



# BARG News

*Ballarat Amateur Radio Group*  
*Inc. #6953T*  
*October*  
*Monthly Newsletter*

Next Meeting  
Friday 30<sup>th</sup> October @ 7:30pm

Virtual Meeting via Webex

All Welcome



## **Contacting us**

You can write to the club at the address below, or e-mail the secretary

The Secretary : B.A.R.G. Inc.  
Box 1218  
Mail Centre  
Bakery Hill Vic. 3354

Or E-Mail : [vk3bml@barg.org.au](mailto:vk3bml@barg.org.au)

We're on the web  
[www.barg.org.au](http://www.barg.org.au)

## **Presidents October Report**

Warmer weather is arriving and happily the restrictions and lock down seem to be having the desired effect of holding back the dreaded virus, giving us the opportunity to start to get out and start doing to more of the normal things.

Along that line, the next BARG field day is planned for Saturday December 5<sup>th</sup>. Proposed rules and times are included in this news letter. Have a look, and if you think we should make any changes we can discuss them at the general meeting on Friday. Should we include the 2200m band?

With the warmer weather we need to arrange to clean up around the club house. I'm going to propose we have a group of 10 run a small working bee on Saturday the 7<sup>th</sup>, to mow the lawn. Trim the trees and also re-set the dipole's and maybe the beam, which has drifted off alignment with the rotator.

We'd need a couple of people with line trimmers, a hedge trimmer, and a pole saw. As well as a couple of able hands to address the antenna's.

Unless restrictions change, we'll need to limit to 10 people.

Remember that this Friday is the general meeting. The WIA are coming along to present, so it will be a good session to join.

There's a couple of folk who are still to pay subs. If that's you, if you could get that sorted out before the end of the month.

### **BARG General Account.**

**BSB: 633 000**

**Account Number: 142 591 247**

If you can't make the general meeting, the construction night is Monday 2<sup>nd</sup>. Come along and give us all a few tips for the Melbourne cup.

Hope to see you Friday.

Malcolm

VK3OAK

## **Presidents 2019 / 2020 AGM Report**

I imagine that every report looking back on the last 12 months is going start out talking about what a strange year it's been. We started out as we have other years. We ran another successful Hamvention out at the greyhound track.

We had some good guest speakers, with another visit by Peter VK3YE. We ran a number of Saturday meetings with BBQ's and working bees that cleaned up around the building, saw the installation of a large flat screen TV and more additions to the antenna system.

In addition to the regular meetings the dinning night ran once a month and was well attended by the regulars and few not so regulars. The coffee morning was expanded from twice a month to weekly.

But it wasn't all social. The construction nights saw a group build of 2m LFA yaggis by a number of members. Most of which have since been pressed into service and are getting very good reports. So much so that there is a second build underway.

2019 was wrapped up with another very successful Christmas dinner out at the club organised by Doug, VK3VBA.

2020 came and all that changed. Meetings have all moved to Webex virtual meetings. And while we'd all rather be meeting face to face, the format has proved to be a success. While some members have been challenged by poor internet connections, it has allowed others to join in on a more regular basis. It's a format that we need to continue to make use of. Even if it's just to allow more remote members to participate in meetings that run out at the club.

The dining nights have been suspended, but the coffee morning has continued, moving to a 2m net with all having coffee and tea at home. Again a format that has allowed some who would not otherwise have been able to join in to continue to participate.

While the construction of the next batch of antennas has been put on hold there are still construction projects underway, with 11 members participating in a group buy of a Anderson Power Pole distribution box, which should arrive any day now.

There's also work going on to assist new entrants to the hobby, with Chris and Colin working on a learning system to add the preparation for the exams. The foundation level is very well progressed. Standard and Advanced modules already started.

We have been fortunate to see a number of new members join the group, both new to the hobby and new the area. Sadly the last 12 months has also seen several long term members become silent keys.



I do need to thank the committee who've worked hard to keep the club running through the last 12 months. Doug, VK3DRE has again done a fantastic job as secretary, his 12<sup>th</sup> year in the role. Gordon has kept an eagle eye on the dollars for us. Ben, VK3NRD has again held as Vice President. Ben has lead the group though the challenges we've had getting the Webex stuff going, even running a number of training sessions for those who are new to video conferencing.

Big thank-you to Ian, VK3AXH, Bob, VK3BNC and Gordon, FGC. Ian, Bob and Gordon have decided to step away from the committee next term after being a committee members and holding all of the various roles over the many years that they've participated. All three have had material impact on the shape of the club over a very long time.

Also thanks to Ian, VK3YFD, Lachlan, VK3ALM, David, VK3KQT, Craig, VK3KG .

I should thank Rick, VK3FIVE for his work cleaning up the area around the club, sometimes ably assisted by Doc, VK3CFH. Scott, VK3MCL for getting the 6m net up and running.

I'm sure there are others I should have called out, so apologies to all who've I've missed, and also to all who've I've assigned the wrong call sign too.

I think we are very fortunate to have a club that is as active as it is. We've adapted well to the challenges that COVID has brought, and I am confident that we'll be able meet what ever challenges 2021 brings us.

BARG, like all clubs, is only as successful as it's members make it. I find that the more you put into a hobby, the more you get out of it, so encourage everyone to participate in the activities that interest them.

So let me finish by saying thank-you to all the members for your participation be it large of small, over the last 12 months. And I look forward to what the next 12 months will bring the club.

73

Malcolm  
VK3OAK

**80m Net Roster. Thursday @ 8 pm on 3.608 MHz**

<b>Date</b>	<b>Name</b>	<b>Call</b>	<b>Alt Name</b>	<b>Alt Call</b>
29-Oct	Scott	VK3MCL	Craig	VK3KG
5-Nov	Craig	VK3KG	Doug	VK3DRE
12-Nov	Doug	VK3DRE	Ian	VK3AXH
19-Nov	Ian	VK3AXH	Scott	VK3MCL
26-Nov	Scott	VK3MCL	Paul	VK3TXR
3-Dec	Paul	VK3TXR	Chris	VK3QY
10-Dec	Chris	VK3QY	David	VK3KQT
17-Dec	David	VK3KQT	Scott	VK3MCL
24-Dec	Scott	VK3MCL	Paul	VK3TXR
31-Dec	No official net tonight. NEW YEARS EVE.			
7-Jan-21	Paul	VK3TXR	Chris	VK3QY
14-Jan-21	Chris	VK3QY	David	VK3KQT
21-Jan-21	David	VK3KQT	Scott	VK3MCL
28-Jan-21	Scott	VK3MCL	Craig	VK3KG



Park Activation, Linton Flora and Fauna Reserve, 25<sup>th</sup> October 2020

## **VHF and Above for October 2020**

Another month has slipped by and propagation is still quite variable with occasional beacons being heard from Tasmania and South Australia on 2mx. Enthusiasts are anxiously awaiting the warmer weather to lift their spirits and get their fix with some long distance qso's on these fascinating bands.

Perhaps one of the main indicators is the use of WSPR, APRS, and PACKET to see what's happening with propagation on 6mx and above. I'm aware that in recent times Steve VK3ZAZ and Paul VK3TXR have been using these modes to see what is happening on some of the band which may seem like they are dead but are producing some results that would give some opportunity of contacts if only we would be willing to try.

You are encouraged to list your intentions when indicators show possible paths by using some of the loggers such as VKSPOTTER which may encourage others to try as well. Don't just listen and observe...just pick up the microphone and call.

In recent times there has been a surge in communications via satellites particularly AO7 and RS44 where there has been a noticeable increase in activity. The footprint of these satellites allows qso's to be made into New Zealand, Indonesia, Philipines and Thailand. I'm aware that Steve VK3ZAZ is quite active and having good success as well as Ian VK3AXH who recently had qso's with E21EJC and DU9JJ9 using CW via RS44 and AO7 respectively.

On Friday 23<sup>rd</sup> of October Lou VK3ALB a keen microwave enthusiast from the Bellarine Peninsula proposed a test day seeing restriction had been lifted for the Melbourne based microwavers using 23cm to 10GHz from 10am weather permitting.

Although there wasn't a huge response stations in Melbourne, Ceres (near Geelong) Ballarat and even Shepparton indicated they would take part. Perhaps the highlight was the successful 1296 contacts between Trevor VK3VG in Shepparton and many others around Melbourne ie VK3MQ and Portarlington VK3ALB had good contacts which were unusual for this time of the year.

Locally Ian VK3AXH, Ian VK3IDL and Bob VK3BNC went to Mt Buninyong and setup their 10GHz equipment and between some light rain managed to be heard and qso with Lou VK3ALB. Like most times this is done we always find things that can be improved for the next event exercise. The next event for these microwavers will be the Spring VHF field day with is scheduled for the weekend of November 28/29 2020. If you are interested then get going now so you can join in the fun. You don't have to go into the field to take part so why not give it a try.

A couple of mornings back Ric VK3BEB came up on the regular 2mx ssb part of the band on 144.1MHz with a very strong signal. Ric has upgraded his station and with more power is and will get great results during the coming season so well done Ric

If you have some news about what's happening in you shack please let me know or simply write it down and send it off to the magazine editor.

Till next time 73 from VK3AXH

P9 Second Century. ARRL looks at lifelong learning now and the focus on electronics and Technology with personal and emergency communications. With licence numbers staying steady its noticed that active members has declined and licensees are not advancing their learning even with the large amount of other learning sources available to them. Commonly people want to know how to “get started on air.” It seems the days of newcomers entering the hobby is not from a “short wave listener” perspective where they learned from listening to others talking and experiencing the process privately before they have to go “On Air”



P13 Member spotlight. Alan Wolke W2AEW Active on HF but runs the You Tube channel. [www.youtube.com/w2aew](http://www.youtube.com/w2aew) with over 300 programs of amateur interests. Started about ten years ago it has inspired many to produce and show their own ideas and construction articles Starting from just one uploaded video of a fun nature he noted some 100 hits within a week.

P20. Up Front. Shows interesting snippets from time to time and I was interested in the “Who’s Behind the Curtain” which was a scaled model of a 4x2 Curtain array on 70cm which fits within a window frame. Back in the 60’s I used a metal venetian blind system in my shack as a receiving ant on 2M and could adjust the blinds as a passive form of gain while working two other local stations. Mine was never formally tested but worked quite well for our use. This design may be limited as far as directivity is concerned but would suit say a personal link between two stations or just to improve pick up from a repeater. The current design is horizontally polarized. Anyone up for a challenge.?

P34 A Vertical End fed Dipole with Folded stub for 20Metres. FSVD. Based upon the century old design of the end-fed Zep [or Zeppelin antenna] which takes its name from the long wire trailing antenna used on the gas filled Zeppelin balloons. The antenna is actually a half wave dipole [ $\lambda/2$ ] which is fed by a Quarter wave [ $\lambda/4$ ] balanced stub. Here the stub section is folded back along the axis of the half wave radiator. Using a fibre glass pole to carry the vertical wire and a meta; base for clamping to the authors balcony he quotes a flat 1.5:1 across the full 20M band. The Un Bal matching kit is described and shown fitted inside an electrical junction box. Actually designed for 20M it may be re scaled to other frequencies. A challenge for someone.

P24 Letters.

p38. A Rasberry Pi USB Serial Server. Extending a USB connection to almost anywhere and perfect for remote applications.

P40 REVIEW: ACOM 1200S 160-6Meter Linear Amp. Giving a full Kilowatt output on all modes and with a paired Full autotune tuner across all stated frequencies. From Bulgaria and just USD\$3,700 see [www.acom-bg.com](http://www.acom-bg.com)

- P45 REVIEW: Phaser Digital Mode Transceiver kit. Provides a clever and simple way for FT8 and other digital modes with a low powered transceiver suitable for field operation See [midnightdesignsolutions.com/phaser](http://midnightdesignsolutions.com/phaser)
- P48 REVIEW: Palstar DL2K High power Dummy load, rated to 1500Watts and covers 160 thru to 6Meters. Two range meter scale of 500 and 2000Watts. Requiring 12 volts power for the fan and lamp it weighs just 5.6 pounds and costs US\$399. See [www.palstar.com](http://www.palstar.com)
- P50 REVIEW: Alex Tune Visual tuning Indicator for Mag Loop Antennas. Rated up to 20W the unit costsUS\$50. See [www.alexloop.com](http://www.alexloop.com) [www.engineering.com](http://www.engineering.com) [www.hamradio.com](http://www.hamradio.com) and [www.gigiparts.com](http://www.gigiparts.com) for further details.
- P52 The Doctor. Answers many questions sent in and this month has answered about adding a linear amp and also about switching antennas and functions.
- P54 Microwavelengths. Looks at focusing a Parabolic disk. Paul Wade W1GHZ reviews his previous ideas that adjusting a dish feed in the back yard is not the best place to do this due to effects from location. He now believes that for general “tweaking” positions of focal feed points might not be as error loaded as before when using a backyard antenna test range.
- P58. FUJI-OSCAR 99 For full time amateur use. After completing its planned seven scientific missions for the Nihon University college and the Japan Amateur Satellite Association. JAMSAT . status reports at [http://sat.aero.cst.nihon-u.ac.jp/nexus/E4\\_news.html](http://sat.aero.cst.nihon-u.ac.jp/nexus/E4_news.html) or current satellites flying [amsat.org/status](http://amsat.org/status)
- P59 Lunar Legacy 50 years on. [www.nadxa.com](http://www.nadxa.com)
- P61 Online club meetings use videoconferencing to maintain club activities. ZOOM at the Olympia Amateur radio society in Washington. Buy a licence for 100 participants on month or yearly usage. Will this be the way for clubs to outreach remote members after Covid 19 ? BARG started using Skype for delivery of monthly meetings to members at Stawell last year. Will this return to principal of Remote learning classes be expanded in the future. As communicators we should be able to maintain and use such systems for any remote receiver.
- P63 Simulated Emergency test results from 2019. American clubs seem to be very aware of and take active stance on the possible use of their amateur stations for the authorities due times of crisis. While organized on much different scale than we are here, should all radio clubs practice an exercise on a regular basis to provide emergency communications/service to their community. Members and/or their club can also use a field day activity to harmonise their skills and understanding of message handling, with set up location settings, erect antennas from simple wire to complex UHF and microwave dishes. These skills should be practiced under variable conditions such as day/night and dry/wet weather. Are you a fair weather inside outside operator ?and can you support yourself in the bush for sustained periods without resup.?
- P66 Happenings page announces that the FCC is Flexible for examiners in the development of remote testing methods for candidates. Also ARRL seeking new clarification about amended service in RF Safety Rules.

- P70 Public Service. Getting started with Echolink as a time tested VoIP Software. ARRL has a book available for newcomers. [www.arrl.org/shop.VoIP-Internet-Linking-for-Radio-Amateurs](http://www.arrl.org/shop.VoIP-Internet-Linking-for-Radio-Amateurs).
- P72 Radio in UK receives a boost during covid lock down
- P73 New Amateur exam Extra Class Question Pool. See the NCVEC website at [www.ncvec.org](http://www.ncvec.org) If writing new exam assessments then look at [www.arrl.org/resources-for-ves](http://www.arrl.org/resources-for-ves)
- p81 How's DX? VP8PJ the South Orkney Island 2020 recap of events. 14 people from Feb 14th for two weeks on Signy Island. To 6th March. Stats included 83,782 contacts with 20,523 unique callsigns . More detail from [www.sorkney.com](http://www.sorkney.com) and for qsl requests try [www.m0urx.com](http://www.m0urx.com)
- p83 World above 50 MHz. reports on the 15 April opening on 50.094 with high solar flux recorded it involved sporadic E and multi hop conditions was quite remarkable for April. Maybe the COVID effect was more likely to blame for the number of stations heard and worked through out the day With so many stations the spectrum was heavily used and 50.323 was considered
- p89 A Look Back. QST for Feb 1949. Post war joint Army/Air Force training program. The Military Amateur Radio System MARS set up initially open only to amateurs in service and Reserves. A considerable amount of surplus electronic equipment has been allocated to the MARS program.
- P94 Classic Radio: Military Telegraph Keys. Discusses both open and covered non explosive types with some photos. Of interest were the RAF "Bathtub" key which was WW2 used in Lancaster bombers and was my first key. Also the miniature British McMurdo model used in the AWA manpack radios. The WS A510 and also could be strapped to a leg by some webbing to allow a seated operator to send while traveling in vehicles. It was used on other clandestine /commando type radios And I have seen it in use on a Artillery night beacon set used for establishing survey data on hilltops. The author has a good collection of keys and the American system seems to have had a recognizable numbering system for their keys initially with army prefixing with a J letter and numbers and the Naval code was a C prefix then numbers indicating the manufacturer . The photo of the Army J-51 key is interesting because it looks like a pair of scissors and could easily be carried in a persons pocket. The most popular type of military key was the J-38 and there is a site with more details at <https://k6ix.net/j38Keys.html>.
- P96 What was in QST editions in July 1920, July 1970 and July 1995.? Their index is given and if an article is of interest we do have a comprehensive collection of old QST mags in the club library.
- P126/7 List of Advertisers in July QST.

## **BARG HF FIELD DAY SATURDAY 5<sup>th</sup>. DECEMBER 2020.**

Building on previous year's events another fun day for BARG members is planned for Saturday 5<sup>th</sup> December. We hope that you will take the opportunity to operate portable at the place of your choice for as long as you want and even invite friends to join in.

The winner will have their call sign engraved on the club's perpetual "Field Day Trophy" which will be presented at the January BARG meeting.

The winning station will have to have participated as a "FIELD station" not deriving its power from the mains, and not his normal QTH. Field stations can score from any amateur station as they do not have to be BARG club stations. If operators can provide detail of setup and antenna used and perhaps a photo of the field station for inclusion in the BARG News this will certainly add to the spirit of the day.

**Event.     BARG HF Field Day.**

**Bands:** 40m. 7000khz to 7300khz

80M. 3500 – 3700khz.

Can use 2m FM. 146.500Mhz.

The use of repeaters is not allowed for scoring purposes. **Mode:** Voice Modes only.

**Time:** 10.00am – 4.00pm.

- Members may operate as long as they wish within the above time slot and may change Portable QTH as required but must be shown on Log sheet.
- Members exchange numbers as per standard contest procedure, eg 59001 as the first Contact including call sign worked, time and frequency.
  - Score 5 points per contact with each portable club member to encourage people to try.
  - Score 1 point per VK3 non club member.
  - Score 2 points per VK1/2/5/7 non club member.
  - Score 3 points per VK4/6 non club member.
  - Score 1 point per DX contact. That is a non VK call area
  - Score 6 points for contacting the club station VK3BML should it be activated. .

- Portable Field stations can claim two extra point per contact as per the scoring above. This is to encourage portable station operation in the field by our club members.

- For scoring purposes only **one contact per hour per station** is permitted.

- Record time of contact in your log.

- Transceiver power to be shown along with antenna details.

Log sheets are to be forwarded to Harry, VK3KGL, 29 Cromwell Street Sebastopol, 3356 showing your claimed score. Your log sheets can be submitted electronically, posted, or hand delivered.

All logs must be submitted by 5pm on Wednesday 16<sup>th</sup> of December 2020.

The decision of the adjudicator will be FINAL and no correspondence will be entered into.

There will be a prize for the winning club station and will be presented at the January BARG meeting or as soon as restrictions allow.

Log Sheets are here: [https://www.barg.org.au/?page\\_id=3324](https://www.barg.org.au/?page_id=3324)

**FEATURES:**

P8. Twist and Shoot is an ARDUINO based PAN & TILT Digital SLR Mount. Using stepper motors which allow for fairly accurate positioning changes and can be utilized for photographic camera work or just security cameras from a remote location. Taking the project a little bit further could be applied to tracking a satellite or the Moon with a yagi array. An interesting article and a number of referenced articles to read about how to go about the construction and assembly.

**EDUCATION:**

P23 The MAX-232 IC. Using the RS-232 TTL Serial converter to communicate with other equipment over a distance. Perhaps use to control the Arduino based Pan/Tilt head.

P25 Getting down and using the Arduino Uno with a MAX232 IC and the DB9 connector. The lesson then continues with a sex education by explaining the sometimes used "Gender Bender" with the DB9. Next you need to know about the Code. Not the Morsian one but one for turning the MAX232 on and earn its pay.

P48. Make a Printed Circuit Board. Part 2. Using the EAGLE program lets design and build a simple Square wave generator using a 555 IC and find out how to make the PCB at home or export your artwork.

P68. Artificial Intelligence. Part 5.

**PROJECTS:**

P37. Connecting Keypads to Microcontrollers. Learn how to use a 4x4 matrix keypad interface to an Arduino or a Rasberry Pi board. At last a use for that Matrix keypad in the junk box.!

P42. Following on to the Breadboard prototype and look at a number of different keypads and their separate pinouts.

P44. BUILD 1. Solderable Stripboard Version.

P46. Build 2. The PCB Version.

Where does this now lead to.? Well you could use it to give control of a security lock box, or a remote control for some equipment. The potential is enormous.

P58. 8x8x8 LED Cubes. Part 1. Create a dazzling ighting effect with a programmable Blue LED cube.

P73. Fan for Fumes. DIY soldering Fume extractor for the workshop.

P90. For the kids. Build an Electronic Dice using the Arduino Uno. Firstly throw away the old old dice set then read this article.



ET AL.