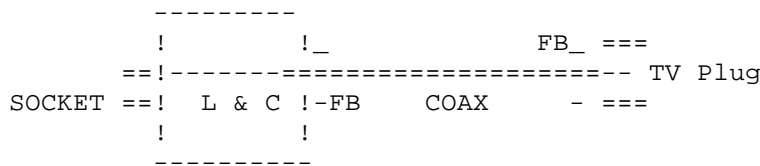


7 0 C M T V I F I L T E R
By G8MNY

I run 400 Watts on 70 cm & have found this filter design very effective. It is basically a "T"eed suck out, with effective UHF braid breaker.

Parts

- Tin Plate (Steel coke can!)
- Belling Lee TV Plug
- Belling Lee Chassis TV socket (metal type)
- 12cm 75 ohm TV Coax
- 2x Coax sized ferrite cores
- 5cm 22swg Silver/enamel copper wire
- 2-10pF trimmer
- Paint (to make it presentable)



Construction

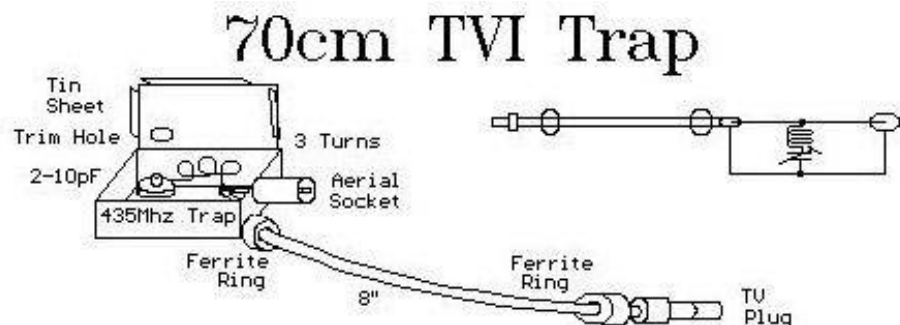
- 1/ Cut tin plate into a cross shape (with taps to solder up) so that it can be folded up into a box 2x2x1 cm. WARNING SHARP EDGES!
- 2/ Drill & mount the Socket on one of the 1cm sides.
- 3/ Connect Plug on coax, feed on the 2 ferrite rings, on the coax.
- 4/ Cut hole for coax in corner of box, & solder in connect the core to the socket centre.
- 5/ Wind wire into coil 3 turns approx 5mm dia. & solder to socket centre.
- 6/ Make tuning hole, & mount trimmer from coil to ground (shaft earthed).
- 7/ Fold up box, just tack solder a few tabs.
- 8/ Connect to an aerial (50Ω does not matter too much), & 70cm Rx & null out a signal.
- 9/ If all OK, solder up properly, Glue coax firmly in place, Fix rings tight to plug & Box (Heat glue).
- 10/ Paint up, & label "432MHz TRAP G...." (for thick TV eng!).
- 11/ Re-tune for best dip, & cover trimmer hole.

Conclusion

I have measured 30dB rejection on the best one, with only about 1.5dB insertion loss (550MHz).

In strong signal area an attenuator can be all that is needed.

Improved interference performance is obtained if an attenuator (3-6dB) is included in the box & the suck out connected across the middle "T" section. This is because the bad SWR of the aerial system will not then de-tune the filter.



73 de John G8MNY on 2003-JAN-06 @ 11:44 local time, from a real IBM XT.