

# IARS THE PROPAGATOR IARS

**ILLAWARRA AMATEUR RADIO SOC. INC.**

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOC. INC.

VOLUME - 89, NUMBER : 3

APRIL 1989.

REGISTERED BY AUSTRALIA POST PUBLICATION NUMBER : NBH - 1491.

MEETINGS ARE HELD ON THE SECOND TUESDAY OF EACH MONTH,  
(EXCEPT JANUARY) AT 7.30.PM. AT THE STATE EMERGENCY SERVICES,  
BUILDING, IN MONTAGUE STREET, NORTH WOLLONGONG.  
VISITORS ARE MOST WELCOME TO ATTEND THE MEETING'S.

## REPEATER REPORT

Well another month has gone and we are getting close to Xmas again. In the last Propagator, there was a STOP PRESS that VK2RAW was 'off air'! Remember that the lead time to get this Newsletter out to you is approx. 10 days so much can happen in that time.

VK2RAW went off air between 1100K and 1530K 23/02/89 and was brought down from its cubicle and delivered to VK2CAG Graeme on 25/02/89. Graeme's comment to me was that he was extremely busy and couldn't put a time on looking at the beast, it was agreed I'd give him a call in the next week. Well as most of you know Graeme, he couldn't leave poor old VK2RAW sitting on the floor of his W/shop and in less than the agreed week the system was again operational, fully tested and tuned. The problem, as reported on the monthly B/cast was a bug, six-legged variety,

using on of the FET's in the exciter as its QTH. Many thanks Graeme for the fine effort.

Working Bee 12/03/89.

Ten working volunteers arrived at the site and proceeded to get on with the testing and lowering of the antenna for VK2RAW voice. Those who were at the site and other club members who attended the monthly meeting to see the video of the 'dropping' (literally!!) of the antenna missed a good exhibition of 'how not to do it' although



"I'M NOT ANGRY WITH YOU ANYMORE DAVID FOR BUYING THAT APPLE 2e.

Father Time and Mother Nature had a large hand in the condx of the wire rope on the jib tackle. Needless to say all was replaced and put back up in the vertical where it all belonged. No little thanks go to VK2XLA Graham for 'just for emergencies' had some wire rope and bits to fix it and save the embarassement of having to call for 'outside' help.

On inspection the antenna was found to have a frayed top and the SWR was reading 2:1 when it should have been 1.3:1 max, after transporting it to VK2EMI Reg's QTH it was found that the antenna had suffered a possible direct hit from the lightningstrike 28/04/88 and has been the cause of most of our problems since then. Reg has since re-built the antenna and at the time of writing is awaiting transport. Many thanks also to you Reg for the quick re-build.

There was a suggestion that we use the Steel Work's 38Hour

CONTINUED NEXT PAGE

## HOW TO KILL

### A GOOD CLUB

1. Don't attend meeting, but if you do come late.
2. If you do attend a meeting, find fault with the work of the officers and other members.
3. Never accept an office as it is easier to criticise than to work, nevertheless, get sore if you are not appointed on a committee - but if you are, do not attend committee meetings.
4. If asked by the chairman to give your opinion regarding some important matter, have nothing to say.
5. After the meeting tell everyone how things ought to be done.
6. Do nothing more than is necessary, but when other members roll up their sleeves, and willingly and unselfishly help matters along, howl that the club is run by a clique.
7. Keep your eyes open for something wrong, and when you find it resign.
8. At every opportunity resign, and get all your friends to resign.
9. Agree to everything said at the meetings, and disagree with it outside.
10. When asked for information, don't give it.

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SAT-SUN: 9.30 AM. - 9.00 PM.

11. Don't attend General meetings; but if you do, say nothing but accept everything, then leave before the voting starts. Afterwards complain that the club is not being run democratically, and accuse

the Committee of dictatorship.

12. When everything else fails, curse the Secretary or President preferably in their absence.

<><><> the end <><><>

# REPEATER REPORT

## CONTINUED

Roster days as maintenance days at the repeater sites, this is generally on a Friday and if any major work is required then the mast/site could be left overnite in a safe and out-of-service condx

till the following day or even the Sunday. Comments from all members would be appreciated.

It seems the antenna replacement at Sublime Pt is working well also with some Sydney stations joining the RTTY net on Friday nites, the more the merrier.

### Next Working Bee

The next anticipated working bee at Mt Murray will possibly be mid to late April to replace the Voite and Packet antennae and de-rust the mast and any other little jobs we can find in the meantime. We will be hopefully using the work's roster day to lower the mast and put it back up on the Saturday afternoon.

Come along to the Club Meeting and get all the info as to times and dates. Several Members have asked to have a map for directions to the Mt Murray repeater site be printed in the Propagator, sorry but as we have already had a partial break-in I feel it better not to advertise the location too much. Information is only given out first hand, ie not over radio or any media that can be read by someone who might use the information incorrectly. It only takes one slip of the tongue and years of work could be destroyed for no sane reason whatsoever. If you want directions see one of the Committee at the

meetings or as the last trip, we will have a meeting place on the day and we can then lead you into the site.

A few members couldn't make the Working Bee on the 12/03/89 but at least did call in and apologise for not being able to make it on the day, to these members I say thanks because at least you did remember and have given your support.

A special thanks to the Working Bee crew on the 12/03/89:-

VK2ALU Lyle, VK2FPN Peter, VK2KEY Pat, VK2KHE Peter, VK2TPH Phil, VK2XBC Chris, VK2XLA Graham, VK2XCC Ray, VK2XGJ John, VK2ZNS Noel.

So until next time, 73  
John de VK2XGJ.

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# DO IT YOURSELF TV

## REPAIRS

\*\*\*\*\*

### INTRODUCTION

\*\*\*\*\*

The first thing you must do before attempting to repair your TV set is to say to yourself, "There is nothing really complicated about a television receiver!" Repeat this over and over and over until you begin to accept this with confidence.

The next thing you must do is realize that sitting around talking to yourself like an imbecile is not going to get you anywhere at all. Remember, television sets are complicated instruments that don't get fixed by mumbling idiots.

Before you start to work, be sure you are equipped with a few simple tools... the kind that are usually found in the average home workshop. We are naturally referring to the home workshop of an Electronics Engineer. If you are not so equipped, a small investment (which should not exceed \$900) will take care of all your needs.

Many people are under the popular misconception that you need special knowledge or skill to repair a TV set, you will not if you can follow this simple manual. That's because the author had no special knowledge or skill in writing manuals.

Above all, do not be discouraged. Try to remember that you cannot louse up your TV set any worse than most TV repair men usually do... and this time, it won't cost you any thing to achieve it!

\*\*\*\*\*

### TV FAULT DIAGNOSIS CHART.

#### SOUND BUT NO PICTURE

Probable cause...

- 1/ Your blind
- 2/ Some wise guy painted your screen black
- 3/ You're watching the radio

#### PICTURE, BUT NO SOUND

- 1/ The volume control knob is missing
- 2/ Your hearing aid is turned off
- 3/ Your watching the washing machine

#### NO SOUND, AND NO PICTURE

- 1/ Your set isn't plugged in
- 2/ Your electricity has been turned off
- 3/ Your set has been repossessed by the finance company

#### BLURRED PICTURE

- 1/ Your screen is dirty and dusty
- 2/ Your screen is covered with jam and peanut butter
- 3/ You're drunk

#### PICTURE TOO NARROW

- 1/ Your eyes are too close together
- 2/ the sides of your set are too close together
- 3/ Your set is standing on it's side

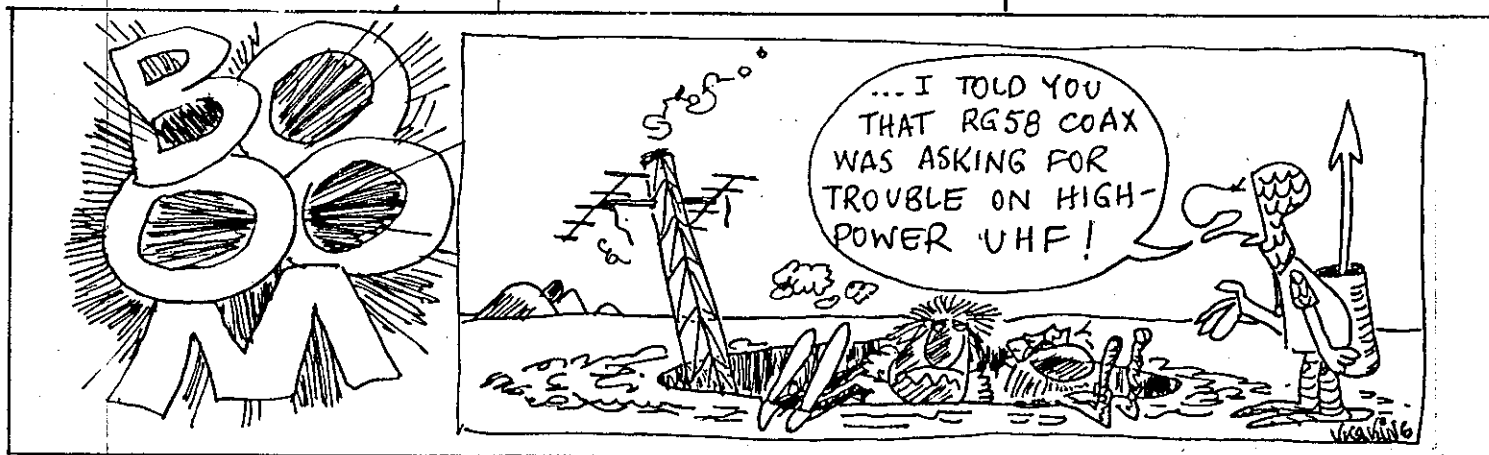
#### PICTURE TOO WIDE

- 1/ Your set is going crazy
- 2/ You're going crazy
- 3/ We're going crazy

#### ROLLING PICTURE

- 1/ Too much oil on your TV casters
- 2/ Your floor slant
- 3/ There's an earthquake going on

CONTINUED NEXT PAGE



## REPAIRS CONTINUED

### NOT ENOUGH HEIGHT

- 1/ Your picture tube has shrunk
- 2/ The actor is looking through a venetian blind
- 3/ The TV actor's head is caught in a vertical press

### PICTURE IS UPSIDE DOWN

- 1/ Your set is upside down
- 2/ Your house is upside down
- 3/ You're watching upside down

### TEST PATTERN IS COCKEYED

- 1/ Your floor is cockeyed
- 2/ The TV camera is cockeyed
- 3/ You're cockeyed

### GHOSTS

- 1/ Your house is haunted
- 2/ Your TV set is haunted
- 3/ You're dead

### SNOW

- 1/ There's a window open
- 2/ There's a hole in your roof
- 3/ There's a hole in your head

### TORN SCREEN

- 1/ The bugs in your neighborhood are getting powerful
- 2/ Somebody threw a rock through it
- 3/ Somebody threw your TV set through it

### INTERFERENCE

- 1/ You've got a nagging wife or husband
- 2/ You've got a nagging kid
- 3/ You've got a nagging backache

### SPEAKER RATTLE

- 1/ There's a baby's rattle in you speaker
- 2/ There's a spackle in the reaker
- 3/ There's a reekle in the spatter

I hope this information will help you to solve some of the easy faults you will be able to cure with this chart.

All the best and good luck

### OTHER PUBLICATIONS TO LOOK OUT FOR.

How to find your TV set  
How to centre your TV set in the lounge  
How to sit in front of your TV set.  
How to fix TV sound.  
How to fix TV picture.  
How to fix TV dinners.  
How to fix TV quiz shows.  
How to detach your antenna from your TV set.  
How to detach Your Neighbor from your TV set.

How to write TV fan mail.  
How to write TV hate mail.  
How to distinguish one TV western from another.

How to distinguish adult TV cartoons from children's TV cartoons.  
How to fake homework while watching TV.  
How to insult TV rating service phonecalls.  
How to recognize re runs.  
How to recognize re runs with changed titles.

How to overcome commercial nausea.  
How to overcome situation comedy nausea.  
How to overcome TV in general nausea.  
How to use TV cliches in daily life.  
How to use TV violence in daily life.  
How to use TV guide in daily life.  
How to learn medicine from TV commercials.

How to learn medicine from TV doctor shows.  
How to distinguish between live, taped and filmed shows.  
How to spot song mouthing.  
How to treat a hernia caused by carrying portable TV set.  
How to stay awake while watching TV.

How to wave to folks at home while attending a studio telecast.  
How to wave to folks at the studio when watching a home telecast.

How to envy contestants on "the price is right".  
How to recognize long dead stars on late TV movies.  
How to recognize long dead plots on late TV movies.  
How to recognize long dead late TV movies.  
How to work out what all this has to do with repairing your TV set.

<XXXXXXXXXXXXXXXXXXXX>

## **Q.S.L.**

Have You Heard the One About.....?

"When is a small packet not a small packet?"  
"When its a small packet of cause!"

This riddle is the handywork of our new "corporation style" Australia Post but if you are an amateur operator in Australia, it's not funny.

Let's explain. West-lakes Amateur Radio Club conducts the activities of the VK2 QSL Bureau and posts outwards QSL cards, your cards, via Australia Post. There has existed a special

**CONTINUED PAGE 8**

# URGENT MESSAGE TO ALL AMATEUR RADIO OPERATORS

FOLLOWS IS A TRANSCRIPT OF A PRESS RELEASE DATE 10TH MARCH 1989. THIS ISSUE IS OF GREAT SIGNIFICANCE TO THE FUTURE OF YOUR HOBBY OF AMATEUR RADIO. IT IS ALSO GOING TO HAVE A SIGNIFICANT IMPACT ON THE COMMUNITY AT LARGE AND THE WAY IN WHICH THEY WILL VIEW AMATEUR RADIO.

INTERFERENCE HAS ALWAYS BEEN A SENSITIVE ISSUE INVOLVING AMATEUR RADIO AND OTHER SOURCES USUALLY THE AMATEUR IS BLAMED BY THE COMPLAINANT. CAN YOU IMAGINE THEN HOW YOUR NEIGHBOUR WHO EXPERIENCES INTERFERENCE IS GOING TO REACT WHEN THEY ARE TOLD IT WILL COST \$50-60 TO GET AN INSPECTOR TO JUST COME AND LOOK AT THE PROBLEM! CURRENTLY INSPECTORS ARE MOST SYMPATHETIC TO AMATEURS POSITION - KNOWING THAT IT IS USUALLY POOR IMMUNITY CHARACTERISTICS OF DOMESTIC APPLIANCES WHICH IS AT FAULT. THE W.I.A. ARE DOING NOTHING ABOUT THIS. IT IS GOING TO HAPPEN ON THE 1ST OF JULY 1989. IF YOU CARE ABOUT THE FUTURE OF YOUR HOBBY AND THE COMMUNITY DONT BE LETHARGIC ABOUT THIS ISSUE. WE ARE IN THE BUSINESS OF COMMUNICATION - SO COMMUNICATE - USE TELEPHONE AND RADIO BULLETIN BOARDS - USE AMATEUR RADIO - AND ABOVE ALL WRITE TO YOUR LOCAL MEMBER - AND ASK THE W.I.A. WHY THEY AREN'T DOING ANYTHING. CHARGING

FOR INTERFERENCE IS A CABINET DECISION - IT CAN ONLY BE STOPPED BY POLITICAL INTERVENTION. A PRESS RELEASE BY THE PROFESSIONAL RADIO & ELECTRONICS INSTITUTE OF AUSTRALASIA

TITLE PUBLIC TO PAY FOR INVESTIGATIONS INTO TV INTERFERENCE IS AS FOLLOWS:-

A SPOKESMAN FOR THE PROFESSIONAL RADIO AND ELECTRONICS INSTITUTE OF AUSTRALASIA, MR. MICHAEL ROBERTS, SAID TODAY THAT THE DEPARTMENT OF TRANSPORT AND COMMUNICATIONS IS PURSUING A POLICY WHICH WILL DISADVANTAGE THOSE MEMBERS OF THE PUBLIC LEAST ABLE TO AFFORD IT.

IN THE PAST THE GOVERNMENT HAS PROVIDED A FREE SERVICE OF HIGHLY SKILLED TECHNICAL OFFICERS TO INVESTIGATE THE CAUSES OF INTERFERENCE TO TELEVISION AND RADIO RECEPTION (E.G. VOICES ON HOME RADIO BEING HEARD FROM NEARBY TRANSMITTERS OR COLOURED DOTS), ALMOST ALL OF THESE INVESTIGATIONS HAVE RESULTED IN THE RECTIFICATION OF THE OFFENDING INTERFERENCE.

THE GOVERNMENT HAS NOW DECIDED THAT IT WILL CUT COSTS BY REQUIRING THE PUBLIC, WHOSE EQUIPMENT IS BEING INTERFERED WITH BY EXTERNAL SOURCES, TO PAY AN UP FRONT FEE TO THE GOVERNMENT, (\$50 HAS BEEN SUGGESTED), TO HAVE THE MATTER INVESTIGATED. THIS FEE WILL BE ON TOP

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OF ANY CHARGES MADE BY A PRIVATE SERVICEMAN WHO MAY BECOME INVOLVED. MR ROBERTS ADDED THAT, IDEALLY, IT WAS THE OWNER OF THE EQUIPMENT CAUSING RADIO AND TELEVISION INTERFERENCE WHO SHOULD BE REQUIRED TO PAY ANY COSTS OF LOCATING AND CURING IT; HOWEVER, AS THE DEPARTMENT HAS NOT SET ANY INTERFERENCE STANDARDS IN LEGISLATION, IT WOULD BE ALMOST IMPOSSIBLE TO ENFORCE SUCH A PAYMENT.

IN THE PAST, SKILLED DEPARTMENTAL OFFICERS WOULD LIAISE WITH NEIGHBOURS AND SEMI-

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## MESSAGE CONTINUED

GOVERNMENT UTILITIES TO RESOLVE THE PROBLEM AS A PUBLIC SERVICE TO THE COMMUNITY, IT IS MOST LIKELY UNDER THE PROPOSED SCHEME, THAT IT COULD END UP COSTING THE PERSON RECEIVING THE INTERFERENCE HUNDREDS OF DOLLARS WHEN THE FAULTY EQUIPMENT BELONGS TO SOMEBODY ELSE.

MR ROBERTS BELIEVED THAT CONTROL OF THE RADIO SPECTRUM SHOULD BE THE RESPONSIBILITY OF THE GOVERNMENT AND THAT INTERFERENCE FREE RECEPTION SHOULD BE RIGHT OF ANY CITIZEN IN THIS COUNTRY. AS THE DISADVANTAGED AND ELDERLY MEMBERS OF THE COMMUNITY USE THEIR RADIO AND TV AS A PRIMARY SOURCE OF ENTERTAINMENT AND INFORMATION, THEY WILL SUFFER THE MOST UNDER THE PROPOSED CHANGES.

HE SAID HE HAD BELIEVED THAT THE PRESENT GOVERNMENT WAS SYMPATHETIC TO THIS GROUP OF PEOPLE BUT NOW THE PROPOSED CHANGES CLEARLY INDICATE A SUBSTANTIAL CHANGE IN GOVERNMENT DIRECTION AWAY FROM THE DISADVANTAGED.

THE PUBLIC ARE URGED TO CONTACT THEIR MEMBERS OF PARLIAMENT AND THEIR LOCAL ORGANISATIONS TO VOICE THEIR DISAPPROVAL OF THIS INEQUITABLE GOVERNMENT DECISION.

(CONTACT - JOHN TAMPLIN - PHONE 02 262 4444)

\* END PRESS RELEASE \*  
DON'T JUST SIT THERE....  
DO SOMETHING.. THE WORST  
IS YET TO COME.  
Taken from W.I.A. BBS...

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## AMATEUR EXAMINATION DEVOLVEMENT

The following letter has been received in the Executive Office from the Department of Transport and Communications:

"As you are aware, earlier this year the Department conducted a number of public forums on the devolution of Amateur operator certificate examinations. At that time the department

announced that it planned to commence the new procedure in the latter half of 1988 and called for submissions from clubs and educational bodies interested in participating.

In response to the request a large number of submissions have been received. Unfortunately however, due largely to problems relating to the filling of positions in the examinations area, the Department has not been in a position to implement the new procedure or to advise applicants the precise details of the accreditation process.

While the majority of the work has been completed, some refinement of the examination question banks and other administrative arrangements is still required. Final implementation will be dependent on the resource availability to complete these tasks and to process applications. Nevertheless, I would assure the Institute that the Department will be implementing the new procedure at the earliest opportunity.

Any publicity the Institute could give to this matter through its magazine and weekly news broadcasts would be appreciated.

Yours sincerely  
(signed) A Jordan

A/g Manager Regulatory  
Radiocommunications Operations Branch  
Communications Operations Division

20th December 1988

## Q.S.L. CONTINUED

class of mail, defined by the International Postal Union, as "small packets" and that's how QSL cards are sent. The bureau even has a special "small packet" stamp and green coloured "small packet" stickers which are used to identify this class of postage.

Imagine our surprise when consulting Australia Post's latest price schedule dated February 1989. Small packet rates have disappeared! Puzzled, checked the postal rate for ordinary packages. They were there all right, together with the fine print "except small packets". Ah, ha, Australia Post admit that the class "small packets" exists, its just that they have no postage rate any more.

The next step was to get the official story from local post office. "Yes small packets exist but not in the price schedule, so there is no price for "small" and ordinary parcel rates apply." What does all this mean? A cool increase of 62 per cent to post your QSL cards that's what! We bet you didn't read about that price rise in the daily press.

The annoying thing is, this increase has been introduced very quietly in the hope that it would all go unnoticed as those knowing of and regularly using "small packet" rate would be few and far between. But Australia Post did not count on

the amateur service, with its great power of communication, to "blow the whistle".

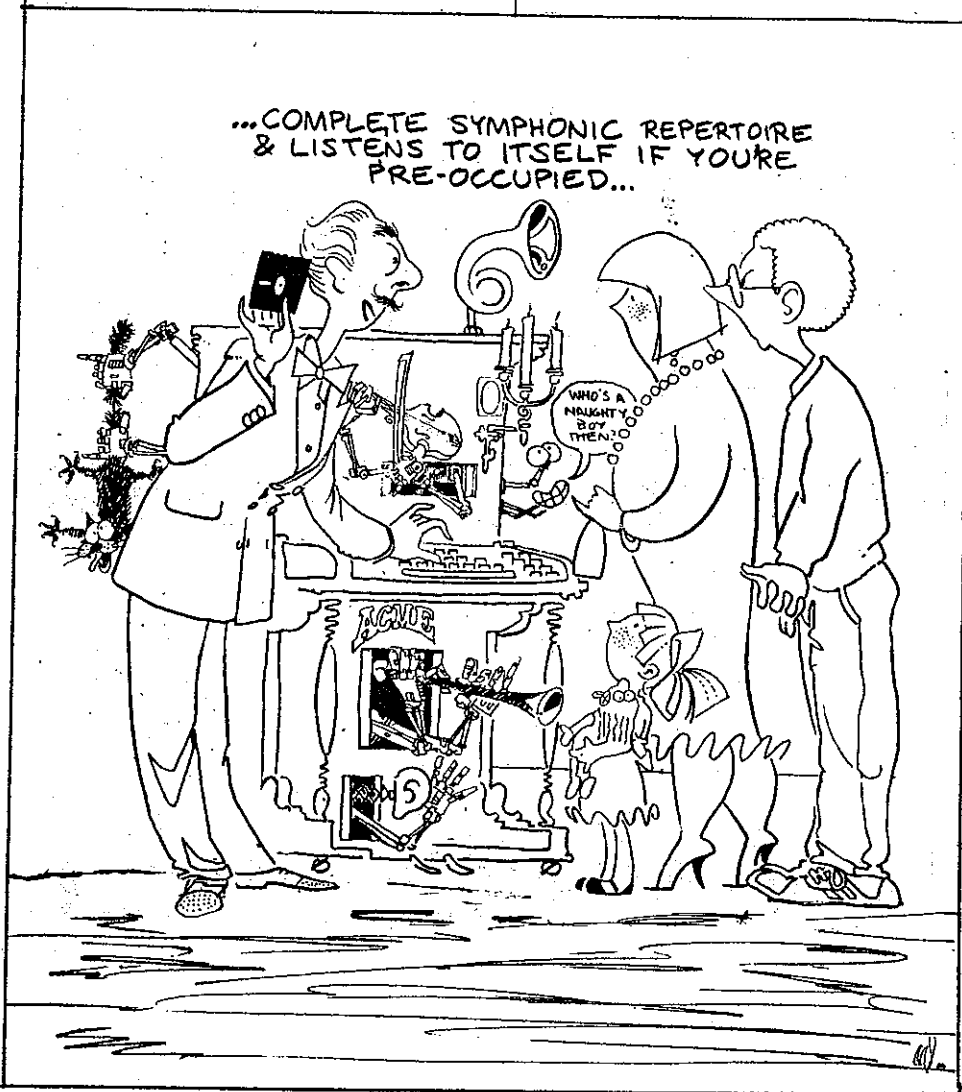
How does this affect each of us as amateurs? The WIA is trying hard to contain costs and thus keep membership fees at a minimum. But imagine what will happen if the WIA's most used service, QSL bureaus, face an outwards postage cost increase of 62 per cent for DX QSL cards.

We believe that Westlakes ARC is the first user of this class of mail to wake up to what's going on and the club has not been idle. Letters of concern and protest against Australia Post's secret price-

hike have been forwarded to the Minister for Transport and Communications, the Opposition Shadow Minister, the local federal member of parliament, the federal office of the WIA and the VK2 Divisional Councillor. We even had a passing shot at the postman.

So now the cat's out of the bag. If you are annoyed at the way Australia Post Inc. has underhandedly increased your QSL cards postal rates, you may wish to write a few letters too. A stamp only costs 39 cents, the last time we looked that is.

From Westlakes Amateur Radio Club Packet BBS..





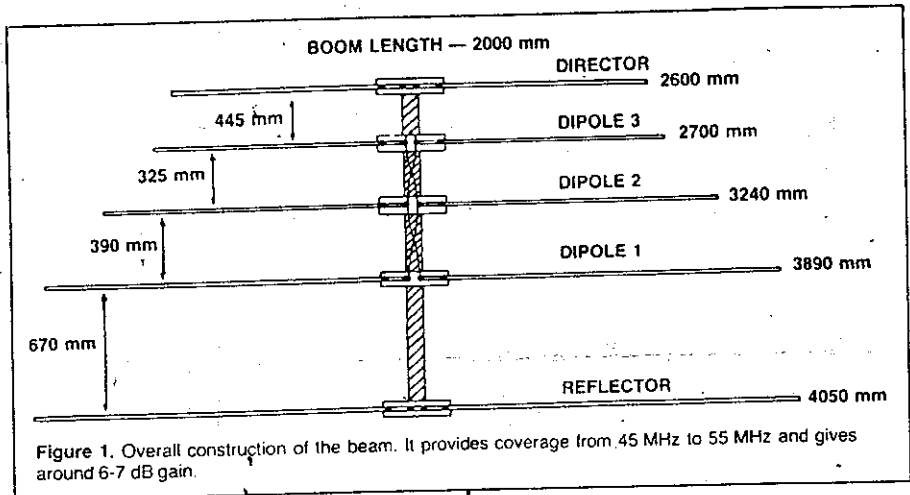
# A full coverage beam for the six metre band

Roger Harrison VK2ZTB

AS HAS BEEN long observed, long-distance (DX) propagation on the six metre amateur band is definitely frequency sensitive, particularly with regard to ionospheric F-layer modes that take advantage of the equatorial F-layer 'anomalies' sited north and south of the geomagnetic equator. Afternoon-type or Class I transequatorial propagation being the favourite for contacts to the US, Japan and other Pacific regions. And the lower the frequency, the longer and more frequent the openings. Amateurs in countries across the 'big pond' (Pacific Ocean) are permitted to operate over 50-54 MHz whereas, until recently, Australian and New Zealand amateurs have been permitted to use only 52-54 MHz. That 2 MHz has caused some difficulties. The popular segment of the band in the Australasian region is around 52.000 MHz to 52.500 MHz, whereas, in other countries it's around 50.000-50.300 MHz or so. Most of the local area beacons, widely used to indicate improving propagation conditions, are spread between 51 MHz (ZL1UHF, Auckland 51.020 MHz) and 52.500 MHz (VK7RNT, Launceston 52.470 MHz and ZL2MDF, Mount Climie 52.510 MHz).

The most popular antenna on six metres is the Yagi, generally of four to six elements. These generally have a bandwidth of around 5-6%, which gives adequate coverage of part of the band if cut at an appropriate centre frequency, but when narrow bandwidth matching methods (like the common gamma match) are used, overall bandwidth may drop to 1% — 500 kHz! A Yagi like this, cut and matched for best performance at 52 MHz, does poorly at 50 MHz \*as many frustrated operators will attest.

A better bet is the log-periodic Yagi array, or log-yagi as it has been dubbed in some quarters. This design is based on the ETI-714 VHF Log-Periodic Antenna published in the February 1978 issue of ETI. It comprises a three-dipole log-periodic array with passive reflector and director elements added. It has been cast to cover 45-55 MHz and should yield a gain of some 6-7 dB over a dipole. Balanced feed is necessary and a



simple coax feedline balun is all that's necessary for matching. Feedpoint impedance is in the 60-70 Ohm region and VSWR across the band should remain below 1.5:1 which is quite acceptable, there being generally little point in trying to better that.

## Construction

The beauty of log-periodic designs is that they're tolerant of construction variations. At these frequencies, tolerances of  $\pm 10$  mm can be accommodated without serious (if noticeable) effects on performance. Figure 1 shows the overall construction dimensions. Each of the dipole halves must be insulated so an insulated boom is required, along with some convenient method of mounting the dipole elements on it. There are two basic ways of achieving this — using a wooden boom and wooden element support brackets; or using a boom of high density water pipe of a suitable diameter and conventional element-to-boom brackets.

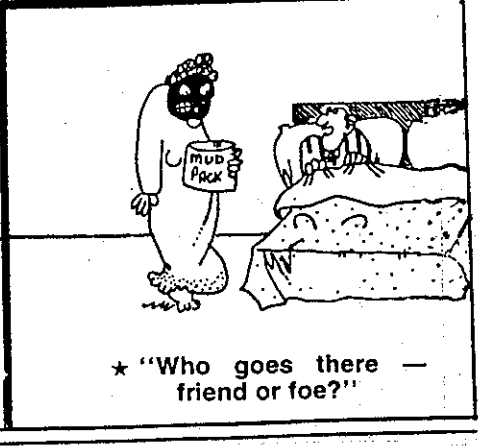
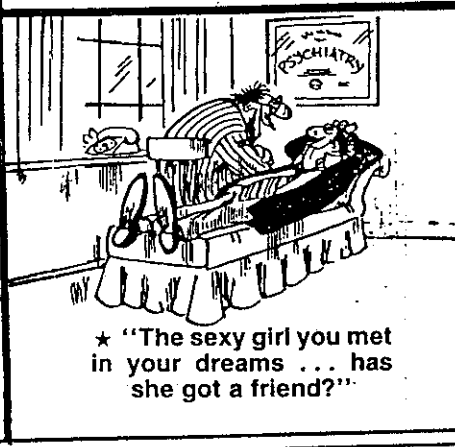
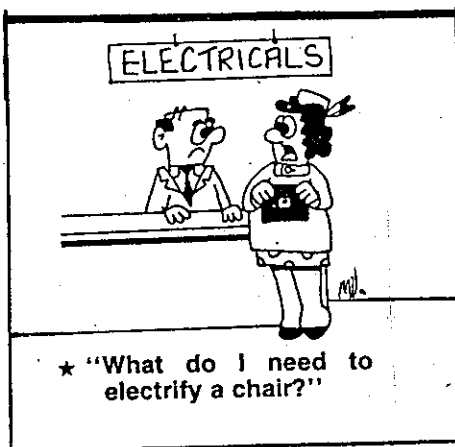
The boom for the model illustrated in Figure 1 is a two metre length of 25 x 50 mm (dressed size) wood such as maple, though western red cedar is also good. It must be a straight-grained and knot-free and suitable for outdoor use if sealed with a stain or Estapol. Wattle 'Forestwood' or one of the

Cabot outdoor stains are fine and will ensure a long life.

The elements consist of two halves screwed to a wooden support block which is affixed to the boom. These blocks are cut from a length of 42 x 19 mm (dressed size) timber of the same type as used in the boom. The element halves are 10 mm diameter aluminium tube which is generally available from hardware stores or specialist aluminium suppliers (look them up in your local 'phone book). The measurements for element length given in Figure 1 are tip-to-tip dimensions. Cut the element halves 5 mm shorter than required to leave a 10 mm gap in the centre. The reflector should be made from a single length, if you can possibly do it, otherwise, use two, two-metre lengths and bond them thoroughly in the centre to get electrical contact. (If it has to be 50 mm short, it won't hurt all that much). Figures 2 and 3 show the general assembly details for the dipoles.

The position of each dipole support block should be marked out on the boom before assembling the dipoles. Drill the two bracket-to-boom screw holes in the brackets a little oversize so that the elements can be lined up parallel and at right angles to the boom, for appearance's sake. Note that the

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# 6 METRE - BEAM CONTINUED

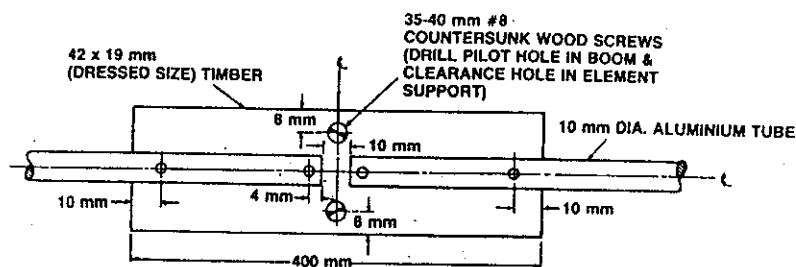


Figure 2. Dipole-to-boom bracket using wood construction.

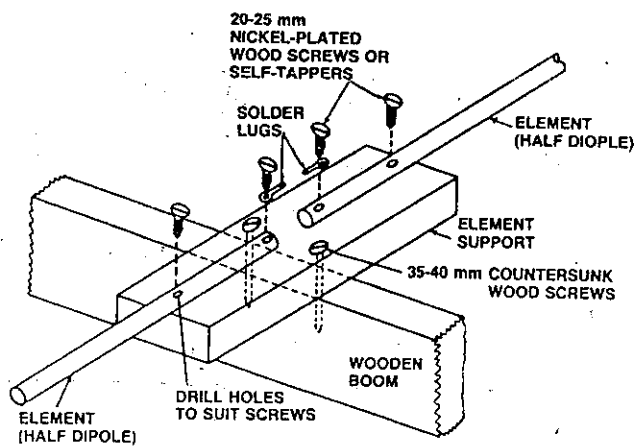


Figure 3. Element-to-boom mounting using wood construction. Estapol or stain all wooden components before assembly.

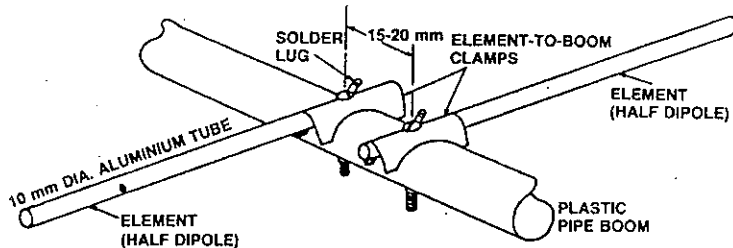


Figure 4. 'Plumber's delight' assembly using a plastic pipe boom.

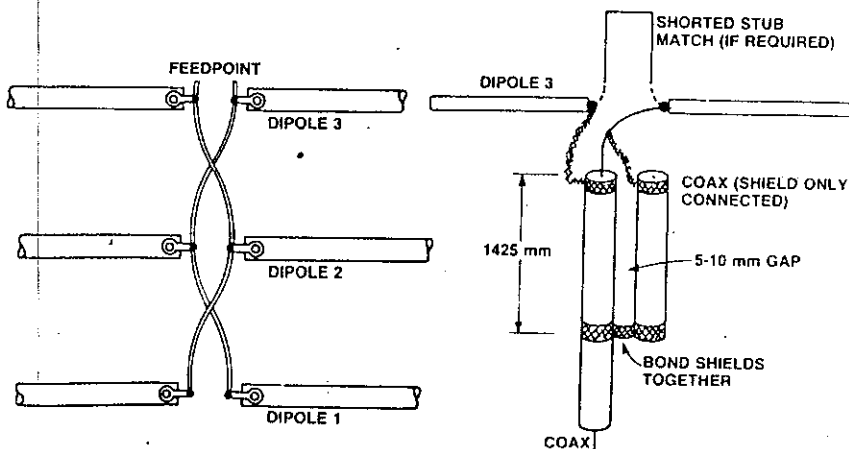


Figure 5. Showing the feedline connections between dipoles and the feedpoint termination.

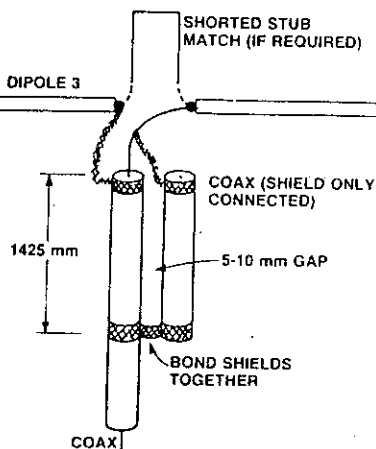


Figure 6. Suggested balun and matching arrangement.

element-to-element spacings given in Figure 1 are dipole centre-to-centre dimensions.

Figure 4 shows 'plumber's delight' assembly. Standard element-to-boom brackets are used. If you can obtain, or modify, element brackets to suit a 50 mm boom, do so, but common brackets are designed for 20 mm booms. A plastic boom will need supporting from the mast to prevent considerable droop. Alternatively, the boom can be drilled to pass the elements which can then be secured with long self-tapping screws through the top of the boom. Make sure you drill the boom reasonably accurately so that the elements lie in the same plane. Mainly for the sake of appearance.

The dipoles are cross-connected (Figure 5) and the feedline is attached to the shortest — dipole 3. Use heavy duty (24 x 0.2 mm) hookup wire for the dipole interconnections. Balun details are given in Figure 6. Seal the ends of the coax with a good sealing compound like Silastic. Tape the balun piece to the main line with electrician's tape, maintaining a spacing of 5 mm or so with small chunks of plastic placed very 100 mm or so between the two coax pieces. Plastic clothes pegs are just great for this! Tape the balun to the boom adjacent to the feed point or secure it with a cable saddle.

Let the balun section hang down from the boom a little, loop the feedline back up and either tape it to the boom toward the reflector end, or secure it with a cable saddle.

I'll leave the boom-to-mast clamping arrangements to you as individual circumstances will vary.

A quick VSWR check with the antenna mounted with the reflector about a metre or so off the ground and pointed skyward should tell you all is OK — or not — before you hoist your 'baby' to the top of the tower. If you want to adjust the VSWR, an open-wire line stub, connected at the feedpoint, shorted at the opposite end and about 1400 mm long to start with can be employed. Shorten the stub successively until you reduce the VSWR to what you want. Tack the stub to the boom, away from the feedline, when you've established its final length.

Now call CQ DX on 50.110 MHz!

## PARTS LIST — ETI-750

(all-wood construction)

- 2000 mm of 25 x 50 mm (dressed size) timber: maple or w.r. cedar.
- 2000 mm of 19 x 42 mm (dressed size) timber: maple or w.r. cedar.
- 16.5 metres total of 10 mm diameter aluminium tubing.
- 20 x 20 mm or 25 mm nickel-plated wood screws or self-tappers.
- 10 x 35 mm or 40 mm countersunk wood screws.
- Heavy duty hookup wire (24 x 0.2 mm)
- 6 x large solder lugs.
- RG8/U coax, length to suit.
- Boom-to-mast clamp to suit.
- Several cable saddles.
- Electrician's tape.

# OPERATORS

## IN VK2...

IN PARTICULAR I WOULD  
LIKE TO HEAR R FROM  
ANYBODY IN THE FOLLOWING  
AREAS WHICH FROM THE  
INFORMATION I HAVE  
OBTAINED ARE UNDER  
THREAT.

ANY INFORMATION WOULD  
BE GREATLY APPRECIATED.  
NOT ONLY FROM THESE  
GROUPS BUT FROM ANY ATV  
OPERATOR OR REPEATER  
GROUP RUNNING A SYSTEM  
ON 579MHZ . PLEASE  
EVEN IF YOU YOUR SELF  
ARE NOT AN ATVER BUT  
KNOW OF ANY THING THAT  
MAY HELP IN THESE MAT-  
TERS COULD YOU PLEASE  
REPLY TO VKSZWI THRU THE  
VKSZTA PBBS ADELAIDE OR  
BY POST QTHR IN THE CALL  
BOOK (1988/89). THANK YOU  
AND CHEERS DE GRANT  
VKSZWI. ADELAIDE.  
TAKEN FROM PACKET BBS...

## ON THE NET

```

XXXXXXXXXXXXXXXXXXXX
Week No: 16. D. DALLEDAL
Week No: 17. V. Hee
Week No: 18. P. Reed
Week No: 19. N. Koosachi
Week No: 20. M. Keech

```

[illegible]

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CLUB-MEETING

Also that VK2EWJ  
Jeff is making good  
progress after his last  
check up in Sydney. TNX  
the Editor.



# THE ILLAWARRA AMATEUR RADIO SOCIETY, INC.



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

**MEETINGS:** Are held every 2nd Tuesday of the Month except January, at 7.30.p.m. in the S.E.S. Headquarters, Montague street, North Wollongong.

**REPEATERS:**  
 VK2RAW - 146.850. - (VOICE) VHF Mt Murray.  
 VK2RAW - 147.575. - (PACKET) VHF Mt Murray.  
 VK2RIL - 147.275. - (VOICE & R.T.T.Y) VHF Sublime Point.  
 VK2RUW - 438.225. - (VOICE) UHF Hill 60 Port Kembla.  
 VK2RIL - 438.725. - (VOICE & R.T.T.Y) UHF Sublime Point.

**BROADCAST:** On Sunday evening prior to the club meeting, at 7.00.p.m. R.T.T.Y. Mode Transmitted on 147.275.VHF, and relay on 3.562.Mhz. +/- QRM. Callbacks taken immediately afterwards. The voice broadcast will be held straight after the WIA Broadcast on 146.850.Mhz < VK2RAW > and 3.562.Mhz +/- QRM.

**W.I.A. RELAY:** On 146.850. at 10.45.am. and at 7.15.p.m. each Sunday.

**CLUB - NETS:** On 3.562.Mhz. SSB +/- QRM on Sunday at 8.00.p.m.

**NEWSLETTER:** "THE PROPAGATOR", published Monthly to reach FINANCIAL-MEMBERS in the week preceeding the club meeting. All articles, adds etc, to the editor must be in, or try, by the 3rd Tuesday each month.

**MEMBERSHIP:** The Secretary, I.A.R.S. Inc, P.O.Box.1838. Wollongong. 2500. Full membership is \$12 per annum; students & pensioners concessional members \$9 per annum.

**AWARDS:** The Award of the Illawarra Amateur Radio Society, Inc. 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. A contact with VK2AMW is sufficient for the award. Band-details, date, frequency, station worked and \$2 or 2 I.R.C.'s to THE AWARD-MANAGER, I.A.R.S. Inc, P.O.Box. 1838. WOLLONGONG. 2500. No QSL-CARD is required.

**STORE:** The club store operates at each club meeting. by COMMITTEE-MEMBERS.

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**PRESIDENT:** VK2DYU- BILL CHADBURN. 45. Beltana Ave, Dapto.  
**VICE-PRESIDENT:** VK2OB - KEITH CURLE. 24. Beach Drv, Woonona.  
**SECRETARY:** VK2TPH- PHILL HOWCHIN. 12. Mawarra Ave, Dapto.  
**TREASURER:** VK2DMR- DENIS McKAY. 17 Doncaster street Corrimal.

**GENERAL - COMMITTEE:** VK2BIT - Peter Woods, VK2XCC - Ray Ball, VK2FPN - Peter.

**REPEATER - CHAIRMAN:** VK2XGJ - JOHN SIMON.

**REPEATER - COMMITTEE:** VK2CAG - GRAEME DOWSE, \*VK2EXN - IAN CALLCOTT, VK2KHE - Peter Tomlin, VK2FPN - Peter, \*VK2EMV - MORRY.v.d. VORSTENBOSCH, VK2MT-ROB-McKNIGHT, VK2BIT-PETER WOODS, VK2FCP-FRED BROWN.

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**LIFE - MEMBERS :** VK2CAG-GRAEME DOWSE. VK2OB-KEITH CURLE.VK2ALU-LYLE PATISON

**SUNDAY - EVENING - CLUB-NET - ROSTER:** STARTING AT 8.00.p.m.

8.00.p.m. FIRST SUNDAY OF THE MONTH : VK2MT - ROB McKNIGHT.

2nd SUNDAY OF THE MONTH : VK2ENX - TONY MOWBRAY.

3rd SUNDAY OF THE MONTH : VK2DTC - DAVE CAPON.

4th SUNDAY OF THE MONTH : VK2PHD - RAY BALL.

5th SUNDAY OF THE MONTH : VK2EBI - KEVIN MURPHY.

And on stand-by : VK2EMV after NOTIFICATION ONLY!