BARG News

Ballarat Amateur Radio Group

Inc. #6953T

June 2022 Monthly Newsletter

Next Meeting

11:30am, Saturday 2nd July 2022

At the Airport

All Welcome

Contacting us

You can e-mail the secretary

vk3bml@barg.org.au

We're on the web

www.barg.org.au

https://twitter.com/vk3_barg

https://www.facebook.com/groups/VK3BML/

President's June Report

In another couple of days, we'll be again at the shortest day of the year and winter will have truly set in. The colder weather doesn't lend itself to outdoor activities and late-night meetings, but there's still plenty of opportunity to be active. The bands certainly seem to be working much better than they were 18 or 24 months ago with many QRP stations having good success, even working Europe on low power in the early evenings.

I've made the most of a few days off to get out into the field managing several parks activations. Lots of layers of clothing and sometimes some rain protection has helped make sure I haven't frozen. As has a hot cappuccino and a supply of muffins from the various local cafes around the place.

Last meeting, we agreed to alternate between having the general meeting on a Friday night and a Saturday. The June meeting is due to be a Saturday meeting, though it's been postponed to Saturday July 2nd as the 25th is the Winter VHF / UHF field day and a number of the committee also had other commitments, including me.

The July meeting will be Friday 29th and the August meeting Saturday the 27th. The August meeting will also be the 2022 AGM where elections will be held again for the committee. As I indicated last year, I'll not be standing again for president. Having done the role for five years, I feel the time has come for someone else to have a go.

None of the committee roles are particularly hard or time consuming, but they are critical in the running of the club. So, give some thought to taking on a role and helping take us forward. Even if only for a year.

Figure 1 Mt Warrenheip

Figure 2 Coffee and Muffin in Ballan.

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Figure 3 Blacks Creek NCR

Figure 4 Limeburner's Lagoon

Mal VK3OAK

Club Nets: VHF NET: Every Tuesday Night at 8 pm on 146.750 MHz - VK3RBA
HF NET: Every Thursday Night at 8 pm on 3.608 MHz - VK3BML
6m NET: Every Tuesday Night at 8:30 pm on 53.650MHz RX / 52.650MHz TX - FM with a 91.5 tone - VK3RWU
BEACONS: VK3RMB 432.536MHz & 1296.536MHz
REPEATERS: VK3RWA - 147.100, VK3RBU - 438.475, VK3RPC - 144.750, VK3RBT - 146.650
VK3RBA, Mount Buninyong - 146.750 & 439.275 & 1273.925
VK3RBA and VK3RWU on Mt William, VK3RCU on Mt Moliagul, VK3RBH in Geelong and VK3RAD in Mitcham are linked.
All on 70cm.
VK2RWB, Mt Gwynne added to the linked system.
The system can be accessed via IRLP node 9503.

Archaeological Breakthrough!!!

After having dug to a depth of 10 feet last year, British scientists found traces of copper wire dating back 200 years and came to the conclusion that their ancestors already had a telephone network more than 150 years ago.

Not to be outdone by the Brits, in the weeks that followed, an American archaeologist dug to a depth of 20 feet and shortly after a story published in the New York Times:

American archaeologists finding traces of 250-year-old copper wire, have concluded that their ancestors already had an advanced high-tech communications network 50 years earlier than the British.

One week later, Australia's Northern Territory Times, reported the following: "After digging as deep as 30 feet in his backyard in Tennant Creek, Northern Territory, Lucky Bunji, a self-taught indigenous archaeologist reported that he found absolutely nothing. Lucky has therefore concluded that 250 years ago, Australia had already gone wireless".

PLEASE NOTE

THE BARG ONLINE REMOTE RADIO WILL BE DISCONNECTED UNTIL EARTH-WORKS ARE COMPLETED IN THE BARG COMPOUND AND ANTENNAS CAN BE RECONFIGURED.

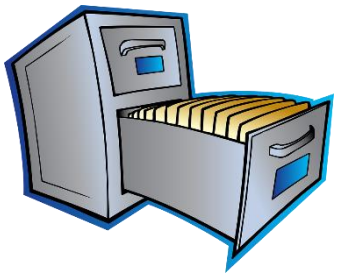
The Road in front of the club rooms has been closed off, hopefully by the time of the next meeting, all will be well.

YOU HAVEN'T BEEN TO BARG THURSDAY COFFEE MORNING? GIVE IT A TRY!!!!!

THE LOCATION IS
"FOOD SEDUCTION ON DOVETON".
A LOCALLY OWNED CAFÉ
ON THE SITE OF GOVE'S BIKE SHOP, ON DOVETON ST NTH.

10:00am start is the usual drill, and we sit down, enjoy a great coffee and snacks provided by Michael and Tina and discuss and solve the world's problems in a couple of hours.

Great service, you order, coffee served to your table.



FOR THE BARG ARCHIVES

Would old and new members please take a photo of yourself.

Please print name call sign and year on back of photograph as these will be used for history of BARG.

Please contact Doug vk3vba

dougr@ncable.net.au 53323565

AN IMPORTANT NOTICE TO ALL MEMBERS

The club rooms have been experiencing one of the power box circuit breakers intermittently tripping, usually during/after a rainstorm.

Gordon VK3FGC has met with a plumber and electrician to look at the problem.

Any members visiting the club rooms are asked to check the circuit breakers, located just inside to the right of the entrance door.

The electrician has split the troublesome circuit into two breakers, they have been numbered.

If anyone notices a breaker OFF, can they please ring Gordon VK3FGC, his number is written near the power board and let him know which breaker has tripped.

BARG ANNUAL GENERAL MEETING

11:00AM 27th AUGUST 2022

"Could we extend the annual meeting? I still have a lot of complaining to do!"

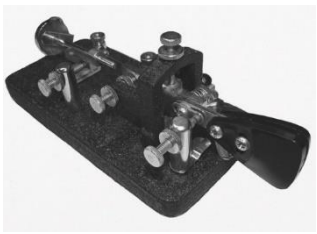
EVERY SUNDAY 0600-0800UTC

To encourage more Morse Code participation and on-air activity we're starting a new weekly event. The Sunday Sesh…. a regular event for when you feel like a bit of a Morse Code sesh.

It's two hours on Sundays from 0600-0800UTC (4-6pm Eastern Standard Time) on 40m. This enables all activity to be centred on one band. And two hours sounds about right for a sesh.

The objectives are simple. Get on air and make CW contacts.

1. A contact can be anything from a simple basic exchange of name, RST, FDU Number, QTH etc to a ragchew.
2. If you want, use Sunday Sesh to clock up a load of contacts to improve your contest/DX skills. That's fine too.
3. QRP? New antenna? New radio? Some DX hints? Tell your QSO buddy…
4. We encourage newcomers to register with committee – we'll listen out and work you at your speed…
5. We ask the more experienced ops to slow down… and the slow guys to increase their character speed but decrease word speed…. Practice, practice practice.



The centre of activity will be 7.028MHz but spread out as required.

Following each sesh, send us an email (vk3qb@hotmail.com) with your QSO count and any soapbox comments. No prizes… we just like collecting statistics.

VK3BML NET CONTROLLER ROSTER

New roster JUNE -DEC 2022 Revised and updated 14 June 2022

80M CLUB HF NET EVERY THURS NIGHT AT 8PM ON 3608Khs +/- QRM.

DATE	OPERATOR	NAME	BACK UP	NAME	COMMENTS
16-Jun-22	VK3QY	CHRIS	VK3HMV	ANDY	From current roster
23-Jun-22	VK3HMV	ANDY	VK3DRE	DOUG	From current roster
30-Jun-22	VK3DRE	DOUG	VK3MCL	SCOTT	From current roster
7-Jul-22	VK3MCL	SCOTT	VK3AXH	NAME	New roster starts now.
14-Jul-22	VK3AXH	IAN	VK3KG	CRAIG	New roster starts now.
21-Jul-22	VK3KG	CRAIG	VK3TXR	PAUL	New roster starts now.
28-Jul-22	VK3TXR	PAUL	VK3QY	CHRIS	New roster starts now.
4-Aug-22	VK3QY	CHRIS	VK3HMV	ANDY	
11-Aug-22	VK3HMV	ANDY	VK3DRE	DOUG	
18-Aug-22	VK3DRE	DOUG	VK3MCL	SCOTT	
25-Aug-22	VK3MCL	SCOTT	VK3AXH	IAN	
1-Sep-22	VK3AXH	IAN	VK3KG	Craig	
8-Sep-22	VK3KG	Craig	VK3TXR	Paul	
15-Sep-22	VK3TXR	PAUL	VK3QY	CHRIS	
29-Sep-22	VK3QY	CHRIS	VK3HMV	ANDY	
6-Oct-22	VK3HMV	ANDY	VK3DRE	DOUG	
13-Oct-22	VK3DRE	DOUG	VK3MCL	SCOTT	
20-Oct-22	VK3MCL	SCOTT	VK3AXH	IAN	
27-Oct-22	VK3AXH	IAN	VK3KG	CRAIG	
3-Nov-22	VK3KG	CRAIG	VK3TXR	PAUL	
10-Nov-22	VK3TXR	PAUL	VK3QY	CHRIS	
17-Nov-22	VK3QY	CHRIS	VK3HMV	ANDY	
24-Nov-22	VK3HMV	ANSDY	VK3DRE	DOUG	
1-Dec-22	VK3DRE	DOUG	VK3MCL	SCOTT	
8-Dec-22	VK3MCL	SCOTT	VK3AXH	IAN	
15-Dec-22	VK3AXH	IAN	VK3KG	CRAIG	
22-Dec-22	VK3KG	CRAIG	VK3TXR	PAUL	
29-Dec-22	VK3TXR	PAUL	VK3QY	CHRIS	OPTIONAL NET depends if people around
5-Jan-23	VK3QY	CHRIS	VK3HMV	ANDY	
12-Jan-23	VK3HMV	ANDY	VK3DRE	DOUG	
19-Jan-23	VK3DRE	DOUG	VK3MCL	SCOTT	
26-Jan-23	VK3MCL	SCOTT	VK3AXH	VK3KG	

Stay safe over the coming months and remember that the COVID is still about. Observe safe practices.

NEXT ROSTER DUE. 1st Dec2022

TO BARG MEMBERS, SWL AND OTHER AMATEURS WISHING YOU ALL A MERRY CHRISTMAS AND A HAPPY NEW Year. GOOD DX'ing and mountain top, parks activations.

A new roster out in December and the New Year's Net can be an open net if the NCS is still away on holidays;

Please advise ASAP of any date that clashes for you and any other status.

73 Craig VK3KG.

Bombard170@gmail.com

FOR SALE:

5 File picture, not actual unit

Portable MIG Welder Unit

Literally as new.

Was purchased under the COVID lockdown period and never used except for setting up. Unit is not required by the members of the Rokewood Men's shed group and is offered for sale here now.

Original cost was $300 from ALDI and asking for $200.

Original box, instructions, and a coil of flux wire.

Pictures of actual unit available.

Contact Craig, bombard170@gmail.com or 0428 928 614

Mt Bacchus Marsh Microwave Expedition

Contributor Leigh VK3XBI

Hi guys, well we tried with supreme optimism.

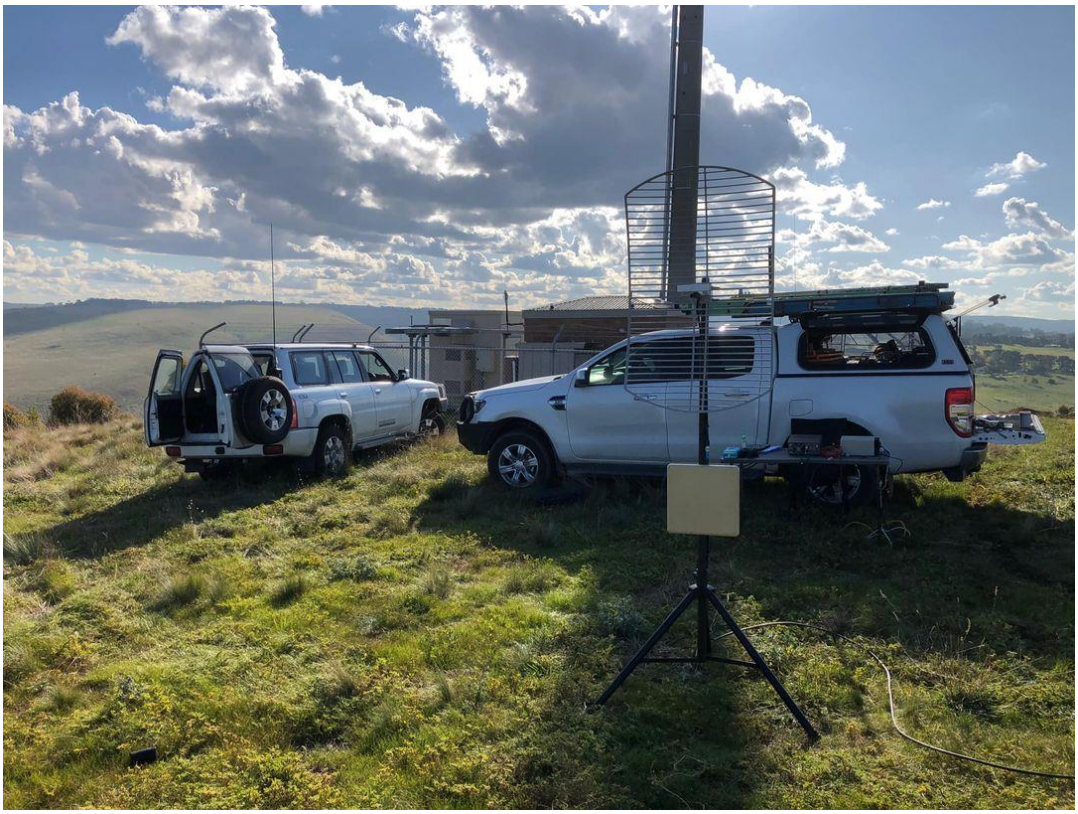
Today, 23/05/2022, was deemed as 2323 and although it mainly related to VK7 and VK4 apparently, we thought let's give it a go.

So, we set up camp at Mt. Bacchus Marsh and pointed our portable antenna system directly at Launceston.

This is the first time that I have operated in approximately 37 years, so why not try for a long-distance contact on 1296 MHz.

The weather was absolutely perfect, and we operated from approximately 1300 to 1600 with no contact.

Obviously, our next field trip will be way more organised with respect to potential contacts. VK3XBI and VK5NV.



VK3KG PERSONAL HISTORY OF BROADCASTING IN HIS ERA.

Contributor Craig Cook VK3KG.

I should start the text off saying that I went to RMIT Radio Research Laboratory initially employed by the Education Department to operate the departments SW transmitter on 5370kHz known as VL3RT.

The letters for this callsign stood for "Radio Teaching" and in the early part of the 1960's the department wanted a broadcast system to be able to reach several remote or isolated students who couldn't make it to a school for their education.

Based loosely on the Rev John Flynn's flying doctor service which carried the school of the Air program for children of the outback. I believe that the RMIT/Ed Dept school broadcasting program preceded the ABC's kindergarten of the air series also.

While I was working as a radio tech at 3DB/LK in Flinders Street which was owned then by the Herald Weekly Times company I read the advert seeking a technician holding a Broadcast Operators Certificate of Proficiency to work up at the RMIT and take charge of this special short-wave station for the department.

The job sounded quite interesting as it did not involve night-time or weekend and broken shifts which seemed important to an active eighteen-year-old single male. As it was a government job it also meant that my involvement with the military in the CMF would be easier when I required to go away for a fourteen camp or course each year. I did miss the penalty money though as it was paid each fortnight separately to the base rate of 26 pounds award.

So started my second journey involving broadcasting, distance and correspondence learning, remote learning programs, TAFE teaching along with setting up a community radio station [twice involved] and dabbling with amateur radio and some amateur TV broadcasting.

Running down the years listed on the broadcasting of Auntie and other stations I didn't see mention of 3RMT-FM now called 3RRR-FM which was the first and I believe the ONLY Educational FM licence issued by the then Labour government under Gough Whitlam.

Race Mathews was the member I think at the time for public broadcasting, and I worked on the preparation and set up of the station on the roof of the RMIT building 56 which housed amongst other TAFE departments of the Communication Industries department.

There was another "group" at Melbourne University seeking the licence, but I think they had very little chance of gaining a radio licence at the time especially after listening to the “quality and content" of their program material during the test period given by the government.

Our group was producing quality educational programs within the campus’s own TV studios and proper qualified staff who knew how to make proper packages with educational curriculum value and not just student music and chatter.

The transmitter we used initially was a modified Marconi sound transmitter that came out of service from Ch7 Sydney along with vision transmitter and all the combining network of solid aluminium and copper coax pipe . The sound transmitter had the RF deck modified by the Communication Engineering dept staff along with design and manufacture of the new antenna on 103.200MHz.

Not sure now what the licence power allowed us but probably had to be about 1 KW into the antenna that

was a phased double folded dipole. Constructed in brass tube and silver soldered together before hauling up and mounted on the corner tower of our Queensbury Street building in Carlton.

Later the RMIT management handed over the control of the station to a group or students who then ran it well, as there was some considerable outside interest and "assistance" available from industry and user groups looking for an advantage in the more open radio and TV industry as it was devolving. The callsign change occurred about a year or so after that.

Now that did not appear in the listings I note. Another point I observed was no mention of VL2UV which was based in NSW, and I also remember listening to VL5UV down around bottom of the HF band 160M. I used to listen to them C1970-72 and did some further research on educational radio and TV in this country while doing my Batchelor of Education at the Hawthorn Institute C1975s.

The Sydney based station ceased on HF and later was transmitting UHF video around the Sydney University for the Dept of Medicine and there was a great article done in Radio & Hobbies or was it then Electronics Aust.

Cover had a pic of the antenna sitting on the tower and it had a large Radome structure that looked like an oversized Bass Reflex speaker box. That could make a good revisit for a future article. !!!

Back in 1962-65 ? RMIT had already broken into the use of TV teaching to classrooms from a set up TV studio using BW technology. This TV studio was in the old Building 9 Radio School and had existed for a number of years prior and many technicians that did their TVOCP there will remember the PYE series of TV cameras and telecine and switching gear there.

This TV studio was under the care of Jack Garry who had previously worked at channel 7 and when the Radio school moved out to new premises in Queensbury st C1972/3? a new studio was incorporated in the TAFE section of the Communication Industries division. About the same time a new fully equipped TV studio was being prepared in a new building along Swanston st within the Advanced College department of Communication Engineering. (https://en.wikipedia.org/wiki/RMITV)

From that studio several engineering students gained their qualifications and impetus to go into the setting up of the first Community TV station known then as CH 39. Community TV is still operating in Melbourne as well as a station in Sydney as far I know. A name that received a start from this station was Rove McManus. (https://en.wikipedia.org/wiki/C31_Melbourne)

I started my technician course at RMIT in one of four student groups [Two were RAAF apprentices and two were private civilian students] there they were using a 15min TV demo and discussion session in the TV studio and via a local cable distribution system to several class groups in their normal room with separate instructors. There was also small microwave link on about 5000MHzs that went from the Radio school roof across Franklin Street and Queensbury Street to the radio school annexe [Campbells building]

In the studio a principal instructor to anyone who remembers this was Bob O'Neil (later changed to Neil) would introduce the days topic, show the simple demo or setup say iron fillings around a single conductor laying on and one going thru the paper. When powered up by a battery and switch the iron filings would jump into their magnetic field structure to show the concentric rings of the magnetic field etc. Early days of TV teaching and closeup camera techniques.

After that demo and maybe leaving some question unanswered he would go to black and the different room teachers took over and concluded the session in more conventional way.

I believe that 2UV medical station demonstrated open surgery live this same way however they had colour cameras and receivers by that time….. Oh my, the detail they must have seen then.

Anyway, that system operated for about four years or so and even had a microwave carrier system with dishes sending the TV pictures across the top of the city baths into a building opposite rented by the tech, as the radio school had expanded outwards by then.

Well although that wasn't the history of the ABC [Auntie] being the first to do things.

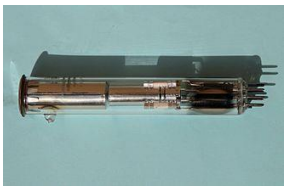
It was just a bit of background history and something that I can say I was one of those that experienced the concept and the execution of another way of receiving an education.

It probably gave me an inside start for when I was transmitting ATV signals on 426.25Mhzs and 444.25Mhz from my shack in Box Hill.

I have a log entry signed by the radio inspector Rod Champness and Gavin Brain when they inspected my station when I applied for a permit to transmit amateur TV SIGNALS in the mid 1970's YES, we had to apply for a permit then just to add the /T after your callsign.

I was then VK3ZBD/T and spent a lot of time increasing my picture quality and trying to spread that 7MHz wide video and intercarrier sound across the air. Back then my best DX was to Tasmania and Winston VK7EM at Penguin on the north coast. The signal on 426MHz had quite a lot of QSB and was interesting to see the picture coming and going into and out of the noise [those little black ants on the screen]

I even had a Bauer 16mm projection Flying spot scanner and Iconoscope tube pattern generator which did a lot of on airtime for me when there were just a few amateurs playing ATV then.



We used old 1" vidicon tube cameras (https://second.wiki/wiki/vidicon) taken from security systems and they were just BW. Later when small colour cameras became cheaper that's when more interest took over and the Melbourne ATV repeater was built.

Now that was all analogue stuff then and now digital is the go and analogue is a thing of the past. Or is it?

Nothing to stop someone using Ancient Modulation again as there seems to be a revival on 160M as well as 80M nets also.

Funny though I still have my Tx and cameras somewhere and my 88 element J Beam that was very popular with about 18.5dB gain quoted back then.

Maybe I could stoke it all up again.

I still have my 50cm TV transmitter in the rack when we were allowed to access that part of the UHF band before the move up of all VHF stations and the community TV channel 35 nearly covers where we were. . A bit like the time amateurs had the 1M band [288MHz] but had to relinquish that when wanted for other services.

Maybe we could get that back one day.??? Won't hold my breath waiting though...

73 Craig
VK3KG

Archaeological Breakthrough!!!

After having dug to a depth of 10 feet last year, British scientists found traces of copper wire dating back 200 years and concluded that their ancestors already had a telephone network more than 150 years ago.

Not to be outdone by the Brits, in the weeks that followed, an American archaeologist dug to a depth of 20 feet and shortly after a story published in the New York Times:

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One week later, Australia's Northern Territory Times, reported the following: "After digging as deep as 30 feet in his backyard in Tennant Creek, Northern Territory, Lucky Bunji, a self-taught indigenous archaeologist reported that he found absolutely nothing. Lucky has therefore concluded that 250 years ago, Australia had already gone wireless".

HUNTINGTOWER SCHOOL STEM PROJECT
PICO BALLOON CIRCUMNAVIGATING THE WORLD

Contributor Greg Hellard, Head of STEM

On June 2nd, 2022, a group of year 7 students released what is known as a pico balloon from the Huntingtower oval. The pico balloon is a small 600mm diameter foil party balloon inflated with helium that carries a payload that comprises a GPS receiver and radio transmitter and is powered by two, miniature solar panels.

Figure 1. Pressure testing the foil party balloon

The total payload of the balloon weighs only 17 grammes. The balloon was configured to float to an altitude of 12,000 meters and up into the high-speed wind of the southern jet stream. Jet streams are relatively narrow bands of strong wind in the upper levels of the atmosphere that circle the globe. The winds blow from west to east and are caused by the earth's rotation.

The objective of the launch was to circumnavigate the southern hemisphere using the jet stream. The balloon was launched and flew east across New Zealand and then turned south toward Antarctica. It then looped back north and continued across the Pacific Ocean crossing South America over the top of Santiago in Peru. The flight continued across the South Atlantic Ocean and under Africa, crossing into the Southern Indian Ocean. It returned across the Australian mainland and completed the circumnavigation across 145 degrees over New South Wales. The balloon was tracked by a network of radio amateurs around the world and the position and altitude plotted on the Huntingtower STEM website.

Some features of the balloon tracker electronics

1. Low power 20mW autonomous shortwave WSPR transmitter for the 20m and 30m Amateur bands that continuously transmits its position and altitude during daylight.
2. Onboard GPS module and antenna calculates position and altitude.
3. Arduino compatible Microcontroller with open-source software and Phase-Locked-Loop oscillator with Lab-calibrated Temperature Compensated Crystal reference Oscillator (TCXO) generates transmissions.
4. Weight 10.5gram (Without HF antenna and balloon harness).
5. Power source is two light weight solar panels charging on 1F super capacitors.

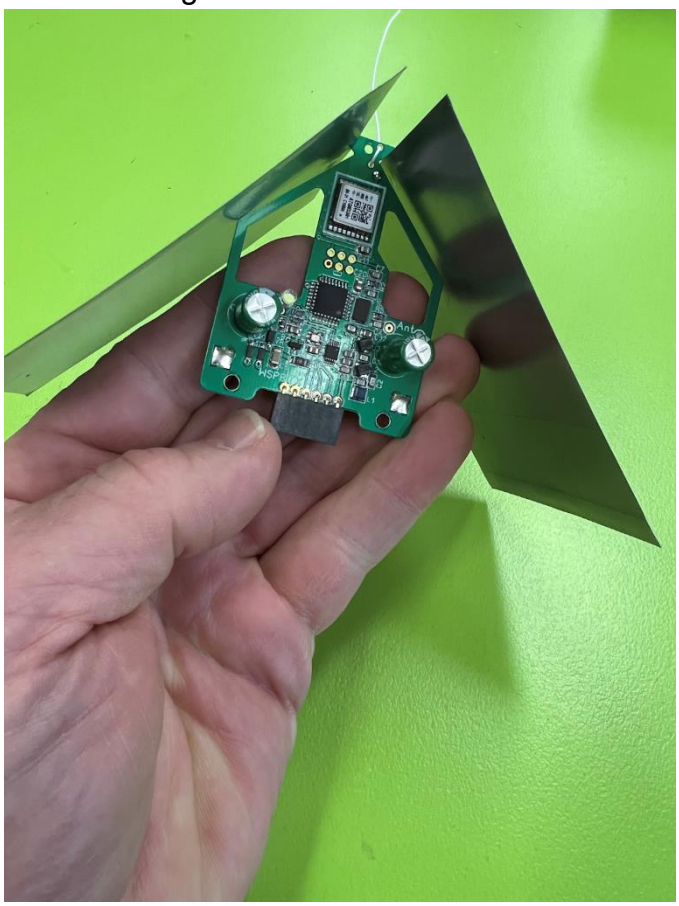

Figure 2. Version 1 tracker used on student flight weighing 14g

The balloon transmitter has a half wave dipole antenna with a 5m enamelled wire length from the transmitter up to the balloon and a trailing 5m enamelled wire. The GPS antenna is mounted at the top of the WSPR tracker. The WSPR 50-bit data transmission contains very limited information, simply the balloon's callsign, 4- character Maidenhead grid square, and power level.

The balloon's transmitted signal is picked up by monitoring stations and logged in an internet database. Students are able to simply view signal reports and the plot maps are viewable at http://wsprnet.org.

The WSPR database is then scraped, and the data converted to post to APRS.fi and HabHub. The plots for APRS data tracking are more phone friendly for student use.

CASA has tightened its requirements on balloon launches into controlled air space. Even for a pico-balloon, no matter where you are in Australia, everything about 400 feet is controlled air space so you need CASA permission to launch.

Prior to launch, there are free online tools that allow simulation of flight path, analysis of wind and weather, sun angle for solar panel charging, determination of balloon ascent rate and free float altitude. Students can also study countries and cultures that are over flown. Finally, the experience of learning amateur radio skills in configuring the RF payload, setting up the balloon flight parameters, and the inflation and launch itself, are all very engaging, hands on STEM experiences.

For this student flight, the total journey took only 9 days, flying approximately 38,000 kms at an average speed of 175 km/hr. It is extraordinary that such a fragile device can be configured to fly at altitude and speed over such a distance.

The balloon is currently (15/06/2022) continuing across the Pacific Ocean attempting a second pass around the globe and may be tracked on HabHub on the link https://tinyurl.com/4u2xkruz or on WSPR on the link https://tinyurl.com/yc4m9wa4

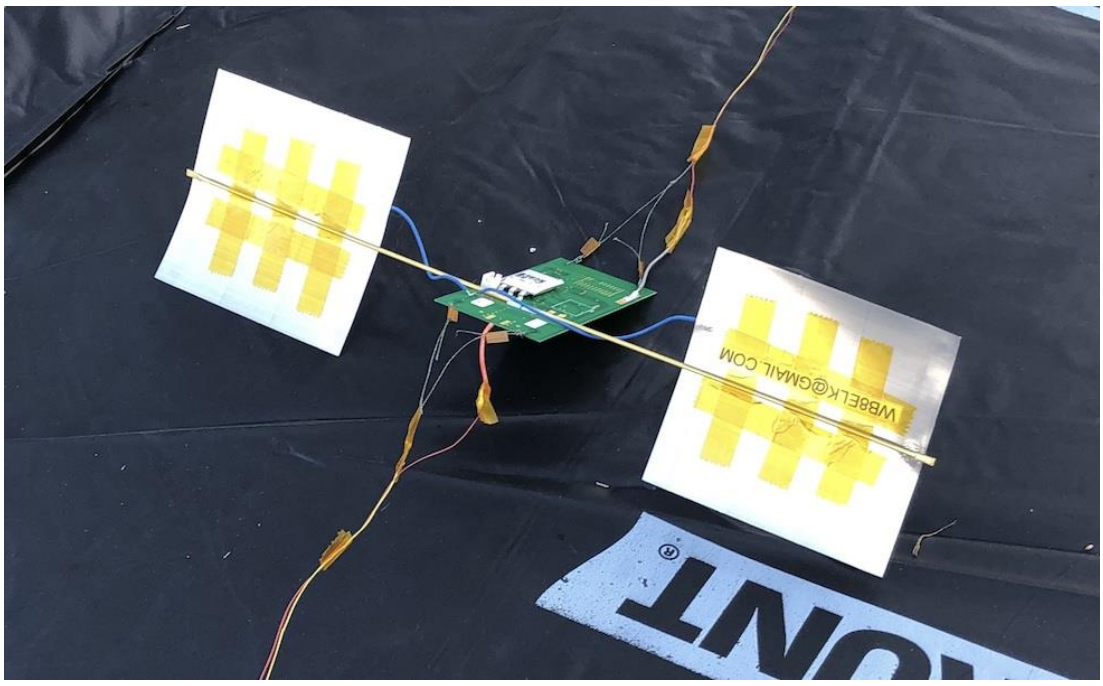

Figure 3. Version1 tracker configuration detailing half wave antenna above and below the tracker. The antenna configuration is the same for the student flight

Greg Hellard Head of STEM

HUNTINGTOWER
Early Learning to Year 12 Co-Educational School

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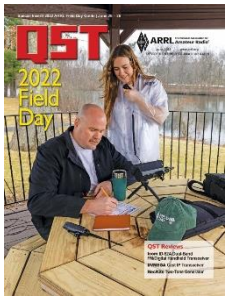
REVIEW. QST 2-2022 February 2022



P9 Diversity and Inclusion. Driving Amateur Radio's Growth.
P13 Spotlight on Walter Holmes. K5WH. Licensed since 1977 his main activity has been to support Online technology and Mentoring activities.
P24 Letters from the Membership.
P26/27 From Crystal sets to Arduino. Time, we got involved.
P30 A Compact 630 Meter Active Loop Antenna. Using RG174 and 12 turns wound to 8" Diameter for the loop. There is a pcb designed which could be adapted and a small vero board be utilized to load some components to for a construction

P34 A WiFi Antenna Rotator Compass, using an Arduino MKR WiFi 1010 micro board and the Honeywell HMC5883L magnetic sensor mounted inside a plastic box [100x100x50mm] mounted on the rotating part of your antenna pole. Software sketch is found at https://www.televideo.ws/index.php/wifi-magnetic-compass then take the ARDUINO MKR_Telnet_Compass.ino and configure from there.

WARNING GO TO THE WEBSITE ABOVE AND READ UPDATE ON SOURCING THE HMC5883L AND ITS CLONE.

The compass is read via a smartphone and details for installing are in the article. The transmitted range of the device was about 300 feet outdoors although if the phone is indoors this may well be less. Using 200W RF to a 3-element beam on the pole showed no signs of any RFI
P36 Build your own 12 and 17-Meter Antenna. "Claiming the performance equals that of a single four element Yagi, all on the same boom and with a single feed." While this isn't a construction project the author has modelled the design before constructing and recommends not to vary dimensions widely from his. All tube sizes are in Imperial diameter to allow for telescoping tightness but spacing on the boom and each element lengths are given in Metric.
Always be careful when using and measuring from articles and display capabilities with an Cable Analyzer.
P39 Priced at USD of $1100 it may seem expensive but looking at what it can do in its performance many amateurs will still want one for their workshop line up. With this frequency range up to 2GHz and an app available for connecting to your computer and logging on automatically for upgrades to the Analyzer. Versatility seems to be its domain because it will allow selecting a single or a swept frequency display, followed by the Smith chart or a TDR [Time domain reflectometry] display. If you don't want to go into the mathematics when dealing with antennas and things then it will play the Impedance Z, Resistance R and Reactance X or all the series/parallel equivalents along with SWR readings over a range to visually show resonance points over a multiband antenna design. Who will buy one first.?
P43 REVIEW: CSN Technologies S.A.T. Satellite Tracker/Controller.
For the satellite chaser this pocket pager sized device is ideal to keep tracking data on all the birds up there now. An interface application is available, and it seems the ICOM range of radios like the IC9700, 9100, 910H and 820/821H are compatible along with the Yaesu G5400 and G550 rotators.
Read more about what this SAT can do, you may find the price quite good at USD$190.
www.csntechnologies.com
P53 DIY tool for measuring AC current and using tin soup cans to maintain perfect alignment of the horizontal elements: Found another use for farmers electric fence stand offs- Supporting 450-ohm balanced lines.
P55 Sampling Aircraft data at HF's. Listen to the HF-ACARS Try decoding the Auckland- New Zealand station on 5583, 6535, 8921, 10084, 13351, 17916 KHz or maybe Agana on Guam. 5451, 6652, 8927, 11306, 13312, 17919, 21928 kHz. Good SWL.

P56 New way to Mountain topping. Activity.
P59 Maintaining privacy in a Public Hobby Who can access your details and your license data. You also need to take care what you post and say on air. What about the records maintained by the department and clubs.?

P62 Meet the Mentor. A program used to assist and guide new amateurs joining the hobby. Do we in VK need to note how this program works and develop it more so here in VK now.
P65 Planning your first DXpedition.
P70 Joel Hallas W1ZR QST Editor and author Silent Key in Nov 2021 at 79 years. First licensed in 1955 he worked in a number of areas and was well versed in nuclear, magnetic pulse, satellite and radar technologies he was well known as the editor of the long running "The Doctor is In" series of Q&A letters and the QST's podcast of the same name. An author of many books published by the ARRL, and he also taught at college level.

VALE. Joel Hallas W1ZR.

P80 How's DX.? Updates amid the COVID crisis.
P82 World above 50MHz's looking at portable Antennas suitable for grid activations.
P87 QST Looks back March 1972…Dual voltage Current power supply for Repeaters. The growing use of foreign languages by American amateurs.
P93 Celebrating Our Legacy. K7AZA remembers his start as a boy scout in 1955 learning Morse code for a badge and how that led him into a career in electronics and his hobby with amateur radio ever since. James W8KGI also remembers his first mentor Ivo W8BAE [SK] helping many young people with small parts and military surplus back in 1954. Although Ivo is SK now James still has Ivo's homebrew portable with plug in coils and flea power using a 6SN7 dual triode in a Pierce oscillator configuration.

P94 Classic Radio: Looks at the World Radio Labs Globe Scout. Back then with AM and CW the only methods employed. Never able to achieve 100% modulation depth because of the Heising method used to plate modulate the final PA valve. At that time other manufacturers were using Screen grid modulation, Cathode keying [which could be quite dangerous with high voltages on the key bar itself and then push pull anode modulation. Trouble with the PP version it was most costly due to the special transformer wound to suit the two valves now included as well as the PA tube. In the 1970's when demand was for only one case for the whole radio Collins and Swan were holding well against the WRL company with their GALAXY brand but when the three Japanese companies arrived the others all disappeared from the amateur marketplace.
P96 Index of QST from February 1922 [100 yr], 1972 [50yr] and 1997 [25yr]

Well, another large, packed magazine this month and the advertisers' pages are really mouthwatering for much of the gear and accessories that are available.

Happy reading and don't forget we have a large holding of early QST in our club library. Just remember to sign out all magazines when borrowing and to sign them back on the return visit.

QST June 2022 Review.

P9 Looking at the second Century. To advance our noble cause. Similar thoughts apply to us as amateurs in Australia and the future directions for the WIA as our representative body.
P13 Member spotlight is Paul Crisher KE8MOI I always find interesting reading about these nominated amateurs and what they have achieved in their lifetime.

P24 Letters from the members and always throw up some interesting bits.
P30 `Kid friendly Morse code key Project. Very, very simple construction that anyone can make up for a field day station. However, the REAL challenge will be getting YOU to practice and use the CW mode to communicate.
P34 Do you want a Lightweight but efficient 40/20 Meter Portable Antenna.
P37 An Efficient Omni directional VHF Antenna for Portable Use. The Plumbers delight, that uses copper tubing and can fit into the camping bag. See the theory of the end fed half wave antenna and the comparison with the J pole feed which is using a parallel l balanced line and this device fed directly with unbalanced coax cable.
P41 REVIEW: Icom ID-52A Dual band FM/Digital Handheld Transceiver.
P46 DVMEGA Cast IP Transceiver reviewed.
P49 HecKits Two-Tone Generator. For testing your SSB transmitter with equal level audio tones and also check for distortion on an oscilloscope look for harmonic distortion, measure your

Intermodulation Distortion also. Two tones of 700and 1900Hz are produced and not harmonically related. With a PCB measuring about 65 x 70mm and a 9V battery built into a case of your choosing. Costing USD$75 and available from HecKits at www.hechkits.com it may prove useful in the toolbox one day. I built myself a device using just a single 555 some years ago and it still survives, and I find it handy to still be able to use as a simple signal generator source from time to time.

P53 Eclectic Technology is suggesting we Polish our CW skills for Field Day activities. How are yours going??

P54 Ask Dave where you individual problems may be answered. This month covering Dipole radiation patterns, Handy Tower systems, RFI I n the house see www.amazon.com/dp/B08BPHCXR3 and accessing Licensing Videos. www.ke0og.net/training and see www.youtube.com/user/arrlhq

P56 Advantages of using the ARRL Field Day Station Locator: www.arrl.org/field-day-locator Someone may like to see if it is compatible for use in VK.

P58 First time POTA activation from North Dakota. Htpps://pota.app/#/map

P61 A GO-BOX for the ICOM -705. Or any other radio you may care to use. Started with an eBay purchase of a Pelican case (www.ebay.comm/itm/142920435708) Finished job looks quite compact and good. Hikers and mountain toppers take note.

P65 thru to p68 Covers the 2022 field day activities and well worth thwe read if you are looking for ideas.

P76 How's DX? Explore the Isle of Rockall. Where you ask? Look at your atlas. 300Km West of the island of Soay in Scotland, well a rock in the water measuring 25 x 31 metres and just 17m tall out of the water.

P78 World above 50 MHz, solar cycle 25 sparks Ionospheric F Layer DX on 6M.

P87 Look Back at QST for July 1972. THE Pip-Squeak follower for 220 MHz D Layer Absorption during a solar eclipse.

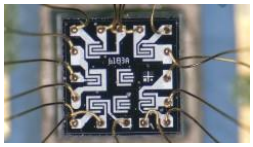
P94 Classic Radio. The Regency HR-2 Transceiver. 6channel FM from 1970 using crystal sets for each channel. Regency also produced radios for 220 and 440 MHz with an HR-6 on 6Metres.

P96 100, 50 and 25 years ago, Look back.

There are still more pages out to P128 and loaded with interesting reading of advertisements and interesting things.

73's Craig VK3KG

SILICONCHIP June 2022 Review.



P12 IC Fabrication, Part 1. An in-depth look at how silicon chips (ICs) are made.

P24 Spectral Sound MIDI Synthesiser. Can play up to 18 different notes simultaneously.

P38 Radar Coach Speed Detector. Review of a speed detector used for tennis and other sporting applications.

P40 Buck-Boost LED Driver. High power for very bright LEDs with adjustable voltage and current limits.

P48 Arduino Programmable Load. A variable load that can handle up to 70W continuously at 15V and 4.7A

P61 500W Power Amplifier Part 3. Assembly and testing to finish the build.

P81 Revised Battery Charge Controller. Alternative parts to this earlier project due to low part availability.

P84 Altium Designer 22. Review of Altium CAD software.

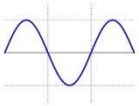
P88 Circuit Notebook. RF Burst Power Meter, Artificial candle using a "real" flame, Digital Volume Control with discrete logic. Easy way to measure SMDs.

P92 Serviceman's Log. Air ioniser/purifier, TV antenna, Fisher-Paykel washing machine plus cartoons by Louis Decrevel.

P98 Vintage TV. Rebuild of Admiral 19A11S TV, history and circuit description.
(For TV aficionados, a valve, CRO TV with electrostatic deflection.)

DIYODE June 2022 Review.

P8 Micron Soldering Station Review. T2040 Electronic Temperature Controlled Soldering Station from Altronics.
P14 Big Brother Part2. Continuation of DIY security system looking at hardware and operating systems.
P35 Mobile Phone FTP Server. How to run a local FTP server on a 'surplus' mobile phone.
P43 Nixie Tube Clock. Design of a Nixie Tube circuit to produce a retro look digital timepiece.
P49 Lightning Detectors. Two circuits to warn of approaching storms. Low component count and veroboard construction.
P63 Flickering Flame. Using 3D printer and an Arduino Nano, produce a very convincing flickering candle flame.



P67 Making Waves. Looking at many methods of making a sinewave, including some homebrew circuits to try. Also, a simple squarewave oscillator.
P82. The HS1101LF Humidity Sensor. A look at the sensor and a simple circuit to try, for evaluation purposes.
P87 Repurposing discarded Laptop power supplies. Getting the DC output onto a small PCB for use while experimenting.
P89 Kids' Basics. Shows how to build a ring of flashing LED to enhance a sign, not using a microcontroller, just hardware ICs.

ITEMS FOR INCLUSION INTO THE MAGAZINE

If you have even an idea for articles or data for the newsletter, please let me know.
If you have information and would like a newsletter article written on it, please let me know.
Web links and/or printed material will be accepted, articles that need returning can be scanned.
I can write the article around the material or idea you supply.
Knowing what you want to see in the newsletter helps immensely toward what gets published.
Anyone with old photographs of amateur gear or operation and club activities will be very welcome.

Tom.. VK3DMK… tomvk3dmk@gmail.com