*** QDG DIGIPEAT October 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

October QDG Meeting

The Next QDG general meeting will be held on Friday October 20 at the **Chermside Library**,
 375 Hamilton Rd, Chermside QLD 4032
Car park off Kittyhawk Drive
Doors will open at 7:00pm for a meeting start of 7:30pm.
If the door is closed please phone Alan 0401 716 778

Alan Simpson memorial home brew competition

This has been held over from the August meeting due to a number of members being away.

The award is open to QDG members.
Alan VK4AAE was one of the founding QDG members; he always strived to do his best in any endeavour.
This competition is to be judged by members present at the **August QDG general meeting each year**.
The best quality, most well built or most innovative radio related home built project you have personally assembled will be judged by members present at the meeting.
Your project may consist of hardware, software or firmware and could be anything from lines of computer code to an antenna tower or your very own fully functional TARDIS.
The first, second and third place winners will receive a certificate to frame and put on your shack wall.

Editorial

Jota

October 20, 21 & 22 2017.
The QDG in conjunction with the Redcliffe and Districts Radio Club will be taking part in Jota again this year at BP Park, 68 Cash Avenue, Samford Valley QLD 4520.
A new radio callsign **VK4SBP** has been obtained for use at BP Park. We have activated Echolink on VK4SBP for this event and future events.
The BP park radio rooms have been cleared of junk and antenna will be tested on Friday 20th at 1:30pm local.

We have arranged to operate from 8:30am to 5pm Saturday and 8:30 to 12pm Sunday. Saturday night operation is possible if there is interest.
If you would like to come along and have a fun time please contact Alan Wills VK4NA 0401 716 778.

Alan VK4NA

JOTA-JOTI

GET READY TO PARTICIPATE IN JOTA-JOTI BETWEEN 20-22 OCTOBER 2017!
60th Jamboree On The Air / 21 st Jamboree On The Internet

Jamboree On The Air (JOTA) and Jamboree On The Internet (JOTI) is an annual virtual global camp in which around 500,000 Scouts and Guides from all over the world make contact with each other by means of amateur radio and the internet.

Through JOTA-JOTI every Member of Scouts Australia can make friends, exchange stories, experience different cultures and have fun as part of the largest activity in world Scouting. JOTA-JOTI also gives Youth Members an awareness that they belong to a worldwide Movement.
http://international.scouts.com.au/programs-in-australia/jotajoti

Scouts Australia International

JOTA Calling Frequencies

Please QSY off the Calling Frequency once you have established a contact

World Scout Calling Frequencies

Band	SSB (phone)	CW (morse)
80 m	3.690 MHz	3.570 MHz
40 m	7.090 & 7.190 MHz	7.030 MHz
20 m	14.290 MHz	14.060 MHz
17 m	18.140 MHz	18.080 MHz
15 m	21.360 MHz	21.140 MHz
12 m	24.960 MHz	24.910 MHz
10 m	28.390 MHz	28.180 MHz
6 m	50.160 MHz	50.160 MHz

Australian Scout Calling Frequencies

Band	SSB (phone)	CW (morse)
80 m	3.650 MHz	3.570 MHz
40 m	7.090 MHz	7.030 MHz
20 m	14.190 MHz	14.060 MHz
15 m	21.190 MHz	21.140 MHz
10 m	28.590 MHz	28.180 MHz
6 m	52.160 MHz	50.160 MHz

Jota information
http://www.k2bsa.net/jota/

JOTA-JOTI Reports More Than 2,500 Registered for October 20-22 Event

Scouting's Jamboree on the Air (JOTA) / Jamboree on the Internet (JOTI) reports that more than 2,500 have signed up to take part in the 2017 event over the October 20-22 weekend. This is the 60th JOTA, and there is still time to register.

For those getting on the air, a Scout Station Scheduling site is available, as is a Scout Camps on the Air (SCOTA) page to register your own station and arrange contacts.

Two **Echolink** conference nodes have been designated for Scout contacts — *JOTA-365* (node 480809) and *JAMBO* (node 832996).

http://qrznow.com/jota-joti-reports-more-than-2500-registered-for-october-20-22-event

Jamboree on the Air - Jamboree on the Internet
JOTA-JOTI 2017 is 20th, 21st & 22nd October
Celebrating 60 Years Connecting Scouts

JOTA-JOTI is the largest Scouting event in the world with over 1 million Scouts participating across 150+ countries.

The event is held the third weekend of October – 20th, 21st & 22nd October 2017 – Celebrating 60 Years Connecting Scouts.

This is the official World Organization of the Scout Movement website for JOTA-JOTI.

http://jotajoti.info/

JOTA Rules

There are some basic rules that should be followed:

All radio operators must operate their stations strictly in accordance with their national licensing regulations;
Stations should call "CQ Jamboree" or answer Scout stations calling to establish a contact;
Any authorized frequency may be used. It is recommended that stations use the agreed World Scout Calling Frequencies listed below as starting points. To avoid congestion, other frequencies close by should be used as well.
The listed frequencies are "calling frequencies." After you make contact with a station, ideally you'll QSY (move) to another frequency and leave the calling frequency open for others to establish contact.

World Scout Calling Frequencies
HF SSB Voice

80 meters — 3.940 MHz and 3.690 MHz where authorized.
40 meters — 7.190 MHz and 7.090 MHz where authorized.
20 meters — 14.290 MHz
17 meters — 18.140 MHz
15 meters — 21.360 MHz
12 meters — 24.960 MHz
10 meters — 28.390 MHz
6 meters — 50.160 MHz

HF CW Morse Code

80 meters — 3.570 MHz
40 meters — 7.030 MHz
20 meters — 14.060 MHz
17 meters — 18.080 MHz
15 meters — 21.140 MHz
12 meters — 24.910 MHz
10 meters — 28.180 MHz
6 meters — 50.160 MHz

The JOTA is not a contest. The idea is not to contact as many stations as possible during the weekend. It is about Scout to Scout conversations to learn about one another and the country where they reside.

All participating groups are asked to send a report of their activities to their National JOTA-JOTI Coordinator (NJC) after the event.

NJC's are requested to send a National JOTA-JOTI Report to the World Scout Bureau for inclusion in the World JOTA-JOTI Report.
http://jotajoti.info/jota-rules/

Letter	Pronunciation	Letter	Pronunciation
A	Alpha (AL fah)	N	November (no VEM ber)
B	Bravo (BRAH VOH)	O	Oscar (OSS cah)
C	Charlie (CHAR lee)	P	Papa (pah PAH)
D	Delta (DELL tah)	Q	Quebec (keh BECK)
E	Echo (ECK oh)	R	Romeo (ROW me oh)
F	Foxtrot (FOKS trot)	S	Sierra (see AIR rah)
G	Golf (GOLF)	T	Tango (TANG go)
H	Hotel (hoh TELL)	U	Uniform (YOU nee form)
I	India (IN dee ah)	V	Victor (VIK tah)
J	Juliett (JEW lee ETT)	W	Whiskey (WISS key)
K	Kilo (KEY loh)	X	X Ray (ECKS RAY)
L	Lima (LEE mah)	Y	Yankee (YANG key)
M	Mike (MIKE)	Z	Zulu (ZOO loo)

http://www.radioqth.net/phonetic

Amateur Radio Q-Codes

International Q Code is an abbreviated way to exchange a great deal of information with a simple code.

The Q Code consists of three-letter groups with each group having a specific meaning. Each group begins with the letter Q. Auxiliary letter groups or numbers are also used to help define the information that is need or passed with certain Q Code three-letter groups.
http://www.qsl.net/w5www/qcode.html

Robust Packet Network

RPR-HF-APRS, Winlink RMS, APRSlink
http://robust-packet.net/

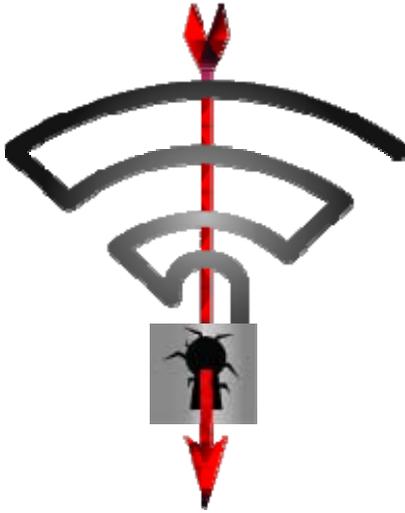## 20+ VPNs rated on privacy and security side-by-side

A VPN is now a necessity for anyone who values their privacy online. They prevent hackers, governments, corporations, and internet service providers from monitoring and tracing internet activity back to the user. All internet traffic is encrypted and tunneled through a remote server so that no one can track its destination or its contents.
https://www.comparitech.com/blog/vpn-privacy/best-vpns-privacy-and-anonymity/

Antennas for confined spaces

Though antennas are things of great beauty to radio enthusiasts, people who are not interested in radio often think otherwise. However antennas are necessary for all types of on-air amateur activity.
http://home.alphalink.com.au/~parkerp/gateway/noapr99.htm

Key Reinstallation Attacks
Breaking WPA2 by forcing nonce reuse

We discovered serious weaknesses in WPA2, a protocol that secures all modern protected Wi-Fi networks. An attacker within range of a victim can exploit these weaknesses using key reinstallation attacks (KRACKs). Concretely, attackers can use this novel attack technique to read information that was previously assumed to be safely encrypted. This can be abused to steal sensitive information such as credit card numbers, passwords, chat messages, emails, photos, and so on. The attack works against all modern protected Wi-Fi networks. Depending on the network configuration, it is also possible to inject and manipulate data. For example, an attacker might be able to inject ransomware or other malware into websites.
https://www.krackattacks.com/

A few pictures from the ICOM IC-7610 demonstration at the Redcliffe clubrooms on Saturday 14/10/2017
http://www.icom.net.au/

IC-7300 on the table
http://rfsolutions.com.au/

Impressive

Yes it does have a 10MHz lock input.

Ken VK4FKEN checking out the IC-7610 transceiver

VK3ZVX

The great thing about the Internet is it can give full reign to your Ego, Er... I mean your Self expression and your Creativity
 The World is a better place if you have a Sense of Humour and especially if you're not afraid to use it
http://vk3zvx.com/discoveries

Eddie 2.13.6 released

Eddie 2.13 includes many important bug fixes and changes. You can see them all on the changelog.
As usual, Eddie is released as free and open source software under GPLv3.
https://airvpn.org/topic/23885-eddie-2136-released/

Look up the best frequency for your location.
http://www.short-wave.info/index.php

PE9GHZ

1,3+ 5,7 + 10 + 24GHz Personal Beacons PE9GHZ/B
http://pe9ghz.org/cmsms/index.php?page=10ghz-beacon

Australian Outback (4WD & remote area) Subscription HF networks

There are several publically accessible high frequency (HF) networks used in remote areas of Australia.

These HF networks provide general and emergency communications to registered users in remote communities such as cattle stations and mines. They also provide a vital safety network for people travelling through the outback – be it by car, caravan, 4WD, or truck - enabling contact with emergency services or other network relay stations.
http://www.swld.com.au/mobile/pages/aus_remote_area_m.htm

Don't use Windows 10 to move data on your Android phone

Details are still sketchy, but if you use Windows 10 to move data on a USB-attached Android phone or tablet, you may lose your files.
https://buff.ly/2eLkTNy

Identify the oscillator type

RES Oscillator Identification.mp4
https://drive.google.com/file/d/0B0_7uUlthT8_ZGxaS0g5clFXNVU/view

6U Wideband ADC/DAC FPGA Modules

Designed to meet the needs of challenging embedded high-performance Signals Intelligence, SATCOM and Electronic Warfare applications, Curtiss-Wright's wide-band ADC/DAC solutions are targeted specifically at wide-band, low latency applications. They couple the dense processing of a single large Xilinx Virtex-7 FPGA with two mezzanine sites that are populated with ADCs and/or DACs from Tektronix.
https://www.curtisswrightds.com/products/cots-boards/fpga-cards/drfm/

HB-225V2 VHF DATA RADIO

The HB-225 VHF 136 to 174 MHz RF data radios deliver reliable & best simple Data Telemetry Systems & 2-way Voice communication and remote control for a variety of application needs.
With Transmit power 5 Watts and 16 channels model HB-225 Data Radio provide reliable voice communication at all times.
Crystal clear audio quality makes the HB-225 V2 VHF an ideal radio or for golf course and emergency call boxes.
http://www.hbwireless.com.au/b-vn-191-0/product/hb-225-uhf-u2-data-radio.html

In-Band Signaling: Quindar Tones

You may never have heard what Quindar tones are, but you've certainly heard them if you've ever seen any manned spaceflight videos. Quindar tones are those short beeps you hear when NASA is communicating with astronauts, as heard in this radio network check conducted between Houston and the Honeysuckle ground station in Australia during Apollo 11:
https://hackaday.com/2017/09/19/in-band-signaling-quindar-tones/

Amateur Radio Emergency Data Network

The AREDN™ Development Team was formed February of 2015 by former members of the BBHNDev team interested in making mesh software work for the needs of Amateur Radio Operators and emergency networks. The AREDN™ work is based on the experiences and skills gained working on the BBHNDev team.

To provide the Amateur Radio Community with a quality solution for supporting the needs of high speed data in the Amateur Radio and Emergency Communications field.
http://www.aredn.org/

Santa Clara County ARES/RACES (Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services) homepage.
http://www.scc-ares-races.org/aresraces.htm

ARRL Michigan Section

Digital Radio Group
Rebuilding and Preparing the Michigan AMPRnet network to carry ICS Form Traffic
http://www.mi-drg.org

JNOS 2.0 - Linux Install (The Easy Way)

The easiest and quickest way to install JNOS 2.0 on a linux system is to use the JNOS 2.0 installer program. In my opinion, this is an excellent way for people to get introduced to JNOS 2.0. It is great for people who have never used JNOS 2.0 before, or are still struggling to get something to work for them. NOW - the installer is very simplistic, and so is the configuration generated. The idea is to start off as simple as you can, then build on the configuration as your experience with JNOS 2.0 grows.

There is nothing stopping even the most experienced people from using the installer. The installer is text based, no graphics libs are required.
http://www.langelaar.net/projects/jnos2/documents/install/linux/

Configure_Personal_JNOS

Raspberry Pi-JNOS
Installing a personal PBBS
http://ares-mi.org/downloads/Packet/Configure_Personal_JNOS/Configure_Personal_JNOS--Raspberry_Pi-JNOS-en-US.pdf

[nos-bbs] Update on JNOS (WIN32, Native Windows) + new installer :)

I'd be willing to bet that the "market" for an easier to install linux
version would be 10x the market for Windows! Here's why:
http://www.tapr.org/pipermail/nos-bbs/2014-March/004342.html

A Website For Getting Satellite Passes From Multiple Points on the Earth

Over the last few days, I've been developing a website that can determine satellite passes given multiple points on the Earth's surface. As someone who lives on the coast, this is useful for me as it can be used to plan intercontinental communications with other hams. The software is very modular, and allows a near infinite amount of points to be added, not just the two I was initially aiming for.
https://blog.scd31.com/2017/02/a-website-for-getting-satellite-passes-from-multiple-points-on-the-earth/

Famous Radio Rooms and Call Signs

http://www.dx-qsl.com/famous-ham-radio-operators.html

Eastfest 2017 Presentation - Hammy Droning

https://m.youtube.com/watch?feature=youtu.be&v=aceOGtQk0gw

How-to-build-a-630m-antenna

While there are many websites which will provide plenty of information to an enthusiastic 630m antenna builder, there is a real 'danger' that such a project may be taken too lightly or executed in the 'wrong order'.

For example - realizing that the ground system is not adequate at the point when one's already trying to adjust resonance and impedance while the antenna structure is collapsing may be a challenge even for an experienced antenna builder.

Inevitably, without a clear understanding of the building steps, the end result will be failure and disappointment, not to mention wasted material and time.

On the contrary, with a bit of planning, such a project will be lots of fun and the end result will be a 'decent signal' and plenty of on-air fun, even from a small city lot.

Below is a DRAFT for an article on this subject. Please read, improve, comment and fix/edit. Once the article is finalized, it will be saved as a .pdf and uploaded to the group file. As you can see, I am brave enough to demonstrate that I am not an expert in this area however it is now up to you to turn it into something meaningful and useful to potential antenna builders.

http://www.f6ciu.com/630m/630vk2/630vk.html

Southgate Amateur Radio News

Top-level domain name '.radio' now available

SARL News report the top-level domain (TLD) name '.radio' is now available to the radio industry and amateur radio enthusiasts and is reserved for individuals and companies with active interest in the radio sector.

The .radio TLD can be used for web and e-mail addresses and will be managed by the European Broadcasting Union (EBU) with support from other world broadcasting unions. Visit the .radio domains registration site at www.register.radio/ to request a .radio domain.

Individuals or entities that will be accepted for the use of a .radio domain are radio broadcasting stations, Unions of Broadcasters, Internet radios, Radio Amateurs, Radio professionals (journalists, radio hosts, DJs, etc.), Radio-related companies selling radio goods and services and radio products and services.

One or more .radio domain name(s) can be requested during the launch period, which ends on 31 October 2017.

The cost for individual radio amateurs is about $30, including tax.
For more information, visit www.nic.radio

https://m.facebook.com/story.php?story_fbid=1609558605734319&id=114351458588382

Ask Ethan: Can We Use Quantum Entanglement To Communicate Faster-Than-Light?

https://www.forbes.com/sites/startswithabang/2016/04/30/ask-ethan-can-we-use-quantum-entanglement-to-communicate-faster-than-light/#5435c7fcfbcd
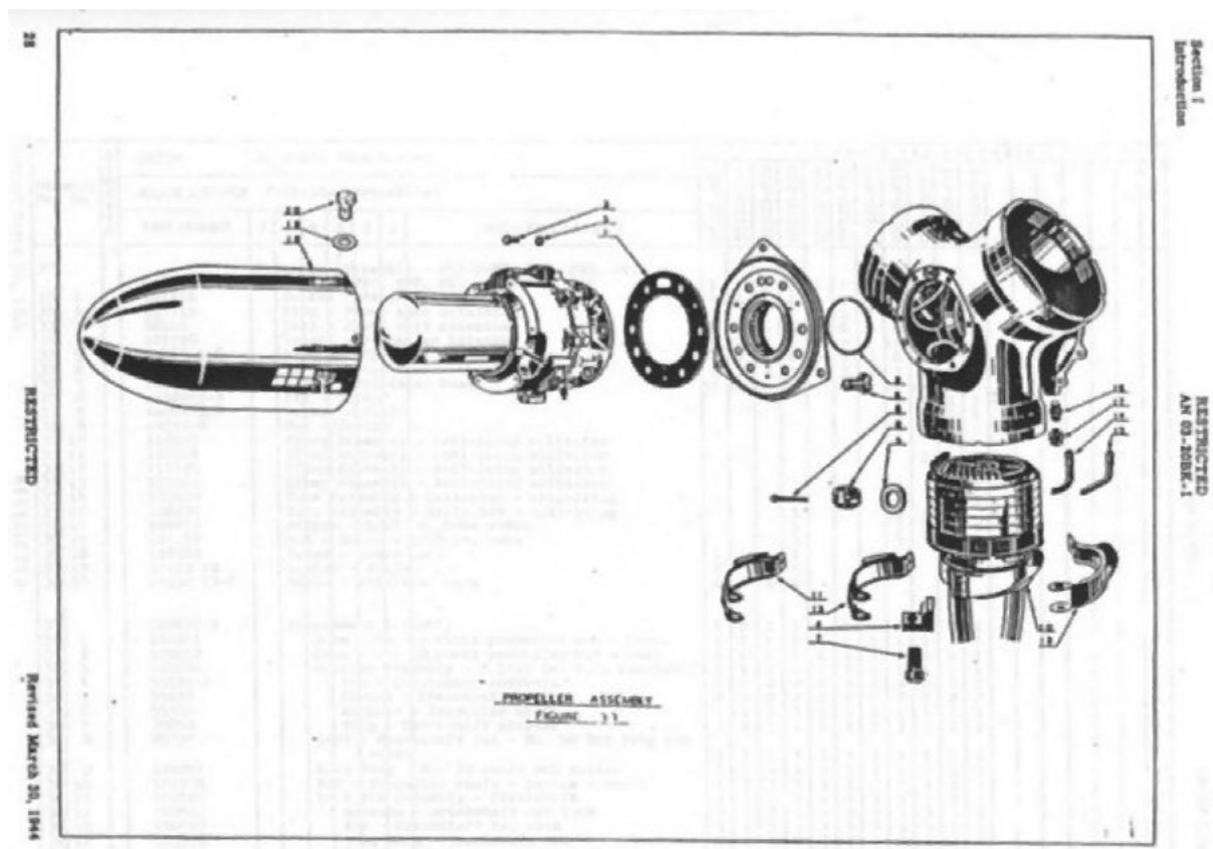
Radio for Everyone

Guides, reviews and articles for affordable radio signal reception with RTL-SDR and Software Defined Radio

Group ADS-B test: 19 dongles
19 RTL-SDR dongle variations tested with identical Raspberry Pi 3 based ADS-B stations, sharing the same antenna and filtered preamp.
http://www.radioforeveryone.com/p/group-ads-b-test-19-dongles.html?m=1

K7NV Prop Pitch Information

These motor & gearbox units were used on WWII and Korean War era aircraft for controlling the pitch angles of the propellers. The bullet shaped canister sticking out in front of the propeller houses the "Power Unit Assembly", which is what Radio Amateurs commonly refer to as the "prop pitch motor. " This unit is actually an electric motor plus a gearbox. Most of these units were made by the Curtiss-Wright Aircraft Co.
These things make very powerful and reliable antenna rotators when they are properly prepared.
http://k7nv.com/notebook/ppinfo/?fref=gc&dti=157675727940940

Raspberry Pi Amateur Radio

@rpiham
https://www.facebook.com/rpiham/

Hiren & Pankaj's Homepage

Hiren's BootCD 15.2
All in One Bootable CD which has all these utilities
https://www.hiren.info/pages/bootcd

Terahertz Wireless

Transmission of Live Uncompressed 4K Video Using
Terahertz Wireless Communication System
https://arxiv.org/ftp/arxiv/papers/1708/1708.07721.pdf

The Truth About Terahertz

Anyone hoping to exploit this promising region of the electromagnetic spectrum must confront its
very daunting physics
Wirelessly transfer huge files in the blink of an eye! Detect bombs, poison gas clouds, and concealed
weapons from afar! Peer through walls with T-ray vision! You can do it all with terahertz
technology—or so you might believe after perusing popular accounts of the subject.
https://spectrum.ieee.org/aerospace/military/the-truth-about-terahertz

Radio Mobile Prediction Software

A nifty freeware bit of (windows) software for hams and other radio people is called "Radio Mobile".
This tool allows you to simulate and map predicted coverage of your location using terrain and
clutter data and maps expected coverage into Google maps.
http://www.vk3bq.com/2013/12/01/radio-mobile-prediction-software/

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

11th November 2017 Gold Coast Hamfest, Broadbeach Qld http://www.gcars.com.au/hamfest-2017

VK & ZL Ham Fests & Events for 2017 http://www.vk4ice.com/hamfests.htm

Contests 2017

VHF-UHF Field Days
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 2017 the QDG has 71 members.
Information and a list of members are up on the web site http://www.qdg.org.au/qdgmem.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/qdgmes.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/

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Enjoy your hobby!

73 Alan VK4YAR / VK4NA

*** Queensland Digital Group ***
  ***   SEQATV group   ***
** Supporting Radio Communications in VK4 **