

THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY

PO BOX 1838 WOLLONGONG NSW 2500

NOVEMBER 1980

MEETINGS ARE HELD ON THE SECOND MONDAY OF EACH MONTH (EXCEPT JANUARY)
AT 7.30 P.M. IN THE CONGREGATIONAL HALL, CORNER OF COOMBE AND MARKET
STREETS, WOLLONGONG. VISITORS ARE WELCOME TO ATTEND MEETINGS.

THIS MONTH'S MEETING - AUCTION - AUCTION - AUCTION

To be held on Monday 10th November, 7.30 p.m., Congregational Hall,
Coombe Street, Wollongong.

The auction last year was a great success - make this year's even
better. Bring your gear and your money for a profitable night.

Enquiries to Denis VK2DMR.

LAST MONTH'S MEETING -

The fifty eight enthusiasts attending the meeting had plenty of fun
finding cars, tin cans, and nails in the floor with the variety of metal
detectors on display. Unfortunately the only gold located was firmly affixed
to an OM's molars.

Denis VK2DMR demonstrated Leo England's metal detector, which is an
improved derivation of the "Practical Wireless" "Sandbanks" design (see the
circuit diagram elsewhere in this issue). Leo's design has a simplified
power supply, reduces battery drain from 70 to 20 mA, and is very sensitive.
Our thanks to Leo and Denis. Ian VK2DKS commented that to get his ETI
detector running he had to adjust capacitor values around the crystal
oscillator.

In the raffle, Ian VK2VXN won the fluorescent desk lamp and Rex VK2VVI
won the toolbox. Store sales were brisk with 10 watt resistors at 2½ cents
each and 7-position heavy-duty wafer switches (ideal for antenna tuners) at
20 cents each. Note: There will be no store in operation at the November
meeting because of Auction Night, but it will be back at the December meeting.

It was nice to see Chas VK2MT back from his trip to U.S.A. and Canada -
in three separate trips to Hawaii, he has attended the radio club meeting
there three times!

COMING EVENTS -

November 29th (Saturday), 2 p.m. - WIA divisional Grand Auction at WIC,
14 Atchison Street, Crows Nest.

December 5th (Friday) - Teleprinter Society General Meeting at 14 Atchison
Street, Crows Nest.

December 7th (Sunday) - Christmas Family Barbecue on Saddleback Mountain,
starting around lunchtime. Prizewinning ticket in the Datong Morse Generator
Raffle will be drawn at the barbecue.

December 8th (Regular Meeting Night) - Solid-state RTTY demonstration by
Dave VK2YKQ/VAV on Apple and Paul VK2ZQT on Tono.

DECEMBER "PROPAGATOR" -

It is hoped to make the December Christmas Issue of the Propagator a
special, larger issue than usual - BUT we need more material for it! Please
bring any articles with you to the November Auction Meeting - even very short
articles will be most welcome. Just think - if everyone at the meeting turned
up with a half-page contribution, we could put an extra 25 pages in the
Propagator. Absolute deadline for plain typed copy will be Tuesday 27th November.



Macelec Pty. Limited

Professional and Industrial Electronics

99 Kenny Street, Wollongong
P.O. Box 1755, Wollongong. 2500
Telephone (042) 29 1455
Telex AA29232

* * * C H R I S T M A S S P E C I A L S * * *

*	KENWOOD HC10 Digital World Hamclock.....	\$102.00
*	KENWOOD TR2400 Hand Held 2 metre Digital TCVR. (2 only).....	\$340.00
*	KENWOOD STI Base Stand for 2400.....	\$85.00
*	KENWOOD TR9000 2 metre SSB-CW-FM TCVR (1 only).....	\$575.00
*	KENWOOD MC50 Microphone Dual Impedance.....	\$55.00
*	LEADER RF Power Meter LPM880 (1 only).....	\$130.00
*	TONO O-7000E Communications Computer (1 only).....	\$950.00
*	KENWOOD TS520SE HF TCVR (1 only).....	\$700.00
*	KENWOOD MC501 Economy Base Mic 50K.....	\$30.00

* * * * *

NEW MODELS DUE EARLY NOVEMBER

Kenwood TS130 V/S 8 Band - Speech Processor - I.F.Shift
Selectable band width - Auto size Band selection
"V" Model 10 Watts Output.....\$714.00
"S" Model 100 Watts Output.....\$847.00
Kenwood TS830S - complete 8 Band Base TCVR Superb 1M.D
Rejection - Dual Resonator for each band -
Excellent Dynamic Range and Low noise level -
Variable Band Pass tuning and I.F. Shift -
Tuneable Notch Filter - R.F. Speech Processor
ETC. ETC.\$1,193.00

* * * * *

Kenwood HS5 Deluxe Headphones\$38.00
Kenwood RD300 300/1KW DummyLoad.....\$87.00
Drake Low Pass Filters.....\$ 21.00
Hi-Mound Marble Base Morse Keys.....\$45.00
6146B Finals for TS520 ETC.....\$12.00
MA5 Kenwood 80-40 metre Mobile Ant. System.....\$104.00

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

JAMBOREE ON THE AIR REPORT

- Ron Dorin, VK2VOE.

The 23rd J.O.T.A. was held over the weekend of 18th - 19th October, 1980. A portable station was set up at the Mt. Keira Girl Guide Camp (Kum-ba-yah), with the assistance of John VK2NHA and a group of helpers to whom I am most grateful.

The portable station was decided upon by myself and 1B West Wollongong guide leader Dorothy Robinson, after a mildly successful attempt at the 22nd J.O.T.A. from my home Q.T.H. From this experience we learnt that many people are unwilling to visit a station at the operator's home. Subsequently the Kum-ba-yah site was booked, the 1B West Wollongong guides were to be in camp and later 1A Wollongong guides were invited to camp as well. An invitation was also extended to all guide and brownie, ranger and venturer groups throughout the district, to visit the site at their convenience.

Two transceivers were used - a Kenwood TS520 and TS120V, with an AT200 antenna tuner. A 2-element duo-band quad antenna (10 and 15 metres) was kindly loaned by Dave VK2PBP and a Crown rotator was loaned by Ron Burns. A 15 metre quarter-wave vertical with wire radials, as well as a 200 metre long wire were installed. This completed our antenna complement.

Friday afternoon the camp was alive. Guides arrived with their packs and began setting up their tents and our group busily set up brackets, masts, guys etc., to support our antennas.

The long wire was run first, and after a good earth was located and attached, it was tuned by the AT200 with perfection. The rotator and quad were mounted atop a 30 foot telescopic antenna mast and the quarter-wave vertical was attached to one end of a length of 1-inch water pipe. The wire radials formed part of the guying.

The vertical was found to be perfectly matched (thanks to W. Orr's Wire Antenna Handbook for the dimensions). The quad's matching was found to be not so good and after a number of attempts on Saturday morning to tune it, we decided to run it through the antenna tuner and this proved to be most successful. By direct comparison, signal levels on receive were found to be from 2 - 3 S-points higher on the quad than the vertical.

The operating room was set up in one corner of "The Lodge" and a world ham map and a large map of Australia were placed in a prominent position. Digital clocks showing local and universal time, large boards with phonetic alphabet, country prefixes, a display of QSL cards and a "prompt card" with ideas on what to talk about were set up. Copies of the World Call Book and the Australian Call Book along with numerous pads and pencils were placed on a separate table for perusal and use of by the visitors.

I had the foresight on Thursday to bring a caravan onto the site for use by John and myself. This amenity proved to be most worthwhile as we were able to self-contain and feed ourselves to our own requirements. The caravan was parked alongside a shower block.

Saturday was a very successful day, in that many contacts were made interstate and into New Zealand. The girls participated in a most enthusiastic manner and many visitors were welcomed and put on air. The girls in camp went on air at every opportunity and at some stages were jostling to be next on. We realised the advantage of having them in camp. When an interesting contact was made, we had only to call, and they would gather around.

On Saturday afternoon contacts were made into the Ukraine and Italy on the quad and S8 signal reports were received most gratefully.

Saturday evening, contacts on 80 metres were unfortunately very difficult due to a late afternoon storm causing very high noise levels and S9 static crashes. A large number of visitors arrived during the evening and appeared to thoroughly enjoy the proceedings despite the poor conditions.

Conditions on Sunday proved to be very poor and until the arrival of Jim VK2DLJ during the morning, successful contacts appeared to be unobtainable.

Jim's arrival brought new hope. The long wire was then able to be tuned on 20 and 40 metres and the 520 was bumped up to full output. Although conditions were far from good on these bands we were able to make many contacts and most Australian states were worked during the day. Special thanks go to Jim VK2DLJ who stayed on until operating concluded late Sunday afternoon. Thanks also go to Beth, the pretty young assistant guide leader whose cups of coffee and pleasant smiles helped to keep young Jim on site all day.

... continued next page.

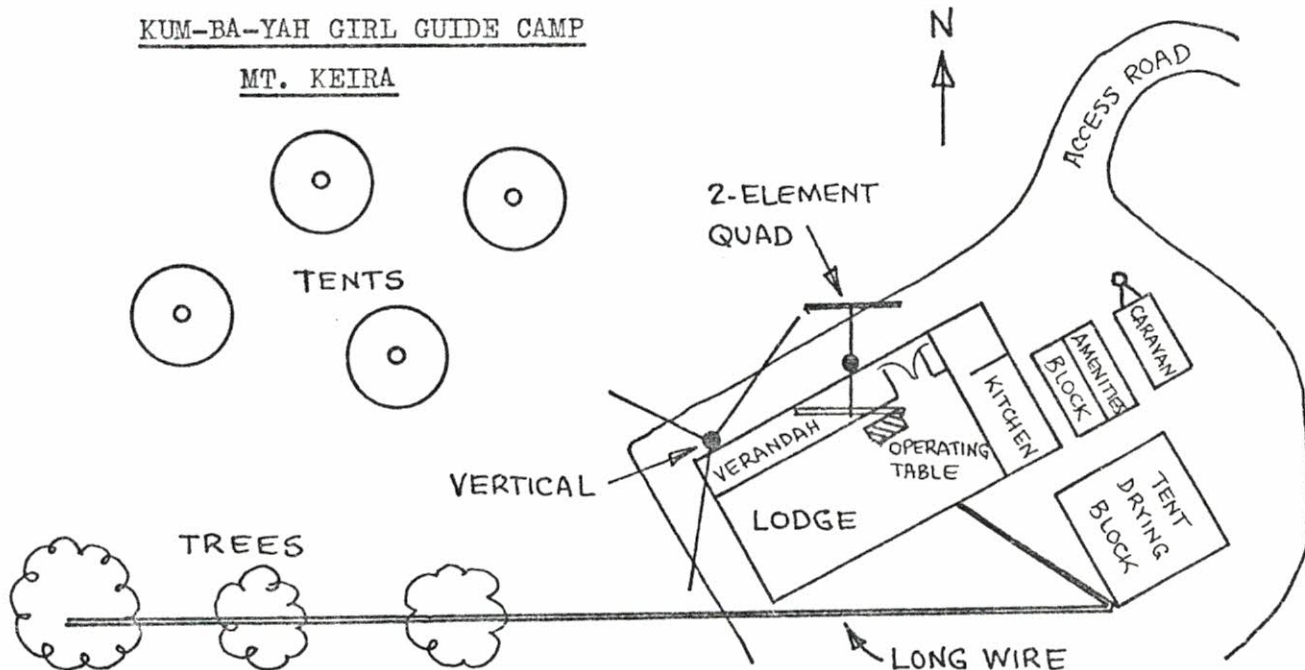
J.O.T.A. Report - continued.

Operating concluded Sunday afternoon with the girls still showing great interest and reluctantly all equipment was dismantled and packed up.

The guide leader and I have already discussed setting up again next year and much has been learnt from the experience we have gained so far. The work load and organisation are great, but so is the satisfaction gained by being of assistance to a very worthwhile movement.

I have only one further comment. If you are planning a field day - DX-pedition or just a weekend away away, try to entice John VK2NHA to go. Ask him to do the food shopping and the cooking and you are assured of a very pleasant time. And he doesn't even snore!

73's, Ron VK2VOE.



AND HERE ARE SOME JOTTINGS FROM BASS POINT:

The J.O.T.A. operation at Bass Point was so successful that few participants have recovered sufficiently to write about it.

Who was the prospective novice who averaged 3 hours sleep over the JOTA weekend (take your pick from Doug, Ron, Paul and Andrew).

Ron and the Nonstop Yackety Yak have both come across the resident stand-up comic from JA. Just one gem from his side-splitting QSO was -

QUESTION: What is the worst food for man to eat? ANSWER: Wedding cake.

Don't use rotten trees to support towers (the tower might fall on your head).

Nice work with the aeronautical mobile, Paul, the green face suited you mate!

You really know when a bloke's in the grip of nicotine when he takes off from Albion Park, and detours to Windang airstrip to get his smokes. Give them away Tony, it's bad for your health.

If you want to wake up at 5.30 a.m. leave your 2 metre rig on and Gerry will do the rest.

It seems that if you use a rhombic on 80 metres you don't need plate current. We got into Armidale 20 over 9 with the plate current turned all the way off??

Shipping must have been confused by the green fluorescent lamps flashing up on the rhombic feedline - until the R.F. blew them out!

Then there was Les with his fingers wrapped in insulation tape so he wouldn't get zapped by the rhombic.



AMBASSADOR JIM

As the picture at left shows, Jim Mead VK2NYY is keeping DX operators around the world right up to date on the currently developed state of Wollongong. Note the clever artistry depicting B.H.P. (Baked Hot Potatoes), E.R.S. (Extremely Roasted Snake), and of course A.I.S. (Another Indigenous Suntan), together with the sheer majesty of the typical Housing Commission architecture.

NO TRESPASSING

Violators will be Prosecuted to the Fullest Extent of the Law -

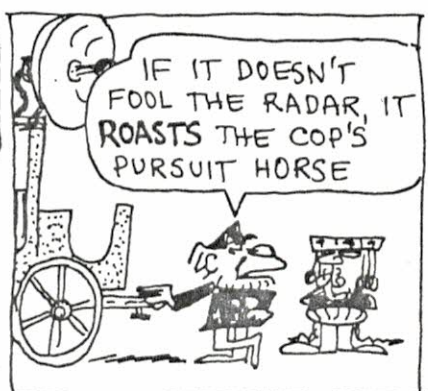
SISTERS OF MERCY

SMOKE SIGNALS

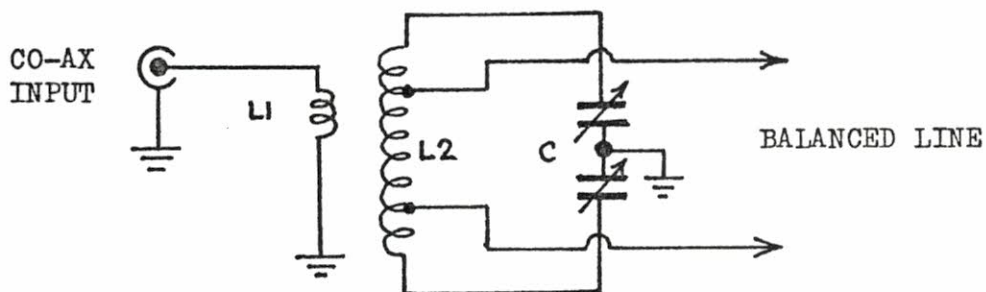
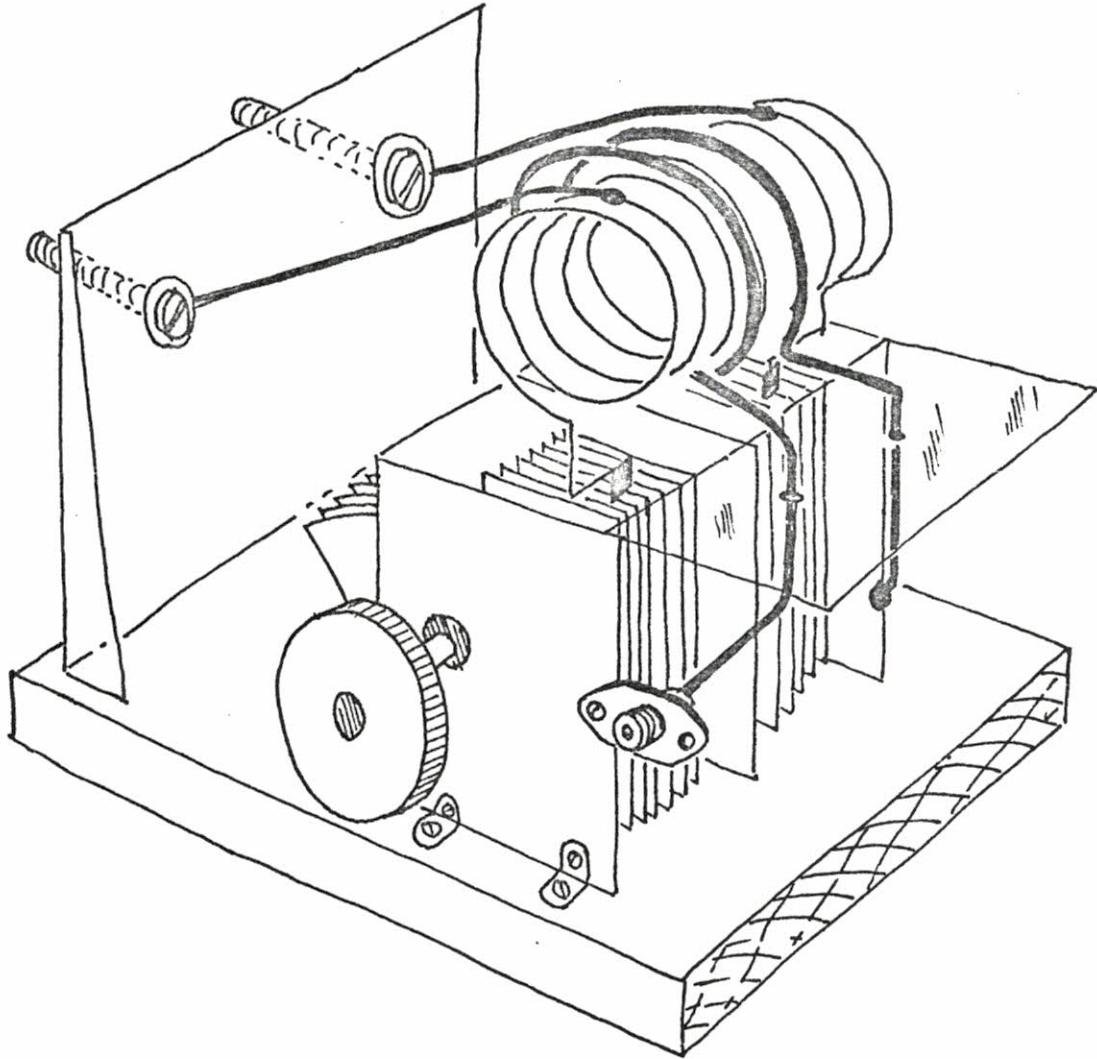
The soft enamelled wire available at attractive prices from a local disposals source may not be copper as expected. Gio VK2VPD carefully wound several feet of the wire into a small coil for a low-power oscillator, and found that it delivered a puff of smoke every time the key went down.

Not wanting to operate on SSB (Smoke Signal Band), Gio checked the resistance of the coil and found it to be 100 ohms!

By way of comparison, the finest gauge of copper wire commonly available is 40 gauge, and it has a resistance of about one ohm per foot.



CO-AX TO BALANCED LINE ANTENNA MATCHER



Capacitor C is a two-gang tuning capacitor recovered from an old broadcast receiver. Electrically, each gang has about 450 pF maximum capacitance; physically, the greater the plate spacing the better.

Coil L2 is 9 turns airwound, 5 cm diameter and about 8 cm long. The prototype used approximately 2 mm diameter copper tube, but any stiff copper wire would do. The coil is tapped two turns from each end, but this may need to be changed depending on the impedance existing at the start of the balanced feedline. The ends of the coil are soldered direct to the fixed plate terminals of the capacitor.

Coil L1 is 2 turns airwound, 7 cm diameter, about 3 cm long, and sleeved to avoid electrical contact with L2. The coil is supported by an insulating plate mounted on top of the capacitor. One end is soldered to the coaxial input socket; the other end to the earthed frame of the capacitor.

This device - a real team effort - was made and used by the group using the rhombic antenna at Bass Point during JOTA. Howard VK2AMD provided the design; Paul Engbo provided the capacitor and feedline insulator; Doug Anderson supplied the mounting plate for L1 and wound (beat?) the coils into shape; Andrew VK2YVM produced the wooden base, and his little brother "donated" the meccano brackets to screw down the capacitor; and Les VK2ALK came good with the knob.

C.W. ABBREVIATIONS

When using the Morse Code, abbreviations are useful to speed communications. Always use abbreviations sparingly when contacting an operator of unknown experience and ability. Below is a list of standard CW abbreviations.

AA	All after	GN	Good night	SASE	Self-addressed, stamped envelope
AB	All before	GND	Ground	SED	Said
ABT	About	GUD	Good	SIG	Signature; signal
ADR	Address	HI	The telegraphic laugh; high	SINE	Operator's personal initials or nickname
AGN	Again	HR	Here, hear	SKED	Schedule
ANT	Antenna	HV	Have	SRI	Sorry
BCI	Broadcast interference	HW	How	SSB	Single sideband
BCL	Broadcast listener	LID	A poor operator	SVC	Service; prefix to service message
BK	Break; break me; break in	MA,MILS	Milliamperes	T	Zero
BN	All between; been	MSG	Message; prefix to radiogram	TFC	Traffic
BUG	Semi-automatic key	N	No	TMW	Tomorrow
B4	Before	NCS	Net control station	TNX-TKS	Thanks
C	Yes	ND	Nothing doing	TT	That
CFM	Confirm; I confirm	NIL	Nothing; I have nothing for you	TU	Thank you
CK	Check	NM	No more	TVI	Television interference
CL	I am closing my station; call	NR	Number	TX	Transmitter
CLD-CLG	Called; calling	NW	Now; I resume transmission	TX	Text
CQ	Calling any station	OB	Old boy	UR-URS	Your; you're; yours
CUD	Could	OC	Old chap	VFO	Variable-frequency oscillator
CUL	See you later	OM	Old man	VY	Very
CUM	Come	OP-OPR	Operator	WA	Word after
CW	Continuous wave (i.e., radiotelegraph)	OT	Old timer; old top	WB	Word before
DLD-DLVD	Delivered	PBL	Preamble	WD-WDS	Word; words
DR	Dear	PSE	Please	WKD-WKG	Worked; working
DX	Distance, foreign countries	PWR	Power	WL	Well; will
ES	And, &	PX	Press	WUD	Would
FB	Fine business, excellent	R	Received as transmitted; are	WX	Weather
FM	Frequency modulation	RCD	Received	XCVR	Transceiver
GA	Go ahead (or resume sending)	RCVR (RX)	Receiver	XMTR (TX)	Transmitter
GB	Good-by	REF	Refer to; referring to; reference	XTAL	Crystal
GBA	Give better address	RFI	Radio frequency interference	XYL(YF)	Wife
GE	Good evening	RIG	Station equipment	YL	Young lady
GG	Going	RPT	Repeat; I repeat	73	Best regards
GM	Good morning	RTTY	Radioteletype	88	Love and kisses
		RX	Receiver		

MISCELLANEOUS ABBREVIATIONS

Abbreviations	Meaning
AA	All after (to be used after a note of interrogation to ask for a repetition)
AS	Wait
CFM	Confirm (or I confirm)
CQ	General call to all stations
MN	Minute or minutes (to be used to indicate the duration of a wait)
NIL	I have nothing for you
OK	Agreed
REF	Referring to (or refer to)
TU	Thank you for your co-operation

PUNCTUATIONS AND OTHER SIGNS

Full stop	(.)
Note of interrogation or request for repetition	(?)
Hyphen or dash	(-)
Fraction bar	(/)
Bracket (before word affected)	[(
Bracket (after word affected))]
Underline or block letters (before and after the words or part of phrase affected)	..
Break signal (double dash)	(=)
Error (erase signal)
End of transmission
Invitation to transmit
Acknowledgment of receipt
Wait
End of work
Commencing signal (to precede every transmission)

The RST System

READABILITY

- 1- Unreadable.
- 2- Barely readable, occasional words distinguishable.
- 3- Readable with considerable difficulty.
- 4- Readable with practically no difficulty.
- 5- Perfectly readable.

SIGNAL STRENGTH

- 1- Faint signals barely perceptible.
- 2- Very weak signals.
- 3- Weak signals.
- 4- Fair signals.
- 5- Fairly good signals.
- 6- Good signals.
- 7- Moderately strong signals.
- 8- Strong signals.
- 9- Extremely strong signals.

TONE

- 1- Sixty-cycle a.c. or less, very rough and broad.
- 2- Very rough a.c., very harsh and broad.

- 3- Rough a.c. tone, rectified but not filtered.
- 4- Rough note, some trace of filtering.
- 5- Filtered rectified a.c. but strongly ripple-modulated.
- 6- Filtered tone, definite trace of ripple modulation.
- 7- Near pure tone, trace of ripple modulation.
- 8- Near perfect tone, slight trace of modulation.
- 9- Perfect tone, no trace of ripple or modulation of any kind.

The "tone" report refers only to the purity of the signal, and has no connection with its stability or freedom from clicks or chirps. If the signal has the characteristic steadiness of crystal control, add X to the report (e.g., RST 469X). If it has a chirp or "tail" (either on "make" or "break") add C (e.g., 469K). If it has clicks or noticeable other keying transients, add K (e.g., 469D). Of course a signal could have both chirps and clicks, in which case both C and K could be used (e.g., RST 469CK).

AR After call to specific station, or end of transmission

AS Wait; stand by

R All received correctly

K Any station transmit

KN Addressed station only transmit

SK End of contact or communication

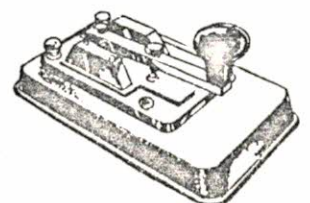
CL Going off the air

The bar indicates that letters are run together.

C.W. ONLY BAND SEGMENTS (All frequencies in MHz)

80m	3.5	-	3.535
40m	7.0	-	7.03
20m	14.0	-	14.1
15m	21.0	-	21.15
10m	28.0	-	28.2

(C.W. may also be used anywhere else in the bands but avoid 10m beacons between 28.2 and 28.27 MHz)



T1: BC214L/2SA495
T2: TIP3055/TIP 33A
T3: MPF102



SEE FOR COMPARISON THE "PRACTICAL WIRELESS"
"SANDBANKS" METAL DETECTOR.

N.S.W. REPEATER ALLOCATIONS (VHF)

August 1980.

N.S.W. has had a high demand for repeater services and has made use of most of the available channels. The numbering of systems in N.S.W. tends to be by the shorter original method rather than the 4 figure national number.

<u>Channel</u>	<u>Callsign</u>	<u>Geographical region</u>	<u>Notes</u>
0a 6625	RPI	Maitland RTTY system	No voice operation
1 6650	RDX	Western Blue Mountains	
1a 6675	RTY	Sydney RTTY system (off air)	No voice operation
2 6700	RPM	Port Macquarie	
	ROA	Orange - Central West	
	RMU	Mid South Coast - Milton	
3 6750	RAG	Central Coast - Gosford	
	RFS	Far South Coast - Eden/Bega	
	RWG	Riverina - Wagga	
4 6800	RLE	Sydney South - Heathcote	
	RIC	Far North Coast - Lismore	
5 6850	RAW	Illawarra - Wollongong	
	RAB	New England - Gunnedah	
	RGF	Murrumbidgee - Griffith	
5a 6875	RMB	Sydney Northern Beaches - Beacon Hill	
6 6900	RAN	Hunter Region - Newcastle	
	1RAC	Canberra City	
6a 6925	RGR	Sydney Lower North Shore - Gladesville	
7 6950	RMI	North West Region - Moree/Inverell	
	1RGI	A.C.T. Division - Mt. Ginini	
8 7000	RWI	Sydney North - Dural	
<u>Above 7000 repeater offset is up 600 KHz</u>			
9 7050	RBM	Blue Mountains - Springwood	Temporary location
10 7100	RWR	Hunter Region - Watigan Mt.	Temp. off air
11 7150			
12 7200			
12a 7225	RST	S.S.T.V. system, Sydney	Not on air
13 7250	RNS	Sydney upper North Shore	Temp. off air
14 7300			
15 7350	RHR	Southern Highlands - Mittagong	

New Services to be Introduced.

Coffs Harbour - application being processed. Expected channel 1.

Tamworth - awaiting license. Ch 13. Request received for a lower channel.

Western Region - Gilgandra - proposed in Warrumbungle Mts. Possible Ch 3.

South Coast - Nowra - Being processed - Ch 12.

Upper Hunter - being considered. Ch 12.

Tenterfield/Glen Innes - being considered - no channel allocated.

Northern Riverina - Young/Cootamundra - being processed - Ch 10.

A.T.V. liason system. Possible site east Blue Mts. Being considered. Ch 14.

WICEN - has been allocated ch 11. A Sydney system expected to be located at Chatswood. Special system.

- Thanks to Tim Mills VK2ZTM, State Repeater Co-ordinator, for the above information.

The well-built stewardess.

What happens to a stewardess wearing an inflatable bra when the cabin of her jet plane is depressurized?

As Los Angeles Times columnist Matt Weinstock told it Friday, this set of potentially explosive circumstances occurred recently on a Los Angeles-bound light. He gallantly withheld the identity of girl and airline.

"When she had, ahem, expanded to about size 46," Weinstock wrote, "she frantically sought a solution. Somehow she found a woman passenger who had a small hatpin and stabbed herself strategically.

"However, another passenger, a man of foreign descent, misunderstood. He thought she was trying to commit hara-kiri the hard way. He grappled with her trying to prevent her from punching the hatpin in her chest.

"Order was quickly restored, but laughter still is echoing along the airlines."

Weinstock says it really happened.

- from "The Flying Circus of Physics",
by Jearl Walker.

Electric shock from capacitors.

High grade capacitors, and, in particular, large energy storage capacitors as used in pulsed capacitor banks, will recover a considerable proportion of the original charging energy if left on open circuit after discharge. This phenomenon is known as the "residual effect", "dielectric hysteresis" or "dielectric absorption" effect and a capacitor is said to have an "absorptive capacity".

Experience has shown that recovery may be as much as 10% of the original voltage, and a 30 kV capacitor may build up to 2 or 3 kV in 10 minutes. Further, dangerous voltages can build-up on open-circuited high voltage capacitors over a period of many months after discharge.

It has been found that a discharge of energy exceeding 10 joules into the human body can be hazardous to life, while 0.25 joules gives a heavy shock. Ten joules would be obtained by complete discharge of a capacitor charged as in the following table:

CAPACITY (uF) :	0.002	0.2	20	80	320	2000
CHARGED TO (kV) :	100	10	1	0.5	0.25	0.1

It is essential that each spare or disconnected capacitor should be kept individually short-circuited by a robust connection when not in use.

It should also be remembered that "new" capacitors have already been energized for test purposes, and should also be kept short-circuited when stored. Capacitors built into equipment which is not in use must similarly be short-circuited individually, otherwise hazard may exist when they are connected in series or if there is a circuit fault when in parallel.

- from Everett and Jenkins, "A Safety Handbook for
Science Teachers".

BEHIND.

Did you hear about the butcher who backed into the bacon slicer, and got behind in his orders?

ILLAWARRA MONTHLY NEWS BROADCAST:

This takes place at 7-15 p.m. local time on the Sunday preceding the meeting night. Next broadcast is on Sunday 9th November. Listen on repeater Channel 5, 28.46 MHz or 3.565 MHz

SPECIAL RAFFLE:

For everyone wanting a morse trainer of his/her very own, the Datong Morse Generator is just the thing - get a \$2 ticket at the next meeting. The generator produces random letters and numbers, with independantly variable character speed and character spacing. The raffle will be drawn at the Christmas Family Barbecue, Sunday December 7th, on Saddleback Mountain.

NEW CALLSIGNS:

Congratulations to Les VK2YVD and Andrew VK2YVM on their new callsigns. Les has been active on 2 metres, and Andrew was very active at Bass Point during J.O.T.A.

It won't be long before the VK2X-- series is used for limited callsigns - in Victoria the VK3X-- series is already in use.

CREED 7B MAGNET DRIVER:

The double current magnet driver described earlier this year in the Propagator used a pair of MJE340 transistors for switching the magnet current. These no longer appear to be available in Wollongong, but Jim VK2DLJ reports that the BF338, from Martin deLaunay in Keira Street, can be substituted. The BF338 has V_{ce} of 200 volts and I_c of 100 mA so is easily able to switch the 100 volts at 20 mA required in the magnet driver circuit.

QSL CARDS:

The Illawarra Society will handle inwards and outwards QSL cards for members who are also W.I.A. members. See Rick Hill, VK2DAP, the club QSL officer, at the monthly meetings. Rick also holds the club copies of the World Call Books, which will be available at meetings, and Rick can provide information from them during the 80 metre net on Sunday nights.

MOBILE SHACK?

Intending amateur Bill Stewart is getting really well set up for the day his licence arrives - his "shack" is a 16 foot caravan, complete with hot and cold running water, a fridge, two comfortable couches, and a long wire antenna.

TEN METRE BEACON:

Work is well advanced on a device which will double as a morse trainer and a ten metre beacon. The microprocessor control circuit is already operational. It produces five minutes of random morse characters, followed by station identification and G.M.T. (in morse). The five-minute segments cycle through a range of morse speeds - and all done with four I.C.'s, including the 280 microprocessor.

WANTED FOR PROPAGATOR:

(1) Technical articles (other readers will be interested in things that you have built).

(2) Monthly DX report.

(3) Monthly jottings from 80 metre net, etc.

Any contributions gratefully received. See Brian VK2AXI at club meetings.

FOR SALE:

Denton Super Tuner, suitable for all antennas from 10 to 160 metres. Handles full legal power. \$100 firm.

John Thurston VK2DET, 11 Cottage Grove, Corrimal.

MONDAY NEWS BROADCAST TIMES DURING SUMMER:

STATION	FREQUENCIES MHZ	G.M.T.	EAST AUSTRALIAN DAYLIGHT SAVING TIME
VK2WI/AWI Voice	3.595, 7.146, 146.85 and others	0000	11 a.m.
VK2TTY RTTY	7.045, 14.090, 146.6	0030	11.30 a.m.
GB2ATG RTTY	14.090 \pm 2Khz	0830	7.30 p.m.
K2WI/AWI Voice	3.595, 146.85 and others	0830	7.30 p.m.
VK2TTY RTTY	3.545, 146.6	0930	8.30 p.m.

QUEENSLAND RTTY NEWS:

VK4TTY transmits a news broadcast on the 1st and 3rd Monday of each month at 7.30 p.m. on 3.545 MHz. On alternate Mondays, the VK2TTY news is normally rebroadcast.

NEWS FROM VK2TTY:

Good news for amateurs looking for an African contact on 50 MHz. The Liberian Radio Amateur Association has received special permission for six meter operation for the purpose of studying long distance propagation. Authorized frequencies are 50 MHz to 54 MHz.

Sydney is to suffer the problems of some of the other Australian cities as from the 24th October. That is the date that the multicultural T.V. station commences transmission on Channel 0 (zero). It will also transmit on UHF Channel 28 (526-533 MHz). Further, all Sydney T.V. stations will, in the future, be using UHF translators on Channel 44 (ABC), 46 (ATN), 49 (TCN) and 52 (TEN). These are in the 652 MHz to 722 MHz frequencies.

NEWS FROM GB2ATG:

We understand from the ARRL RTTY Bulletin that all Russian QSL's must be sent via Box 88 and that it is a waste of time and money to include letters and IRC's with card as all envelopes are processed in Moscow and letters and IRC's are removed before the card is passed to an individual or club. Save your money therefore and wait patiently until you receive the card through the Bureau.

It is also understood that, when writing to an amateur in Turkey, you should make no mention of amateur radio or callsigns on the envelope.

German Amateur Licence Regulations Revised:

There are now 3 classes of licence - A, B, and C, the C licence being for VHF only (144 MHz up), and the B licence appears to be "senior" to the A licence. One interesting point is that the power ratings are now based on RF power output power rather than DC input power. In the case of the B licence 75 watts output is permitted on 160 metres and 750 watts output power on all other bands from 3.5 MHz to 1300 MHz. In the case of the A licence, 150 watts RF output power is the maximum allowed from 3.5 MHz to 1300 MHz. The C licence limitations are for 75 watts RF output power for all VHF bands.

A footnote to the chart indicates that "output power" means peak RF power but makes no mention of E.R.P.

MOONBOUNCE REPORT, NOVEMBER 1980

VK2AMW EME STATION

The dish was dismantled at its Dapto site and transported to its new site on the weekend of 18th and 19th October.

The 30 foot diameter parabolic reflector made the move in one piece after it had been separated from its counterweight assembly and lifted off the support tower.

The journey was made by road early on the Sunday morning before there was much other traffic about. There was very little room to spare on some of the narrower sections.

No damage was caused by the move, which is a tribute to the expertise of the haulage contractor.

The major components now rest on platforms where they will be checked over carefully, any corroded steelwork replaced and all then repainted ready for erection on its new concrete foundations. These foundations have yet to be poured.

As much work still has to be carried out by university staff and by whichever amateurs would like to help it is expected that it will be a number of months before we are operational again.

The vandals struck again a few weeks before the move when they removed the twenty foot long tubular feed supports from the parabola. As these were of duralium for strength and lightness they may not be easy to replace.

1296 MHZ EME TEST

The scheduled EME test by Swedish station SK2GJ was carried out over the weekend of 25th and 26th October their time (26th and 27th our local time). Final results are not yet to hand. I had hoped to participate on Sunday 26th but a continuous cloud cover over Wollongong during the common window period (approximately 3 a.m. to 6.30 a.m. local time) caused disappointment. A check was maintained on the EME information frequency of 14345 KHz and reports received from the Swedish end indicated that SK2GJ was operational and had received their own echoes at 24 dB over noise. Unfortunately the tracking gear of the 100 foot diameter dish had developed a malfunction and was still being worked on up to nearly the end of our common window period, so they were not able to try for contacts up to that time. They expected repairs to be completed soon after but it was too late for me - the local cloud cover lifted as the sun came up but the moon had just passed below the horizon.

SK2GJ was to operate again on the next day, but being a working day for me, it was not possible to participate.

I had advised VK1ZT of the test and he re-activated his 1296 MHz set-up, which includes a 10 foot diameter dish. He indicated on the 26th that he would be trying again on the 27th local time - results will be known next weekend.

The club station ZL1BQ was active with a 10 foot portable dish. They were contacted on 14345 KHz during the EME test period on Sunday and they described their set-up which was in an encampment up on a hill. They included in their team several keen and experienced UHF and SHF operators, who can show us in VK2 what a dedicated group can do.

So much remains to be discovered on our UHF and SHF bands that it is a pity that we don't take more interest in them. For instance, the SK2GJ receiving set-up included a pre-amplifier developed and loaned to them by G3WDG. It has a measured noise figure on 1296 MHz of 0.55 dB.

MICROWAVE NEWS

The latest edition of "VHF Communications" includes a construction type article on a SSB transceiver for the 10 GHz band - who said that hams can't develop really "state-of-the-art" gear.

- Lyle VK2ALU

THE ILLAWARRA AMATEUR RADIO SOCIETY

PRESIDENT: Keith Curle, VK2OB, 24 Beach Drive, Woonona, 2517.

VICE-PRESIDENT: Denis McKay, VK2DMR, 17 Doncaster St, Corrimal 2518.

SECRETARY: John Doherty, VK2NHA, 7 Risley Road, Figtree, 2525.

TREASURER: Geoff Cuthbert, VK2ZHU.*****

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Brian Wade VK2AXI; Kieran Kennedy VK2DAN.

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ANNUAL SUBSCRIPTIONS: Send \$5 to the Treasurer, I.A.R.S., P.O. Box 1838, Wollongong, N.S.W. 2500., or see Geoff Cuthbert at meetings.

INQUIRIES: The Secretary, I.A.R.S., P.O. Box 1838, Wollongong, N.S.W. 2500.

QSL CARDS: For Illawarra members who are also W.I.A. members, see Rick Hill VK2DAP at meetings, for inwards and outwards cards.

THE ILLAWARRA AMATEUR RADIO SOCIETY - SERVICES

MONTHLY MEETINGS: Second Monday of each month (except January) at 7.30 p.m., Congregational Hall, corner of Coombe and Market Streets, Wollongong.

MONTHLY BROADCAST: 7.15 p.m. on the Sunday night before the monthly meeting, on VHF repeater 5, UHF repeater 9, and 28.46 MHz.

SLOW MORSE BROADCAST: From VK2AMW on Monday nights (except meeting nights), 7-8 p.m., on 1.805 MHz.

W.I.A. BROADCAST RELAY: Sundays 11 a.m. and 7.30 p.m., repeater 5.

MONTHLY NEWSLETTER: The Propagator is usually posted to reach members during the week before the monthly meetings.

AMATEUR RADIO CLASSES: Preparing for Novice, Limited, and Full licences, Fridays 6-9 p.m. See Keith Curle VK2OB or Denis McKay VK2DMR.

CLUB NETS: 52.525 MHz FM, 8.30 a.m. Sundays.
3.565 MHz, 8.00 p.m. Sundays.

VHF REPEATER: VK2RAW, Channel 5 (146.25 MHz in, 146.85 MHz out)

UHF REPEATER: VK2RUW, Channel 9 (433.225 MHz in, 438.225 MHz out)

THE PROPAGATOR

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