision 3 notes:

- L3 added and last of L1 tap changed to allow tuning up to 52MHz!
- L1 changed (was at 9, 9, 9 and 4) for better bandsread and higher top frequency range  
L2 (was 1mm, 10 turns close together, 18mm outside diameter) removed in revision 3 (click on the link for [revision 2](#)).
- Choke antenna output added to prevent HF-currents on the transmission cables (to improve immunity when using badly tuned antenna's)  
Can be used on good antenna's too of course.
- Notes: remember that you can always experiment with inductance (L1, L2, L3) to best suit your specific needs.



original prototype



revision 2

