

THE WORLD BELOW

400 GHz

The Periodical Newsletter of the
WAIKATO VHF GROUP Inc.,
ZL1IS,
PO BOX 606,
Waikato Mail Centre
Hamilton 3240.



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www.zl1is.info

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WAIKATO VHF GROUP EXECUTIVE

President	Alan Wallace	ZL1AMW	07 843 8738
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Committee	David King	ZL1DGK	07 579 9930
Committee	Neill Ellis	ZL1TAJ	07 576 7876
Committee	Kevin Hampshire	ZL1KRH	07 544 5987
Editor	David King	ZL1DGK	07 579 9930

September General Meeting 2015

A General Meeting of the Waikato VHF Group will be held on
Sunday, 20th September, 2015 at 1:30pm
at

St. Stephens Church Hall, corner Ohaupo Road & Mahoe Street, HAMILTON.
Click [HERE](#) to go to a map of the location.

The guest speaker will be Warren Harris (ZL2AJ) who will speak on SOTA
(Summits on the AIR).

Summits on the Air (SOTA) is an award scheme for radio amateurs and shortwave listeners that encourages portable operation in mountainous areas. SOTA has been carefully designed to make

participation possible for everyone - this is not just for mountaineers! There are awards for activators (those who ascend to the summits) and chasers (who either operate from home, a local hilltop or are even Activators on other summits).

So come along and hear what Warren has to tell us about this new activity for radio amateurs.

Non Members and visitors most welcome.

TVI Filters for 2m and 70cm :-

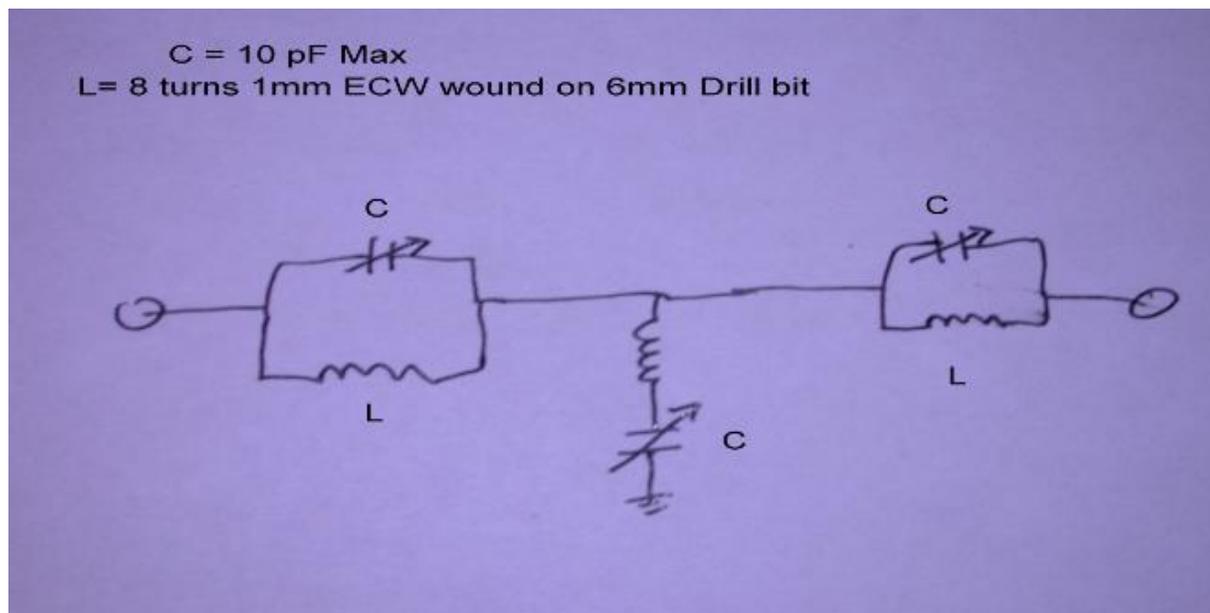
VK3NX - Australian Amateur Radio Station

The TVI filters described below worked very well at my old QTH in suburban Melbourne, in curing a TVI problem on 2m. that I had with a neighbour. The 432 MHz notch is an addition to the basic 144MHz Band-Stop filter.

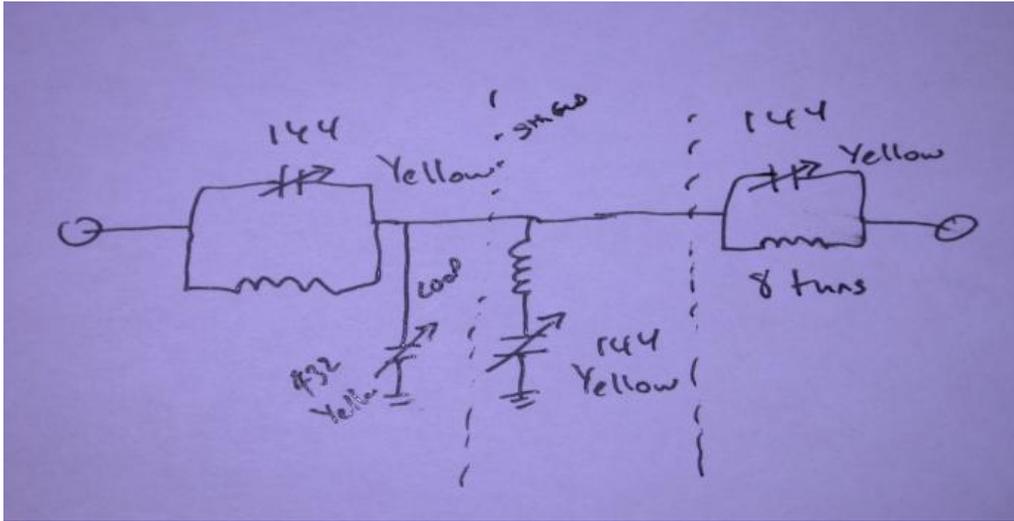
The attenuation in the 2m band was >80dB!! This should cure ANY TVI situation caused by "Front-End Overload". It is important that the filter be placed ahead of any preamplifiers on the TV set. It worked very well for my neighbour's TV set.

Several units were built in diecast enclosures and "tuned" for maximum rejection with the use of a Spectrum Analyser. 75 ohm male and female connectors were used on the input and output so the unit could be "plugged" in-line without the use of an additional "patch lead".

Schematic for 144 MHz



Schematic with 432MHz added



The 432MHz Band Pass tuned circuit consists of a loop of wire as shown below that is tuned with a Yellow "Phillips trimmer" that has a maximum capacitance of 10pF. The wire is approximately 20mm long and sits about 3mm above the ground plane. The 144MHz parallel and series tuned circuits are as above for the 144MHz filter. Placing some shields as depicted in the photographs below increases attenuation because of increased isolation from input to output.

Pictures of assembled units.



<http://vk3nx.com/images/DSCN4186.JPG>

2 techniques are shown: ABOVE: "ugly style" with components soldered directly above a ground plane and BELOW: the main signal path is etched on the PCB. Both methods work equally well at these frequencies. It is important to have the PCB in good RF contact to the "ground" path.



<http://vk3nx.com/images/DSCN4191.JPG>