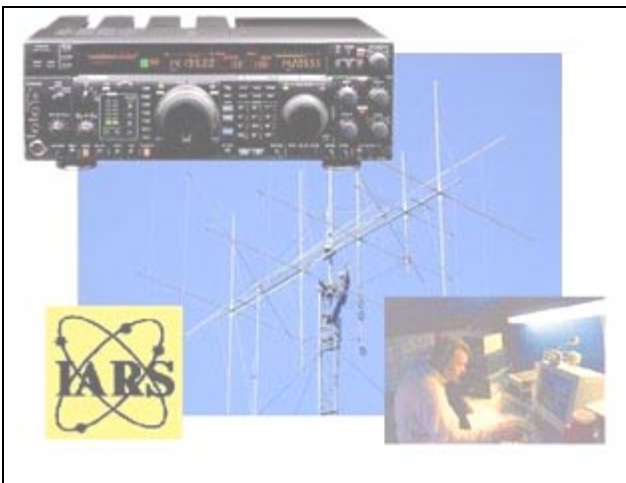


# The Propagator

	<p><b>Official Newsletter of the Illawarra Amateur Radio Society</b></p> <p>Volume 0102 Issued 7 May 2002 Published Bi-Monthly</p> <p><b>Editor – Rob Heyer VK2XIC</b></p> <p><b>IARS meets at 19:30 Hrs. on the second Tuesday of each month (except January) in the SES LHQ Montague St. North Wollongong. VK2AMW Since 1948</b></p>
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IARS PO Box 1838 Wollongong 2500.

## BLACK MOUNTAIN - SIX METRES

Six Metres and Black Mountain in the ACT near Canberra, what could they possibly have in common?



They both have been worked on by Norm VK2ZXC. If you have not been to have a look at the tourist attraction of Black Mountain and the view from the Telecom Tower platforms, then it's worth the drive, should you be in Canberra. You will be able to take in the sites looking over the city and the surrounding country, which is very impressive. Not only will you be able to take in the sites of Canberra below but also you can just turn your eyes sky ward and see some of Norm VK2ZXC's handy work on the Tower itself. (*Look closely you may be able to see him!*)

I don't want to talk about what it would be like hanging by a thread (*rope and harness*) 150 to 200 meters off the ground and trying to fasten transmitter coax cables (*'cooked' samples of which we have seen at the club*) to cable racks and not having anything close by to grab to stop you swinging uselessly in the air and feeling like an astronaut, but looking like a fool.

What I want to talk about is Norm's very recent addition of four new countries on the 6-metre band.

**CO8LT** Cuba

**VK9ML** Mellish Reef

**9M6CT** East Malaysia

**YB9AY** Bali



**Mellish Reef** Grid Locator QH72wo  
17 deg 24 min 39 sec South 155 deg 53min 25 sec East

These have to be confirmed, as they are less than a fortnight old at the time of writing. With these four new counties it lifts Norm's total country count to 88, only 12 to go! Norm will be the first 'Z' call in Australia to have worked 100 confirmed countries on six metres.

A fabulous effort, and filing the QSL's is no small task either. Some of us were well entertained by John VK2BHO and Norm VK2ZXC at the March 2002 meeting and saw some of the interesting QSL Cards. Norm has added 700 more cards to his extensive file of binders. He said it took him six hours over two days to file, cross-reference and mark off.

I recall his statement at the March meeting; "Gentlemen, this is on 6 Metres not 20!" Well done Norm.

I hope to talk to some others of the 6 Metre Hunters to find out how they have performed and what are some of the skills they employ to snare the rare and not so rare DX stations on 6 Metres.

*Rob VK2XIC*

## IRLP

**There is a new node No. 820 in Tokyo (7J1YAB) now operating.**

Still some more construction is required, however, they will answer our calls.

The operators of the node are Johann 7J1AQB and Steve 7J1AIL.

It is good to see a new node in Japan.

*Rob VK2XIC*

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# FROM YOUR PRESIDENT.

FELLOW CLUB MEMBERS.

At the committee meeting held April 17<sup>th</sup>. Most committee members expressed concerns about lack of members involvement, in this OUR club. I only took on the Presidents job **BECAUSE NOBODY ELSE WANTED IT.** This is also true for the secretary and treasurer. Both of these positions were taken to KEEP OUR club going.

I have tried to get a treasurer at the last 2 meeting and will try again the meeting to be held in May.

The club has got accounts to pay and without a TREASURER we cannot pay them.

Members do I send the bills back and say we cannot pay them? One is for a repeater licence!

I will NOT be standing for ANY positions this coming year. I'm getting more involved at VOX FM and it's taking more of my time. They have asked me to go 5 days a week and stay at least 6 hours a day.

For as long as I can remember there's NEVER been any nominations at any AGM that I have attended. Nominations have been called for from the floor. **THIS MAKES THE AGM LONG AND BORING.**

At the April meeting held at Cataract Dam two members spoke to me regarding coming onto the committee next year.

If ANY members are interested PLEASE come along to the JUNE committee meeting. If you cannot attend this meeting PLEASE contact me and I will talk to you about it. There's not too much WORK involved. BUT SOMEBODY HAS TO DO IT.

At the April committee meeting it was decided to send the AUGUST newsletter out to ALL members via the POST. If you have changed your mailing address. KINDLY ADVISE ROB VK2XIC. His Email address is elsewhere in this newsletter. This newsletter will be sent at least 2 weeks BEFORE the meeting date so forms can be received, by the due date.

In this newsletter there will be a NOMINATION FORM. Lets hope we get some nominations. If not the AGM to be held AUGUST 13<sup>th</sup> will have to be adjourned to the next month.

This will make this meeting, a SPECIAL meeting, at great expense to OUR club, and at this meeting there will be only one item for discussion and that will be to elect the committee for the coming year. If there's NO nomination at this meeting. An EXTRAORDINARY SPECIAL meeting will be called. This meeting will discuss the WINDING up of the Illawarra Amateur Radio Society. I for one hope we NEVER have to get this far but most of the OUT GOING committee can see this could happen.

Regards Brian Farrar VK2UBF President Illawarra Amateur Radio Society Inc.

# REPEATER REPORT

Hi to all.

Our Editor has been on to me for a while to write up a Repeater Report for inclusion in "The Propagator". Due to the many other distractions, this hasn't happened for quite a while, so my apologies...

Well as usual the Repeater Committee has been very busy & we have many projects ahead of us. I'll TRY & keep it brief & go thru each site separately.

## MADDENS PLAINS - VK2RMP

- 6850 Rptr is working fine. It is currently working split antenna with no diplexer, just a couple of cavity filters.
- 8725 Rptr is OK at the moment, however it's output stage failed back in January & despite many hours of late night work I was unable to get more than about 10 watts out of it. Fortunately, John VK2AAL offered his time & experience & it was returned with 50+ watts. Recently the Rptr has been plagued occasionally by some form of interference. It sounds like over-deviated audio & it matches the audio output of Capital TV. Very strange, but not regular enough to make an official complaint to the ACA.
- 4700 VK2AMW-3 Digi is working well.
- 4925 VK2AMW-4 Digi has been taken off the air so that we can use it's antenna for 6850's Txer. There are no plans at the moment to return it to air (& it may never with the apparent lowering of packet usage).

The WIA Broadcast Rxer failed for the Broadcast on Sunday morning the 28/4/02. I did a VHF to VHF relay from Sydney to our Rptrs for the evening Broadcast. Brian check the site on 1/5/02 & fixed the unusual prob. Further investigation is needed to confirm what really is wrong.

We still have to get all our antennas across to the new tower sometime soon. We have been waiting for professional assistance, as it is a HUGE job, not to mention very dangerous. It will probably take a whole weekend (or more) to do the job.

## **SADDLEBACK MOUNTAIN - VK2RIS**

- 6975 Rptr was removed back in March for it's 100,00klm check-up. The "mechanic" was John VK2AAL again & he did a great job fixing up a few minor problems that had occurred over the past year or so. He also retuned the diplexer cavity filters. Shortly, the Rptr should be putting out a better signal, particularly to the north, as its antenna is going up considerably higher due to some site upgrading.

## **MT BOYNE - VK2RBT**

- 6675 Rptr just keeps on plugging away which is great considering the 350klm round trip that is required to get there. At my last visit on the 26/4/02, did a few mods to the DTMF control functions, plus topped up the back-up batteries, checked the antenna VSWR's etc.
- 7575 VK2AMW-6 Digi is also providing sterling & reliable service. While other digis come & go down the south coast, it just keeps chugging along.
- Late last year the ENTIRE antenna & feedline systems of both the Rptr & Digi were totally replaced and re-installed professionally at the cost of another company who wanted to build a new tower at the site. It was a great bonus for us.

## **KNIGHTS HILL - VK2RUW**

- 8225 Rptr is working well, however it's antenna system has a small problem, due to rectification. When you are using the same antenna to transmit 25 watts of RF, while using the same antenna to receive 0.12uV signals, if metal to metal connections aren't absolutely sound you can get severe break-up & static desense probs. I've climbed the tower several times trying to tighten or secure whatever is causing the problem with no luck. The answer is to split the antenna system. This will fix the desense probs & also allow for the removal of the diplexer which will return about 3dB gain on both RX & TX.
- The Goulburn Eastlink link is working fine now, but I had to replace the radio's RX crystal in March as it wandered way off frequency for some reason causing bad signal drop-out probs.
- Despite our best intentions, the return of the 10m Rptr is plagued by the Asian pirate signals. The Rptr is complete, but

even just leaving the Rxer connected to an old Station-Master 15' up at my place, the mute is quite often constantly opened by Asian speaking voices. So if it was placed 2,700' higher on a better antenna, etc, it would be next to hopeless to use or listen to. Our best bet at this stage maybe to use a "simplex gateway" on 10m FM. At least the more the Rptrs are used the more it would be Txing & would eventually drive the pirates off the frequency, thus clearing it for legitimate Amateur traffic. (Well, this is the theory anyway!)

- The link system which links the 3 VHF Rptrs together is working great except for a nuisance problem which leads to audio peaks from users on 6975 Rptr being clipped. I am hoping that a re-adjustment of the Rxer's IF stage will fix this. We also now have the High Range 6825 Rptr linked into our system, however it is not linked in all the time as it presently puts an extra tail onto the system. This will be fixed by a visit to the 6825 site by either myself or a Goulburn ARS member shortly. 6825 was recently over-hauled by the GARS & it is working very well, so when it is connected to our existing system provides western coverage from Sydney to almost Goulburn, especially along the F5.

### **MT MURRAY - VK2AMW-5**

- This 7575 Digi just keeps on going & going. Phil VK2TPH & myself were comparing notes on this system the other day & no one has been to the site for well over 18 months! Not bad for a solar-powered site. A working bee is planned soon in anticipation of the winter extremes.
- APRS 145.175MHz APRS Digi - We are planning the installation of this new type of system at this site. It's quite a clever thing this APRS, & will be linked into the current VK2 APRS system. Don't ask me how it all works however, ask Phil, in fact maybe we should hassle him for a Club demo!

We also now have a 6m 50 watt Rptr almost ready for installation, it just needs an ident board built & installed plus a frequency pair picked. We haven't decided where to put this system as yet, but it will probably have to be a split site system as we don't have cavity filters suitable. (They would be 3 meters tall if we did!) If anyway knows of anything that could be

converted, please call. Due to the wavelength, this Rptr should provide tremendous ground-wave coverage, not to mention the DX stuff possible.

Due to the freeing-up of the diplexer previously used by the 6850 Rptr & also the resurrection of an old but top-spec Rptr, we may put our 7275 Rptr back on the air as solely a local un-linked chat-type Rptr. The complete system has been operating on my work bench (connected to an external antenna) for over a month now with not one bit of pager interference. If you remember when this Rptr used to be a Sublime Point, it was plagued by a lot of pager interference due to a 2a-b intermod produced by two now-defunct Telstra Pagers on 148.0375 & 148.1875MHz. Where this 2m Rptr is to be located (if anywhere!) is still to be decided. For interest sake, the Rptr is the one that Graeme VK2CAG totally designed & built many years ago for which he received WIA Awards due to it's top notch quality & design.

IRLP - Well our Node is still going strong. We had some unfortunate hard drive failures early this year which, combined with some bios probs, led to the replacement of the whole PC, the cost of which was paid for by Steve VK2TSB - a VERY generous donation indeed. Meanwhile the Node was moved from up Narellan way (it's original home when it first went on-air on the 6/6/01), to Ken VK2TKE's home QTH where it enjoys the high speed ADSL line that Ken kindly pays for. Another very generous & on-going donation to our Club & it's Members.

The IRLP system is still happily residing in the background of our linked VHF Rptrs, being used when & where we want it. LOTS of very nice interstate & overseas contacts & friendships have been generated in the past year. Also the number of other Nodes has increased from 93 when we joined in, to 425 at last count! These Nodes are in Canada, USA, England, New Zealand, Japan, South Africa, Denmark, Sweden, Antartica as well as the 25 other VK Nodes.

This HUGE increase is contrary to a certain non-member but regular IARS Rptr user down the coast that said in June of last year "Mark my words, this internet linking stuff will be dead in a



years time!" Well the Nodes are currently growing at about 5 to 10 a week & in fact it is increasing as the word spreads about what IRLP is all about.

I must thank all the hard-working Rptr Committee that make my job so much easier - John ZLJ, Phil TPH, Brian UBF, Simon XQX, Ken TKE, Peter BIT & our newest committee member John AAL. Thanks Guys!

To finish off, when I visited Mt Boyne last week, that made my 250<sup>th</sup> documented visit to an IARS Rptr site from when I first started my Rptr Diaries at the beginning of 1991. In fact there is many more visits before that when I used to visit Mt Murray with Graeme CAG or with Peter BIT when we were putting the original 10m Rptr on the air back around the beginning 1990, but unfortunately I never documented any of that earlier work. With an average 100klm round trip to our sites, that's 25,000klms of travelling, not to mention the driving involved in purchasing of components, etc! But it's been a lot of fun (well most of the time anyway....).

Until next time,  
Rob VK2MT  
(5/5/02)

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# “M” Theory

**Questions for those working towards an amateur exam.  
Or just test yourself. *Answers on page 11***

1.

The best method of eliminating TV front-end overload caused by a 160 through to 10 Metre amateur transmitter is to:

- (a) use a high-pass filter on the TV receiver.
- (b) use a low-pass filter on the transmitter.
- (c) install a wave-trap in the TV set's feedline.
- (d) install sound bars on the TV set.

2.

To check for harmonic radiation from a transmitter you might use a:

- (a) signal generator.
- (b) wavemeter.
- (c) thermocouple ammeter.
- (d) signal tracer.

3.

One possible cause of TV interference by harmonics from an SSB transmitter is from "flat-topping." This is caused by:

- (a) insufficient drive.
- (b) driving the final stage into non-linear operation.
- (c) too low tank circuit Q.
- (d) carrier oscillator frequency drift.

4.

Keying chirps from a telegraphy transmitter would most likely arise from:

- (a) a lack of filtering at the key.
- (b) keying the final stage.
- (c) keying a stage close to the oscillator.
- (d) keying at too low a speed.

5.

A laminated iron core has reduced eddy-current losses because:

- (a) the laminations are stacked vertically.
- (b) the laminations are insulated from each other.
- (c) the magnetic flux is concentrated in the air gap of the core.
- (d) more wire can be used with less DC resistance in the coil.

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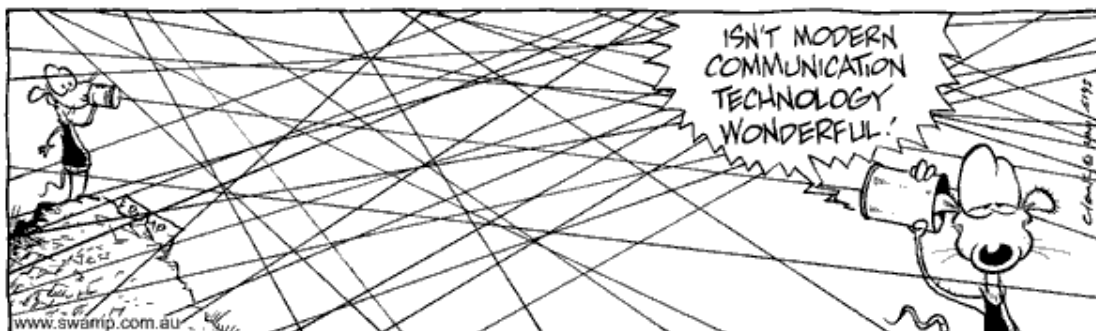
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## “M” Theory

Answers:-

1. (a), 2. (b), 3. (b), 4. (c), 5. (b), 6. (b).



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# Coming Events

**SSTV** – All welcome to the Monday evenings Net time between 19:30 - 20:00 Hr.Local, 10:30 - 11:00 Hrs Zoolu on 146.975 MHz.

**May Meeting:** 14 May 02

This meeting will be held at SES LHQ.

Meeting set to start at 19:30 Hrs.

**June Meeting:** 11 June 02

This meeting will be held at SES LHQ at 19.30 Hrs

VK / ZL Trans Tasman Contest 1<sup>st</sup> June

**July Meeting:** 09 July 02

This meeting will be held at SES LHQ.

Meeting set to start at 19:30 Hrs.

**August Meeting:** 13 August 02

**Annual General Meeting (AGM)**

This meeting will be held at SES LHQ.

Meeting set to start at 19:30 Hrs.

## Some Humour

### The Benefits Of Drinking

A herd of buffalo can only move as fast as the slowest buffalo, and when the herd is hunted, it is the lowest and weakest ones at the back that are killed first.

This natural selection is good for the herd as a whole, because the general speed and health of the whole keeps improving by the regular culling of the weakest members.

In much the same way, the human brain can operate only as fast as the slowest brain cells. Excessive intake of alcohol, we all know, kills off brain cells, but naturally it attacks the slowest and weakest cells first.

In this way, regular consumption of alcohol eliminates the weaker cells, constantly making the brain a faster and more efficient machine.

The result of this in-depth epidemiological study verifies and validates the causal link between all-weekend parties, and the achievement of excellence in all disciplines. It also explains why, after a few short years after leaving university and getting married, most workers cannot keep up with the performance of the new graduates.

Only those few who stick to the strict regime of voracious alcohol consumption can maintain the intellectual levels that they achieved in their college years.

If you feel that you are losing your competitive and technological edge, do not sit and shudder at home - get back into the pub.

Your company needs you to be at your peak, and you should not deny yourself the sparkling career that you deserve!

# The IARS Repeaters



The Illawarra Amateur Radio Society operates several repeaters on the Illawarra South Coast. Below is the listing of frequencies in use.

Access tones are not required.

Their status is also displayed along with the type of repeater.

The listing below also includes the Satellite Gateway and BBS run by John Simon VK2XGJ.

Call sign	Freq In/Out	Type	Location	Linked To
VK2RUM	29.520/29.620	Voice	Knights Hill	Off Air
VK2RBT	146.075/146.675	Voice	Mt Boyne	RMP & RIS
VK2RMP	146.250/146.850	Voice	Maddens Plains	RIS & RBT
VK2RIS	146.375/146.975	Voice	Saddleback Mt	RBT & RMP
VK2RUW	433.225/438.225	Voice	Knights Hill	RUW
VK2RMP	433.725/438.725	Voice	Maddens Plains	RGN, RHR RGI & RTW
VK2AMW-3	144.700/144.700	NODE DIGI	Maddens Plains	VK2AMW-4
VK2AMW-4	144.925/144.925	NODE DIGI	Maddens Plains	VK2AMW-3
VK2AMW-5	147.575/147.575	NODE DIGI	Mt Boyne	
VK2AMW-7	147.575/147.575	NODE DIGI	Mt Murray	
VK2XGJ	53.100/53.100	BBS / SATGATE	Dapto	
VK2XGJ	144.700/144.700	BBS / SATGATE	Dapto	
VK2XGJ	147.575/147.575	BBS / SATGATE	Dapto	
VK2XGJ	440.050/440.050	BBS / SATGATE	Dapto	

**Propagator downloads are available, contact Rob - email [vk2xic@yahoo.com.au](mailto:vk2xic@yahoo.com.au)**



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**Club meetings are held 7:30 PM on the second Tuesday of each month, (except January) at the SES Building Montague Street North Wollongong**

Committee meetings are held on the third Wednesday of each month.

**Membership:**

Full - \$20 Concession - \$15. Membership expires after the AGM in August.

Visit the Illawarra Amateur Radio Society inc. Homepage [IARS@1earth.net.au](http://IARS@1earth.net.au)

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