



# THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY.

P.O. Box 1838. WOLLONGONG. N.S.W. 2500.

IARS is a Member Club of the Wireless Institute of Australia.

PRESIDENT

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24 Beach Drive  
Woonona 2517

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166 Osbourne Parade  
WARILLA 2528

MONTHLY MEETING Held on the Second Monday of each Month, at 7.30pm,  
at the Congregational Hall - Wollongong

CLUB STATION - VK2AMW. CLUB REPEATER - VK2RAW, 2m, Channel 5.  
VK2RUW, 70cm, Channel 1.

LARS MONTHLY BROADCAST

The Monthly Broadcast takes place on the Sunday preceeding the Meeting Night each month, at 1900 Hours EAST.

Frequency used by VK2AMW for the broadcast is -  
Repeater Channel 5, or Simplex Channel 40.  
Relay on 28.460 MHz, 20 cm Channel 1.

LARS CLUB NETS

6 Metre. 8.30am Sunday, 52.525 MHz FM.  
10 Metre. 8.00pm Sunday, 28.460 MHz USB.

**April**

**1979**

**N.B NEXT MEETING  
WILL BE HELD AT THE  
CONGREGATIONAL HALL  
COOMBE ST WOLLONGONG**

**Monday, April 9**

VISITORS ARE MOST WELCOME TO ATTEND.

NAME BADGES

Secretary John is holding a number of name badges for Members who ordered them PRIOR to the March Monthly Meeting.

1979 CALL BOOK

Members of the IARS who are non-Members of the WIA, and who wish to be certain of being included in the 1979 Call Book are advised to relevant details to:

The Editor,  
(Call Book)  
PO Box 2611 W,  
MELBOURNE VIC 3001

to arrive NOT LATER than April 30th. In any event, any IARS Members whose details have changed since the 1977 Call Book was issued, would be well advised to communicate with the Editor as above.

PERSONAL COMMUNICATIONS FOUNDATION - U.S.A.

Is an Organisation comprising amateur radio operators who also happen to be Lawyers, Professors and Judges, who have set a foundation which will offer advice and assistance to American Amateurs who find themselves on the wrong end of a lawsuit for having a tower and a beam in their back garden, or who have caused TVI, BCI and HiFiI even though their rig may have been cleared by the FCC. Apparently it is a voluntary organisation, and has received monetary support from the ARRL. Incidentally, lawsuits of this nature are not isolated cases in the U.S. During 1977 for example: no less than 7,781 amateurs or CB'ers found themselves in court defending their hobby. It has been estimated that it has cost EACH of them between \$4,000 and \$8,000! One can only hope that it never reaches these proportions here in Australia. Alternatively, perhaps NOW is the time to start setting up a similar foundation here.

IARS EXECUTIVE AND COMMITTEE FOR 1979/80

- |                |        |        |
|----------------|--------|--------|
| PRESIDENT      | Keith  | VK20B  |
| VICE PRESIDENT | John   | VK2BH0 |
| SECRETARY      | John   | VK2NHA |
| TREASURER      | Geoff  | VK2ZHU |
| COMMITTEE      | Graeme | VK2CAG |
|                | Keiran | VK2DAN |
|                | Les    | VK2ALK |
|                | Gerry  | VK2APG |
|                | Paul   | VK2ZQT |
|                | Brian  | VK2AXI |

On behalf of the new Office Bearers and Members, I would like to express my appreciation to the Office Bearers of 1978 for their competent administration during their term of Office.

EDITOR.



STREET.

CROWN

P/O

TOWN  
HALL

CHURCH  
HALL

THIS MONTHS MEETING  
PLACE

Moonbounce Report - April 1979

The University has received approval from two of the Authorities involved, for the installation of the dish and its control building at the new site, subject to certain conditions which should be possible to meet. Further approvals are awaited.

Microwave News

The 10GHz system was given a checkout with VK2AHC's gear. Compatibility was proven. The new system is inherently of a narrower bandwidth than the gear being currently used by VK2AHC, which should help to give it a better signal to noise ratio.

The waveguide and Gunnplexer assembly has now been mounted in the dish such that polarisation of feed can be very easily varied over 180 degrees.

The main lobe of radiation from the dish is very sharp and its gain has been checked as close to the theoretical value, which indicates that the Cassegrain subreflector has the correct profile and is in its required position.

Provision has been made for the pointing of the dish to any magnetic compass bearing with an accuracy of approx 1 degree. This appears to be necessary for over-the-horizon work.

Lyle VK2ALU.

FOR SALE

YAUSU FRG7 Communications Receiver - S.S.B. Filter Mint  
Condition \$320.00 O.N.O.

HOME BREW 3.5MHz Transmitter + 4 Crystals \$ 60.00

MUCICOLOUR MARK II \$35.00

CONTACT JOHN THURSTUN VK2VFG (PHONE 042 - 83.3509)

KENWOOD 700A Modified 25dB Gain Pre-Amp. \$600.00 O.N.O.

SEE PAUL VK2ZQT at MEETING.

WANTED

To Buy UHF RELECTOMETERS

To Buy UHF CAVITY RESONATORS:- For Use with UHF Repeater  
See Paul VK2ZQT at Meeting.

WANTED

Test signals for UHF Repeater.

This Repeater will be operational between 4.30 p to 10.30 p daily till the Ident is installed. The Ident is presently under Construction by Graeme VK2CAG.

It has been noted at Previous Meetings that Visitors have not been made as welcome as they should. It is the responsibility of all Members at the Meetings to pay particular attention to the Visitors as they are, by being present, both prospective Amateurs and Members of our Club. Visitors, in future, will be given a tag with their name indicating that they are a Visitor. Please make them WELCOME.

RADIO TELETYPE (RTTY)

The Club has decided to devote a Section of the 'Propagator' to RTTY as this mode is becoming very popular.

In the issues to come we hope to be dealing with all facets of RTTY that make this Mode enjoyable.

In our Club alone there are a lot of people now active on RTTY and many more that are preparing to get on the air.

In this issue we will be dealing with operating and a general rundown of what one can do with RTTY. RTTY is easy to get into as all one needs is a communications receiver or transceiver and a machine. A demodulator and a modulator to transmit if required. Those big words in the last sentence are not meant to frighten you they are simply the terms used for decoder and encoder. Machines for the Club Members are available from Richard VK2ZVX the frequencies that are generally used for RTTY are around 3045 KHZ 7045 KHZ, 14090 KHZ, 21090 KHZ, 28909 KHZ, 52075 KHZ, 146.6 MHZ.... so if you have never head of a RTTY signal, tune into one of these frequencies and if you hear a 'MUSICAL' signal you are listening to RTTY. People who use RTTY have as much fun as people who use SSB. Amateurs around the world work DX on RTTY very easily with low power. I only run twenty watts to the TA33 and have worked successfully into Europe. So power is not a factor with RTTY. Some people like to work DX while others Rag Chew. Then there are other that prefer to send PIX. PIX is very popular world wide. It is the name given to sending pictures over the teleprinter. Occasionally when you tune around you will find amateurs sending PIX and they are fun to receive. For those who are Active on RTTY I have several PIX tapes that I can send and the same can be recorded on a Cassette if required for further use.

If there is anyone interested in seeing a Station (RTTY) in operation there are people in the area that are willing to demonstrate the Mode. There are also people that can help with Technical aspects if required.

There are alot of machines available from the Club so we hope to print you soon. I have now been on RTTY for nearly two years and now work only RTTY on HF..I found that I have worked a lot on SSB and found the change to RTTY a greater challenge than talking into a microphone. I think that once you try it you too will find the same thing.

In the next issue of 'The Propagator' we will give a rundown on how to get your machine going that you now have..

We will also give monthly DX Report as worked on RTTY within the club. We hope that users of RTTY will submit the DX Report for this page.

DX NOTES FOR THIS MONTH:

YV5APF	20MX	1145GMT	IT9ZGY	20MX	0647
HB7NG	20MX	0800	DJ2LT	20MX	0650
3-8RU	20MX	0934	VE7DOC	20MX	0625
			G3MWI	10MX	0800

These are only some of the many that I have worked in the last few weeks. There is a lot of activity on Ten meters from Europe to look for. So We hope that this has sparked an interest in RTTY for you. Get your machine while they are available. HOPE TO PRINT YOU SOON.

((((((73))))))

GERRY VK2APG



## CAPACITORS.

GREEN CAPS. .001, .0015, .0022, .0039, .0047, .0056, .0082,  
and .01, each 10c.  
.039, .047, .056, and .082, each 15c.  
.1, .15, and .47, each 20c.

ELECTROLYTIC CONDENSERS, 25V, double ended.  
4.7uF, 10c. 100uF, 15c. 220uF, 20c. 470uF, 25c.  
2500uF, 50V, 2.00. 4700uF, 50V, 2.00.

## TRIMMER CONDENSERS.

PCB mounting trimmers, 3-13pF and 2-20pF, each 10c.

## TANTALUM CAPACITORS.

.47, .1, 1.5, 2.2, 4.7, & 6.8 mF each 20c.  
10mF, .. 25c. 22mF ... 45c. 47mF ... 65c.

## NEOSID COILS.

Former .. 10c. Slug, F29 (VHF) ... 10c.  
Cans.... Single, 10c. Double, 15c.  
Small Balun Former, 15c.  
Coil former and can complete, 10c.

## CABLES AND CONNECTORS.

Belling Lee. Connectors, 50c.

PL259 Plugs, 1.00. S029 Sockets, 1.00.  
Adaptors for RG58U cable for PL259 plugs, 25c.

CO-AXIAL CABLE. RG8U (heavy) ... 1.20 per metre.  
RG58U (light) ... 50c. per metre.

Sheathed, light hook-up co-ax, lengths of 4 metres, 1.00.

METERS. S Meter 400uA 1-3/8 x 5/8 ..... 2.50.

RESISTORS. Bag of 160  $\frac{1}{2}$  watt resistors. ... 4.00.  
10 each of values 10, 47, 68, 100, 220, 470, 680,  
1K, 2.2K, 4.7K, 6.8K, 10K, 22K, 47K, 68K, & 100K.

DIODES. 1N4148 ... 10c. OA91 ... 10c.  
EM404 ... 20c. EM410 ... 25c.

LED's. colour RED ..... 35c each.

I.C's. 741 ... 85c. LM38 ... 1.85.  
7812 regulators ... 2.00. NE555 ... 90c.

TRANSISTORS. MPF131 ... 85c. BC109 ... 35c.  
2N3568 .. 30c. TIP32A .. 50c. BF167 .. 50c.  
2N3054 .. 80c. 2N5485 .. 95c. 2N5457 .. 50c.  
2N5459 .. 50c. 2N5416 .. 50c. 2N3568 .. 30c.

## PCB TRIM POTS.

Values, 2K, 5K, 10K, 25K, 50K, & 100K. .. 25c each.

## PRINTED CIRCUIT BOARD.

Fibreglass PC board, copper on one side.

Sheet sizes - 18" x 5" ... 1.50.  
12" x 4 $\frac{1}{2}$ " ... 1.00.

## POTENTIOMETERS.

Values of 5K, 10K, & 25K. each 50c.

SUPPRESSOR RESISTORS for ignition high tension leads.  
In line, screw type. each ... 50c.

SUNDRY OTHER ITEMS. Cable clamps .. 10c.ea. Plastic Tape .. 20c.  
Power Cords... 1.00 ea. Wafer Switches... 1.00 ea.  
Meter Leads... 20c. pair. Four Pin Plug & Socket... 10c.  
Alligator Clips - large, insulated. Red or Black... 10c.

2 METRE REPEATER....CHANNEL 5....VK2RAW

A great deal of work has been done on the Repeater during the last 12 months, mostly behind the scenes and not greatly publicised, here is a rundown of what has happened:-

19 Visits have been made to the Repeater Site since 1st January last year. All of these were to repair the equipment after breakdown.

JANUARY.....The Transmitter aerial (A Dipole) was replaced with a five eighth wave groundplane, after water had entered the Gamma matching box. The landline was repaired after a tree fell on it after being hit by lightning. The transmitter output valve was replaced, and the receiver repaired after lightning damage.

MARCH.....The Transmitter was modified because of suspected noise output causing intermittent de-sensing.

APRIL.....Two lightning strikes, both affecting the transmitter, and once the receiver. Some additional lightning protection was fitted, which appeared successful, as no damage was done during several storms in the next few months.

A new set of crystals was purchased by the Club for use in a new Repeater to be built at a later stage.

JULY.....The transmit aerial went open circuit due to high winds. It was replaced with an extended ringo which gave better signal strength along the Coast.

SEPTEMBER.....Open circuit landline repaired at the entry to the receiver cubicle.

NOVEMBER.....Repairs to seized cooling fan and general maintenance to Battery and Landline.

DECEMBER.....Repairs and complete re-alignment after lightning damage. Modifications done to mute circuit to slow down action of mute opening so as to prevent static from storms from activating the repeater.

JANUARY.....Lightning strikes again, and noise burst altered to bring the repeater into line with others....the noise burst, or 'TAIL' is now silent.

FEBRUARY.....Landline went open circuit somewhere underground and the break could not be located. The standby landline, which runs parallel with the main one is now in use.

The kilowatt-hour meter stopped working since December, and was removed for repair.

MARCH.....Persistent muting trouble occurring with the receiver during last month. The complete repeater has been removed from the site, and is at the time of writing working on the bench and ready to be taken back to Robertson when time and weather permits

Several capacitors in the receiver were replaced, and the first 455KHZ if transformer was repaired for intermittent open circuit. this was due to corrosion from moisture which penetrated the cubicle some two years ago.

I would like to thank all who gave their time and efforts in the past year to helping to keep the repeater on the air.

There are plans for improvement to the Repeater in the future, and these will be published in the 'PROPAGATOR' soon.





# MACELEC

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99 Kenny Street, Wollongong. 2500  
Phone : 29 1455

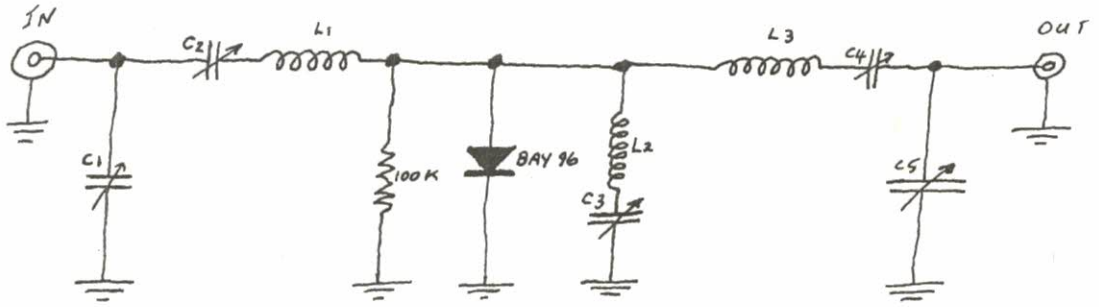
ELECTRICAL  
MECHANICAL  
MANUFACTURE  
and  
SUPPLY

## KENWOOD

KENWOOD RANGE OF MOBILE H.F. ANTENNAES	(P.O.A.)
KENWOOD SM220 Station Monitor - Oscilloscope (1 only).	\$ 310.00
KENWOOD BS5/BS8 Panoramic Adaptor for Above.....	\$ 57.00
KENWOOD TS820S - The Ultimate - (1 only).....	\$1175.00
KENWOOD TS520S - Most Popular - .....	\$ 799.00
KENWOOD TR7500 2 Metre P.L.L. Mobile (1 only).....	\$ 250.00
S.B.E. "Sidebander" 10 Metre Mobile.....	\$ 150.00
KENWOOD R300 All Band Communications Receiver.....	\$ 318.00
KENWOOD AT200 Antenna Coupler - S.W.R. - Power Meter- -Coax Switch.....	\$ 185.00
HANSEN Transformer Coupled Power Meter Reads True P.E.P. and R.M.S. to 200 watts.....	\$ 82.00
NAGARA V5JR Trap Vertical 80-10M.....	\$ 150.00
CUSHCRAFT ARX-2 2 Metre Ringo Ranger.....	\$ 49.00
HANSEN Dummy Load 30 watts up to 150 MHZ.....	\$ 15.00
DAIWA FD30LS Low Pass Filter Cut Off Frequency 32MHZ 3 Stages - Top Quality.....	\$ 20.00
Hi-Mound HK708 Morse Key.....	\$ 21.00
HI-MOUND HK702 Morse Key Marble Base.....	\$ 38.00
KENWOOD DG5 Digital Display for TS520S.....	\$ 187.00
DAIWA DR7500 Medium Duty Rotator Fully Approved C/W Circular Scaled Indicator.....	\$ 199.00
DAIWA DR7600 Heavy Duty Version Of Above.....	\$ 289.00
KENWOOD HC2 Hamclock.....	\$ 34.00
KENWOOD TS7005P All Mode 2 Metre Transceiver AC-DC Full Digital Readout.....	\$ 812.00
KENWOOD TS120V 80 Thru 10 Metre Mobile Styling Similar to TS820 But Much Smaller. Digital Display - I.F. Shift - Noise Blanker - Analog Dial 25KHZ Per Rev - Vox - R.I.T. - 30watt P.E.P.....	\$ 630.00
KENWOOD TS 120-S 80-10 metre mobile transceiver 200W	
CONTACT BARRY HARTLEY VK2FE	PEP/P \$ 760.00

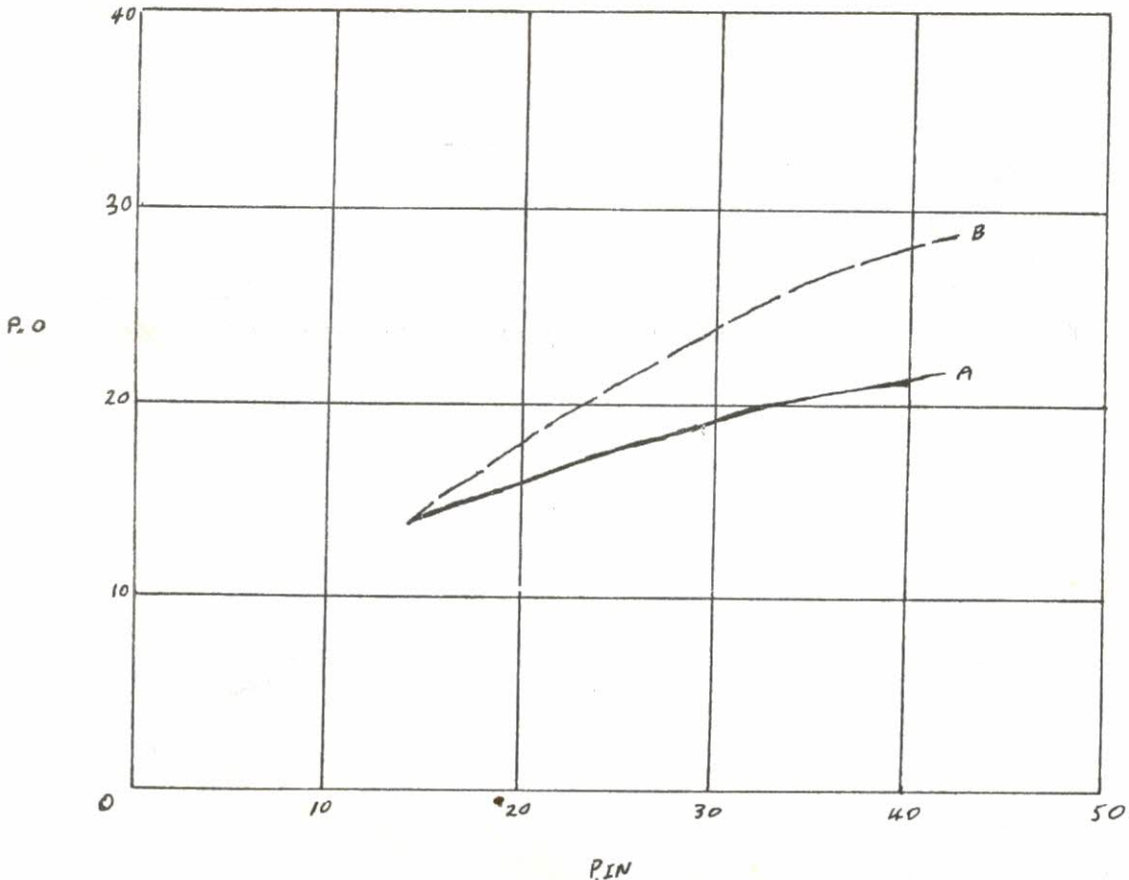
AS THE JAPANESE YEN IS STILL CHANGING  
PRICES SUBJECT TO ALTERATION WITHOUT NOTICE.  
ABOVE ITEMS NORMALLY AVAILABLE EX STOCK.

UHF TRIPLER



- L1 19/64" INTERNAL DIAM., 6 1/2 TURNS 18 S.W.G.
- L2 17/64" " " 2 TURNS 14 S.W.G.
- L3 1" X 0.25" X 0.02" COPPER STRIP
- C1 VARIABLE 7 TO 100 pF
- C2,3,4. AIR- = 2 - 13 pF
- C5 VARIABLE 2 - 25 pF

INPUT CIRCUIT	C1, C2, L1,	= 2 METERS	144 - 148 MHz
IDLER	= C3, L2	=	288 - 296 MHz
OUTPUT	= C4, C5, L3	= 70 CM	432 - 444 MHz



GRADIENT A INCREASING I/P 15W TO 40W WITHOUT RETUNING  
 = B " " " " WITH "

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Amateur Radio Society

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