



BARC Newsletter

Volume 33, Issue 4

October 2012

### Diary Dates

October	12 <sup>th</sup>	Social Meeting
October	26 <sup>th</sup>	Business Meeting

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### Club Net Frequencies

Due to interference to the HF net on 28.450 MHz the following procedure has been adopted. If 28.450 MHz is not available, the first clear frequency in the following list will be used, 28.445, 28.440, 28.455, 28.460 (i.e. down 5, down 10, up 5, up 10) The starting time is 8:00 pm. On Wednesday nights the normal frequency of 439.950 MHz will be used, This is a repeater and an input of 434.950 MHz will be used. The starting time is 8:00 pm.

### Editorial

The Club needs to prepare for JOTA 2012 This will involve Club members making themselves available to man the Club station during the JOTA weekend so that the Scouts can make contact with other groups . This Weekend will be our first chance to help the Scouts make a success of JOTA

### What's New

There has been plenty of activity at the Club house on the Saturday Afternoons since the last Business Meeting.

A long wire some 60 to 70 metres long has been erected between two trees thanks to the efforts of Bill VK4TWS, Warren VK4WH, Peter VK4COZ, Les VK4SO, Stuart VK4MSL and Kevin VK4ZR.

The long wire has been connected to the Club's ICOM AH4 Antenna tuner. Cables for the control and RF connection have been installed from the base of the tower to the Radio Console in the main hall with the help of the above members plus Michael Cullen VK4TBR and Peter VK4ATC.

The Antenna rotator control cable has also been installed along with the rotator Control unit. Frank VK4XK has spent some time reconditioning the rotator and controller.

A two metre vertical antenna consisting of two 5/8 waves centre fed has been installed thanks to Frank VK4XK for his donation.

## COMMITTEE MEMBERS

### **PRESIDENT**

Kevin Dibble VK4ZR

### **VICE-PRESIDENT**

To be Selected

### **SECRETARY**

Peter Holtham VK4COZ

### **ASSIST-SECRETARY**

Keith Adams VK4XAK

### **TREASURER**

Les Parker VK4SO

### **LIBRARIAN**

Peter Holtham VK4COZ

### **PROVIDOR**

Jim Kelly VK4HJK

### **REPEATER OFFICER**

To be Selected

### **STATION MANAGERS (VK4BA)**

#### **HF**

Bill Scheele VK4TWS

Les Parker VK4SO

### **PROJECTS CO-ORDINATORS**

Ron Everingham VK4EV

### **AWARDS & QSL MANAGER**

To be selected

### **PUBLICITY & LIASON**

To be selected

### **WICEN REPRESENTATIVES**

To be selected

### **QSP NEWS EDITOR**

Kev Dibble VK4ZR

### **CLUB EQUIPMENT OFFICER**

Les Parker VK4SO

### **W.I.A. ACCREDITED EXAMINERS**

Les Parker VK4SO

### **BARCFEST COMMITTEE**

Les Parker VK4SO

## CLUB MEETINGS

Meetings are held on the 2<sup>nd</sup> (social) and 4<sup>th</sup> (business) Fridays of each month at Rochedale Scout Den. 21 Rochedale Road Rochedale

No meetings are held on the 2<sup>nd</sup> Friday of January or the 4<sup>th</sup> Friday of December.

Visitors are most welcome to come along and Sample our hospitality.

## MEMBERSHIP SUBSCRIPTIONS

Subs fall due on the last day of August and must Be paid by the 4<sup>th</sup> Friday in September

Current Standard Membership fee is \$20.00 (Subject to any changes prior to 31<sup>st</sup> August)

## CORRESPONDENCE

All correspondence (except for items for the Club newsletter) should be addressed to:

The Secretary  
Brisbane Amateur Radio Club Incorporated  
P.O. Box 6106  
Upper MtGravatt 4122 Qld.

Club Web Site <http://www.qsl.net/vk4ba>

Items for the Newsletter may be sent by mail to:

QSP Editor  
. P.O. Box 6106  
Upper Mt Gravatt, 4122 Qld..

or, by Email to:

[vk4ba@qsl.net](mailto:vk4ba@qsl.net)

Deadline is 5pm Monday prior to the 2<sup>nd</sup> Friday  
Each month except January.

## CLUB STATION NETS (VK4BA)

28.450 MHz. SSB Mondays 2000 hrs Local  
439.950 MHz. FM Wednesdays 2000 hrs Local

## Jamboree on the Air (JOTA)

- Reprint from ARRL

Jamboree on the Air

provides the opportunity for millions of Scouts around the world to meet on the air via Amateur Radio

•

JOTA 2012: October 20 and 21

Boy Scouts and local hams are getting ready for the 55th year of this annual on-the-air event!

•

How Big is Your World?

Scouts are invited to enlarge their world by interacting with others, using modern methods of communication. "Share your life experiences to enlarge your world...."

[Learn More](#)

[1](#) [2](#) [3](#)

### **What is JOTA?**

When Scouts want to meet young people from another country, they usually think of attending a World Jamboree. But few people realize that each year more than half a million Scouts and Guides "get together" over the airwaves for the annual Jamboree-on-the-Air (JOTA). The World Scout Bureau reported that the 2010 JOTA had just over 700,000 Scout participants from nearly 6,000 amateur radio stations! Modern technology offers Scouts the exciting opportunity to make friends in other countries without leaving home. JOTA is an annual event in which Boy and Girl Scouts and Guides from all over the world speak to each other by means of Amateur (ham) Radio. Scouting experiences are exchanged and ideas are shared via radio waves. Since 1958 when the first Jamboree-on-the-Air was held, millions of Scouts have met each other through this event. Many contacts made during JOTA have resulted in pen pals and links between Scout troops that have lasted many years. With no restrictions on age or on the number of participants, and at little or no expense, JOTA allows Scouts to contact each other by ham radio. The radio stations are operated by licensed amateur radio operators. Many Scouts and leaders hold licenses and have their own stations, but the majority participate in JOTA through stations operated by local radio clubs and individual radio amateurs. Some operators use television or computer-linked communications.

- [When does JOTA happen?](#)
- JOTA is held the third weekend in October of each year. JOTA takes place starting Saturday at 0000 hours local time (12:00 AM) to Sunday, 23.59 hours local time (12:00 PM), though some activity continues over from Friday to Monday to take advantage of long distance (DX) time differences.
- [How do we take part?](#)

# 55<sup>th</sup> Jamboree On The Air and 16<sup>th</sup> Jamboree On The Internet 20 – 21 October 2012

## Everyone in Scouts can take part!

The theme for JOTA-JOTI 2011 is "How big is your world?" 22 year old Scout, Mr. Carlos Neves from Federação Escutista de Portugal (NSO from Portugal) has won this year's contest. His logo design will be used as the logo of the 2012 JOTA-JOTI.

### **Some important hints for a successful activity:**

- Do your research. Start at [www.scouts.com.au](http://www.scouts.com.au) – click on "International" and select JOTA-JOTI. Check often for new information.
  - Decide on your venue. Plenty of good high trees to support antennas are desirable, but lack of trees can be overcome with a bit of ingenuity.
  - Publicise your activity. Make sure that every youth member and leader knows about it.
  - **Engage an Amateur Radio Operator. If you can't find one, contact the National Coordinator at [jota.joti@scouts.com.au](mailto:jota.joti@scouts.com.au) and he will help if possible. He'll need to know WHERE (suburb/town/state) you will be running your activity. This needs to be done NOW, not a few days before the event.**
  - **Make sure you have a good internet connection**
  - Build a program around the activity. Do some preparation activities in weeks leading up, so that Scouts will know what's expected of them, and what they will say to other Scouts.
  - Plan alternative, supporting activities for the weekend. Not every Scout can use the radios or computers at the same time. Look through the Award Scheme and see which badges match your program.
  - Look after the non-scout people who help you. Keep up the coffee and food, and make offers of help to assist them to set up and pack away.
  - Make sure someone takes plenty of good quality, clear photos of your event.
  - Tell the world how well you did. Register your group at [www.jotajoti.org](http://www.jotajoti.org). It's usually open for registrations a few weeks before JOTA-JOTI. You can also complete an online BLOG. This information helps you tell the world what you got up to, and it helps organizers know numbers of participants, and how it went.
- JOTA-JOTI is all about putting Scouts in touch with other Scouts. Here's an opportunity for you to provide your Scouts with a truly International Scouting experience without the expense of traveling. It also exposes Scouts to new experiences and new interests.

Albert Shelley

## The Brisbane Amateur Radio Club Involvement in Jota

The Club has a commitment to the Rochedale Scout Group to provide the group with facilities so that they can join in the Jota activities.

Our Club Station VK4BA has been setup for use during the October weekend of the 20 to 21<sup>st</sup>. We now need volunteers from our club members to be available to operate our Radio Gear and help the Scouts to contact other groups.

We will need a roster to be able to meet the Scouts requirement during this important weekend. Please try and make yourself available to assist in making this weekend a success for our Club as well as for the Scouts.

Please contact one of our Committee members and let us know of the times that you may be available to be part of the roster.

## Interesting Talks at our Club Meetings

If you have not been able to come along to the Club Meetings lately you have been unfortunate to miss on some very interesting and informative practical talks and demonstrations

At our last social meeting there were two very interesting practical demonstrations on how to test your antenna system.

Kevin VK4WA brought along a very interesting piece of test equipment he has recently purchased as well as an antenna to experiment with. He brought along a portable HF antenna analyzer made by a company called YouKits.

It covered a range of 1 to 60 MHz  
It displayed both impedance and VSWR plots on a graphical format  
It has a number of variable sweep ranges  
The graphs were displayed on a Daylight usable Colour LCD Display  
The unit ran off an internal 12 Volt Lithium-ion battery

The unit was quite small and easy to operate and Kevin demonstrated its use by connecting it to a 10 metre vertical antenna.

He also brought along an antenna tuning unit and demonstrated how easy it was to adjust the tuning unit to produce optimum results by observing the results using his antenna analyzer.

He also brought along a kit he constructed to produce an instrument for measuring Inductance and capacity on very small values typical for the values used in some VHF/UHF tuned circuits

The other talk demonstration was by Peter VK4COZ who had a very interesting piece of test equipment that was used in conjunction with his laptop computer.

Peter had a holiday in the UK and while he was there he came across the Vector Network Analyzer so after some deep thought he looked at all the various models and selected one he thought he could put to good use

He presented the Club members with a power point presentation so I have managed to persuade him to allow the use of these slides to give the reader an insight into what the talk and demonstration was all about.

Slide 1 was simply an introduction.

### **The Vector Network Analyser (VNA) or the SWR bridge on steroids!**

Slide 2

**What does a VNA Do? Measure the magnitude and phase characteristics over a range of frequencies of Networks (eg. tuned circuits)**

**Amplifiers**

**Components**

**Cables**

**Antennas**

**And present the results as a plot on a PC Screen**

Slide 3

## How Does It Do It?

Compares the incident signal that leaves the Analyser with either:

The signal that is transmitted through the device under test, or

The signal that is reflected from the input of the device under test.

Slide 4

## A Commercial VNA

made by Agilent (HP), cost  
A\$28,000



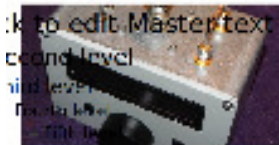
Slide 5

## Several Ham Radio VNAs Available

N2PK  
VNA

cost less than  
A\$500!

DG8SAQ  
VNA

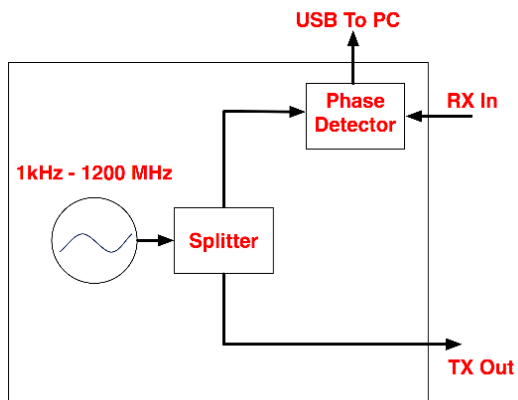


Slide 6

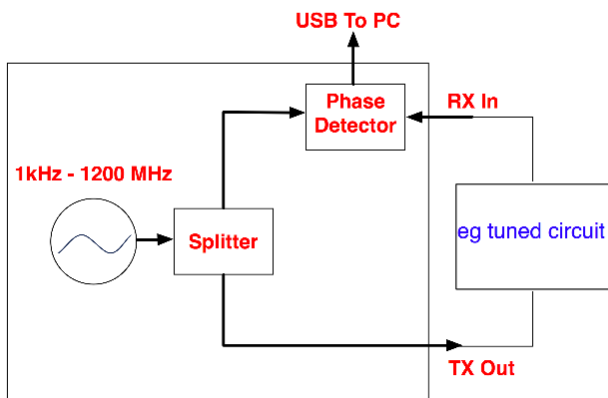
## The DG8SAQ VNA



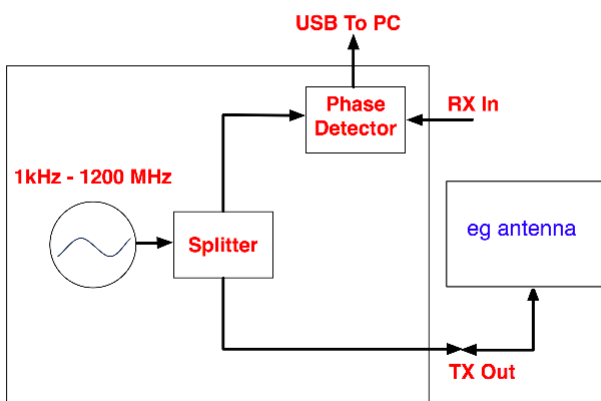
## The VNA Inside



## Connecting Up - Transmission



## Connecting Up - Reflection



## The Software

**With the software “magic” happens  
Somehow the software turns the magnitude and phase data into useful  
information.**

**Eg. SWR vs frequency, impedance vs frequency Smith Charts.....**

**Software is VERY powerful, analysis very detailed**

## Calibration

**Needs to be calibrated to ignore effects of connecting cables.**

**In this way only the characteristics of the device under test are reported.**

**Calibrate with “short”, “open”, “load” (50 ohms) or “through” for desired  
Range of frequencies.**

The powerpoint presentation was followed up with a practical demonstration of how the VPN could be used to check out the characteristic of some antennas.

Peter had brought along two antennas. The first one was a mobile whip used for 27 MHz CB and required a metal plate for the ground connection.

The second antenna was a dual band vertical for 2 metres and 70 centimetres which Peter used on his vehicle. The impedance and response over 100 MHz to 500MHz was displayed



Club Members talking while Peter VK4COZ and Les VK4SO set up prior to the Demonstrations by Kevin VK4WA and Peter VK4COZ at the Social Meeting in September  
Backs to the camera are Colin VK4ACG, Peter VK4ATC and Bill VK4TWS. Others missed out getting their photo taken



## WW SPECIAL INTEREST GROUPS --- RADIO SCOUTING

(Snip from WIA news)

<http://www.scouts.com.au>

<http://www.scout.org/jota>

<http://www.international.scouts.com.au>

### CALLING FREQUENCIES

Please QSY off the calling frequency after establishing communication.

Australian voice calling frequencies:

3.650, 7.090, 14.190, 21.190, 28.590, 52.160

World CW calling frequencies:

3.570, 7.030, 14.060, 18.080, 21.140, 24.910, 28.180, 50.160

World voice calling frequencies:

3.690 & 3.940 MHz, 7.090 & 7.190, 14.290, 18.140, 21.360,  
24.960, 28.390, 50.160

Calling frequencies for Slow Scan TV (SSTV):

3.630, 7.033, 14.227

Calling Frequencies for PSK31

14.070

### St George Amateur Society Activity

The St George Amateur Society will be running a JOTA station at Bonna Point Reserve Kurnell, NSW this year as part of the annual scout and guide Boree Regatta event.

The station will have two VHF transceivers on 2 metres and 70 centre metres and two HF transceivers operating on 80, 40 and 20 metres. The call sign will be VK2LE.

The station will have over 500 scouts and guides on the air from 10am Eastern Daylight Saving Time, EDST Saturday morning till 10pm EDST Saturday night and again from 9am EDST Sunday morning to 2pm EDST Sunday afternoon.

The look forward to making 2012 a truly memorable Jamboree On The Air.

For further information, check out the St George web site at <http://www.sgars.org/jota>

**BRISBANE AMATEUR RADIO CLUB  
BUSINESS MEETING 24 August 2012**

The meeting was opened at 7:35pm by the President VK4ZR. Nine members were present: VK4SO, VK4XAK, VK4DS, VK4ACG, VK4OU, VK4TWS, VK4ATC, VK4ZR, VK4COZ.

**Apologies**

VK4WA, VK4EB, VK4XK

**Minutes**

The minutes of the previous meeting were read by the Secretary who moved they be accepted as a true record.

**Business Arising**

A receipt for \$300 has been received for the initial rent of the Scout Hall. The aerials have been brought back from the Gold Coats: a 3 element beam, a 2 meter J-pole and a 70cm vertical. The rotator has been found to work but there is no controller at present.

JOTA is coming up in October and priority will be given to preparing for that rather than the Open Day.

**Financial Report**

Available to BARC Members on request

**Correspondence**

The usual magazines have been received, AR, CQ, plus memberships renewals from VK4EV and VK4MAO. A receipt was sent to VK4MAO.

**Reports**

**10m Net** Bill, VK4TWS, reported the net is continuing to run well.

**2m Net** Les, VK4SO, reported on the usual small numbers on 70cm, however VK4ZR has successfully linked the repeater to Echolink, allowing the repeater to be accessed via Internet.

**General Business**

A working bee will be held on Saturday 1st September to start putting up antennas. A lock still needs to

be fitted to the console so equipment can be stored inside.

Bill will talk to the Scoutmaster about JOTA activities.

There being no further business, the meeting was closed at 8.15 pm.

**Talk and Demonstration on using Echolink**

By Kevin VK4ZR

Kevin demonstrated how a laptop computer could be set up for use on Echolink to access the VK4RBA repeater.

The demonstration of accessing VK4RBA was not successful as his home computer had lost contact with Echolink.

It was possible to show the members how Echolink could be used for amateur Contacts with a Echolink contact between Kevin VK4ZR and Peter VK4ATC

Peter VK4ATC was using his Smart Phone the he had installed Echolink on to.



Now in the BARC Library. QST for October 2012.

Don't forget there is a Business Meeting on Friday 28<sup>th</sup> September 2012 plus a working bee on Saturday 29<sup>th</sup> at the Club house. Come along and enjoy the fun and friendship that we are having on these Saturday outings