

THE PROPAGATOR

THE MONTHLY NEWSLETTER OF THE
ILLAWARRA AMATEUR RADIO SOCIETY
A MEMBER SOCIETY OF THE WIRELESS INSTITUTE OF AUSTRALIA

Published by the
Illawarra Radio Amateur Society
P.O. Box 110
DAPTO 2530

NO. 3/76

MARCH 1976

NO. 3/76

PRESIDENT:

Keith Curle VK2ZYI
24 Beach Drive
Woonona 2517
Phone: 842469

SECRETARY:

Ian Bowmaker VK2ZJA
15 Akuna Street
Keiraville 2500
Phone: 292158

NOTICE OF ANNUAL GENERAL MEETING.

Members are advised that the Annual General Meeting of the Illawarra Amateur Radio Society will be held at the Wollongong Town Hall Meeting Room on Monday, 8th March at 7.30 p.m.

AGENDA.

- 1) Apologies and welcome to new members and visitors.
- 2) Minutes of previous Annual General Meeting.
- 3) Presidents Report.
- 4) Secretary's Report.
- 5) Treasurers Report and Financial Statement.
- 6) Election of Committee for '76-'77.

NOTICE OF MONTHLY GENERAL MEETING.

Members are advised that following the Annual General Meeting, the Monthly General Meeting of the Illawarra Amateur Radio Society will be held.

AGENDA.

- 1) Minutes of previous General Meeting.
- 2) Correspondence.
- 3) Financial Report.
- 4) General Business.
- 5) Raffle.
- 6) Lecture or Film.

FOX EZZY REPORTS -----

Well here it is 1976 and a Happy New Year to All.

So much has happened in the past few months it has been almost impossible to keep track of it all. HOWEVER.....

Graeme VK2AGV has moved QTH and now has his own "PAD2" at North Wollongong.

Graeme can work the C.H.6 repeater from his DA "KEN" on the front verandah.

WOULD you beleive JOHN VK2BHO has joined the jet set on 2 metres F.M?

A recently aquired "BLACK BOX" gets out niceley from his W Warilla Q.T.H.

TOM VK2ABI, yet another stalwart of the D.C. Bands is now aboard 2 metres F.M., While GARY VK2ZOM has madw a welcome reappearance after a long absence.

Roger VK2BRE has his "Billdit" RIG working up to the first stage of the P.A. and sounds well, while Kevin VK2AFF has been heard about more since the aquisition of his *Multi"7

BILL VK2DJ has been holidaying down South and has had his 40 metre Home Brew rig working overtime.

YOURS TRULY has also been working the 40 metre band with an Identical rig to Bills. Complete with a home brew 8ft mobill whip an looking forward to a trip to VK4 by the time this goes to press.

March Meeting - ANNUAL GENERAL MEETING OF I.A.R.S.

Notice of Motion.

After due consideration the Committee recommends the following Motion to be put to the Annual General Meeting.

"That the annual subscription for the Propagator shall be \$3 for Full membership and \$2 for Junior membership."

Sgd. Ian Bowmaker, Secretary.

Election of Committee for '76-'77.

Nominations will be called for at the meeting for all Committee positions - volunteers will be welcome if you feel you have a talent for any of the positions.

We have so far the following offers to fill respective Committee positions:-

President- Ian, VK2ZJA.
Vice-President- Bill, VK2DJ.
Secretary- Keith, VK2ZYI.
Treasurer- Charles, VK2ZEN.
Committeemen- 3 required. - Bill, VK2DJ.
Graeme, VK2AGV.
Geoff, VK2ZHU.

Other appointments are:-

Propagator Editor- Ian, VK2ZJA.
WICEN Co-ordinator- Jim, VK2BBG.
IARS Representative to WIA Combined Radio Clubs Committee
- Geoff, VK2ZHU.
Repeater Co-ordinator- Graeme, VK2AGV.
Stores Officer- Bill VK2DJ. Moonbounce- Lyle, VK2ALU.

No election is necessary for the above other appointments, as these are made by the Committee.

Raffle.

Prize for the usual meeting night raffle will be again a very useful item - a low power soldering iron, as well as some useful consolation prizes, so don't forget your money!

Speaking of money, the usual Stores will be in operation. We have a list of items which are available on order from the Waverly Amateur Radio Society - orders may be placed with either Charles, VK2ZEN or Bill, VK2DJ.

Lecture or Film.

Unfortunately the film promised for the February meeting was not available, however we are hoping it may be available for this meeting; Geoff is working on it. He is also trying to line up a lecture on the subject of Slow Scan Television for a future meeting.

In any event the usual coffee and Rag Chew will be on.

SUBSCRIPTION MEMBERSHIP RENEWAL.

A form for renewal of subscription to the Propagator will be included in the next issue.

We ask that you fill in the form and return immediately by mail or hand in at the April meeting in order that you may continue to receive the Propagator.

SUBSCRIPTION RENEWAL FORM APRIL ISSUE.

PROPOSED BUDGET FOR 1976-7

Expenditure

Newsletter postage say 110 x 18 ^c = \$20 for 11 months		\$220
Hall hire		33
Bank Fees		10
P.O. Box rent		10
Licence VK 2 AMW		12
Moonbounce postage & telephone		15
Repeater - Licence	\$12	
Insurance	18	
Rent	40	
Power	60	
Materials	<u>100</u>	
	\$ 230	<u>230</u>
		\$530

Income

100 members @ \$3	\$300
Raffles 11 meetings @ \$10	110
Sale of parts	<u>100</u>
	\$510

I.A.R.S. Monthly Meeting Dates For 1976.

Monthly meetings will continue to be held in the Wollongong
Town Hall Meeting Room, Crown St., Wollongong.

Dates of meetings for 1976 are as follows:-

8 March, 12 April, 10 May, 21 June, 12 July,
9 August, 13 September, 11 October, 8 November, 13 December.

Please note that the June meeting date is one week later than
the usual second Monday of the month owing to a public holiday.

Ian, VK2ZJA, Secretary.

ILLAWARRA AMATEUR RADIO SOCIETY.

President's Report 1975 - 76.

In this the first year's operations of the I.A.R.S. I am pleased to report we are in a solid position and appear to be improving. As you may recall in June 75 by a unanimous decision we ceased operations as the Illawarra Branch of the Wireless Institute of Australia, to enable us to become financially independent and to draft a constitution which fitted into the structure we found best for conducting our activities.

As the function of most societies such as ours is governed by the amount of money they can raise, this has been one of our prime objectives. Thanks to the tremendous effort of Bill VK2DJ in the construction and tuning of the 2M "Billdit" carphone the Society raffled, together with sales of components from our store - handled by our very able Treasurer Charlie VK2ZEN, our finances are in great shape with assets in excess of \$500. My thanks to them both.

The committee really worked as a team with a meeting every month, our secretary Ian VK2ZJA kept minutes of both these and the general meetings as well as writing letters and answering all the many queries associated with the running of a group such as ours. On the subject of Committee meetings I would like to thank all the members for their attendance and enthusiasm.

The Society's repeater is now history. It is regarded by most people using it as the best in NSW and this is as a direct result of the energy and ability of Graeme VK2AGV - and he still intends to improve it. Hank VK2BHL must also receive a mention while talking about the repeater for his constructional work on the ident unit etc.

Probably one of the things keeping us in touch with our members is the newsletter "The Propagator" the production of this has been carried out by Geoff VK2ZHU with the collating and mailing being done by Gerry VK2APG. My thanks to them both, together with all our regular contributors.

No matter how many people I thank for their assistance in helping the society run smoothly I would still miss someone. If I could, I would like to ask every member in turn what the IARS does for him, and what he would like it to do for him. We are trying to make new members feel at ease, the trouble with people engrossed in a hobby is that they tend to forget they also started, knowing very little about it. If in the next year you feel on the outer or that the Society is a "clique", walk up to a committee member and tell him so and I guarantee we can rectify the situation in minutes.

I hope my successor has the co-operation and unity that I did, it made my job for the year a pleasure.

Keith VK2ZYI

President. I.A.R.S.

REPEATER.

ON5DO is the editor of the VHF/UHF bulletin, distributed worldwide. His home QTH is Anvers in Belgium and he is very active on 20m as well as VHF/UHF.

A QSO on Monday 26.1.76 turned from moonbounce to repeaters and finally to front ends. As those of you who have worked our repeater from further afield will know, the performance is outstanding and feather in 2AGV's cap. The very low cross modulation, virtually non existant de - sensitising, combined with high sensitivity of the front end are due to the fact that no R.F. amplifier is used but the signal goes straight into a twin BFR balanced transistor mixer.

ON5DO was very keen to obtain a copy of this part of the circuit and that is well in hand now. Whilst further discussing the repeater in general, the problem of servicing was mentioned as well as the idea from 2AGV to have a second receiver board ready. When high cost of good transistors was talked about ANORE offered to send us a couple of BFR91s and lo and behold they arrived here Thursday 29.1.76!

The second receiver will have another function apart from being a quick changeover spare: moves are afoot to broadcast the news in the top end of the band from Sydney. If all repeaters were equipt with a second receiver, relays would become a lot easier.

The operation would be as follows.

A tone encoded signal into the normal receiver would switch receivers over to the second receiver. Provided signal (carrier) is received, the second receiver would remain on if no signal received, the normal receiver would become active again. QSO timer resetting and other problems associated with the relay of broadcasts would be overcome this way.

A disadvantage of this proposed method of operation is that a signal into the normal receiver will not be retransmitted and thus precludes use of the repeater for say emergency calls unless one buys crystals for the second input frequency and is able to over ride the incoming signal.

Give some thought to this and if you come up with better ideas let's know it! Incidentally, travellers through the metropolitan area almost unanimously vote our repeater as the best one that they have struck anywhere!

HANK 2BHL.

Reproduced below is the second in the series of articles which have been published in AMATEUR RADIO.

Again I would mention that this Society would like to see all Amateurs and prospective Amateurs becoming members of the W.I.A..

At present the membership of the I.A.R.S. stands at 114 - but there are only 52 financial members of the W.I.A. resident in the Illawarra area. We would like to see a greater number of W.I.A. members. The future of Amateur Radio needs your support.

Membership application forms are available from Geoff VK2ZHU.

WHAT IS THE WIRELESS INSTITUTE OF AUSTRALIA - PART 2

We have seen from Part 1 that there are 8 WIA's, namely, 7 autonomous self-governing and independent Divisions (one in each State — VK8 comes under VK5) and an entirely separate Federal WIA supported by and belonging to the Divisions as a whole.

We have seen that the Federal WIA is allowed to do those central functions for Australian amateur radio which no one Division could do without wearing two hats. An agreement exists as well as a Constitution.

We have seen that the 7 Divisions are 'the members' (with equality of voting) of the Federal WIA. There are no other 'members' of the Federal WIA. You, as a member, are a member of a Division — the Division which has control in the State or Territory in which you reside (usually).

If you have read and understood these facts you will see that it is not much use writing direct to the Federal WIA with the object of changing an existing Federal policy on the books from Conventions and Federal Postal Voting. You must write to your Division about this kind of thing — by all means copy it to the Executive Office if you wish.

The Divisions originate Agenda Items and other business to be debated at Conventions. Executive also can and does originate Agenda Items (etc.) as well as conducting postal polls as required.

There is a great deal of information exchange between Federal Councillors and the Executive throughout the year. The WIA as a whole is very much a living entity and champion of the amateur radio cause through the very close and cordial relationships between the people within itself informing and guiding one another along the guide lines mutually agreed as being the most beneficial. The operative word is 'mutually' even though one Division or another might go off at a tangent on matters of internal policy.

Basically, whatever may be harmful or good to one Division is usually harmful or good for every other Division.

Under the terms of an agreement (29-6-1971) the Divisions acknowledge and agree that the Federal WIA shall have paramount powers to act as the representative of radio amateurs throughout Australia before or on governmental, political or technical bodies within or outside Australia in relation to matters directly or indirectly affecting amateur radio or radio amateurs in more than one Division.

The Federal WIA has also been given paramount powers in relation to a number of other matters which affect amateurs from more than one Division or have effect externally or affect two or more Divisions.

In so short an article as this it is quite impossible to spell out in detail all the Constitutional provisions but it is obvious that control is essential to prevent persons or Groups doing their own 'thing' independently of the WIA. The objectives are to foster and promote amateur radio in the best possible manner for the greatest possible benefit of all who enjoy it.

Hopefully this will help to explain the necessity for the continuation of the centralised functions of the WIA amongst which are representations and dealings with 'Central Office' of the Radio Frequency Management Branch and other Government Depts., etc., IARU matters, all relations with overseas amateur radio societies, Intruder Watch, Federal Contests and Awards, Project Australis, WIA YRCS and others.

The Divisions, as we have seen, look after amateur radio affairs within the respective States and Territories.

Each Divisional Council controls and manages a number of important local matters. Amongst these are dealings with the respective State Radio Branches on State affairs such as local repeaters, Amateur Advisory Committees (which are most important arbitrators, as it were, between the individual and the Radio Branch) and the acquisition and sale to members of disposals, components and equipment.

Many of the Divisions conduct their own classes and courses to prepare people for amateur examinations in theory, regulations and morse code. Some clubs also carry out these functions on their own account. Another local function is the QSL bureau both inwards and outwards for the benefit of members. This has assumed increasing importance as the postage rates go up.

Each Division conducts a broadcast at specified times to disseminate news and items of interest for country members and interested listeners. The broadcasts are usually done on Sunday mornings on most of the lower HF amateur bands as well as on VHF. Every Division issues a bulletin or news sheet (often times as an insert in AR) covering items of Divisional interest so as to free the pages of AR for technical articles and matters of general, as opposed to local, interest.

Yet another important function of Divisions (and indeed the radio clubs as well) is to provide a focus for numerous social activities, lectures, specialised groups, field events and so on. Indeed, the larger Divisions own or rent their own central premises and in two cases have an office manned by a paid clerical assistant.

The Divisions also provide certain other facilities devoted to the advancement and

betterment of amateur radio for their members. One specific item worthy of mention is advice or assistance if an amateur encounters interference problems or difficulties in getting planning permission to erect masts and aerials.

Amateur radio is a truly world-wide activity enjoyed by almost a million people in their own homes, in their 'shacks' on remote islands, as amateur stations in their own cars, boats or caravans, aboard ships at sea and aircraft in flight, through amateur radio's own satellites in orbit and even on foot.

Amateurs represent a wide cross section of the public and are always ready to swing into action for emergencies and disasters. A truly magnificent leisure activity for young and old alike.

ASJA AWARD

The Publications Committee has pleasure in advising that the winner of the ASJA Award for 1975 is Mr. Bill Rice VK3ABP for his article "On Eyre" in the August issue.

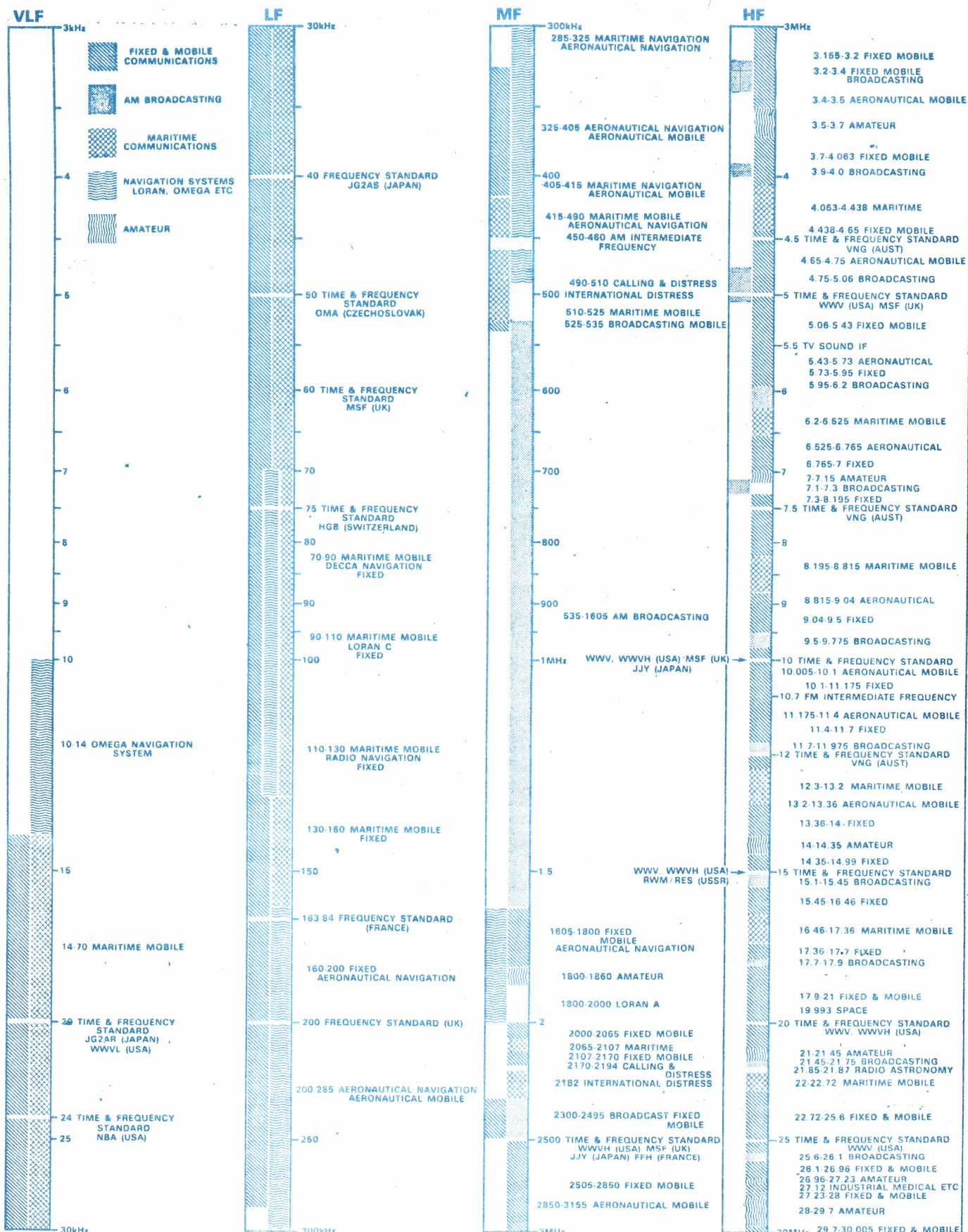
MAGPUBS

- New subscription rates announced for HAM RADIO
1 year \$7.75
3 years \$17.00
 - The new rate for NZART's BREAK-IN is —
1 year only \$5.20
 - VHF Communications: 1969 and 1970 issues are now out of print and not available. It is not known if a re-printing is intended.
The price of binders is now \$2.25 each plus postage 60 cents.
Postage rates for single issues of past years is now 40 cents (60 cents for 4 issues in one parcel). No specials are available.
 - Other magazines on direct subscription by surface mail —

	1 year	3 years
QST	8.50	25.50
Radio Communication*	8.00	—
CQ	6.50	14.50
73	7.00	13.50

VHF Communications
1976 price not yet notified but will accept at \$5.00 (Air Mail \$2.00 extra).
CQ-TV* 2.50 —
*Please ask for membership proposal form
 - AR is available to PNG subscribers and WIA members by Air Mail on pre-payment of \$14.00.
 - Numerous back issues (from March 1972) of AR are available to members on pre-payment — please send s.a.s.e. for details.
- PLEASE WRITE TO W.I.A. P.O. BOX 150 TOORAK, VIC., 3142 FOR DETAILS AND LISTS.

FREQUENCY SPECTRUM



This table is based on information supplied by the Australian PMG's Department. It shows Australian allocations within the International

Telecommunications Union Regulations. While broadly similar to allocations in other countries, they may differ in detail.

The above table has been reproduced from ELECTRONICS AUSTRALIA, issue of February, 1976. We gratefully acknowledge the source.

STOP PRESS..

NOVICE LICENCE. We understand that the examination for the Novice Class Licence is to be held on Tuesday, 16th March.

Moonbounce.

The report below has been prepared by Lyle, who is at present convalescing at home following an operation. He hopes to be back to full activities shortly. We wish Lyle a speedy recovery.

Moonbounce Report- March 1976.

The February EME tests were carried out under some difficulty due to lack of experienced personnel available to operate VK2ALW.

Charlie, VR2ZEN and group did a good job in manning the station for the first (W/VE) test period. Of the stations scheduled with VK2ALW during this period, only VA4JX was definitely heard, but a contact could not be completed.

VK2ALU was not capable of participating in any tests or other site work in February due to a spinal injury and subsequent operation, which may curtail activities for a period, but I'm sure that VR2ZEN would appreciate hearing from those club members with full calls who have had experience operating the Moonbounce equipment and who may be able to help out during forthcoming test periods.

QSL cards have been sent to and received from several of the stations contacted for the first time during the January tests.

Lyle VK2ALU.

VHF CONVERTERS and other kits from GUP

28/52MHz

\$11 !

INC. P&P

A simple, versatile, high performance converter that is easy to construct and align and has a choice of IF frequencies. The converter exhibits high gain, low noise figure, low spurious responses and good cross-modulation characteristics. A bandwidth in excess of 3MHz is easily obtained. A very popular converter. Dual-gate MOSFETs are used in the RF and MIXER stages.

IF.....by choice
GAIN.....better than 20dB
BANDWIDTH.....better than 3MHz
 at -6dB points,
 less than 2db
 ripple.
NOISE FIGURE.....2db approx.
SPURIOUS RESPONSES.....better than -50dB
SENSITIVITY.....0.25uV for 10dB S+N/N
 or better

144MHz

\$14 !

INC. P&P

Another simple, high performance converter. Low noise figure, good cross-modulation and overload characteristics together with low spurious responses, high gain and a choice of IF frequencies make this an ideal converter for two metres, no matter which end of the band you use. A bandwidth of 1MHz, or 350kHz peaked, is easily obtained without instability. Alignment is simple and no neutralization is necessary. Dual-gate MOSFETs are used in the RF and MIXER stages.

IF.....by choice
GAIN.....better than 20dB
BANDWIDTH.....at -6dB points,
 350kHz peak aligned
 1MHz broad banded.
NOISE FIGURE.....2.5dB typical
SPURIOUS RESPONSES.....better than -60dB
SENSITIVITY.....0.25uV for 10dB S+N/N
 or better

432/576MHz

\$14

INC. P&P

Australia's only surviving 432MHz converter kit. Originally designed in 1969 by VK5QZ, with recent modifications by VK6SS and 6UP, this converter is simplicity itself. Construction and alignment are simple, requiring no special tools or instruments. The converter has good band width, low noise figure and a choice of IF frequencies. The well-known TIS88 is used in the RF and MIXER stages.

IF.....28MHz or 52MHz
NOISE FIGURE.....4dB typical
BANDWIDTH.....4MHz typical at
 -6dB points
SENSITIVITY.....1mV for 10dB S+N/N
 or better

marker generator

\$7

INC. P&P.

A versatile, high performance marker that accepts crystals in the range 50kHz to 3MHz and produces strong harmonics through 1296MHz from a 1MHz crystal or through 432MHz with a 100kHz crystal. Stability determined by the crystal.

GUP SHOP

P.O. BOX 283
RYDE 2112 NSW

All printed circuit boards are fibreglass. All kits are designed to run off a 12.V. supply nominally and will work at voltages + or - 3.V. from this (with modified performance). Data given is performance of prototype and can be regarded as typical. Kits are supplied complete with all minor components. Coax sockets, crystals, crystal sockets etc. not supplied.

COMPONENTS FOR SALE * NEW STOCKS.

GREENCAP CONDENSERS 100V

.0047, .01, .022

8c each

.047, .1

12c each

METERS

1. S Meter 400 uA movement, calibrated in S units
1 to 9 and 10 to 40 over S9. Cutout size $1\frac{3}{8}" \times 5\frac{7}{8}"$ \$2.50 -
2. Level Meter This is a dual movement meter indicating
L and R level. Each side from -20 to +3. Each movement
is 200 uA F.S.D. The dual scale is translucent, for
illumination from the back. Very pretty. Cutout size
 $1\frac{7}{8}" \times 1\frac{1}{2}"$. Probably the same as the meter used in an
Electronics Australia mixer/preamplifier project a few
months ago. Only two left. \$3.00
3. 0 - 1mA Meter A standard 2" square meter. \$4.00
4. 0 - 1mA Meter A standard 3" x 2" meter. \$5.00
5. 0 - 10A Meter A standard 3" x 2" meter. \$5.00

RESISTORS

Bags of 130 $\frac{1}{2}$ W resistors plus 4 Greencaps.

10 each of 13 values : 22, 47, 82, 100, 470 ohm

1K, 2.2K, 10K, 22K, 47K, 100K.

\$3.00 per bag

Greencaps 2 - .1, 2 - .0047, .01 or .022 to bring
cost of resistors down to 2c each and still make a
round \$3.

NEW ITEMS

- DPDT mini slide switches. 10c each
- 10K A and 15K A potentiometers 50c each
- 500K C switch potentiometers 60c each
- .0068 mf feed through capacitors 10c each
- Philips "beehive" trimmers 30c each
- Ceramic trimmer, mica insulation. 30c each
- Ground Plane Antenna Base. 1.00 each
- Edge Connectors. 1.00 each
- Tag strips 10c each
- Ceramic bolt-down trimmer. 10c each
- Twin wire lead fitted with 2 1.5mm plugs. 50c each
- Small solder type feed through capacitors. 5c each
- Wire wrap type trimmers. 10c each
- Ceramic 250 pf trimmers. 10c each

NEOSID. Formers. 8c each

Balun formers - small 12c each

large 15c each

Cans - single 10c each

double 12c each

Slugs - F 29, F 16, long ferrite beads. 7c each

U

THE PROPAGATOR.

Newsletter of the Illawarra
Amateur Radio Society.



MR.L. PATISON VK2ALU
98 HEASLIP STREET
WOLLONGONG

96

2500

I.A.R.S.

PO BOX 110

DAPTO. NSW. 2530.

9