

APRIL 97

# THE PROPAGATOR

THE NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY INC

Volume 5

Issue 97 April,

Well, how was the field day? I enjoyed myself immensely poking around all the goodies that were at the various stalls and boots of cars, not to forget the disposal hall. It's amazing how many people you don't see when your head is down in a box of stuff looking for that elusive bargain of the day. I spoke to a few bodies but they were mainly "have you seen". My standard answer was, about an hour ago over there somewhere.

I was perhaps a little disappointed in some of the prices for second hand equipment, as they seemed a tad on the high side of fair. I'm especially disappointed in the guy who sold me the stuffed Ram chips, but I should have known better!

One thing that really struck me as an "X" call was the amazing number of HF sets that were on sale everywhere. The flea market had 'em, the

the Wicen stand had 'em the disposal hall had 'em. By the end of the day I couldn't help myself, I had to buy one, so I did. Morse here we come( no laughing out loud BHO).

For those that went on the bus trip, tnx for the company fellas and I'll see you there next year.

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By the time read this the 146.850 repeater will have been given a clean bill of health by the SMA and the site owners. Our equipment and installation is A1, a credit to Rob and those who have put in many hours "to make it so." (Felt I should say "Engage". It'll pass)

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I would like to remind you all about security. Please do not give definite information of repeater sites and equipment at these sites. There are many ears out there.

## Good On Ya

I would like to thank our new Canteen Officer for the wonderful spreads that he has put on for the last couple meetings. Vic VK2KVH has been putting on a virtual smorgasbord at the end of the business section of the meetings. The customary rag chew has become a mixture of chatting and chewing. For those who have missed out on the tucker, "tuff", you had better be at the next meeting or you'll miss out again.

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Where are the articles that have been promised. If you have been building or experimenting, drop me a line about it.

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## IARS ON VOX

The Illawarra Amateur Radio Society made history the month of March when Brian VK2UBF did a broadcast on the local community radio station 2VOX FM 106.9.

We hope to do this broadcast every first Tuesday of each month. The broadcast will start around 4pm on the 'drive time' with Warren Gibson VK2TWG.

The first broadcast just spoke about the different types of licences available to ham operators and why amateurs are called HAM radio operators and ham radio in general. The next time around I hope to speak about paket radio and the next month about the history of our club. So if you have anything to put into this monthly broadcast kindly let me know or send it to VK2XGJ or direct to my PMS on 144.625 (s VK2UBF at prompt line)

The main reason for this broadcast is to get interest in HAM radio and of course to get

interest into our club. I may even have some interesting items for members to receive so remember to tune to the ""Voice of the Illawarra"" 2VOX FM 106.9 the first Tuesday of the month around 4pm Sometimes the program may be recorded at home and broadcast as I may not be able to get off work to do the show ""live"".

BRIAN FARRAR  
VK2UBF.

Thanks Dave VK2EZD for the loan of the FT7 instructions so we could get a copy off to Harry VK2DEW, the winner of the raffled radio.

## 4800 Baud to Canberra

Phil VK2TPH reports that the building of the 4800 baud paket modem is going very nicely and that a test is soon to be organized from the site to check the path through to Goulburn and Canberra. Don't forget that there will be a port on VK2XGJ's BBS for you to link through. Power supply, radio, antenna and feedline have all been acquired at little or no extra cost to the club. Keep up the good work Phil and the boys on the project.

## Moonbouncing

Lyle VK2ALU is going to be doing a few more tests soon so if you are interested in giving a hand and maybe be a part of history, keep in contact with Lyle.



## 2 Metres on a Fly Screen Door

It was around 10.30pm one Saturday not so long ago, on a farm out on the Southern Highlands, the decision was made to build a beam for 2 metres. Now farms are not renowned for their abundance of antenna building material, especially in the beam department. There is usually plenty of fencing wire to run a long wire or two, but not a lot for building a 5 element beam.

After much scrounging around in various sheds and a disused dairy, keeping in mind the that the next piece of junk that is disturbed could be the lounge room of a red belly black snake, an old screen door was unearthed. This looks useable! One side of the old aluminium door was about the right length as a boom for a 5 element beam. Suitable elements had to be located and soon it was discovered that the only suitable material were some old joining strips from

some refrigeration panels. These were far from the optimum shape for antenna elements, as if looked at in crosssection they were an "I" shape.

The straighter sections of the strips were sought and the calculations began, according to what could be remembered easily. The boom was marked out in 0.25 wavelengths for the elements and the driven, reflector and directors were measured and cut. Out goes the call to find the pop rivet gun. This was duly found but the pop rivets were not in the same location (Murphy who?). More scrounging noises emanated from the shed. After some serious box up turning and jar peering, suitable aluminium rivet were produced. This will be easy from here it was thought. Struth how wrong can you be.

Remember the "I" shape of the elements. The pop rivets would not go through both pieces of aluminium as well as bridge the gap of the "I". Out with the tin snips to remove the top section of the "I" so that the rivet could be put through the

bottom section of the "I". This worked brilliantly. After applying 10 pumps to the riveter handles it was discovered that bugger all was happening in the way of rivet squashing. Aaaaaaaggggghhhh! The riveter was then pulled apart and inspected. How old is this bloody thing. About 10 years old was offered as an answer with a proud and I got it at Clints Bargain Barn. Groan!

The general consensus was that the jaws were not being forced close enough together to provide the necessary force for the gripping of the shaft of the rivet. A bit of grinding on the two faces of the jaws was in order. The only available grinder was of course one with a 12" wheel which made delicate adjustment a tad on the difficult side. This exercise did prove to be successful.

The beam was gamma matched. This was made from a piece of 20 mm conduit as a stand off and a piece of copper pipe the was just the right size for the dielectric of a piece of RG8 to fit into. A suitable shorting strap was bent up.

The elements and the gamma matcher were all pop riveted on except for the elements and the gamma matcher as the handle on the pop rivet gun then broke off.

Aaaaagggghhhh!!!!

A pair of vice grips was employed as a substitute handle and this worked just fine until the last pop rivet was being inserted, when quite unexpectedly the pop rivet gun broke.

Aaaaagggghhhh!!

The antenna was now complete and the time was approaching morning.

The next day the KR400 was dug up and mounted on top of a suitable pole. This pole was in fact the previous home of the KR400. This appeared to go OK.

Here we go! VSWR check. A metre similar to one that had been used before on 2m by one of the amateurs was obtained. 2 hours later with the best VSWR of 2 and a bit to 1 it was decided to try it in the vertical position. Remember that the KR400 was used on this pole before. Somewhere in transit the plate had gotten itself bent so that the beam

sorta faced about 15 deg upwards.

Aaaaaaagggghhh!!

Lets give it a whirl anyway. Dialing through the channels on an FM900, a voice permeated the ether.

Where are you at matey?

Newcastle was the reply.

How do we sound?

Fine came the reply.

Struuuuth! it works.

I'm taking the family back home.

An hours drive and a shower later a phone call is received from the XYL of the fly screen door beam owner. He had slipped out of the door of the shack and his left ankle is now pointing 180 degrees from where it is supposed too. Ambulance metal plates and screws and it was back together.

This weekend gone the fly screen beam was tested on a proper VHF

VSWR metre and the report was 1:1.05

Struuuuuuth!!!

## FM900 on 6M's

There are a few members in the club that have the information to put the FM 900/92 on six metres. It is not a quick job, taking about 12 hours from start to finish, but you end up with an FM rig that covers most of the FM portion of the six metre band. Ask Phil VK2TPH about the info.

**The unpublished  
Windows 95 error  
codes later in this  
issue.**



## -REPEATER REPORT-

February - April 1997

How's '97 treating you so far?

Mine's going OK except for the intense pressure placed upon me by that tyrant Editor, to produce a literary masterpiece (ie: a Rptr Report) by a totally unrealistic deadline with a complete lack of available research & study time. Oh well, what the hell - here goes...

VK2RMP (Maddens Plains)

146.850 - The Rptr itself is working fine, unfortunately we are still plagued by the interfering signal, mainly during the weekday daylight hours. The interfering signal comes from a VHF multi-frequency trunking 2-Way system owned by Communications Site Rentals of Sydney. (These are the same people that took the VK2 WIA to Court over their Dural installation a year or so ago.) Up until now both on the air & in The Propagator, I have been rather "diplomatic" about who was causing the interference after being assured by their people that they were very interested in helping to fix the problem they were causing to us & that there was no need to involve the SMA.

During the past 10 or so months, we haven't been sitting on our hands waiting for someone to help us however. We have consulted many professional 2-Way experts, searching for ideas & suggestions to alleviate the interference. Unfortunately, not one of them has worked. We've moved the antenna (which was very difficult & time-consuming), used different anten-

nas, tried both notch & pass-band filters in the RX line, the TX line & both the RX & TX lines, we've disconnected (with permission) other services eqpmt, played with power & mute levels & even used a totally different Rptr, all to no avail.

As you can imagine it is quite frustrating to have tried all these ideas & have had no apparent improvement in the interference level. It certainly doesn't help matters also when you hear an Amateur user pass a comment like - "you think they would have fixed the interference to the repeater by now..."

I'm convinced that the problem exists up on the tower & is possibly some type of rectification of metal-work. There is a heap of very rusted brackets & U-Bolts, unterminated feed-lines & antennas & quite a few dissimilar metal joints that could be suspect. An observation we noticed a long time ago was that the level of interference drops dramatically when it's raining, supporting the idea of metal to metal rectification (or something similar).

I am no longer very "diplomatic" about the company whose transmissions are causing the interference to our 6850. Over the course of many hours of phone calls & several letters, they promised many times that they would definitely assist us in rectifying the interference. During one of the latter phone conversations, I was told that they needed a heap of info about the Rptr & it's diplexer. They wanted circuits, plans, formulas & specifications so they could investigate further. It



took hours to compile & totalled about 15 pages, but I put it all together ASAP & sent it back to them the following day. Over 5 weeks passed & not even a call or note to acknowledge receipt of the A4 envelope. By this time I was feeling just a tad pissed-off.

It was now the end of February & I felt we had been damn patient, so I rung them again. Did they get the info they had requested, I asked? Yes. Any ideas? Nah, haven't had a chance to look at it yet - !!! Resisting temptation to spit the proverbial dummy, I informed them that this had gone on long enough. We were sick of the four-letter words we were regularly hearing from their trunking system, would they please consider looking at the problem urgently. I was told that they couldn't justify sending out a \$75/hour technician to look at a situation that wasn't causing THEM any problems.

I might add here, that I had suggested many times for them to contact me at home or work anytime, if they had a technician going to the site as I would drop whatever I was doing to meet them. I was told they haven't had any visits lately. I know that someone had been there at least three times recently, in fact the technician had left his business card attached to a power cord plugged into a GPO in October '96, explaining that the cord was only temporary & would be removed shortly. The cord & card were still there as at the 30/3/97.

So that was it, they were now not interested in helping our situation, in fact they now suggested I should con-

tact the SMA, something that in previous conversations they suggested/requested I didn't do. So I did, straight away. I was given a sympathetic ear by the SMA, but was asked to supply a detailed report, including all relevant details such as all the ideas we had tried, with the results, the measuring gear used, times, dates, conversations, etc...(Here we go again I thought). I thanked them & rung my contact at the Tower owner's business. He was most interested & promised an on-site meeting.

During March we had two on-site meetings, the second visit included an SMA field technician. Our gear & installation was inspected & given the "seal of approval" (rather pleasing). After numerous tests, their conclusion was the same as ours, in that it appears to be something related to tower hardware or "dress" as they call it. Fortunately by coincidence, the tower owners have allocated funds to have the entire tower & fixtures cleaned-up. This may well fix our interference, it may not, in the meantime we are pursuing some other ideas.

Well that's the story so far, hopefully it will have a happy ending very soon. In the meantime if you want to listen to some VERY colourful conversations direct (not through our Rptr), CSR's trunking channels are: 166.850MHz, 167.000MHz & 167.150MHz. The data control channel (the UFO sounding interference we hear) is on 166.700MHz. The more channels they use, the more interference we suffer.



438.725MHz - This UHF Rptr at Maddens Plains has now been on the air for about 2 months. It is working well with no problems. As expected, coverage is similar to 6850 although the "penetration" is not quite as good as on VHF. Surprisingly though, in many instances the UHF signal level is far stronger than the VHF. This may be due to the higher gain the dual-band antenna exhibits on UHF.

This Rptr carries both morning & evening VK2 WIA Broadcasts on a Sunday. The talking clock is also attached to it. One observation expressed by many users is that when driving through bad pager areas, even though 6850 may be stronger than 8725, at least there is no pager crap to endure on UHF. Comments on it's performance would be appreciated.

VK2RIL (Sublime Point)

147.275 - This Rptr appears to be performing well. It is only a simple Rptr system but due to the use of the 3 elmt Yagi facing south, it produces quite a strong signal into W'gong. Remember, that due to the unresolvable Telstra Pager intermod, the Rptr receives on a negative offset, not the usual positive one. You transmit on 146.675MHz, receive on 147.275MHz.

VK2RAW (Mt Murray)

147.575 - This Packet digipeater is working rather well at present. It has just had a change of antenna system courtesy of Phil (TPH) & John (XGJ). The original 27' colinear (the old 7275 antenna) failed for whatever reason & wasn't fixable on site. It is to be pulled

apart shortly for a hopeful repair. We are now using 5/8th over 5/8th Ringo Ranger type antenna, originally bought about 15 years ago for the old 6850. Upon Phil's next visit, he's hopeful of installing a new EPROM with a more advanced level of software. Phil is also progressing well with the planned 4800Bd digipeater he is putting together.

VK2RUW - (Knights Hill)

438.225 - Not much to Report no failures or problems. Since the installation of the pre-amp on the RXer, the sensitivity appears to have gone up a bit. The link to Goulburn is still working well, however the VK1's have had their end off for quite a few months while they build a new Rptr. Hopefully, they will have resurrected their end shortly.

29.620 - The TX end of the Club's 10m Rptr can be installed shortly at Knights Hill. Should be on the the air soon.

VK2RIS - (Saddleback Mtn)

146.975 - The Rptr is working OK at the moment, we are just waiting for the old Optus tower to be placed in the vertical position. It is presently lying on the ground, with the new Vodafone/Optus tower taking over it's role. When they "replant" this old Optus tower, we will be allowed to install our Rptr's antenna somewhere near the top. This is planned to happen in the next few weeks.

That's all for now,

Till next time - RoB VK2MT

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# Undocumented Error Codes

The following is a list of undocumented Windows 95 error codes which somehow got overlooked when printing the documentation.

*WinErr 001: Windows loaded - System in danger*

*WinErr 002: No Error - Yet*

*WinErr 003: Dynamic linking error - Your mistake is now in every file*

*WinErr 004: Erroneous error - Nothing is wrong*

*WinErr 005: Multitasking attempted - System confused*

*WinErr 006: Malicious error - Desqview found on drive*

*WinErr 007: System price error - Inadequate money spent on hardware*

*WinErr 008: Broken window - Watch out for glass fragments*

*WinErr 009: Horrible bug encountered - God knows what has happened*

*WinErr 00A: Promotional literature overflow - Mailbox full*

*WinErr 00B: Inadequate disk space - Free at least 50MB*

*WinErr 00C: Memory hog error - More Ram needed. More! More! More!*

*WinErr 00D: Window closed - Do not look outside*

*WinErr 00E: Window open - Do not look inside*

*WinErr 00F: Unexplained error - Please tell us how this happened*

*WinErr 010: Reserved for future mistakes by our developers*

*WinErr 011: Window open - Do not look outside*

*WinErr 012: Window closed - Do not look inside*

*WinErr 013: Unexpected error - Huh ?*

*WinErr 014: Keyboard locked - Try anything you can think of.*

*WinErr 018: Unrecoverable error - System has been destroyed. Buy a new one. Old Windows licence is not valid anymore.*

*WinErr 019: User error - Not our fault. Is Not! Is Not!*

*WinErr 01A: Operating system overwritten - Please reinstall all your software. We are terribly sorry.*

*WinErr 01B: Illegal error - You are not allowed to get this error. Next time you will get a penalty for that.*

*WinErr 01C: Uncertainty error - Uncertainty may be inadequate.*

*WinErr 01D: System crash - We are unable to figure out our own code.*

*WinErr 01E: Timing error - Please wait. And wait. And wait. And wait.*

*WinErr 01F: Reserved for future mistakes of our developers.*

*WinErr 020: Error recording error codes - Additional errors will be lost.*

*WinErr 042: Virus error - A virus has been activated in a dos-box. The virus, however, requires Windows. All tasks will automatically be closed and the virus will be activated again.*

*WinErr 079: Mouse not found - A mouse driver has not been installed. Please click the left mouse button to continue.*

*WinErr 103: Error buffer overflow - Too many errors encountered. Additional errors may not be displayed or recorded.*

*WinErr 678: This will end your Windows session. Do you want to play another game?*

*WinErr 683: Time out error - Operator fell asleep while waiting for the system to complete boot procedure.*

*WinErr 815: Insufficient Memory - Only 50,312,583 Bytes available*

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# THE ILLAWARRA AMATEUR RADIO SOCIETY SOCIETY INC

PO BOX 1838  
WOLLONGONG NSW 2500

## REPEATERS

<i>Call</i>	<i>Fx</i>	<i>Mode</i>	<i>Location</i>	<i>Linked to</i>
VK2RMP	146.850	VOICE	MADDENS PLAINS	VK2RMU
VK2RMP	438.725	VOICE	MADDENS PLAINS	
VK2RIS	146.975	VOICE	SADDLEBACK MT.	FUTURE
VK2RUW	438.225	VOICE	KNIGHTS HILL	VK2RGN VK1RGI
VK2RUW	29.620	VOICE	KNIGHTS HILL	OFF AIR
VK2RAW	147.575	PAKET	MT. MURRAY	
VK2AMW-1	144.625	PAKET	WOLLONGONG UNI	
VK2XGJ	144.700	PAKET	DAPTO	
VK2XGJ	439.075	PAKET	DAPTO	

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<b>BROADCAST</b>	VK2UBF	BRIAN FARRAR	146.850 / 146.700
	VK2MT	ROB McKNIGHT	438.225
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