

the PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY

PO BOX 1838 WOLLONGONG NSW 2500

MARCH 1981

THIS MONTH'S MEETING:

Monday 9th March, at 7.30 p.m., in the Congregational Hall, Coombe Street, Wollongong. The Annual General Meeting of the Society, with election of officers for 1981, will be held. Do consider nominating for a position on the committee, and make a contribution towards the running of your society.

A mini-auction will be held, and Roger Graham VK2AIV will have his DREAM computer generating random morse - more details inside.

NEXT MONTH'S MEETING:

Monday April 13th at 7.30 p.m. The big feature of the meeting will be the FIND-A-FREQ competition. The contestants will be required to measure the resonant frequencies of circuits provided in sealed boxes. Bring your dip oscillators to join in and win valuable prizes!

Dip oscillators may be borrowed, begged, (but not stolen), and may be homebrew or commercial. Frequency range will be 3 to 150 MHz. A circuit is included this month if you need to build! Final details in next month's Propagator.

LAWRENCE HARGRAVE WEEKEND:

28th and 29th March. The club station VK2AMW will be operating from a tent(s) at Stanwell Park for the whole weekend - equipment and operators needed! (No linears please). The Lawrence Hargrave Award will be inaugurated (see inside for a rough reproduction of the award, and the rules). The Society will also sponsor the children's kite flying competition (details inside).

WHERE IS THE KING, etc?

Because of a printing delay, this month's newsletter is unfortunately rather thin, and is unable to carry cartoons, etc. Better luck next month!

SUBSCRIPTIONS FOR 1981:

Subscriptions for the Illawarra Amateur Radio Society for 1981 are now due. Send \$5 to the Treasurer, Box 1838, Wollongong, or pay at the March meeting. Prompt payment will help ease the burden on our Treasurer (who, contrary to rumour, has not been holidaying in the Bahamas!)

FOR SALE: Transceiver, FT7, mint condition. \$375.
See Daryl Harman VK2BLS, phone (042) 83 1429.

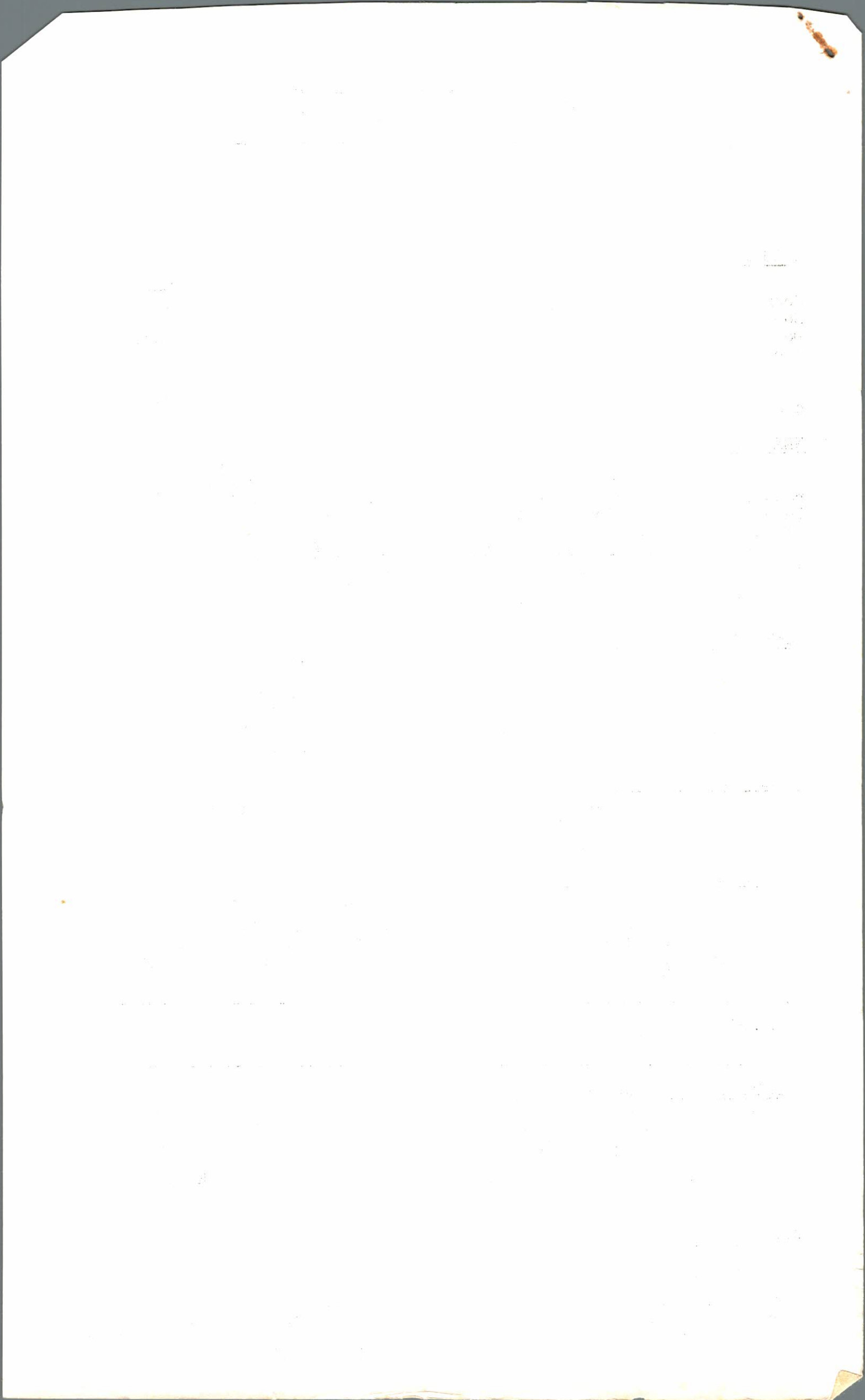
AMATEUR RADIO CLASSES, 1981:

Don't put off studying for your amateur licence - do it now. If you have a Novice or Limited Licence already, upgrade it! Classes for Full, Limited, and Novice Licences have started again, so get in quickly before you miss too much work.

Classes run on Friday nights from 6 p.m. to 9 p.m., Room 213, Mathews Building, Wollongong Technical College.

IDIOT BOX:

British television is now 40 years old but mercifully has not yet sunk to the depths plumbed by Channel 11 in New York every Christmas Eve for the past decade. The Channel 11 Christmas tradition is to repeat a ten-second loop of film over 1000 times, to make up a three-and-a-half hour programme. The loop shows a traditional Yule log burning with traditional fireplace and wallpaper backgrounds.
- "New Scientist" 1976.



THIRD PARTY TRAFFIC AGREEMENT WITH CANADA:

This item comes from the VK2TTY news bulletin, Sunday 22nd Feb.

The following is the text of a letter from the Department of Communications received this week.

"I wish to advise that following an exchange of letters, special agreement, pursuant to article 41 of the International Radio Regulations, now exists between this administration and the administration of Canada, concerning Third Party Traffic between Amateur Stations.

Consequently, it is now permissible for Amateur Stations of Canada and Australia, duly licensed in accordance with the legislation in force in these two countries, to exchange messages or other communications from or to third parties provided:-

- (A) The amateur stations exchanging such third party communications are not paid any direct or indirect compensation for them, and
- (B) Such communications are limited to conversations or messages of a technical or personal nature, for which by reason of their unimportance, recourse to the public telecommunication service is not justified.

I would be grateful if you could arrange for this matter to be given some publicity through the channels available to you. I might add that an approach has also been made to the United States of America in relation to third party traffic. I will advise you when an agreement is completed.

Signed J.D. Williamson for Secretary."

For those that may be interested Radio Regulation 41 (GR41) in part reads as follows:

- (1) When transmission between amateur stations of different countries are permitted, they shall be made in plain language and shall be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.
- (2) The preceding provisions may be modified by special arrangements between the administrations of the countries concerned.

PLEASE NOTE: No phone patching is permitted by Amateurs in VK.

A.O.C.P. EXAMINATION:

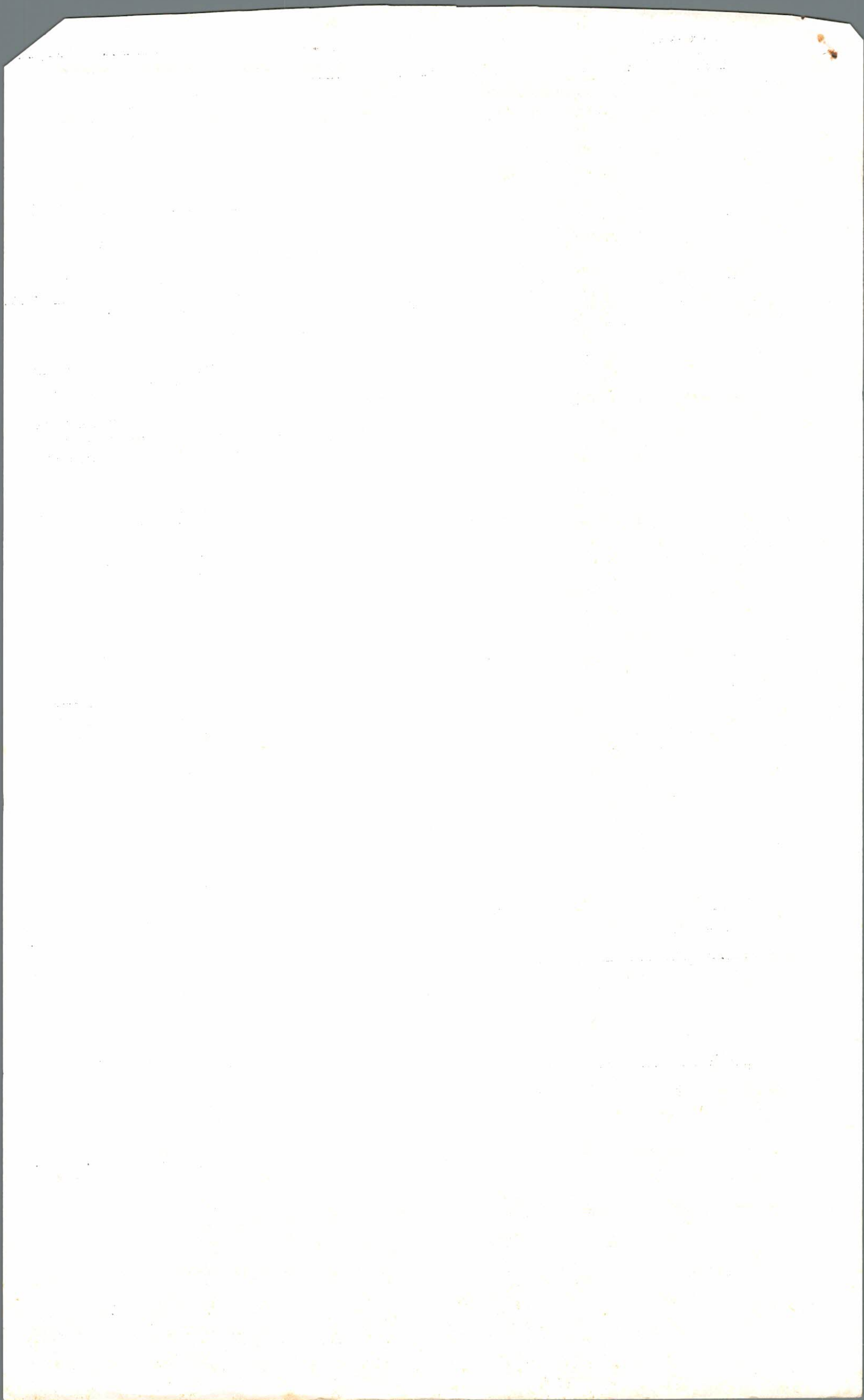
From the VK2TTY news bulletin Sunday 15th February comes the following advice:

"Due to circumstances beyond the control of the Department of Communications, the August A.O.C.P. examination, the the Sydney Metropolitan Area, has been transferred to the first Tuesday in Septemeber 1981 (Tuesday 1st September). The closing date for applications remains the same, namely July 8th for A.O.C.P. and August 4th for Novice Supplementary Morse. If you have any further queries, please contact the Department of Communications direct."

FOR SALE: AWA Car Radio AM/FM 18 months old - 1 owner. Used only 3 months. In excellent condition. \$70 O.N.O.

Contact Paul VK2PFY at the next meeting.

NEW CALLSIGN: Jim Smith VK2VPS has now got his limited call - VK2YYB - and with his new Yaesu handheld should soon be getting well into two metres.



MARCH GENERAL MEETING - MORE NEWS:

Roger Graham, VK2AIV, will demonstrate his DREAM computer which is now producing random morse. Members will remember Roger's excellent demonstration of his homebrew antenna rotator and indicator last year, and this promises to be another good one.

A mini-auction will also be held of equipment ex-VK2DAP. Items for auction include:

Operating table (4' x 2' laminex top) and chair; AWA carphone Receive only Ch 5 repeater; Microlink 13.8V 4A power supply; Metbend Tower 11 metres high; SBE Sidebander IV CB (PLL board faulty); Tandy "Globe Patrol" 0.5-30 MHz regenerative receiver; Daiwa RF550 speech processor; Pair small stereo speakers; Mico 10 watt soldering iron with transformer; Shure 444 microphone; Lucas LM3 car battery; Antenna switch four position; Oil-filled dummy load 100 watts 50 ohm; One-watt transmitter 28.365 MHz; Desk lamp 240V; E.A. two-tone generator; E.A. twin-paddle morse keyer; 30-50 volt 1A power supply; Homebrew "L" network antenna tuner; Telex headset with boom mic; Solid state linear board 2 x 2N6084; Digital clock 12V 24 hour; Hansen field strength meter; Large steel cabinet, suit linear; Lotring 80 watt soldering iron; Drake TV3300 1KW 30 MHz low pass filter; Mobile antennas 80-10 metres; Heavy duty 240 V extension lead; boxes of components; Aluminium and antenna parts.

LIVERPOOL AND DISTRICTS AMATEUR RADIO CLUB 2ND FIELD DAY:

To be held at Catherine Field Hall, Catherine Field Road, Catherine Field, on 22nd March 1981.

8.45 - 9.00 a.m.	HF Scramble (all bands)
9.00 a.m.	Start of Observation Trial (all day to finish).
	Disposals open to book equipment in for sale.
9.30 - 10.00 a.m.	10 and 2M DF Fox Hunt
10.30 - 10.45 a.m.	VHF Scramble (repeaters can be used)
11.00 am.	Disposals open for sale.
11.00 - 11.30 a.m.	Childrens Beeper Hunt (Audible)
11.00 - 11.30 a.m.	Junior Pedestrian Fox Hunts (2 hunts)
11.30 - 12.00 p.m.	Senior Pedestrian Fox Hunts (2 hunts)
12.15 - 12.30 p.m.	Meet the People contest.
12.00 - 1.30 p.m.	Lunch
1.30 p.m.	Entries close for technical Quiz, general knowledge Quiz, Childrens Cross Word.
1.30 - 2.30 p.m.	10 and 2M 2 transmitter DF Fox Hunts
3.00 - 3.30 p.m.	10m, 2m and 70 cm Talk in Fox Hunt
3.30 p.m.	Observation Trial and Childrens colouring contest close. Entries must be in by 3.30 p.m.
3.45 - 4.00 p.m.	Open 2M Pedestrian Fox Hunt
4.00 - 4.20 p.m.	Afternoon Tea.
4.20 approximately	Prize Giving and Raffle Drawing

All 10M events - 28.3 MHz, all mobile 2M FM events - 146 MHz, all pedestrian 2M AM events - 144.47 approx., mobile 70 cm event - 439 MHz.

ALK STRIKES AGAIN:

Field days which have good prizes can be well worth attending - it seems that Les VK2ALK really cleaned up at Gosford, bringing back a Helray Power Meter, a 15M helical antenna, and a complete set of 80-10M helicals with base spring and mount... without going into any of the mobile foxhunts! He won the HF scramble and one of the pedestrian foxhunts, as well as entering other events. Well done, Les.

FOR SALE: Hygain TH6DXX 6 element triband yagi. Brand new, partly assembled, with balun. \$220 O.N.O.

Jim Smith VK2VPS, 846735 or 289311 and leave message.

MOONBOUNCE REPORT - MARCH 1981

(Or should it be DX or ragchewing!)

For those with an interest in moonbounce not all one's time is spent building and operating via the moon. There are HF nets where the devotees catch up with the latest news and other regular skeds between pairs or groups of stations which have continued over a period of years.

For instance ZE5JJ in Zimbabwe (formally Rhodesia) and VK2ALU recently exchanged QSL cards to mark our 200th weekly HF sked (plus one on 432MHz EME). These skeds are currently on 15 metres and often last an hour or more. Copy is not uncommonly in the "armchair" category - and linears are not used.

If nothing else, this could demonstrate that one can work a station in most any country with relatively modest equipment over a goodly part of the sunspot cycle - provided the best band is selected and the exact frequency and time of operation of the station is known (and on phone too).

Trans Tasman UHF Propagation:

Quite a few feet of recording chart has been run off over the past month - with the receiver tuned to the ZL2VHP beacon frequency of 433.250 MHz and the beam heading on approximately 100 degrees. Unfortunately I have not been able to spend much time in the shack to capitalise on those openings which are either known to have occurred since the last report, or during suspected openings from what the chart showed when seen later (additional known openings at this QTH were on 23rd and 27th January 1981).

As there have been no interesting charts over the past couple of weeks this year's openings may be over - and records are not currently being obtained. A hot dry spell would see the chart running again.

It has been difficult to decide whether some variations in chart reading have been brief signal periods (as were noted earlier in the year when a listening watch was being kept) or say, an intense electrical storm well out to sea.

A "dark operated relay" set-up has therefore been made up, which causes a set of relay contacts to close 5 seconds after a light beam has been interrupted by the ink container of the chart pen moving by a set distance from "noise only" reading - the delay should obviate effects of short lightning surges or ignition pulses from passing vehicles. The contacts then stay closed for 60 seconds, which will cover the period between idents on the beacon. They then open and are "locked open" if the dark period continues. They will close again if the light beam has been re-established for about 10 seconds and another "dark" takes place for more than 5 seconds.

The relay will be installed in the chart recorder and will operate a tape recorder while the contacts are closed. There should then be no problem to decide if the increase in reading is beacon signal or something else. If desired, a signal level difference of 2dB or less can be used to operate the relay.

Lyle VK2ALU.

LAWRENCE HARGRAVE WEEKEND: LATE NEWS.

A reproduction of the Lawrence Hargrave Award, and details of the kit-flying contest sponsored by the Society, should appear elsewhere in this Propagator. Rules for obtaining the Award are:

Amateurs within Australia - contact 10 members of the Illawarra Amateur Radio Society.

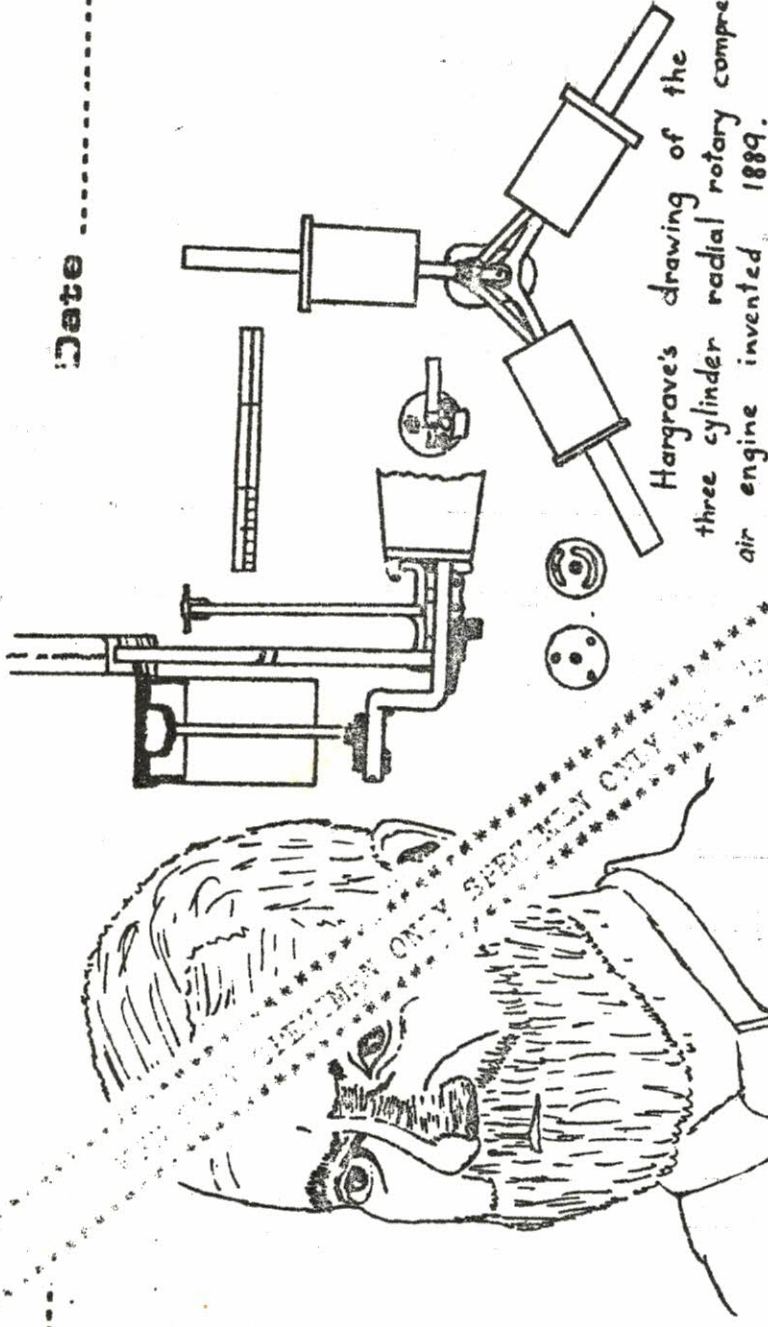
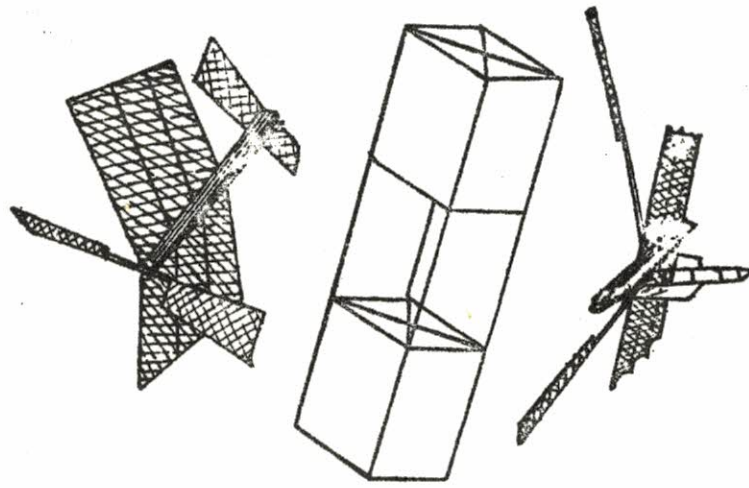
Amateurs outside Australia - contact 5 society members, OR work the club station VK2AMW.

Send \$2 or 5 I.R.C.'s to P.O. Box 1838, Wollongong, with a log extract signed by two licenced amateurs.

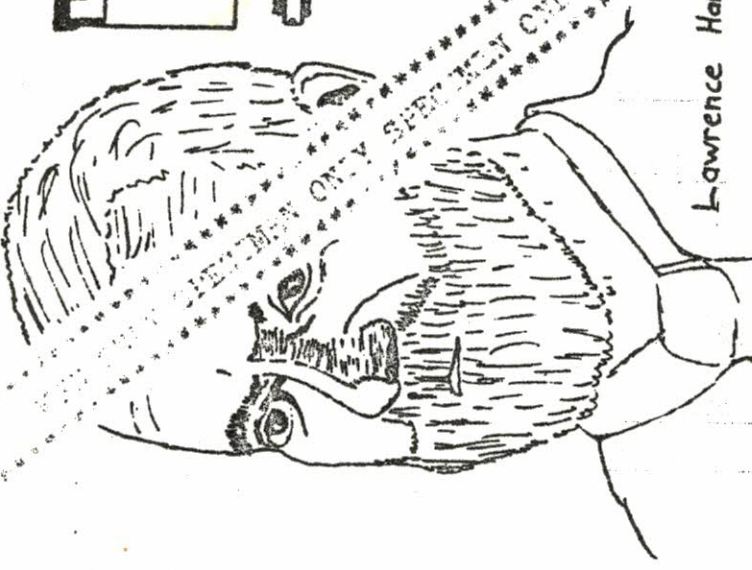
LAWRENCE HARGRAVE AWARD

Certificate No.

Date



Hargrave's drawing of the
three cylinder radial rotary compressed
air engine invented 1889.

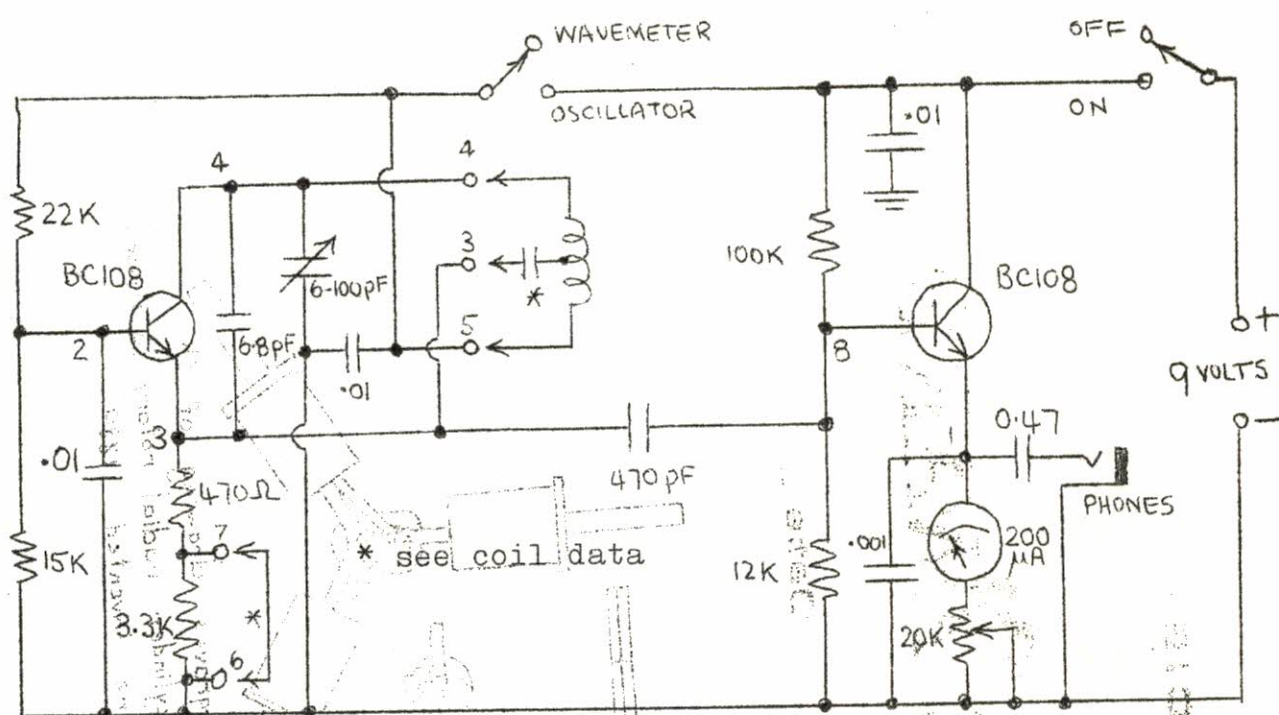


Lawrence Hargra

This is to certify that
has qualified for this award by earning
the required number of points.

Club President
wards Manager

SOLID-STATE DIP OSCILLATOR



See original article in "Electronics Australia", February 1969, p 66.

The coils are mounted on octal (eight pin) plugs, and most of the circuitry is attached to the lugs of the socket. Numbers on the diagram refer to lug numbers.

Coil Data:

1. 1.3MHz - 3.0 MHz: 136 turns centre-tapped, 30 B&S $\frac{3}{4}$ in diameter, 1-11/16in long, 68 pF
2. 2.9MHz - 7 MHz: 60 turns centre-tapped, 24 SWG $\frac{3}{4}$ in diameter, 1 $\frac{1}{2}$ in long, 39 pF
3. 6.5MHz - 16MHz: 23 turns centre-tapped, 18 B&S $\frac{3}{4}$ in diameter 1 in long, 10 pF
4. 12MHz - 30MHz: 10 turns at 16 turns per inch spacing, 18 B&S, $\frac{3}{4}$ in long.
5. 23MHz - 60MHz: 4 turns, 18 B&S, $\frac{3}{4}$ in diameter, $\frac{1}{4}$ in long.
6. 60MHz - 160MHz: A 3in length of 18 B&S wire, bent into a hairpin with width $\frac{1}{4}$ in. Also a shorting link between pins 6 and 7.

On the three lowest ranges, the oscillator functions as a Hartley, with centre-tapped coil and a capacitor to block DC and control the amount of feedback. The capacitor is mounted inside each plug-in coil.

On the three highest ranges, the oscillator functions as a Colpitts; the 6.8 pF capacitor from collector to emitter is one section of the divider and the other capacitance is that of the emitter junction of the transistor.

For the highest range, 60MHz to 160MHz, the collector current must be increased from the normal of about 1mA to about 3mA to obtain satisfactory oscillation. This is done by shorting out the 3.3K emitter resistor with a shorting link mounted with the appropriate coil.

The whole circuit may be operated from supplies between about 4.5 volts and 12 volts.

The ON/OFF switch controls battery supply to both the oscillator and detector circuits. An additional switch turns the oscillator on or off, leaving the detector switched on. This allows the unit to be used as a dip meter with the oscillator on, and as an absorption wavemeter with the oscillator switched off.

LAWRENCE HARGRAVE

HERITAGE WEEK.

KITE FLYING COMPETITION FOR CHILDREN

STANWELL PARK BEACH

MARCH 28TH 1981

SECTION I SENIORS 17 TO 19

SECTION II JUNIORS 12 & UNDER

FIRST PRIZE	\$ 75	} IN EACH SECTION
SECOND "	\$ 25	
THIRD "	\$ 10	

THIS COMPETITION IS OPEN TO SCHOOL PUPILS FROM HELENSBURGH TO KIAMA.

ENTRIES WILL BE ACCEPTED AT STANWELL PARK BEACH FROM 8AM TO 10AM
ON SATURDAY 28th MARCH.

CONDITIONS OF ENTRY...

1. THE JUDGES DECISION WILL BE FINAL AND NO DISCUSSION WILL BE ENTERED INTO.
2. ONE ENTRY PER PERSON.
3. ENTRANT MUST FLY THE KITE, ONE HELPER ONLY TO LAUNCH IT.
4. KITE MUST BE HOME MADE. NO COMMERCIAL KITES OR KITS ACCEPTED.
5. WINNER OF EACH HEAT INTO FINALS.

POINTS WILL BE AWARDED FOR.....

ORIGINAL DESIGNS.

HANDLING ABILITY.

WORKMANSHIP IN CONSTRUCTION.

SPONSORED BY ..

ILLAWARRA AMATEUR RADIO SOCIETY.

PLEASE NOTE.. THERE IS NO ENTRANCE FEE FOR THIS COMPETITION
BUT WE DO REQUEST ALL COMPETITORS AND SPECTATORS TO KEEP THE
AREA WE USE TIDY.

STATE OF NEW YORK

IN SENATE

January 1, 1901

REPORT

OF THE

COMMISSIONERS OF THE LAND OFFICE

IN RESPONSE TO A RESOLUTION

PASSED BY THE SENATE, APRIL 1, 1899

AND BY THE ASSEMBLY, MAY 1, 1899

ALBANY: J.B. LIPPINCOTT & CO., PRINTERS, 1901

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