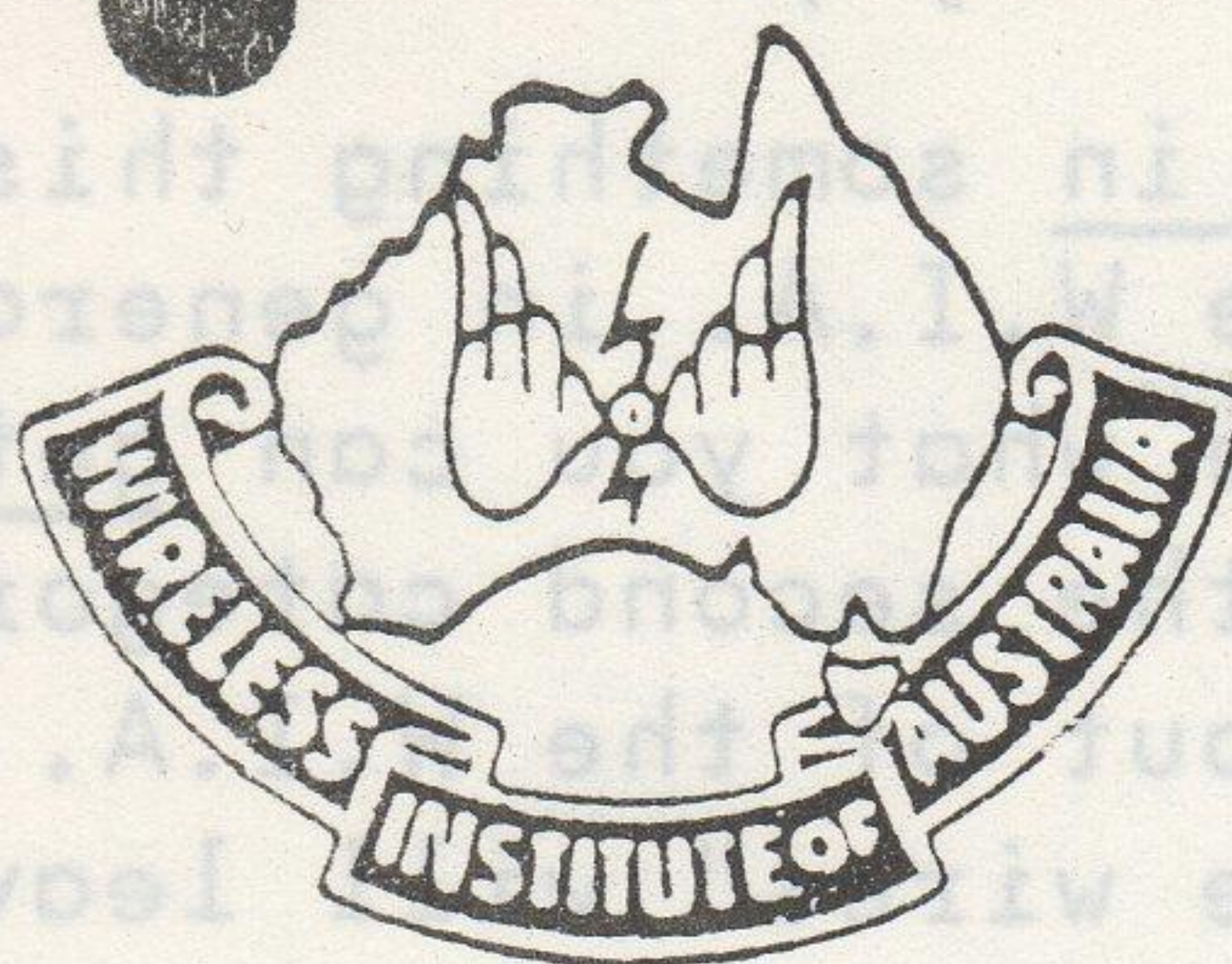


QRM

Amateur
Radio
News



FEBRUARY 1985

Issued by the Tasmanian Division of
the Wireless Institute of Australia

Radiatorial Comment

Listening to our broadcast on Sunday mornings, your Editor has been impressed with the gallant efforts of our most recent announcer, Barry VK7KAD, to involve us all much more in the W.I.A. operations. In all three branches in VK7, we continually suffer from the "dead wood" syndrome experienced in many voluntary organisations. There are even levels of "deadness": lowest level - those who don't bother to join W.I.A. at all (either it's too expensive or, "I might get stuck with some sort of responsibility"); next-lower level: those who join but never come to meetings or admit to being members ("I just pay my sub to get 'A.R.'"); then there's low level: those who are members and attend meetings but only to chat with their mates or criticize those who are trying to improve the Association and incidentally, the conditions for our hobby ("Stick-in-the-mud" lot in the W.I.A. - never make much progress - but I'll stir 'em up") The stirring-up referred to almost always consists of a harangue about the inefficiency of Council or Divisional Officers - never an offer to become part of the system, to provide experience or expertise.

Your Editor once resigned from a Union because he was disgusted with the way it was run. It was a salutary experience! The Union never faltered in its bias towards the red end of the spectrum, and your Editor was left with no means of publicising what later proved to be a disastrous situation. Never again! The motto should be "If you want to improve an organisation, you must be part of it" - and that doesn't mean just being a non-participating member.

The setting-up of an "activity group" in the south, similar to the one already flourishing in the N.W. Division, ought to lead to the involvement of more and more amateurs as the different areas of activity come into being. The same principle should apply to the main Divisional body - there are enough experienced and well-qualified members to start practical sections on all aspects of our hobby, from Morse practice to satellite operations, from

soldering to computers. Young members joining W.I.A. must be bored beyond measure by the stultifying content of our meetings, and the "dead wood" atmosphere created by the very people who could be broadening their enjoyment and knowledge of amateur radio.

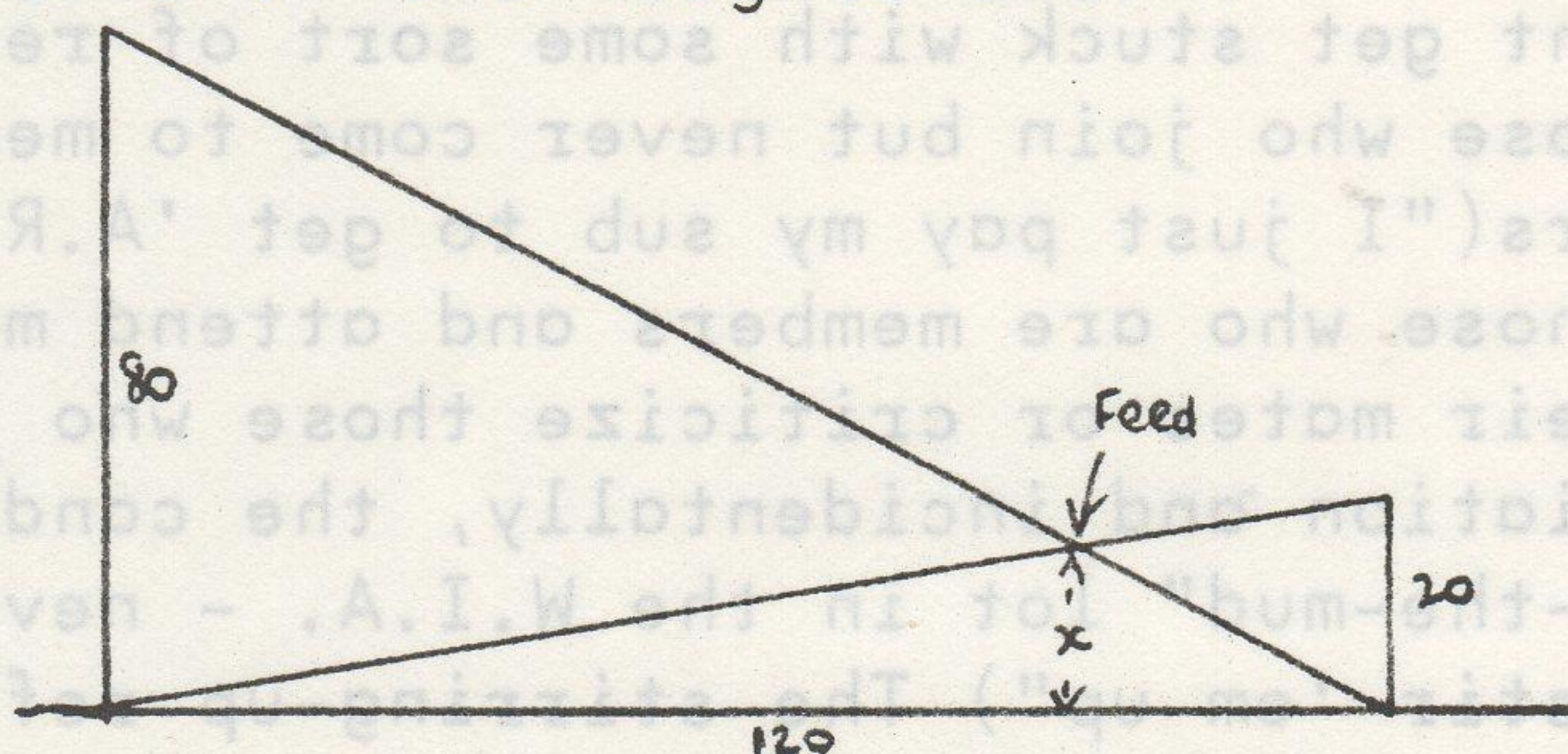
Are YOU going to put in something this year for the benefit of fellow-members and the W.I.A. in general?? Or are you merely going to sit back and see what you can get out of it?? Be Warned! If you're in the second category, you may soon find there is nothing to get out of the W.I.A. (i.e., the same as you put in) because the "live wires" will leave to form separate splinter groups where they CAN get interest and action and find it possible to widen their horizons.

John VK7JK.

The Editor's deadline for copy for the March issue of QRM is FRIDAY, 1st. MARCH. Don't miss it!!!

A SMALL PROBLEM (from December issue)

The antenna feed point problem by VK7CV is solved by using the reciprocals of the heights shown.



$$\frac{1}{80} = 0.0125 \quad \frac{1}{20} = 0.05 \quad (\text{on the electronic slide rule})$$

Add these two figures together, result: 0.0625.

$$\frac{1}{0.0625} = 16. \quad \text{Height of feed point} = 16 \text{ metres.}$$

$$\text{OR: } \frac{1}{x} = \frac{1}{80} + \frac{1}{20} = \frac{1+4}{80} = \frac{5}{80}. \quad \text{Thus } x = \frac{80}{5} = 16 \text{ metres.}$$

Any questions????

F O R S A L E .

One 2m handheld IC2A \$200.00.

One Superboard Computer with commercial case, software, etc. ... \$200.00.

Contact Peter Frith, VK7PF, QTHR or (003) 430182.

P A C K E T R A D I O .

There have been a number of articles on "Packet Radio" in "A.R." magazine, and there will be an on-going segment bi-monthly, sourced from the Sydney Amateur Digital Communications Group (SADCG) and the Melbourne Packet Radio Group (MPRG) alternately.

These articles have covered the field fairly extensively and in some detail, and should be read again by anyone who may be thinking of "having a go". This contribution is intended perhaps to answer some basic questions that may arise.

As a quick description - Packet Radio is a system that allows the transfer of information (QSO's) or data in a digitally encoded form at high speeds in short bursts (packets). It can be operated on all bands and modes permitted to the amateur by D.O.C., direct - i.e. station to station, via repeater or via satellite.

Because the transmission and reception of the signals is controlled by microprocessors, and each packet is of short real time duration, it is possible to have as many as 16 users on the same frequency in individual QSO's, in what appears to them to be the same time. As an example of speed: RTTY operates at around 50 baud; Packet runs at 1200 baud, some 24 times as fast. Some of the time saved is used by the "housekeeping" of the system, which includes checking and verifying the correctness of the transmissions.

Assuming you are considering a move into Packet Radio. What do you need? Additional to a suitable rig, which you probably already have in the shack, you will require three items:

1. A Terminal.
2. A Terminal Node Controller (TNC).
3. A Modulator/Demodulator (MODEM).

With the above, the system operates broadly as follows: Output from the terminal in binary code is assembled into a packet containing the address, data, end of message etc., by the TNC which also handles the baud rate conversion from the terminal speed to the transmission speed. The TNC passes this to the MODEM where the packet is converted to AFSK 2 tone modulated form which is then sent to the Tx. Incoming signals follow the reverse route.

1. The Terminal: May be any Display or Typewriter type terminal, (ex-RTTY, for example) or almost any computer from mainframe to personal micro. It MUST have RS 232 connection and be able to generate ASCII character code.

2. Terminal Node Controller: There are two main approaches: One is to write programmes for all the requirements as software for a computer that is used as a terminal - a big job and not for the fainthearted. It also ties up the computer completely. The other is to use a dedicated TNC which will handle all the programming requirements. This way leaves the computer terminal available for other duties, and is the way to go if a typewriter type is used. In this method, the programs are all contained in ready processed chips.

Ways and means are:

(a) Base Boards and circuits - Quite practical as the necessary chips, ready programmed, are available individually as are the base boards.

(b) Kits - These are supplied by the various Amateur Groups. They contain the boards and all vital chips, including the programmed ones. NOT supplied are the readily available miscellaneous parts.

(c) Fully Built - I believe a large USA-based electronics group has plans to market a fully-built TNC/MODEM combination black box.

3. MODEM: Commercial Modems capable of 1200 baud can be used. Experience has indicated that add-on timing circuitry is needed. Circuit boards for dedicated Modems are available and can be supplied as part of the TNC kit. Components are readily available commercially.

COSTS: Depend on how you wish to travel.

1. Terminals: If you suitable RTTY gear, it should be almost nil cost. At the other end, a full-featured keyboard/VDU intelligent display terminal will cost about \$1,000.00 + S.T.!! If you use a computer, almost anything goes. Vic 20's and converted TV Monitors are in practical service.

2. TNC's and MODEMS:

(a) Base boards - approx \$40.00 for TNC plus \$20.00 for Modem.

An estimate for all components is \$350.00.

(b) Kits - Two are currently immediately available.

One from Vancouver through SADCG and costing about \$190.00 One from TUCSON, USA direct at about \$240.00 - Both include the Modem Board and software in EPROM.

SADCG estimate of total assembled cost is \$300.00. A combination TNC/Modem kit from MPRG will be available shortly. Prices not yet known.

(c) Fully-built - no prices or release dates are yet available.

Apropos "Vancouver" and "Tucson": These are two control procedures (protocols) advanced as the best (or at least different). AX25 developed by the Tucson USA Group, which has recently been adopted by the ARRL; and V1/V2 originating from the Vancouver (Canada) Group. After much testing, the SADCG and MPRG have adopted the V2 for normal operating in their respective areas. They also advise that V2 fits the requirements of D.O.C. whereas AX25 does not. However, AX25 is used in satellite and HF into the USA, and the TNC kits software will run both protocols. All this sounds vaguely familiar and if you are confused, you are not alone!!

However, Packet is a whole new area for the amateur and will appeal to "nuts and bolts" buffs as well as the operator types. Still interested?? I have nine copies of the information release of the SADCG - approx 10 A4 pages. Also I hope to have a Vancouver TNC kit here by the time this is printed. Give me a call.

Russ Pitman VK7ZRP.

Phone 278453.

**ICOM**

PRICE LIST
AMATEUR PRODUCTS

MODEL	DESCRIPTION	R.R.P.
		\$
<u>HF</u>		
IC 730	10-80m 100w XCVR, 12v/mic.	799.00
IC 745	10-160 100w XCVR./Gen. Cover	1,199.00
IC 751	10-160 100w XCVR. /Gen. Cover	1,499.00
IC R70	2-30MHz RCVR., 240v AC/DC opt.	749.00
IC R71A	2-30MHz RCVR., with 32 memory, 240v. DC opt.	850.00
<u>VHF</u>		
IC 271A	2m FM/SSB/CW/25w 12V DC/AC opt.	819.00
IC 271H	2m FM/SSB/CW/100w 12v DC/AC opt.	1,099.00
<u>MOBILE</u>		
IC 25A	2m FM/25w syn. 12v/HM12	395.00
IC 25H	2m FM 45w syn. 12v/HM12	499.00
IC 27A	2m FM 25w syn. 12v/HM12	450.00
IC27H	2m FM 45w syn. 12v/HM12	529.00
IC 290H	2m MBL. 25w/FM/SSB/CW, 12v/mic.	647.00
<u>PORTABLE</u>		
IC 2A	2m/FM 800CH HT Nicad & Charger	299.00
IC02A	2m/FM 800CH HT Nicad & Charger	375.00
<u>UHF</u>		
<u>Base</u>		
IC 471A	UHF XCVR. 32 memory/12v/430-450MHz/25w	999.00
IC 471H	UHF XCVR. 32 memory/12v/430-450MHz/75w	1,289.00

OBTAINABLE FROM:

Hobby Electronics,
477 Nelson Road, Mount Nelson,
Hobart, Tasmania.

Ph: (002) 23 6751.



Monitors AGC-HM-123

HM-123A 12" DIAGONAL SCREEN / TEXT DISPLAY MONITOR

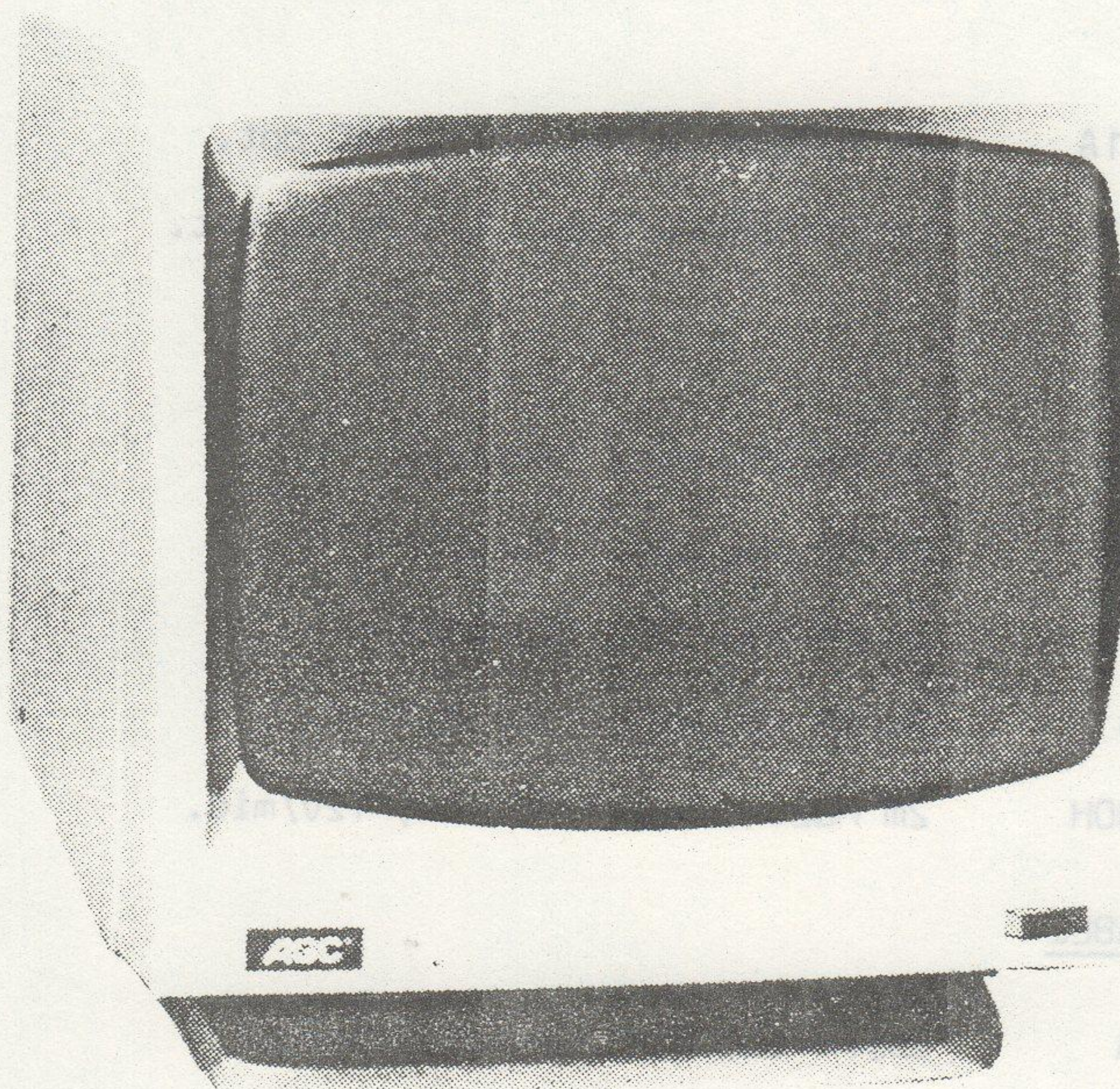
Designed for use with advanced level small business or scientific computer systems. This high performance data display monitor features an anti-reflective and dark tinted viewing screen, computer matched appearance and high resolution graphics and text display. With 5 x 7 input character, monitor resolution and computer compatible scanning provide a displayed capability of 24 lines and 80 characters.

FEATURES

- * High resolution crisp, clear.
- * Anti-reflective, dark tinted, 75 square inch screen.
- * 80 characters x 24 lines display capability.
- * Attractive, computer matched styling.
- * Textured high impact plastic front panel and metal housing.
- * 80 Column and 40 column switchable.
- * All controls on the back, except power lamp switch.

SPECIFICATION

- * CRT: 12", 90', 635R display standard phosphor P31.
 - * Resolution:
Centre 1000 lines
Corner 900 lines
 - * Video response: 10Hz-22MHz (within 3db)
 - * Power consumption:
DC12V, 1.1A
 - * Dim (mm): 308W x 266H x 333D (mm)
 - * N. Weight (Kgs): 6.8kgs/set
- Package: Freight package:
16.7 cuft/78.2kgs/8 sets/one carton.



AVAILABLE FROM GEORGE HARVEY ELECTRIC PTY. LTD.
76, York St., 162-4, Argyle St.
Launceston, 7250 Hobart, 7000.
003.316533 002.342233

F O R S A L E .

One Siemens 100 Teletype Machine... \$50.00
One Trio DM801 Grid Dip Meter \$80.00 (new)
One "Sideband" (converted C.B.) 10 metre band Transceiver
240 volt or 12 volt can be used.
Suitable for Novices. \$70.00
One Helray Peak Power Meter.
Indicates 5 - 50 watts (suit novice). \$40.00

All available from VK7CV Warren, phone (002) 441268 OR QTHR.

FRUSTRATION SECTION.

With great aspirations for some experimental DX operating, Alan VK7ZAR and Greg VK7KJ set out at the start of a weekend in early January (at the height of the summer) and headed off in the direction of Ben Lomond, 5,000 feet up. They were carrying a load of equipment covering from 6 metres to 1296 MHz, and had set up H.F. links prior to their departure. But on their arrival, what did they find? It was blowing a gale and temperatures were down to freezing. Conditions as Greg says, "were VKØ" - visibility nil and, with those windspeeds, no antennas either! Mike VK7ZWW had the key to the ski lodge, but where was he?? David VK7ZOT was a 1296 contact, but later on Saturday morning they had to cancel everything. To cap this story, on Saturday evening, Andy VK7ZAY in Hobart heard a ZL calling 7KJ on 144.1 SSB.! After travelling 600Km for nothing, that really was the end!

Greg, 7KJ.

FURTHER FRUSTRATION SECTION.

The Dick Smith Explorer Project Blizzard, under the callsign AXØPB, has been the subject of some experimental work on 2m. by Greg, VK7KJ. There have been tests running on 144.1 SSB each evening, using CW and SSB alternately. AXØPB calls for two minutes after each hour and then listens for the next two minutes. Greg reports that signals have been heard for about 30 seconds, but none appears to have reached the Dick Smith Explorer yet. "Is his rig deaf??" asks Greg. At the time of writing, DSE was in Commonwealth Bay, a path distance of about 1500 miles.

Greg 7KJ.

SUNDAY MORNING BROADCASTS.

What a valuable communication medium we have in these broadcasts! Do we make the most of their possibilities? Are they as effective as they might be? Our Broadcast Officers, announcers, relay organisers and news collectors work hard week after week. Is there any way we can use the facility given to us by the powers-that-be, to make it punchier, to reach a wider audience, to acquire greater news coverage? Is the time right? How about a different format? Perhaps all these questions could be sorted out by a delegate meeting, preferably at a conveniently situated inn!

VK7 QSL BUREAU.

ANNUAL REPORT 1984.

The number of cards handled continues to fall, comparative figures for the past three years being:

	<u>Outwards</u>	<u>Inwards</u>	<u>Total</u>
1982	17,858	19,734	37,592
1983	11,696	16,300	27,996
1984	7,672	11,015	18,687

It is likely that this trend will continue for the next two years and should commence to increase again in 1987.

As from last June, the Branches are re-imbursing the Bureau for postage on cards sent to them, and this amounted to \$27.85 for the year. With the charge for cards in VK again in force, this has been of considerable assistance in keeping the deficiency for the year down to \$17.01.

Although the already exorbitant postage rates are to increase again shortly (despite a large profit by Australia Post), cash reserves built up during the good years will enable the Bureau to carry on without the need to increase the charge of 2c per card.

My thanks go to Col Wright, Ken Hardstaff and Ray Jones, the Branch QSL Officers for their assistance during the year.

Chas. Harrison, VK7CH,

QSL Manager.

When QRM came "back on the market" last March, it was referred to as a WIA (Tas. Division) newsletter, and your Editor held high hopes that each month there would be at least a news section, if not a whole page, from the southern, northern and northwestern Branches. Nothing earth-shattering, you understand - just chat, local information, personal anecdotes, activities that had taken place in the previous month and preparatory notes for the month ahead.

There must, however, have been some MISunderstanding. Members seem to think that, unless they have something of super-intellectual, international, or even inter-Galactic significance to say, they daren't write in.

Nothing could be further from the truth! Your Ed looked back through some early editions of QRM, kindly loaned by the Editor of the day, 7JV, and what did he find? - A super-mix of technical tips, news and gossip about the well-known (and not-so-well-known) characters in the amateur radio sphere, their families, their comments and opinions. Now, from the hubbub of conversation that precedes WIA meetings (and even intrudes into them at times!), and the pontificating that goes in debates, it's fairly obvious that members DO have opinions, comments and news - but only the individual involved in the conversation actually knows about them.

Any club thrives on sharing - expertise, news and "family chat". But it's like fertilizer - "no good unless you spread it around". So, fellers, spread it around, will you? By eye-ball, telephone, odd slips of paper (ANY variety will do), letter post card, an old shirt-cuff - any means, as long as they're decipherable. Then QRM will fulfill at least one of its original ambitions and the sense of separation of club branches and individual members will dwindle until it's a thing of the past.

H A M F E S T

The 1985 Tas. Amateur Radio Convention ("Hamfest" or "TARC") will be conducted over the Queen's Birthday Long Weekend which is 8th, 9th and 10th June, 1985.

The 75th Anniversary celebrations will be the backdrop for the Hamfest and we hope to provide an interesting programme.

We need your offer of help to:

- * Provide a satellite comms. display
- * Provide a RTTY display
- * Provide an ATV display
- * Provide gear for "home brew" display
- * Aerial constructors
- * Computer/ham radio display
- * Provide your suggestions for additional areas of interest
- * Provide a display concerning the teaching and training for amateur radio qualifications.

We will need to have a cut-off date for registrations.

VK7DY eagerly awaits your response

SO YOU WANT TO CONTACT THE EDITOR?

His name is John Rogers. His callsign is VK7JK. His telephone number is 002.293402. His address is:

1, Darville Court,
Blackman's Bay,
Hobart, 7152.

And when you lose your copy of QRM, remember he's QTHR. When he is at home, the 2m rig is normally running and listening to Repeater 2.

The copies of this newsletter will be distributed to WIA members at Branch meetings and to other interested subscribers by post at purely nominal cost. Anyone who would wish to take up this offer, please contact the Editor on 002.293402.

TASMANIAN DIVISION COUNCIL.

Notice of Meeting.

The Annual Meeting of the Tasmanian Division of the W.I.A. will be held at the King's Meadows High School, Launceston, Tasmania on Saturday, 16th. March, 1985 commencing at 2 p.m.

Mr. P. Fudge was elected Federal Councillor.

Mr. J. Gelston was elected alternate Federal Councillor.

The following motion was unanimously supported by all Council Members:

That the Tasmanian Division of the W.I.A. endorses the Max Loveless Pioneer Memorial Collection endeavours, which seek to provide a permanent memorial to the pioneers of wireless through the preservation of early items of equipment and their eventual restoration. While respecting the mutual autonomies of the organisations involved, the W.I.A. looks forward to co-operation with the M.L.P.M.C. in the development of that project.

Nomination for VK7 Council 1985.

Nomination Form for VK7 Council

I nominate.....callsign.....

for a position in the VK7 Council for the year 1985.

Proposer.....callsign.....

Seconder.....callsign.....

I, the proposed, hereby accept the nomination for the above position.

Signed.....(nominee).....date.

Forwarded to P.O.Box 1010, Launceston, Tasmania, 7250
by 23rd. Feb. 1985.