

QRM News



Newsletter of the Wagga Amateur Radio Club (WARC inc)

August 2013

President: John VK2YW
Secretary: Jorgen VK2KJJ
PO Box 294 Wagga Wagga NSW 2650
Meetings at Small St Clubrooms
Last Friday of each month

Callsign: VK2WG – VK2RWG – VK2RTW
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IRLP Node - 6260
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President's Report



Hello Members,

This is my first President's Words since the AGM. Yes, I did have a couple of words for Brian last month but that was via email and from Milparinka and was very short. First, let me welcome the new Executive. There is one new face to welcome and that is Nick VK2FNGG and I look forward to working with you all in the next 10 months. Doug VK2ODD is still on the Exec even though he is now living in Nowra. We have been able to utilise Skype for contact during Exec Meetings.

Tuesday night Net has been a bit light on – presumably because of the colder weather so hopefully as it starts to warm up I hope we will see some more activity.

We look like running another Foundation Course – either the shortened version or the full one. Seems we may have enough to run a full one. If you know of anyone who would like to do the course please get them to contact me. It is anticipated that the date will be the last weekend in September. I must say I had a great month away. Thanks to all those people who kept track of me on APRS (VK2YW-10) and made contact while mobile. For those who weren't aware Lindy and I travelled to Milparinka (3hrs north of Broken Hill) and managed the Visitors Information Centre. Milparinka is a ghost town with just a handful of habitable buildings including a hotel which is (unfortunately) currently closed plus many ruins. When we arrived there was only one other resident in town so we tripled the population. I had a fairly constant stream of visitors coming through although numbers may well have been down in comparison to other years. My job was to provide them with a history, answer any questions, sell souvenirs and guide them to the sights. I met some very interesting people including three authors who all wrote on different subjects but in a way were all connected with either history or the outback or Outback people. I also met up with quite a few who were prospecting in the area and I got to see gold – albeit just a small amount

but which proves there is still plenty of gold out there to be found. I met up with another amateur who recounted meeting Dick Smith at Milparinka in the 1980s and we had a great chat. I can certainly say I didn't get time to be bored during the fortnight. One thing I will need to pack if I go again and that's a dipole – 80m mobile from that distance is really pushing the limits. The second two weeks were spent making our way to Alice Springs via Birdsville, Boulia and Ross River Resort. This is probably the long way to get there as its about 3600km. Its about 1000km shorter to go via the Stuart Hwy but nowhere near as interesting. The long way is mostly gravel roads or tracks but some of the way was quite high quality bitumen. I can honestly say that Alice Springs is a definite for your bucket lists. Plan to spend at least a week or more in the area; you won't be sorry and do go and see the Telegraph Station. And, can I recommend Bo Jangles Saloon as a quirky place to eat and have a drink. The amateurs are friendly and they have quite a good repeater covering much of the area. I did manage a catch up with Geoff VK8GG for a chinwag over a drink or two on one evening. The trip home was very quick – just three days but I must say it is good to be back home again. If Brian has room there are a couple of photos attached.

This month we have the Annual Dinner and a Sunday Foxhunt and BBQ. I don't have the details for that as I write this but we will let you know at the meeting or by email.

Well that's enough for me for this month – see you at the meeting.
73 de VK2YW

Courthouse and Visitor's Centre and PO ruins in the background – Milparinka



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Mobile phone powered with pee

“We are very excited as this is a world first, no one **British scientists have developed a novel way of charging mobile phones using urine as the power source to generate electricity**.has harnessed power from urine to do this so it's an exciting discovery. Using the ultimate waste product as a source of power to produce electricity is about as eco as it gets,” said Dr Ioannis Ieropoulos from the University of the West of England (UWE Bristol). A new research paper, *Waste to Real Energy: the first MFC powered mobile phone*, by scientists working at the Bristol Robotics Laboratory - a collaboration between UWE Bristol and the University of Bristol - appears in the *Journal of Physical Chemistry Chemical Physics* published by the Royal Society of Chemistry. “One product that we can be sure of an unending supply is our own urine. By harnessing this power as urine passes through a cascade of microbial fuel cells (MFCs), we have managed to charge a Samsung mobile phone. The beauty of this fuel source is that we are not relying on the erratic nature of the wind or the sun; we are actually re-using waste to create energy. “So far the microbial fuel power stack that we have developed generates enough power to enable SMS messaging, web browsing and to make a brief phone call. Making a call on a mobile phone takes up the most energy but we will get to the place where we can charge a battery for longer periods. The concept has been tested and it works - it’s now for us to develop and refine the process so that we can develop MFCs to fully charge a battery.” The microbial fuel cell is an energy converter, which turns organic matter directly into electricity, via the metabolism of live microorganisms. Essentially, the electricity is a by-product of the microbes' natural life cycle, so the more they eat things like urine, the more energy they generate and for longer periods of time; so it’s beneficial to keep doing it. The electricity output from MFCs is relatively small and so far researchers have only been able to store and accumulate these low levels of energy into capacitors or super-capacitors, for short charge/discharge cycles. This is the first time they have been able to directly charge the battery of a device such as a mobile phone and it is indeed a breakthrough. The project has been funded by the Engineering and Physical Sciences Research Council (EPSRC), the Gates Foundation and the Technology Strategy Board. The scientists believe that the technology has the future potential to be installed into domestic bathrooms to harness urine and produce sufficient electricity to power showers, lighting or razors as well as mobile phones. ***Ed. This may have applications for ham radio along with the ham operators other pastime drinking beer the operator will never have a flat battery.***

Tarcutta Moto X



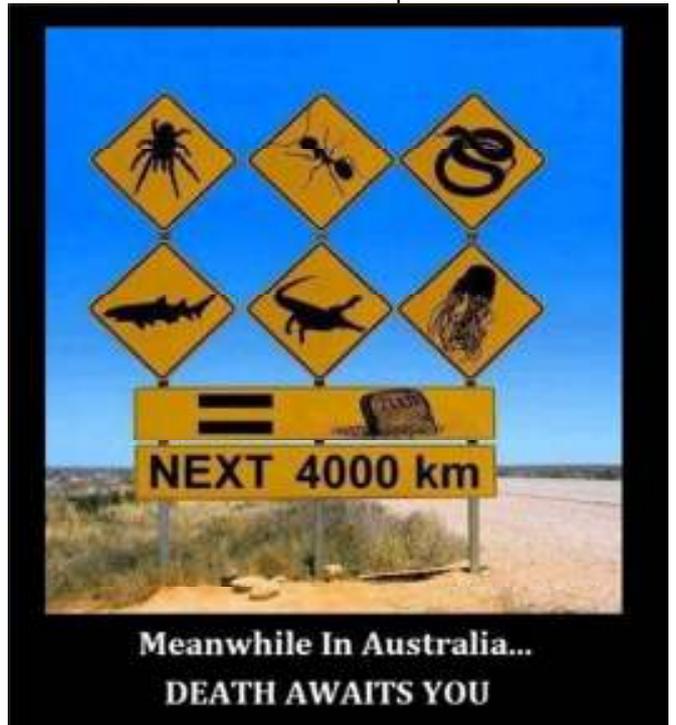
Tarcutta Moto X with Rod VK2FROD Nick VK2FNNG and Brian VK2FBKT using Nicks tactical UHF repeater, communications was a big success.



Sunday morning we had a frost and a fog but the day came up warm and sunny a fine finish to the 3 days we were out at Tarcutta.



View of the Pits from the Comms post.



For the benefit of John KD7AAT Aussie wildlife.



The shop at Cameron Corner (taken from the corner post) and below Alice Springs area

The Wagga Amateur Radio Club (WARC) would like to take this opportunity to thank our sponsor EACOM for their continued support and assistance.

CLUB MEETING THIS FRIDAY

EMR and you

As reported in several sources, one of the reasons the ACMA gave for not continuing the high power trial was an observed lack of understanding of operator's obligations with regard to Electromagnetic Magnetic Radiation.

It behoves us to reverse this, not only because it is the law, but to show that term 'Amateur' describes the license class not the ability and professionalism of those who hold it. With it getting mighty crowded in the spectrum, it is in our best interests to continue to show that the amateur service is of ongoing value to the community, and hence worthy of RF real-estate we are gifted.

Alan VK1WX has kindly put together the following summary of EMR issues. You will also see that he has also kindly offered to provide advice.

What is EMR, it is electromagnetic radiation?

It is the energy that radiates from any device that generates radio frequency energy. This can range from garage door openers, microwave ovens, Amateur radio transmitters, CB radios to broadcast radio or television transmitters.

Why do we need to be aware of this radiation?

Excessive exposure to the radiation can and will cause damage to the tissues of the human body.

Changes to Amateur Licensing

Under the new Amateur Licence Conditions and Determinations (LCDs) issued in May 2013 it is a requirement that Amateurs do a self assessment to see if their station is compliant with the Australian Government's Australian Radiation Protection and nuclear Safety Agency (ARPANSA) standards. **How do we check if our station is compliant?** You do not have to be an engineer who understand the mathematics and physics of the ARPANSA standards to check your compliance. On the WIA website is a calculator developed by VK3UM to give you a guide as to your compliance, it can be found at <http://www.wia.org.au/members/technical/emr/> The sort of information required is band of operation, power level, type of antenna and height of the antenna. The operation of the calculator is simple, all that is needed is to select the parameters of your station as shown in the calculators boxes and the result is automatically calculated. If the station is compliant there is nothing further to do except keep a record of the assessment carried out. **What happens if the station is not compliant?** Under the LCD you have to notify ACMA in writing that the station is not compliant and you have 28 days to make the station compliant. However before contacting ACMA there are many changes that can be made to bring your station into compliance all of which are mostly common sense. Contact Alan VK1WX M 0418 462 832 H 02 62582568 if you would like to discuss your stations compliance.

Compact 5W UHF CB Radio - \$169

Fathers Day Special \$149

Fixed installation UHF transceivers in your vehicle are always a better option as you get range and power. You'll always be connected to a higher gain antenna with a ground plane and you can always get more transmitting power as you aren't restricted to small batteries that hand-held units typically have. All the usual UHF CB features, such as channel scan, repeater access and CTCSS. Ideal as a vehicle unit for 4WD etc.

- 80 channel
- Signal strength meter
- Up to 20km range line-of-sight

- Compact size for under-dash mounting
- Mic and lead included
- Mounting bracket included



6-in-1 Jump Starter Power Station - \$159

Members Price – \$142.95

A versatile jump starter that incorporates a raft of essential functions for general automotive, camping and emergency situations. Tucked in on either side are two tough insulated battery clamps for jump starting a vehicle or charging a 12VDC battery. The front panel features 2 x 12VDC cigarette lighter sockets for operating 12V appliances, a 5 LED powered work light and two digital display indicators for remaining battery capacity and air pressure. There is also a DC socket as well as an LED polarity indicator to warn if your connections are reversed. An extremely useful 260PSI (Displays 99 Max) air compressor is also built into the unit so you can inflate a flat car tyre or other inflatables, by simply setting the pressure on the digital gauge and the compressor will automatically inflate to the set pressure. Inflating pressure can be viewed from the front digital readout and switched between PSI and BAR. The unit also features a 400W inverter output at the rear and a 5VDC 2.1A USB socket for charging and operating Smartphones, Tablets, or other USB devices. Black rubber handle and corners will protect against common knocks and accidental drops. **Features:**

- Automatic air compressor for pumping tyres and other inflatables
- AC and DC chargers included
- 12V 18Ah SLA battery inside
- 400W (800W surge) modified sine wave Inverter - 230VAC outlet at rear for powering laptops, etc
- 5 LED work/map light at front panel
- Charging and air compression dial indicators
- 2 x 12VDC sockets for running 12V appliances
- DC charging takes approximately 12 hours
- AC charging takes approximately 34 hours
- Charging jack
- Built in air cooling fan
- Battery level indicator
- 600A Cranking, 900A Max
- Dimensions: 295(H) x 273(W) x 215(W)mm



Have you done anything to
Promote Amateur Radio
this month?