Official Bulletin

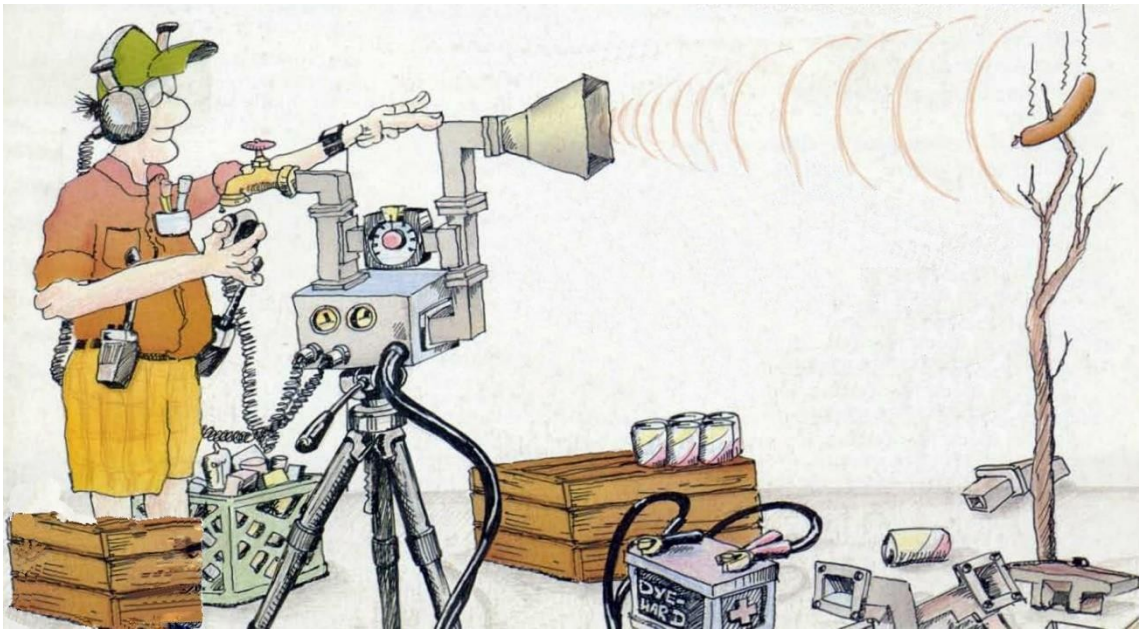
MHz to GHz

The West Australian VHF Group Bulletin

August 2016

THE WEST AUSTRALIAN VHF GROUP (INC)

PO BOX 189 APPLECROSS 6953



Contents

1. Editor's Comments

As most amateur radio operators know that the progress in electronics is amazing and the digital communications is expanding at a very fast rate. Typically the increase in digital voice, digital weak signal comms is a reality. Behind most of these systems is either a trustee PC or a microprocessor. Small powerful microprocessors such Raspberry Pie or Arduino units are readily available from electronic stockists. Check out the websites listed in **section 4**. There are wide range tools & accessories combined with the intellect and know how the amount of AR community is ever increasing. In the coming months a number of microprocessor projects is be considered for members. As a reader do you have suggestions or a project that club members would appreciate building? More submissions from members would be appreciated. There is only 4 months to go before next edition of the magazine.

2. From the President's Desk Terry VK6ZLT

Well, 2016 has certainly started out with a flurry of activity continuing since the advent of the 1st Saturday in the month as an afternoon of shack and project work at Wireless Hill Operators Cottage. Well done all. A special **WELL DONE** goes to Alan VK6AMH in conjunction with

Denis VK6AKR who organised the John Moyle Field day session at Wireless Hill. Results are in and VK6VH came in fourth in the portable six hour competition.

Would members consider submitting proposals as to what they consider would be a suitable activity for the benefit of all members?

3. Tribute to Bob VK6ZFY (SK).

It is with a sad heart to announce that Bob Pine VK6ZFY became a silent key on Saturday 2nd July

Before he had an Amateur Radio licence, Bob was an avid Model aircraft builder/flyer along with Tony Howes VK6XP, Ross Tolchard VK6ZED/VK6KAT, Graham Byass VK6BY and possibly others. It seemed to be a natural progression from building their own radio controlled aircraft equipment before such things were commercially available, into the world of amateur radio.

Bob obtained his amateur radio licence in 1965 and was very active on 144 and 432 MHz ssb. He was one of the original instigators (approx. mid 1970's) of the Perth 144 MHz SSB Evening Net and also regularly participated in early morning skeds on 2m and 70cm with stations in South West WA.

He achieved many Interstate and Overseas Sporadic E contacts on 52MHz and later on 50MHz, and participated in 6m Meteor Scatter skeds with VK5 stations.

Bob was passionately involved with the early OSCAR Satellites, and also copied signals from the 137 MHz NOAA

Weather Satellites to produce weather image information.

He achieved a 10GHz contact between Cape Naturaliste and the hills above Harvey using surplus Tellurometers.

He was still making nightly contacts on 144 MHz until a week or so, prior to his death, at the age of a month short of 96 years

Bob served in the RAAF in World War II. He lost an eye and had a pronounced limp as he walked. These did not hold him back. He was a surveyor and these skills helped him when working portable and calculated the distance of contacts and determining grid locators.

In retirement, his interest in gemmology took him to many inland places in the search for marvellous stones. On these trips he operated portable and provided many long haul 144 MHz contacts! These provided an opportunity to build up Grid Locators and show propagation over land in contrast to experiences with overwater paths.

Bob Pine gave so much to the WA VHF Group over the years. He was President in 1980-81 and Secretary from 1987 to 1996.

Thanks Bob!!!

Vale Bob

Wally Howse VK6KZ

Thanks to Phil VK6ZKO, Glen VK6IQ, Terry VK6ZLT, Ian VK6TWJ and Graham VK6RO who contributed to this tribute!

4. Microprocessors for Amateur.

DDS sig gen 1 Hz to 60MHz.

http://www.vk5tm.com/homebrew/dds/dds.php

VHF/UHF Sig Generator

http://www.dxzone.com/catalog/Technical_Reference/Test_Equipment/Signal_Generator/

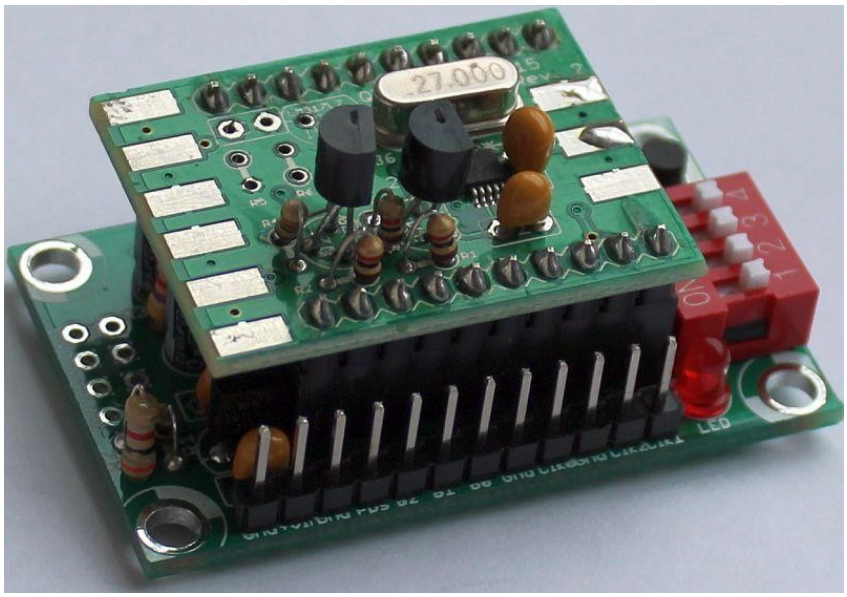
Arduino based Antenna analyser

http://www.dxzone.com/catalog/Technical_Reference/Vector_Network_Analyzer/

http://www.dxzone.com/catalog/Technical_Reference/Arduino/
Selection

5. Kits and DIY equipment.

Recently Bob VK6KW bought a number of **ProgRock - triple GPS-disciplined programmable crystal.**



This kit is a simple minimalist controller for the Si5351A Synth kit (included with the ProgRock kit). It is intended as a programmable crystal replacement. It has three independent outputs with frequency range 3.5kHz to approx. 300MHz, and can be optionally **GPS disciplined**.

The features of this kit are as follows:

Includes Si5351A Synth kit AND "ProgRock" PCB kit

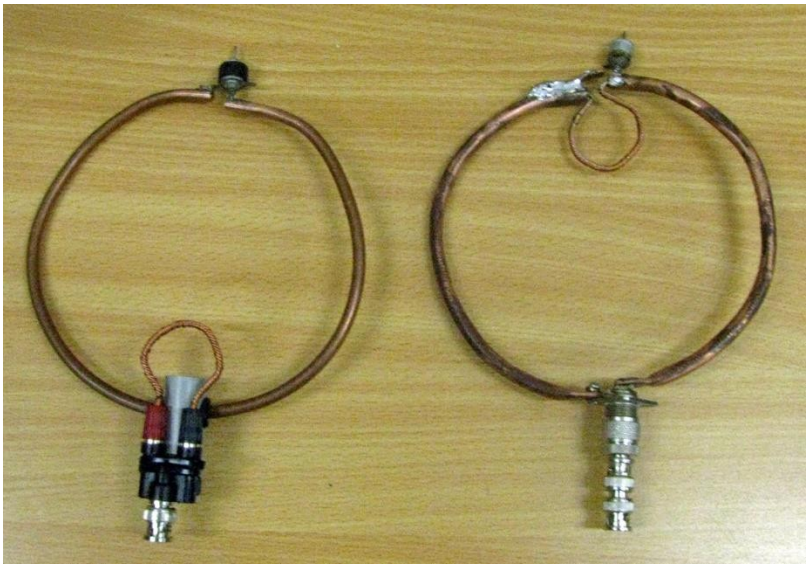
- Easy construction, no surface-mount components to solder (Si5351A already pre-soldered)

- 3 independent 3.3V p-p square wave outputs (2 if you use GPS discipline)
- You can feed the outputs through LPF kits to get sinewave outputs
- 8 selectable “banks” of frequencies, chosen by 3 input control signals
- Frequency range 3.5kHz to 200MHz
- Extended frequency range up to approx. 300MHz if you don’t mind violating the Si5351A datasheet specifications
- GPS frequency discipline using 1pps from a GPS receiver
- Unique power supply noise filter circuit designed by Alan Gray G8LCO
- Power supply voltage 5V, or using LM317LZ regulator (supplied), range is 5-12V DC
- Minimalist configuration user interface using 4-way DIP switch, push button, and LED
- Frequencies and configuration stored in non-volatile memory (EEPROM) for next power-up

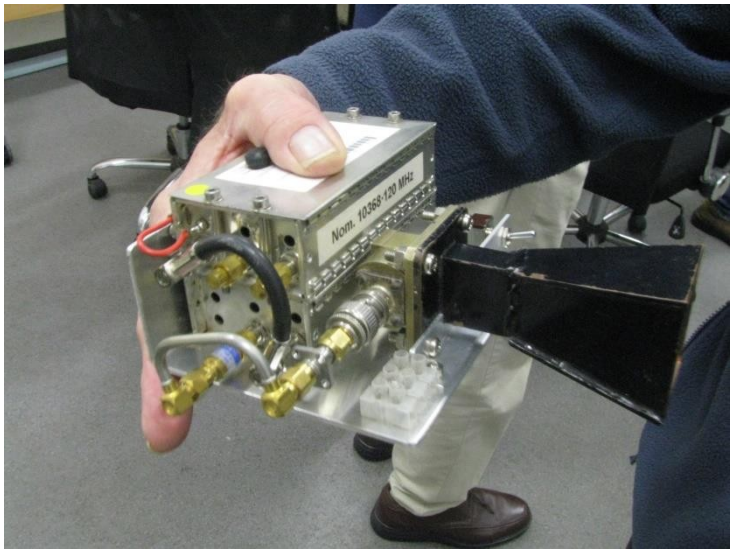
Check out http://www.qrp-labs.com/progrock.html

DIY is not dead!

Taking a leaf out of the *April 2016 MHz to GHz* Roger VK6FRAN constructed two examples of the 2m magnetic loop antenna which have proved to be very sensitive and superior to the whip antennas on the test portables.



Not to be out done Phil VK6ZKO constructed a 10GHz signal source from surplus UHF Programmable synthesiser coupled to High Stability OCXO module.



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http://www.wavhfgroup.org.au/subscriptions