

TASMANIAN AMATEUR RADIO

P.O. BOX 275
LAUNCESTON
TAS. — 7250

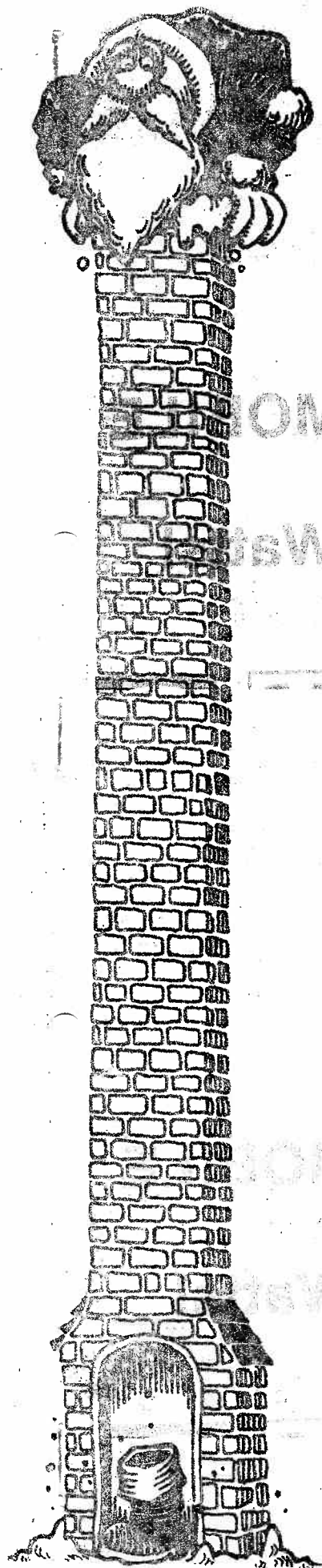
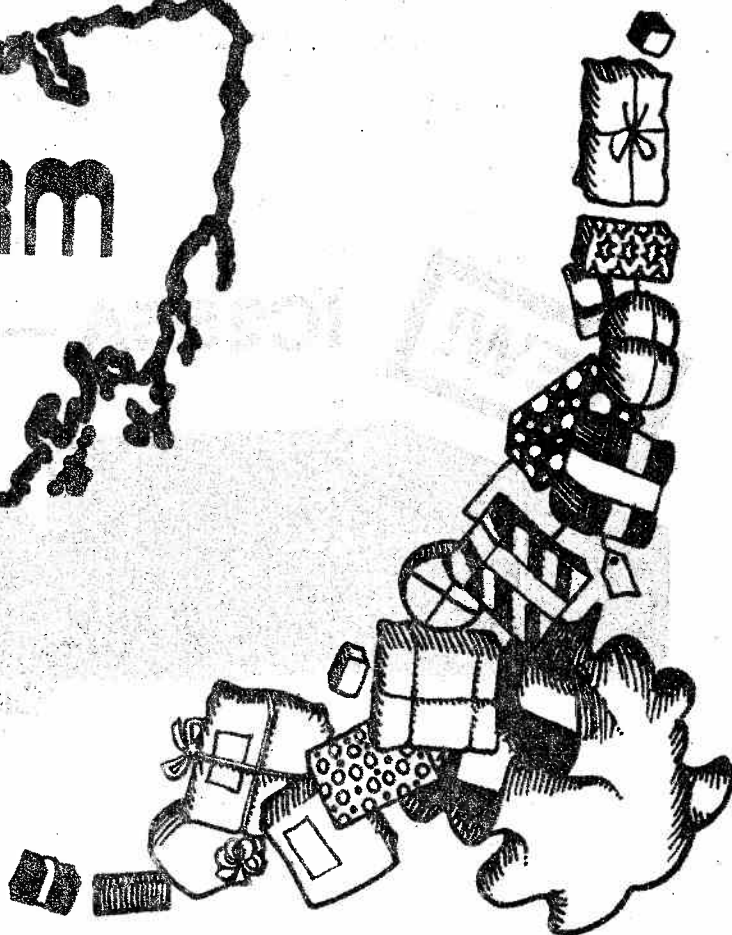
Bulletin issued by the North, North West and
Southern Branches of the Wireless Institute
of Australia, Tasmanian Division

Registered for Posting
as a Publication
Category B

NOVEMBER 1979

VOLUME 9 NUMBER 9

price 40c



Features:

* FM TRANSCEIVER INCORPORATING A MICROCOMPUTER

CPU control with ICOM's original programs provides various operating capabilities. Frequency control, band-edge detection, and the display are accomplished by the microcomputer. The 5-channel memory is controlled electrically by the use of a 256-bit RAM area. The circuits for these IC-255A functions are equivalent in capability to conventional circuits having a large number of C-MOS MSI's.

* TWO VFO'S BUILT-IN

No extra equipment needed for split-frequency operation. Easy writing and reading of the five memory channels. Smooth and easy tuning with 25KHz and 5KHz steps.

* MULTI-PURPOSE SCANNING

Memory Scan allows you to monitor five different memory channels. Program Scan provides scanning between two programmed frequencies. Adjustable scanning speed. Auto-stop stops scanning when a signal is received, or a frequency is not being used.

* SUPERIOR RECEIVING CHARACTERISTICS

The use of newly developed low-noise and large dynamic range junction FET's (for the RF amplifier and the first mixer) and of helical cavity filters (for the antenna and RF circuits) provides excellent sensitivity and intermodulation distortion characteristics. A pair of high quality monolithic crystal filters and ceramic filters facilitates very stable receiving and excellent durability.

* HIGHLY STABLE TRANSMITTING CHARACTERISTICS

Both the directly amplified VCO output without the use of multipliers or mixers and the use of a power module in the PA unit produce very clean transmitting signals without spurious radiation. RF power is selectable 25W (HIGH) and 1W (LOW). 25W HIGH output power will increase your QSO range.

* COMPLETE

Comes with mobile mounting hardware, dc cable & microphone.

* BACKED BY VICOM

90 day warranty and technical/spares support.

IC255A Specifications: General. Numbers of semi-conductors: Transistors 49, FET 4, IC 29, Diode 50. Frequency coverage: 143.800 — 148.195MHz. Frequency resolution: 20KHz steps, 5KHz steps with TS switch depressed. Frequency Control: Microcomputer based Digital PLL synthesizer. Independent Transmit-Receive Frequency Capability. Memory channels: 5 channels, any inband frequency programmable. Usable conditions: Temperature: — 10°C — 60°C (14°F — 140°F). Operation time: continuous. Frequency stability: Within ±1.5KHz. Antenna impedance: 50 ohms unbalanced. Power supply requirement: 13.8V DC ±15% (negative ground) 5.5A Max. Current drain: Transmitting, HIGH (25W) Approx. 5.5A, LOW (1W) Approx. 1.5A. Receiving, at max audio output Approx. 0.7A. Squelched Approx. 0.5A. Dimensions: 185mm (W) x 64mm (H) x 223mm (D). Weight: Approx. 2.5kg. Transmitter Output power: 25W (HIGH), 1W (LOW). Emission mode: 16F3.

Modulation system: Variable reactance frequency modulation. Max. frequency deviation: ±5KHz. Spurious emission: More than 60dB below carrier. Microphone: 1.3K ohm dynamic microphone with built-in preamplifier and push-to-talk switch. Operating mode: Simplex, Duplex (±600KHz from receive frequency and any inband frequency separation programmable). Receiver. Receiving system: Double-conversion superheterodyne. Modulation acceptance: 16F3. Intermediate frequency: 1st: 10.75MHz. 2nd: 455KHz. Sensitivity: More than 30dB S+N/D/N+D at 1μV. Less than 0.6μV for 20dB Noise quieting. Squelch sensitivity: Less than 0.4μV. Spurious response rejection ratio: More than 60dB. Selectivity: More than ±7.5KHz at —6dB point. Less than ±15KHz at —60dB point. Audio output power: More than 2.0W. Audio output impedance: 8 ohms.



GELSTON COMMUNICATIONS
LAUNCESTON, P.O. BOX 1311
TAS. 7250
PHONE: 003 — 44 3883

Vicom 68 Eastern Road,
South Melbourne, Vic. 3205.
Phone (03) 699 6700
Telex AA36935 PROVIC
Amateur Radio Division

GELSTON COMMUNICATIONS

TWO WAY RADIO SALES & SERVICE

PLESSEY
Electronics



40 LAVENDER GROVE

P O Box 1311

Phone 443882

LAUNCESTON 7250

TAS

New equipment available this month.

IC255A 25 watt 2 Meter mobile with lots of features. \$425.00

IC502A 6m portable transceiver \$289.00

In stock for immediate delivery Icom IC22S see us for a special deal
Pre Loved equipment.

Belcom 28 Mhz mobile transceiver only \$130.00

Icom IC262 Hand held SSB transceiver \$185.00

Johnson Viking Modified for 28 Mhz covers 28.1 to 28.6Mhz
supplied with power supply for mains operation \$120.0

In stock a full range of SCALAR Amateur antennas.

6&2 Meter mobile aerials

HF. Resonators from 80 to 10 Metres.

Gutter Grip Bases

Reyco Antenna Traps \$33.00 pair.

ANSULATOR Centre Insulator \$16.00

Discone receiving antenna \$49.50

VHF Notes

At last we have some news to report. Six metres has been open to JA. on two occasions and we have had several good openings to VK 2,4,5. We are still waiting for the "promised" 1958 style world wide openings. A report from WIAW ARRL headquarters stated that the sunspot numbers have reached that of 1958.

For those with telytype equipment WIAW bulletins are sent daily at 0200, 0500, and 2300 UTC and monday through Friday at 1600 UTC
Frequencies 14.095, 21.095, 28.095.

Also during the month we have had several good 2 Meter openings to VK3 when contacts were made on 6-2-432 Mhz.

73

Joe Gelston
VK7JG.

For Sale.

8 Element 6 Meter beam has worked W6 \$140.00

AWA 25M Carphone fitted with Repeaters 2,3,8, simplex 40 \$185.00
VK7JG.

Also : VS33 Triband Beam \$150.00

; Aircraft Band Scanning Receiver \$175.00

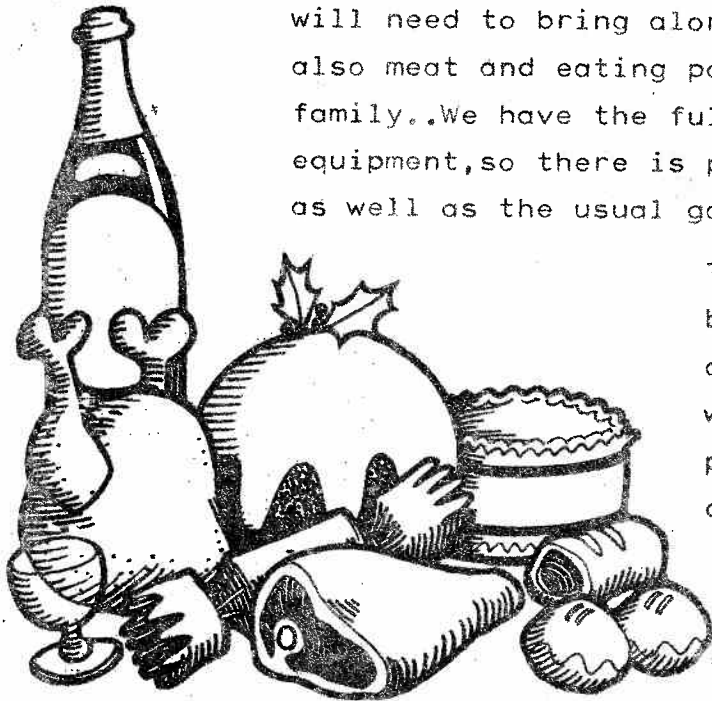
; FT7-B in as new , never been used condition in
original packaging , \$395

NORTHERN BRANCH W.I.A.
CHRISTMAS BARBEQUE AND FAMILY DAY

Will be held on the 15th of December at 2 PM onwards at the Kings Meadows High School. (At the rear of the Gymnasium)..SANTA will be attending and the usual arrangement is that, parents bring along one wrapped present (about max \$3.00 value) for each of their own children and SANTA distributes them when he arrives.

The salads and side dishes will be provided as will the drinks and icy-poles etc for the children. Adults will need to bring along their own drink and also meat and eating paraphanalia for their family..We have the full use of the Gym and equipment, so there is plenty for the adults as well as the usual games for the children.

This day has proved to be very popular with all, including members without children, in the past, so please try to come along.



MEETINGS

Northern Branch Executive
-anyone welcome 7th Dec.

Northern Branch General
Business meeting 14th Dec.

T.A.R.C. RECEIPT/PAYMENT STATEMENT

(This is an interim statement only and

RECEIPT	Registration fees	\$878.50	there are outstanding payments to come)
	Proceeds from raffle	\$229.20	
	Auction of surplus equipment	\$127.65	
	TOTAL	\$1235.35	
PAYMENTS	Seddon Press (raffle tickets)	\$27.60	NET SURPLUS
	Kings catering (Sat night)	\$450.00	
	Hire of Magician	\$12.00	
	Hire of premises for dinner	\$30.00	
	Hire of Disco (Sat night)	\$80.00	
	McFarlane Murray (drinks)	\$138.89	
	Advertising (Amateur Radio)	\$35.00	
	TOTAL	\$773.49	\$461.86

SOUTHERN BRANCH NOTES by Sue VK7ZSU/NSU

This month's notes will be very short and will mainly be a calendar of future events; Firstly, the Southern Branch thanks the Northern Branch for hosting TARC ; which was enjoyed thoroughly by everyone who attended.

At the next General Meeting, topics to be discussed will include ;

- (a) A club project for 1980 of a general purpose UHF repeater for ATV and RTTY.
- (b) Nominations for Amateur Advisory Council.
- (c) Any early nominations for February elections of the Southern Branch ; these must be in prior to the commencement of the February meeting
- (d) Southern mini-hamfest ; Bruny Island 23 - 24th Feb.

Part II of the video tape Aerial Circus G6CJ will be shown during the second half of the meeting.

The swap shop stand will again be operating.

The next General Meeting will be held on February the 6th at SES Headquarters, with the executive meeting being held on the 31st of January.

The Divisional AGM and Dinner are on the 15th of March in Hobart and arrangements are well under way for this.

The wine bottling and barbeque to be held at Tom (7TM) and Gael's QTH is the Christmas function and this is to be held on December the 1st. It is a BYO drink and meat with salads, savouries etc, being provided.

The Repeater has had a holiday recently, due to damage to the receive antenna cable. This cable is very delicate and must be gently treated. However, due to forces unknown, it was damaged, resulting in intermittent shorting of the two conductors. On the second climb, Andrew, VK7AW cut the cable and replaced the connector with a new one. We hope that with the connectors costing approx 40 dollars each when available, not to have to repeat the exercise.

While this tower work was in progress, Brian, VK7RR retuned the transmitter, replacing the final valve with a new one and also retuned the receiver for good measure.

Incidentally, I was mobile in VK2 about three weeks ago and worked a number of newcastle amateurs who have recently heard the Southern repeater. That is one way to keep up with local news when you are away.

Happy Christmas all; and may the Christmas spirit not cause your harmonics to be in discord, cause all projects to oscillate in sympathy and may the New Year find all safely through the festive season.

73 Sue



TASMANIAN AMATEUR RADIO CONVENTION 1979

This year's Convention at Alanvale College in Launceston on the 17th and 18th of November, appeared highly successful. One hundred and fifty attended for lunch on Sunday and a similar number of the general public looked in on Saturday.

Once again an impressive array of commercial equipment was on display. However an apology is tendered on behalf of a few exhibitors who were forced to cancel their contribution at the last moment.

Provision of workshop sessions seemed quite popular and our thanks to those who assisted in this area.

The new style foxhunts, provided plenty of exercise. As the fox was placed in an 8cm by 20cm tube, a wide variety of hiding places were possible. Fox hunt prizes were awarded to :
Tony Pollowy VK7TP (1st) and Graeme Reardon VK7ZGG (2nd)

It seems that the art of home-building of equipment is not yet lost, judging by the amount of home-brew gear on display. A wide variety was on display and prizes awarded as follows;

(1st) Kenwood trophy and 1st prize to Tom Moffat VK7TM for his first class exhibit of a RTTY demodulator.

(2nd) Graeme Reardon VK7ZGG for a low voltage power supply.

(3rd) Tony Pollowy VK7TP for the sheer volume of his exhibit:
A table full.

Activities for the ladies and children and a dinner dance on Saturday night, attended by 97 people, completed the weekend.

If there were any people unhappy about any aspect of the weekend, they didn't complain to me. I hope newcomers to Amateur radio who attended were made welcome by the old timers. One particularly pleasing aspect was the large number attending from Southern Tasmania

Thanks however, to everyone for your attendance, to the ladies for manning the canteen and providing Sunday lunch, to exhibitors and to the committee for their work and support. In the hope that I've not left anyone out, thanks to all who helped in any way.

To those who didn't attend ; don't make the same mistake next year.

Reg Emmett VK7KK

Convention Committee Co-ordinator

Prize Donors

Thanks are extended to the following who donated prizes at the convention.

Advanced Electronics
Gelston Communications
Bail Electronics/Yaesu Muesen
Kenwood Australia
Vicom International

Raffle Results

Thanks to all those who helped to sell tickets.

(1st) Prize of \$100 order on Advanced Electronics
Mr. K. Jones of Launceston

(2nd) \$30 order Mrs. Nichols of Montrose

(3rd) \$10 order on Seddon Press Mrs. N. Hewens Lton.

The Pioneer Spacecraft

The spacecraft (Figure 3) is 2.9 meters (9.5 ft) long from its cone-shaped antenna to an adapter ring which fitted it to its Atlas-Centaur launch vehicle. Its most prominent feature is a large dish-shaped, high-gain antenna, 2.74 meters (9 ft) in diameter. Behind the big antenna are compartments for spacecraft electronics and several of the scientific experiments. Booms extend from the spacecraft carrying radioisotope thermoelectric generators and some science experiments. The generators provide electrical power. The spacecraft is spin stabilized. The axis of rotation is occasionally adjusted by a pair of thrusters so that the dish-shaped antenna always points toward the Earth for good radio communications. It is equipped with two identical receivers and two identical transmitters in case one or either should fail. A data system changes science and engineering information into a specially-coded stream of data bits for transmission to Earth. This information takes 85 minutes to travel from Saturn to the large receiving antennas on Earth.

Science and Experiments

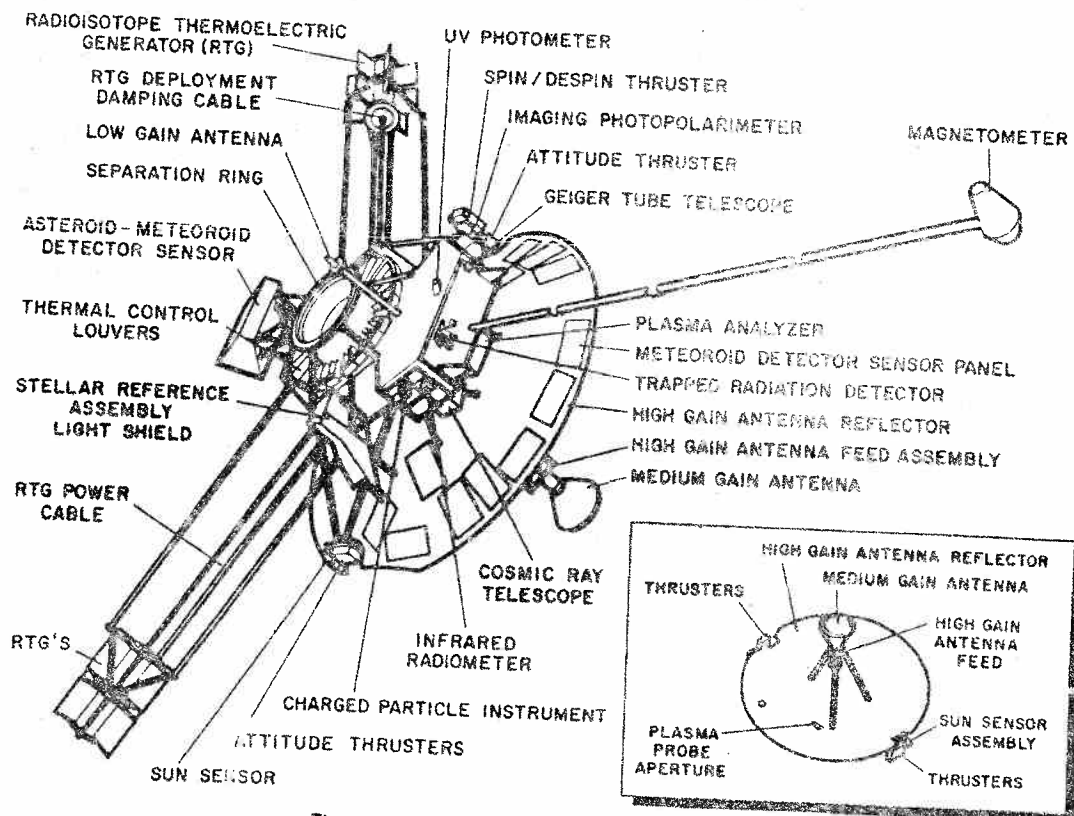
Observations planned with the Pioneer spacecraft at Saturn are:

- Map the magnetic field of Saturn and determine its intensity, direction, and structure. Although such a

field has not been detected from Earth, several experts in planetary magnetism believe that Saturn does have a magnetic field. Saturn is also believed to have a denser core of metallic hydrogen like Jupiter, inferred from the motions of its natural satellites. Such a core would support the probability of Saturn having a magnetic field.

- Determine the densities of electrons and protons of various energies distributed along the trajectory of the spacecraft through the Saturn system.
- Map the interaction of the Saturn system with the solar wind consisting of protons and electrons streaming outwards from the Sun.
- Measure the temperature of Saturn's atmosphere and that of its largest satellite Titan.
- Determine the structure of Saturn's upper atmosphere where molecules are expected to be electrically charged so as to form an ionosphere.
- Map the thermal structure of Saturn's atmosphere by infrared observations coupled with data from radio occultations when the radio signal from the spacecraft to Earth is attenuated and refracted as the spacecraft passes behind the planet.
- Obtain spin-scan images of Saturn in two colors during the encounter period, and close-up images of special planetary features, including the ring system, and make polarimetry measurements of the planet, the rings, and some of the satellites.

Pioneer / Saturn Spacecraft



The Pioneer Saturn spacecraft and its science experiments.

LETTER OF APOLOGY RE: YAESU DISPLAY AT TARC79

It was indicated in the program for the convention that there would be a display by Bail Services of Yaesu equipment, provided thru their distributor in Launceston, John Doolan. Unfortunately, Bail is going thru management changes and all equipment was unable to be shifted till it was resolved. Below is a typed copy of a letter sent to the Convention committee explaining the situation.

The Organizer
WIA Convention (17th - 18th Nov.)
TASMANIA

Dear Sir,

Due to circumstances beyond our control, we are unable to supply equipment on loan for display at your coming convention.

We are sorry for inconvenience thus caused, but trust the Convention will be a success.

A pair of Yaesu headphones and a morse key will be sent to Mr. John Doolan for the purpose of a donation to the convention.

Yours faithfully
BAIL ELECTRONIC SERVICES
(signed) James O. Bail

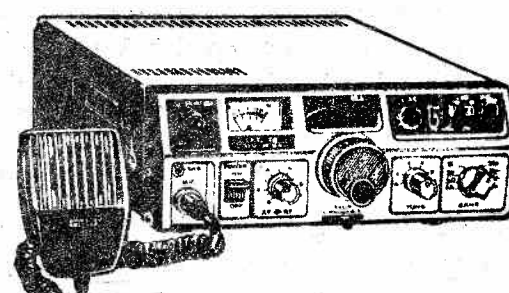
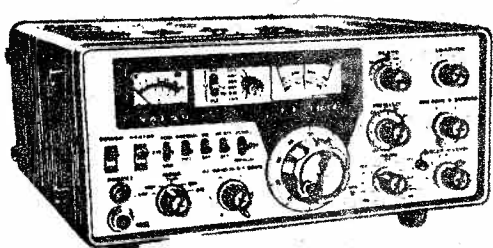


J. D. ELECTRONICS

64 Wentworth Street,
NEWSTEAD PH. 445000

YAESU AMATEUR EQUIPMENT AND ACCESSORIES





R.S.G.B. AWARDS MANAGER

From the 1st of January 1980 the RSGB Awards Manager will be G3KDB, Peter Miles.

The new address will be Box 73, LICHFIELD
STAFFS, ENGLAND

NORTH WEST BRANCH NOTES by Jim VK7NCW

Before presenting the Branch notes, there are two things that I would like to mention ;

Firstly, we are all very sorry to learn that our popular and efficient Secretary, Joan, has been confined to hospital. However, it is gratifying to know that she is now home and recuperating. Joan has asked for leave of absence and her position is being capably filled by Tony, VK7AX.

Secondly, it was with some great concern, that the meeting was informed that the great stalwart of Amateur Radio on the North West coast ; Max, VK7MX ; advised in writing, that he wished to sever all connections with the Branch. This indeed, is a great shock as Max has given the Branch 22 years or so, of invaluable service.

He has been responsible through his generous and unselfish assistance, in helping several Amateurs obtain their license; the writer being one of them.

Max, no doubt, has his reasons for taking such drastic action. His place is going to be very hard to fill.

Minutes of previous meeting were read and confirmed.

The Treasurers Report was presented by Ivan VK7ZOA/NOA.

December Meeting Because of a prior commitment, the headquarters are not available on the usual meeting date. Will members please take note that the December meeting will now take place on Dec. 12th commencing at 7.30 local time.

QSL Bureau Don, VK7NDP distributed many QSL's. His efforts are much appreciated by the Branch.

Council Paul, VK7ZPB, told the meeting that the Branch subscription be \$3 to cover general operating expenses. Paul advised the meeting that he is leaving VK7 soon to take up an important position on the mainland.

ATV Group Tony, VK7AX, advised that the group is engaged in several projects and is going along well.

Microprocessor Group Steve, now VK7Z??, reported that this group is also going along nicely.

The Chairman advised that moves would be made whereby various groups would be held at future meetings to cater for the novices ; eg HF, ATV, VHF etc.. We would like to see this eventuate, because the novices are increasing in numbers all the time and should be catered for. It would be a wonderful move if, after the general business was finished, for all those novices interested in obtaining a pass in AOCP theory, to go to another room to receive instruction from an instructor. The Branch is fortunate in having several very qualified members in this sphere.

Bob Wilson, VK7ZAA kindly donated many back issues of QST magazine.

Giant Christmas Stocking valued at \$250 is being organized to be raffled in aid of Branch funds, by Vince VK7NVH. In order that the general public may participate in the raffle, Vince is looking after the Devonport area, Tony, VK7AX the Ulverstone area and Steve VK7Z?? the Burnie area. Tickets to be 50 cents each.

TARC 79 Tony, VK7AX advised that he was collecting equipment to take to Launceston to enter in the Home Brew display. Tony also reported that the 2 beacons are now working okay.

North West Branch Notes (cont)

The Acting Secretary was instructed to send a letter to Max, VK7MX thanking him for the invaluable work he has done for the Branch over many years.

J.O.T.A. Several groups were held on the coast. Vince, VK7NVH, "around the world in 80 days" had bad luck with his balloon carried antenna. The balloon hit a tree and "poof".

A group of Guides accompanied by the Devonport Guide leader and Guide Commissioner, were entertained at the shack of Jim VK7NOW. On the Saturday afternoon-right on the dot of 0700Z on 21.170 MHz, Werner, DF4FX of Kassel in West Germany, transmitted to us, some superb, noise free SSTV pictures at strength S7 to S9 all the time.

The pictures consisted of greetings to the Guides, pictures of himself and XYL, also of his lovely home and miniature waterfalls. One Guide spoke in German to Werner; who also speaks excellent English... On the Sunday at 0530 Z precisely, the Guides spoke to the very popular Mexican operator, Harry, XE1-EFT in Guadalajara. Harry's eldest daughter stayed up until 11.30 PM Mexican time, especially to speak to the Guides. She spoke in excellent English and French.

Activity After general business, Adrian, VK7ZAT, gave a most informative lecture on Power Supplies which was well received.

Supper, served by the Ulverstone members to 38 members concluded the meeting.

VY 73 Jim VK7NOW

LETTER FROM THE DIVISIONAL TREASURER

A number of subscription re-inbursement cheques have not as yet been cashed. As it is near the end of our financial year it would be appreciated if these cheques could be cleared or indicated as not received, as soon as possible. A list of names as follows; P. Mutton, D. Morgan, B. Proudloch, A. Robertson, F. Biner, D. Webster, P. Ralph.

-----LOST OR BORROWED ?-----

A quantity of VHF Communications in a red half box. These are the latest issues and I cannot find them. I know my memory is slipping, so if anyone has either borrowed them or seen them I would appreciate their return.

Peter VK7PF

FOR SALE....FOR SALE....FOR SALE....FOR SALE

For Sale ; FT 7-B YAESU Transceiver

50 Watt plus Output AS New. \$570 ONO

VK7MM Martin Fox

4 Henslowes Rd. Ulverstone

7315 Ph. 004 251320 bus hrs.

ADVANCED ELECTRONICS

5A THE QUADRANT, LAUNCESTON, TASMANIAN, 7250 — P.O. BOX 328 — PHONE: 31 7075

BUILD A PROJECT... CAPACITOR DISCHARGE IGNITION from a Dick Smith kit

SINE AND SQUARE WAVE OSCILLATOR

New simple design!

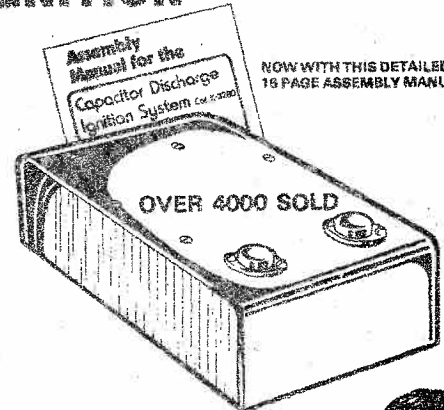
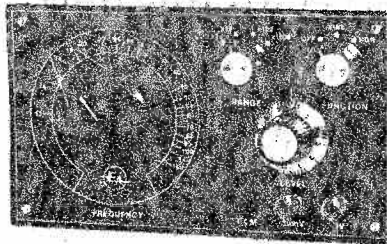
SEE E.A. JUNE 1978

An essential piece of test gear for the serious hobbyist. Covers frequencies from 15Hz to 150kHz in four overlapping ranges. Low distortion... less than .1% maximum between 20Hz and 20kHz. This is one of the most useful pieces of equipment on the experimenters bench. This new, simple design is easy to build and a great performer. runs from 9V battery.

All parts supplied, including specially printed front panel, attractive 'Zippy' case and full instructions.

S-3006 9V battery 45c extra

Cat. K-3459 ★ ★ NEW \$32.00



Assembly Manual for the Capacitor Discharge Ignition System (Cat. K-3460)

NOW WITH THIS DETAILED 16 PAGE ASSEMBLY MANUAL

OVER 4000 SOLD

This has got to be the best value C.D.I. available. Your car will be easier to start — when hot or cold, your points and plugs will last longer — keeping your car in tune and using less petrol. When you add all that up, it won't take long for the C.D.I. to pay for itself.



Cat. K-3460 ★ \$27.50

7 DIGIT FREQUENCY METER

COUNTS TO 40MHz — or to 200MHz

All new 7 digit 40MHz frequency meter from Electronics Australia. Can be run from 12V DC mobile supply. Has built-in 240V mains power supply for use in workshop. Has rugged drilled case with black mar-plate cover and special silk screen printed perspex front panel (like the original). Readouts are rugged light emitting diodes for long trouble free service. Has built-in quartz crystal time-base circuit for incredible accuracy. Kit is supplied for operation up to 40MHz — you only need to add one IC at any time to convert your 40MHz kit to 200MHz. Full instructions supplied.

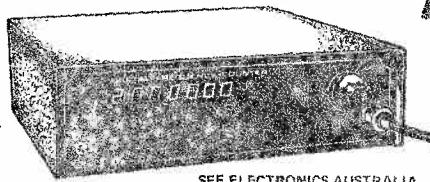
Cat. K-3437 ★ ★ 40MHz \$99.50

DESIGNED BY LEO SIMPSON OF ELECTRONICS AUSTRALIA

NEW

EASY LOW COST CONVERSION TO 200MHz All you do is add a 95H90 IC (Cat. Z-5360) at just \$12.50 and you turn your 40MHz DFM into a 200MHz DFM. No other parts to buy. For a total of just \$112.00 you have a 7 digit 200MHz frequency meter.

Cat. Z-5360 \$12.50



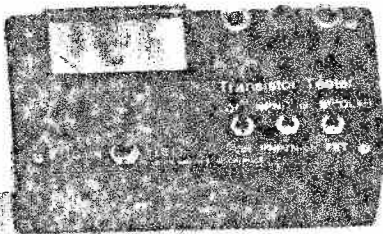
SEE ELECTRONICS AUSTRALIA AUGUST 1978

TRANSISTOR TESTER

Speed fault finding!

Not just another Transistor Tester! This one tests bipolar transistors, diodes, F.E.T.'s and even S.C.R.'s and P.U.T.'s. This practical low-cost test instrument is simple enough to be built by a beginner and then provide him with a valuable piece of test equipment. You can get experience in building, then use it to learn about the operation of semiconductors, or use it for video cassette checking. Ideal for the beginner and serviceman alike, or in schools. Battery operated and supplied with one of our new 80000 meters in a deluxe 'Zippy' case. S-3008 9V battery 45c extra

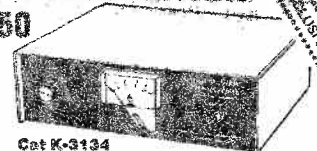
Cat. K-3052 ★ ★ NEW \$19.75
SEE E.A. JULY 1978



NOVICE TRANSVERTER

\$89⁵⁰

HIGH POWER

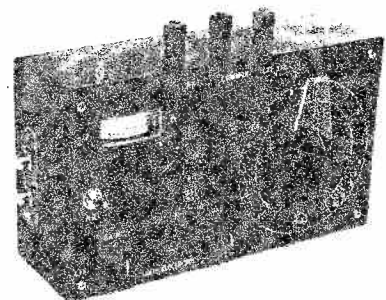


Cat. K-3134

The cheapest way for a novice to get going on 80m. Use your old CB radio and transvert it up to 80m. Maximum power output is 10W on AM, 30W PEP on SSB. Surprisingly easy to build — about 4 hours work. Fibreglass PCB is standard to make it easy for you. Supplied with a 23.570MHz xtal which allows the following conversions:

3.535MHz — 27.105MHz
3.545MHz — 27.115MHz
3.555MHz — 27.125MHz
3.565MHz — 27.135MHz

Measure unknown components R-L-C BRIDGE



SEE E.A. MARCH 1978

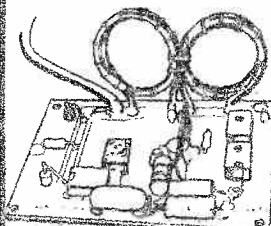
Check the values of new and used components and determine the actual value of wide tolerance capacitors such as electrolytics and ceramics. Ten ranges include measurements from 10 ohms to 10 megohms and from 10 picofarads to 10 microfarads... plus inductive measurements down to a few hundred microhenrys.

The tried and proven Resistance, Inductance, Capacity bridge is a handy, easy-to-use piece of test equipment. Runs from 9V battery supply. Complete kit of parts includes specially printed front panel.

S-3006 9V battery 45c extra
Cat. K-3466 ★ \$34.50

2 METRE AMPLIFIER

45 WATTS
ONLY \$29⁵⁰



Yes! A fantastic 2 metre amplifier kit of the simplest construction. Uses the 2N8004 transistor to give 45 watts out from 2-12W drive. Runs from 13.8V. complete kit includes detailed instructions.

Dissect box to learn and protect the amplifier. Cat. K-3120 \$8.00

Cat. K-3120

NEW! 2 METRE CONVERTER

This simple, low cost converter employs the latest design techniques and components to produce a highly sensitive, low noise converter of exceptional stability. Covers the full 144-148MHz band with an IF of between 20 & 30kHz (suitable for use with any sensitive receiver such as the TR7 Night, output to OSCAR speaker).

Cat. K-3462 \$34.50

NORTHERN BRANCH EQUIPMENT STORE

13

Books

1000 Questions&Answers for Novices
Manual of Questions & Answers for the Novice
W.I.A. Log books
W.I.A. car stickers

Semiconductors

LM111H
LM3900
NE565 RTTY demod
NE 556 Dual Timer
NE556A "
LM372H
LM325H
LM301 Op amp
MC1741
LM1351
LM370
DM7420
LM743
LM709 High perf op amp
LM340T 15V @ 1A Regulator
LM317T 2-20V Regulator
BC308
BF66
2N3563
BC547
MRF102
2N3564
2N5245
2N3866
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1pF 2.2pF 3.3pF 4.7pF
6.8pF 10pF 15pF 22pF
27pF
33pF 47pF 68pF 82pF 100pF
150pF 220pF 330pF 390pF
470pF 560pF 680pF 820pF
1000pF
0.0027uF
0.01uF 0.02uF 0.05uF
0.15uF

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4.50

0.28

0.25

0.70

0.30

0.75

1.40

0.25

1.00

1.20

0.33

0.20

0.10

0.10

0.05

0.10

0.10

0.10

0.06

0.05

0.10

0.03

Electrolytics

470uF 25V

100uF 25V

50uF 10V

47uF 10V

47uF 25V

22uF 25V

10uF 25V

4.7uF 25V

1.0uF 63V

0.47uF25V

Tantalum Electrolytics

22uF

10uF

4.7uF

1uF

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