

# THE PROPAGATOR

2/78

FEBRUARY 1978

2/78

THE MONTHLY NEWSLETTER OF THE  
ILLAWARRA AMATEUR RADIO SOCIETY

A Member Club of the Wireless Institute of Australia.  
Published by the Illawarra Amateur Radio Society.

PO Box 1838  
WOLLONGONG NSW 2500

PRESIDENT

Bill Valvert VK2DJ  
19 Springfield Avenue  
FIGTREE 2525

Phone No: 71 3569

SECRETARY

Brian Boseley VK2BCI  
Figtree Hotel  
FIGTREE 2525

NOTICE OF MONTHLY MEETING - - - FEBRUARY 1978

Members are advised that the monthly meeting of the Illawarra Amateur Radio Society will be held at the Wollongong Town Hall Meeting Room at 7.30 pm on Monday, 13 th February 1978.

AGENDA.

- 1 Apologies and welcome to visitors.
- 2 Minutes of previous Monthly Meeting.
- 3 Correspondence.
- 4 Financial Report.
- 5 General Business.

LECTURE.

At time of going to press, no specific lecture has been arranged - not the best time of year to be organising speakers for meetings.

However, there may well be some discussion on the subject of WICEN. See elsewhere in this issue for an up to date report on WICEN activities.

## WICEN NOTES

Well things are looking up. At the February meeting a copy of the latest WICEN notes from Sydney will be circulated. As they concern MONEY I suggest you look carefully at them. It seems that WICEN members will have to attend a training course ( you guessed it ) locally and will then be issued with special ID's and gear. These include a compulsory hard hat ( very attractive with writing etc on it \_\_ sorry one colour only ) and special ID's signed by the police and SES ( very official - and hard to come by ).

Also at the February meeting will be a list of people who have registered for WICEN in the past. As things are hotting up might I suggest that if you no longer have the time, the inclination or the future joining fee, that you cross out your callsign at the meeting. Those callsigns not crossed out will be active WICEN members who will be contacted to see when the training course can be run. At this stage it is expected that we will be running about two WICEN exercises during the year plus the course. As two or three weeks notice is usually given we will be looking forward to seeing or hearing from a few faces. During December a WICEN alert came from Wollongong SES. Jim VK2YCH did a creditable job along with all of the other people involved in the standby alert. A special thanks to everyone involved or just listening, which by the way, is a most important part of emergency communications.

The Mid South Coast's co-ordinator is John VK2BTQ, who is busy organising WICEN in a very difficult area. Good luck John.

The following is a list a WICEN members in 1977 for Illawarra. If you're not on it I'd be more than happy to put you on it.

VK2YCH - deputy co-ordinator.

VK2DJ	VK2ZKU
VK2APG	VK2ZVX
VK2ZHU	VK2BCI
VK2YAV	VK2ZBM
VK2AQJ	VK2ZFO
VK2ZEN	VK2ZQT
VK2BUU	VK2CAG
VK2BNG	VK2JJ
VK2ZJA	
VK2AXI	



## Dapto Moonbounce Report - February 1978.

The February 432 EME News includes details of 88 different scheduled EME tests for this month, involving well over 40 stations on all continents. They will be using the frequency range from 432.000MHz to 432.060MHz. Also it is normal for a number of other contacts to be made on an unscheduled basis.

Reports continue to be received of EME contacts being spoiled by interference from non EME stations using the same frequency. The station causing the interference does not have to be in the same part of the world as either of the EME stations and of course, probably cannot hear either of the EME stations.

The message to VK stations on 70cm is clear - If you are using other than low ERP on transmit, PLEASE do not use 432.000MHz to 432.060MHz, especially on Friday night and on weekends - after all there is more than ample spectrum space above 432.060MHz. This is now being recognised by the more progressive overseas Amateur Radio Organisations who are modifying their 'bandplans' accordingly, so I have been informed.

VK2AMW is scheduled for EME tests with YV5ZZ and W6ABN between 0000Z and 0100Z on Saturday February 11th. We will be at the transmitting site at Dapto from 10am to approx. 1230pm (Summer time) on Saturday, should anyone wish to visit for the tests. If so, we would appreciate arrival before 11am, or do the last  $\frac{1}{4}$  mile by foot, to prevent bad ignition QRM!

## Oscar Report.

Oscar 7 continues to operate well. A change in operating format took place from January 1st 1978. The previous format of alternate days on Mode A and Mode B was changed to one day of Mode A, followed by two days of Mode B. This helps cater for the greater use being made of Mode B compared with Mode A and also takes into account the anticipated operation of the Russian satellites on the equivalent of Mode A. One or more such satellites is expected to be launched in 1978.

Mode B normally provides contacts to most states in VK and also ZL, depending on the pass concerned favouring contacts either to the east or to the west of VK2.

Paul VK2ZQT, has had some contacts on Mode A, while VK2ALU operates mainly Mode B although I have also had the odd contact on Mode A. Several stations are normally heard on each pass of Mode B but not necessarily on Mode A.

VK2ALU monitored quite a few passes over the Nov. Dec. 1977 period and noted a number of occasions where Mode switching from B to A took place.

Lyle VK2ALU.

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"One of the intriguing spin-offs of the CB boom is the increased interest in amateur radio in the USA.

The ARRL reports that the licence figures now stand at 375,000 with 50,000 non-amateurs now enrolled in radio training courses."

(Reprinted from The Australian CB Scene - Electronics Aust 11/77)

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FOR SALE.

Shure mobile type Microphone, with PTT. . . \$20.  
Desk microphone, with PTT-Hold switch. . . \$10.  
Low Pass TVI filter, low power type. . . \$6.  
6MJ6 Valves. Suit TS520. ( 2 of ). . . \$10 ea.

See or contact Keith, VK2OB.

FOR SALE.

Voltage Regulator Units.

Current rating of 20 Amps approx.

Voltage rating - three models - 6V, 12V, 20V.

Units are regulators only, transformer and rectifiers are not supplied.

Sample units will be at the meeting for inspection.

See or contact Keith, VK2OB.

70 Cm Band News. - Geoff, VK2ZHU.

A suitable transceiver unit has become available to I.A.R.S. for conversion to use as a repeater on 70 Cm.

The Committee and Paul Gardiner are investigating.

Below are set out the current frequencies of operation.

SIMPLEX CHANNELS.	433.50	Primary.
	433.55	Secondary.

REPEATER CHANNELS.

<u>Site</u>	<u>Repeater IN</u>	<u>Repeater OUT</u>
DURAL	433.00	434.60
GOSFORD	433.05	434.65
WOLLONGONG	433.10	434.70
NEWCASTLE	433.15	434.75
WAVERLEY	433.20	434.80

ANNUAL GENERAL MEETING.

Please note that the Annual General Meeting of the I.A.R.S. is to be held on Monday, 13th March 1978.

At this meeting, the election of Committee is to take place. We are looking for some new faces to participate in the running of the Society, so what about it fellows. Some of the current members of Committee have served for a good number of years, and justly deserve a break; also some will not be standing again because of other commitments.

Let's not have an empty nominations list this year, let's have an ELECTION for Committee positions.

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WANTED ... WANTED ... WANTED

Technical articles, For Sale advertisements,  
Personal Items, etc., ... ANYTHING!

For inclusion in forthcoming issues of  
the Propagator.

Any material for publication should be in  
the Editors hands not later than 1½ weeks  
before Meeting nights.

Ian, VK2ZJA.

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# PRINCIPAL AMATEUR BAND ALLOCATIONS

From "Novice Amateur Radio" publications.  
Sam Voron VK2BVS

## MEDIUM FREQUENCY (MF) ALLOCATION

**1.60 Metres** — 1.8 to 1.860 MHz  
1.800 to 1.815 MHz morse section.  
1.815 to 1.860 MHz voice section.  
1825 MHz national call channel.  
1820 kHz also a popular crystal net.

160m provides the longest ground wave coverage, about 150 miles. Reliable local day time coverage using mobile equipment. Especially popular in the UK as a local mobile and base operation. Several thousand miles can be covered at night. Under certain ionospheric conditions, especially when solar activity is low, 160 metres is the only amateur allocation which will support communications with interstate areas. Being the highest wavelength available to amateurs, it is also the best band for communications within limestone caves.

AM home-made simple rigs are popular on this band. DX-ing at sunset into the USA and South America, at midnight into Asia and before sunrise into Europe. Morse and LSB voice are best for DX-ing. WIA broadcast on 1825 kHz AM.

## HIGH FREQUENCY (HF) ALLOCATION

**80 metres** — 3.5 to 3.7 MHz  
3.525 to 3.575 MHz is the Novice Band in Aust.  
3.5 to 3.550 MHz morse section.  
3.550 to 3.7 MHz voice section.  
3.7 to 3.75 MHz is the US Novice Band  
3.565 MHz is a popular Novice listening and working channel as is 3.555 MHz.

Ground wave distance is about 90 miles on this band, however, at low solar activity periods day time coverage of 200 miles is common due to ionosphere E layer propagation. Night time provides Australia and New Zealand reliable coverage. Some AM stations but mainly LSB and morse operation. DX-ing also popular as is mobile interstate working.

**40 metres** — 7.0 to 7.15 MHz  
7.1 to 7.150 MHz is the American Novice Band.  
7.00 to 7.035 MHz morse segment.  
7.035 to 7.150 MHz voice segment.  
7.050 MHz national listening channel.  
Some AM stations but mainly morse and LSB.

Reliable day time skip interstate, when solar activity is high stations within the State can be worked. During evening and night world-wide coverage is possible using SSB and especially morse to get through the interference from broadcast stations. Some AM stations but mainly morse and LSB.

**20 metres** — 14.0 to 14.35 MHz  
14.0 to 14.1 morse, 14.1 to 14.35 voice.  
14.1 to 14.2 popular into Europe.  
14.2 to 14.35 popular into the USA

At high solar activity provides world-wide day and night coverage. Whereas 160 and 80 metres provides a "blanket coverage", on 40 and 20 metres there is usually a skip zone. It is the most popular international DX amateur band using morse and USB.

**15 metres** — 21.0 to 21.45 MHz  
21.125 to 21.2 is the Novice Band in Australia  
21.0 to 21.150 is morse.  
21.150 to 21.450 is voice  
21.1 to 21.2 is the US Novice Band.  
In the US voice is 21.25 to 21.45 MHz. Morse is 21.0 to 21.25 MHz.

Sometimes this is the only band which can be used to contact stations in the US, especially when only Europe can be contacted on 20 metres or when only Pacific Islands can be reached on 20 metres.

21.210-21.440, 24 ch. Japanese mobile band in 10 kHz spacing.

15 metres is more variable during the low solar activity periods but becomes more reliable at high solar periods. The variability of this band makes DX-ing quite popular. During mid-summer and winter interstate contacts are possible using sporadic E propagation. Morse and USB are popular. South American AM signals can be heard at times.

**10 metres** — 28.0 to 29.7 MHz  
28.1 to 28.6 MHz is the Australian Novice Band.  
28.1 to 28.2 MHz is the US Novice Band.  
28.0 to 28.5 is the American morse section.  
28.5 to 29.7 is the voice section.  
28.5 is the national calling frequency in Australia.  
28.55 MHz is a popular international channel.  
28.6 MHz is the international DX listening frequency.

A 23 channel systems is being organised for modifying 11 metre rigs on to 10 metres. The range will be from 28.3 to 28.590 MHz using the same channel spacing as on 11 metres.

28.3 to 28.5 will be for AM and SSB.  
28.5 to 28.590 for SSB.  
28.5 to 28.65 MHz is the international DX-ing segment for voice.

28.0 to 29.1 MHz is the international DX-ing segment for morse.

During high level of solar activity 10 metres supports world-wide low power communications. Each summer and winter, Pacific wide excellent sporadic E communications is possible independent of the solar activity.

28.7 to 29.4 many AM nets operate in the USA.  
29.45 to 29.55 is the amateur satellite band — satellites can be heard three times daily for 20 minutes as they orbit overhead. They relay amateurs from thousands of miles away.

29.6 MHz is the American FM national calling frequency.

29.5 to 29.7 MHz, sixteen American repeaters for FM mobile use.

Morse, AM, USB are all popular. A popular local base and mobile band.

28.2 to 28.25 is the international amateur 10m beacon band. These beacons transmit 24 hours daily providing an indication of propagation conditions for the 10 metre DX enthusiast.

0A4VHF — Peru	28.185 MHz
9J2BBB — Zambia	28.2025 MHz
DL01GI — West Germany	28.205 MHz
W4 — USA	28.2075 MHz
3B8MS — Mauritius	28.210 MHz
ZD9GI — Gough Isl.	28.2125 MHz
VK2WI — NSW, Australia	28.2175 MHz
5B4CY — Cyprus	28.220 MHz
YU — Yugoslavia	28.2225 MHz
F3THF — France	28.2275 MHz
VE3TEN — Canada	28.225 MHz
ZL3MHZ — New Zealand	28.230 MHz
VP9BA — Bermuda	28.235 MHz
PY1CK — Brazil	28.24 MHz
A9YC — Bahrain	28.245 MHz
WAT10B — USA	28.250 MHz

Some of the above beacons such as Sydney are planned, others are changing to the above new frequencies.

## VHF (VERY HIGH FREQUENCY) ALLOCATION

**6 metres** — 52 to 54 MHz

### (1) List of 50-54 MHz Beacons:

VK0MA — MAWSON	53.100
VK2WI — SYDNEY	52.450
VK4RTL — TOWNSVILLE	52.600
VK5VF — MT. LOFTY	53.000
VK6RTV — PERTH	52.300
VK6RTU — KALGOORLIE	52.350
VK6RTW — ALBANY	52.950
VK7RNT — LAUNCESTON	52.400
VK8VF — DARWIN	52.200
JD1YAA — JAPAN	50.110
KH6EQUI — HAWAII	50.104
ZL2VHP — PALMERSTON NTH.	52.500

### (2) 6 Metre Band Plan:

MHz	
52.000-52.010	"Earth - Moon - Earth" (moon-bounce) operation only, any mode.
52.010-52.100	DX operation only; subdivided according to mode as follows:
52.010-52.050	CW operation only.
52.050-52.100	Narrow modes only (e.g. CW, SSB, DSB, AM, FSK).
52.100-52.300	All narrow band modes, DX and local tunable operation.
52.300-52.400	Beacons only; secondary beacon segment.
52.400-52.500	Beacons only; primary beacon segment.
52.500-53.100	Simplex net operation, primarily FM.
53.100-54.000	General operation; DX, local, and experimental operation, and modes; "private" nets; future linear translators and repeaters.

Calling frequencies are as follows:

52.025	CW
52.050	Meteor Scatter — any narrow band mode.
52.075	RTTY (FSK).
52.100	Primary SSB/AM calling frequency.
52.200	Secondary SSB/AM calling frequency.
52.300	SSTV(F4) slow scan television.
52.525	FM national call channel.
52.656	FM secondary channel.

Low power long distance sporadic E propagation in mid summer and winter. Covering a range of 400 to 2500 miles with extremely strong signals. An excellent mobile band giving a reliable range of 75 to 100 miles. DX-ing can also take place as a result of Tropospheric weather conditions causing signals to be propagated between different air layers.

FM, USB and morse popular. USB and 52.525 MHz FM.

## 2 metres — 144 to 148 MHz (VHF)

### (1) List of 144 to 148 MHz Beacons:

VK1RTA — CANBERRA	144.475
VK2WL — SYDNEY	144.010
VK2RHR — MITTAGONG	144.120
VK3RTG — VERMONT	144.700
VK4RTT — MT. MOWBULLAN	144.400
VK5VF — MT. LOFTY	144.800
VK6RTW — ALBANY	144.500
VK6RTV — PERTH	145.000
VK7RTX — LONAH	144.900
ZL1VHF — AUCKLAND	145.100
ZL2VHF — WELLINGTON	145.200
ZL2VHP — PALMERSTON NTH.	145.250
ZL3VHF — CHRISTCHURCH	145.300
ZL4VHF — DUNEDIN	145.400

(C) 4 metre band plan:

MHz	
144.000-144.010	EME operation only, any mode.
144.010-144.100	DX operation only; subdivided according to mode as follows:
144.010-144.050	CW operation only.
144.050-144.100	Narrow band modes only (e.g. CW, SSB, DSB, AM, FSK).
144.100-144.400	All narrow band modes, DX and local tunable operation.
144.400-144.500	Beacons only; primary beacon segment.
144.500-144.600	Beacons only; secondary beacon segment.
144.600-145.700	General operation; DX, local, and experimental operation, all modes; "private" nets; future linear translators and repeaters.
145.7 — 146.0	Satellite and space communication.
146.0 — 148.0	FM net operation; simplex and and repeater.

Calling frequencies are as follows:

144.025	CW calling frequency.
144.050	Meteor scatter calling frequency, any narrow band mode.
144.175	RTTY (FSK) calling frequency.
144.100	Primary SSB/AM calling frequency.
144.200	Secondary SSB/AM calling frequency.
144.300	SSTV calling frequency (F4).
146 & 146.5	Popular FM listening channels (146.5 national FM calling channel).

Tropospheric long distance propagation of up to 500 or even 2,000 kilometres is more marked on 2 metres than on 6 metres, but sporadic E long distance propagation is less evident on 2 metres than on 6 metres. 2 metres is a very popular short range mobile band especially on FM.

## ULTRA HIGH FREQUENCY ALLOCATION (UHF)

**70 centimetre band** — 420 to 450 MHz

### (1) List of 24 hr. 420-450 MHz Beacons:

VK4RBB — BRISBANE	432.400
VK7RTW — LONDON	432.475
ZL2VHP — PALMERSTON	431.850

### (2) 70 Centimetre Band Plan:

The full 70cm band plan as amended is as follows:

MHz	
420 — 432	Amateur Television (ATV). Primary Channel DSB or VSB (ATV-1) Video at 426.25 MHz Sound at 431.75 MHz.
432 — 432.0	EME only — any mode.
432.01-432.05	DX only — CW portion (with CW calling frequency at 432.025 MHz).
432.05	Meteor scatter calling frequency.
432.05-432.1	DX only — all narrow band modes (including CW) (with RTTY calling frequency at 432.075 MHz and SSB/AM primary calling frequency at 432.1 MHz).
432.1 — 432.4	Tunable operations both DX and local, all modes (with SSB/AM secondary calling frequency at 432.2 MHz and SSTV calling frequency at 432.3 MHz).
432.4 — 432.6	Beacons only.
432.6 — 433	Tunable operation — any mode. NOTE: Calling frequencies should be used solely for monitoring, calling or establishing contacts. Calling frequencies should not be used for net operations.
433 — 435	FM Repeater Inputs.
435 — 438	Internationally reserved satellite allocation.
438 — 440	FM Repeater Outputs.
440 — 441	FM Simplex.
441 — 443	Experimental.
443 — 450	ATV secondary channel.
	VSB only (ATV-2).
	Video at 444.25 MHz.
	Sound at 449.75 MHz.

Over a 1,000 miles has been covered on tropospheric propagation. UHF has been found to provide coverage into areas VHF signals cannot reach. 70cm is becoming a popular mobile short range band especially on FM.

**23 centimetres** — 1215 to 1300 MHz mobile antennas on this band are only an inch or two. 23cm signals have been found to reach into areas not accessible to 2m or 70cm coverage. DX via tropospheric propagation has been covered as far as 1,500 miles with this distance being pushed further as more operators make up equipment for this band.

Other bands in the super high frequency and microwave amateur allocations are found to propagate over long distance as a result of surface weather conditions (e.g. over 200 miles on 10,000 MHz using only a few milliwatts of power). Much home made equipment is used on these bands.

CHF (576-585 MHz) and 2300 to 2450 MHz  
SHF 3300 to 3500 MHz, 5850 to 6000 MHz,  
10,000 to 10,500 MHz and 21,000 to 22,000 MHz



# Sideband Electronics Sales

## Distributors of COMMUNICATIONS TRANSCEIVERS

### HF TRANSCEIVERS

**ASTRO** - 200 digital solid state 200 W.P.E.P. \$1000

**TRIO KENWOOD** new model TS-520-S  
160 to 10 M, with optional digital  
readout connected externally. Can be  
used as a frequency counter self contained  
separately powered by 12 volt DC. \$700

**TRIO KENWOOD** model TS-820S AC only  
160 to 10 M with digital readout. \$1,100

**TRIO KENWOOD** model TS-820 AC only  
160 to 10 M. \$930

**TRIO KENWOOD** model MC-50 Microphone. \$ 50

**TRIO KENWOOD** model TS-600 A FM-AM.  
SSB transceiver full 50-54 MHz coverage 10  
Watt output variable from 1 Watt to full power.  
VFO controlled AC-DC operation. Styling as  
TS-700-A. \$700

**TRIO KENWOOD** model TR-7400 2 meter  
FM transceiver 10 to 25 watts output.  
Frequency range 144.00 to 147.995 MHz No.  
of channels 800, Double conversion super-  
heterodine sensitivity better than 0.4 UV for 20 DB. \$440

### ICOM

#### VHF TRANSCEIVERS SSB

**ICOM** model IC-202 2 M SSB portable trans-  
ceiver 144-144.4 MHz \$215

**ICOM** model IC-502 6 M SSB portable trans-  
ceivers 52-53 MHz. \$215

**ICOM** IC-22-S synthesized 22 channel 2 M  
transceiver 10 channel pre programmed.  
Supplied with 50 extra diodes for the  
programming. \$269

**ICOM** model IC-245 \$450

**ICOM** model IC-211 \$750

**YAESU MUSEN** model FT-101-E AC-DC  
transceivers 10 to 160 M with speech processor \$850

**YAESU MUSEN** model FT-301. \$960

**YAESU MUSEN** model FT-301-D \$1140

**YAESU MUSEN** model FT-301-S \$660

**YAESU MUSEN** model FL-2100 B Lineal Ampl. \$525

**YAESU MUSEN** model FP-301 \$165

**YAESU MUSEN** FR-G-7 Uses Wadley loop princ. \$300

**YAESU MUSEN** FT221-R 2 meter all  
mode transceiver. \$628

### FREQUENCY COUNTERS

**YAESU MUSEN** model YC-500-E-S-J P.O.A.

### SWR METER

**Twin meter** model: Y.M. - I.E. 3.5 to 145 MHz  
prof quality \$ 28

**DRAKE TV** - 3300 TVI lowpass filter \$ 34

**SSR-1** Receivers \$270

### AUSTRALIA'S SOLE DIST. OF KLM PRODUCTS

#### KLM SOLID STATE POWER AMPLIFIERS

(MHz) 144-148 PA10- 80BL 80 OUTPUT (watts)

" PA10-140BL 140 "

" PA10-160BL 160 "

" PA 2- 70BL 70 "

400-470 PA10- 70CL 70 "

PA 2- 12-B 12 Watts

PA 2- 25BL 25 Watts

P.O.A.

#### NOW AVAILABLE

New range of beam antennas from Western  
Communications U.K. model DX33 3 element  
tri-bender \$238

**HIDAKA** model VS-33 3 element tri-bender includ-  
ing Balun \$258

#### VERTICALS:-

**HIDAKA** model VS-41 80 through 10m. Vertical  
antenna incl. \$115

Guide wires (Radial Kit additional \$30)

#### MARK MOBILE ANTENNAS

HW-80, 6' long for 80 M. \$ 28

HW-40, 6' long for 40 M. \$ 25

HW-20, 6' long for 20 M. \$ 23

Swivel mounts & chrome-plated springs for all \$ 13

#### CUSH CRAFT ANTENNAS

A144-11 11 Element 2M-Yagi \$ 50

A147-11 11 Element 2 M Yagi \$ 50

A147-20 combination horizontal vertical 2 M \$ 75

#### ANTENNA ROTATORS

Model CDR Ham-11 for all hf beams except  
40 M \$240

Model CDR AR-22 L junior rotator for small  
beams \$ 75

**KEN** model KR-400 for all medium size hf  
beams with internal disc brake \$120

All models rotators come complete with 230-  
volt AC indicator-control units.

6-conductor cable for

KR-400-500 65 cents per metre

#### COAX CABLE CONNECTORS

PL-259 \$1.20

SO-239 Chassi Mount \$1.20

Male to male joiner \$1.20

Female to female joiner \$1.20

Angle connector \$2.00

T-connector \$2.50

#### COAX CABLE

RG-8-U foam filled per metre \$1.20

#### CRYSTAL FILTER, 9 MHz, similar to

FT-200 ones. With carrier crystals. \$ 35

**APOLLO** 3 position co-ax switches \$ 15

All prices quoted are net SYDNEY, N.S.W., on cash-with-order basis, sales tax included in all cases, but  
subject to changes without prior notice. ALL-RISK INSURANCE from now on free with all orders over  
\$100; small orders add 50c for insurance. Allow for freight, postage or carriage; excess remitted will be  
refunded.

# Sideband Electronics Sales

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PETER SCHULZ, VK2ZXL

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TELEPHONE: 521-7573



## AMATEUR RADIO COURSE, 1978

In 1978, the School of General Studies within the Wollongong Technical College will be running an approved course in Electronics, which will cover all the work needed to obtain a Novice, Limited, or Full Amateur Licence.

TIME: The course starts on Friday 17th February, at 6 p.m. to 9 p.m.  
It will then continue weekly at the same time.

LOCATION: Wollongong Technical College, Matthews Building, Room 213  
(see map below).

ENROLMENT DETAILS: Enrol on the first night of the course, Friday 17th February, at room 213. (If you miss the first night, enrol on the second night.) Fee is \$2 .

### COURSE INFORMATION:

The Novice section of the course assumes no previous knowledge of electronics or radio. Starting from scratch, it will prepare you for the Novice Licence Examination in October.

Recommended Novice Study Materials: (Available at the class)

"Questions and Answers for the Novice Licence" - published by Westlakes Radio Club. \$3-50.

"Handbook for Operators of Radio Stations in the Amateur Service" - published by P & T Department. 30¢.

Beginner's Morse Code Cassette. \$2-00

The Advanced Section of the course starts where the novice section finishes, so you can upgrade your novice licence to a limited or full licence at the August examination.

Note - If you have a limited licence, you can take morse code by itself to upgrade to a full licence.

Recommended Advanced Texts:

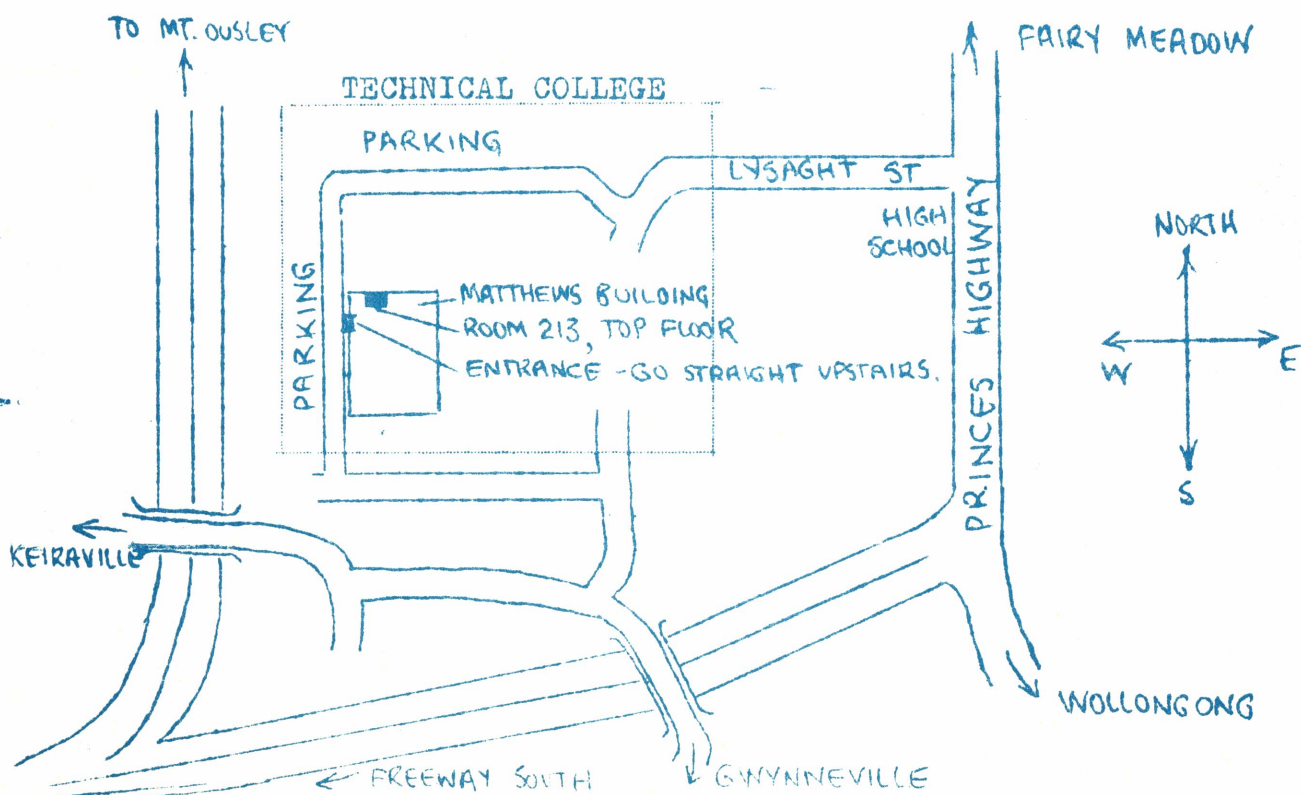
The R.S.G.B. Handbook.

The A.R.R.L. Handbook.

|| ENROLMENT  
CLOSES  
10 FEB 78

### FURTHER INFORMATION:

Contact Brian Wade, VK2AXI. Phone (after hours) 84-1381 .



MACELEC  
99 KENNY STREET WOLLONGONG  
PHONE 29 1455

 **KENWOOD**

TS 820	H. F. Transceiver 10-160M.....	\$960.00
DGI	Digital Display for TS820.....	\$160.00
TS 520S	H.F. Transceiver 10 - 160M.....	\$699.00
DG5	Digital Display / Frequency Counter for TS 520 .....	\$170.00
TS 600	All mode 6 metre Transceiver.....	\$734.00
TS 700	All mode 2 metre Transceiver.....	\$675.00
SP 520	Extension Speaker to suit TS520-820.....	\$ 36.00
TR2200A	2 metre FM Portable.....	\$192.00
TR7200	2 metre FM Mobile.....	\$249.00
TR3200	70CM FM Portable.....	\$291.00
TR7400A	2 metre FM Digital 25W Mobile.....	\$444.00
R300	Communications Receiver.....	\$260.00
MC 50	Desk Microphone.....	\$ 49.00
MC 10	Hand Microphone.....	\$ 13.00
HC 2	Ham Clock.....	\$ 32.00
M 25	2 Metre Hi-Gain Mobile Antenna.....	\$ 17.25
MB	Mobile Base only.....	\$ 3.62
M25T	2 Metre Hi-Gain (Top Only).....	\$ 13.75
Hansen FS5	SWR - Power Meter.....	\$ 36.00
Hansen	SWR - 6 Field Strength - SWR Meter.....	\$ 26.00
B & K 1827	6 Digit Auto Ranging Frequency Counter.....	\$228.85
	100 HZ - 30 MHZ.	

 **KENWOOD**

We also stock a range of Audio Generators - Signal Generators  
Digital Multimeters - Power Supplies ETC.

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\*Prices subject to change without Notice.



## COMPONENTS FOR SALE

Disc Capacitors. .001, .0047, .01, .022. ... 6 cents.  
.047 ... 8 cents. .1 ... 10 cents.

Electrolytic condensers, 25V, double ended.  
4.7 uF ... 6c. 100 uF ... 12c.  
220 uF ... 15c. 470 uF ... 20c.

Trimmer Condensers.  
Ceramic trimmer, mica insulation. 30c.  
Wire wrap type trimmers. 10c.  
Ceramic bolt-down trimmers. 10c.

Feed through capacitors, small solder type. 5c.

Tantalum Capacitors.  
.47 mF ... 17c. .1 mF ... 17c.  
4.7 mF ... 18c. 10 mF ... 25c.  
22 mF ... 45c. 47 mF ... 65c.

PCB mounting trimmers, 3-13 pF. ... 10 cents ea.

SEMICONDUCTORS.	NEOSID. Formers, cans, etc.
BC 109 20c.	Formers. 8c.
MPF 131 85c.	Balun formers, small. 12c.
5486 FETS 65c.	large. 15c.
1N4148 10c.	Cans. single. 10c.
0A91 12c.	double. 12c.
	Slugs, F 16. 7c.

Coil Former, complete with can. ... 10 cents each.

ANTENNA BASE, 'Belling Lee' mobile type. ... \$4.00 ea.

### METERS

S Meter 400uA $1\frac{3}{8}$ " x $5\frac{1}{8}$ "	\$2.50
Level Meter dual 200uA meters, illuminated	\$3.00
0 - 1 mA Meter 50mm square	\$4.00
0 - 1 mA Meter 75mm x 50mm.	\$5.00
2" sq. 100mA centre zero meters.	\$6.00

### RESISTORS

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

### ANTENNA WIRE

Bronze alloy wire, single strand, 1.2mm diameter. See sample at meeting.  
Lengths cut to order 5c/metre

Pair meter leads with alligator clips	50c
Vernier dials 35 mm. 4 turns knob for $\frac{1}{2}$ turn dial	\$1.50
DPDT slide switches	25c
Four pin plug and socket - pair	15c
Alligator clips - large, insulated. Red or Black	20c
Ground Plane Antenna Base	\$1.00
Edge connectors	\$1.00
Tag strips	10c

The I.A.R.S. Store is stocked with selected purchases of good quality components. A small profit is marked up on these items yet prices are very reasonable. The profit goes towards expanding the range of items kept in stock.

Bring your money on meeting nights and keep stocked up with those often needed components.

THE PROPAGATOR

Newsletter of the Illawarra  
Amateur Radio Society

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