



# The PROPAGATOR

Illawarra Amateur Radio Society Inc.



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The monthly newsletter of the Illawarra Amateur Radio Society Inc.  
Registered by Australia Post publication number :- NBH - 1491.

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Meetings are held on the second Tuesday each month (except January) at 7.30 pm in the  
State Emergency Services building in Montague St, Nth Wollongong.

Visitors are most welcome.

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VOLUME 91, NUMBER 10

OCTOBER 1981

## GREETINGS TO ALL!

Welcome to the "Propagator", the newsletter of the Illawarra Amateur Radio Society Incorporated! The newsletter is being sent to all licensed amateur radio operators in the Illawarra this month, as well as to all our members. This is in order to let you know a bit about the Society.

The IARS is your local amateur Society, who run the repeaters and other services in this region. We thought that we might let you know a bit about what goes on in your local group. Coming up soon, the Society has a number of interesting and entertaining activities in which you might like to take part.

Check out the program at right to find out what is coming up. Visitors are always very welcome at all Society functions.

Club meetings are held on the second Tuesday evening of the month, starting at 7:30pm, at the S.E.S Headquarters building, Montague Street, North Wollongong. The IARS club station is also being created at this address. Please come along!!!

## CALENDAR

**OCTOBER:** This could be one of the busiest months on record for the IARS. Rob VK2HT has been putting together a video on the Club's repeaters. "Around the Sites" will be shown at this month's meeting. Following the video, we might wander off into a Radio Yarns night. Bring your memories, pictures, tales, etc.

On the weekend of the 19th and 20th is the Scouts Jamboree of the Air, where the boys and girls get to talk to other Scouts around the world by amateur radio. As of that isn't enough, the Radio 2WL Expo show is on the same weekend, with the Society having a stall at that too.

**NOVEMBER:** This is traditionally our big club auction for the year. Everyone (members and others) are welcome to come along to sell their gear, or buy someone else's. This is always a very popular night.

**DECEMBER:** Also traditional is the Christmas break up night, with families and friends invited to meet others who have lost relatives to the radio.

Minutes of IARS General Meeting,  
10th September 1991, at SES HQ,  
Montague Street, North Wollongong.  
Start 19:45.

Apologies: VK2 EMV, JBS, JTB, RHE,  
XCC, YKQ, ZDM.

Visitors: Roger Harrison VK2ZTB

Correspondence in:

1. BARG News - Ballarat ARG

Correspondence out:

1. Bob Maughan VK2CRM - IARS info.
2. Wayne Green &
3. Carole Perry - requesting info re their methods of encouraging new members to the amateur ranks.

REPORTS:

1. Club property: Steve VK2TSB has obtained a solid core door for radio room.

2. Repeaters: VK2RAW 146.850 - The desense problem may be due to a cavity problem - being checked.

VK2RIL 147.275 - Diplexer is out of tune and repeater taken of air to avoid problems with other users at site. Should be back shortly.

VK2RAW 147.575 - NETROM2 is now operational at Mt Murray.

VK2RUW 438.225 - an audio IC was blown, now replaced.

VK2RIL 438.725 - TXer has been tuned, RXer being tuned with difficulty. Possibly a new crystal required.

3. Finance: Treasurers report was received.

4. QSL Cards: Cards being held for some local amateurs, both members and non-members of IARS. Please collect from Graham VK2GID ASAP, as non-collected cards will be returned to the Bureau after a reasonable time has elapsed.

5. 2WL Lifestyle Expo. (See separate article...Ed).

6. Antenna - weather permitting, Saturday 14 Sept, Working Bee. (It wasn't)

7. Amateur Exams. Roger Harrison said that DOTC had foreshadowed the changes in exams in April and that in July DOTC had confirmed that it would only deal with one body representing Amateurs - the WIA.

Most of the concern of members present was that there was very little information from the WIA on this topic, especially as the Regional Conference of Clubs had just been held with the item not even listed for discussion.

Roger Harrison VK2ZTB gave a talk on propagation theory and practice and a demonstration of the capabilities of "Graph-DX", a forecasting and planning program for propagation predicting. The program is available from FT Promotions P.O Box 285 Balmain NSW 2041, Fax (02) 818-2949.

Members in hospital: Morry, VK2EMV, is in Wollongong Hospital, Ward 18. Get Well Soon Morry.

Meeting closed 22.00

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#### RAVINGS

John VK2XGJ once said that to do a good job of this Newsletter, it would take the whole month. We do try to write it over this time, but of course all of the reports and minutes have to be done in the last week before printing to make it up to date.

Because of when the deadlines line up, this means that I am actually writing this column in August, to appear in your letterbox in October. So if you wonder why some things seem a bit dated, now you know.

\*\*\*\*\*

A few of the Society members attended a working bee yesterday (22nd September) to reinstall the VK2AMW 20 metre antenna at North Wollongong. Being a slacker, I didn't go. However I drove past that night and there was definitely a shiny aluminium device at the top of the mast.

The installation was given a severe test that night (remember the windy Saturday night?) by high velocity gusts of wind. Next morning, I drove past on the way to pick up some reports, and noticed a slight lean to the antenna, but not that can't be easily fixed.

So the club station antenna is up and connected. All we need now is a transceiver to make it go...

\*\*\*\*\*

EXAMS - EDITOR'S VIEW

Generally I try to stay away from touchy subjects, but on this one I have a couple of thoughts which don't seem to have surfaced yet.

In the motor cycle racing fraternity of Australia, the Auto Cycle Union is the representative body of riders. It has a federal and state branches, much like the WIA.

The ACU slowly but surely became a controlling body, as well as a representative one. This was brought about by the Dept of Sport and Tourism.

We are seeing the same thing in Amateur radio. The representative body is being converted into a controlling body by the Government, whether they like it or not. Grass roots hams are generally not happy about a change in structure (nobody ever is). That's what the fuss is about. Not exams, but the Amateur structure.

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You may have heard of the Packet Talk at John VK2XGJ's last month. What we didn't tell you is that the Propagator was there, but only just. Graham VK2GID tells:

After finding John's address in an old issue, I motored to the venue to find no-one there and no antennas in sight. John moved a year ago.

Not a problem: I had brought 30c for exactly this reason, and there was a phone box out the front. Wrong: I goofed the number up and couldn't remember the proper one. Hmm...

High speed mobile from Dapto back to West Wollongong, to look up John's number, call John and then high speed mobile back to a different part of Dapto. John thought this was hilarious. Lucky for me John isn't the Editor!

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## REPEATER REPORT

(Compiled 18/9/91). Elsewhere in this issue of the Propagator, there is a questionnaire relating to various aspects of the Society. I urge you to fill it in and return it. There are questions about the Club's repeater systems that I asked to be included, so that we can gain some idea of what direction you, the members and users of the systems, feel that we should be heading in. Perhaps we may get some response, it can only be an improvement on the previous under-whelming support or ideas we have enjoyed in the past. If you feel strongly about some aspect of our repeaters, or with the Club in general, don't just whinge over the airwaves or behind people's backs, get off your behind and put some muscle into your idea. I shall now climb down from the soap-box and proceed with the report.

A special hello to any readers who are reading the Propagator for the first time, after it being sent to them by the Club. Why not come along to the October meeting! Hopefully, the video on the Club's repeaters will be complete and will have its world premiere screening on that night.

29.520/620 - Taken off air 11/8 while videotaping the repeater sites. Put back on air 15/9. While the TXer was down, gave it a tune and made permanent the mods that have been done in the past year and a half, since it was put on air. The "regular" users have returned to using the system since its return to air. The repeater is still working reasonably well, but RXer still needs better selectivity. The many requests for help or ideas in this regard have met with no response at all. Until I can figure out what best to do, the RXer will unfortunately stay the way it is.

148.850 - The repeater still has a small amount of desense, appears to be around a couple of dB. Only one quick trip has been made to Mt Murray by Ken VK2TKE to attempt a fix, but this was unsuccessful. This has been the only visit to the site in the past two months due to our desire to limit the number of times we go up there, so as not upset the owners of the land that we pass through. We are still awaiting (optimistically) the site owner's decision on whether we are allowed to lay the mains cable to our cubicle. At least the existing amount of equipment appears to be a good balance with the solar panels' power output. The next step for the desense problem is to possibly remove the repeater's diplexer cavities (putting the repeater off air) and bringing them down to the test bench. The RXer itself may even need a look at. Due to the high level of traffic through this system, this will have to be done as soon as possible.

147.275 - The pager interference problem has now been absent for over 2 months (touch wood). On 3/9 it was reported to me that our repeater was occasionally interfering with a commercial service also at Subline Point. I went up that arvo to check if our equipment had been interfered with or altered in some way. Nothing found. The next day, the interference worsened. Graeme VK2CAG found time to check the equipment and found that the interference could be reduced by separating the feedlines. He also found that the VSWR into the repeaters diplexer was 3 to 1. It was felt that this high figure was upsetting the repeaters TXer, causing spurious signals. Before anything could be done, the interference worsened to a level that made the commercial service unusable. The owners of the service reported hearing certain callsigns of people talking for hours on end. (Callsigns not reported to avoid enbarassment.)

EARLY DAYS - WOLLONGONG RADIO CLUB

Last month's article brought forth a response from IARS member Bob Bonnella, VK2URB, who was able to confirm that the Wollongong Radio Club had been located at premises in Rosemont St., also that this was at the home of Col Mearing. Col was contacted and a visit to his house produced interesting information on that period of Club activity.

Col not only described what took place, but also gave me the the Club's Station Logbook which covered it's Station operations over the period from 5.7.48 to 26.6.53. This corrects an error in last month's article, as, in fact, the Club's Station was fully operational from Rosemont St. over the period from 5.7.52 up to June 1953 when the transmitter was taken off the air for modification.

Unfortunately this project was not completed and due to this and other factors numbers dwindled over the next year or so and meetings eventually ceased.

The VK2AMW licence renewal fees were were paid each year by Col Mearing, up to 1957 or 1958 - at which time he was contacted by a local Amateur who was one of a group planning to reactivate the Club. Col passed on the licence information to them but did not take part in any of their activities.

It is not known what occurred from that time up until 1962, except that it appears they held meetings at one time in the small building at the edge of Coniston Oval (see last month's article).

The Station Logbook reveals (1) The first contact is dated 5.7.48. As the Club Station Licence for VK2AMW was not granted until 3.12.48 it would appear that the operation during the

intervening period would have to have been under a private call sign. As the initials RW are entered as the responsible operator, this may have been Reg Walters, VK2WV, at whose premises the Club was located about this time.

(ii) Greville Dennis, referred to in last month's article, is shown as Greville Dennys, VK2UK.

(iii) Many of the wellknown Amateurs in Australia, of that period, were contacted by the Club Station on 40 and 80 metres, some on a number of occasions. 20 metres was also used.

(iv) The period of "CW only" activity, referred in last month's article, extended from 3.9.48 to 7.1.49, during which they had some 240 contacts, 174 of which were with overseas stations. Then there was a break of approx. 7 months to 10.8.49, after which the next 380 contacts logged were on phone, as were over 95% of the contacts thereafter, up to 26.6.53.

(v) The Club station consisted of a "homebrew" transmitter and recvr. An end fed antenna with 300 ohm open wire feeders was used when the Club was located at Passlows but a centre fed dipole was put up at the Rosemont Street location. This was used with an antenna tuning unit.

(vi) In March 1950 a FS6 transceiver was used at the Club and also by it as a portable station at an outing at Mount Keira on 5th March 1950.

(vii) Late in 1950 a 101 transceiver was also operated at the Club for a period.

Col Mearing, who did not obtain an Amateur licence himself - although he sent practice morse to other club members who were going for their licence examinations - passed on to me the large sheet metal sign which was on his shed door for years. It says -

HEADQUARTERS  
WOLLONGONG  
AMATEUR RADIO CLUB  
VK2AMW

He also gave me a number of

transmitting and receiving valves of the 1940's and 1950's vintage, as well as the station microphone - a "considerably dressed up" carbon insert in a chrome plated metal case, made to look like a crystal microphone!

Let it be thought that station operation was the only activity of the Wollongong Radio Club. Col indicates that they had regular lectures and discussions on radio subjects, particularly those which would assist members to get their licences. Past Amateur Examination Theory and Regulations papers were covered in depth and Morse practice was conducted up to the 14WPM then required of new Amateurs.

A number of items of equipment, such as GDO's, VFO's etc. were constructed at the Club by various members under the guidance of experienced Amateurs in order to put theory learned into practice and also assist those getting gear together for their own stations.

The outing at Mount Keira referred to above was basically a Fox Hunt which was held on HF (probably on 7MHz) as there was not a great deal of VHF activity by Clubs in the 1950's. Col thinks that the Club President of the time, Eric, VK2DY, may have modified a Transponder Unit to operate as a transmitter on 166MHz - which we had instead of 2 metres in those days - but he is not aware of any other VHF activity in the Wollongong area during this period.

My thanks to Col for his assistance in filling in a gap in our knowledge of Club history, and in particular, for his donation of the first Station Logbook for VK2AMW's long and chequered association with our Club, together with the station microphone, club signboard etc.

Lyle VK2ALU.

The Club's inwards QSL cards team currently has cards for these people: VK2's CDP, DAN, EU, FCW, HQ, IU, JAC, JHW, JJJ, JTS, KDX, KMD, KRP, KWN, MIL, NEK, NNJ, PGB, PGL, PGD, PJA, PHF, PZK, TOY, ZNS. If you are on this list, please arrange to pick up your cards from Graham VK2GID, at meetings, or send us a couple of dollars for postage.

If you are on the list, but have had some cards in your letterbox last month, disregard this (because I must have dropped them over).

If you have arranged with the QSL bureau to send your cards to the IARS, then either pick them up or organise with us to get them sent out. Please! I am sick of having them hanging around every couple of months and worrying about how to get them sent out.

On a nicer note, the Club provides a service where you give Graham VK2GID or Bill VK2JBS your outgoing cards and we send them on. Also, your cards can be sent to the Club and you can pick them up.

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SPECIAL BOOK OFFER

The Illawarra Amateur Radio Society is pleased to offer a first edition, autographed book set. This two volume definitive collection is limited to the first 20 000 orders. Hurry, but do not send any money.

As part of this exclusive issue, we present to you Volume One: "Ray VK2XCC's Everything You Need to Know About Packet". This small manual tells you everything Ray thinks you need to know.

But wait, there's more! You also get Volume Two: "John VK2XGJ's Guide to Working H.F.D.X". This is also a lightweight, very easy to carry booklet, which perfectly complements the other volume.

We do, however, recommend keeping these two books well apart on your shelf. Ring (RAW) 146.850 now to reserve your gift-boxed set! Our operators are waiting for your call!

Minutes of IARS Committee Meeting -  
17 September 1991 at SES HQ,  
Montague Street, North Wollongong.  
Start 19.30.

Present: VK2 KLH (Chair), DSH, GID,  
GPJ, KCV, KWG, MT, TKE, URB, XSV.

Apologies: VK2KHE, OB, XCC, Ron  
Hanks

The minutes of the last Committee  
Meeting of 20/8/91 were read and  
received. Moved VK2 TKE, URB

Correspondence in:  
WICEN - copy of affiliation  
agreement with State Emergency  
Services.  
Redcliffe Radio Club - concern re  
revised examination procedures.  
McLean, Conway & Assoc - info  
required re renewal of Public  
Liability insurance.  
WIA Examination Service - details  
of exam procedure and cost: Theory  
\$10, Regulations \$5, CW Receive  
\$10, CW Sending \$5 - per candidate.

Correspondence out:

DOTC: re examination changes.  
Draft letter to the WIA outlining  
the concern of members to be  
completed and sent.

Reports:  
Treasurers report was received  
from Ken, VK2TKE.

This issue of the "Propagator"  
contains a questionnaire. Please  
take the time to complete it to  
help us determine the future  
directions of the IARS. You may  
also win a free membership  
subscription.

Antenna: Weather permitting the  
antenna will be raised on Sat 21/9.  
Thanks in particular, to Vic  
VK2XSV, Keith VK2OB and Rob VK2MT.

#### FOR SALE

Icom IC-24AT dual band handheld:  
A good little transceiver but not  
as good as the one that replaced  
it. The Icom also comes with a  
700mAh Nicad pack. To those who are  
interested, I am after \$650 but am  
prepared to haggle. Contact Phil  
VK2TPH either on (042) 613666 or  
@VK2XGJ's BBS.

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Stores: Ken VK2TKE to report to  
next meeting re insurance  
requirements. Vic VK2XSV and Ken  
VK2TKE to investigate surplus  
stores disposal at TAFE and  
purchase (liberate) any worthy  
articles.

Propagator: Dale VK2DSH outlined  
the costs involved in preparing,  
printing and distributing our  
newsletter. Total costs are of the  
order of \$700 per year. Another  
Packer takeover target??

QSL Cards - Graham VK2GID has a  
number of inward QSL cards which  
have not yet been collected.

2WL Lifestyle Expo 19/20 Oct: John  
VK2ZLJ will provide tables for the  
display. A raffle will be held  
subject to gaining authority (if  
required). The WIA will provide  
videos and some pamphlets and Ken  
VK2KWG is preparing a handout.  
Extra copies of the "Propagator"  
will be printed for distribution.  
Ken VK2TKE to arrange for a sign to  
be made. Application forms will  
also be available at the display.

Repeater report: Rob VK2MT reported  
the difficulties currently being  
experienced with VK2RUW 438.225 and  
VK2RIL 147.275. The proposed  
linking of VK2RUW to Goulburn is  
progressing satisfactorily.

Finance: A number of members have  
yet to renew their membership.  
Subscription fees are our only  
source of income (used to provide  
members with the "Propagator" and  
keep our repeaters functioning), so  
it would be appreciated if  
outstanding fees could be paid NOW.  
If you are not a member but use the  
Society's repeaters perhaps you  
would like to make a small (non tax  
deductable) donation to help defray  
the costs of keeping them  
operational.

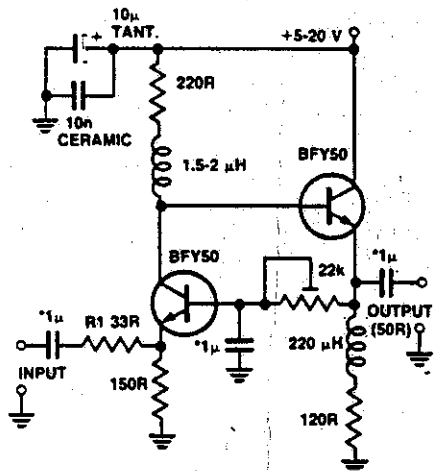
Meeting closed 23.02

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## Wideband Power Amplifier

Well, not all that much power — in the milliwatt range, really. This uses the same configuration as the common-base/common-collector amp opposite; but power gain is provided and the circuit will deliver between about 10 and 180 mW output, depending on power supply voltage. The common collector stage provides current gain, transferring power to the load. This stage has to operate at a fairly high quiescent current. In fact, to get the bandwidth, both stages have to be operated at high quiescent current levels.

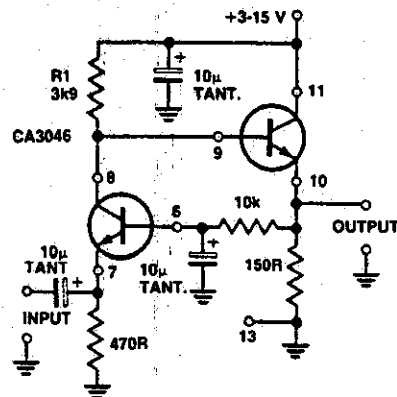
Common base stage compensates for the input capacitance of the common collector stage. The RFC in the emitter of the output device gives 'lift' at high frequencies, helping broaden the bandwidth. R1 can be used to match the input to the source driving impedance. Two of these amplifiers can be cascaded to deliver around half a watt output with little decrease in overall bandwidth. Increase the  $1\mu$  capacitors to decrease lower cutoff.



MIDBAND POWER GAIN 13-15 dB.  
POWER OUTPUT (5 V SUPPLY) APPROX. 10 mW  
(20 V SUPPLY) 180 mW; BANDWIDTH APPROX.  
50 kHz-15 MHz.  
\* 50 V METALLISED POLY OR MONOBLOCK  
(LOW INDUCTANCE) TYPES.

## Common Base/Common Collector Wideband Amp

This amplifier configuration has the advantage of low input and low output impedances — around 100 Ohms here. Two devices from a transistor array IC are used. Use dipped tantalum capacitors and keep leads short for best results. You can match the input impedance to the impedance of the source by varying R1, which varies the emitter current of the common base stage and hence the input impedance. Linearity of this configuration is very good, but gain is not high.



MIDBAND GAIN APPROX. 17 dB.  
BANDWIDTH (-3 dB) APPROX. 150 Hz - 3.5 MHz.  
MAX. INPUT AT 5 V SUPPLY APPROX. 40 mV RMS  
ALWAYS GROUND PIN 13 OF CA3046

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## SWITCH MODE POWER SUPPLIES

I was reading an ad for a Yaesu FT-990 yesterday and I noted that it had a "switch mode power supply", which was supposedly a big deal. Fine, but what is one?

There are basically two ways to make a power supply, linear and switch mode. The "usual" supply is a linear device, which means that the transistor (or regulator or whatever) generally operates in its linear region. The idea here is to take the AC supply, step it down by transformer, rectify and filter it, then use a linear regulator to get the desired voltage.

In a switch mode supply, the main transistor (or whatever) acts as a switch - it is either on or off. This means reduced losses, as when it is on there are no volts across the switch, and when it is off there is no current through it. Power is volts times current, so we have less losses.

The SMPS (switch mode power supply) also has a different layout. Take the AC mains, then rectify and filter it to give DC. Pass this through a fast (say 20kHz) oscillating switch to give high frequency AC, transform it down, rectify and filter it. Regulation is by varying the duty cycle of the switch.

The benefits are reduced power dissipation, and also a lighter transformer. Because the transistor or whatever wastes less power, the transformer doesn't need to handle so much power. Also, because of the much higher frequency, the transformer can be smaller (less energy per cycle). Anyone who has ever hefted a 13.8V 20A supply will know how desirable a smaller transformer is.

The only real drawback is that they cost more than the linear type. But in portable gear, this may be well worthwhile.

## HAM EXAMS AGAIN

This is probably not a wonderful medium for spreading this news, but anyway, here goes... The WIA Exam Service has released their prices. Exam papers will cost \$10 for theory and morse receive, and \$5 for regs and morse sending, per candidate. On top of this would be the examiner's cost of a venue and a bit for himself.

If you want to be an examiner, you need to be either an amateur, or a professional person (too many details to list here), then fill in a form and pay a \$10 fee (which appears to be once only, not annual). Forms and details will be available at the October meeting.

What does the committee think? This seems reasonable on the surface, but where will it lead? Will the WIA end up running all of the Amateur deal in Australia? Perhaps so. What needs to be done is to change the structure of things in Australia.

At the moment, the WIA is not properly representative, in say the way that a government is, because not all amateurs are in the WIA. However, not all amateurs are in the clubs either. What we need is say a delegate from every Club to the WIA, or something. Basically, the grass roots amateurs (as general people seem to be called), need a handle on the WIA - some way to let their feelings be heard.

Sorry about all of the political type of stuff that has been appearing in the magazine lately, but it is a time of change for the hobby, and so we try to tell you what the committee thinks. If you don't agree with our ideas, collar a committee member and let them know your thoughts. We are all in this together, remember!

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### 2WL EXPO DISPLAY UPDATE

Things are going along well for the IARS's display at the 2WL expo. The event is held at Beaton Park, Gwynneville (in Wollongong) on the weekend of the 19th and 20th October.

Many thanks to VK2ZLJ for arranging some tables for the setup. We have also arranged some videos from the Wireless Institute, the site is organised, leaflets are being printed, etc etc etc.

However, we do need people. A roster will be drawn up next meeting; we look like needing 12 people if everyone is only to do half a day.

Also, we would like some gear and things to display - homebrew gear, new gear, old gear, lots of gear.

See Rob VK2MT, Ken VK2KWG or Dale VK2DSH if you can help out or if you want more information.

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### DOTC QUESTION

I was fiddling about, trying to work out how to start this except for "Last month Keith VK2OB asked us:". I have begun this way every month for the last year. Oh well - four weeks ago my sheet of paper asked us about common symmetry amplifier circuits. Admit it - you had never even heard of one!

The answer was (D) - A matched pair of one PNP and one NPN are used. I won't try and explain this one, because it will become obvious that I don't know.

The next question I have is another transistor question, so I'll skip it and do a units question: A capacitance of 0.022uF is the same as:

- (A) 22 pF
- (B) 220 pF
- (C) 2200 pF
- (D) 22000 pF
- (E) Just use a 0.01 and be done with it.

\*\*\*\*\*

## PACKET NEWS

This is the remnant of a larger column that didn't work out, due to the pressure of deadlines. So Graham VK2GID, who knows a little bit about packet, will have a shot at it. This could be quite inaccurate:

VK2RAW's packet controller has been upgraded to allow NetRom access at both levels 2 and 3. Previously only level 3 access was possible, so that only bulletin boards and the like could use the network. Now everyone can, thanks to a change in thinking about some regulation. (I don't understand this, I just type what I remember).

So what, I hear you ask? Even Ray VK2XCC would know that packet allows you to communicate to other computers over radio. Well using the NetRom network does it smarter, and wasting less air time (sounds good, doesn't it Ray?)

What NetRom does for you is looks after all of the mucking about getting signals over long distances, which might involve a few hops. The networking does error checking along the way, and only resends lost packets over the problem hop, rather than all the way from the beginning as standard digipeaters make you do.

For the user, this means that you can connect to VK2RAW, then you have a few options. The good one is to then type "N" to see what other nodes the controller knows. (Other digi's with NetRom that VK2RAW can link to, however far).

You can then connect "C" to any of these, and the network does all the magic between VK2RAW and the other node, which might be a few hops. You can, from the distant node, type "U" to see who lives at that end, and connect from the distant node to a user in that part of the world.

Further documentation can be had from the NORDLINK directory of John VK2XGJ's bulletin board. I haven't read any of that, I am just writing from what I remember of the packet talk at John's place.

Best way to work out the system is probably to get on and have a bash. I tried it a minute ago through VK2RAW (VK2RSD also has the facility) and the big trick to remember is not to wait for prompts because there aren't any. But it seems to work pretty well.

Anyway, no doubt next month we will be able to present you with a bit of a better idea of how it all works. But this gives you an idea of what you can do.

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BROADCASTS - The Wireless Institute of Australia, N.S.W Division broadcast is relayed to 29.620 MHz and 146.850 MHz at 10.45am and 7.15pm each Sunday. Callbacks after the broadcast. RTTY broadcast in the week before the Club meeting, Sunday evening, 6:45pm on 147.275 MHz, relayed onto 3.618 MHz +/- GRM and 29.620 MHz, with callbacks immediately after.

NEWS LETTER - The "PROPAGATOR" is published each month to reach all financial members in the week preceding the Club meeting. Articles and letters are always welcome. Commercial advertising \$\*\* per quarter page per year, member's classifieds free for one issue. Ring Graham (042)286732 for details.

MEMBERSHIP - \$15.00 P.A, concessions \$12.00 P.A, expiring immediately after the Annual General Meeting in July.

STORE - The Club store is open at each meeting, and sells all sorts of hard to get knick-knacks that you might need.

LAWRENCE - VK stations require 10 contacts with IARS members. Overseas  
HARGRAVE stations require 5 contacts. One contact with the Club station  
AWARD VK2AMW is suitable. Details of contacts are to be sent to the Club secretary.

\*\*\*\*\* COMMITTEE \*\*\*\*\*

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	-VK2XGJ - John Simons (042) 614828	
	-VK2XLA - Graeme East	-VK2XSV - Vic Hee
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