



BARG News

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

Next Meeting
Friday 29th September 2017 @ 7.30pm

At the B.A.R.G. Club House, Ballarat Airport

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 1261
Mail Centre
Ballarat. Vic. 3354

Or E-Mail : vk3bml@barg.org.au

We're on the web
www.barg.org.au

Presidents Report

Well the warm weather is coming back, and with it there is renewed activity around the club. Last week some VHF/UHF antenna were mounted to enable additional bands to the Remote Base. And Planing is well under way to get the log dipole up on the rotator. It's taken some time, but the end of the project is in sight. All members will have access to a pretty capable station.

Hamfest is only a month away too. Table booking are coming through. The change of weekend, the first weekend in November is working well for some, and means some other regulars won't make it.

It's the major fund rasier for the year, so please set aside the time to come along and help out. There's lots of different jobs, and many of them are not physically demanding.

I look forward to seeing you there.

Mal vk3oak

A Word From The Editor

Last weekend I had a go at the Remembrance Day on the 12th and 13th of August. I was a simple QRP station from home. Conditions were average, though I seemed to be able make contact with most stations that I was able to hear. Sometimes the other station had to work a bit harder to complete the exchange. It seemed that the closer the station the harder the contact. I managed VK1, 2, 3, 4, 5 and 6 contacts. No ZL contacts made it into the log. All were on 40m.

Like every news letter, it's only as good as the content that members provide. A few words and photo about a project or trip is always welcomed. You might be surprised with the positive feedback that you get.

Malcolm - VK3OAK

Did you hear about the soldier that survived a mustard gas attack and a pepper spray?? He is now a seasoned veteran.!

A rubber band pistol was confiscated from a student during an algebra class. They were told its a weapon of math disruption.

BARG THURSDAY NIGHT NET CONTROLLERS LIST.						
For VK3BML club station of Ballarat Amateur Radio Group.						
DATE	OPERATOR	NAME	ALT	OPERATOR	NAME	COMMENTS.
THIS ROSTER DEvised		Jul-17				
28-Sep-17	VK3AXH	Ian	alt	VK3KQT	David	
5-Oct-17	VK3KG	Craig	alt	VK3AXH	Ian	
12-Oct-17	VK3GGG	Mick	alt	VK3KG	Craig	
19-Oct-17	VK3DRE	Doug	alt	VK3GGG	Mick	
26-Oct-17	VK3KQT	David	alt	VK3DRE	Doug	3KG not available.
2-Nov-17	VK3KG	Craig	alt	VK3KQT	David	
9-Nov-17	VK3AXH	Ian	alt	VK3KG	Craig	
16-Nov-17	VK3GGG	Mick	alt	VK3AXH	Ian	
23-Nov-17	VK3DRE	Doug	alt	VK3GGG	Mick	3KG not available.
30-Nov-17	VK3KQT	David	alt	VK3DRE	Doug	
7-Dec-17	VK3KG	Craig	alt	VK3KQT	David	
14-Dec-17	VK3GGG	Mick	alt	VK3AXH	Ian	
21-Dec-17	VK3DRE	Doug	alt	VK3KG	Craig	3KG not available
28-Dec-17	VK3KQT	David	alt	VK3GGG	Mick	
				New Roster for New Year.		
4-Jan-18			alt			3KG not available
11-Jan-18			alt			
18-Jan-18			alt		Net may	not run .See who attends.
25-Jan-18						
1-Feb-18						
8-Feb-18						
15-Feb-18						ALSO add Ian 3YFD to roster.
22-Feb-18						

Rumors about the club are rife that there has been a couple of across town contacts on 472KHz by locals. Didn't think they could get an antenna that big into a Ballarat back yard? Maybe they have shrunk it. Have heard comments on other frequencies about loading down existing feed points with large coils.

Heard someone up Black Hill way is learning about the performance of large Variometers for this project.

Bigears

88s & 73s

BIG EARS.

VHF and Above for October 2017

With the winter season now behind us enthusiasts will be hoping to get some good early propagation indicators that keep us glued to the bottom end of the VHF and UHF bands.

At this stage nothing out of the ordinary has happened however there have been a few occasions when there has been a lift in propagation making it much easier to have a contact across the bottom part of Victoria and into the Mt Gambier area.

Each morning from around 7:50am you can hear contacts being made on 144.1 and 144.120 when things get a bit busy. If you are interested why not have a listen and think about joining in as we all still get a buzz from this activity.

As we move towards the warmer weather this group will be looking for DX into VK6 which for many of us is quite achievable.

On Wednesday evenings at 8:30pm Rob VK3MQ in the Mt Dandenong ranges runs a VHF net on 144.150 where stations can check in and have contacts with other stations located across the State and on occasions something out of the ordinary may happen such as in this past week. A visitor Scott VK4CZ/p on holiday and operating from a high rise in Melbourne using his FT817 and small vertical antenna had contacts into Ballarat and Warragul which is quite an achievement given the 5 watt power level and type of antenna used.

Till next time 73, Ian VK3AXH

Digital Transmissions

There has been mention of this in previous editions of the BARG magazine. However with the rapid increase in this activity now is the time to do something about it. As mentioned previously you can buy an off the shelf unit such as from Tigertronics for around \$180 or you can get out the soldering iron and make your own. Modes that can be utilised range from Slowscan TV, RTTY, and more recently being heard everywhere on HF is WSJT-X in particular WSPR which is a weak signal propagation reporting activity.

If you google WSPR – Map you can see the activity on any band and by using the interface mentioned above take part and upload your results automatically for all to see.

If you want to get involved such as a group from BARG at present using 472 KHz namely VK3BNC, VK3AIG, VK3KQT, VK3KG, VK3AXH and local VK3IDL then build up the circuit shown below.



Wiltronics Research Pty. Ltd. ABN 26 052 173 154

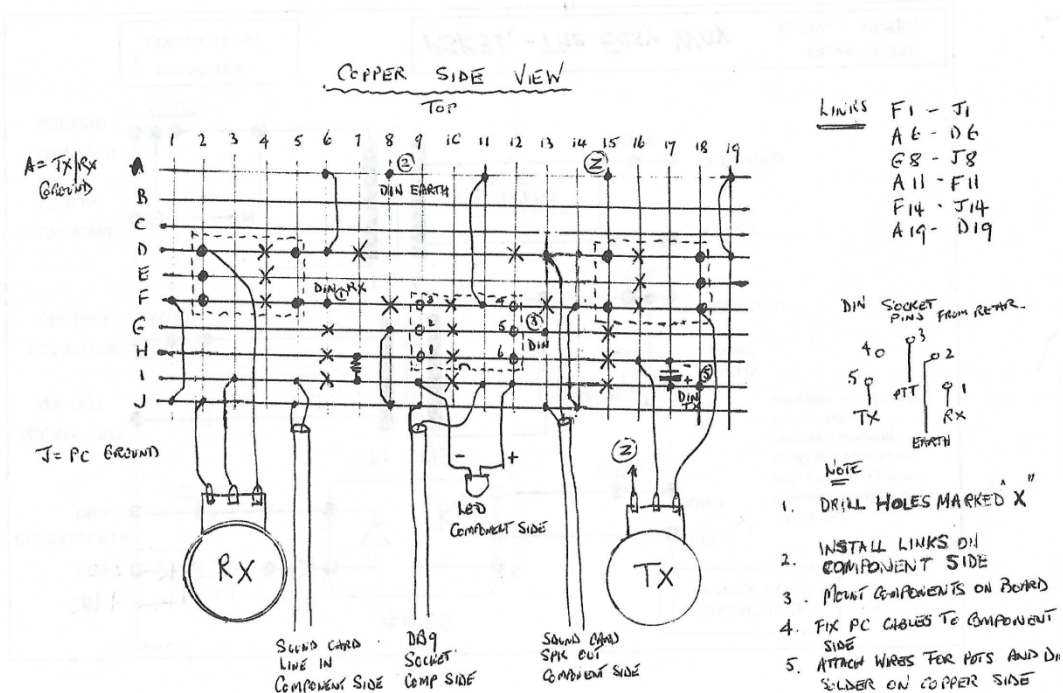
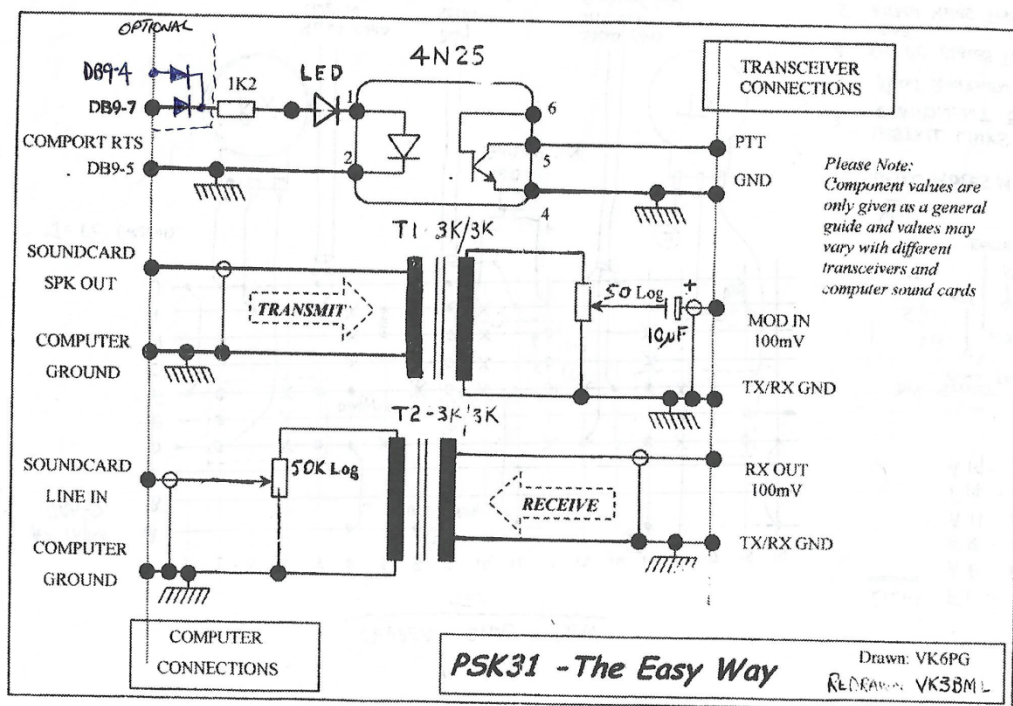
Unit 4 Cnr Ring Rd & Sturt St, Ballarat Victoria, 3350

Postal Address: P.O Box 4043, Alfredton 3350

Ph: 03 5334 2513 | Fax: 03 5334 1845

Email: sales@wiltronics.com.au

www.wiltronics.com.au



Using a small piece of vero-board and the pattern above you can build this interface in a very short time. Parts are available from Wiltronics or Jaycar.

73, Ian – VK3AXH

9 Silicon Chip Sept 2017

- P2 Editorial Viewpoint A shift to electric vehicles could be dangerous.
- P4 Mailbag. Spice tutorials.
LED lamp failures.
Spring Reverb.
Internet hacking.
LED traffic lights
Restore ABC shortwave services.
Radio history under the hammer.
- P16 Cassini's Grand Final near.
- P22 Sputnik Anniversary 60 yrs on.
- P24 3 Way adj Active crossover for Loudspeakers.
- P36 Circuit Notebook: Autoboot NBN Modem.
Laser Range finder with an Arduino.
High temp Digital thermometer.
- P40 The Electronex design & assembly Expo. 6-7 Sept at Melb function centre.
- P53 -60 Jaycar catalogue items.
- P61 Whats next for Australian Broadcast Radio?
- P63 Future of DRM radio Broadcasting?
- P66 Superhet radio IF alignment with DD Synthesis.
- P73 Serviceman: When a GPS loses its way and other service problems.
- P78 LTspice Modelling an NTC Thermistor.
- P86 Build an Arduino Data Logger with a GPS.
- P92 Logging Data to the net using Arduino.
- P94 The AD9850 DDS Module.
- P100 Vintage Radio. Philips MT4 3 transistor Swingalong.
From 1965.
- P107 Ask Silicon Chip. Questions and response.
- P112 Notes & Errata.



73 Craig

VK3KG

Today a man knocked on my door and asked for a small donation toward the local swimming pool. I gave him a glass of water.

I want to die peacefully in my sleep, like my grandfather.. Not screaming and yelling like the passengers in his car.

If I had a dollar for every girl that found me unattractive, they would eventually find me attractive.

I find it ironic that the colours red, white, and blue stand for freedom until they are flashing behind you.

When wearing a bikini, women reveal 90 % of their body... men are so polite they only look at the covered parts.

A recent study has found that women who carry a little extra weight, live longer than the men who mention it.

Relationships are a lot like algebra. Have you ever looked at your X and wondered Y?

America is a country which produces citizens who will cross the ocean to fight for democracy but won't cross the street to vote.

You know that tingly feeling you get when your attracted to someone? That's your common sense leaving your body.

Did you know that dolphins are so smart that within a few weeks of captivity, they can train people to stand on the very edge of the pool and throw them fish?

My therapist says I have a preoccupation with vengeance. We'll see about that.

I think my neighbour is stalking me as she's been googling my name on her computer. I saw it through my telescope last night.

Strong people don't put others down. They lift them up and slam them on the ground for maximum damage.


Money talks... but all mine ever says is good-bye.

You're not fat, you're just... easier to see.

If you think nobody cares whether you're dead or alive, try missing a couple of payments.

SALGUOD

Craig, VK3KG, provided the attached article on an interesting antenna. I don't currently have a scanner, so the quality is much lower than I'd hoped. If anyone would like a better copy, let me know and I'll share it once I get a better scan.



WICEN (Vic) Inc

VK2ZOI Flower Pot Antennas for 6 & 2 metres

John Morrissey VK3ZRX

Many vertically polarised, omni-directional VHF antennas for portable operation are less satisfactory than desired. Base station antennas often have radials (fragile, fiddly to assemble, and snag on objects – and people) and very often, the performance of a mobile whip mounted on a mast is disappointing and somewhat unpredictable.

A few desirable attributes for /P operation:

- lightweight and robust
- simple and fast to erect, no fiddly assembly
- cheap, readily obtainable components
- easy to construct
- easy to pack and transport
- no radials
- good performance (low SWR, good bandwidth, low angle of radiation)

Gain over a dipole is not on this list. An omni-directional gain antenna is only really useful over flat ground. In hilly country it will just exacerbate problems with multipath, which is much better controlled with a small beam. Even a small beam will have higher gain, too.

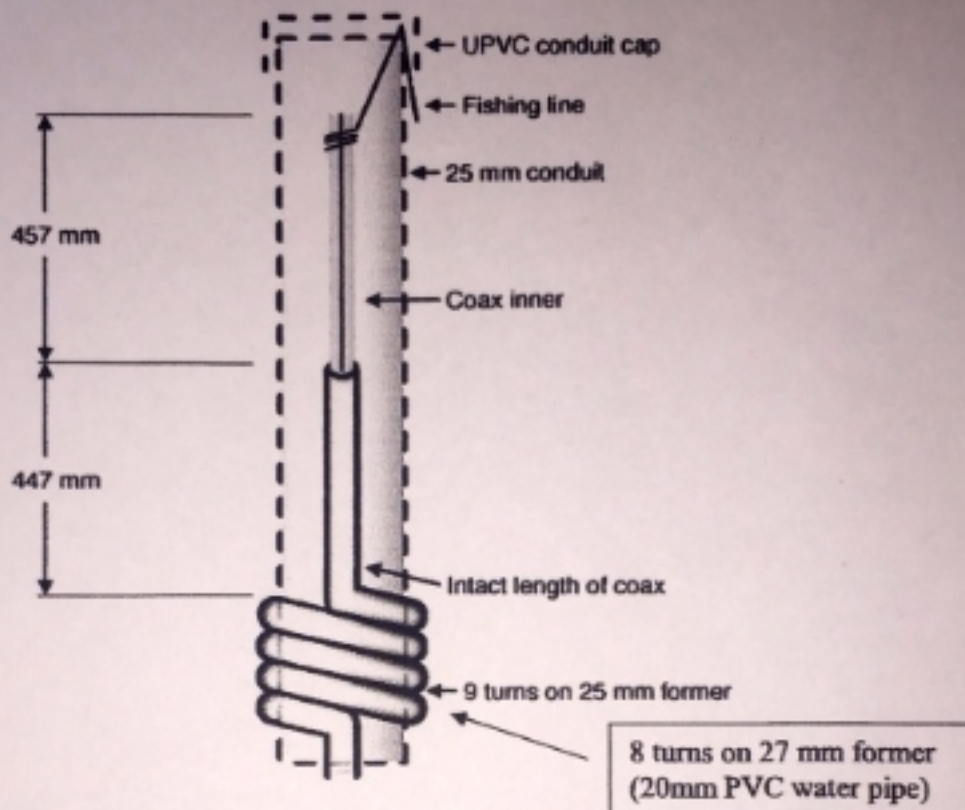
An antenna which fills all the requirements very well is the "flower pot" antenna described by John Bishop VK2ZOI. See <http://vk2zoi.com/articles/half-wave-flower-pot/> See the article for how it got its name!

It is a centre fed vertical half wave dipole, with the feedline coming into the antenna coaxially via a resonant choke at the bottom of the antenna. Pat Hawker G3VA in his book Antenna Topics refers to the same design as an "end fed resonant feedline dipole", in reference to the resonant choke, although strictly speaking the antenna is actually a centre fed dipole. At HF the choke will have a resonating capacitor across it, but at VHF the flower pot uses self-resonant chokes.

VK2ZOI's design for the 2m version of the flower pot is shown on the next page.

Some minor changes to the antenna are needed to suit other available materials. The original uses PVC electrical conduit, you may prefer PVC pressure pipe which is somewhat different diameter. This required changes to the choke design as shown on the next page.

To improve appearance, use 20mm PVC waterpipe for the choke section, then a 20x15mm PVC reducer above the choke with the top section from 15mm PVC waterpipe. This improves appearance and makes the antenna lighter.



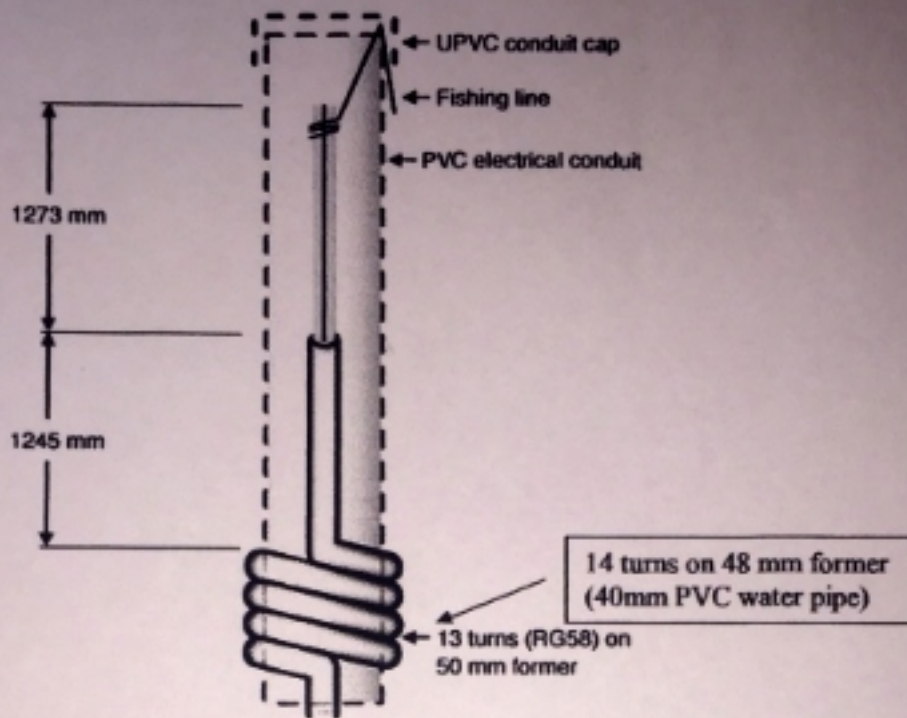
A version for 6m is also shown on the next page. Again, a modified choke is needed for water pipe instead of conduit.

To reduce the amount of coax used, the top section can be a piece of stranded wire of similar gauge to the coax inner conductor.

For portable use, a slimmer antenna is desirable. The antenna can be made from a combination of 25mm, 20mm, and 15mm PVC waterpipe with suitable reducers between each, and a section of 40mm waterpipe (which is 48mm OD) for the choke.

Another method is to shorten the PVC support pipe to just above the end of the coax shield, and mount a PVC pipe cap on the pipe. A stud from a standard VHF whip antenna mount (5/16 inch, 26 tpi) can be mounted through the cap and a stainless steel whip used for the top section. The whip can be removed when desired, making the antenna much more convenient to transport.

Yet another option is a "naked flower pot". This just consists of the active parts of the antenna hung from a squid pole, with no PVC pipe except for a short piece for the choke former. The naked flower pot will probably require a "heavy duty" squid pole, a standard pole will probably bend too much. A naked flower pot needs the top radiator section to be 1300mm, somewhat longer than is required inside PVC pipe.



Performance of the flower pot is very good, and compares very well with good commercial antennas. It is worth noting that ZCG-Scalar marketed a very similar antenna many years ago; it also performs well.

The web page for the antenna also includes some SWR plots, which show the antenna is reasonably broadband.

Flower pots have been built by a number of WICEN members with uniformly good results.

Overall, this antenna design ticks a lot of the boxes for portable operation, and is well worth a try.