



THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY

PO BOX 1838 WOLLONGONG NSW 2500

Volume 84, Number 3.

April 1984.

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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.

NOTICE OF MEETING: The next meeting of the I.A.R.S. will be held on Monday April 9th at 7.30 p.m. in the Congregational Church Hall, Coombe Street, Wollongong. Thanks for everyone's consideration in not smoking in the Hall; perhaps an extra raffle ticket could be bought with the money saved.

ANNUAL GENERAL MEETING - NEW COMMITTEE: The Committee and its various subgroups was elected at the March Annual General Meeting without too much table thumping and threatening from re-elected President Dave VK2DFL. Twenty Club members have been elected to the various positions and special note should be made of those assisting for the first time --- Jim VK2JIM, Committee and Award Manager; Andrew McEwan, Asst. Treasurer; Gerard Mueller, Committee; Kevin VK2EBI, Assisting on 80m Nett Co-ordinating and Nora Fisher whose efforts have already been apparent by way of Publicity. Congratulations also to those re-elected from last year. A summarised listing appears as usual on our back page.

At the close of the meeting, Dave VK2DFL and Mike VK2DFK gave a demonstration of computerised RTTY.

THIS MONTH'S MEETING: Lyle VK2ALU, enjoying the dawn of his retirement, could not postpone that dreaded shack 'spring clean'. Lyle will bring in some equipment of a high nostalgia rating for the benefit of those 'who are in love (with it), and for those who can remember.....'.

Our monthly raffles will be reintroduced following the run of mini-auctions held last year.

SUBSCRIPTIONS: A reminder that subscriptions for 1984/85 are now due. Full membership is \$10.00 with students and pensioners at \$5.00. Please pay promptly to enable the Club to function in the black.

(Your regular front page Editor, Ken VK2DOI will return to next month's issue. VK2MY)

REPEATER REPORT

MOUNT MURRAY 6850

THE REPEATER WAS TAKEN OUT OF SERVICE FROM 4/3/84 TO 10/3/84 DURING WHICH TIME ITS CONTROL UNIT WAS BEING EXTENSIVELY MODIFIED TO INTERFACE WITH THE NEW TELEMETRY DECODER. UNFORTUNATELY THIS WORK HAD TO BE DONE IN A WELL EQUIPPED WORKSHOP OWING TO THE COMPLEXITY OF ALTERING THE OLD CIRCUITRY (DISCREET TRANSISTORS) TO MATE WITH THE INPUT/OUTPUT CIRCUITS OF THE TELEMETRY UNIT, WHICH USES ALL CMOS DEVICES.

THE TELEMETRY UNIT IS WORKING AS PLANNED. ITS PURPOSE IS TO ENABLE US TO REMOTELY CONTROL THE BASIC REPEATER FUNCTIONS AND TO MONITOR VARIOUS THINGS SUCH AS WIND SPEED, BATTERY VOLTAGE ETC.

THE TELEMETRY CODE IS NORMAL AMATEUR STANDARD RTTY. THIS ELIMINATES THE NEED TO BUILD UP A NUMBER OF ENCODERS FOR USE BY THOSE PEOPLE ELECTED TO CONTROL AND MONITOR THE REPEATER. INSTEAD, ANY AMATEUR WHO HAS RTTY CAPABILITY, AND WHO KNOWS THE COMMAND CODES, CAN CONTROL THE REPEATER WITH HIS NORMAL RTTY STATION. ALL REPEATER COMMITTEE MEMBERS HAVE RTTY CAPABILITY.

THE MOST IMPORTANT COMMANDS THAT CAN BE CARRIED OUT ARE AS FOLLOWS

1/ REPEATER SHUT-DOWN. THIS COMMAND WILL ONLY BE USED IN THE CASE OF PERSISTANT MIS-USE OF THE REPEATER, SUCH AS THAT TYPE OF CONDUCT RECENTLY OBSERVED ON THE SYDNEY REPEATERS. ALSO IN THE CASE OF INTERFERENCE PROBLEMS, OR A REQUEST FROM DOC.

2/ AUXILIARY RECEIVER SWITCH-ON AND SWITCH-OFF. THIS COMMAND WILL BE USED TO CONTROL THE AUXILIARY RECEIVER FOR PURPOSES OF AUTOMATICALLY RELAYING THE WIA SUNDAY BROADCASTS .

3/ TIMER INHIBIT. THIS ONE IS USED IN CONJUNCTION WITH BROADCASTS BOTH WIA AND LOCAL CLUB B/CASTS TO PREVENT TIME-OUT.

4/ TIMER REDUCTION. THIS REDUCES THE TIME-OUT PERIOD FROM THE USUAL 4 MINUTES TO 20 SECONDS AND WILL ONLY BE USED WHEN THE BATTERY IS LOW BECAUSE OF EXCESSIVE RAG-CHEWING ACTIVITY IN THE ABSENCE OF WIND. IT KEEPS THE REPEATER ACTIVE FOR URGENT MESSAGES WHILE DISCOURAGING LONG TRANSMISSIONS WHICH COULD END UP FLATTENING THE BATTERIES.

THERE ARE OTHERS WHICH ARE AN AID TO DIAGNOSIS OF PROBLEMS AND ASSIST IN MAINTENANCE. IT IS HOPED THAT THE TELEMETRY SYSTEM WILL SAVE THE REPEATER MAINTENANCE TEAM MANY HOURS OF DRIVING AND PETROL COSTS.

AT THE SAME TIME AS THE REPEATER WAS RETURNED TO SERVICE A FRESHLY CHARGED SET OF BATTERIES WAS INSTALLED, THE TOTAL CAPACITY NOW BEING 250 AMP-HOURS. FROM EXPERIENCE GAINED SINCE THE WIND GENERATOR WAS INSTALLED THIS SEEMS TO BE ABOUT THE OPTIMUM CAPACITY THAT GIVES THE BEST COMPROMISE BETWEEN DURATION WITH NO WIND AND ABILITY TO BE FULLY CHARGED WHEN THERE IS SUFFICIENT WIND. THE REMAINDER OF THE ORIGINAL 600 AMP-HOUR BANK IS SPLIT UP AND SPREAD AROUND THE COUNTRY-SIDE AT THE HOMES OF VARIOUS REPEATER COMMITTEE MEMBERS, AND KEPT IN A FULLY CHARGED CONDITION IN THE EVENT THAT WE HAVE AN EXTENDED PERIOD WITHOUT WIND. IN THIS CASE IT IS A FAIRLY SIMPLE TASK (ALTHOUGH STRENUOUS) TO DO A BATTERY CHANGE. HOPEFULLY THIS SHOULD BE NECESSARY ONLY 2 OR 3 TIMES A YEAR, AT WHICH TIMES ROUTINE MAINTENANCE CAN BE CARRIED OUT AT THE SITE.

REMEMBER THE IDENT TONES ? ? ? ? ?

SEE LAST MONTHS 'PROPAGATOR'

DAVE VK2DFL IS MAKING AN ADDITIONAL AERIAL WHICH WILL BE PERMANENTLY CONNECTED TO THE AUXILIARY RECEIVER. WHEN FITTED, BOTH RECEIVERS WILL BE ACTIVE DURING BROADCASTS, ALLOWING URGENT TRAFFIC TO BE CARRIED BY THE REPEATER WHILE A BROADCAST IS BEING RELAYED WITHOUT UNDUE INTERFERENCE TO THOSE LISTENING TO THE BROADCAST. AT PRESENT, A CO-AX RELAY CHANGES THE ONLY RECEIVING AERIAL OVER TO THE APPROPRIATE RECEIVER.

SUBLIME POINT 7275

THE RTTY REGENERATOR FAILED ON 16/3/84, GIVING LOW DEVIATION FROM THE REPEATER WHEN REGENERATING RTTY SIGNALS. ON 18/3/84 THE CLUB BAR-B-Q WAS HELD AT SUBLIME POINT, AND THE REPEATER WAS INSPECTED BY SEVERAL MEMBERS. AT THIS TIME THE RTTY REGENERATOR WAS REPAIRED, THE FAULT BEING CAUSED BY A FAULTY SOLDER JOINT IN THE TONE FILTER SECTION OF THE RTTY REGEN BOARD.

NEW REPEATER COMMITTEE

THIS YEARS REPEATER COMMITTEE IS AS FOLLOWS:-

GRAEME VK2CAG, MIKE VK2DFK, MORRY VK2EMV, IAN VK2EXN, DAVE VK2EZY, AND FRED VK2YSB.

WE PLAN TO HAVE A REPEATER COMMITTEE MEETING EARLY IN THE YEAR TO SORT OUT THE DETAILS OF PLANNED REPEATER ACTIVITIES FOR THIS YEAR. BRIEFLY, WE WILL BE LOOKING AT MAKING DUPLEXERS FOR ALL OF OUR REPEATERS, RE-BUILDING THE AERIAL SYSTEM AT SUBLIME POINT, STARTING ON THE MICROPROCESSOR MESSAGE STORAGE SYSTEM FOR 7275, AND PRODUCING A VIDEOTAPE OF THE IARS REPEATER NETWORK.

GRAEME VK2CAG

FEBRUARY RESULTS FOR 'UHF KILOMETRE KONTEST'

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>TOTAL</u>
REG VK2EMI	5	4					9
IAN VK2EXN	4	3					7
LYLE VK2ALU	3						3
GRAEME VK2CAG	2	2					4
ROY VK2KO	1	1					1

THERE ARE STILL FOUR MONTHS TO GO, AND RUMOUR HAS IT REG IS GOING ON HOLIDAYS SOON. THE CHAPS THAT HAVE RIGS ALMOST FINISHED, HOW ABOUT MAKING AN AXTRA EFFORT TO GET ON AIR AND GET SOME POINTS. THE SOLDERING IRON HAS BEEN RUNNING HOT AT XCC AND KPL QTH, AND KO HAS BEEN EXPERIMENTING WITH AN ANTENNA SO MAYBE SOME BIG SCORES IN THE NEXT MONTH OR TWO. HOW ABOUT FINDING THE LOCATION OF A DISTANT REPEATER, TAKING YOUR RIG AND YAGI, AND OPERATING PORTABLE FROM THE TOP OF A MOUNTAIN. (ITS AMAZING WHAT ALTITUDE CAN DO).
C.U. NEXT MONTH.

VK2EZY

Moonbounce Report - April 1984.

A copy of the half hour long edited version of the videotape of our contact on 10/9/83 with Z25JJ was sent to Peter Carey (now ZS6CDD) as a record of our first 1296mhz EME contact. His comments on the tape have not yet been received.

VK2AMW was not scheduled for any tests on the March 'sked.' weekend due to our Moon window period not being at suitable times of the day for EME stations in Europe and USA. VK2ALU operated the installation on the evening of Sunday 18/3/84 and called CQ on a 'random' basis on the frequency allocated for such calls, in case any stations in the Pacific area were on. Nothing was heard apart from our own echoes, which averaged approx. 3dB above noise.

A High Power Permit has now been received to allow VK2AMW to operate for EME communication and experimental purposes at up to 500 watts output from the power amplifier, under certain specified conditions. The present power amp. is capable of running with an output of up to 160 watts and may be pushed up to 200 watts output.

Design and construction of a computer operated dish pointing system is proceeding at the University of Wollongong. It will operate on the Hour Angle drive only.

The satellite communication system at VK2ALU is being recommissioned with the idea of being able to participate in the Oscar 10 EME nets which are set up for the purpose of arranging EME skeds. and for discussion of EME matters in general.

Lyle VK2ALU.
(EME Coordinator.)

HAND-HELD RADIOS VS. USER HEALTH HAS BECOME a legal issue in New Jersey. A fire chief there has sued General Electric, alleging his use of one of their hand-helds over a 14-year period damaged his sight and hearing. At issue is GE's alleged negligence in not providing a warning of possible health hazards, despite a recommendation by the federal government in 1973 that such a warning be provided with portable transceivers. Whether close exposure to moderate RF fields actually causes physical ailments has been the subject of heated debate for years. Despite many government and industry studies no clear-cut consensus has been reached. Attempts have been made on the local level, most recently in Massachusetts, to closely regulate all transmitter operators, and an on-going effort (strongly supported by ARRL's Biological Effects of RF Energy Committee) is being made for the adoption of a federal pre-emption law with exemptions for Amateur Radio. The effects of a decision favoring the fire chief could have an even more serious effect on Amateur Radio than the current antenna ordinance problems, barring federal pre-emption. Local governments, acting to protect citizens, could enact legislation that would severely restrict if not bar operation of Amateur transmitters within their borders.

Ham Radio Magazine, July 1983

COMPUTER'S AND YOU' S..

To achieve the best results from your new fangled, all strange box of IC's and keys etc. you really need a special monitor.. If you can't afford one of these the next best thing is a TV, modified to run as a monitor..

If you have a small B/W portable or even an old B/W console set then in most cases it is possible to use them as a switch selectable TV/Monitor..

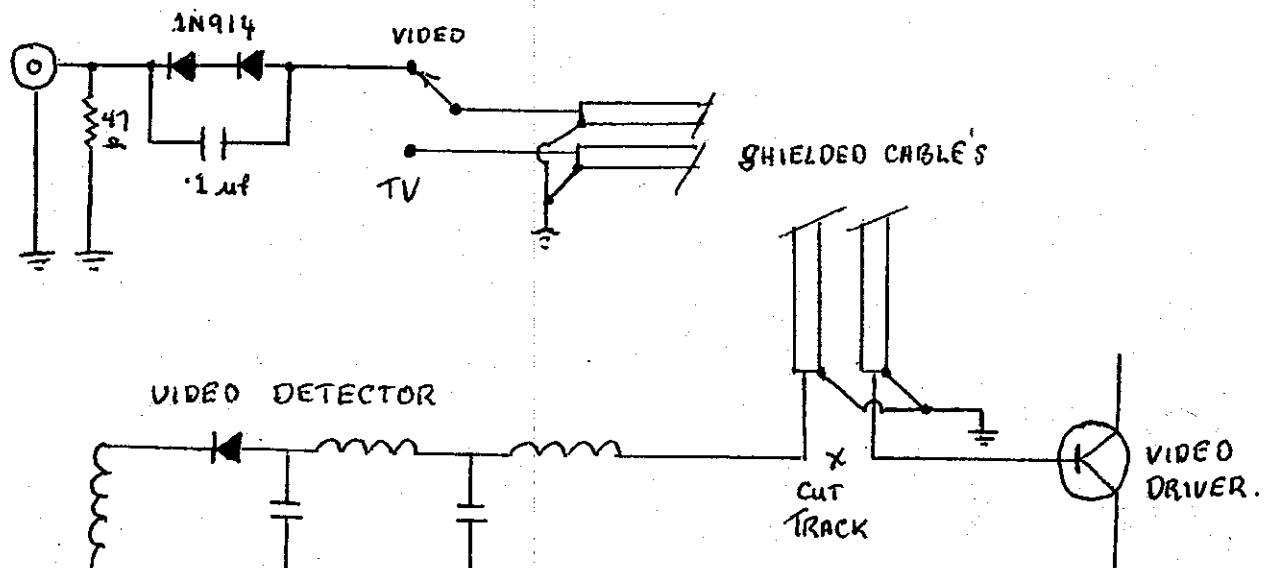
NOTE.. there are some TV sets you cannot convert, so a circuit diagram of your set is needed first.

Parts list..

1x RCA socket to connect the video from computer,
 1x 470ohm 1/4 watt resistor,
 2x 1N914 diodes,
 1x 0.1 uf monolithic capacitor,
 1x spdt switch (if you still wish to use the TV side),
 2x 600 mm shielded cable.

All these can be mounted inside the set near the antenna input.

Note.. You can't expect to get the same quality of picture from a converted TV as the one you get from a professional monitor but it is better than none at all. If you do a lot of program work then a good monitor is well worth the investment.



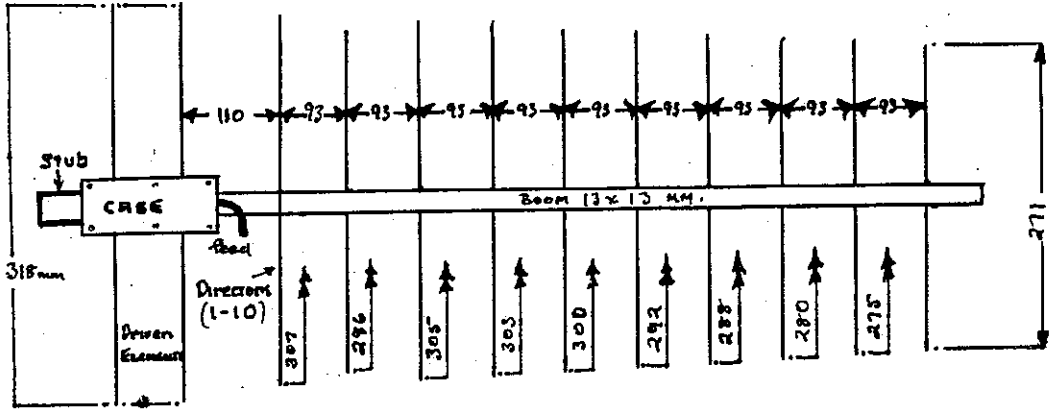
Thanks to Ray VK2XCC/PHD, for the info on this mod.



UHF "70 cm" DUAL DRIVEN YAGI

Developed from "ZL Special" P.W. November 1978

All Dim in MM



Driven Elements
6.3mm (1/4")
(SEE DETAIL.)

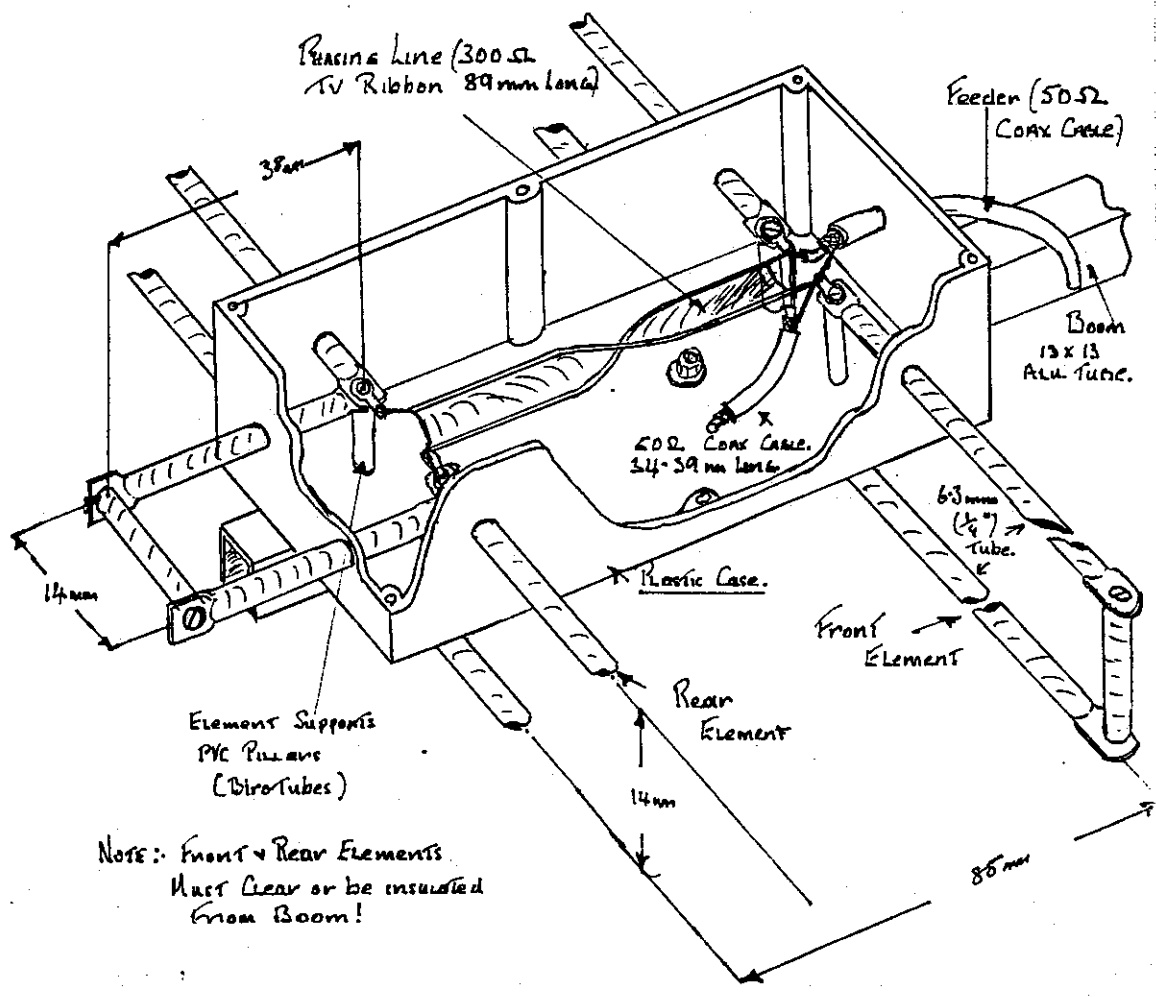
Directors 3.1mm (1/8")
Rod

Successive Elements If Required,
Decrease by 4mm per Element.

Boom Length = 1.1mtrs.

DRIVEN ELEMENT & FEED DETAILS.

DAVE MYERS VK2DFL
30 HIGHLANDS PDE.
DULLI 2516.



NOTE: FRONT & REAR ELEMENTS
MUST CLEAR OR BE INSULATED
FROM BOOM!

70CM ANTENNA

Dave Myers VK2DFL.

The design of this antenna is purely experimental and no claim to it's operation is implied. The original design was taken from Practical Wireless, November 1978, based on an idea from the ZL Special for 144Mhz. I have scaled the antenna down for 70cm and results so far have been very encouraging. I offer the idea to anyone who may wish to try it out and possibly have a good result on the UHF band. The spec's for 144Meg seem very good so i see no reason why it could not be used. One may have to play around with the phasing strip to achieve a good resonance but that is what we, as amateur's are all about, so give it a go and let's know the results...

Gabe Gargiulo WA1GFJ
17 Whitney Street
East Hartford CT 06118

Let's Use English

-- for a change

CBers are known for their CB lingo, the jargon they like to use. They use a handle — a nickname that they use only on the air, like "Red Baron" or "Big Breaker." Their language is colorful: "18 wheeler" instead of "truck," "10-4" instead of "OK." There are even dictionaries of CB slang being published.

As far as I am concerned, this is foolishness. CBers are people talking to other people — why shouldn't they use the same language as everyone else?

We hams are almost as bad. Our peculiar language includes such things as "What's your QTH?" or "Thanks for the fine Q sew." Most of our contacts involve a lot of jargon, but we manage to get some English

in, so listeners can at least tell what language we are speaking.

There was a time when ham talk had its place, on CW. Abbreviations and short cuts are the order of the day on CW, but to carry them over into speech is silly. The only reason we keep using a peculiar form of talking is that it sets us apart, it makes us a select group, with our own practices.

I propose that we stop using oddball terms like QTH, QRMary and XYL, and stick to terms that we have understood since childhood, like hometown, interference, and wife. As a group we have nothing to set us apart. Oh yes, we all managed to pass a code and theory test that wasn't that much of a challenge; then we went out and

bought our rigs, set them up, and started talking. We're not really into this radio thing too technically. If we were, I could understand us talking shop, using technical terms.

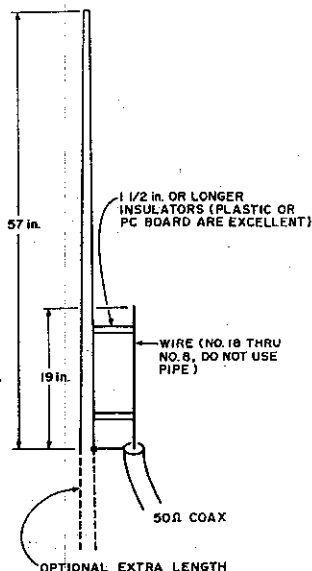
Why did we get into ham radio at all? To join a group that is set apart by its strange practices, or for the thrill of being able to talk with some one across the state while seated in our car, or across the world from the home station? I think you know why. So what happened? When we first became hams we wanted very much to join the group and be like everyone else. So we imitated what we heard. We adopted the practices we heard on the bands. We learned to say "The QTH here is . . .", "The handle here is . . .", "See you further on down the log."

That gave us a feeling of belonging, and made us feel like old pros on the band.

Now that CB has become the latest national fad, and its weird ways of talking are being heard on the streets and on TV, many of us hams have seen how silly it is and how little we need our own peculiar jargon. We can make sense to each other by using everyday English, the same language we use everywhere else. So how about it? How about going up or down in frequency instead of QS whying? "Further on down the mike cord", should become "Some other time." Let's lay QRMary to rest, alongside QRNancy. No more talk about XYLs or Q sews. Come on, hams, let's hear it for good old standard English! ■

From CQ

Gene Preston K5GP
906 Cedar Glen
Austin TX 78745



The Zeppy Vertical

-- a perfect 2m antenna

Believe it or not, a CBer came up with this antenna. Electrically it looks like a $\frac{1}{2}$ wave endfed Zepp antenna with a $\frac{1}{4}$ wave section of open wire line to obtain a match to 50 Ohms. After a couple of days I

realized that here was the perfect 2 meter antenna. The main 57" element can be directly bolted to a car frame, be the top of a flagpole, or be a piece of wire directly bolted to the rig. It is better than a

$\frac{5}{8}$ wave antenna because it doesn't require a ground but has about the same gain.

I built a 57" stinger on a PL-259 plug and found that waving around the mike or touching the radio didn't

affect the swr or received signal strength. A 19" piece of wire performed miserably when compared with this antenna. It's also easy to build and easy on the pocket-book. ■

From CQ.

David Naatz WA0VHX
RFD 5, Box 237
Austin MN 55912

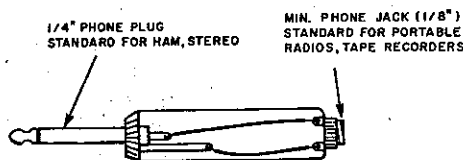
Have you ever bought a good pair of headphones for your ham set that work with your AM/FM radio or tape recorder, only to be confronted with a monstrous $\frac{1}{4}$ " plug? Well, here is a setup that may help.

This is also a handy adapter to have lying around for that "once-in-a-lifetime"

chance that you won't have a speaker or headphones and want to get on the air.

That happened to me as I came home from college, but forgot to bring home a speaker or 'phones. I used this adapter in conjunction with some 2,000 Ohm earphones that I had used with an old Japanese transistor radio. ■

Headphone Jack Adapter



NEXT MONTH.

Next month I hope to be able to start the first of a series of articles from Ian Eddy VK2IE. These will be on a regular basis dealing with all aspects of R.T.T.Y and allied fields. Thanks to Ian for starting off a regular column and I trust that it will be very usefull to all who use the RTTY mode.

I also have a series of articles to put in dealing with various items. These will also be in multi part (monthly) series, so look out for them.

Jim Feeney WA6CLZ,
2400 Glenfaire Dr.
Rancho Cordova CA 95670

VHF Noise Snooper

- - track down annoying pulses

Are you quite sure that nothing can be done about that noise level at your QTH? Just one of the problems with noise is its frequency content. I had a noise which affected the FM broadcast band and even wiped out 6m, but only contributed 1/2 an S unit on 75m. So I was forced to look for some special device, and found it sitting right in front of me. Here is a new approach to noise tracing, using a piece of equipment you most likely

already have.

Simply cut or unsolder one end of either of the FM detector diodes in an AM/FM portable, and you have an ultra portable, ultra sensitive noise detector. A schematic is usually unavailable for these

Japanese sets (there oughta be a law!), but you can usually spot the diodes sitting side by side between the last i-f cans and the audio transformers. Shorting one diode will probably work as well, but I didn't try it.

In use, my detector worked amazingly well. First find a blank spot between stations and start out. I tried using a bicycle, but tire noise drowned out the noise I was trying to locate, so I walk now. As you move, the noise will go in and out like airplane flutter, slowing down and getting steady when you are very near. Then you can point the end of the whip at the noise source for a null. One noise was found so accurately that the vertical position on the pole was pinpointed for the power company linemen.

Of course there are other problems. When you rid the neighborhood of all those power leaks, you really notice the cars. ■

Richard A. Watson W1ZOA
41 Harvest Street
Lynn MA 01902

Solder Soldier

- - sniff your
heart out

Here is a handy gadget for picking up solder from a printed circuit board when you are trying to remove a component or excess solder. There are commercial solder removers available for about five dollars that are easier to use, but unless you need one quite often, this one works fine.

The large end is turned on a lathe to fit inside the metal tube on the end of the XYL's vacuum cleaner hose. A bit of plastic electrician's tape will

hold it there.

When you are ready to remove the solder, put the tip near the solder and melt it with the iron. Put your finger over the 3/8" hole and the suction will remove most of the solder. If the solder sticks to the inside of the 3/16" hole, you can dislodge it with a nail.

The material was teflon, but you can use any plastic that will not melt if you accidentally touch it with your iron. ■

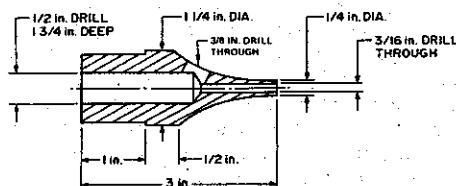
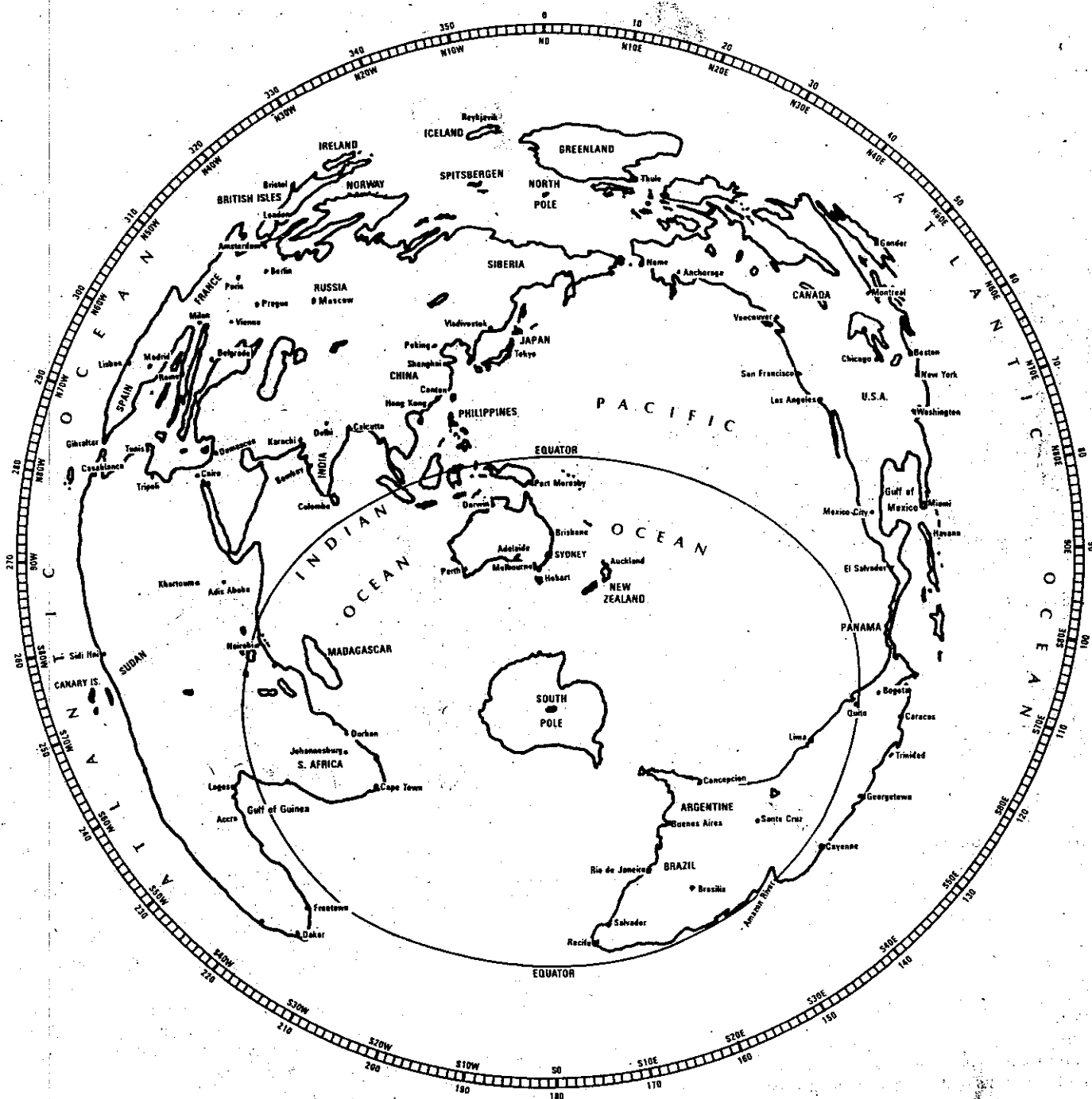


Fig. 1.

FROM '73 MAGAZINE.

I hope that this map may be of use to our newer members of the club. It is invaluable in determining beam headings to the various DX countries etc.

GREAT CIRCLE MAP



This rather distorted looking map of the world is known as a "great circle" map or "azimuthal" map. To those used to the more conventional (and also distorted) map of the world, based on Mercator's projection, it looks quite strange and, in parts, even unrecognisable.

Its purpose is to indicate the true compass bearing from the centre of the map, Sydney in this case, to any other point on the globe. This permits a directional aerial to be correctly orientated towards a particular country or area.

If this map is compared with a Mercator map it will be seen that, along a line directly north and south of Sydney, the locations are identical. On the other hand, a line east and west of Sydney, indicates completely different localities on the two maps.

On a Mercator map a line drawn due west of Sydney (270°) would intercept Cape Town in South Africa. In fact, as shown in the great circle map, an aerial so orientated would be pointing in the general direction of Adis Ababa. For Cape Town, a bearing of 217° would be required. Stranger still, Dakar would require a bearing of 215°. Similar differences will be found if a line is drawn due east towards South America.

Great circle maps are, in theory, accurate only for the one central location for which they are drawn, in this case Sydney, although it is generally considered that, within a radius of 250km, the error will be negligible for radio communication.

In practice, considering the relatively wide acceptance angle of most practical amateur beams, it is likely that the error would not be serious at a much greater distance from Sydney.

HELP WANTED COLUMN.

This column I hope will become a regular feature in the Propagator every month. The idea behind it came from listening around and the many call's I receive for assistance on various segments of our hobby. Let's have any ideas you may have to pass on, or likewise any problems you may have, which you cannot fathom out..

The first one that I have is that as editor, I am badly in need Articles for inclusion in the Propagator. If you have any projects or idea's you would like to pass on, let me have them and we will type them up and if needed will also do any drawings that may need to be done. So don't be afraid to submit anything just because you can't type or draw.

The committee at the last committee meeting, decided to have the small RTTY terminal unit that a few of us are using made up in a semi kit form and to offer these through the club store or by mail order to any interested Amateur's who may need a easy to build and use TU. The kit will consist of, 1. Circuit Board. 2. Complete Paper work.

And if needed, where to get the bit's.

These units have been evaluated for the past 12 month's, and are very easy to build and use. They can be interfaced with an Apple, or Comatable computer, as well as the normal Mod.15 or Siemens 100. We hope to have the kits available very soon in the future, as we have to make arrangements to have the boards commercially made up. It is hoped to market these semi kits for \$10.00 ea. and when you order, all we need to know is what system you are running. ie. Computer or Mechanical.

So lets have any News or Articals you may have hidden away in the shack and let your fellow Members know about it...

Pass on any thing you may have, to,

1. A committee Member at the meetings,
2. Post to me at,

30 Highlands Pde.
BULLI 2516,
N.S.W.

73, Dave Myers
VK2DFL.

LATE NEWS. ATTENTION.

This months meeting will also feature a Demonstration of the Proposed New Kit from Dick Smith Electronics.

Gill McPherson will give a Demo, and talk on the mew kit which is reported to be a VHF unit, to follow on the success of the recent UHF unit. So come along and lets have the first look at Trickys new offering for the home brewer..

" WANTED "

Some one to write up a DX column every month..
There must be someone out there who knows what is going on with the bands. Let's hear from you...

THE ILLAWARRA AMATEUR RADIO SOCIETY - P. O. BOX 1838 WOLLONGONG 2500

Meetings: Second Monday of every month except January at 7.30 p.m. in the Congregational Church Hall, Coombe Street, Wollongong. Committee Meeting - 3rd Monday of each month.

Repeaters: VK2RAW - 6850 VHF Mount Murray. VK2RIL - 7275 VHF Sublime Point.

VK2RUW - 8225 UHF Hill 60 Port Kembla. VK2RIL - 8725 UHF Sublime point.

Broadcasts: On Sunday night prior to Club Meeting - 7.00 p.m. - RTTY on 6850 and 7275 VHF Repeaters; 7.15 p.m., Voice on 6850 VHF, 7275 VHF and by relay on 3.562 Mhz. Call backs after the WIA relay at 7.30 p.m.

W. I. A. Relay: On 6850 VHF at 11.00 a.m. and 7.30 p.m. weekly on Sunday.

Club Nets: 3.562 MHz SSB on Sunday at 8.00 p.m. and slow morse net on 28.440 Mhz on Tuesday at 8.00 p.m.

Newsletter: "The Propogator", published monthly to reach financial members in week prior to meeting. All articles, ads etc. to the editor, Dave Myers VK2DFL at 78 Highlands Pde. Bulli 2516. Telephone 84.9404. Copy deadline 3rd Tuesday each month.

Membership: The Secretary, I.A.R.S. P.O. Box 1838, Wollongong 2500. Full membership is \$10.00 per annum; students and pensioner concessional members \$5.00 per annum.

Awards: The award of the I.A.R.S. is "The Lawrence Hargrave" award. VK stations require 10 contacts with I.A.R.S. members; overseas stations require 5 contacts with I.A.R.S. members or contact with the Club station VK2AMW is sufficient in itself for the award.

Band details - time, day, date, frequency, station worked + \$2.00 or 4 I.R.C.'s to Award Manager, I.A.R.S., P. O. Box 1838, Wollongong 2500. No QSL cards required.

Store: The Club store operates at each Club meeting.

Committee: President - Dave Myers VK2DFL, 78 Highlands Pde., Bulli.

Vice President - Keith Curle VK2OB, 24 Beach Drive, Woonona.

Secretary - Murray McConnell VK2MY, 62 Ramah Avenue, Mt. Pleasant.

Treasurers - Geoff Cuthbert VK2ZHU, 2 Nioka Avenue, Mt. Keiraville.

- Andrew McEwan, 7 Nioka Avenue, Keiraville.

General Committee: Mike Keech VK2DFK, Ian Callcott VK2EXN, Ray Ball VK2XCC, Morry Van De Vorstenbosch VK2EMV, Jim Mead VK2EJM, Gerard Mueller, Roy Parton VK2KO, Jim Hayes VK2JIM.

Repeater Chairman: Graeme Dowse VK2CAG.

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