

THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY.

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

IARS is a Member Club of the Wireless Institute of Australia.

PRESIDENT

Keith Curle, VK2OB
24 Beach Drive
Woonona 2517

SECRETARY

John Doherty, VK2NHA,
7 Risley Road
FIGTREE 2525

EDITOR

Keiran Kennedy
166 Osbourne Parade
WARILLA 2528

MONTHLY MEETING Held on the Second Monday of each Month, at 7.30pm,
at the Wollongong Town Hall Meeting Room.

CLUB STATION - VK2AMW. CLUB REPEATER - VK2RAW, 2m, Channel 5.
VK2RUW, 70cm, Channel 1.

LARS MONTHLY BROADCAST

The Monthly Broadcast takes place on the Sunday preceeding the
Meeting Night each month, at 1900 Hours EAST.

Frequency used by VK2AMW for the broadcast is -
Repeater Channel 5, or Simplex Channel 40.
Relay on 28.460 MHz, 20 cm Channel 1.

LARS CLUB NETS

6 Metre. 8.30am Sunday, 52.525 MHz FM.
10 Metre. 8.00pm Sunday, 28.460 MHz USB.

July

1979

Members are advised that the Monthly Meeting of the
Illawarra Amateur Radio Society will be held at the
Wollongong Town Hall Meeting Room at 7130pm on

Monday, July 9

VISITORS ARE MOST WELCOME TO ATTEND.

Moonbounce Report - July 1979.

The P & T Dept. has been contacted with regard to our application to change the dish site, which was made some time ago.

Requests for sets of high grade coaxial capacitors, needed for GASFET preamps, are being fulfilled as received from LME experimenters, locally and overseas.

Microwave News.

Contact has been made with more Sydney amateurs who are interested in getting on to 10GHz.

A 10GHz test was made on 17/6/79 between VK2YCN in Gosford and VK2's AHC and ALU at Collaroy Plateau, to evaluate my gear. Signals were exchanged between 2YCN and 2AHC, with strength down somewhat compared with that on their previous test over this non line-of-sight path. 2ALU's signals were heard by 2YCN but losses in my mixer - IF preamp. stage prevented me hearing 2YCN. A different and much more efficient IF preamp. is being constructed to overcome this problem.

WANTED - A 6/40 transmitting valve - to replace one in my 2 metre PA. stage which has given up the ghost.

I may be contacted at home QTH on phone 296984 (evenings) - or at the next Club meeting.

Lyle VK2ALU.

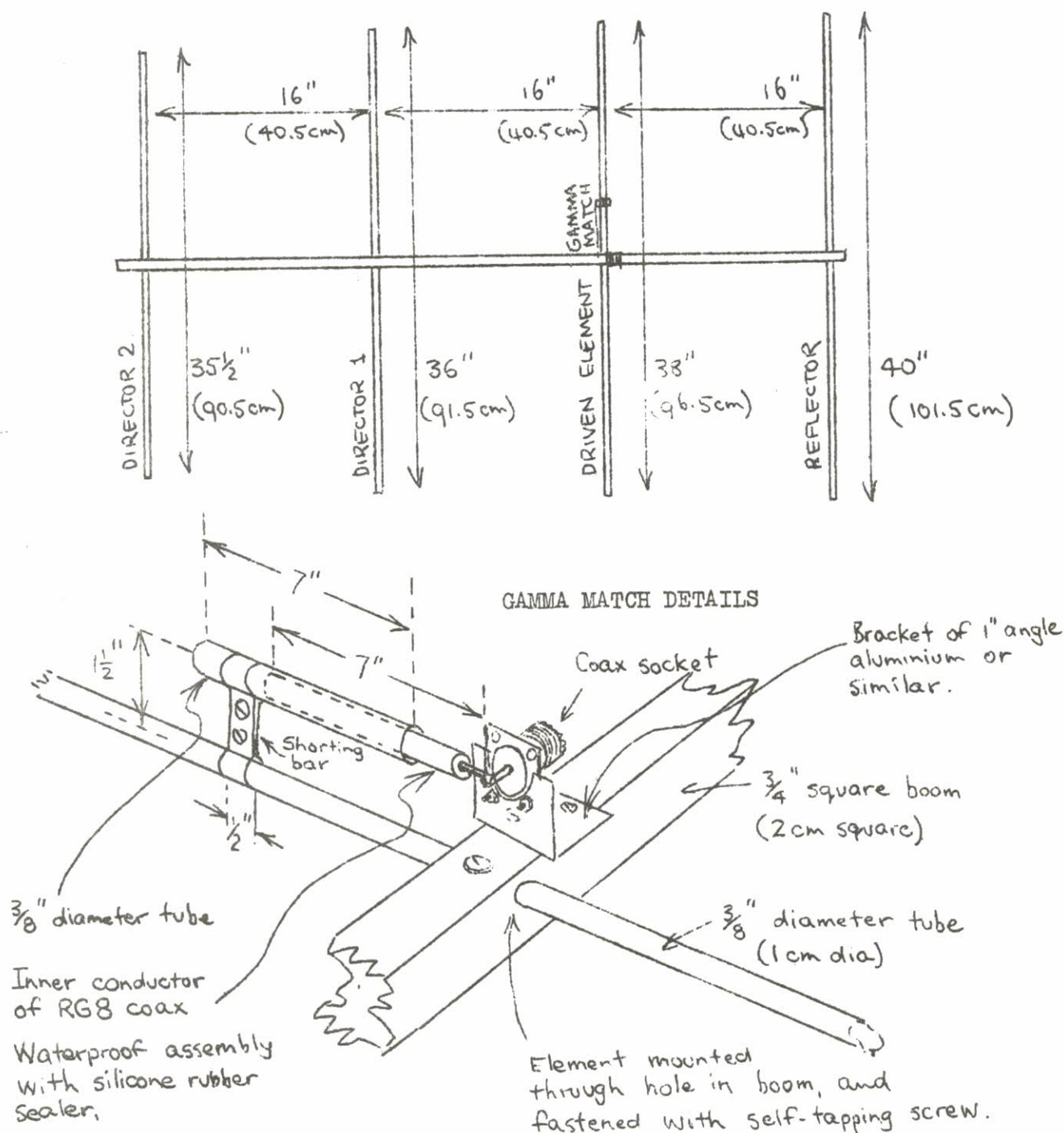
FOR SALE -

50 m/m Oscilloscope, A.C./D.C. (rechargeable batteries.)
D.C. to 10 MHz. Good condition \$195.00
Contact Barry Hartley VK2FE home-842439, work-291455.

Kenwood TS7500 2 Metre mobile. AS NEW (P.L.L. - V.C.O.)
Contact Barry Unsworth VK2BUB home-377168 work-611388.

A VERY ORDINARY TWO METRE BEAM

Here are all the dimensions you need for a simple four-element two-metre beam with gamma match to permit use of a standard coaxial feedline.



The four elements and the gamma bar can be cut from two lengths of 2-metre long tubing. The square boom makes construction easier than would be the case with a round boom. Aluminium or wood can be used for the boom.

The gamma bar is made of 7" (18 cm) of aluminium tube slipped over a 7" length of inner conductor from RG8 (thick) coaxial cable. The shorting bar is a 1/2" wide strip of aluminium wrapped around the gamma bar and driven element and clamped with a couple of nuts and bolts. (Tinplate cut from a food tin could be used in a pinch.) One end of the "coax" is soldered to the coax socket; the other end is left insulated so that it does not touch the metal tube. The coax socket and the shorting bar provide sufficient mechanical support for the assembly.

Adjustment of the gamma match:

1. Clamp the shorting bar to the driven element about 5 1/2" from the centre of the element.
2. Slide the 7" tube back and forth over the coax conductor, to obtain minimum SWR.
3. If necessary, reposition the shorting bar on the driven element to further reduce SWR.
4. Repeat steps 2 and 3 until SWR is minimised.

Brian VK2AXI



MACELEC PTY. LTD.

Professional & Industrial
Electronics



* * NEW PRODUCTS * * - * * NEW LOW PRICES * *

<u>KENWOOD</u>	TS520S - H.F. Transceiver.....	\$ 650.00
<u>KENWOOD</u>	TS820S - H.F. Transceiver.....	\$ TBA.
<u>KENWOOD</u>	TS120V - H.F. Mobile 10watt output.....	\$ 530.00
<u>KENWOOD</u>	TS120S - H.F. Mobile 100watt output.....	\$ 760.00
<u>KENWOOD</u>	SM220 - Station Monitor.....	\$ 375.00
<u>KENWOOD</u>	AT200 - Antenna Tuning unit/SWR.....	\$ 185.00
<u>KENWOOD</u>	AT120 - Antenna Tuning unit/SWR.....	\$ 120.00
<u>KENWOOD</u>	R599 - H.F. Receiver.....	\$ 235.00
<u>KENWOOD</u>	TR7200G 2M 10watt Mobile c/w ch 2,4,6,8,40,50..	\$ 175.00

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<u>KYOKUTO</u>	2M Mobile 15 Watts - 4 memories - Auto Scan - Digital P.L.L. -RIT.....	\$ 360.00
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<u>DRAKE</u>	"Century-21" Communications Receiver 0.5 to 30MHZ -AC/DC AM CW SSB.....	\$ 325.00
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<u>DRAKE</u>	UV3 VHF-UHF FM Fully Synthesized System. 5KHZ Steps - Double Conversion 10.7MHZ - 455 KHZ 6 pole Crystal Filter @ 10.7MHZ and 8 Pole Ceramic Filter @ 455 KHZ. 25 Watts Output VHF 10 Watts UHF.	
	Model 1340 144-148 MHZ.....	\$ 760.00
	Model 1345 144 and 432 MHZ.....	\$ 1070.00

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<u>NAGARA</u>	V5JR 80-10M Trapped Vertical.....	\$ 150.00
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<u>CUSHCRAFT</u>	2 Metre Ringo Ranger.....	\$ 49.00
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We Also Stock A Wide Range Of Test Equipment. Power Supplies,
Technical Books etc.

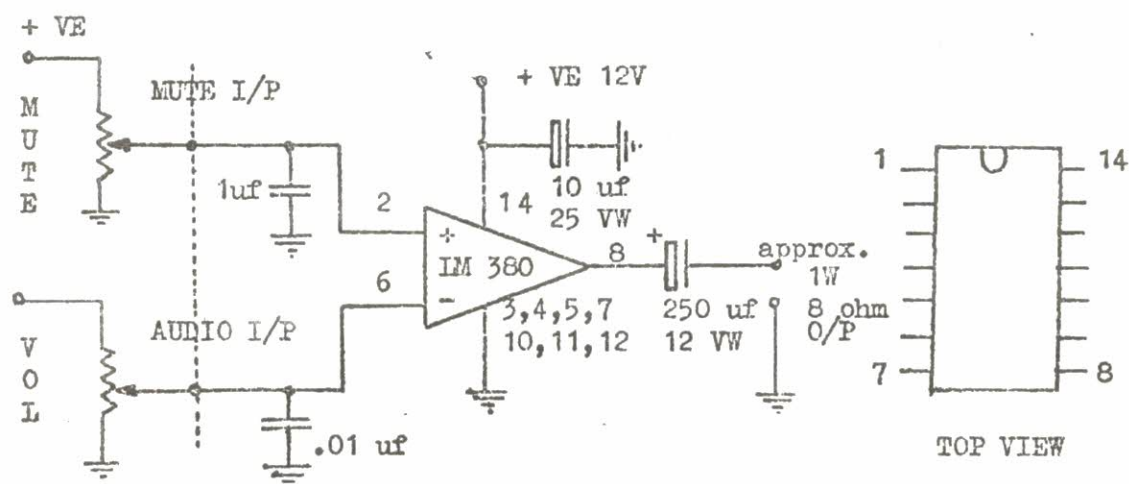
We are now South Coast Distributors for SKYBAND Antennas.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.



USE OF THE LM380 AS A MUTABLE AUDIO AMPLIFIER

Basically the LM380 is an integrated circuit capable of up to about 2W audio output (into an 8 ohm load) and features high input impedance, fixed voltage gain of 50 and a wide supply voltage range. In my circuit, I utilize these features as described later.



In this circuit, the audio amplification part follows fairly conventional lines, and the component values shown are only nominal and can be changed to suit the particular application. Here the audio is fed into the "inverting" input and will produce about 1W O/P into 8 ohm load when run from a supply voltage of 12V. The mute circuit works as follows - Assume the mute is open and the I.C. operating as normal from a 12 Volt supply. Pin 8 (the output) will then be at +VE 6 V. As the I.C. has a fixed voltage gain of 50, the application of + or - 0.12 V to pin 2 will cause the output to swing from +12 V to 0 V respectively. This is calculated by $\text{NORMAL O/P VOLTAGE} \div \text{GAIN} =$

$$\frac{6}{50} = 0.12 \text{ V.}$$

In either of these conditions, the integrated circuit will no longer amplify low level audio signals and is considered to be muted. In my own particular application I use a +VE muting voltage because the quiescent current of the muted I.C. is considerably less when done this way.

To develop at least +VE 0.12 V of mute voltage should present very little problems to most people. The Hepburn/Jenkins carphone receiver circuit for instance is quite capable of doing this with little or no modifications. Because as already mentioned the I.C. has a high input impedance, the mute potentiometer may be a very high value (500 K ohm typical) and often very little loading to the external circuitry.

73's PETER ALLEN

VK3YAL

COMMUNICATIONS SATELLITES

Mr P.R. Britt, Director of Planning, Telecom Australia, will be addressing the AIS Technical Society on Tuesday 10 July 1979, at the AIS Visitors Centre, North Gate AIS. His topic is "Communications Satellites" and he will cover the principles of communications by satellite and will discuss the applications of satellite technology to international and domestic telecommunications services. The address will also include some observations on the possibility of an Australian National satellite system.

The AIS Technical Society has extended an invitation to the members of the IARS to attend this most informative evening. Would those intending to attend please notify Geoff Cuthbert VK22HU to assist with catering arrangements.

The meeting will commence with light refreshments at 5.30 pm followed by the address at 6.00 pm.

The meeting should finish at 7.30 - 7.45 pm.

IARS STORE

A new price list for the store is in the process of being completed and should be available soon.

This month we should have a new range of TOROIDS and BALUN CORES from NEOSID.

Also we will have resistors in lots of 10 of any value for 25 cents, FERITE CHOKES at 20 cents, 10.7 MHZ crystals at 30 cents and lots of other goodies.

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N.S.W.
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MR.L. PATISON VK2ALU
98 HEASLIP STREET
WOLLONGONG

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I.A.R.S.

P.O. Box 1838,

WOLLONGONG, NSW 2500