Subject: Passive CW headphone filter

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To: TECH@WW

By G8MNY (Updated Mar 04)
This filter is a plug in adapter that has no batteries but gives very good performance.

The through position attenuator values of 100 & 1200 may need adjusting to suit your Rig & Headphones to have the same loss as the filter.

The 3 tuned circuits are all made from 0.47uF polyester caps & old telecomm bifilar wound line loading coils connected in series to make 88mH. The input & output tuned circuits are series ones matching the low impedance of the LS jack & Headphones. The middle tuned circuit is a parallel one but the coil centre tap has been used as the output load.

The coupling Rs of 3K3 & 1K5 are compromise between bandwidth & loss.

I boxed it up in a small plastic box that was a tight squeeze for the components so they did not need any fixing. The I/P was a short wander lead jack & the O/P was a socket in the box. The holes for the cable, switch & socket, were moulded in with a soldering iron.

In use it will make beacons & CW much easier & less tiring to read. At around 800Hz your ears can resolve about 25Hz in frequency, this filter is much wider & does not have bad ring effects that some narrow filters do.

As this is a post IF filter large signals in the IF bandwidth outside the CW filter bandwidth will affect the Rig's AGC & thereby weaken/modulate signals heard through the CW filter.

Using it takes the hard work out of resolving noisy signals. Switching the filter out on a tuned in weak signal is very impressive!

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73 De John, G8MNY @ GB7CIP
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