



OXTALES

First published 1980

Newsletter of the Oxley Region Amateur Radio Club Inc.,

PO Box 712 Port Macquarie 2444

Club e-mail address: vk2bor@orarc.org

Club Website: <http://www.orarc.org>

ORARC's Forty-fourth Anniversary Year

Club Nets on VK2RPM
146.700MHz
(CTCSS 91.5Hz)
Every Sunday at 0830
Every Thursday at 1930

January 2015

Compiled by VK2TT & VK2AYQ

PRESIDENT: Lyle Smith VK2SMI 6585 2497
VICE PRES: Charles Edmondson VK2KCE 6584 0495
TREASURER: Larry Lindsay VK2CLL 6587 1155
SECRETARY: David Hogan VK2FRAB 6582 3006

President's Report

I, personally, don't know what happened to 2014. It was a fast year and I feel like I skipped several months of it, so if I have not followed up on something, please remind me.



We are starting a new year and with that will come the contests, JOTA, fox hunts, BBQ's, field days and fun days. I look forward to members making presentations after the monthly meetings and if you have an idea, run with it, get it together and let the committee know when you want to do it.

We can look forward to a few extra activities this year including fox hunts, another antenna shoot-out and the ANZAC day event.

The Beechwood Billy Cart Classic was held in November and although there was a small attendance in the way of bilycarts, there was a big attendance of club members to assist with checkpoints and safety communications. With Richard's (VK2CHC) recent accident, he referred the final days running to myself. Having the organisation Richard had already completed, made it an easy task.

(continued Page 3)

ORARC VHF/UHF Repeaters

MIDDLE BROTHER

VK2RPM 2 metre (Voice - CTCSS 91.5Hz)
O/P 146.700MHz - I/P 146.100MHz

VK2RPM 70 cm (Voice - CTCSS 123Hz)
O/P 438.525MHz - I/P 433.525MHz

VK2RPM-1 (APRS Digipeater)
SX 145.175MHz 1200bps

TELEGRAPH POINT

VK2RCN 2 metre (Voice)
O/P 147.000 MHz - I/P 146.400 MHz

VK2RCN 70 cm (Voice - CTCSS 123 Hz)
O/P 438.425MHz - I/P 433.425MHz

VK2RCN-1 (APRS Digipeater)
SX 145.175MHz 1200bps

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Down The Coax

Ross Hull Memorial Contest 1 to 31 January 2015

ORARC meetings held in the S.E.S. Building
Central Road, Port Macquarie.

Monthly General Meeting
Saturday 3 January 2015 2:00 pm

ORARC Foxhunt Day
Saturday 10 January 2015 Start 10.00 am
Venue to be announced at 3 January Meeting

Summer VHF-UHF Field Day Saturday 10 &
Sunday 11 January 2015

Friday Night Get-Together
Friday 16 January 2015 7.00 pm

Monthly General Meeting
Saturday 7 February 2015 2:00 pm

ORARC Antenna Shootout and Foxhunt Day
Sunday 15 February 2015 Start 10.00 am
Venue to be announced at 3 January Meeting

Friday Night Get-Together
Friday 20 February 2015 7.00 pm

Wyong Field Day Wyong Racecourse
Sunday 22 February 2015

Monthly General Meeting
Saturday 7 March 2015 2:00 pm

Friday Night Get-Together
Friday 20 March 2015 7.00 pm

John Moyle Memorial Field Day Saturday 21
& Sunday 22 March 2015

Monthly General Meeting
Saturday 28 March 2015 2:00 pm

email Directory

Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

Sundays
(0830)

Thursdays
Local)

January 2015

| | | | |
|--------|----------|--------|----------|
| VK2CHC | Jan - 04 | VK2EM | Jan - 01 |
| VK2TT | Jan - 11 | VK2ZHE | Jan - 08 |
| VK2CHC | Jan - 18 | VK2ICQ | Jan - 15 |
| VK2TT | Jan - 25 | VK2EM | Jan - 22 |
| | | VK2ZHE | Jan - 29 |

February 2015

| | | | |
|--------|----------|--------|----------|
| VK2CHC | Feb - 01 | VK2ICQ | Feb - 05 |
| VK2TT | Feb - 08 | VK2EM | Feb - 12 |
| VK2CHC | Feb - 15 | VK2ZHE | Feb - 19 |
| VK2TT | Feb - 22 | VK2ICQ | Feb - 26 |

March 2015

| | | | |
|--------|----------|--------|----------|
| VK2CHC | Mar - 01 | VK2EM | Mar - 05 |
| VK2TT | Mar - 08 | VK2ZHE | Mar - 12 |
| VK2CHC | Mar - 15 | VK2ICQ | Mar - 19 |
| VK2TT | Mar - 22 | VK2EM | Mar - 26 |
| VK2CHC | Mar - 29 | | |

email Directory (cont'd)

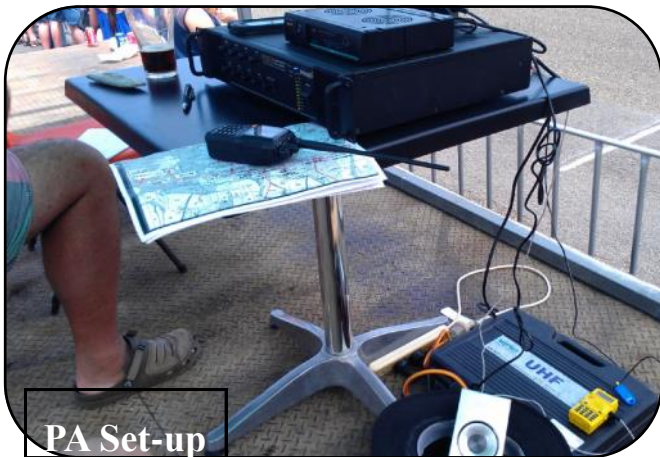
(from page 1)



A Billy Cart comes down the mountain.

This Billy Cart was originally built and raced by VK2ZCM Craig many years ago.

With a safety marshal paired with one of our members, we headed out to be in position for the big race. Paul (VK2ICQ) took his position in the chase/commentary car and I setup my radios for the PA system



PA Set-up

The short races started and finished, with the motorised eskies taking the most amount of time to get ready, and one would have suspected by their driving, they had dipped into their esky for a cold ale. but alas, they only contained ice!



I was hearing of dissatisfied spectators from up the track, waiting for the main race to start, but as we know, not every plan works as it should! The race did eventually start, with four finishers, one DNS (did not start) and one DNF (did not finish)... something to do with a wheel that did not stay on! A good day, and thanks to those attending.



Getting ready to start at the top of the mountain.



Coming down the mountain. Note the back platform and door for the 'pusher'.



A fully enclosed stream lined shape . Note driving position.

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A different approach to streamlining.



Note the amount of corrosion on the connector



Setting up for the Club's Christmas BBQ.

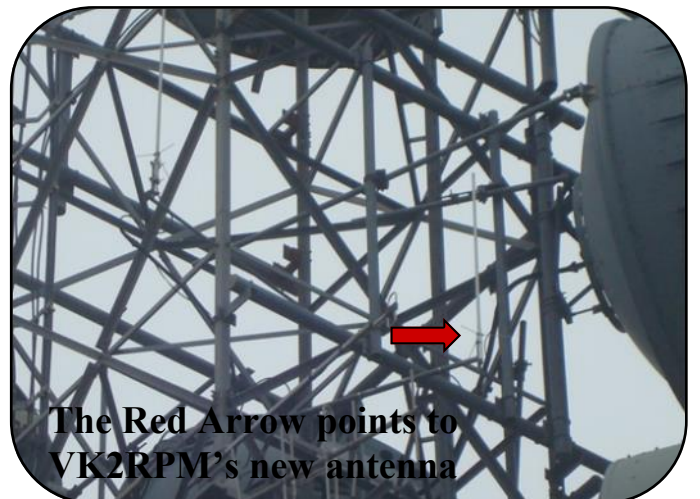
On the 6th of December, ORARC held its Christmas BBQ at the Settlement Point Reserve. The day started early with Henry (VK2ZHE) arriving with the club's communications caravan loaded with supplies and tea making facilities. As preparation for the BBQ, the caravan was setup and the early arrivals cleaned-off the BBQ's and prepared the area. With the early start, we all enjoyed bacon-and-egg toasted-sandwiches for breakfast.

A very short Committee meeting, followed by a general meeting, which, when out of the way, led to sausage sandwiches for lunch and a good chin wag for those attending. Several hours later, the clean-up was over and the site looked better than when we arrived... which is always a good thing. A big thanks to all those who helped out.

Since the last edition of OXTALES, VK2RPM has had four visits onsite resulting in the removal of a water logged cable and its replacement installed.

In the following picture, note the corrosion that developed on the connector during its exposure to the most unfavourable moist conditions.

A new Diamond X50 antenna and mount, manufactured by Arthur VK2ATM, has been installed on the north face of the tower. It has dramatically improved coverage into Wauchope and areas of Port Macquarie. but unfortunately the noise on



The Red Arrow points to VK2RPM's new antenna

site was not evident during the last two visits so we are still chasing this elusive problem. Just a reminder that the club conducts two radio nets each week and if you gave up due to the noise problem then I suggest revisiting the nets due to the recent improvements on VK2RPM.

We now have a supply of the 2015 WIA call books in stock. If you are after one, please contact David (VK2FRAB) about payment and pick-up options, before we sell out.

The club's 2015 calendars are also in stock at \$2 each. It's a way to recognise all the club members and to keep the club's activities displayed.

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A great Christmas present to yourself to hang in the shack. Again, please contact David (VK2FRAB) about payment and pick-up options, before we sell out.

Planning has begun on the ORARC 2015 Field Day in June. This is the 40th anniversary of the field day and we will be looking for assistance with some aspects of this weekend. Please be ready to volunteer yourself, and remember, "many hands make for light work".

73's from Lyle VK2SMI

An ORARC member was driving south from the "donut" when suddenly his 2 meter radio crackled his call sign...Answering...he heard a fellow ham's urgent warning.....Hey mate, just heard on the news that there's a car on the Pacific Highway, travelling the wrong way, please be careful!!

He replied, Well I'll declare, it's not just one.....There are hundreds of them!"

Editors note: If members have a joke or funny anecdote that is suitable for Oxtales please feel free to submit it.

The Christmas BBQ in pictures.



The Club's well used Communications and refreshment Caravan on location.

Committee hard at work planning

Paul VK2ICO, Larry VK2CLL, David VK2FRAB, Jim VK2VIV, Lyle VK2SMI, Mark VK2FMGM



A festive table awaits the BBQ, Alisa VK2FABJ, Arthur VK2ATM, Norah, Bill VK2ZCW, Lewis VK2AG, and Pamela



Chris, Kasey, Sue, Dennis VK2FAET, and Rob VK2CRF



Stuart VK2FSTU and Jennifer relax





Peter chats with Richard VK2CHC who demonstrates the results of an interesting Motorcycling technique!



John VK2KHB and Trevor VK2TT reflect on the state of the nation.



Happy members at the BBQ clockwise Diana and Bob VK1ZRE, at the BBQ Joanne, Tim VK2ZTM, Peter and David VK2FRAB, Jim VK2VIV, Roy VK2EJB, Lyle VK2SMI, Craig VK2ZCM, Ross VK2RR and Sue with Tim VK2ZTM and Henry VK2ZHE in background.

Season greetings to all



History of The Cubical Quad

As reported by W6SAI and W2LX in "All About Cubical Quad Antennas", Radio Publications Inc., 1972.

(Contributed by John, VK2KC)



In the year 1939 a group of radio engineers from the United States travelled to the South American republic of Ecuador to install and maintain the Missionary Radio Station HCJB, at Quito, high in the Andes mountains. Designed to operate in the 25 metre short-wave broadcast band with a carrier power of 10,000 modulated watts, the mission of HCJB was to transmit the Gospel to the Northern Hemisphere, and to tell of the missionary work in the wilds of Ecuador. To insure the best possible reception of HCJB in the United States a gigantic four element parasitic beam was designed, built and erected with great effort and centred upon the heartland of North America.

The enthusiasm of the engineers that greeted the first transmission of Radio HCJB was dampened after a few days of operation of the station when it became apparent that the four element beam was slowly being destroyed by an unusual combination of circumstances that were not under the control of the worried staff of the station. It was true that the big beam imparted a real "punch" to the signal of HCJB and that listener reports in the path of the beam were high in praise of the signal from Quito. This result had been expected. Totally unexpected, however,

was the effect of operating the high-Q beam antenna in the thin evening air of Quito. Situated at 10,000 feet altitude in the Andes, the beam antenna reacted in a strange way to the mountain atmosphere. Gigantic corona discharges sprang full-blown from the tips of the driven element and directors, standing out in mid-air and burning with a wicked hiss and crackle. The heavy industrial aluminium tubing used for the elements of the doomed beam glowed with the heat of the arc and turned incandescent at the tips. Large molten chunks of aluminium dropped to the ground as the inexorable fire slowly consumed the antenna.

The corona discharges were so loud and so intense that they could be seen and heard singing and burning a quarter-mile away from the station. The music and programs of HCJB could be clearly heard through the quiet night air of the city as the r-f energy gave fuel to the crowns of fire clinging to the tips of the antenna elements. The joyful tones of studio music were transformed into a dirge of doom for the station unless an immediate solution to the problem could be found.

It fell to the lot of Clarence C. Moore, W9LZX, one of the engineers of HCJB to tackle this problem. It was obvious to him that the easily ionized air at the two mile elevation of Quito could not withstand the high voltage potentials developed at the tips of the beam elements. The awe-inspiring (to the natives) corona discharges would probably disappear if it were possible to operate HCJB at a sea level location. This, however, was impossible. The die was cast, and HCJB was permanently settled in Quito.

What to do? Moore attacked the problem with his usual energy. He achieved a partial solution by placing six-inch diameter copper balls obtained from sewage flush tanks on the tips of each element. An immediate reduction in corona trouble was noted, but the copper orbs detuned the beam, and still permitted a nasty corona to spring forth on the element tips in damp weather.

Clearly the solution to the problem lay in some new, different approach to the antenna installation. The whole future of HCJB and the Evangelistic effort seemed to hinge upon the solution of the antenna problem. The station could not be moved, and the use of a high-gain beam antenna to battle the interference in the crowded 25 metre international short-wave broadcast band
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was mandatory. It was distressingly apparent to Moore that the crux of the matter was at hand.

The Birth of the Quad

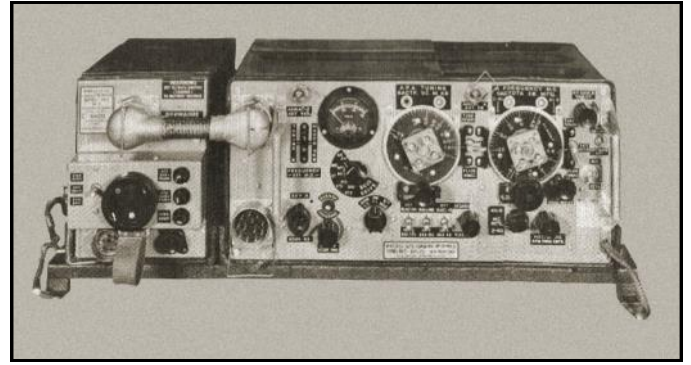
In the words of W9LZX, the idea of the Quad antenna slowly unfolded to him, almost as a Divine inspiration. "We took about one hundred pounds of engineering reference books with us on our short vacation to Posorja, Ecuador during the summer of 1942, determined that with the help of God we could solve our problem. There on the floor of our bamboo cottage we spread open all the reference books we had brought with us and worked for hours on basic antenna design. Our prayers must have been answered, for gradually as we worked the vision of a quad-shaped antenna gradually grew with the new concept of a loop antenna having no ends to the elements, and combining relatively high transmitting impedance and high gain."

A Quad antenna with reflector was hastily built and erected at HCJB in the place of the charred four element beam. Warily, the crew of tired builders watched the new antenna through the long operating hours of the station. The vigil continued during the evening hours as the jungle exhaled its moisture collected during the hot daylight hours. The tension of the onlookers grew as a film of dew collected on the antenna wires and structure, but not once did the new Quad antenna flash over or break into a deadly corona flame, even with the full modulated power of the Missionary station applied to the wires. The problem of corona discharge seemed to be solved for all time.

The new Quad antenna distinguished itself in a short time with the listeners of HCJB. Reports flooded the station, attesting to the efficiency of the simple antenna and the strength of the signal. In his spare time, Moore built a second Quad antenna, this one to be used in the 20 metre band at his ham station, HC1JB, in Quito.

At a later date, after Moore had returned to the United States, he applied for a patent covering the new antenna; the fact that the Quad-type antenna radiated perpendicular to the plane of the loop was deemed by the Patent Office to be of sufficient importance to permit the issuance of a patent to Clarence C. Moore covering the so-called Cubical Quad antenna.

Wireless Set WS 19



Reminiscences by David VK2AIF

David noticed a picture of the old British WW2 WS-19 in the past Oxtales. David had operated these sets in 1949 and thought that members might be interested in the following comments.

"Well, the WS19 was used in WW2 and also for a long period afterwards.

It was used in Korea by British and Commonwealth forces, the Malayan Emergency, all the Australian forces plus the CMF/Army Reserve up until the late 1950's , when it was replaced by the British/Australian (AWA) WS-122 WS-22A.

The old WS-19 was built for armed vehicles, including tanks, armoured car Recce Vehicles, and many heavy vehicles.

I was using the WS-19 in an army unit "1st Air Support Signals" in 1949 and it was installed in an American "White Scout Car". At one stage I operated a WS-19 that had been built by the Russians with all the instructions written in Russian on it, some WS-19's were also made in Canada.

The WS-19 certainly "chewed up" the batteries and if they had to be taken out of vehicles for man-pack work, they weighed in at about 92 lbs (41.8 kg). (Footnote 1)

One of the features of the WS-19 was that it covered H/F and UHF with a special QSY arrangement for H/F, where, with the flick (continued on next page)

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of a switch, you could change to another pre-arranged frequency. This was known as QSY to "Flick Freq" with a push of a button.

For the aerial tuning there was a "Variometer" unit which fed the signal into a Marconi Rod Whip on the side of the vehicle which had a large metal box at its base.

The WS-19 was replaced in the late 1950's with the WS-122, WS-22 and the WS-62 for HF, and C42 and C45 VHF equipment. These, in some cases were made by AWA."

73 David (VK2AIF).

Many thanks to David for sharing his memories. In our club there is a wealth of interesting stories and memories which members would find fascinating. The editors of Oxtales urge members to send in material to be shared.

Editors note. I bought a Wireless Set WS 19 from a radio store in Oxford Street (Deitch Brothers I think) Sydney whilst at school.

Those Services Operators must have been tough in days to even consider using the set for 'man-pack' operation. It was exhausted just carrying the basic set through the back streets of Sydney to Central Station!

Incidentally after attaching a power supply and antenna the set fired up on the first go. Not having an amateurs licence then the transmitter section of course wasn't used!



Technical Specifications

Frequency range: A set - MkI: 2.5 - 6.25 MegaHertz (MHz), MkII & III: 2 - 8 MHz
B set - 229 - 241MHz

Modulation modes: A set: Amplitude Modulation (AM) for speech, Continuous Wave (CW)

and Modulated Continuous Wave (MCW) for Morse code transmission.

B-set: AM speech only

Approx Power output: A-set: AM MCW 1-3 Watts (W); CW 3-5W,

B-set: 0.4W Number of valves 15 thermionic valves (termed tubes in the USA)

Size/weight: WS19 17.5x8.5x12.5 inches – 40lbs

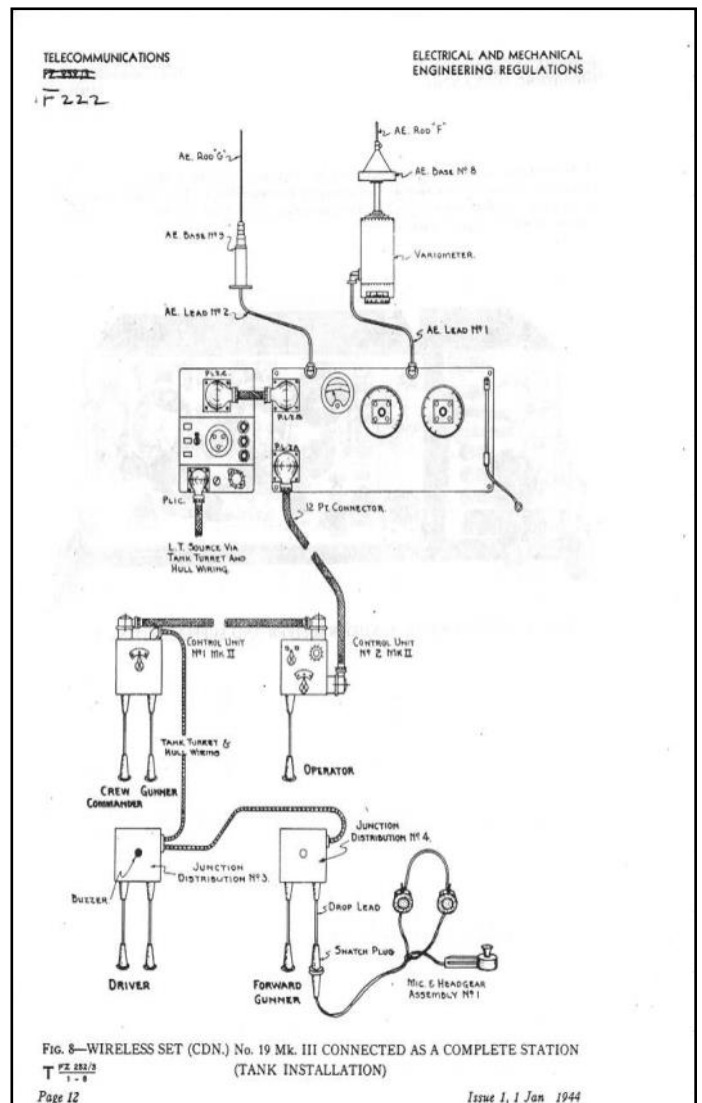
Power Supply Unit 6x8.5x12.5 inches – 25lbs

Aerial Variometer 10x5 inches cylinder – 5lbs

Power Supply: 12 Volt (V) or 24V lead-acid batteries driving rotary motor-generators, which provide 275V at 120 milliAmps (mA) for the receiver and 500V at 50mA for the transmitter.

Antenna System: A set: 8-16ft vertical rod or horizontal long-wire

B set: 25 inch vertical rod (1/2 wave)



Information supplied from the PYE Historical Files.

VK2RCN loses power

On the 22nd of December Henry VK2ZHE phoned me to say the Telegraph Point repeater was running on batteries and they were going flat and would not last the night. A check of the Essential Energy web site did not indicate any failures in the area and several phone calls to the property owner resulted in no answer, with this in mind and the lateness of the hour it was agreed on a trip for Tuesday morning.

On arrival it was established that the tower was still intact with all antennae but upon opening the hut I had the @#\$\$% scared out of my by a “monster” perched on the repeater rack, it snarled and disappeared into the roof. After I exited the hut at break neck speed and regained my composure I had another careful look at the beastie and confirmed it to be a 45 cm goanna it was not happy with us disturbing its new home.



While it was resting Henry and I established that the repeater hut had no mains power. The repeaters were turned off for further testing and Henry left to find where the interruption had happened leaving me to evict our “squatter”. A rope loop taped to the end of a stick was rigged and the hunt was on, the goanna just wanted to be

left alone and after several gentle prods and running from one side to the other of the hut it was snared and removed, after posing for a photo it took off for the nearest bush never to be seen again, I hope.



Henry returned with the good news of a circuit breaker restored and we now had lights, a check of cabling, power points, power boards and the repeaters did not supply any reason for the outage and after clearing all equipment of any damage from our visitor we proceeded with the start-up of the repeaters.

First the APRS digipeater with lights on and moment’s later packets were being heard and sent, the 2 metre and 70 cm repeaters were powered up and tested for operation with good news on all fronts.

The batteries were checked and water topped up and charging, we are suspicious that two of the batteries may be nearing their life expectancy and will require replacement early next year.

A temporary patch was placed over the cable entry (we suspect this was the goanna’s entry too) but this too will require a permanent repair next visit.

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Blast from the Past

R.F. METER



The vent cover in the door was on the ground when we arrived, several rusty screws had broken so these were replaced and the cover secured (was this from the visitors spouse attempting a rescue).



The hut was locked and the conclusion without contrary information was that the power outage was a result of recent storms. Henry and I gave the repeater a good workout on return to our respective homes.

Lyle, VK2SMI

Jaycar
Electronics

Better. More Technical

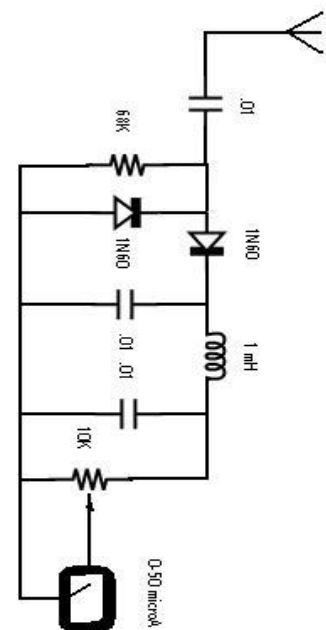
7/148 Lake Rd Port Macquarie
Ph. (02) 6581 4476

The following was submitted by David in 2007. New members may be interesting in building up this useful piece of test gear.

'Winter is here and it's a great time to use the evenings to create a few new additions to the shack. A simple project that is extremely useful is a RF Meter. You can make the complete unit in just a few hours and the parts are every-day items. I use mine for tuning the antenna, looking for maximum radiation, especially with the mobile and portable rigs.

It's also a good tool for plotting antenna radiation patterns.

I built my unit in a plastic box obtainable from Tandy's. (Footnote 2) All components were mounted on a piece of Vero board.



Footnote 2. Jaycar, a Club sponsor, would be a 2015 source of component supplies today.

Turbo Tuner – 2

Automatic Screwdriver Antenna Controller

Model and Radio Compatibility

Model YTT-1: Yaesu FT-857/857D, FT-897/897D

Model ITT-1: Icom IC-706, 718, 746, 7000, 7100, 7200

Model KTT-1: Kenwood TS-480, 2000

<http://www.tennatronix.com/>

The article is about the YTT-1 for the 857D that I have, but gives a good indication as to the beauty of having such a gadget in the car to tune the radio automatically for you.



I have the Yaesu 857D in my car and have a Little Tarheel II Antenna system, which comes with an in car manual/auto system (part auto only) that you buy separate to start with. This had an up down button on it and raised or lowered the antenna according to the antennal analyser you had to have it connected to so to get the best signal for that part of the band you pre thought may be where you wanted to transmit.

This is all and good if you plan on transmitting on say i.e. 7.080 to 7.130 and before and after that, usually not as the SWR was too great. And like all amateurs you often chased the calls you wanted to break in on or found of interest only to find

SWR raised its ugly head.

This is where the Turbo Tuner – 2 comes in. On my radio, and I'll presume the rest have this function as well, you go through the settings till you find the Tune button on the radio. Once the Turbo Tuner is connected to the radio it's as easy as holding the Tune button in for @ 2 seconds and a few seconds pass then an audible beep signals that the Tuner has been actioned and this where the beauty of this gadget comes in.

Up or down depending on the frequency chosen, and the tuner does the rest, finding the sweet spot for SWR on the frequency you want. Say I'm on my normal frequency of 7.155 where I always sit, and I hear a conversation going on 7.060, I hit the tune button and in around 7 seconds I'm on air after the K in Morse has been heard.

If you want to go to say 3.560 then you do the same thing, it will take a few seconds longer to go to that frequency and it has to find the right way to go. Around 5 seconds and the audible beep and it starts to raise the antenna, another 10-15 seconds and the audible K Morse sound comes in and you are on 3.560.

I'd say it would be a few seconds longer than the tuner you use on the big rig in your radio shack, and for what it does, a few seconds is great.



If you look at my radio picture above you'll see the TUNE – DOWN – UP buttons that allow you to send the antenna up manually or down manually as well. I will say this

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now, it does play up sometimes, but this is because you have to find the adjustment that suits your set-up, and as things go, it stated that to set the DIP switches up in a certain manner, one of them being Stall Current Setting. It stated my should be 300 mA but I'm putting mine up to 500 mA as this should stop it stalling and sometimes going all the way down or up during auto tuning.



You can see the set-up below my seat in the car, it took me 5 minutes to swap things over to use the Turbo Tuner. I wouldn't be without it now.

One down side occasionally, if you want to go to say 28.450 from 7.155 then I've found it can say out of range, but if you slow it down and go down in frequencies a bit slower this doesn't seem to happen.

Any questions, please feel free to Email me on vk2fstu@swalsh.com.au

Stuart VKSTU

Editors note: Thank you Stuart for such an interesting and informative article. I hope that this will inspire other club members to contribute similar pieces in 2015. The more member contributions to Oxtales the better the publication.



Peter (formally VK2MPK) recently moved back into the district and intends to re-join the Club. Peter is currently studying for his Advanced Licence with Larry VK2CLL. His 'mugshot' was taken at the BBQ for the 2015 calendar.

Motorcyclist may be interested to note that Peter runs a business 'Iron Horse Recovery' service to bring your steed back home when it has broken down (horsepet@tpg.com.au).

There is always room for one more! Just ask Lyle VK2SMI who can explain the purpose of each antenna!





WIA Matters

The WIA acts for all of us in matters relating to Amateur Radio. If you are not already a member why not make 2015 the year to join up?

A summary of the current 'Hot issues' being followed by the WIA on behalf of radio amateurs include:

Bandplan review

The WIA has commenced a review of the Australian Amateur Radio Bandplans. Bandplans are a way of trying to give everyone a fair share; an aim which becomes increasingly difficult as spectrum becomes crowded. For instance, in the case of 2-metre and 70cm repeaters on the east coast, the number of available frequencies is very limited and it has become necessary to reduce channel spacing or channel re-use distances, or both.

WRC 2015 and Proposal for a new 5MHz Amateur Service Allocation

The last WRC meeting in Brisbane, the third in a series of five meetings that are being held in the Asia-pacific region, was sponsored by the ACMA with the assistance of the Australian Department of

Communications. Several hundred delegates representing all areas of the radio communications industry and many national administrations attended the meeting. The two main issues of interest to Australian amateurs were: a proposed new secondary allocation for the amateur service around 5300 kHz and a proposed new primary allocation in the 77.5 to 78 GHz frequency band for the radiolocation service that may affect the existing primary amateur service allocation in that band. *Dale Hughes VK1DSH*

EMC Awareness Campaign

The Australian Communications and Media Authority (ACMA) has amended the Amateur Radio regulations syllabus, to expand the demonstrated knowledge of Electromagnetic Radiation or EMR. Safety has been on ACMA's agenda for a considerable time, and it is seeking to minimise risk and promote safety across all its operations, including Amateur Radio. The process to include EMR in the existing Amateur Radio Syllabus at all three licence levels, commenced about 18 months ago and the WIA has embarked on an EMR awareness campaign with lectures provided to clubs and at WIA events.

IPS Service Review

In June 2014, a Discussion Paper was released by the Ionospheric Prediction Service as the first step in what could be a wide-ranging review of the service. The WIA has responded to the discussion paper.

ORARC 2015 Calendar

| January | | | July | | |
|-----------------|---------------|---------------------------|------------------|---------------|-----------------------------|
| 3rd (Saturday) | 14:00 | General Meeting | 4th (Saturday) | 14:00 | General Meeting |
| 10th | 10:00 | Fox Hunt | 17th (Friday) | 19:00 | Get Together |
| 16th (Friday) | 19:00 | Get Together | August | | |
| 26th | | Australia Day | 1st (Saturday) | 14:00 | General Meeting & AGM |
| February | | | 21st (Friday) | 19:00 | Get Together |
| 7th (Saturday) | 14:00 | General Meeting | 15th | 08:00 - 00:00 | RD Contest |
| 15th (Sunday) | 10:00 | Fox Hunt/Antenna Shootout | 15th | 08:00 - 00:00 | ILLW |
| 20th (Friday) | 19:00 | Get Together | 16th | 00:00 - 15:00 | RD Contest |
| March | | | 16th | 00:00 - 15:00 | ILLW |
| 7th (Saturday) | 14:00 | General Meeting | September | | |
| 20th (Friday) | 19:00 | Get Together | 5th (Saturday) | 14:00 | General Meeting |
| 21-22 | 10:00 | John Moyle Field Day | 18th (Friday) | 19:00 | Get Together |
| 28th (Saturday) | 14:00 | April General Meeting | 27th (Sunday) | 10:00 | Fox Hunt |
| April | | | October | | |
| 3rd - 6th | | Easter | 3rd (Saturday) | 14:00 | General Meeting |
| 17th (Friday) | 19:00 | Get Together | 5th | | Labour Day |
| 25th (Saturday) | 10:00 - 16:00 | ANZAC Day Activity | 16th (Friday) | 19:00 | Get Together |
| 25th | | Anzac Day | 17th | 08:00 - 22:00 | JOTA x 3 |
| May | | | 18th | 06:00 - 12:00 | JOTA x 3 |
| 2nd (Saturday) | 14:00 | General Meeting | November | | |
| 15th (Friday) | 19:00 | Get Together | 7th (Saturday) | 14:00 | General Meeting |
| 30th | 14:00 | June General Meeting | 20th (Friday) | 19:00 | Get Together |
| June | | | TBA | | Car Rally |
| 6th | 07:00 - 16:00 | Field Day | 22nd (Sunday) | 09:00 | Beechwood Billycart Classic |
| 7th | 07:00 - 16:00 | Field Day | December | | |
| 8th | | Queens Birthday | 5th (Saturday) | 09:00 | Christmas Meeting/BBQ |
| 19th (Friday) | 19:00 | Get Together | 18th (Friday) | 19:00 | Get Together |