



## Newsletter January 2019

- Some interesting projects from across the ditch by ZL2PD.  
<http://www.zl2pd.com/index.html>
- An introduction to Home Brewing for Hams by WB8ZCC. References, tools and resources etc. <http://www.wb8zcc.com/wp/homebrew-how-to/>
- Home brew your own inductors (air core)  
<http://www.arrl.org/files/file/Technology/tis/info/pdf/9708033.pdf>
- Some ideas to build over the holidays.  
<http://homepage.eircom.net/~ei9gq/homebrew.html>
- A cheap 0-10MHz frequency reference for just a few \$'s, accurate but noisy.  
[https://sites.google.com/site/g4zfgradio/u-blox\\_neo-6-7](https://sites.google.com/site/g4zfgradio/u-blox_neo-6-7) Not suitable as a VFO!
- Lead free Solders and other alloys beyond 60/40 and 63/37 by Kester.  
<https://www.kester.com/Portals/0/Documents/Knowledge%20Base/Alloy%20Temperature%20Chart.pdf> And some problems of their use.  
<https://groups.io/g/QRPLabs/topic/28042912> and other alloys from Multicore.  
<http://www.farnell.com/datasheets/315929.pdf>
- You won't need a metal detector to find "Gold" here.  
<http://www.af4k.com/hamlynx/hamhomeb.htm>
- An interesting CW/RTTY add on for your rig to build or home brew using off the shelf software or pre-installed for you.  
[http://mortty.info/wp-content/uploads/MorttyV3Manual\\_v1.09.pdf](http://mortty.info/wp-content/uploads/MorttyV3Manual_v1.09.pdf)
- Yet another quick easy light weight antenna for the portable user. An ATU may be required for some rigs/bands. [http://wa3wsj.homestead.com/UP-Outter\\_BW\\_Mini.html](http://wa3wsj.homestead.com/UP-Outter_BW_Mini.html)
- Understanding logic architecture choices in digital devices. (part 4 ) is now available.  
[https://www.nutsvolts.com/magazine/article/understanding\\_digital\\_logic\\_ics\\_part\\_1](https://www.nutsvolts.com/magazine/article/understanding_digital_logic_ics_part_1) and more..
- Understanding Phased Array antennas.  
[https://www.nutsvolts.com/magazine/article/how-phased-array-antennas-work?utm\\_source=hs\\_email&utm\\_medium=email&utm\\_content=67600469&\\_hsenc=p2ANqtz-8HsB1wflWtS3UO8neNi6HZuDw3xn\\_pkqj-Aje3hMVH2V9bnALjqEeRoSL5FmuWUs7ZvSPI3t6IYXTahZkk2TlCfx5mBQ&\\_hsmi=67600469](https://www.nutsvolts.com/magazine/article/how-phased-array-antennas-work?utm_source=hs_email&utm_medium=email&utm_content=67600469&_hsenc=p2ANqtz-8HsB1wflWtS3UO8neNi6HZuDw3xn_pkqj-Aje3hMVH2V9bnALjqEeRoSL5FmuWUs7ZvSPI3t6IYXTahZkk2TlCfx5mBQ&_hsmi=67600469)
- From "DuWayne's Place" blog <http://kv4qb.blogspot.com/?wref=bif> an audio frequency generator (50Hz to 4500Hz) and other projects.
- Bi directional couplers and bridges included in the latest Magazine from AnalogDialog.  
<https://www.analog.com/media/en/analog-dialogue/volume-52/number-2/volume52-number2.pdf> page 27.

- Looking for something to build over the Holiday period? Many Kits are listed here. <http://fofio.blogspot.com/2015/07/radio-kit-guide.html>
- A Stocking filler for Christmas may be this book. <https://www.elektormagazine.com/news/ltpice-simulator-book> for anyone interested in Circuit Simulation and learning Spice.
- Portable power options for SOTA, Field Day and other uses. <http://www.k0nr.com/wordpress/2018/11/my-sota-battery-journey/>
- An Arduino based single port VNA for HF using the F4GOH Project by Anthony. <https://radio.g4hsk.co.uk/projects/an-arduino-based-vector-network-analyser/>
- For the adventurer, (a work in progress at the moment) from the radioartisan@groups.io Digest #228 of November 27, 2018 - (message 2) Dan KW4TI is designing a 2 port VNA based on the STM32F103C8T6 Bluepill Module, <https://github.com/profdc9/VNA> The software is not yet finalized so wait a little before committing to it.
- A 1/12 wave impedance matching transformer by Darrel AA7FV originally published in QST. <https://www.cv.nrao.edu/~demerson/cs/twelfth.htm> and the full technical article (22 pages) [http://www.physics.princeton.edu/.../e.../impedance\\_matching.pdf](http://www.physics.princeton.edu/.../e.../impedance_matching.pdf)
- And yet another 2 port VNA, 1MHz - 6GHz. [http://www.yl3akb.lv/content/vna\\_v2/vna\\_v2.php](http://www.yl3akb.lv/content/vna_v2/vna_v2.php)
- Improving the homebrew VNA <http://hforsten.com/improved-homemade-vna.html> and also <https://www.geeky-gadgets.com/two-port-vector-network-analyzer-20-10-2017/>
- New Product guide from MiniCircuits for Q2 and Application Notes. [https://ww3.minicircuits.com/pdfs/New\\_Product\\_Guide\\_Q2\\_Final\\_Web.pdf](https://ww3.minicircuits.com/pdfs/New_Product_Guide_Q2_Final_Web.pdf) [https://ww3.minicircuits.com/applications/application\\_notes.html](https://ww3.minicircuits.com/applications/application_notes.html)
- Another project from Antony F4GOH, a DMR Hotspot to build. <https://hamprojects.wordpress.com/2018/11/30/hotspot-dmr/>
- 14 Alternatives to the Raspberry Pi from a few dollars to some capable of running Windows 10 and other OS's. <https://www.zdnet.com/pictures/here-are-the-best-raspberry-pi-single-board-computer-alternatives/?ftag=TRE5575fdc&bhid=24184293582875430816628108888270>
- Hot Iron # 102 is now available from G6NGR, a 53 page pdf publication.
- You can do EME on a Budget? [http://history.k4lrg.org/Projects/K4MSG\\_EME/](http://history.k4lrg.org/Projects/K4MSG_EME/)
- From the NAQCC December News Letter pages 3 & 4, a portable transmitting loop antenna for QRP operation. [http://www.naqcc.info/newsletter\\_current\\_lores.pdf](http://www.naqcc.info/newsletter_current_lores.pdf)
- CloudLog on a Pi zero by Alex G7KSE for any OS user. <http://g7kse.co.uk/cloudlog-on-a-rpi-zero-w/>
- For educational use only - an ECG project from Scott Harden in the simplest form. <https://www.swharden.com/wp/2016-08-08-diy-ecg-with-1-op-amp/> uses your sound card and Python to display the wave forms on your PC operating system of choice.
- From Owen Duffy, a power meter based on the AD8307 module for -75dBm (the noise floor) to +15dBm. The units are dBm at the SMA input, but they could be dBA with a suitable current probe, or +xx dBV/m with a field strength sense antenna. <https://owenduffy.net/blog/?p=12447>
- A preview of the proposed qrp-labs QSX multi band transceiver features including a filter alignment tool, a Spectrum Analyser style display. <http://www.qrp-labs.com/qsx.html> and a youtube explanation - <https://www.bing.com/videos/search?q=youtube+qsx+by+Hans+&view=detail&mid=FF79E1DC28226C533F69FF79E1DC28226C533F69&FORM=VIRE> and more in

<https://www.bing.com/videos/search?q=youtube+qsx+by+Hans+&&view=detail&mid=356FB10D9B7BE4EF1B6B356FB10D9B7BE4EF1B6B&rvsmid=FF79E1DC28226C533F69FF79E1DC28226C533F69&FORM=VDMCNR> the costing is not final but hoped to be in the sub \$150 range for all HF band, multi mode stand alone unit - no PC required.

- A book for your shelf in the Shack.  
<http://www.hanssummers.com/images/stories/k6lha/Basics.pdf> 900 pages of reference material to assist in designing RF devices.
- "Crystal Sets to Sideband" the book by Frank W. Harris, KØIYE. 400 plus pages as an "e-Book" [https://ve3ips.files.wordpress.com/2017/05/csts\\_book.pdf](https://ve3ips.files.wordpress.com/2017/05/csts_book.pdf)

We hope you and yours have a great Christmas Season and a Happy New Year.

Ian VK3LA  
[vk3la@wia.org.au](mailto:vk3la@wia.org.au)