Mains Plugtop Filter Adapter

By G8MNY (New Sep 14)

These were made for UK's BT in 3A (1A/3 KBA 85) & 7A (1A/7 KBA 85) models before all kit came with filters. I bought a few over the years at various junk sales. They are not just a VDR across the mains, as some "Computer spike" filters are, but have a proper RF filter balanced line filter too.

The VDRs are both 275V40B, & the caps are X2 or Y type 250V AC rated. The toroid has L & N wound on opposite sides (13 Turns each) on an unsaturated core. It is wire up so phase currents cancel the high normal mode flux, so it does not saturate & become "no inductance" with the mains current. The inductance L was measured for just 1 winding.

There are quite effective at reducing RFI, on noisy sources & the Shack Rx, especially on 80/40m bands. But I found much of RFI was through the earth so I modified them to have a 10 turns on a 2cm dia ferrite on the earth too. This was done on the wire to the earth socket...

CONCLUSION
This is a useful addition to my kit when I put on ham demo station. I always use an RF earth (clipped on local radiators or an outside stake) if I am using just a random wire aerial.

See also buls on "Reducing Electronic RF QRM" & "Clip on QRM Probe".

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73 de John G8MNY @ GB7CIP