



*** QDG DIGIPEAT May 2017 ***

Digipeat is the Official Newsletter of the Queensland Digital Group
Incorporating 'Amateur Eye', the Official Newsletter of the
South East Queensland Amateur Television Group

May QDG Meeting

The Next QDG general meeting will be held on Friday May 19 at the **Chermside Library**.
Doors will open at 7:00pm for a meeting start of 7:30pm.
If the door is closed please try the buzzer or phone Alan 0401 716 778

Editorial

Change of meeting venue back to the NEW Chermside Library

Due to popular demand, the QDG meetings are moving to the new Chermside Library from the April meeting.

This means I will be looking for members to share picking up the access card and a supper person for each month.

SEQATV group and QDG helping with the Q-Tech talks, please see the information later in Digipeat.

Alan VK4NA

Fldigi v4.0.4 now available

The hard-working development team led by W1HKJ have announced the release of Fldigi v4.0.4. This version of Fldigi is a maintenance release with a couple of bug fixes, performance improvements and several new features.

<http://qrznow.com/fldigi-v4-0-4-now-available/>

KiCad EDA

A Cross Platform and Open Source Electronics Design Automation Suite
Schematic Capture, PCB Layout and 3D Viewer.

KiCad is free software. KiCad is made available under the GNU General Public License (GPL) version 3 or greater.

<http://kicad-pcb.org/>

DESIGNSPARK

Mechanical Software, Electrical Software, PCB Software and Obsolescence Manager

<https://www.rs-online.com/designspark/home>

windscribe VPN

Browse the web privately as it was meant to be

Your online privacy is under attack.

Windscribe sets you free.

<https://windscribe.com/>

QB50 CubeSats to deploy from ISS



The first phase of QB50 CubeSats should be deployed from the International Space Station over three days May 16-18, 2017.

<https://amsat-uk.org/2017/05/12/qb50-cubesats-iss-deployment/>

How to securely erase any hard drive, SSD, flash drive, iPhone, iPad or Android device

Here's everything you need to know about securely wiping hard drives (HDDs), solid state drives (SSDs), flash drives, and even iOS and Android devices

<http://www.zdnet.com/pictures/how-to-securely-erase-any-hard-drive-ssd-flash-drive-iphone-ipad-or-android-device/>

Top 10 Amateur Radio Uses for the Raspberry Pi

The Raspberry Pi has proved to be a phenomenal hit with hobbyists around the world. Originally conceived to get children into computer programming, it was quickly adopted by hobbyists due to its cheap price and GPIO output pins. Indeed, initial demand was unprecedented and supplies were limited for some time after launch and this still continues after each new version is released.

It didn't take long for the Amateur Radio community to see the potential in this little computer and sure enough we're starting to see some really interesting uses coming to the fore.

<http://www.hamblog.co.uk/top-10-amateur-radio-uses-for-raspberry-pi/>



Amateur Radio Operator
<http://www.vk2byi.com.au/>

VK2GOM Ham Radio & SOTA Blog

<https://vk2gom.wordpress.com/>

HP laptops covertly log user keystrokes, researchers warn

Audio driver supplied by Conexant may put PCs from other makers at risk, too.

<https://arstechnica.com/security/2017/05/hp-laptops-covert-log-every-keystroke-researchers-warn/>

LinkedIn Engineering

TrafficShift: Load Testing at Scale

LinkedIn started as a professional networking service in 2003, serving user requests out of single data center. For any internet services company, availability is a key factor in its success. In any internet architecture, a lot of things can go wrong at any given time; network links can die, power fluctuations can knock out entire racks of servers, or you could release bad code. In the face of adversity, keeping LinkedIn up and always running is a challenging task.

<https://engineering.linkedin.com/blog/2017/05/trafficshift--load-testing-at-scale>

Why Windows must die. For the third time

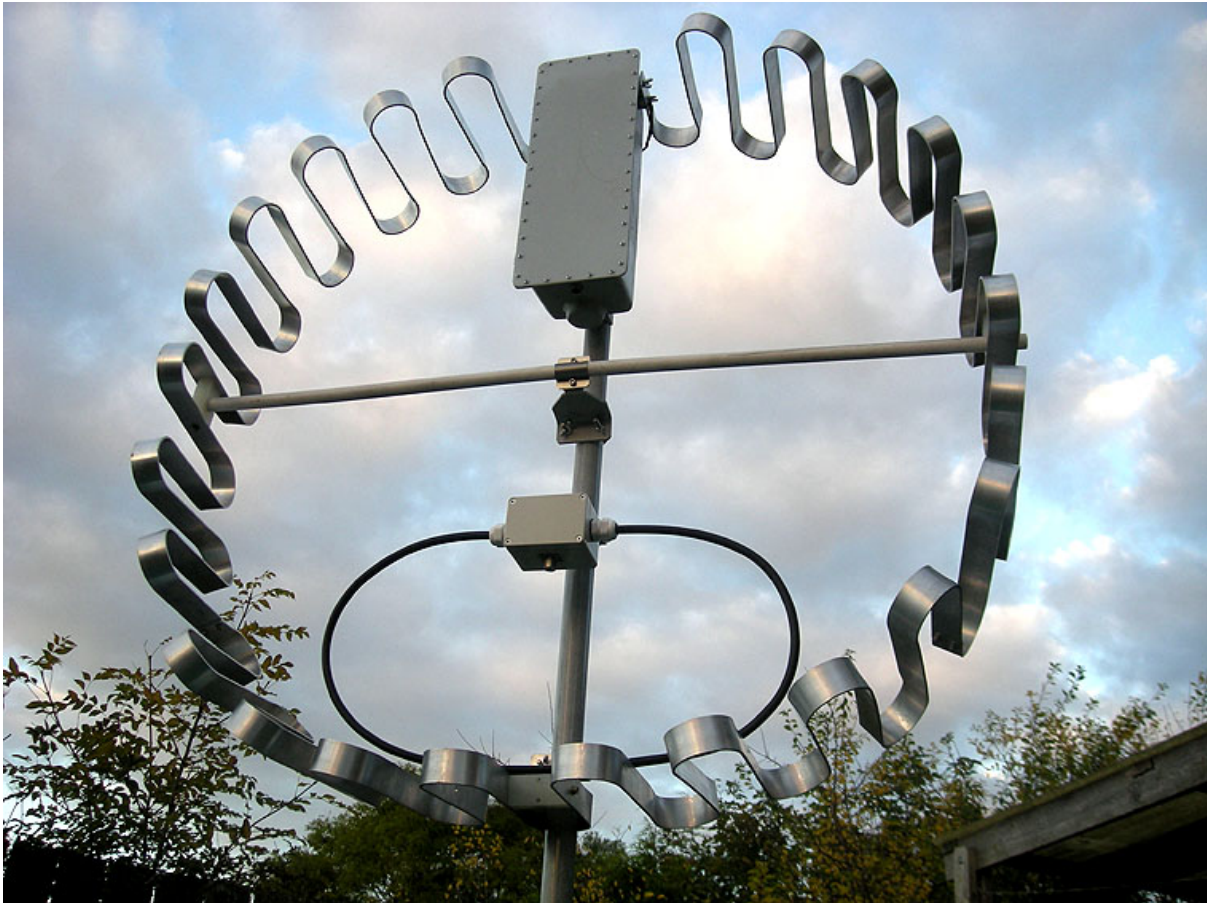
Microsoft knows Windows is obsolete. Here's a sneak peek at its replacement.

<http://www.zdnet.com/article/why-windows-must-die-for-the-third-time/>



Latest news and alerts

<https://www.scamwatch.gov.au/>



Fractal reduced size magnetic loop antenna

Reduced size 3 times than conventional magnetic loop (size 1.2X1.2-1x1 meter and 70X70cm) Fractal shape make antenna much broader bandwidth up to 120 KHz on 10 meters band Easy tuning slow motion power dc motor with double gears electrically insulated Capacitor Butterfly type 7mm gap between plates make them up to 9KV insulation allowed use up to 400watts power Ridged design easy assembling with size suitable for portable installation also balcony or loft

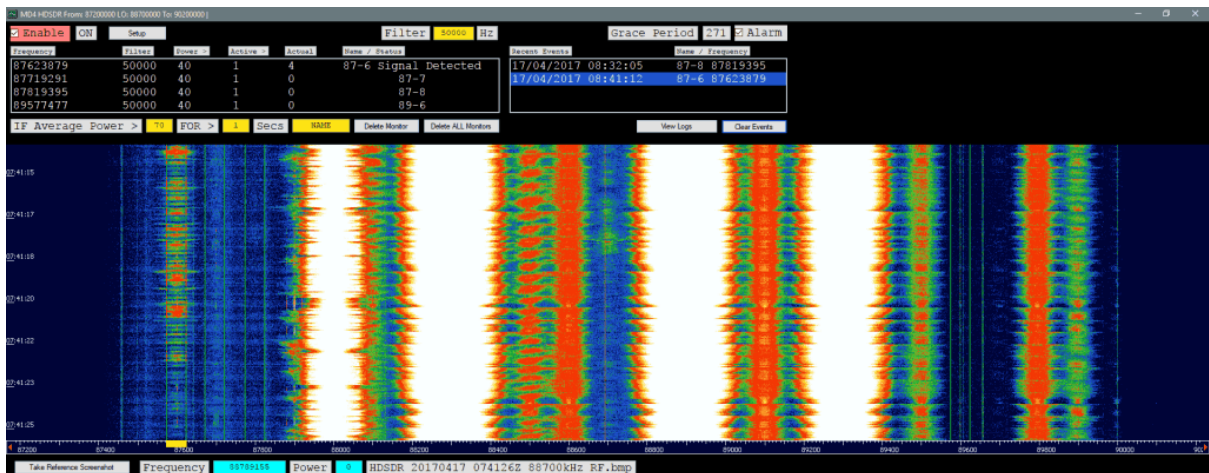
<http://www.mixw.co.uk/Magloop/magloopF.htm>

RTL-SDR.COM

The BIG List of RTL-SDR Supported Software

There are now dozens of software defined radio packages that support the ultra cheap RTL-SDR. On this page we will attempt to list, categorize and provide a brief overview of each software program. We categorize the programs into general purpose software, single purpose software, research software and software compatible with audio piping.

<http://www.rtl-sdr.com/big-list-rtl-sdr-supported-software/>



A Screenshot based Meteor Scatter Detector for HDSDR

Over on our forums Andy (MOCYP) has posted about his new meteor scatter detection program which works with HDSDR and any supported SDR like an RTL-SDR. It works in an interesting way, as instead of analyzing sound files for blips of meteor scatter activity it analyzes screenshots of the HDSDR waterfall. The software automatically grabs the screenshots and determines if a signal is present on any given frequency. You can set a preconfigured detection frequency for a far away transmitter, and if the waterfall shows a reflection it will record that as a meteor.

<http://www.rtl-sdr.com/a-screenshot-based-meteor-scatter-detector-for-hdsdr/>

RADIO AUSTRALIA - A POSSIBLE RETURN?

If you have been following the saga surrounding the closure of Radio Australia on shortwave over the past few months, you will already be aware that this once strong international broadcaster has now gone. But is this really the end? Could we see Radio Australia (RA) rise from the ashes?

<http://medxr.blogspot.com.au/2017/05/radio-australia-possible-return.html?m=1>

ARTEMIS: Free Signal Identification Software

Artemis allows for various example signals to be quickly viewed with the corresponding example waterfall image, frequency, bandwidth and other information. There is also a filtering function that allows you to search by frequency and type of signal.

<http://www.rtl-sdr.com/artemis-free-signal-identification-software/>

Old mobile phones: Six other uses instead of recycling or binning them

The chances are high that you've got an old mobile phone or two cluttering up a drawer in your house.

<http://mobile.abc.net.au/news/2017-05-06/ways-you-can-re-use-an-old-mobile-phone/8488540>

Aluminium solder

Now you can repair Aluminium, Die-cast, Pot-Metal, White-Metal, Zinc based Alloys and even Galvanised without a welding machine and expensive specialist gases! All you need is a hand held propane type torch for small to medium sized items.

www.durafix.com.au



DVMEGA is a collective name for digital voice and data related kits and modules. At this moment C4FM, DMR and D-STAR is supported. In the future, more digital voice and data modes will be available.

<http://www.dvmega.auria.nl/>



EI7BA Multiband Cubical Quad

Building instructions.

<http://www.ve3sqb.com/hamaerials/5bandquad/>

Wire Antennas for Ham Radio

A lot of designs.

<http://www.n4lcd.com/wireantennas/>



This quad plan is a combination of ideas and designs from several sources: Cubical Quad Notes, Volumes I & II, by L.B. Cebik, W4RNL, All About Cubical Quad Antennas by William I. Orr, W6SAI, and a January/February 2008 article in ARRL- NCJ (National Contest Journal) by Steve Root: Design and Construction of a Quad That Will Last. In the end it was Steve's article that became the basic plan with a few changes picked up in the Cebik and Orr books. Steve also answered several questions for me via email. Some time was spent with antenna modeling software which helped confirm element sizes and spacing relative to impedance matching.

<http://tamiamiarc.org/technical/94-a-3-band-homebrew-quad>

Signal Identification Guide

This wiki is intended to help identify radio signals through example sounds and waterfall images.

Most signals are received and recorded using a software defined radio such as the RTL-SDR, Airspy, SDRPlay, HackRF, BladeRF, Funcube Dongle, USRP or others.

http://www.sigidwiki.com/wiki/Signal_Identification_Guide

SOME DIGITAL MODES USED IN HAM RADIO

Digital modes are becoming more and more popular on the amateur bands. This is mainly due to the following reason: Affordable home PC's with built in soundcards. This has brought forth a multitude of decoding software, some free, others not. There are new modes being invented all the time and keeping track of these is turning into a full time job! One of the main problems encountered by the newcomer to digital modes (or digimodes as they are known) is how to identify what they are seeing/hearing. Most of the decoding software uses a visual 'waterfall' display to facilitate easy tuning.

http://hfradio.org.uk/html/digital_modes.html

Parabolic Reflector Antenna Gain

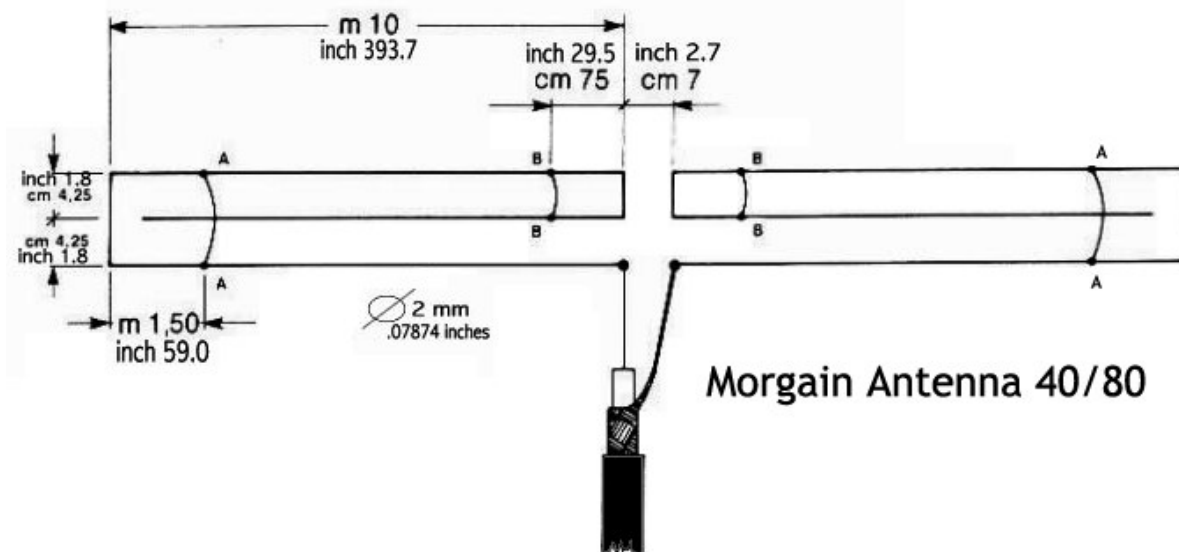
An overview or tutorial about parabolic reflector gain, the antenna gain formula or equation, and the practical factors affecting the 'dish' antenna gain.

<http://www.radio-electronics.com/info/antennas/parabolic/parabolic-reflector-antenna-gain.php>

The 17 equations that changed the course of history

Mathematics is all around us, and it has shaped our understanding of the world in countless ways.

<https://www.businessinsider.com.au/17-equations-that-changed-the-world-2014-3>



This antenna originally designed in the U.S. was born as an antenna for 40 and 80 meters and has been adapted for 20 and 10 mand can have excellent performances on the 15 meters, with a total length of 20 meters.

The picture shows the Morgain dimensions: the measures are not original but they are the best measures that have been obtained from several Morgain tests.

The wire used is copper 2 mm square covered in vinyl.

<http://www.iw5edi.com/technical-articles/morgain-antenna-4080>

Impact of Trees and Bushes on the Effective Height of a Vertical Electric ELF Antenna

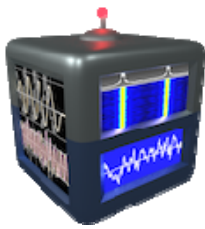
The impact is evaluated of nearby trees and bushes on the effective height of a vertical electric antenna in the extremely low frequency (ELF) band. We try to find the distance at which the plants might influence the local quasi-static field and thus disturb the effective height of antenna. The obtained results might be helpful when choosing the place of antenna positioning in the long-term ELF monitoring.

https://www.jstage.jst.go.jp/article/jae/32/2/32_65/article

Using a HackRF as a Beacon Transmitter on a Drone for Antenna Calibration

The idea is to use the drone as a remote beacon which can move all around the antenna. As the drone flies around, the HackRF on the drone emits a data chirp containing GPS telemetry of the drones position. The receiver on the ground decodes this data and also determines the SNR of the received signal. By plotting the received SNR together with the drones GPS position, the radiation pattern of the antenna under test could be determined.

<http://www.rtl-sdr.com/using-hackrf-beacon-transmitter-drone-antenna-calibration/>



CubicSDR

Cross-Platform and Open-Source Software-Defined Radio Application

0.2.0 includes built-in support for:

- SoapyRemote
- RTL-SDR
- AirSpy
- SDRPlay** (only ApplImage supported for Linux currently)
- HackRF
- BladeRF
- Red Pitaya
- Audio Devices
- UHD (OSX / Windows Only)
- RFSpace (OSX Only)

<http://cubicsdr.com/>

rtl-sdr.com

Quick Start Guide

This page is a guide aimed at helping anyone set up a cheap radio scanner based on the RTL-SDR software defined radio as fast as possible on a Windows system. If you have any trouble during the installation, please see the troubleshooting guide further down the page. We also have brief instructions for getting started on Linux and OSX at the end of this page

<http://www.rtl-sdr.com/rtl-sdr-quick-start-guide/>

2-11 GHz WA5VJB Log Periodic

Here's an interesting rainy day project for microwave enthusiasts to experiment with.

<http://vk4ghz.com/2-11-ghz-wa5vjb-log-periodic/>

ACMA Radcom Database

Register of Radiocommunications Licences

http://web.acma.gov.au/pls/radcom/register_search.main_page

2m SSB

Sunshine Coast 2m SSB net

19:30 Sundays on 144.300 MHz

Don't just use your equipment on field days; come up on air every Sunday.

Brisbane 160m net

Monday nights at 7:30pm local 1.848 MHz. LSB

SEQATV Club Net

Wednesday nights

8:00 PM EST on VK4RRC 146.925MHz repeater

2017 dates

BARC Fest for 2017 on the 3rd June 2017

<http://barcvk4ba.com.au/index.php/barcfest>

Contests 2017

VHF-UHF Field Days

Summer 2017 – Saturday 14 and Sunday 15 January.

Winter 2017 – Saturday 24 and Sunday 25 June.

Spring 2017 – Saturday 25 and Sunday 26 November.

Summer 2018 – Saturday 13 and Sunday 14 January.

Winter 2018 – Saturday 23 and Sunday 24 June.

Spring 2018 – Saturday 24 and Sunday 25 November.

Summer 2019 – Saturday 12 and Sunday 13 January.

Winter 2019 – Saturday 22 and Sunday 23 June.

Spring 2019 – Saturday 23 and Sunday 24 November.

Summer 2020 – Saturday 18 and Sunday 19 January.

Winter 2020 – Saturday 20 and Sunday 21 June.

Spring 2020 – Saturday 28 and Sunday 29 November.

<http://www.wia.org.au/members/contests/vhfuhf/>

QDG information

QDG meeting dates 2017

January 20

February 17

March 17

April 21

May 19

June 16

July 21

August 18

September 15

October 20

November 17

December 15

Unless otherwise noted, QDG group general meetings are held on the third Friday of the month at the **Chermside Library**, Brisbane.

Doors will open at 7:00pm for a meeting start of 7:30pm.

QDG Membership

QDG Membership is presently free.

As of June 2015 the QDG has 65 members.

Information and a list of members are up on the web site <http://www.qdg.org.au/qdgmemb.htm>

Membership forms are on the web site.

QDG Membership services

Members receive additional 'Digipeat Extra' emails and invitations to other club activities not included in the Digipeat newsletter.

Sound Card to Radio Interface

This computer to radio interface can be used for any audio mode including voice.

The SCI provides isolation to remove earth loops as well as providing switching and level adjustment.

Contact Richard VK4ZA on 07 3376 5231, email richatkn@tpg.com.au or via the QDG web site.

Please contact Richard if you are interested in a dual interface PC board or a mark 2 version with modified connections.

Alan Simpson memorial home brew competition

August QDG general meeting <http://www.qdg.org.au/qdgmemb.html>

QDG club contacts

Club contact: Alan Wills VK4NA

Digipeat Editor: Alan Wills VK4NA

Web site: Alan Wills VK4NA

Web site hosting: Tim O'Donohoe
Supper: Alan Wills VK4NA
JOTA: John VK4CJO
Phone: Alan Wills VK4NA 61 07 3491 8032
Mobile: 0401 716 778
Twitter @VK4NA

Email: qdg@qdg.org.au

Web site: <http://www.qdg.org.au>

Digipeat <http://www.qdg.org.au/qdgdigi.htm>

QDG
37 Evergreen Parade
Griffin QLD 4503
Australia

South East Queensland ATV group Information

SEQATV meeting dates 2017

Please check the SEQATV [Web site](#)

Unless otherwise noted, SEQATV group general meetings are held on the first Tuesday on the month at the Redcliffe Club rooms

The club is located at MacFarlane Park in Klingner Rd, Kippa Ring.(UBD Map 91 Ref G 1)

<https://www.google.com.au/maps/place/MacFarlane+Park,+Kippa-Ring+QLD+4021/@-27.2214151,153.0882619,17z/data=!4m2!3m1!1s0x6b93e5f47d867511:0xe926a70030364326>

SEQATV group Membership

SEQATV group Membership is set at the AGM, please contact the secretary for the current fee.

The membership fee remains at \$20.00 for 2016

SEQATV group Membership services

Members receive additional 'Amateur Eye Extra' emails and invitations to other club activities not included in the Digipeat or Amateur Eye newsletters.

SEQATV Club Net

Wednesday nights

8:00 PM EST on VK4RRC 146.925MHz repeater

The SEQATV group Officers

Elected officers:-

President: Arnold Youngberg VK4SU

Secretary: Bruce Jones VK4EHT

Treasurer: Andy Beales VK4KCS

Coopted Officers:-

Callback Officer: Peter Jones VK4YAC

Vice President: Alan Wills VK4NA

Assistant Secretary Bill VK4ZWJ

Additional coopted officers will be added as required.

SEQATV group Contact Information

South East Queensland Amateur Television Group

PO Box 643 Kallangur, Qld 4503, Australia

Amateur Eye (club mag) Phone: Alan Wills VK4NA 61 07 3491 8032

Email: secretary@seqatv.org

Web site: <http://www.seqatv.org/>

Enjoy your hobby!

73 Alan VK4YAR / VK4NA

***** Queensland Digital Group *****

***** SEQATV group *****

**** Supporting Radio Communications in VK4 ****