

QRM

Amateur
Radio
News



JULY 1985

Issued by the Tasmanian Division of
the Wireless Institute of Australia

Radiatorial Comment

Well, here we are again, back to our "standard edition" of "QRM" after all the unusual experimenting of the 1985 TARC version of your monthly "mag". Following the events of the June 8th/9th weekend, a great deal of discussion has been taking place - in the Southern Branch anyway - for two reasons: one, to compile an "archive" of the 1985 TARC so that we can call to mind in future years the happenings and personalities of that time; and second, to examine the successes and the shortcomings that resulted from our planning effort so that we can build on the first and avoid the second.

One facet of TARC that was universally noted and approved, was the fact that we had the opportunity to meet face-to-face, and talk with, many of our fellow-amateurs who took the trouble to travel from all over the State to join in the occasion. Those voices we had heard for so long, suddenly became real people, and the hum of conversation never ceased at the TARC venue or during the dinner at the Masonic Club. There was real appreciation of the social aspect of the weekend, and several conversations hinged on renewed intentions to become "more a part of what is going on" and even to become active members of the W.I.A. Very encouraging! But your Editor walked into a "back-handed" compliment - "Well, it's great to meet you, but you look older than I thought you'd be". Ah, well, you can't be a winner all the time.

Certainly TARC has proved most effectively that amateur radio in all its spheres, needs to be shared, and it is our great hope that the Activity Centres now coming into being will form the basis of much closer association, not only among individual members, but among the Branches of the W.I.A. throughout the State.

VK7JK.

WOULD ALL ASPIRING CONTRIBUTORS TO "QRM" PLEASE NOTE THAT THE
EDITOR'S CLOSING DATE FOR THE AUGUST ISSUE IS FRIDAY, 2nd. AUGUST.

73 INTERNATIONAL.

This article, which you may have seen mentioned in the latest "A.R." DX Section, comes to us courtesy of Jim, VK3YJ, who is the Australian correspondent of "73 International". Jim also tells me that he has just about finished putting up his "spider quad" for 10, 15 and 20 metres, and, when he and Barry, VK7GE are both pointing towards S. Africa, they have some good contacts on the ANZA net on 14.135 MHz. Thanks for the information, Jim.

73 INTERNATIONAL

Each month, 73 brings you ham-radio news from around the world. In this collection of reports from our foreign correspondents, we present the latest news in DX, contests, and events, as well as keep you abreast of the technical achievements of hams in other countries.

If you would like to contribute to your country's column, write to your country's correspondent or to 73 Magazine, Pine Street, Peterborough NH 03458, USA, Attn: Perry Donham KW10.



AUSTRALIA

J. E. Joyce VK3YJ
44 Wren Street
Altona 3018
Victoria
Australia

THE WIA

Our early Australian amateur-radio experimenters, with great foresight, knowing that the best way to expand knowledge in any particular field of endeavor is by sharing with others of similar vocation their thoughts and ideas, soon realized that some national forum was needed. With this in mind, they founded the Wireless Institute of Australia, the doyen of National Radio Societies.

Founded in 1910, the WIA is easily the oldest national radio club in existence, with the RSGB (1913) and ARRL (1914) following closely behind. Not a bad effort for an isolated country that had been colonized by Europeans (mainly convicts and their guards, sent out from England) only 130 years previously.

Our 75th Year Celebrations

This year the Wireless Institute of Australia is celebrating its 75th year of service to amateur radio, not only locally but worldwide, as the voice of Australian amateurs. As stated in earlier columns, there will be a great range of activities on all bands and modes of transmission this year to mark this special event.

The WIA is a combination of eight self-governing bodies which are companies registered under separate State Corporate Affairs Acts, and, as such, are responsible for the running of amateur radio

within their own division. Each division then has a councillor on our federal body, which is responsible for the decisions made on an Australia-wide or international basis. The WIA has all the usual facilities and services to members that most other good national radio societies have, e.g., QSL bureaus, club rooms, etc., plus a monthly magazine sent free to all members.

The magazine is called *Amateur Radio* and is similar in format and quality to 73 except that it has an average of only 60 pages, but as this magazine is sent free of charge to all members monthly, even overseas members, this alone makes the \$A35 annual subscription to be a member of the WIA seem more than fair, considering that the commercially-printed magazines of this size available here are around \$A2 or more each, per month, plus postage costs. The WIA also publishes a yearly *Callbook* that covers all VK plus P29 call areas. This is a comprehensive callbook that has 70 pages of call signs with another 20 pages allocated to suppliers of amateur equipment in our area. The final 76 pages are of good-quality information, covering most things concerning amateur radio in Australia, from repeaters to an electromagnetic interference checklist, DX hints, AMSAT operating, etc.

Several of the WIA state divisions conduct slow Morse-code practice sessions on the air, with the VK2 and VK5 sessions on 3.550 MHz (give or take QRM) at 0930 UTC onwards, seven nights per week, being the most popular in the eastern states. There is usually a different instructor each night, and with some sending stories or jokes as part of the practice session, this makes you concentrate so that you don't miss the punch line; it makes interesting listening. Others send the usual mixed letter and figure groups at speeds between 3 and 16 wpm.

The WIA (VK3 Division) started a nightly broadcast on 200 meters for the amateur-radio fraternity in 1921. This led to what is now a weekly event nationwide. Sunday morning is the time of most WIA broadcasts of local and federal news on most amateur bands. Each division has its own times and frequencies of operation, but a typical time slot would be between 9:30 and 11:00 local state time, with frequencies around 3.600 MHz, 7.050 to 7.150 MHz, and 14.175 MHz (VK6 and VK5), 21.175 and 21.195 MHz being of interest for DX operators. There are also 2-meter FM transmissions via repeaters in most states plus, lately, a trial transmission on 6 meters in VK3.

Perhaps the best way to gauge the worth of a national body representing its members is to ask what kind of relationship it enjoys with its members and with the authorities. In this regard, the WIA is held in high esteem by our DOC, so much so that we are left basically as a self-regulating body with an Amateur Advisory

Committee responsible for the behavior of fellow amateurs on the air. The Committee, consisting of a group of amateurs and a DOC representative, monitors all amateur bands. If any amateur transmissions are found lacking in quality, the Committee sends out notices to the offending station, asking it either to explain or clean up operating procedures or quality. If no notice is taken of this friendly request, it then goes to our DOC, which then takes official action if it is deemed appropriate.

But the greatest worth, I feel, is the united front presented on all amateurs' behalf. Some of the latest cases where the WIA has been successful in this regard are—

- The granting of third-party traffic with consenting countries (e.g., America and Canada, with more in the pipeline)
- The introduction of a Novice-grade license
- The abolition of the 30% import duty on amateur gear, reintroduced for a short time last year
- The granting of WARC bands as soon as they become available, plus extra frequencies on the recognized amateur bands
- The abolition of the need to keep logbooks

The list is endless.

My Opinion

The WIA, to me, is like a trade-union movement, with its members paying for services rendered (e.g., better wages, better working conditions, legal representation, and liaison with the government of the day).

This poses a question. How many people, outside a union movement, refuse that extra \$10.00-per-week raise, or the extra benefits that the union members get for them via their donations to an organization presenting one voice, for the betterment of all? Conversely, how many non-members of a national radio organization representing them refuse to use the added advantages gained by that organization on behalf of its members? E.g., larger frequency allocations, no log books, the fight against tower height limitations, representation to the DOC to eliminate spectrum anarchy on the bands, etc., etc.?

We all believe in freedom of choice in our democratic system, but we should also believe in every person pulling his fair share of the load. I feel sure that if these nonmembers had to fight the battles that organizations like the WIA do on their behalf, on an individual basis, they would be the first to stand up and shout "Why isn't something being done?" They are very lucky that members of organizations like the above are not so shortsighted.

Happy 75th birthday, WIA!

Jim VK3YJ.

BEING A CORRESPONDENT. (by Jim VK3YT)

Two years ago, I was asked by the W.I.A. to write a monthly article, on their behalf, for the 73 International section of "73's" magazine. These articles were to give a cross-sectional view of amateur radio activities within Australia, to the many world-wide readers of this particular American publication.

Little did I know what I was letting myself in for, as there is, at present, an Australiana interest in the U.S.A., due a lot to Paul Hogan and the America's Cup win, that has left me at the receiving end of a lot of international phone calls and overseas mail. Perhaps two examples of these might give you, the readers, some idea of what John - VK7JK - and countless other unpaid volunteers involved with the W.I.A., are doing to keep the W.I.A. in the forefront of world-wide amateur radio.

PHONE CALL

One Sunday evening, sitting down to enjoy a roast dinner, I heard the phone ring. "This is W5---. I am just reading your article and thought I would give you a call". (Into the oven goes my roast dinner!)

After preliminary discussion about the article, the gentleman discloses that it is 2 a.m. at his QTH, and that he is sitting on, and phoning from, his toilet! After a 35 minute conversation with him, I was really broken up by his next request - he asked me for one of my QSL cards for this contact by phone. I ask you - how would you fill in a QSL card for someone sitting on a thunderbox, 7,000 miles away, and calling by telephone??

After I had stopped laughing, my mind boggled at this request - Would it be: Readability 5 Strength 9 with occasional QRM?

This gentleman has since rung me twice to confirm the contact!

LETTER REQUESTS.

The following is a typical request that I seem to get, although this one was a bit longer than usual. Seeing that I can get up to 10 of these letters per week, and only one in ten will send return postage with their requests, I ask you all to remember to add SASE or return post when asking for info from overseas stations.

I sometimes feel sorry for John - VK7JK - who asks for contributions to keep QRM going, but gets few replies. (He can have my lot if he likes!)

(The whole letter above-mentioned, consisted of eight pages partly handwritten, partly in French and partly a printed self-advertising handout. A very truncated summary is given below)

"Dear OM,

My call is WB2CFX but it should be W2! I am from Brussels but American citizen and wish to come to Australia. I need to know: 1. Can I have easily an Australian call? 2. How do I get it? 3. Can I have a printed text of the Australian regulations (updated) 4. What current do you have?

5. Where should I land and live - it must be nice? I have been through two wars - no more! 6. What would be the advantages & disadvantages of living in BRISBANE? 7. Could you send me a GOOD map of VICTORIA and stress specifically some spots to your liking? 8. Could you introduce me to some Hams (sic) in Brisbane and somewhere else too? BE FRANK, HONEST! 9. Where do I find light, sun, air, company? 10. What is the address of - Chamber of Commerce, storage firms, etc.? I have no commercial equipment - I build myself, no SSB, no phone, only CW, RTTY and packet.

RUDY, W2.

(ED: you can perhaps understand how Jim felt!! In fact, Jim says he asked for all that info and then insulted him by calling him a boy because he didn't use RTTY.)

THIS MONTH'S TECHNICAL ARTICLE.
WATT is electricity?

Electricity is a colourless, odourless gas which burns with a bright flame. Light grows from a bulb. An amp is a little animal that crawls along a wire. An amp lives in an ohm. In summer, an amp lives in a coulomb. Polarisation is the changing of an ohm into a coulomb.

Ammeter is an animal that eats amps. A battery fires amps around a circuit. An amp rides round the circuit on a megacycle. Megacycles are parked on a grid. Hemmings right-hand rule states that: All amps must ride their megacycles on the right-hand side of the wire.

A charge occurs when all the amps run down the wire at the same time. All amps meet at an accumulator. An oersted is an ohmstead for 'orses. A joule is a fight between two amps. You receive a shock when an amp isn't wearing any shoes.

Editor s Note: When Watt read this, he invented the steam engine as a decent alternative, and was then prematurely retired to the old volts ohm.

(Lifted from the "N.Z.Navy News", Sept. 1982)

F O R S A L E .

1. AZDEN PCS300. 2m. handheld. AS NEW. 3.5 watt output. Complete with charger, handheld ext. speaker/mic and leather case.
\$255.00 the lot, or near offer.
2. Kenwood HMC1 headset with vox and mic. Suit Kenwood TR2600 and TM21 and TM41 hand helds. New.

CONTACT Alan, VK7AN, QTHR or phone 003.317914.

F O R S A L E .

One ROOFRACK, suit Landcruiser or any other 4WD.
CONTACT Arthur VK7KBA.

QSL INFORMATION SHEETS.

Thanks to Allen, VK7AN for the sheets giving the latest QSL information, direct, as he says, from Japan. Since there is a total of four sheets, we shall publish the first two (from A to VY) this month, and the second two (from VK to 9Y) in the August issue.

CQデータ・シート④

世界のQSLビューロー

プリフィックス	国名	住所
A2	BOTSWANA	Botswana Amateur Radio Society, P.O.Box 1873, Gaborone
A3	TONGA	Amateur Radio Club of Tonga, c/o USPEC, P.O.Box 278, Nuku'alofa
A4	OMAN	Royal Omani Amateur Radio Society, P.O.Box 981, Muscat
A9	BAHRAIN	Amateur Radio Society of Bahrain, P.O.Box 25425, Awali
AP	PAKISTAN	Pakistan Amateur Radio Society, P.O.Box 65, Lahore
BY	CHINA	BY1 : Chinese Radio Sports Association, P.O.Box 6106, Beijing BY4 : CRSA Shanghai Branch, P.O.Box 205, Shanghai BY5 : CRSA Fuzhou Branch, P.O.Box 730, Fuzhou BY8 : CRSA Sichuan Branch, P.O.Box 607, Chengdu
C3	ANDORRA	Unio Radioaficionats Andorrans, P.O.Box 150, La Vella
C5	GAMBIA	Radio Society of The Gambia, P.O.Box 2470, Serrekunda
C6	BAHAMAS	Bahamas Amateur Radio Society, P.O.Box SS-6004, Nassau
CE	CHILE	Radio Club de Chile, P.O.Box 13630, Santiago
CM, CO	CUBA	Federacion de Radioaficionados de Cuba, P.O.Box 1, Habana
CN	MOROCCO	Association Royale des Radio-Amateurs du Maroc, P.O.Box 299, Rabat
CP	BOLIVIA	Radio Club Boliviano, P.O.Box 2111, La Paz
CT	PORTUGAL	Rede dos Emissores Portugueses, Rua D. Pedro VN 7,4, 1200 Lisbon
CX	URUGUAY	Radio Club Uruguayo, P.O.Box 37, Montevideo
D2, D3	ANGOLA	Liga dos Amadores de Radio de Angola, P.O.Box 484, Luanda
DA-DR	GERMANY	Deutscher Amateur-Radio-Club, P.O.Box 1155, D-3507 Baunatal
DU	PHILIPPINES	Philippine Amateur Radio Association, P.O.Box 4083, Manila
EA	SPAIN	Union de Radioaficionados Espanoles, P.O.Box 220, Madrid
EI	IRELAND	Irish Radio Transmitters Society, P.O.Box 462, Dublin 9
EL	LIBERIA	Liberia Radio Amateur Association, P.O.Box 1477, Monrovia
F	FRANCE	Reseau des Emetteurs Francais, 2 Square Trudaine, 75009 Paris
FO	FRENCH POLYNESIA	Club Oceanien de Radio et d'Astronomie, P.O.Box 5006, Pirae, Tahiti
G	UNITED KINGDOM	G : c/o E.G. Allen, G3DRN, 30 Bodnant Gardens, London SW20 OUD GD : c/o G.W. Ripley, GD3AHV, "Corea Bungalow," Ranague Rd., Ballasalla, Isle of man GI : c/o R.R. Parsons, GI3HXV, 45 Erinvale Ave., Finaghy, Belfast BT10 OFP, Northern Ireland GJ : c/o H.J. Chater, GJ2LU, 106 Rouge Bouillon, St. Helier, Jersey GM : c/o L. Hamilton, GM3ITN, Halls Land, Hardgate, Clydebank, Scotland GU : c/o W.E. Butt, GU2FZC, Meo Voto, Green Lanes, St. Peter Port, Guernsey GW : c/o J.L. Reid, GW3ANU, 28 Waterson Rd., Gabalfa, Cardiff, Wales
H4	SOLOMON IS.	Solomon Islands Radio Society, P.O.Box 418, Honiara
HA	HUNGARY	Magyar Radioamator Szovetseg, P.O.Box 214, H-1368 Budapest
HB	SWITZERLAND	Union Schweizerischer Kurzwellen-Amateure P.O.Box 9, CH-4900 Langenthal 1
HC	ECUADOR	Guayaquil Radio Club, P.O.Box 5757, Guayaquil
HH	HAITI	Radio Club d'Haiti, P.O.Box 501, Port-au-Prince
HI	DOMINICAN REP.	Radio Club Dominicano, P.O.Box 1157, Santo Domingo
HK	COLOMBIA	Liga Colombiana de Radioaficionados, P.O.Box 584, Bogota
HL	KOREA	Korean Amateur Radio League, C.P.O.Box 162, Seoul 100
HP	PANAMA	Liga Panamena de Radioaficionados, P.O.Box 175, Panama 9A
HR	HONDURAS	Radio Club de Honduras, P.O.Box 273, San Pedro Sula
HS	THAILAND	Radio Amateur Society of Thailand, G.P.O.Box 2008, Bangkok 10501
I	ITALY	Associazione Radioamatori Italiani, Via Scarlatti 31, 20124 Milano

(Continued)

プリフィックス	国名	住所
J2	DJIBOUTI	Association des Radioamateurs de Djibouti, P.O.Box1076, Djibouti
J3	GRENADA	Grenada Amteur Radio Club, P.O.Box290, St.George's
J7	DOMINICA	Dominica Amateur Radio Club, 5 Solomon Lane, Goodwill
JA-JS	JAPAN	Japan Amateur Radio League, 1-14-2 Sugamo, Toshima, Tokyo 170
JY	JORDAN	Royal Jordanian Radio Amateur Society, P.O.Box2353, Amman
LA	NORWAY	Norsk Radio Relae Liga, P.O.Box21, Refstad, Oslo 5
LU	ARGENTINA	Radio Club Argentino, P.O.Box97, 1000 Buenos Aires
LX	LUXEMBOURG	Reseau Luxembourgeois des Amateurs d'Ondes Courtes P.O.Box26, L-3601 Kayl
LZ	BULGARIA	Bulgarian Federation of Radio Amateurs, P.O.Box830, Sofia
OA	PERU	Radio Cub Peruano, P.O.Box538, Lima
OD	LEBANON	Association des Radio-amateurs Libanais, P.O.Box8888, Beirut
OE	AUSTRIA	Osterreichischer Versuchssenderverband, P.O.Box999, A-1014, Vienna
OH	FINLAND	Suomen Radioamatooriliitto, P.O.Box1, SF-00751 Helsinki 75
OK	CZECHO-SLOVAKIA	Central Radio Club of Czechoslovakia, P.O.Box69, 113 27 Praha 1
ON	BELGIUM	Union Beige des Amateurs-Emetteurs, P.O.Box400, B-8400 Ostend 1
OY	FAROE IS.	Faroes Radio Amateurs, P.O.Box343, DK-3800 Torshavn(Via Denmark)
OZ, OX	DENMARK	c/o B.W. Nielsen, OZ7BW, Solbjergghedevej 76, DK-8355 Ny-Solbjerg
P2	PAPUA NEW GUINEA	Papua New Guinea Amateur Radio Society, P.O.Box141, Port Moresby
PA-PI	NETHERLANDS	Dutch QSL Bureau, P.O.Box330, 6800 AH Arnhem
PJ, P4	NETHERL ANTILLES	Vereniging voor Experimenteel Radio Onderzoek in Nederlandse Antillen P.O.Box3383, Curacao
PP-PY	BRAZIL	Liga de Amadores Brasileiros de Radio Emissao P.O.Box07-0004, 70.000 Brasilia, D.F.
PZ	SURINAME	Vereniging van Radio Amateurs in Suriname, P.O.Box566, Paramaribo
S2	BANGLADESH	Bangladesh Amateur Radio League, G.P.O.Box3512, Dhaka
SM	SWEDEN	Foreningen Sveriges Sandareamatorer, Ostmarksgatan 43, S-123 42 Farsta
SP	POLAND	Polski Zwiasek Krotkofalowcow, P.O.Box320, 00-950 Warszawa 1
SV	GREECE	Radio Amateur Association of Greece, P.O.Box564, Athens
T7	SAN MARINO	Associazione Radioamatori della Repubblica di San Marino Via delle Carrare 67, 47031 San Marino
TA	TURKEY	Turkiye Radyo Amatorleri Cemiyeti, P.O.Box109, Istanbul
TF	ICELAND	Islenzkir Radioamatorar, P.O.Box1058, 121 Reykjavik
TG	GUATEMALA	Club de Radioaficionados de Guatemala, P.O.Box115, Guatemala City
TI	COSTA RICA	Radio Club de Costa Rica, P.O.Box2412, San Jose
TU	IVORY COAST	Association des Radio-Amateurs ivoiriens, P.O.Box1752, Abidjan 01
U, R	U.S.S.R.	Radio Sport Federation of the U.S.S.R., P.O.Box88, Moscow
V2	ANTIGUA AND BARBUDA	Antigua and Barbuda Amateur Radio Society, P.O.Box114, St. John's
V3	BELIZE	Belize Amateur Radio Club, P.O.Box296, Belize City
VE,VO,VY	CANADA	VE,VO,VY : Canadian Radio Relay League Central QSL Bureau P.O.Box51, St. John, NB E2L 3X1 VE1 : c/o L.J. Fader, VE1FQ, P.O.Box663, Halifax, NS B3J 2T3 VE2 : c/o A.G. Daemen, VE2IJ, 2960 Douglas Ave., Montreal, PQ H3R 2E3 VE3 : Ontario Trilliums Amateur Radio Club P.O.Box157, Downsview, ON M3M 3A3 VE4 : c/o L.R. Lazar, VE4SL, 30 Bathgate Bay, Winnipeg, MB R3T OL2 VE5 : c/o B.J. Madsen, VE5ADA, 739 Washington Dr., Weyburn, SK S4H 2S4 VE6 : c/o N.F. Waltho, VE6VW, General Delivery 9714-94th St., Morinville, AB TOG 1P0

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.

HAMPROGS. DOC.
AMATEUR RADIO PROGRAMMES DOCUMENTATION.

From: James K. Mills WB9KFP, Special Interest Group Co-ordinator,
Chicago Area Computer Hobbyist Exchange,
P.O. Box 94864, Schaumburg, IL 60194.

BMAINT.BAS and BREPORT.BAS are modifications of Ward Christensen's maillist programmes for use by Amateur Radio Clubs. The KEY is now by callsign instead of by name - this is much more convenient for Amateur Radio Clubs where one usually knows the individual's call-sign better than his name. The Keying algorithm is changed not only for the callsign, but also to allow any number of records up to the maximum of 1920 (15 extents) per disc.

LABELS.BAS is a small BASIC-E programme to print return address labels (or whatever you want to use them for). Asks for name, organisation, street, city-state and postal code. Prints out 2 to 100 labels (you can change the limits).

TEACH.ASM is the predecessor to my own PRACTICE.ASM documented below. TEACH is for those first learning the Morse Code. It sends a character, then waits for a response, and then another, and so on. It will give you a bar graph of your speed and correctness of responses. Source code is 10K. Needs hardware to be able to generate tone. PRACTICE.ASM and RANDTEXT.BAS are for use in order to practice Morse Code. Some type of hardware is necessary to generate a tone which can be controlled by the computer. CODE.BAS is Ward Christensen's MBASIC Morse receive programme - hardware required to interface your radio to the computer. MORSE.ASM is a Morse send-receive programme. Again, hardware is required to couple radio to computer. Source code is 8K.

RTTY.ASM is a Ham RTTY (5-level Baudot Code) send/receive programme with some nice features. It was developed from the TTY*.ASM files which are also included on this disc for reference.

CP/M USERS GROUP VOLUME 41

1. HAM RADIO PROGRAMMES.

NUMBER	SIZE	NAME	COMMENTS
		-CATALOGUE.041	CONTENTS OF CP/M VOL. 41
		ABSTRACT.041	Abstracts on some files.
41.1	12K	BMAINT.BAS	1. Ham maillist maint. BASIC/E
41.2	12K	BREPORT.BAS	1. Ham maillist report.
41.6	2K	CODE.BAS	1. Simple Morse Code receiver.
41.7	3K	HAMPROGS.DOC	1. Doc on BREPORT, BMAINT, RTTY
41.8	2K	LABELS.BAS	1. Print return labels.
41.9	6K	MOONLOC.DOC	1. Doc on 41.10 to 41.13 which
41.10	3K	MOONLOC1.BAS	are various versions of progs
41.11	3K	MOONLOC2.BAS	to locate moon's position to
41.12	7K	MOONLOC3.BAS	do moon bounces.
41.13	5K	MOONLOC5.BAS	
41.14	8K	MORSE.ASM	1. Morse send/receive programme.
41.15	7K	PONG.ASM	3. PONG for the VDM (re-release of CP/M U.G. 6.9)
41.16.	8K	PRACTICE.ASM	1. Morse Code teacher.
41.17	2K	RANDTEXT.BAS	1. Generate text for 41.16.
41.18	2K	RESIZE.DOC	1. part of ham maillist system.

(Continued)

41.19.	5K	RESIZE2.BAS.	1. Part of ham maillist system.
41.20	5K	RESIZE3.BAS	1. Part of ham maillist system.
41.21	26K	RTTY.ASM	1. RTTY send/receive programme.
41.22	12K	SSPLIB.FOR	4. Curve fitter/simultaneous linear equation solver.
41.23	10K	TEACH.ASM	1. Morse Code teaching programme.
41.24	9K	TTY.ASM	1. Baudot-coded-ASCII to ASCII
41.25	5K	TTYR.ASM	1. Variation of 41.24.
41.26	5K	TTYR1.ASM	1. Variation of 41.24.
41.27	5K	TTYX.ASM	1. Xmit ASCII via conversion to Baudot-coded-ASCII.

F O R S A L E .

BF981 dualgate FET's, 2m. pre-amp devices, as in "A.R." Vol. 52 No. 6, June 1984. Cost of 70 cents each.

CONTACT Mike, VK7ZML via Repeater 2 or 002.681598.

Address: 31, Dollery Court, Brighton, 7030.

AUSTRALIAN LADIES' AMATEUR RADIO ASSOCIATION.

On behalf of ALARA, Laura VK7NYL and myself were very happy to be part of TARC 1985. We appreciated the interest shown in our display and especially the scrapbook, compiled by our historian, Mavis VK3KS who has collected details of our early days. We enjoyed meeting other amateurs and their families from all round the State. It was good to catch up with another ALARA member, Jan VK7JM from Ulverstone, and of course, the camera was put into action to capture another photo for our album - also cared for by Mavis. We also enjoyed our turns in operating the TARC station.

Each Monday night, ALARA holds an official net at 8.30 p.m. E.S.T. (or 9 p.m. Daylight Saving Time) on about 3.582 MHz and this links YL's from all over Australia. YL's are invited to join in and enjoy meeting other YL's who come from many walks of life and who have very diverse interests. Many rewarding friendships have been made on this net. If anyone would like more information on ALARA, please drop me a line QTHR, or a call (from the OM) on 2m. will catch me. A reminder to the OM's that they are also welcome to join our nets after the girls have had a couple of rounds.

73, 88 and 33,

Helene VK7HD.

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.

**ICOM**

PRICE LIST
AMATEUR PRODUCTS

1st October 1984

MODEL	DESCRIPTION	R.R.P.
		\$
<u>ACCESSORIES (Cont'd.)</u>		
FL 63	CW/N Filter for IC R70/IC R71A	65.50
FL 70	455 KHz 2.8KHz SSB Wide Filter for 745/751/R71A	52.50
GC 4	World Clock	120.00
HM 3	Microphone 3 or 4 Pin (Specify Radio)	22.00
HM 5	Microphone 4 Pin Noise Cancelling	34.00
HM 7	Microphone 8 Pin Amplified	22.00
HM 8	Microphone 8 Pin with DTMF Pad	56.00
HM 9	Speaker Microphone for IC 2A/ IC 4E	25.00
HM 10	Scanning Microphone for 25A/45A/260A 290A/25A/730	41.00
Hm 11E	Scanning Microphone for 490A	45.00
HM 12	Scanning Microphone for 25A/45A/271A/ 471A/751A	29.00
HM 14	Scanning Microphone 8 Pin with DTMF Pad 27A/47A	56.00
HM 22	Scanning Microphone 8 Pin for 27A/47A	29.00
HM 25	Scanning Speaker mic. 8 Pin for 27A/47A	33.00
HP 1	Headphone	38.00
HS 10	Headset	37.50
HS 10/SB	PTT Switch Unit for HS 10	37.50
HS 10/SA	VOX Switch Unit for HS 10	37.50
HS 15	Boom Microphone for HS15/SB	37.50
HS 15/SB	PTT Switch Unit for HS 15	37.50
LC 1/2/3/	Carry Case for IC 2A/ IC4E (BP5/BP4/BP3)	10.00
LC 10	Carry Case for IC 505	42.00
LC 11	Carry Case for 02A/04A (BP3)	15.00
LC 12	Carry Case for 02A/04A (BP5)	15.00
LC 14	Carry Case for 02A/04A (BP7/BP8)	15.00
LCM 12/5	Carry Case for 2A/4E (Leather Case)	72.00
SS 1	Shoulder Strap for 2A/4E/02A/04A	15.00
Manual	Any owners manual except (701/720A/730/ 740/745A/751A	10.00

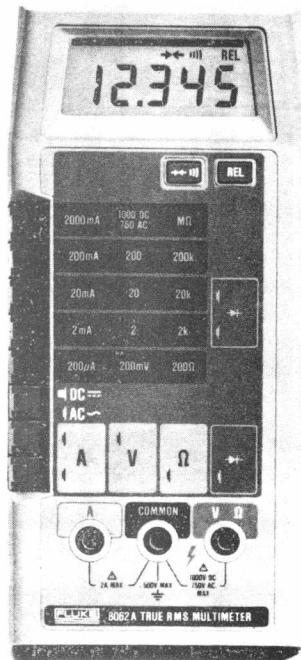
PRICES ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

OBTAINABLE FROM:
Hobby Electronics,
477 Nelson Road, Mount Nelson,
Hobart, Tasmania.

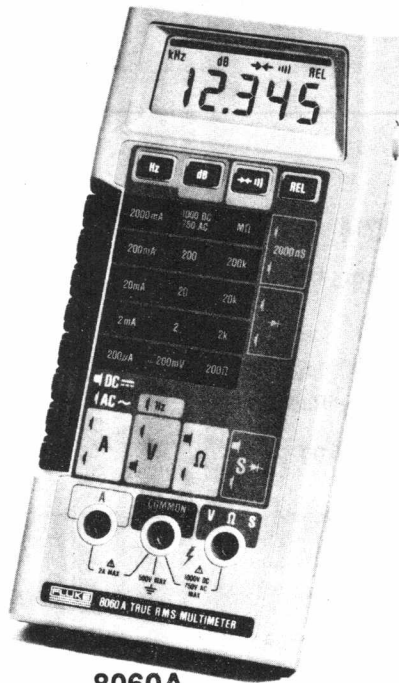
Ph: (002) 23 6751.



4½-DIGIT HANDHELD DMMs



8062A



8060A

The 8060A and 8062A 4½-digit true-rms DMMs

These two 4½-digit handheld DMM's offer far more measurement capabilities than found in most bench/portable DMM's. They are Fluke's first microcomputer-based handheld DMM's and consequently offer unique and valuable features never before found in a small low-cost DMM. The 8060A even measures *frequency* — from 12 Hz to more than 200 kHz — autoranging over four decades from 200 Hz to 200 kHz.

The microcomputer lets you automatically do such things as subtract lead resistance when measuring ohms, convert voltage to dB or dBm, average each set of updated measurements to reduce noise, take the

reciprocal of period measurements to indicate frequency, and display only the difference between a stored reference value and a measured value. Three self-test diagnostic routines are built in. One test occurs each time the power switch is turned on.

The 8060A and 8062A are exceptionally well-suited to the needs of engineers, technicians, and hobbyists skilled in audio, video, telecommunication, or computer technology. They are designed using the same rugged case and safety engineered jacks, test leads, and double-fused current inputs found on other Fluke handheld DMM's. And the same extensive overload protection is built in for the other functions and ranges.

8062A

- Stable 4½-digit (20,000 count) resolution
- 0.05% basic dc accuracy
- True-rms ac voltages to 30 kHz
- Fast audible and/or visual continuity tests
- Relative reference (offset)
- Low-power ohms on all resistance ranges
- Constant-current diode test mode
- Measures resistances to 300 MΩ
- Self diagnostics
- 1-year warranty and calibration cycle

Because the 8062A has several unique modes, several special annunciator symbols may appear in the LCD readout. For example REL will appear when the relative reference button has been pushed — a helpful reminder to any operator. The 300 MΩ top resistance range in the 8062A is fifteen times higher than the usual 20 MΩ. To keep the front panel simple, there is only one manually-selectable position above 200 kΩ. When that position is used, the appropriate 2 MΩ, 20 MΩ, or 300 MΩ range is automatically selected.

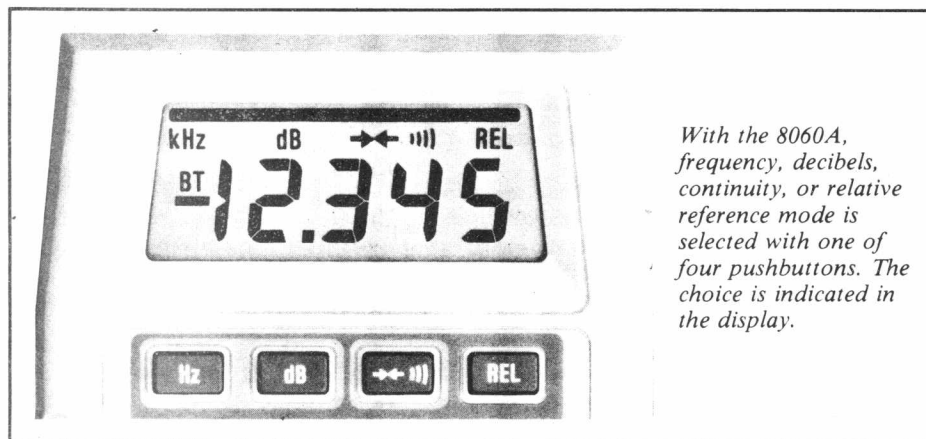
There are five ac and dc voltage ranges on the 8062A from 200 mV to 1000V for dc, to 750V for ac. Resolution is 10 μV on the 200 mV range. True-rms ac accuracy is specified to 30 kHz. Basic ac accuracy is 0.5%.

There are four ac and dc current ranges on the 8062A from 20 mA to 2A. Resolution is 10 nA on the 20 mA range.

8060A

- All the features of the 8062A, plus
- *Frequency*... 12 Hz to 200 kHz
- True-rms ac voltages to 100 kHz
- 0.04% basic dc accuracy
- 0.2% basic ac accuracy
- dBm or relative dB measurements
- Conductance measurements

It is easy to accurately measure the dB gain or loss of amplifiers, filters, attenuators, etc. with a DMM that has dB readout. To combine that feature in a handheld DMM that also measures *frequency* provides a nearly ideal test instrument for many applications. LCD annunciators appear in the display when the dB or Hz pushbuttons are used to select one of those modes.



With the 8060A, frequency, decibels, continuity, or relative reference mode is selected with one of four pushbuttons. The choice is indicated in the display.

AVAILABLE FROM GEORGE HARVEY ELECTRIC PTY. LTD.
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