

CW Filter – Quick Start Guide

About the filter

The CW filter is an add-on board that is fed audio from the headphone jack of the receiver and then outputs filtered audio to either headphones or powered computer style speakers.

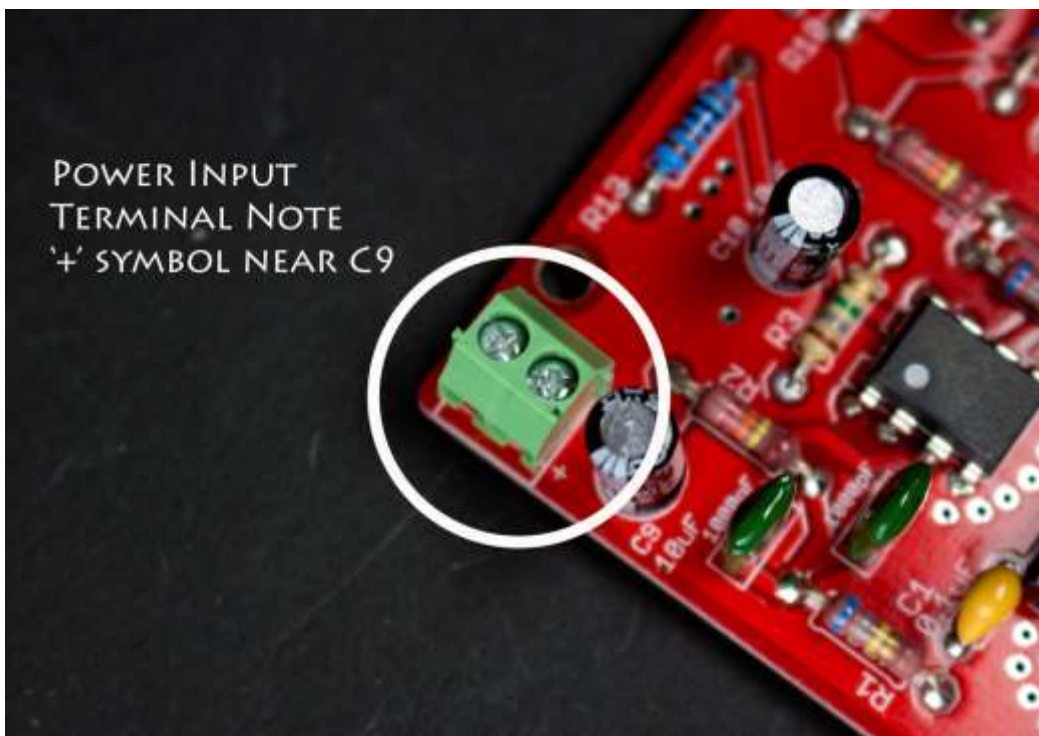
The filter is centered on a 600Hz envelope with a shape factor of 8:1, it is particularly effective at reducing noise, co-channel interfering signals and other QRM. While it will work with modern sophisticated receivers, it is better suited to simpler designs such as direct conversion designs that have limited built in selectivity and are prone to be overwhelmed on crowded bands.

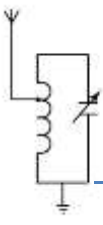
How to deploy

The filter has three connections that need to be hooked up, these are;

1. Power connection – a small screw terminal block is provided for this.
2. Audio in – a 3.5mm stereo jack is provided for this.
3. Audio out – a 3.5mm stereo jack is provided for this.

Power can be supplied via a 9 Volt battery or a DC power supply, whichever way is chosen, the positive lead is attached to the terminal marked '+' that is nearest component C9 on the PCB. See photo below for more on this.



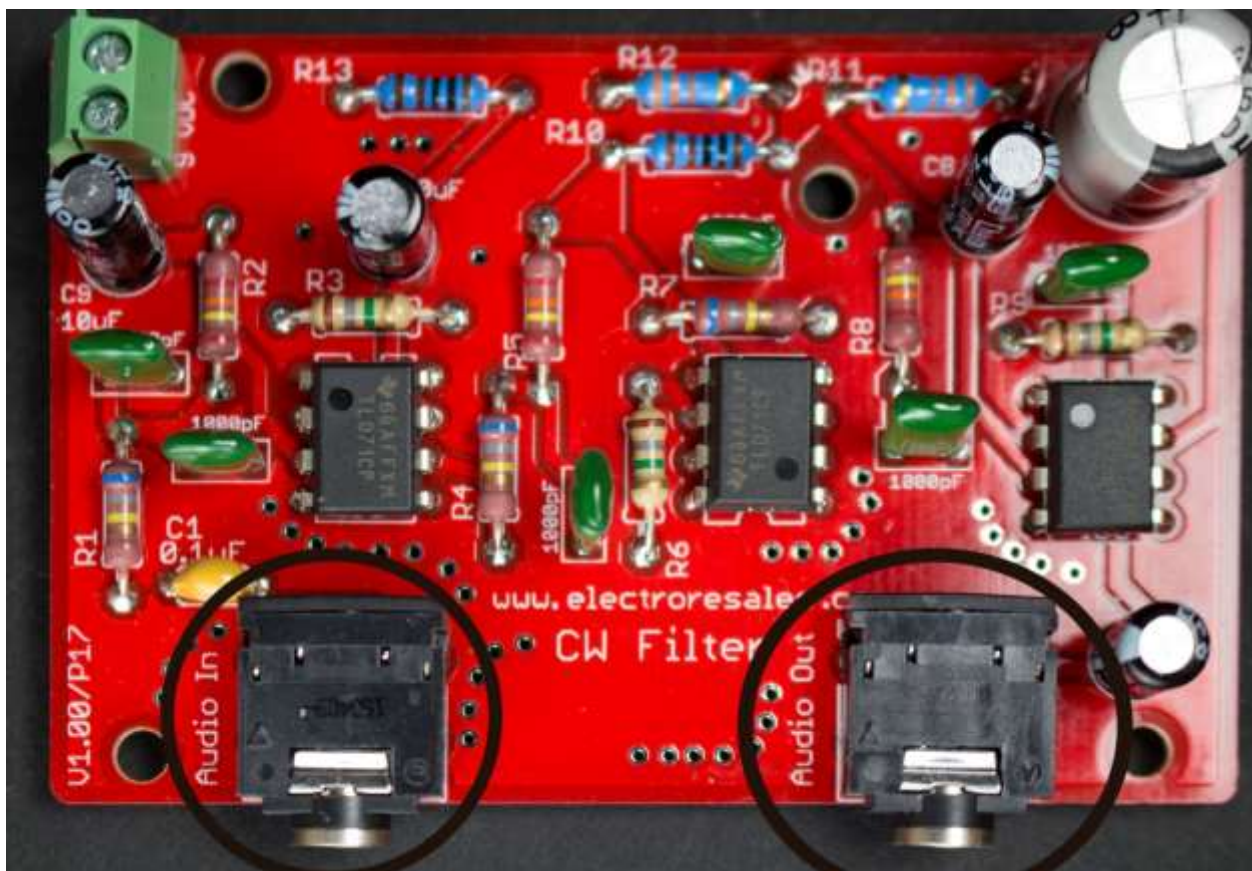


Electro-Resales

Once power connections have been made, an audio cable is required to connect the filter audio in jack to the receiver headphone jack and headphones such as ear buds used with a smartphone can be connected to the audio out jack.

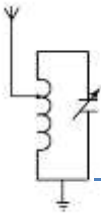
With audio from the receiver feeding into the filter & power applied, audio with a distinct rushing sound should be heard in the headphones.

The photo below circles the input and output jacks;



CW Filter Usage

The filter provides a high level of selectivity due to its sharp 'nose', as such tuning in a signal will be different to the process used to tune without the filter in line. Until you are familiar with the filter it may be best to tune in the CW signal of interest with the filter unplugged, when the CW tone is loudest, introduce the filter to the audio chain and then tune more carefully to bring the signal in.



Electro-Resales

Use of the receivers AF and RF controls will assist in adjusting the filter activity, you may find that more or in some cases less AF gain is needed. The amount of AF or RF gain will depend on the receiver in use, signal conditions (propagation) and signal strength. Adjusting the filter will take a little practice, however, once mastered the benefit of the filter will be fully appreciated.

The small Print

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Any person who constructs or works on electronic equipment may be exposed to hazards, including physical injury, the risk of electric shock or electrocution.. These hazards can result in health problems, injury, or death. Only qualified persons who understand and are willing to bear these risks themselves should attempt the construction of electronic equipment. By purchasing this item, the buyer acknowledges these risks.

There is a risk of electric shock, electrocution, burns, or fires that is inherent in the construction and use of electronic equipment. By purchasing this item, the buyer acknowledges these risks.

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