



The PROPAGATOR

Illawarra Amateur Radio Society Inc.



The monthly newsletter of the Illawarra Amateur Radio Society Inc.
Registered by Australia Post publication number :- NBH - 1491.

Meetings are held on the second Tuesday each month (except January) at 7.30 pm in the
State Emergency Services building in Montague St, Nth Wollongong.

Visitors are most welcome.

Number 8 Volume 92

August 1992

Editorial

Welcome to the first newsletter of the new financial year. The old team of John VK2XGJ, Peter VK2KHE and Peter VK2FPN are back in business, ready to put 300% effort into the club this year. Maybe it's time for us to take a look at ourselves and our hobby. I know I get very complacent about things and just tend to go along with whatever is going on. Most unlike me, since I was very dynamic when I was younger (it's not a bad feat to be able to retire at 47 years old). I expect a lot of you were very progressive as well.

We've all heard it before :-
new broom sweeps clean
but the bristles soon wear out and we are back to nowhere. Maybe it's time to redirect our energies back into our club and get some of the benefits that we should be getting.

Let's face it, we're in the club because it benefits us - the fact we help others along the way is a bonus.

Program

August

A talk by Col Christensen on Antarctica. This is a family evening so bring the family and a plate of goodies. If you have a Dolby stereo sound system, it would enhance the short video of the ship crashing through the ice pack and the wind whistling through the rigging.

September

A technical night of some sort, but more info later when the committee decides what is going to happen. Might lead us into a big club project to put our club on the map again.

October.

This will be a rag-chew night, but specifically we will be deciding which club project to undertake.

Remember there is a visit to the CSIRO at North Ryde on the 19th. Names will be taken at the September meeting.

***** Page 1 *****

The New Committee

There have been major changes in our committee. Most important job is the President. I am very pleased to say Brian Clarke, VK2KLH, has accepted the job again. He established an excellent foundation last year and it's up to us to build on it this year. Another important job is the Secretary. Ron Hanks, VK2JRH, has agreed to do the job this year. Our Treasurer is Dale Hughes, VK2DSH, and under his guidance the club will become extremely financial. Dale is also the man behind the promotion of radio at the Science Centre. Our repeaters will once again be under the watchful eye of Rob McKnight, VK2MT, and Ken Goodhew, VK2TKE. These two powerhouses did a fantastic job last year and projects for this year include linking the 70cm repeater to Canberra and beyond. I think they are planning an East Coast Backbone of linked 70cm repeaters. Lyle Patison, VK2ALU is continuing his excellent series on the Club history. I really enjoy his segments. Just think one day we'll all be part of our club history. Graham Denny, VK2GID, is retaining the QSL card task. Ken Grimm, VK2KWG is our Vice President. Rob Bonella, VK2SRB, is the Assistant Secretary. Ray Ball, VK2XCC, is the Social Director. Broadcast Officers are John Simon, VK2XGJ and Peter Tomlin, VK2KHE. Propagator Editors are Peter Read, VK2FPN, John Simon, VK2XGJ and Peter Tomlin, VK2KHE. There were others, but I can't read my writing. let me know at the meeting. To you I say

' May all your dreams come true'.

Quote of the Month

Always be sincere
Even if you have to fake it.

See Jack at

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Eh?

A little bird told me that Dale, VK2DSH, was using packet to transfer morse? More than likely not, but I need an article to fill in the hole at the bottom of this column.

Hey! I've got a better idea; why don't you send me some short (3-4 lines) articles then you wouldn't have to read this rubbish.

Science Centre

If you think there is no club future, just have a chat to Dale about what will be happening in the next 12 months! If you want to be a part of some very exciting projects, jump in now. We still need about 4 more operators prepared to 'waste' 4 hours a month talking on radio. A fantastic excuse to get out of mowing the lawn!

Here's the roster :-

Sat	8/8	VK2FPN	VK2XGJ	
Sun	9/8	VK2JRH	VK2DSH	
Sat	15/8	VK2GNV	VK2GMC	
Sun	16/8	VK2GID	VK2FPN	VK2KHE
Sat	22/8	VK2XGJ	VK2FPN	VK2KLH
Sun	23/8	VK2ALU	VK2JRH	
Sat	29/8	VK2SRB	VK2TSB	
Sun	30/8	VK2KWG	VK2DSH	
Sat	5/9	VK2XGJ	VK2FPN	
Sun	6/9	No one yet		
Sat	12/9	No one yet		
Sun	13/9	No one yet		

Club Project.

No, EME is out! We've already done that. How about Computer Speech recognition? How about 23cm transmission with linked repeaters to another state? How about Electronic Matter Transfer? How about Robotics? How about plant growth enhanced by radio waves.

Yes, I know none of them are radio construction projects, but they are electronics and maybe it's time we started looking at what direction our hobby is headed. See us at the Rag Chew in October with your suggestion. WARNING - John VK2XGJ is going to push a Racket project! Peter VK2KHE wants a rotating 200 amp powersupply on top of a 60' self supporting mast. I want computer voice recognition. Make sure you get your bid in first!

Committee Meeting.

A good roll up with VK2's JRH, GID, SRB, XQX, DSH, MT, KWG, FPN and ALU in attendance. Here's the comprehensive minutes.

Some letters came in.

Some letters went out.

The treasurer reported a healthy balance.

Rob VK2MT gave a repeater report.

Then followed some discussion on :- Science Centre, Club station, Club future, meeting location, Bert Stockleys equipment, letter from VK2FPN and a few odds and ends.

We all went home at 21:30 (but don't tell the wife, she thinks it finished at 9.30..)

The first meeting was very interesting. The amount of positive feed back that came forth was incredible. How powerful do you think we could be with the combined brain power of all our members. How about contacts? Do you realise you could have your thoughts passed on to anyone in the world. You could talk to The Queen of England or the President of Poland. Everyone is accessible. How? By the people you know and the people they know. Far fetched? Not in the least. Useless? Not in the least. Need a whatsit? I know someone who knows someone who knows some one ... How do you think big business gets along - by themselves? No way! You scratch my back and I'll talk to Jo Blo who knows the Prime Minister. How do amateurs get access to the Satellites? By paying for them? No way! It's done by a lot of people doing a little! I think it's about time we did the same thing.

***** Page 3 *****

SAREX

Shuttle Amateur Radio Experiment
STS-47 Space Shuttle Endeavour

When: Mid-September, 1992 for 6 days of 2M Operations.

Where: Earth Orbit. Altitude 300 KM, coverage of latitudes from 70 degrees North to 70 degrees South.

Operators: Dr. Jay Apt N5QWL and Dr. Mamoru Mohri 7L2NJY. N5QWL is the flight engineer for STS-47 and will operate the shuttle systems during the "night" shift, while 7L2NJY will be one of the scientists performing experiments in a laboratory in the shuttle's cargo bay during the "day" shift.

Modes:

FM VOICE - N5QWL and 7L2NJY

PACKET: W5RRR-1Packet (Beacons giving daily mission activities by N5QWL daily if he gets a chance, and robot QSO's - successful connects will be issued a contact number by the robot)

Frequencies: We will operate split. PLEASE DO NOT TRANSMIT ON THE DOWNLINK FREQUENCY!

VOICE: Downlink (shuttle transmits) on 145.55 MHz Uplink (ground transmits) on 144.95, 144.91, 144.97 MHz (except over Europe) - we'll listen on those 3 frequencies to spread out the pileup a bit. Uplink for Europe only: 144.80, 144.75, 144.70 MHz. Successful QSO's on voice will be facilitated by using standard international phonetics for your call sign. We will not answer any stations using non-standard phonetics. Use your entire call sign - we log with an audio tape recorder. Do not use our call sign - passes are very short, and we want to work as many folks as possible.

PACKET: Downlink (shuttle transmits) on 145.55 Uplink (ground transmits) on 144.70 (worldwide). If you can, decrease your radio's deviation to 3 kHz (most are initially set at 5 kHz) and compensate for the Doppler shift. If you cannot, wait until a minute or 90 seconds after we come over your horizon to transmit - that will put you within our IF. If a station transmits without following these suggestions, we just hear what sounds like a noisy carrier. The above applies to voice and packet.

QSL via: N5QWL, 806 Shorewood Drive, Seabrook, Texas 77586 USA. Include a self-addressed stamped envelope (SASE). Non-US stations include a self addressed envelope with \$0.50 of US postage affixed or appropriate IRC's. Include the Call sign worked, Date, UTC, Mode, and Frequency. For packet contacts, include the QSO number issued by the robot. SWL QSL's: Include the Call sign heard, Date, UTC, Mode, and Frequency.

Information Sources During The Mission: AMSAT News Service (ANS) bulletins, Compuserve, Genie, Prodigy, local packet bulletin boards, ARRL bulletins, and HF voice from NASA Johnson Space Centre ARC, Houston, Texas, W5RRR, or NASA Goddard Spaceflight Centre ARC, Greenbelt, Maryland, WA3NAN, frequencies listed next page.

W5RRR may be found on or near: 7.215, 14.280, 21.360, and 28.400 MHz.

WA3NAN retransmits NASA Select Audio and SAREX bulletins simultaneously on or near 3.860, 7.185, 14.295, 21.395, and 28.650 MHz.

Operations Notes:

N5QWL will be asleep over most USA passes, and 7L2NJY will be busy with laboratory duties for most US passes, so try us on packet over the USA. Remember, our packet call sign is W5RRR-1. We'll try to work voice (1) when we are not otherwise engaged, and (2) at night or when the ground is cloudy (we are generally busy taking pictures of the Earth during clear daylight passes). Our orbit will carry us over the Northern hemisphere in daylight.

We plan to work 6 schools on this mission: 2 in the US, 3 in Australia, and 1 in Europe or Africa.

We do not plan any orbiter manoeuvres after the first 6 hours of the flight, so orbital elements obtained early in the flight ought to be pretty good for the entire flight. If I can get to it, I'll activate the SAREX about 3 hours into the mission; deactivation will occur at about 6 days, 8 hours after launch.

The orbiter attitude is planned to be tail down, payload bay south. The SAREX antenna will be in the right forward window, so most contacts should have a good antenna pattern from AOS to TCA (time of closest approach).

Pre-launch Keplerian Elements available next issue or from VK2XGJ

Jobs!

This is only for the committee and I knew with a heading like that you wouldn't read it! It would greatly help the Incoming committee if they had a list of what you did, how you did it and your contacts. How about a job description?

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Do you know?

I can't find Keith VK2OB's questions (it's also embarrassing 'cause I don't know the answers) so here's a thought for you.

If you have a block of wood and a block of steel in the same room (at the same temperature) why does the steel feel colder? (If you want a tip, go along to the Science Centre and ask one of the kids, they'll know the answer!)

***** Page 5 *****

Editorial Policy

Unfortunately, we don't have one! Basically it's do your own thing. Obviously John VK2XGJ will be raving on about packet and satellites, Peter VK2KHE will be raving on about construction projects and I'll just be raving on.

The quality of the printing should be vastly improved, but we may have an occasional slip - all the equipment is kindly loaned by various people. Laser printing is by a printer friend of mine - let me know if you need some good quotes.

As far as club policy goes, I'm not too sure about that either. I forgot to put the screws on our President for an article; hopefully he'll feel guilty at reading this and give us one next month!

This is said by every editor and ignored by every reader, but I'll say it again. **I need your articles.** You may not have John's 'one eyed' approach, or Peter's technical approach or my witty approach (maybe it's only half wit), but you can certainly speak, and that's all we are doing.

There some adverts in this issue - I hope you support them since they support us. If you want to advertise, let me know. Hey, while I have you undivided attention, I'll explain my hobby - Play By Mail Games - aw! forget it, you'll never understand. However, if you know a (trainee) programmer who wants to make a couple of dollars, I am prepared to pay \$1,000 to have a large program written. Must be written in Basic, Clipper or Pascal and based on the

computer games of Civilisation, Railroad and Simm City.

Gold Mine! I was looking for a folder the other day and came upon an old one titled 'Propagator'. It contained a lot of old articles, and especially some cartoons from Brian Wade VK2AXI - I really enjoyed VK2KING so I have resurected some old ones. The one in this issue applies to me!

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Point of View

Elsewhere in this issue you may have read just how well our club is NOT going!, but I won't elaborate on that, I'll just give you a few thoughts of my own.

The main problem seems to be the dreaded word "Apathy", or is it? It would appear that there is a definite lack of interest with the majority of the membership, and this is supposed to be considered the norm in any club, but does this lack of interest come from being bored with our hobby or simply our capabilities with what equipment we possess has become unexciting and perhaps mundane. Let's face it; after all, it's only a hobby! Well, I can't answer for you the reader but I can certainly answer for me. It takes a reasonable amount of time and effort to study for an Amateur licence and upon passing the exam, one should feel proud, and quite rightly, as the standard of electronics knowledge required is high. Then comes the day when the new licensee puts his station on the air, depending on the type of licence, he may work HF, VHF or UHF in a variety of modes according to the type of equipment he owns (Do you remember your first day?)

The thrill of it all doesn't stop there, because of the prohibitive price of equipment in these unstable economic times, the average Amateur has the capability to build much of his own equipment at a small fraction of the cost of commercial types and is able to enjoy putting them to work. I don't mean to say we should be building all mode transceivers or the like, but we should all be capable of constructing things like antennae,

towers, power supplies and a multitude of test equipment. And where does the inspiration to do all this come from? Well, the licence alone should be enough but I believe the local club should be committed to constructional / educational programs to assist it's members not only with technical expertise but the ability to keep the cost of our hobby down. For the club to succeed with this type of program, it is necessary for it to draw on it's members as teachers and volunteers.

What I am trying to say is the success of your club depends on you and what you are willing to give in the way of your time.

Over the next eleven issues I have been asked to write some technical articles. So it is my intention to cover some basic constructional topics such as were discussed above, but don't leave it all to me! If you have any constructional or technical items you would like to see in print, then please don't be apprehensive, send them in to the club or give them to Peter VK2FPN, John VK2XGJ or myself at any of the meetings, we will truly appreciate it.

Peter, VK2KHE.



*** WARNING ***

Well here we are after the AGM with a whole new Propagator Crew. My only comment: You'll be sorry!!!!!! Being one of the Crew and seeing that my main interests are Packet radio and Satellites. Guess what my input into the Newsletter is going to be? Here is a little snip from the AMSAT news re the problems on STS-50 and why no one could access them till late in the mission.

STS-50 SAREX Frequency Change Necessary Because Of Antenna Problems Flight crew members KB5SIW & KB5SIX have worked closely with ground controllers and SAREX operational personnel in an attempt to improve antenna performance. During Orbit 89 the SAREX antenna was modified by KB5SIX according to an IFM (In Flight Maintenance Procedure) drawn up by antenna designers at the Johnson Space Centre in Houston. Despite these changes, the antenna performance continues to be less than pre-flight analysis had expected. After reviewing all of the data collected and procedures attempted to this point, SAREX personnel have decided that on further adjustments or modifications will be made to the SAREX antenna system during the balance of this flight. As a result, frequencies available for SAREX operations have been severely limited. Based upon current flight hardware performance coupled with a desire to conform as nearly as possible with world-wide band plans, SAREX operational personnel have been forced to make yet another frequency change to STS-50 operating

frequencies. Effective from Orbit 101 (23:00 UTC July 1st), All SAREX OPERATIONS WILL TAKE PLACE ON 144.450 MHz SIMPLEX FOR THE BALANCE OF THE STS-50 MISSION. Elsewhere in this month's issue you will find the preliminary Keps and information on STS-47 due to be launched somewhere around 11/9/92.

You've probably been thinking about it for a while. Maybe even had a bit of a dabble and got disappointing results. Or maybe you think your gear isn't up to it and a new rig is too expensive. Well, none of the above thoughts are unusual so read on. Let's look at the points one at a time. What are we listening for? You must realise there are lots of satellites up there. We'll start by looking at DOVE (oscar-17) ie. the 17th oscar to be put into orbit. DOVE will be our first satellite of the month. Why DOVE ? Well, its signals are as strong or stronger than most. It's not a complex satellite. Essentially it has only a telemetry beacon and a digitalker. You won't make much out of the telemetry unless you have a packet radio setup but you should be able to hear the digi-talker with very simple gear. This is a computerised voice simulator and is responsible for DOVE's name. It's called a Digital Orbiting Voice Encoder, how about that? The signal from DOVE sounds like a regular buzzing noise interrupted by bursts of irregular buzzing. Rather like a packet radio signal with an 'idling' tone in between. It switches itself off completely for 30 seconds every couple of minutes. This is to allow the control stations to communicate instructions to the satellite. It is a narrow band FM signal. You should listen on 145.825 MHz.

This frequency is a common one used by a number of amateur satellites for their downlink data. In the case of DOVE start listening for signals at about 145.828 MHz. As the satellite progresses through its 'pass' you will have to follow the signal down to about 145.822 MHz. You will probably already have realised that the frequency will be exactly 145.825 MHz. when the satellite is closest to your QTH. At this point there will be no relative velocity and therefore no doppler shift. It is well to note that an overhead pass, ie. an orbit that takes the satellite directly over the observer will produce the maximum doppler shift whilst a pass that appears low in the sky may produce barely noticeable doppler shift. Think about it. If your set can't tune in 1 kHz. steps don't worry, just leave it tuned to 145.825 MHz.

Now, when do you listen ? This is a tricky one. If you have a computer there's no problem. There's no shortage of programs and data to tell you when to listen. Use of computers in amateur satellite work is a subject on its own. If you haven't got one don't despair, ask someone who does have one to run out a list of AOS times. Now, equipment. To simply listen to the signals all you need is a good 2 metre FM receiver and a ground plane antenna. The signals from a setup like this won't be strong but you will hear them and if the digitalker is operating the signal should fully quiet your receiver. DOVE's telemetry transmitter normally runs at 250 mW and when the digitalker is on it runs at 4 watts. That's a 2 'S' point improvement. A quarter wave ground plane is better than a high gain co-linear type vertical like a Ringo. The

quarter wave receive better when the satellite is high in the sky. Make sure you use your best bit of coax for the feeder and terminate correctly at both ends. Don't skimp here this is your first lesson in giving it your best shot.

I don't want to put your hopes up too much but I have heard UoSat-2 digitalker fully quieting on an ICOM IC-2a hand held with its rubber ducky antenna. UoSat runs about 340 mW. I know what I said earlier about weak signals and noisy locations but remember we are just listening to hear the signals so far. If you tried to decode data or communicate using simple gear like that you would be sadly disappointed. In fact I saw VK2ALU Lyle at one of our Meeting with his IC202 listening to AO-13 CW/RTTY.

Listen in to the Amsat Australia net each Sunday night at 1000z on 3685 kHz or 7064 kHz. It is excellent value. It's conducted by Graham VK5AGR. Call in to the net if you can. Call-ins start at about 0945z. Well that should whet your appetite till next month. I still have to get that msg down from MIR that VK2BLR put up there! I can't access the beast as by the time I have AOS there are no vacant slots for me.

Till next time, 73, John de VK2XGJ

Wow!

I thought this job was time consuming, but reading the next report makes me feel like a piker! I hope you tell Rob and Ken how much you appreciate their work. On the subject of repeaters Why don't you use them a little more, and more importantly, why don't you reply to a CQ call

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Repeater Report

VK2RAW (146.850) - 28/6/92 At end of the last report, had installed on-site a new output transistor in the rpt'r's exciter (this was the fourth time in as many months, due to assorted reasons). When power was restored, the rpt'r's RXer suffered badly from desense & spurious signals from the TXer. Unable to rectify on-site, no other option but to remove the rpt'r & work on it back home. Left site in very poor conditions-cold, windy, rainy, slippery & very dark. Briefly worked on the exciter that night, but found it impossible to tune & rectify problem with limited eqpmt. Next day, took the exciter to Graeme (VK2CAG) who was able to spend some time working on it. He was able to get rid of all the spurious signals & also retuned the stages to get almost 10 watts output. (Had previously been between 4 & 7 watts depending on transistor installed.) With the rpt'r's PA stage following, the total output was almost 30 watts...excellent.

2/7/92 - Made a quick dash up to Mt Murray before work to reinstall rpt'r. After opening & closing the 2 gates, the electric fence & the cubicle door, the rpt'r was installed & tested OK. Closed the door, hooked the fence back up & opened & closed the 2 gates, again. (All done in less than 10 minutes. I thought I'd only be a little bit late to work, but Murphy was with me.) Found Steve (VK2XNH) on 8225, QSYed to 6850 to check rpt'r. Reported a very good signal & was able to access on very low power. Half-way down Macquarie Pass, while still chatting on 6850, the rpt'r

stopped/failed/carked it. Elected to be even later to work, turned around & went back up the Pass, thru' the gates, fence & door again. Checked rpt'r & eventually found the mute's toggle switch (for selecting mute open or close) was intermittently faulty. (This switch is part of the original rpt'r system & is more than 15 years old). Actioned it about 50 times & appeared to fix problem. To be replaced next visit. Left site once again, thru' the fence & gates again. To date the rpt'r is still working well.

VK2RIL (147.275) - As reported in the 3 previous reports, 7275 has been suffering from pager interference. The interference has steadily got worse & worse. Contacted Barry Sullivan at the local DOTC about the problem on the 23/7/92. He had a quick check on their extensive eqpmt & found one particular Pager had a spurious signal appearing in the top end of the 2m band about 40dB down from the fundamental. He was going to contact the owners to have the spurious rectified. Hopefully this will fix the problem. All other functions of rpt'r working fine.

4/7/92 - Very strong winds (in excess of 100km/h) experienced overnight. Noticed signal strength appeared to be down. Went to Sublime Point & found the top insulated arm supporting the 27' long colinear had been broken-off. The antenna was bent over with the tip almost touching the ground. Climbed the tower with a rope & re-attached the antenna, while it was still VERY windy & drizzling rain.

VK2RIL (438.725) - This rptr is now on the air from our rptr site at Sublime Point. It was officially 'launched' on the 18/7/92. John (VK2ZLJ) & myself (with harmonics) installed the rptr, P/S, antenna & feedline late that arvo', finishing in the dark. Initial testing found very poor RX & TX. Suspected the antenna or feedline. John returned to the site the next day to check the feedline, & found all OK. I must also thank John for the donation of around 30 feet of brand new mil-spec RG-213 for the feedline.

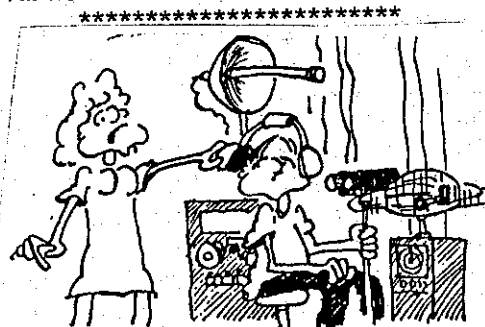
21/7/92 - Went up to site during lunch-break to replace the suspect antenna (well we assumed it was suspect). Replaced the 7 elmt dual-dipole yagi with my own yagi, a 10 elmt Grid Reflector Yagi. Reg (VK2EMI) at Vincentia reported 'full-scale', so decided the other antenna must have been faulty & left site. Got back to work almost within the hour, not bad for a 45km round-trip. Signal strength around W'gong is very good, just about full-scale everywhere. The rptr also gets down the coast into the Shoalhaven region & beyond. Towards the north & west it is very poor, but that was what we intended. A high concentration of signal in the service area only, not wasted to the N,E or W.

VK2RUW (438.225) - Nothing to report on this rptr, have had no problems. As reported above, very strong winds experienced on 4/7/92. These same winds blew over the Illawarra Communication's 100' tower at at Knights Hill. A total write-off. (What a mess!!!).

VK2RUW (144.775) Packet - The UHF port is still working well providing excellent paths from quite distant digipeaters. AAPRA have supplied the IARS with an STC 191 VHF radio to be used on the VHF port of the digi. Initial tests from the site on VHF have provided VERY strong signals to the Illawarra & Shoalhaven regions. We are presently awaiting X-tals for 144.775. Michael (VK2XCE) is doing all the work on this system at the moment, so a BIG thank you to him.

VK2RUW (29.520/29.620) - Dale (VK2DSH) now has the complete 10m rptr in his possession. He has volunteered to build a high-quality 10m RXer to replace the converted CB we have used for the previous 3 years. That was the biggest problem with this rptr, we had heaps of output power but could never use it because the TXer would desense the RXer if we went above about 15-20 watts. Even with that amount of power the rptr still delivered excellent signals into many countries. The overseas stations consistently reported better signals than the VK3 10m rptr, the only other 10m rptr in VK.

Till next time... Rob - VK2MT



★ "AREN'T you taking this neighborhood watch program a bit far, John?"

Historical

WAY BACK THEN ..Episode 10.

Jan. to Dec. 1972.

(1) Quest for site for 2 metre repeater eventually leads to Mount Murray.

(2) Some background to 2 metre repeater channel allocation in Australia in late 60's - early 70's

The Club's involvement with WICEN continued in January. In February our WICEN Officer, VK2ZYL, provided WICEN with a list of gear operated by members in this area. However there is no record of further WICEN activities for the remainder of the year.

At the AGM in March the following were elected -

Pres. Geoff VK2ZHU

VP. Hank VK2BHL

Sec. Keith Curle

Treas. Alan VK2VH

Area Off. Lyle VK2ALU

Pub. Off. Barry VK2FE

Librn. Graeme VK2AGV

Committee VK2ZGB and VK2ZOM.

As at the AGM, Club funds amounted to \$278.

2 Metre Repeaters- to end of 1972

As we were, at this time, in the process of getting our first repeater up and running, it may be of some interest to cover briefly the situation that lead up to it being placed on its chosen frequency.

Interest in putting repeaters on the 2 metre band started, I believe, about the mid 60's. Initially such operation was not exactly "legal" as I remember it (the "old timers" amongst us may remember "Fred"-on 145.854-146.1?)

Simplex channels also existed as -

Channel A 145.854MHz

Channel B 146.000MHz

Channel C 146.146MHz

In 1968 a conference was held at Wodonga at which it was decided to formalise the allocation of Channels and to provide for more channels for the the repeaters which were about to come into operation in various States. At this Conference it was decided that there should be four additional Channels, with 100KHz spacing between them, and the Repeater "in" frequency 500KHz above it's "out" frequency. The new Channels would be numbered 1 to 4. This resulted in -

	Input	Output
1	146.1	145.6
2	146.2	145.7
3	146.3	145.8
4	146.4	145.9
Simplex A	145.854	
Channel. B	146.000	
C	146.146	

Channels 1 and 4 were to be used initially, with Channel 4 to be used in State capital cities. It could also be used elsewhere.

However, in due course, as the number of repeaters in the various States increased, conflict started to arise between the satisfactory operation of those on the same channel etc. The Satellite Group then indicated that a serious interference problem was expected to arise when Amateur Satellites with communication facilities (not just the beacons carried by the early Satellites) commenced operation, as the Satellite band allocated was 145.800 to 146.000MHz. This meant that Channels 3 and 4 as well as the Simplex Channels A and B were either in or at the edges of the probable

Satellite passband.

The Sydney Repeater at Dural was on Channel 4 and the Wollongong Repeater had been allocated Channel 1 (as had other Repeaters elsewhere in the State).

The WIA Federal Executive therefor arranged for a Conference to be held at Albury to resolve the situation. All States and interested Groups were to send delegates so that they could put forward their views and listen to those of others.

The Conference ended with all States except NSW agreeing with a recommendation from VK3 which would transfer all Repeater operation to above 146.000MHz. NSW was insistant that no change be made to the existing Channels, at least until an interference problem was found to occur between, say Channel 4 and Satellites, and then perhaps to delete or move this Channel.

The matter was put to the various Clubs and after our members had heard the various arguments at a Special General Meeting held in August, we recommended that the changes, as agreed to by other States, be not implemented for a period of six months, during which it was hoped that a consensus could be achieved.

The argument waxed fiercely for many months beyond the end of 1972 so we continued to use Channel 1 for our Repeater for a long period.

The Wollongong Repeater.

The Repeater was moved from VK2AGV's QTH to a site near Robertson about the middle of the year, where it operated for a short period but it was found that coverage was poor over the Wollongong area,

though it was quite good to the west! It went off air due to equipment failure after a few weeks.

We then attempted to obtain a better site for it at Knights Hill but the TV station people concerned were not agreeable. We also looked at sites at Maddens Plains and at Brokers Nose but these were ruled out for various reasons. However by October arrangements were well in hand for it to be located on a farm property near the top of Macquarie Pass, at Mount Murray.

Tests with portable 2 metre gear at this site resulted in good contacts with VK2.s AGV, ALU and ZOM in the Wollongong area and with VK2's HO, AV and DG in the Sydney area.

By the end of the year the Club was organising to install a run of power poles to the selected location for the Repeater from a supply point on the property and it was "full steam ahead" to get it up and running.

The Wollongong Models and Hobbies Exhibition in August provided another opportunity for the Club to present a very well organised exhibit, for which a number of members put in a lot of preparatory work over several months and more participated over the Exhibition weekend. We had a good response from the public and also had a group of Sydney Amateurs visit the show at the Police Boys Club. Afterwards they were given a demonstration of EME operation out at the Dapto Moonbounce Site at their request.

A project was initiated by Basil, VK2AW, during the year - to collect books on subjects related to Amateur Radio which were donated by various Club members and to send them to an

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Amateur organisation in Indonesia, for use by Amateurs and those studying to become Amateurs in that area.

Talks etc. given at meetings during the year included-

Feb - Experience with the Dural Repeater installation and attempts to resolve the Repeater Channel problem. - Chris VK2ZDD.

Mar - VHF and UHF Antenna Design and Characteristics - Bob Milton of WIN4 and previously of Hills Antennas.

May - Two films.

June - Film - Transistors.

July - Auction of some of VK2ANO's old gear.

Oct - Operating on the HF Bands - Basil VK2AW.

Nov - Amateur VHF and VHF Repeater operation in Europe - VK2ZYH.

Dec - Raffle of bits and pieces of gear. Towards the end of the year it was decided that we might establish a Clubroom at the Wollongong Police Boys Club. A Subcommittee was appointed to make a detailed investigation of what would be involved.

Lyle VK2ALU

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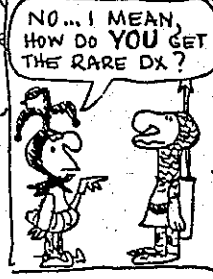
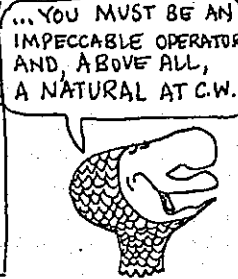
Help!

Hello Peter. Can you write an article for me please? At present as far as I know, there are no WIA accredited examiners in the IARS. I am applying to be one, but you need two examiners to run exams. Perhaps someone out there would be willing to apply? Cost is \$10 and a form is available from the WIA executive office (PO box 300, Caulfield South, Vic). It also bears noting that to be able to examine morse sending, you have to have the required qualification yourself.

Many thanks de Graham VK2GID.

Fantastic!

Simon Ferrie has a mate who had a special offer on some disks, but due to a hard drive catastrophe, can't sell them so he is selling his computer instead - make sense? Anyhow, I don't have all the details, but it is a 486 with a lot of extra's but no hard drive. It sounded like a good buy, but the guy's desperate, so you can beat him down. Ask Simon at the meeting for more details.



POST BOX - All mail can be sent to "THE ILLAWARRA AMATEUR RADIO SOCIETY" at
PO Box 1838, Wollongong, 2500.

REPEATERS

VK2RUW	-	29.620	Voice	Mt Murray/Knights Hill
VK2RUW	-	144.775	Packet	(ROSE)
VK2RAW	-	146.850	Voice	Mt Murray
VK2RIL	-	147.275	Voice/RTTY	
VK2RAW	-	147.575	Packet (NetRom)	- (Off air)
VK2RUW	-	438.225	Voice	Knights Hill
VK2RIL	-	438.725	Voice/RTTY	

BROADCASTS - The Wireless Institute of Australia, N.S.W Division broadcast is relayed to 29.620 mHz and 146.850 mHz at 10.45am and 7.15pm each Sunday. Callbacks after the broadcast. RTTY broadcast in the week before the Club meeting, Sunday evening, 6:45pm on 147.275 mHz, relayed onto 3.618 mHz +/- QRM and 29.620 mHz, with callbacks immediately after.

NEWS LETTER - The "PROPAGATOR" is published each month to reach all financial members in the week preceding the Club meeting. Articles and letters are always welcome. Commercial advertising \$60 per half page per year, member's classifieds free for one issue. See Peter VK2FPN for details.

MEMBERSHIP - \$20.00 P.A, concessions \$15.00 P.A, expiring immediately after the Annual General Meeting in July.

LAWRENCE VK stations require 10 contacts with IARS members. Overseas stations
HARGRAVE require 5 contacts. One contact with the Club station VK2AMW is suitable.
AWARD Details of contacts are to be sent to the Club secretary.

***** **COMMITTEE** *****

PRESIDENT	VK2KLH	Brian Clarke
VICE PRES	VK2KWG	Ken Grimm
SECRETARY	VK2JRH	Ron Hanks 84-2691
ASSIST SEC	VK2SRB	Robert Bonella
TREASURER	VK2DSH	Dale Hughes
ASSIST TREAS	VK2GID	Graham Denney
COMMITTEE	VK2SRB	Robert Bonella
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PUBLICITY	VK2KWG	Ken Grimm
BROADCAST	VK2XGJ	John Simon
EDITORS	VK2KHE	Peter Tomlin, VK2XGJ - John Simon, 61-7148
	VK2FPN	Peter Read 61-7148
SOCIAL	VK2XCC	Ray Ball
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LIFE MEMBERS	VK2ALU	Lyle Patison
	VK2OB	Keith Curle