

## **NARS - December 2020 Roundup !**

Hi all, just a quick recap of December. A frustrating and disappointing month for many, with Christmas as good as cancelled and re-introductions of lockdowns and other measures to try and keep the virus from spiraling out of control. Hopefully you had a good Christmas and new year despite the difficulties.

Not much to report from my station although I did manage to run some new feeders to the antennas up the garden, and received the 12 SSTV images during the 20th anniversary of activity from the ISS.

One article from Mike this month (thanks Mike). No other submissions unfortunately.

This will be the last monthly round up I put together, so if anyone else would like to take it on during 2021 please come forward. If someone does decide to take it on, please send the completed round up to Paul for distribution.

73 Richie.  
MW0LGE

## **Nets and Keeping In Contact**

We have two nets running at the moment, and Zoom on Thursday.

- Tuesday VHF net, 8pm local. 144.700MHz
- Thursday Club Night on Zoom <https://www.gw4ezw.org.uk/zoomdetails/>
- Sunday HF net, 10am local. 3.705MHz +- qrm

## **Other Nets**

- Cwmbran DARS - GB3RT net, Monday 7.30pm
- Cwmbran DARS DSTAR net - DCS 005P, Tuesday 7:30pm
- Cwmbran DARS HF net, 3.722, Thursday 7:30pm
- Carmarthen ARS - 80m ssb, Sunday, 2.30pm, contact GW0JLX on 0776 828 2880
- Bristol ARC - Nets on GB3AC Sun 8pm, Wed 8pm. Fri 7pm



# MW1EHW

## 4:1 Current Balun

Last month I talked about building a 4:1 Current Balun. Experimented with a 1:1 version before going with the 4:1. The ferrites are FT240-31 from <https://hamgoodies.co.uk>, PTFE 18 AWG from Ebay and the design is based on [4:1 Current Balun | M0PZT](#).

Steve (GW4OGO) posted a few video links in the WhatsApp group a few weeks ago which others might find helpful.

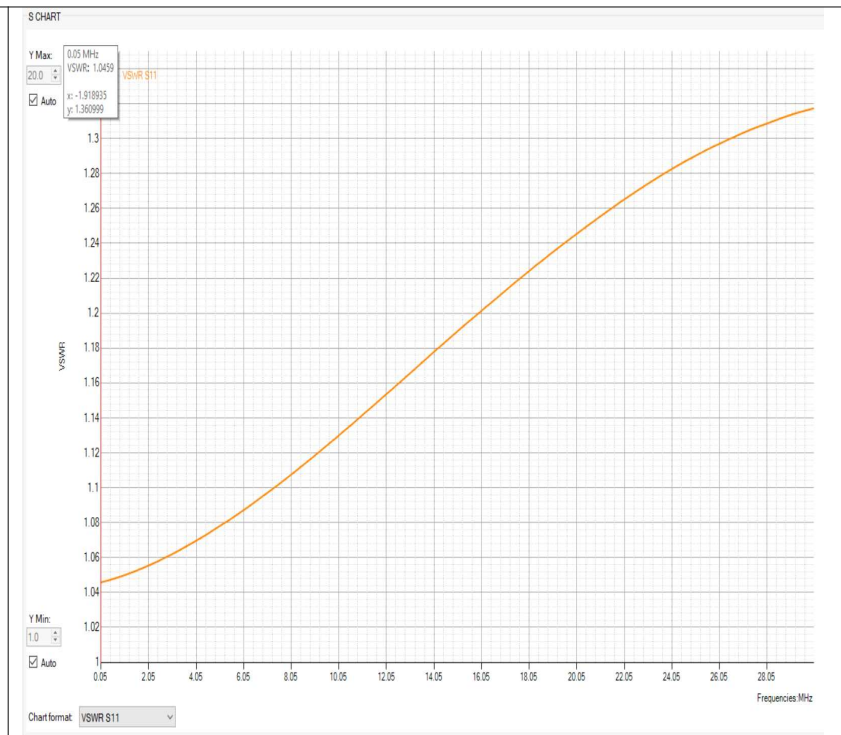
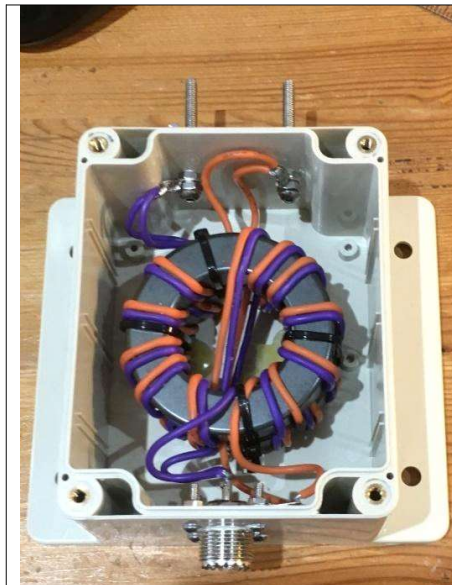
Tried the balun winding method but my SWR was 2.5 at 30 Mhz so going to look at this again another day. I believe it is down to the quality of the wire being able to make 50 Ohms with 12 turns after watching the full video.

#100 Balun PART 1: Broadcast Interference, Common Mode Current and Balun's magic - <https://youtu.be/kMIKfHHR8FY>

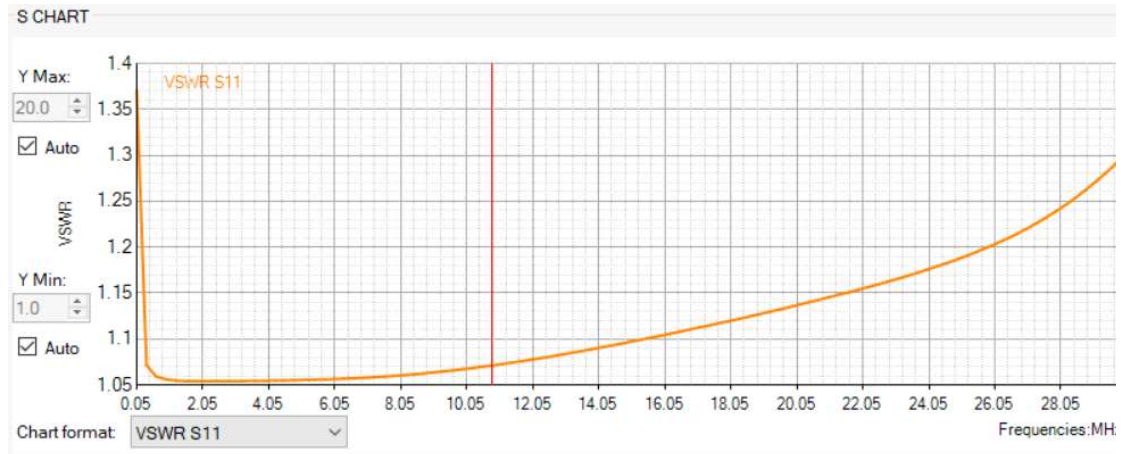
#101 Balun PART 2: Balun's magic and how to wind an effective working Balun - <https://youtu.be/JhAPJISUjB8>

105 Balun PART 3: How to build an effective working 4:1 Balun for 800-watt HF power - <https://youtu.be/P7wW4TtXmc8>

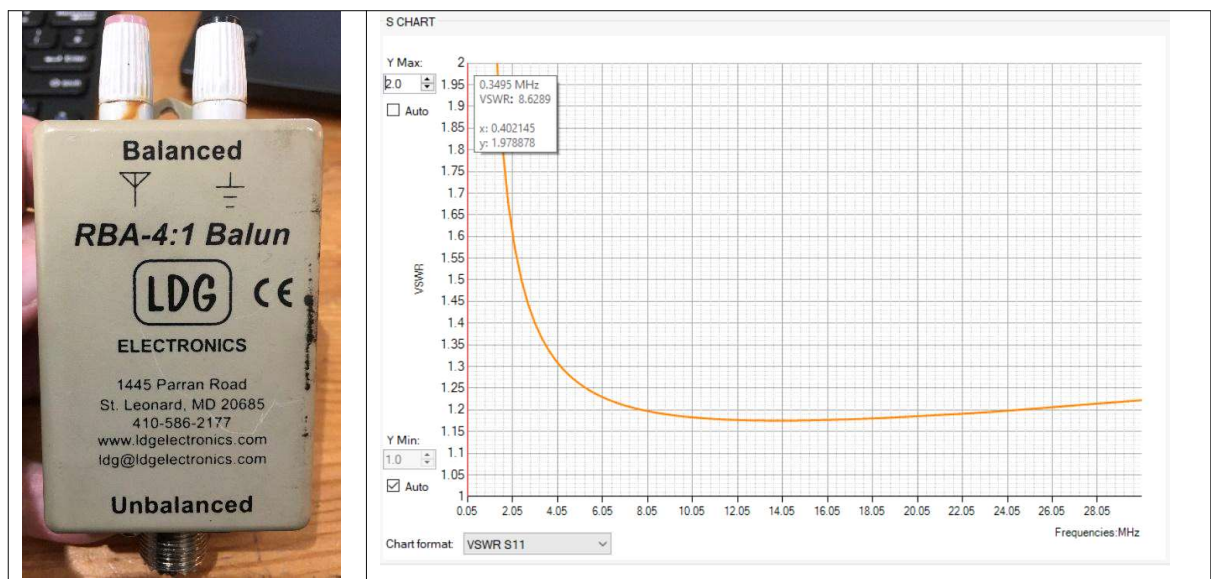
### [1:1 Version](#)



Reconfigured for the 4:1 version by taking one of the purple and orange wires to link together in serials. Unable to find the picture of the modification.



## LDG 4:1 Voltage Balun



## Verdict

Well, it is far from perfect. The SWR is better at the lower frequencies on the homemade balun vs the commercial version but is the other way around at the higher frequencies.

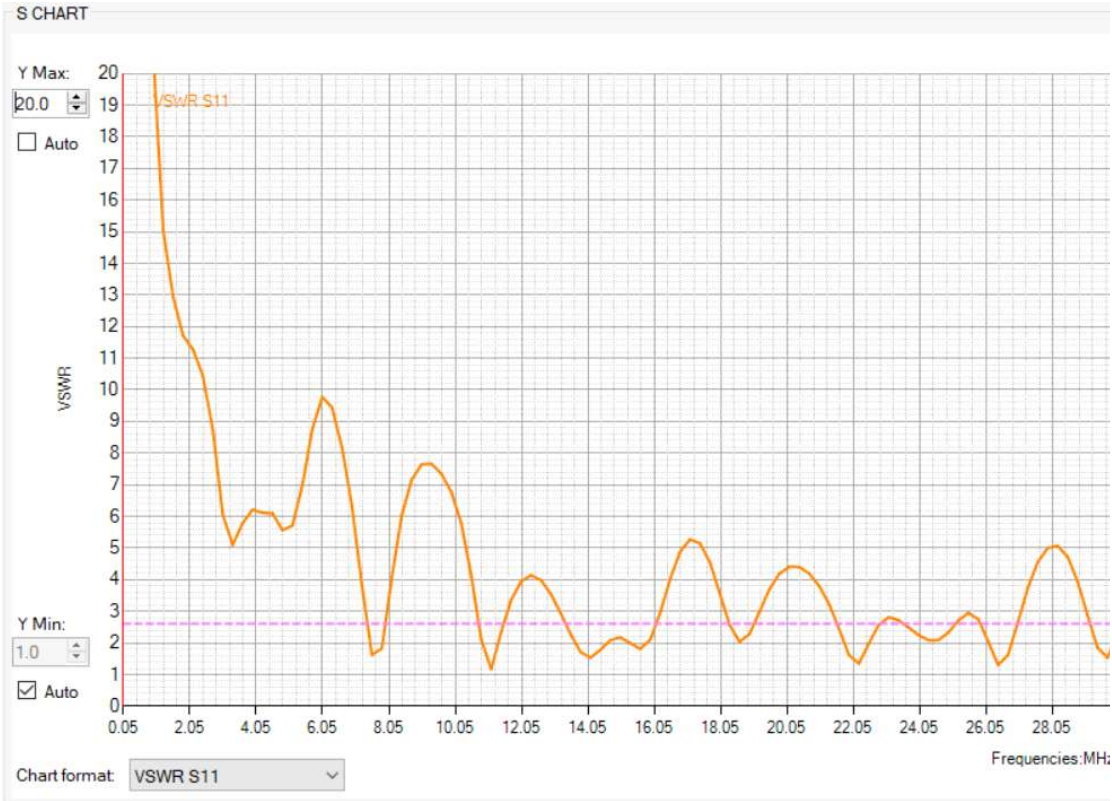
## Antenna changes

Took a number of SWR measurements for before and afterwards.

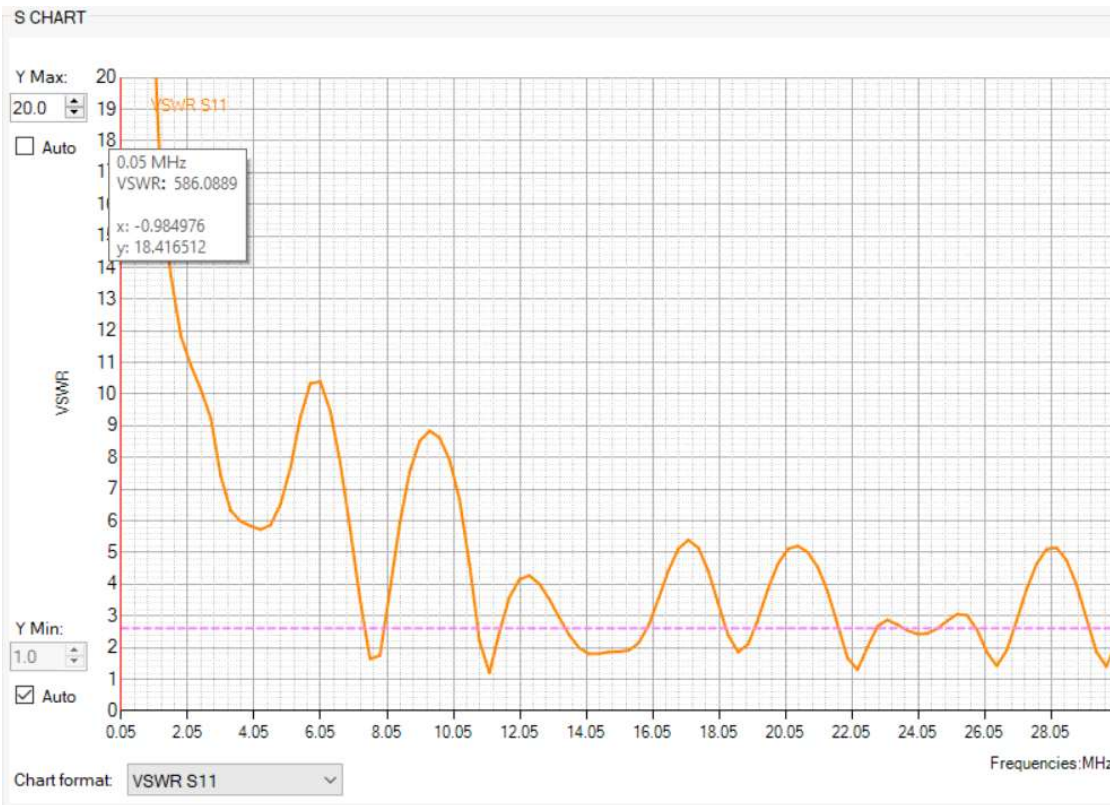
Note: My SWR will vary in wet and dry weather due to using ladder line plus it is partly

laying on the fibre glass roof of the kitchen extension.

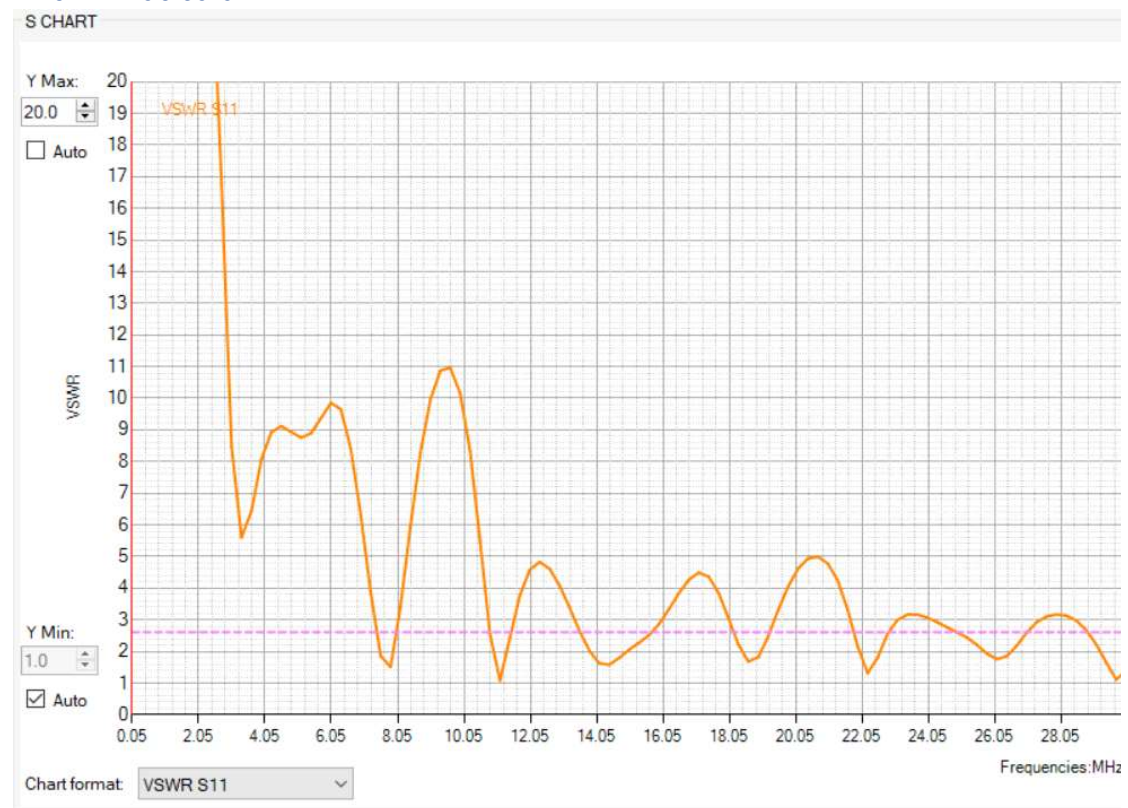
Before in the shack



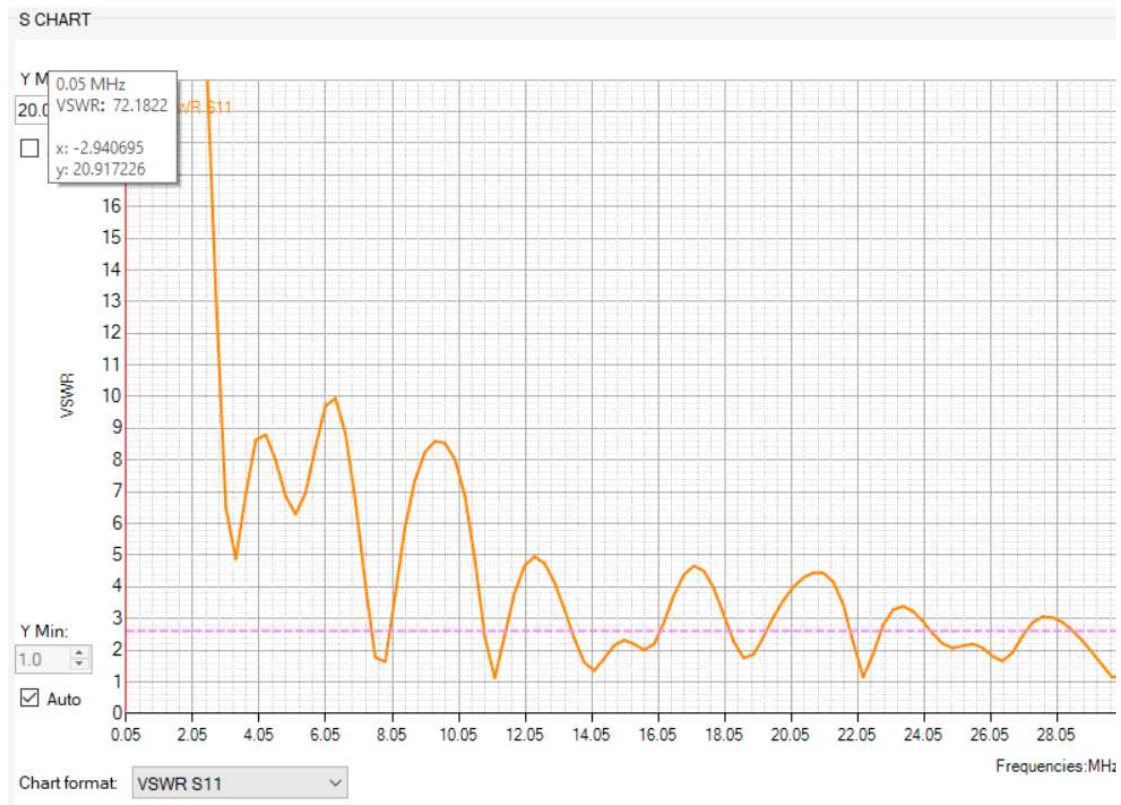
At the LDG 4:1 voltage balun



With 4:1 at balun



4:1 in the shack



## Verdict

Received improved signal reports from the 80m nets on Sunday morning. Completed some on-air testing with Richie (MW0LGE) running 1-Watt power and still received a 5/9. Richie was using his Icom 705 on 100mW and again he was getting 5/9 from myself. Should note that this point we are only about 5 miles apart 😊

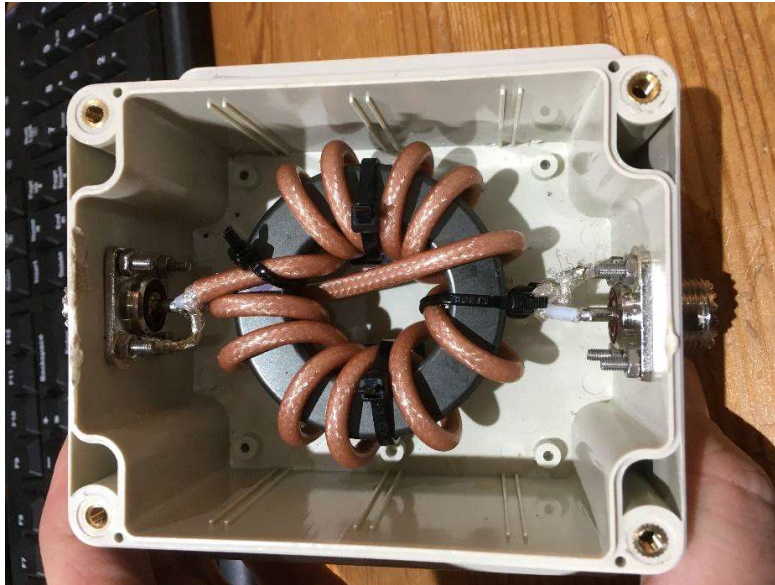
Appears that the SWR has increased greatly on top band (160m) and the 80m has also increased a little. The graphs gave me 3.644MHz with 6.0431 SWR (before) and 6.9248 (afterwards).

When the weather is warmer, I plan to purchase and install an external ATU. This will see the ladder line shorten by a good 3 metres and a longer length of coax (new Ultraflex 10).

Also plan to investigate the PTFE wire and build a second 4:1 current balun to see if I can get a better match at higher frequencies maybe with different ferrite material.

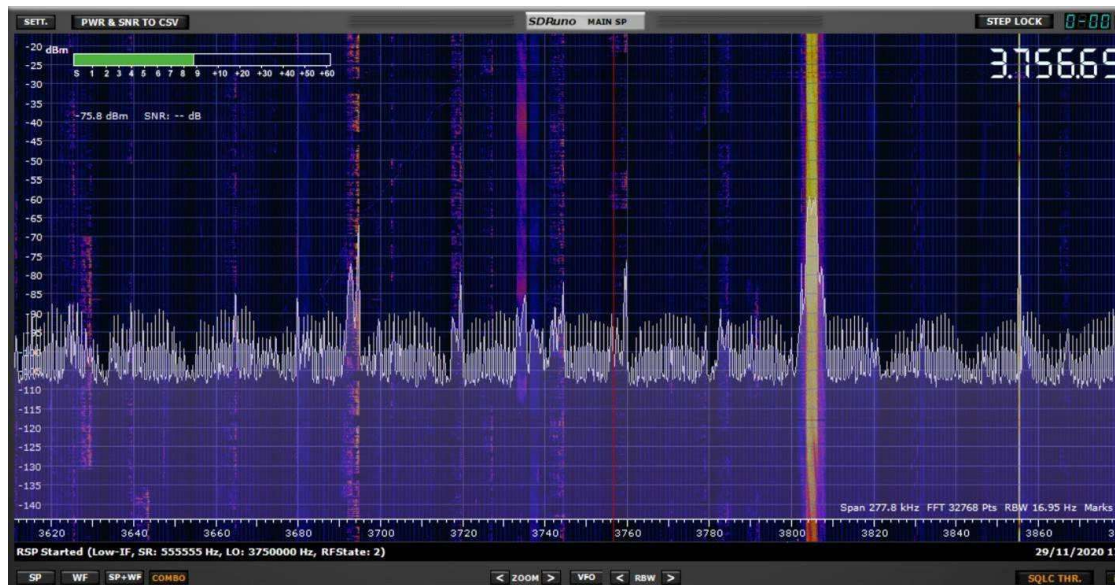
## 1:1 RF Choke

Also worked on building a 1:1 RF Choke for the shack using RG142 cable which is still to be installed.



## Interference

Several of you have heard me talking about my local interference and I promised a screenshot. Below is the output on 80m and the sine-wave type noise.

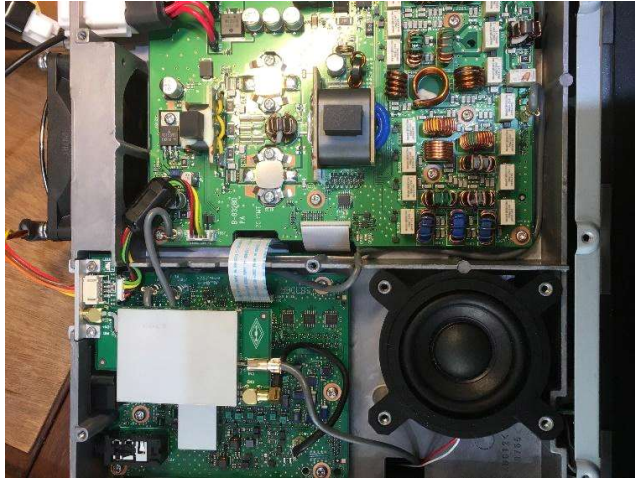


## Ofcom

My Ofcom investigation has been closed as I have been unable to provide problem stations which I cannot work. Not going to give up yet, as I am now reading up on using WSJT-X WSPR to see if that can help me identify weak signals which I cannot work when measuring with another nearby site.

It is not helped by other external interference in my local area which is hiding the VDSL signal in the noise floor and cannot see any differences at the 3.75 MHz guard frequency.

## PanAdapter



The Panadapter is finally installed in my 7300 and will be spending the Christmas and New Year period working as many stations as I can.