



The



# PROPAGATOR

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, North Wollongong.

Visitors are most welcome.

Number 8 Volume 93

August 1993

### \*\*\*\*\* Editorial \*\*\*\*\*

I received a phone call from the new editor late last week asking if I could do the Propagator for him this month as he was way behind in his work.

Isn't it strange how these days, we don't seem to have any time! Most people you talk to just don't seem to have time. Years ago, we were working 48 hour weeks and I don't think the pressure was as high as it is these days, at least, my father had time to spend with the family and we were always doing different things.

In these modern times, with all the labour saving gizmos, you would have thought we would have a lot more time.

Maybe we don't want more time!!!

Maybe we enjoy working under pressure all the time. Do you ever stop and think 'What would happen if I didn't do this project today?' Is it really important that you 'bust a gut' today just so you can bust another one tomorrow?

STOP!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Sit down and relax. When was the last time you sat on the verandah with a beer in one hand, your wife in the other and sat watching the sun go down?

When was the last time you went for a stroll in the bush?

When was the last time you went fishing?

When was the last time you stopped and took the time to do what you enjoy doing instead of what you have to do?

Why not make a new years resolution, (albeit a bit late for this year, although if you were relaxed, it would be a bit early for next year) to slow down just a little. Give yourself 30 mins a day to do something completely different from what you are doing.

### \*\*\* Future Events \*\*\*

More details on the future will be provided in the future.

\*\*\*\*\* Page 1 \*\*\*\*\*

*Available in our junk yard .....*

1. Electronic bits and pieces (millions!)
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**WAY BACK THEN**

Episode 21.....1977.

The election of officers in April included the following: Pres. Bill Calvert VK2DJ, Vice Pres John Hodgkinson VK2BHO, Sec. Brian Boseley VK2NBB. Committee - VK2's BBC, ZEN and ZVX.

An item in the July Propagator gave Notice of Motion for a change to Section 6A of the IARS Constitution.

It was proposed to amend this Section to read as follows: "Section 6A.

The management of the Society shall be vested in the committee, consisting of the President, a Vice-President, Secretary, Treasurer and three others. The above officers are to be the holders of either the AOCPP, AOLCP or the NAOCP. In addition two other members may be elected to committee.

All members of committee shall be Financial Members and be elected at the Annual General Meeting. They shall remain in office until successors are appointed at the next Annual General Meeting.

This proposed amendment will be discussed at the next General Meeting and if acceptable without alteration will then be held over till the following General Meeting for voting." There was no further mention of this matter in subsequent issues of the Propagator as far as I can find.

As I do not have the Secretary's Minute Book covering this era, I have no means of checking whether the above Amendment to the IARS Constitution was duly ratified. In going through Propagators, searching for items I often find, that matters which are included in one issue for attention at the next meeting are not covered in subsequent issues to advise of the outcome. Thus one can only surmise what happened unless some other source of information is found.

A Guessing competition was initiated during the year in order to raise money for a contribution from the IARS to the NSW Divn. WIA for the WIA fund in aid of its WARC79

commitments.

First prize was a new TRIO 5MHz CRO, with a Scientific Calculator, donated by Macelec, as second prize. The competition was drawn in December and a cheque for \$400 was subsequently forwarded.

In September the IARS had a stand in the Wollongong Display of Recreational Activities.

A club barbeque was held at the Kanahooka Bay Sailing Club in November.

Club Monthly Broadcasts, conducted by John 2BHO, continued throughout the year. The local area WICEN group carried out activities under Coordinator Jim 2BBG. In the December Propagator it was stated that the IARS Components Store was now well stocked. Items were sold at very reasonable prices.

Talks etc. given at Monthly Meetings during the year included:

Feb - Photosensitive Adhesive labels for panel labelling -VK2AIV

Mar - NASA film- Apollo 16 Lunar Landing Mission.

Apr - Trade Display-Peter Schultz

May - Amateur Space Communications VK2ALU.

Jun - Received Noise Cancelling Device (as in AR, a few months previously)-VK2BUU.

Aug - SWR Bridge demo. -VK2OB (ex VK2BUU)

Sep - Capacitance Bridge demo - VK2OB.

Oct - Trade Display - Barry VK2FE of Macelec.

Nov - The Role of the Radio Amateur - John Milton, local District Radio Inspector.

Lyle VK2ALU.

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From : VK2XGJ  
To : VK2FPN  
Type/status : PN  
Date/time : 01-Aug 09:23  
Bid : 16941\_VK2XGJ  
Message # : 16941  
Title : Updat 93August

Well the Elections have been and gone and we are now into another Financial Year for the IARS Inc. For some reason they call it a Fincial Year, I wish I were as Financial as I'd like to be!!! Here are some useful bits of info on the Satellites.

Several Members have asked what frequencies are used on the various Satellites, here is a short list.

#### Amateur Radio Satellite Frequencies.

##### SSB/CW

Satellite	Uplink		Downlink	
AO-10	435.027	- 435.179	145.825	- 145.977
RS-10/11	145.860	- 145.900	29.360	- 29.400
RS-12/13	21.210	- 21.250	29.410	- 29.450
AO-13	B 435.423	- 435.573	145.825	- 145.975
	J 144.423	- 144.473	435.990	- 435.940
	L 1269.351	- 1269.641	435.715	- 436.005
	S 435.601	- 435.637	2400.711	- 2400.747
FO-20	145.900	- 146.000	145.866	- 145.946
(Wednesdays only)				
AO-21	435.102	- 435.022	145.852	- 145.932
	435.123	- 435.043	145.866	- 145.946

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**1200 BAUD Packet**

2 Mx FM FSK uplink, 70 Cm PSK SSB downlink, except as noted.

Satellite	Uplink	Downlink
AO-16	145.900 - 145.940 145.920 - 145.960	437.05 - 437.026
DO-17	None	145.826 / 2401.22

Note: Telemetry only; 2-meter FSK downlink not operational.

WO-18	None	437.100
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Note: Telemetry and images only on WO-18.

LO-19	145.840 145.880 145.860 145.900	437.126/437.150
FO-20	145.850 145.890 145.870 145.910	435.910

Mir Space Stn	145.550 145.850	145.550 145.850
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Note: Packet mailbox; 1200baud FM AFSK simplex.

**9600 BAUD Packet**

FM FSK uplink, FM FSK downlink

Satellite	Uplink	Downlink
UO-22	145.900 145.975	435.120
KO-23	145.850 145.900	435.175

Note: On board cameras on UO-22 and KO-23.

**FM VOICE**

Satellite	Uplink	Downlink
AO-21	435.016	145.987

Note: In repeater mode for 6 of every 10 minutes.

Mir Space Stn	145.550 145.850	145.550 145.850
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Note: occasional simplex QSOs with the cosmonauts.

The VK2XGJ Satellite Gateway has now been in operation for a little over six weeks and has been working well. If you have Personal Mail to send to a stn outside the VK Call area please make sure that you have the FULL heirarcical address as the BBS doesn't have each and every Packet User's address in its files. I have fixed a few but I'm not too sure if my guess of the destination was correct. If you are using a BBS other than one of the BBS's in the Sydney, Wollongong, Nowra area, the best way of ensuring that your Personal Mail is sent via satellite is to address it: SATGATE @ VK2XGJ enter your normal Title and then on the top two lines of the message, the destination and the sender's full heirarcical address. eg

To: EA4EKT@EA4AAZ.#EAM.SP.EU  
From:VK2AC@VK2XY.NSW.AUS. OC  
Then your message with your Heirarcical address on the bottom, ending with Ctrl Z or /EX

This way the msg will be forwarded to the VK2XGJ BBS and on checking the unsend mail (a dally chore) I can then amend the addressing, and get the message sent to the Satellite Gateway nearest to the Home BBS of the recipient.

I had the priveledge of a visitor from FK8 on Wednesday 28/07/93, FK8FZ Yves. Seeing that the only Packet access that the local Amateur fraternity has to the outside world is via VK2EHQ on HF, the Amateur Radio Club in New Caledonia is looking at setting up Satellite Gateway in the near future. Yves was

here in VK for a week's holiday and used the time to speak to myself on setting up a Satellite Gateway and to VK2EHQ Peter, on the HF Gateway and no doubt to thank him for his services to FK8.

Here is an interesting article from the AMSAT News Day 205.

VE3ONT Provides EME Contacts For OSCAR Satellite Users

The Toronto VHF Society, using the callsign VE3ONT, will use the 46M (150 ft) diameter radio telescope at Algonquin Provincial Park (grid FN05xw) during this year's ARRL International EME Competition. VE3ONT will be active the full weekend of each contest period, October 9-10 and November 6-7. Below is the schedule of operations for VE3ONT

<b>TX Freq.</b>	<b>Range</b>
<b>Approx.UTC</b>	
<b>Oct 9</b>	
432.050 432.050 -.060	0445-1830
<b>Oct 10</b>	
144.029 144.025-.030	0550-1900
<b>Nov 6</b>	
432.050 432.050 -.060	0340 1700
<b>Nov 7</b>	
1296.050 1296.050 -.060	0450-1730

VE3ONT will operate "split" and we ask that stations avoid calling us on our transmit frequency. VE3ONT will transmit and receive with left - hand circular- polarization (LHCP) off the dish on all bands. This means that after reflection from the Moon, signals will be right-hand

minutes of the AGM of the Illawarra Amateur Radio Society  
Tuesday 13 July 1993  
ES HQ, Montague St North Wollongong  
start 20.16

proxies: VK's 2, TFM USA JES ZLJ TSE UR GRB JTB

proxies: Nil

minutes of previous AGM, 14/7/1992 were read and received;  
moved VK2XGJ sec VK2MT

Business arising from minutes: Nil

Reports:

President: As per Propagator

Treasurer: Balance carried forward \$ . . .  
Moved VK2ALU sec VK2KCV

Repeater Committee: Another busy year with one thing and another, the most  
obvious thing being the addition of DTMF control to clubs repeater sites.

Matters arising from reports: Votes of thanks for both repeater committee  
and the Propagator editor for excellent efforts throughout the year.

Motions:

That the propagator editor be a member of the club committee.

That the previous motion not be put at this time

Minutes of the July Committee Meeting of the Illawarra Amateur Radio Society  
20/7/93 Start 19.35

Present: GMC USB KLH ZWG MT KWS XQX  
Apologies: GJT TKE

Corro in: Learning by video pamphlet from the Gladesville amateur radio group, from the meeting of club education officers.

Corro out: Nil

Reports:

Treasurer: Discrepancy in figures carried over. Checked and adjusted.  
Total monies \$.

Repeater: A 10m simplex gateway to be installed at Knights Hill.  
Linked to UHF network and DTMF.

Science Centre: Nothing to report as there has been nothing done.

General Business:

Suggestion for a meeting of the club to be held at the science centre, possibly in September.

Looking for old gear to be displayed at the science centre.  
Ken KWS to speak to Glen re science centre and its direction.

November field day to be discussed at the next 3 meetings. Ideas on mobile operation are to be asked for.

Agenda for coming club meetings:

August: Lyle or John to talk about their various areas and give a demo.

September: Meeting to be held at the science centre if possible. KLH will give a talk and display on the mocom 70 mods.

October: Antenna demonstration, and a wine and cheese night



December: ATV by XCE , possibly at the science centre.

Meeting closed at 21.30

Minutes of the IARS July 93 General Business meeting held at SES HQ  
Montague St Nth Wollongong 13/7/1993.

Normal formalities dispensed with as they were taken care of at the AGM.

XGJ addressed club on the approval of connection to the internet wormhole  
thru the Wollongong Uni. We have to supply the radio,tnc,p/s,cables etc.  
Rob MT said he would supply the p/s.

XGJ to holdpacket meeting at his QTH on 21/8 1993 @ 1400 Hrs  
Subject:NOS (network operating system)

Deceased estate auction to be held in near future.

KVH to run Monday night 2m net starting from 19/7/1993 on 147.275 +ve @  
7.30pm.

Meeting closed at 21.50

CARRIED

That the Science Centre Be a portfolio  
Moved VK2DSH sec VK2KLH  
carried

General Business:  
VK2GBJ will at next ordinary club meeting put that the Propagator editor  
ex officio a committee member  
Moved VK2GBJ sec VK2FPN

Selection of returning officer:  
Moved that Lyle VK2ALU be returning officer  
Moved VK2XGJ sec VK2KLH carried

Election of Officers:

President:KWS  
V.Pres: XQX  
Secretary:UR  
Ass Sec: SRB  
Treasurer:UBF  
Ass Treas:GTJ  
Committee:GMC ZWS KLH  
Rep Comm: TKE MT  
OSL Cards:XGJ  
Publicity:XQX  
Broadcast:TKE MT  
Prop Edi: TSB  
Canteen: GMC  
WIA lias: Left until SMA is fully operational

Vote of tnx to Lyle for acting as returning officer

Meeting closed at 21.36

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circular polarized (RHCP). This will permit us to work stations with vertical, horizontal, or RHCP polarization. VE3ONT will transmit at the legal power limit on 144 and 432 MHz and 100 watts on 1296. Power amplifiers and receiving preamps are located at the dish feed.

As users of a non-amateur antenna, we will not be in competition with other stations. Our intention is to provide an initial EME contact for as many stations as possible.

Consequently, we strongly discourage duplicate or "insurance" contacts. Operation will be primarily on CW, although SSB might be employed depending on signal strength and number of stations calling.

All operation will be "random" format, meaning that VE3ONT will accept no

skeds. If conditions are poor, we will use a 30-second sequence in which VE3ONT transmits the first 30 seconds and listens during the second 30 seconds of each minute. Note that this is NOT the usual sequence for EME skeds.

VE3ONT will maintain HF liaison on 14.345 MHz during daylight hours and on 3.818 MHz at night.

We anticipate being able to work OSCAR-class stations with 100 watts of output power on 144 and 432 MHz; 25 watts should be sufficient on 1296 MHz. Photographs and technical information concerning the dish and VE3ONT's operation will be presented by W9IP and VE3ASO at the Central States VHF Conference and the Eastern VHF/UHF Conference.

For clarification, contact Dennis Mungham (VE3ASO) or Michael Owen W9IP. QSL to VE3ONT

(Callbook address).

A few days after the Elections I had a phone call from our new President VK2KWG Ken, he wanted to know the phone numbers of some of the new Committee. When I had a bit of a shot at him and asked why he was asking me and I made reference that this lack of knowledge on the phone number of Committee people was good Propagator material, his comment: "Ahhh, but you are not doing the Propagator this year are you? So you can't do me in!"

Ken, have I got news for you!!!!

Last but not least, it was decided to hold a TCP/IP Education Day for the Local Packeteers interested in this protocol. Chaired by none other than our own Globe-trotting TCP/IP Guru VK2YKQ Dave. To be held at the VK2XGJ QTH at 1400K on 21/8/93. Bring a formatted disk with you and you shall leave with a full working system disk with your Call installed.

Till next time,

73, John de VK2XGJ

### **The Ultimate Power Supply**

Hopefully this will be continued next issue.

#### **\*\*\*\*\* Thought \*\*\*\*\***

**OUR CLUB's AGM - A Personal Comment.**

I first started coming to the IARS meetings when I was 15 years old back around 1975, when the meetings were held in a back room of the old Town Hall building. I finally joined-up around 1983. Two years later I sat for

& passed my Amateur License. I am proud of being an Amateur & I am also proud of being a member of the IARS.

To what point are these ramblings directed you ask?... Last month's Club meeting, the "AGM", must rank as one of the IARS's least-proudest days in its long history. The whole election was very pitiful & pathetic. Instead of feeling pride in the Club spirit, I felt very sad & embarrassed. Fortunately there were no outside visitors to see this embarrassing show we call an AGM. Only 25 of the 85 or so financial members attended. Of course some had quite legitimate reasons for being unable to attend, but that leaves a lot that I can only guess didn't attend because of the chance they might of got elected to a position to help keep OUR Club alive & running. It took ages to fill the positions, (some never were), in fact at one stage we gave up on the President's position & had to come back to it later, because there were no takers. (Thanks Ken for accepting the position & returning some dignity to the very sad state of affairs we call "The AGM".)

I remember AGM's from past years & they were totally different. It wasn't a case of begging, coersing or arm-twisting like it is now. There were many takers for ALL of the positions (including washing-up the cups), at the very least there was always 5 or 6 just for the President's position. Members were actually keen & proud to be elected to a position to represent THEIR Club.

Looking round at last month's AGM a lot faces reflected what I was feeling. They were putting on a "happy-smiley face", joking & laughing but deep-down I'm sure a lot of them felt as I did, that it was all a very sad & pitiful state of affairs. Now it's pointless calling our Club's members slack & apathetic. Others have got up at meetings & over the air-waves & said just this, but this has the opposite affect. You call someone a "slack bastard" enough times & that's exactly what he will become. After all, let's remember this thing called Amateur Radio is just a Hobby, NOT a Profession, we all put into it what we can with the available time we have in our busy lives. We get back what what we put into it. OUR Club is only a Club of "hobbyists", so no one has any right to put shit on any other member for not putting in as much effort as they think they should.

We've all read our previous Editor Peter's ramblings & ravings for the past couple of years, you may have dismissed his comments as a load of rubbish, but if you were to read between the lines, what Peter was trying to do was to get people talking & hopefully generate some interest & enthusiasm back into OUR Club.

This leads me to my last point, I keep typing OUR Club in capitals, because after all it is OUR Club,... YOURS & MINE. If we have another AGM next year like we just had, I believe it won't be long before there won't be a need for any more AGM's, there won't be a Club. This will be a very sad day as OUR Club has had a proud history

now for over 30 years. What you put into YOUR Club will be returned many times over, put in no effort & you will get nothing in return.

These sort of comments will certainly invoke criticism & back-stabbing, from fellow members, so be it; but if there is ANY comment generated, either good or bad, it will be worth it for OUR Club's sake. Let's all get together & put OUR Club back on the rails to the strength & dignity it so rightly deserves, before it is too late...

Best Wishes Rob-VK2MT

### \*\*\*REPEATER REPORT\*\*\*

1/7/93 - 1/8/93

Ken & myself have been "re-elected" to the positions of Repeater Officers. This will be our 4th year together looking after those talking boxes on the hilltops around W'gong. We hope it's going to be a good year...

VK2RAW (146.850) - Since our last report, we have been supplied with info regarding the break-in to our rpt'r cubicle. I will resist the temptation to print the names, addresses & phone numbers of the two people in question. Suffice to say, they live in the Mt Murray area, are both UHF CBers & have since been visited by the Police. Hopefully they will think twice about their actions in the future.

As reported last month, 6850 is suffering from slight desense during the daylight hours. The desense seems slightly less lately. We will be visiting & hopefully attending to the problem in the near future. Because

the desense is only slight, we are putting it off till we go up to Knights Hill to attend to some work there.

The rptr is also presently suffering from occasional unidentified interference. I have reported the problem to DOTC, or should I say SMA. Tim (ZTM) reported the problem on the WIA Broadcast on the 25/7 & I have also spoken to a rptr fellow from the St George club & he confirmed the spurious is in the Sydney area. It sounds like a TXer with a buzz/hum sound, like a poorly filtered P/S. The spurious signal wanders up & down the 2m band across the input freqs of our 6850 rptr plus 6725, 6800 & 6875. Hopefully it won't be long before someone up Sydney-way tracks down the spurious TXer.

VK2RIL (147.275) - The rptr itself is working fine. We're still on the folded-dipole antenna, but only because the work we were waiting on at the site, still has not happened. I'm feeling confident that by the next report we will have had some changes up there, not the least of them being an improvement in the coverage of the rptr.

The rptr is suffering from some extra Pager interference of late, this is besides the on & off problem we suffer from the intermod from Telecom. While monitoring this new interference on 7275, I have been unable to trace it to any particular Pager transmission in the area. Maybe it's coming from the Sydney area.

We still haven't heard anything from the WIA re our request for a new rptr frequency, either a negative off-set frequency or the creation of a rptr sub-band lower down the 2m band. We are open to other suggestions from them, but as yet they have been silent. Our rptr has suffered from illegal pager transmissions appearing on our input frequency for years now. The performance of our system has suffered consequently & we are sick of being told to be patient &/or "fight" the pager companies. Many years have passed & trying both these approaches have, in my opinion, been a waste of time. Through no fault of our own or anybody elses, we were unfortunate enough to be issued a positive off-set 2m rptr freq. This was long before Pagers were ever thought of. We are being told now there are no negative off-set frequencies left in this area (a look in the Call Book confirms this) & that the idea of a rptr sub-band is impractical & cannot be entertained. Well that doesn't help us at all. We are being told to go back & re-assess our need for a change of freq, surely we are only crying poor. To that I respond ,

if it's no big deal (having a positive off-set freq that is), then let us swap freqs with one of the existing negative off-set rptrs. How about WIA's 7000 at Dural? - we'll pay the cost of new xtals! I bet that would go down well. 7275's Paging problem isn't anyone's fault in particular, but we're the ones suffering & know one appears to want to help us out. We await the WIA...

VK2RIL (438.725) - This ones easy, no probs, nothing to report.

VK2RUW (438.225) - The rptr system is performing well. The work on the TXer to supply the WIA B/cast signal into the system is going well. Ian (AIJ) at Goulburn volunteered to do the work on the old 828 exciter to be installed at Mt Murray. The Xtal has been ordered & will be sent to Ian's place when it arrives. In return, I've been asked to build the control unit that will be installed at Mt Gray (Goulburn) to co-ordinate the switching of their 8325 rptr plus the link TXer back up to us & also the link TXer to Mt Ginini & 8525 rptr.

VK2RUW Digipeater (4775) - The system has been "crashing" a bit lately. It is felt that this is occurring from compressed data being passed thru' the system & some strange combination is locking-up the TNC. After discussing the problem with Michael (XCE), who was the poor bunny who kept having to go all the way up to Knights Hill to basically just push a button, we decided to hook the TNC reset to the DTMF remote contrl system. Now if the system crashes, a push of a few buttons resets the system remotely. John (XGJ) (read Packet Guru) & Michael feel that the new level of ROSE software that's just arrived in Australia, will overcome this "crashing" problem.

VK2RUW (29.620) - Over the past few weeks a lot of work has been done on

the re-establishing of the 10m system. What we are looking at is the establishment of a 10m FM simplex "Gateway" into the UHF Rptr systems of W'gong, Goulburn & in the future Canberra. If it all works out, UHF rptr users will have "breakers" from ZL, JA, etc. There won't be all the desense problems we had with the 10m rptr because it will only be a simplex system, not a duplex one like a rptr. The system will possibly be "user" selectable via the DTMF remote control system.

That's it for now, till next time - Rob VK2MT.

\*\*\*\*\*

Well, that's it for another issue. Time to put the baby to bed and get on with our lives.

I wish the new committee all the best and sincerely hope they survive the Herculean task they have in front of them. It's not going to be easy, but there is light in sight.

I made a comment to our new President just after the AGM. I hope I didn't upset you Ken; I meant what I said, but it was a comment and definately not a criticism. I wish I had the strength to undertake the job you have committed yourself to.

Glad to see a couple of our members were at the Science centre last weekend - sorry, but I missed your names.

As we say in my business; see you round like a d100.

POST BOX "THE ILLAWARRA AMATEUR RADIO SOCIETY Inc"  
PO Box 1838, Wollongong, 2500.

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

**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.

**CLUB NET** - There is a club net on 147.275 (VK2RIL) at 19:30, 7:30 pm and 09:30 UTC on Monday evenings. All amateurs are invited to join in and waffle.

**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 is \$60 per ad per year, member's classifieds are free. 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 HARGRAVE AWARD** - VK stations require 10 contacts with IARS members. Overseas stations require 5 contacts. One contact with the Club station VK2AMW is suitable. Details of contacts are to be sent to the Club secretary.

\*\*\*\*\* COMMITTEE \*\*\*\*\*

PRESIDENT	VK2KWG	Ken Grimm	
VICE PRES	VK2XQX	Simon Ferrie	
SECRETARY	VK2UR	Ron Hanks	84-2691
ASSIST SEC	VK2SRB	Robert Bonella	
TREASURER	VK2UBF	Brian Farrer	
ASSIST TREAS	VK2GTJ	T. Jepson	
COMMITTEE	VK2ZWG	Jim Beaver	VK2KLH - Brian Clarke
REPEATER	VK2MT	Rob McKnight	VK2TKE - Ken Goodhew
QSL CARDS	VK2XGJ	John Simon	
PUBLICITY	VK2XQX	Simon Ferrie	
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