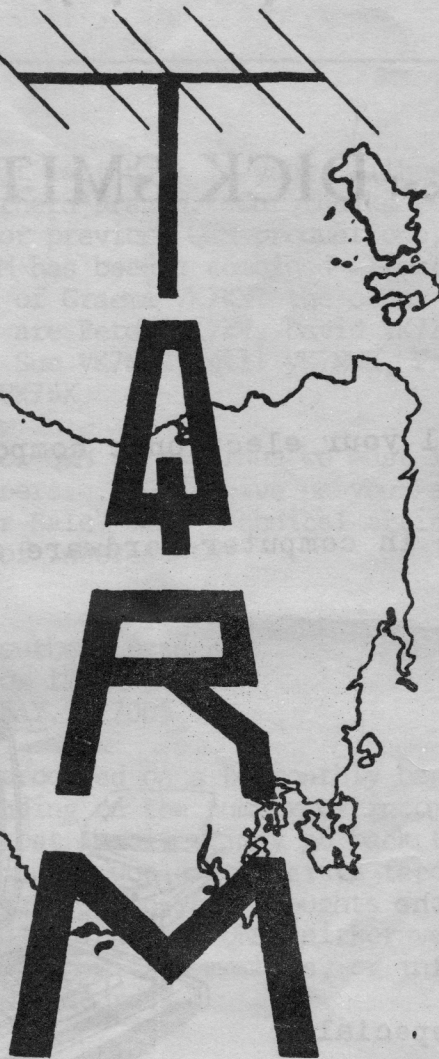


OCR

AMATEUR
RADIO
NEWS



APRIL 1982



Issued by Tasmanian Division of Wireless Institute Aust:
Registered by Australia Post Publication No. TBH0043.

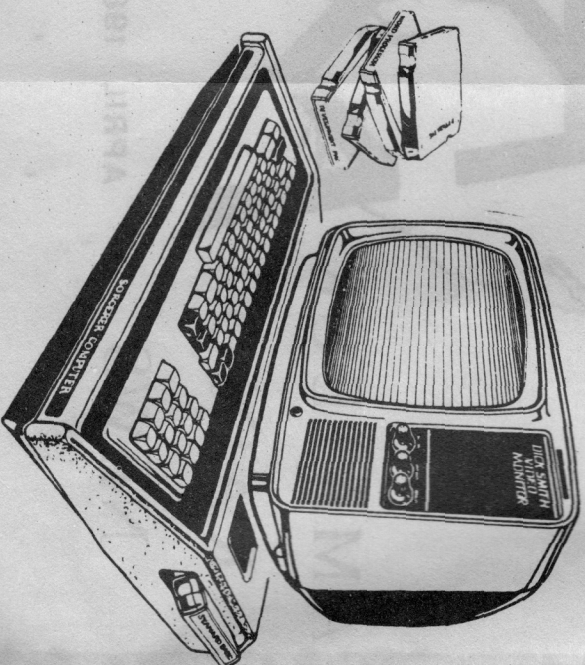
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Well QRM is at last back in your mailbox, this time from the Southern Branch. Our thanks to the Northern Branch for previous QRM productions.

The revival of QRM has been a combined effort lead by the enthusiasm of Graeme VK7KX, the other QRM committee members are Peter VK7PV, David VK7ZOT, Rai VK7VW, Ron VK7RM, Sue VK7NRG, Bill VK7NWR, Pauline VK7NPK and Shane VK7BX.

Of course, for QRM to continue we must input from you, the members. Please give us your support by forwarding "For Sale" ads, technical articles, in fact anything of interest to:

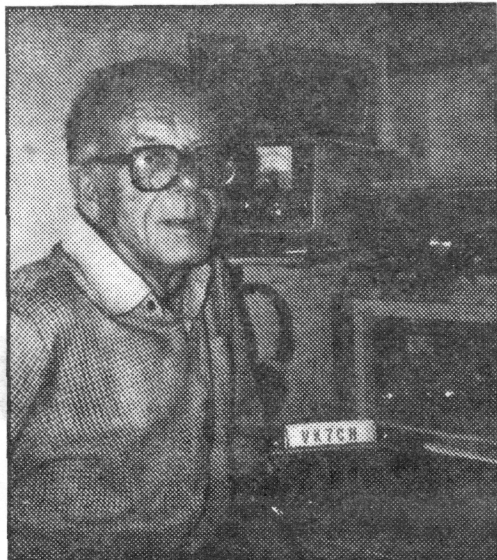
"QRM",
WIA, Southern Branch,
P.O. Box 123,
SANDY BAY, 7005

QRM will be produced on a bi-monthly basis at first and depending on the number of incoming articles and the cost involved, may go back to a monthly production. We would appreciate feedback from you, the readers as to your thoughts on the format, layout and contents of QRM, either verbally to any of the above committee members, or in writing to the above address.

WHO'S WHO?

CHAS. HARRISSON VK7CH.

The 'Who's Who' page will try to introduce you to some of the people behind the callsigns each issue. We hope it makes interesting reading and look forward to input from each branch in turn.



It was 12th. July 1927 when my licence arrived. Call 7CH. No official prefix but at that time Australians were using 'OA' and it was late 1928 before 'VK' became official. Input power 25 watts and among wavelengths allowed was one around 30 metres but this was withdrawn in Dec. 1928 and 14 Mcs. substituted.

The first rig was a one valve TPTG (tuned plate tuned grid) circuit. The HT supply was made up of a series of 'hedgehog' one to one transformers rectified by 'slop jars' - a number of jam jars

strung across the floor containing lead and aluminium elements in a borax solution. Regulation was very poor and reports on the note not very flattering, but most others were using the same anyway. The receiver was a Schnell O-V-1 (No RF stage, detector and one audio.)

On Sunday evenings after the broadcast stations had closed about 10p.m., amateurs were permitted to broadcast gramophone records on the broadcast band. Loop modulation was used. A carbon mike in series with a loop of wire which was pushed into the tuning coil and the mike placed in front of the gramophone. Appeals to listeners usually brought in enough records for the next week's session but resulted in perhaps opera one week, jazz the next and so on, depending on the taste of the owner of the records.

The era of contests was just beginning, but they were different from the present day ones. My certificate for topping the VK scores in the Third ARRL Contest of 1930 shows that messages (of 10 words each) were exchanged with 48 stations in U.S.A. during the two weeks

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of the contest! These contests were all on CW.

In 1932 I graduated to crystal control. the first crystals were old quartz spectacle lenses laborously ground down to somewhere within the band. The transmitter was a 245 CO E408N FD and TCO4/10 PA.

Transferred to Victoria in 1934 I operated for the next 17 years from the Goulburn Valley as VK3CN, being closed down during the war years. Prior to the war, home built gear was almost universal, commercial gear being both scarce and expensive. By 1946 disposals gear was beginning to come on the market and that not suitable for ham use was a wonderful source of hard to get parts.

On returning to Tasmania in 1951 the old call VK7CH was re-allotted and by now commercial receivers were more freely available, my first being an Eddystone 750 but a home built transmitter was in use until about 10 years ago.

Operating maritime mobile for many years aboard the yacht 'Moorina' regular skeds were kept on 3590 Mhz. with the Hobart boys on numerous cruises, using a Type A Mark 3 then various home made rigs. It was from these skeds that the present 'Sewing Circle' developed.

Before leaving Tasmania several positions were held in the WIA and in 1934 I was honoured by being elected a Life Member. On returning, I again became involved in Divisional affairs finally taking on the QSL Manager job in 1973.

Employed in the Banking industry from 1925 I retired in 1968 after four years in Burnie.

I think I have been lucky in being around during a period when radio progressed from the comparative primitive of 55 years ago to the sophisticated present day equipment. Surely there can never be another 50 years which could show so much progress. From my own experience I feel that newcomers are missing a lot of fun in not having to build their own gear and not having to be dependent on their own efforts to get them on the air.

ATV NOTES

The purpose of this column is to inform those interested in ATV of developments in the North, North West and South. To do this, of course, requires information to be passed on to the editor and your contributions, whether in the form of notes and/or circuits will be appreciated.

SOUTH: Construction is well under way for an ATV repeater. The need for a repeater was discussed recently by several interested amateurs who felt that without a repeater, interest in the south would not progress much further due to the problems of topography which prevents contacts between a number of stations.

Enquiries revealed that a number of amateurs were interested and a gathering was held at Ron's (VK7ZRO) QTH to discuss requirements. Ron had been contemplating building a repeater for a long time and was enthusiastic enough to start work on the receiver system the same week.

To my knowledge five stations have or will soon have the facility to transmit colour with one B & W station just completed.

The following stations have either receive or transceive facilities and there may be others of which I am not aware.

VK7RR (T) VK7ZTA (T) VK7HK (T) VK7ZRO (T)

VK7BX (T)

VK7RM (R) VK7ZJH (R) VK7ZAR (R) VK7ZPK (R)

The location of the repeater for testing and initial use will be at Ron's QTH as this is the most suitable site at present.

A meeting was held at Ron's QTH recently with Tony VK7AX and David VK7YY and much discussion on ATV and repeaters ensued. I think everyone left that evening knowing a little more about activities in other parts of the state.

VK7RM:

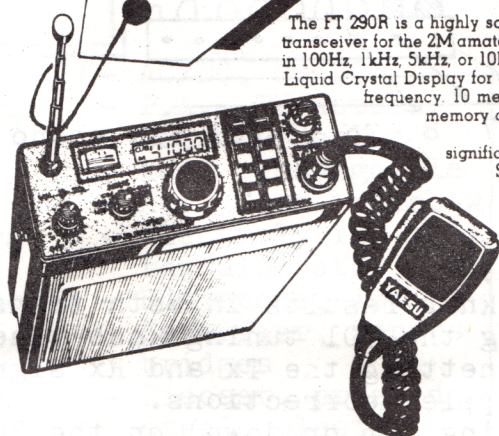
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NEW

2 METRE PORTABLE FT 290R



The FT 290R is a highly sophisticated compact multimode transceiver for the 2M amateur band. Featuring PLL synthesis in 100Hz, 1kHz, 5kHz, or 10kHz steps. The FT 290R utilizes a Liquid Crystal Display for digital readout for the operating frequency. 10 memories, scanning of the band or memory channels, two VFO's & receiver offset tuning makes a significant breakthrough in technology. So be quick, these are not going to last! Don't miss out!

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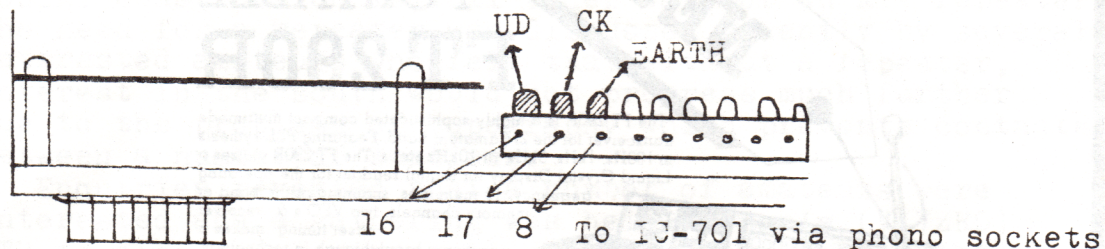
CHIRNSIDE ELECTRONICS - ANT.

SCALAR INDUSTRIES P/L

MAIL ORDERS WELCOME

TRACKING THE IC-211E & IC-701 TOGETHER FOR OSCAR WORK:
Modification is required to the IC-211E only:-

As shown in the diagram take two leads and an earth from the UD and CK tags of the tagboard under the IC-211E to the two spare phono sockets on the back. These are then connected to the appropriate pins on the 24-way socket on the IC-701 - i.e. pins 16, 17 & 8.



Operation is as follows:-

Turning the 211 tuning knob results in both transceivers tuning together. Turning the 701 tuning knob tunes the 701 only thus enabling netting the Tx and Rx signals via Oscar and making doppler corrections.

The direction of tuning (up or down) on the 701 when tracking will depend on the last direction the knob of the 701 was turned. Thus it is possible to make the transceivers tune in opposite directions as would be required for Oscar 7 mode B and Oscar 8 mode J when using the 701 with a 70cm transverter.

FREQUENCY CHART:

Satellite	Mode	Uplink Tx Freq	Downlink Rx Freq	Beacon
Amsat Oscar 7 (AO-7)	A	145.85 145.95 USB/CW	29.4 29.5 USB/CW	29.502 435.100
	B	432.125 432.175 USB/CW	145.975 145.925 LSB/CW	145.972
Amsat Oscar 8 (AO-8)	A	145.85 145.95 USB/CW	29.4 29.5 USB/CW	29.402
	J	145.90 146.00 USB/CW	435.2 435.1 LSB/CW	435.097

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GHE are pleased to assist the Wireless Institute Of Australia (Tasmanian Division) in the production of their revitalised magazine.

We invite all members to visit our Electronics Division Showroom in Hobart and Launceston to inspect our comprehensive stocks, including:-

Adaptors	- AC/DC, DC/DC	Plugs & Sockets	- Audio, multi-pin, antenna, BNC etc.
Amplifiers	- P.A., TV Antenna	Potentiometers	- Bourns multi-turn, carbon & wirewound
Batteries	- Nicad & Sealed Lead rechargeable	Resistors	- 1/4 to 10W all values
Cable	- Mic, Coax, rainbow	Soldering Irons	- Weller, Scope, Adcola soldering equipment
Capacitors	- Electrolytic, poly tantalum etc.	Speakers	- Ralmar, Magnavox
Diecast Boxes	- Eddystone, ITT	Sprays	- Freezer etc.
Diodes	- Rectifier, zeners bridges	Switches	- Micro, miniature, P/B & toggle, slide & rocker
Enclosures	- Diecast, pressed steel, plastic	Terminals	- Belling & Lee Ralmar & Bulgin
Fuses	- Glass & ceramic, fuseholders	Transformers	- Arlec power & audio, Ironcore, & Ferguson
Heatsink	- Extrusion & Clip-on	Transistors	- Motorola, G.E., R.C.A., Philips
Hook-up Wire	- All colours & sizes	Tools	- Xcelite, Channel-lock, Ralmar
I.C.'s	- National, Philips, Motorola Signetics		
Instruments	- Panel-meters, multi-meters, VU meters, scopes, hire service		
Microphones	- Ralmar stands, mixers & Access		
Multimeters	- Digital & analogue		
Oscilloscopes	- Hitachi, Trio		
Power Supplies	- Arlec, Adtech		

"A WHOLLY TASMANIAN OWNED COMPANY"

VHF NOTES

There have been some rather good openings on VHF and UHF over the past months.

8.2.82 Monday at 0900 local VK7DA, ZAH, JG worked on 144 mhz VK5's ZPS, ZDR with good 5/3, 5/6 reports. The signals also had meteor bursts on them which gives an interesting effect. 432 Mhz. was also open with VK3's ZHP, ACH, ZBJ being contacted at good signal strength. Daniel VK7DA was hearing carriers from VK3 ZHP and ZBJ on 1296 Mhz. at 6-10 dB out of the noise. Dave VK7MR worked VK3UD on 144.1 SSB.

5.2.82 Friday at 0200 local, Joe VK7JG accessed several VK4 repeaters and also had contacts on 2 SSB. 52 Mhz. was open until approximately 2400 with VK7ZAR working JA5 & 6 callareas with 5/5, 5/9 signals. Some JA stations were using 3 Watts PEP to dipoles. Other stations worked were VK2 ZI, DDC, 8GB, 1RK. The VK2WI beacon on 52.450 is having trouble with the keyer but should be back on shortly.

20.2.82 Saturday at 0958 GMT, VK7ZZ was over run with JA stations. Ian worked 29 in all call areas JA1,2,3,4,5,6. This went on till about 11.30 with sigs very good 5/9 copy. Ian was the only station on in the South! Where are all the keen VHF operators? 52Mhz. has not closed.

2.3.82 Tuesday; there was auroral activity with VK7's KJ, ZZ, ZPK being active on 52 Mhz. Several VK2 and VK3 stations were worked by this means. Joe VK7JG in Launceston was also worked.

On the 4th. there was another auroral display late at night but there were no signals on six. The southern repeater VK7RHT (also OG ---/--- of late!) was off the air from the 15th. for a few days; the final stage had a ventilated 6/40.

Just to prove that strange things happen on VHF, VK7KXA was heard on channel 40. For further information on this extremely rare station contact VK7KXA QTHR: We've heard a rumour that awards may be issued for this one!

David Chadderton VK7ZOT.

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THIS MONTH'S SPECIALS:

BARLOW WADLEY MK II	\$120:00
SONY ICF - 2001 Digital Receiver	\$199:00
FL 2100 LINEAR	Best Offer
FTV 650 6 METRE TRANSVERTER	Best Offer

P.O. Box 1311, Launceston : Phone (003)443882

INFORMATION WANTED:

I would like the following information on Tasmanian
Medium Wave broadcasting stations.

start of on-air transmission,
original wavelength / frequency,
original power and any increase,
any change of wavelength, when and why (e.g. 7ZR,
7BU, 7SD)
close down date (i.e. 7UV, 7DY)
types of aerials, radiation patterns
types of transmitters
change of transmitter site
early broadcasts(commercial and amateur)
change in call-sign
any other relevant information.

This request comes from Fred Reid, VK7FD,
8 McRae Place,
BURNIE.

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LOGIC PROBLEM

When time is no problem and you are feeling cool-headed and patient, try sorting out the information given below to form 5 files, each listing the name, location, antenna and power output of these amateur radio stations.

CLUES:

1. The rhombic is connected to a transmitter with 30 W output and the Yagi, which is not in Canberra, belongs to Peter.
2. Tom lives in Hobart but doesn't have a rhombic antenna.
3. Neither Mike or the Sydney station have transmitter outputs of 80Watts nor do they have vertical antennas.
4. The Perth station does not have a Quad or a Yagi and his name is not Jim.
5. The Melbourne stations output is 400 W and Mike does not live in Canberra.
6. Jim has 150 W but he doesn't have a vertical antenna.
7. The G5RV is not in Perth and it is not Mike's antenna.

	Melbourne	Perth	Canberra	Hobart	Sydney	G5RV	Quad	Yagi	Vertical	Rhombic	400 W	150 W	200 W	80 W	30 W
Bill	✓								✓		✓				
Jim		-	✓				✓		-			✓			
Tom				✓		✓				-				✓	
Peter			-		✓			✓					✓		
Mike		✓	-		-	-			-	✓				-	✓
400 W	×														
150 W															
200 W															
80 W															
30 W										×					
G5RV		-													
Quad		-													
Yagi		-	-												
Vertical															
Rhombic															

Use ticks on the chart for known clues and crosses for elimination.

The next issue of QRM will reveal the solution and an explanation of how to work it out. In the meantime, have a go! It's just logic!

VK7NPK



HOBBY ELECTRONICS

83 Carella Street

Howrah 7018

Ph. 476674

Modify your GEMTRONICS 3325

If you have a Gemtronics 3325 that has been converted to 10 metres, and has channels 21-23 fitted with 28.550, 28.560, 28.570 and 28.590, then you may be interested in an inexpensive method of filling in most of the gaps between these frequencies by fitting an extra crystal and obtaining another four channels.

Fitting a 13.290 Mhz. crystal in the appropriate socket should give the following frequencies on channels 17 to 20:

17	28.543 - 28.547	19	28.563 - 28.567
18	28.553 - 28.557	20	28.583 - 28.587

The only modification needed to pull the crystal is to short out the fixed capacitor and trimmer in series with the crystal socket, and solder an 18 pf. ceramic capacitor across the crystal.

We tried pulling the crystal up in frequency but had no success. The crystal used is the same one that provides channels 21-23. (Available from Harvey- VK7HK)

The clarifier on my rig changes the frequency on transmit and receive by 2 and -1 Khz. from the frequencies noted above.

If you are contemplating adding further channels to your Gemtronics, you should check the frequencies of the mixer crystals as the ones quoted in the pamphlet provided with it are incorrect. (Refer A.R. April 1979)

VK7RM:

QSL BUREAU NOTES

Unclaimed cards are held at the Bureau for the following and will be destroyed on April 30th. unless claimed.

VK7AG	ER	HY	MD	PS	WH	NTD	ZBA
AZ	FI	IR	NC	SL	NBI	NVL	ZDI
BA	FM	JC	NZ	TA	NCW	NWB	ZIF
BS	GF	JW	PH	TD	NPJ	NXZ	ZJJ
CKK	GM	KD	PL	TX	NSR	ZAJ	

Call at 95 Wentworth St., Bellerive;
Phone me on 44 2854;
or write if you want yours saved.

Chas. Harrison
VK7CH QSL Manager.

LOW LEVEL PATCHING UNIT

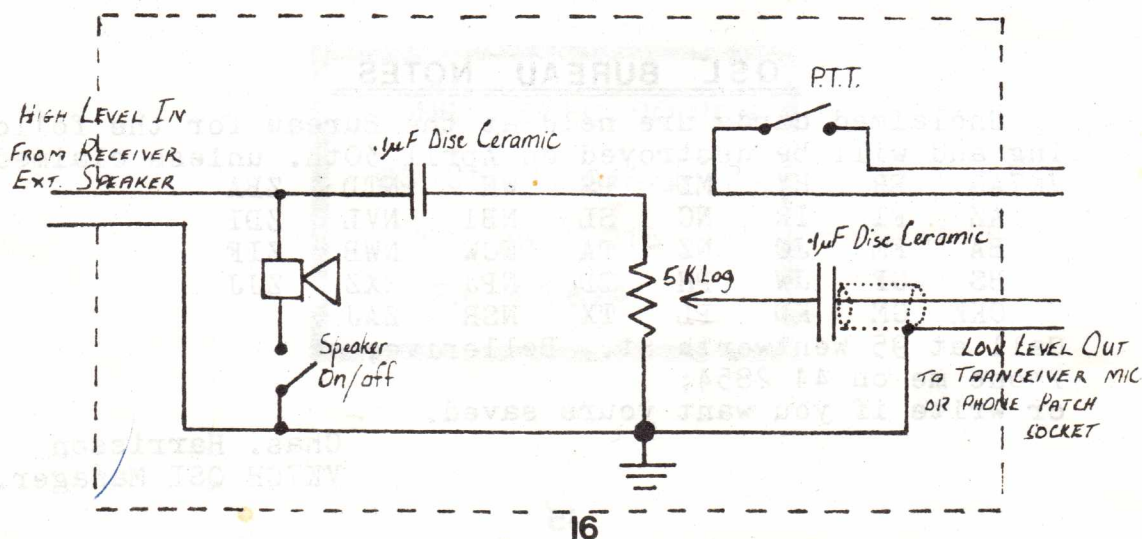
Written by Shane Burgess, VK7BX

Many members have said that they are unable to do Broadcast Relays because they do not have patching facilities. This simple design should overcome those problems at minimum cost.

The circuit is simply a voltage divider with the low level audio being picked off on the wiper of the pot. The speaker shown is to enable the incoming signal to be monitored. The capacitors on the input and output are for DC isolation, i.e. to prevent a DC current flow to earth and/or the other transceiver or receiver.

C2 should be soldered directly to the potentiometer and a shielded cable earthed at one end only (as shown) run to the low level output socket. The PTT switch need only be installed if your transceiver does not have a PTT switch on the front panel.

The output should be wired into a microphone plug according to the microphone plug wiring diagram in your owner's manual. The whole unit inside of the dotted line should be built in an all metal box to minimise hum and RF interference.



EQUIPMENT STORES - SOUTH

Resistors:

10 ohms - 3M9 ohms $\frac{1}{4}$ - $\frac{1}{2}$ watt.

Capacitors:

Disc .001 - 820 pf.

Green caps .001 - .1

Transistors:

NSB319	2N3819	2N5086
BF200	NSD202	NPS3702
BC547B	BC308B	2N2222
BD139	BD140	TIP3055
2N3055		

I.C.'s:

LM741	LM380	NE556A
LM3900	LM709	LM111
DM7410		

Voltage Regulators:

7812 12V 1A. 78L12 12V

100mA. 7815 15V 100mA.

SWITCHES - FEED THRU'S

CAPACITOR PACKS - BOOKS

COAX RG-8 - PLUGS PL259

SOCKETS SO-239 - LOG BKS.

TAG TANTS - 1uF - .1uF -4.7

Kenwood Dip Meter is available for free loan to Southern branch members.

Channel 5A - 8 Element Yagi's Cheap enough to stack. \$25 ea. Minor conversion for 2 metres Brand new.

Contact Southern Branch Store

54 Foot Galvanised Steel Tower easily transported in 6ft. sections: \$200 or consider barter with H.F. Linear Amp. Contact Southern Branch Store.

Contact VK7VV - RAI Taylor
Home Phone - 727743.

SOUTHERN BRANCH

NORTH

The following books are now available:

1982 Callbook-

ARRL Antenna Handbook-

Cubical Quad Handbook-

Better Short Wave Reception-

Beam Antenna Handbook-

Shop & Shack Shortcuts-

Antenna Anthology-

I.C. Handbook-

Solid State Basics-

ARRL Ham Radio Operating

Handbook-

Hints and Kinks-

RSGB Morse Code Instruction Book-

Other items of interest include;

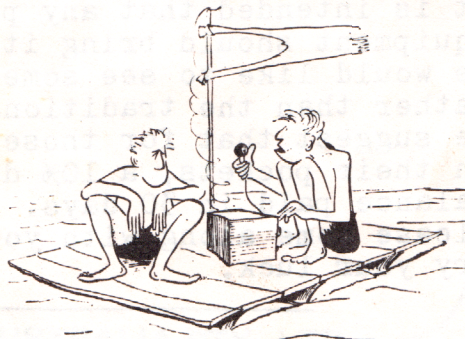
World Prefix Maps, World Atlas, W.I.A. Badges, Car

Stickers;

Plugs, connectors, transistors, resistors, capacitors.

Contact VK7ZBY - Brian
Brian Yeomans.

NORTHERN BRANCH



"He wants us to QSL direct . . ."

Wanted to Buy

New call sign requires H.F. and 6 Metre gear. Prefer solid state 12 V but will look at others.
Oscilloscope also required. Will be at T.A.R.C.
Contact Arthur VK7KTV: RSD 1745, Penquin. 7316.

FOR SALE

Yaesu 901 DM HF Transceiver with original packing.
Shure 444D microphone insert dual impedance.
Shure 444 microphone insert high impedance.
Icom Electret ICSM2 desk mike.
Contact Bill VK7UW: 184 Main Rd., Huonville: Ph. 641320

IC 701 TRANCEIVER plus matching Power Supply and
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Phone 284622 VK7HV

COMPUTER - Superboard II with Power Supply in aluminium box.

Dabug II monitor, 8K RAM, Misc. extras - very little use. \$400.

RTPY DEMODULATOR:- ETI (VK7TM) Design, bar LED tuning, variable shift, power supply, in aluminium case. Can be used with above computer. Modulator PCB included in box. \$60.

Will sell separately if computer is sold first.

Ron VK7RM (002) 232808 QTHR.

AUCTION

Immediately following the next Southern Branch meeting we will be holding an auction sale.

It is intended that any person wishing to auction equipment should bring it along to the meeting.

We would like to see some higher priced equipment rather than the traditional junk box clear out.

We suggest that for those people without the 'necessary' in their pockets, a 10% deposit should be made and the balance paid in 30 days.

Please come along with your better class of junk and try your luck.

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