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Branch 63 Clubrooms
Park Street, Upper Hutt
Newsletter of The New Zealand Association of Radio Transmitters, Upper Hutt Branch 63, Inc.

ZL2VH Newsletter — May 2015

President's Report

It was disappointing that there were insufficient numbers for the Mid Winter Dinner. Instead there was a decent turnout at the Friday Meeting where John ZL2TWS showed Ham Radio Now episode on how the ARRL promote Ham Radio and a slide show of his recent trip to Dayton Hamvention. A lot of lively discussion ensued, with one result is that branch 63 is now on Facebook! https://www.facebook.com/groups/1606806442913475/ All members are welcome to join !

We are always looking for articles to fill the pages of newsletter. Please forward anything no matter how large or small to the editor.

73's and good DX
Simon ZL2BRG
President.

Repeater Update – June 2015

Climie Maintenance
Despite it being mid winter there has been some preparation for the 3cm Beacon Installation with myself, John ZL2TWS and Mike ZL2NSA going on site Mid week to prepare the wifi-pole for the upcoming 3cm beacon installation, also did some work work for the new 6m Dipole antenna that John and Phil ZL2HF are building for the 53.395 6m repeater

3cm Beacon

Currently on soak at ZL2BRG QTH. Installation is planned for late June/July

Repeaters

1292 23cm

On AIr

860 Dstar

On Air.

5425 DStar

On Air

730 2m FM Repeater

On Air

53.950 6m FM Repeater

Apart from the occasional Interference which is keeping open the receiver is Performing excellently.

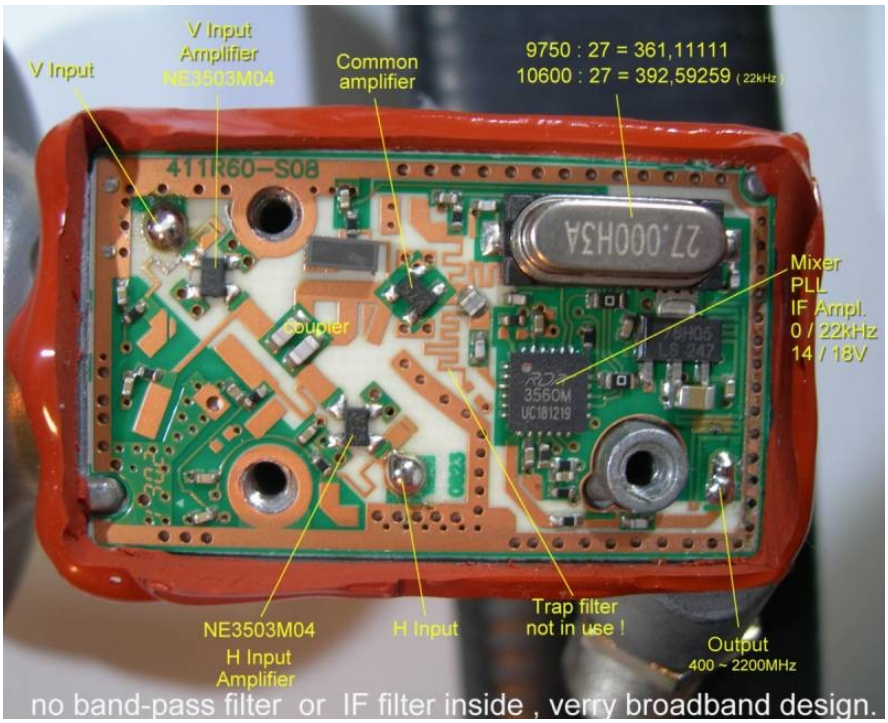
Getting Started on 10GHz

Up until very recently building hams wanting to get started on 3cm by building a receiver would have been looking at a relatvly expensive and / or time consuming project.

That changed recently when a new type of low cost dvb-s satellite Low noise Block has became available. Costing around $30 NZ these are good enough to to receive ssb, cw and JT4 signals on the 10Ghz band . With one even being used to receive some signals off the moon.

The key to the performance of these LNB's is that they use a crystal controlled PLL locked local oscillator (instead of DRO's) and with a reciever front end without the usual band pass filter allowing it to cover the 3cm ham band.

Brands Tested include Octagon Optima Single and dual PLL LNB available via ebay and Avenger PLL321S-2 which is available directly here in NZ via trademe or direct from Amiko NZ.



The 10368 Mhz band is downconverter to 618 Mhz this brings the output within the range of many scanners, or with the ubiquitous RTL-SDR Dongle, which makes a excellent 3cm SDR setup. The lnb is powered by 12v dc up the center conductor of the coax, I made a simple bias-t with an 20db attenuator to reduce the signal to the receiver.

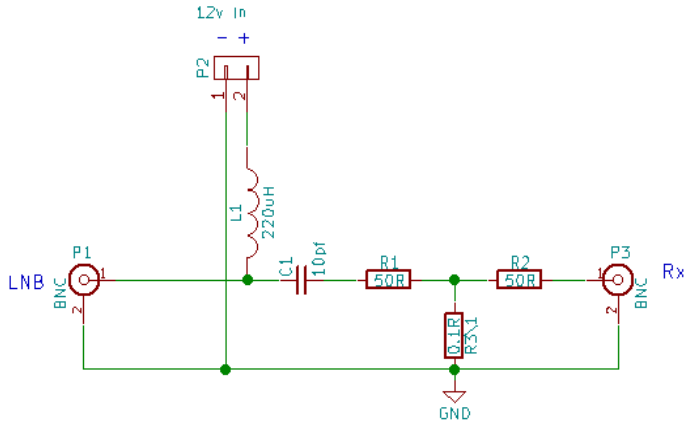


Illustration 2: LNB bias-t Interface schematic

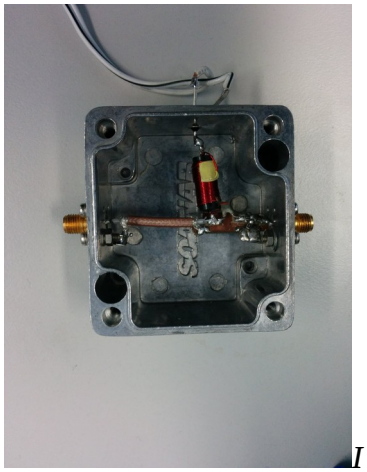
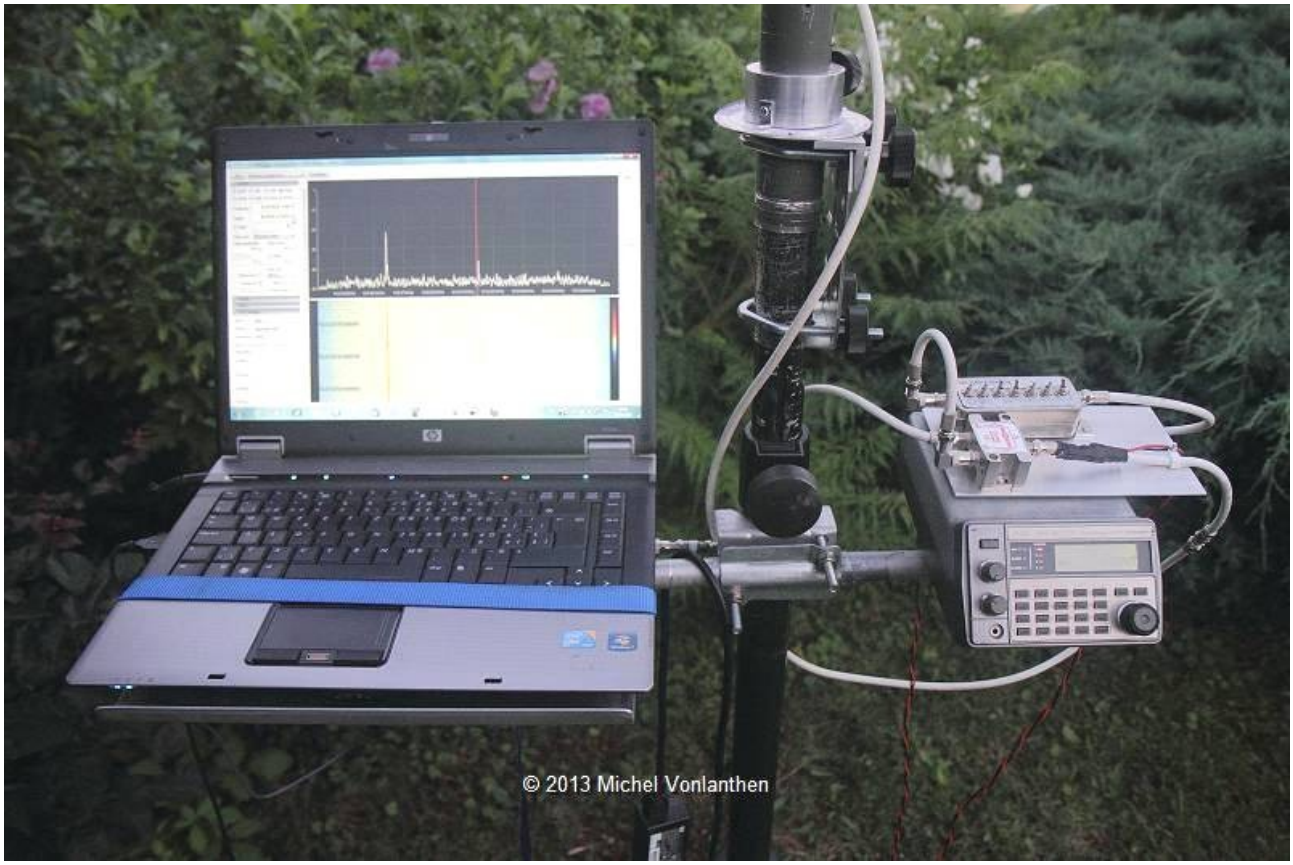


Illustration 3: Bias-t construction

Illustration 5: Avenger lnb

Illustration 4: Avenger lnb without covers

Running off 12v DC the lnb's draw 160mA and when installed in a old 60cm sky satellite dish the receiver can easly detect sun / ground background noise. Stablilty once the lnb has warmed up is easily sufficient to receive ssb / cw and using wspr to decode the ZL2VHX Climie 3cm beacon. Greater stability can be acheaved by removing the 27Mhz Crystal and feeding in a high stablility reference.
In all a excellent and simple introduction to 10Ghz.



Links:
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