

QRM

BULLETIN ISSUED BY THE NORTHERN ZONES OF THE
WIRELESS INSTITUTE OF AUSTRALIA TASMANIAN DIVISION

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H A M F E S T S P E C I A L

It is a pleasure to write a few lines for this our last issue for the year. Although the above line could easily have read "It is with regret that I write these few lines for this our last issue"!

The reason being that we have run out of articles and in fact we spent the last couple of days looking through other publications for suitable material to copy. To date QRM has contained 7 pages each month, 3 of which are filled with meeting notes and notices written by the same people. Our membership is such that if every member would fill one page per year we could publish a 14 page bulletin each month. Will YOU please try and help us keep QRM as it has been, on your doorstep every month and put pen to paper and write something for our next issue.

On behalf of the people associated with the production of QRM and myself I'd like to wish all our readers a very happy Christmas and a prosperous New Year.

C U IN 73

JOHN VK7JV

C O M I N G E V E N T S

M E E T I N G S

Dec. 5th	North Western Zone - Labin's Hall, Ulverstone
Dec. 8th	Northern Zone at the QTH of NORM VK7NR in the form of a BBQ - Bring your own steaks and 807's ALL WELCOME! Bring your YL or XYL or both, QTH - 69 Georgetown Road.

JANUARY No meeting in the North West

Jan. 12th Northern Zone - A.E.B. Rooms High Street.

THE NEXT YRCS CLASS WILL BE ON FEBRUARY 24th - See next QRM

9th DECEMBER - ROSS HULL VHF CONTEST

SUNDAY NEWS BROADCASTS

Now that this zone is responsible for originating the 9-30am Sunday broadcast we have a number of advantages:-

- a local 2 meter broadcast
- an AM 7Mc broadcast suited to transistor radios, dual wave radios etc.
- an immediate publicity channel for local notes.

Help where you can by keeping a note-pad handy. If you hear of something newsworthy jot it down and hand on to 7KK sometime (or 7-30 Fridays) on channel 4.

NOVEMBER MEETING

The Northern meeting was attended by thirty persons including 7ZLH and 7ZWK from Hobart. We were pleased to welcome Graeme Crompton, a member not seen very often at our meetings.

Most business transacted was routine information - re satellite working, broadcasts and meeting arrangements.

Slides were shown by 7JV, 7PF and 7KK enabling us to visit interstate and overseas ham shacks and remote radio sites within the state. Seeing Mt. Read under 2 feet of snow and an aerial view of channel 3's transmitter tower under construction were two unusual shots.

After the meeting John 7JV auctioned a small quantity of gear donated by various members to the clubroom fund. Bidding was fierce and the treasurer informs me that the clubroom account was \$68.00 better off.

DECEMBER MEETING

December Northern meeting will be a barbeque at Norm 7NR and Anne Richardson's home, 69 Georgetown Road, Newnham. Bring-UR-own refreshments liquid and solid and the XYL, YL etc.

FOX HUNTS

The second fox hunt held this season on November 24th was attended by nine foxes.

7RR's idea didn't prove too popular. With the help of an inside contact he hid his car in the middle of a fleet of semi-trailers in a machinery firm's yard and provided some "suspect" answers to confuse all and sundry.

It may be that another effort will be held mid-January. Keep an ear out.

RON 3AKC worked VK6BE Tuesday 28th first on CW and on SSB with 5-5 sigs. The VK6 beacon was also coming in 5-5.

VK6BE must have really made use of that opening as he worked VK5-MC, ZTN, DA, DK.

VK5-MC Chris's 2 metre signals have been heard in U.S.A. via the Moon. Chris also heard both sides of a QSO between VK3ATN and a W station.

NORTH WESTERN ZONE NOTES

Our November meeting was well attended and numerous matters of business were dealt with. Most of the old-faithfuls were present.

We have been notified that the call-sign of the beacon will have to be changed. As the alteration is from a two letter to a three letter call, this has created somewhat of a problem to modify the electronic keyer. However, the brainpower of 7ZGR and 7ZBE are working on it and it shouldn't be too long before the new call is heard. Bob was instrumental in designing the original keyer and no doubt will have the answers to the present problem.

The writer has been on leave and is penning these notes at Cressy. It has been very pleasing to hear and work so many Northern boys per the repeater at this Q.T.H.

Maybe you won't hear so much of 7ZIE for a few weeks as Ian is very busy working on his house. The QTH was selected for its satisfactory operation of Channel 4 repeater and the house is wrapped around the shack. We are anxious to know what the dozens of wires are for radiating from the shack all over the house. Very interesting!

7ZAO has completed his solid state car-phone and it sounds very good Graham.

Remember chaps there will be no January meeting. See you first Tuesday in February.

Our zone takes this opportunity of wishing all QRM readers the compliments of the season and good hamming!

VK7MX

S T O L E N

STOLEN from guards van at Railton Railway Station on Monday November 27th, 1972 one Pye portable U.H.F. transceiver on 168.25 MHz. Serial No.335A. Also engraved in many places with T.G.R.5.
If offered unit inform Police, Tas. Govt. Railway or VK7NR.

(ADVERT)

BRIAN 7ZBY URGENTLY REQUIRES 3 CERAMIC 6/40 SOCKETS IN GOOD CONDITION -
STATE PRICE IF ANY -

PHONE - WORK 918288 EXT. 21

HOME 918218

ADDRESS CALL BOOK.

TECHNICAL ARTICLES OF INTEREST

I hope this may be the start of a series if I can keep it up, similar to the Technical Topics of Pat Hawker G3VA. I intend to bring extracts of articles from recent publications.

WIRELESS WORLD SEPT. Part 1 of the WW desk calculator using a Texas 1802 NC calculator chip. This chip is the heart of the calculator and contains more than 6000 transistors. All the normal small calculator functions are available with an 8 digit LED readout. A complete kit of parts is available in the U.K. for £39.50, which is a very reasonable figure.

SYNCHRONOUS DETECTION IN RADIO RECEPTION 1 by Pat Hawker.

A review of means of synchronous detection leading up to the present direct conversion receivers becoming more popular on the amateur bands. Pat promises in the second part to introduce a system called two phase quadrature technique of detection which gives a 7DB increase in S/N ratio over a normal product detector.

RADIO RECEPTION DEVELOPMENTS

New techniques described at an I.E.R.F. conference. Included is an article on noise blankers with quite a few new ideas, one of which is a new method of blanking where by a delay circuit in the signal path is switched out to lose a noise spike without actually putting holes in the wanted signal.

WIRELESS WORLD OCT. 1972 Part 2 of the W/W calculator. and

Step by step construction using the available kit/with sample examples of calculations. The complete circuit shows only 7 IC's including power supplies and shows how the calculator uses a system of time division multiplexing of input and output to the calculator IC to save on the number of leads required.

NOISE SILENCER FOR AM RECEIVERS

This uses a LM372 IC as a noise amplifier with its own AGC to save to set the threshold. A gate pulse is derived from a comparator to give an output if the noise spike is over the 100 per cent modulation level. The gate pulse is used to gate the signal path gate of push pull FET's.

From my own experience FET's really work and I will try this circuit when possible and believe it will be possible to use it on other modes.

LINEAR DB METER A simple design to measure to -80DB.

The unit uses two operational amps 72741 in a cascaded switched amplifier into a meter circuit with another two 72741's arranged as a logarithmic amplifier to give a basic linear 0 to 10 DB meter scale.

BRITISH ISLES VHF BEACON SYSTEMS

A history of the development of the beacons and the effect they have had on the increase of general activity on the VHF, VHF bands.

PRACTICAL ELECTRONICS. July, August, September so far.

THE P.E. CALCULATOR

This calculator will give similar results to the W/W calculator but uses individual 7400 series IC's, a whole 144 of them. The cost will be many times the W/W one but the circuiting will be of interest and if one were to build one I'm sure you would have a better understanding of what goes on.

ALPHA-NUMERICAL DISPLAYS PART 5, 6, 7.

Part 5 describes light emitting diode displays (LED) and the form they take.

Part 6 shows how LED displays can be used and how a four digit version uses a time sharing system to save on decoder and package leads.

Part 7 Other types of displays. Liquid crystal, dot matrix, seven segment filament, cathode ray tube, seven segment scan.

HAM RADIO ACT. 1972 - High frequency synthesizer. 300 Khz to 10 Mhz. This is a simple generator not suitable as a TX or RX oscillator source but as an accurate frequency generator using IC's where the frequency can be set up by thumb wheel switches.

73 SEPTEMBER 1972FREQUENCY SYNTHESIZER FOR 2M FM Part 1

This synthesizer is designed to take the place of TX and RX crystals in a variety of FM sets to give 145 to 148 MHz coverage in 5 KHz steps. This is similar to what Bob 7ZRF and myself have been developing and part 2 with circuits is awaited with interest. This first part gives the theory and application for use on 2M FM.

On the same subject on page 106 is a write up on a commercial unit at a kit price of \$130.00.

PETER VK7PF

LETTER TO THE EDITOR:

Dear Sir,

The concise Oxford dictionary describes FOX and HUNT as follows:-
FOX: n. (Fen. Vixen, Also Bitch) A Red furred sharp snouted bushy tailed quadruped Preserved in England as a beast of chase. Cunning.....Act craftily.

HUNT: n. Hunting (Lit. & Fig.) Persons hunting with a pack.....Pursue wild animals ,.....Scour (District).

Since our last Fox hunt comments have been made about where certain parties hid their vehicles. Translating the above descriptions of FOX and HUNT I would think that only crafty underhanded method of concealing a transmitter would be fair go.

If ever we were called upon to unearth an illegal transmitter operating against the State we could expect to have to work harder to find it.

But to be serious perhaps the Editor could look up the rules as used on the mainland for fox hunting and perhaps some one can organise a good map and compass which can be handed to the fox to take with him when he hides. Now if we could only get back to directional hunts we really could have some fun.

Personally I don't think 7RR is a red furred, sharp-snouted bushy tailed quadruped of either gender nor is there any truth in the rumour that I will dress English style for the next hunt i.e. Red coat, top hat, horn and horse.

TALLY HO! CHAPS.

DE VK7NR.

IT MAY BE a little late but we do welcome two new calls to the VHF bands:

DERRICK VK7ZJM who is active on channel B

STEPHEN VK7ZSE who will be heard shortly on 6 metres FM.

KEVIN getting ready for DX season overhaul on 2M AM first in 9 years. Antenna rotator. Beams up on the tower and a bare wall ready to take the contest certificates.

HAVING RECEIVED some orders recently for 1GL earphones and converters we'll wait another week before posting same to give you the opportunity to be in it. Let's know your requirements within a week. The Zone does get a small discount to boost its funds.

TWO METRE F.M. TRANSCEIVER KITS.

T 001 Two Metre F.M. Exciter.

Nominal H.T. 12 volts. Power output in excess of 1 watt at 13.5 volts. Crystal frequency multiplied by 36. capable of driving a QOEC 6/40 which can be amplitude modulated. Board Size 7" x 1 $\frac{1}{2}$ ".

Price \$13.98 tax.

S 002 Speech Amplifier (to suit T 001)

Nominal H.T. 12 volts. High Z input. Suit Ceramic Mic. Constant level amplifier. Aerial C/C relay for use with receiver R 001. Board Size 7" x 1".

Price \$13.80 Inc. Tax.

R 001 Two Metre F.M. Receiver.

Nominal H.T. 12 Volts. 20 db quieting at 0.3 uV signal. I.F. selectivity in 2 MHz block filter. (Filter is mounted & Pre-aligned). Bandwidth in excess of 15 KHz. Current consumption is typically 60 ma muted. 160 ma at full volume. Excellent cross modulation, characteristics. Mute circuit incorporated. Audio output $\frac{1}{2}$ watt nominal. Board Size 7" x 4".

Price \$55.20 inc. tax if purchased with other kits as a transceiver.

\$61.20 inc. tax purchased as a separate item.

X 001 Five Channel Crystal Board

Receive frequency set trimmer capacitors, transmit frequency set trim pots. Five position rotary switch. Board size 7" x 19/16".

Price \$10.35 inc. tax.

Transceiver Case. (to suit above items)

Includes speaker, knobs, socket for microphone & R.F. Space for limiter meter if required. Size 9" x 9" x 3".

Price \$19.98 inc. tax.

High power R.F. Finals

F 002. Twelve watts minimum at 13.5 volts. Current drain nominal 2.5 amps.

Price \$37.95 inc. tax wired & tested.

All kits will be supplied wired & tested for an additional charge of 20%.

C 001 430 MHz Converter.

Nominal H.T. 12 volts. 4DB noise figure. Single conversion to an I.F. from 14 to 150 MHz. Broad band, suitable for T.V. Uses crystal in the range 28 to 36 MHz third overtone. Board Size 6" x 2 $\frac{1}{2}$ ".

Price \$17.85 inc. tax. Crystal not included.

C 004 2 Metre Converter.

Nominal H.T. 12 volts. Low noise 2.5 db FET. Cascode R.F. amp Single conversion to an I.F. up to 30 MHz. Uses crystals in the range 30 to 45 MHz third overtone. Board size 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ ".

Price \$14.00 inc. tax. Crystal not included.

C 003 6 Metre Converter

Nominal H.T. 12 volts. FET cascode R.F. amp. Single conversion to an I.F. up to 20 MHz. Uses third overtone crystal in the range 30 to 50 MHz. Board size 3 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ ".

Price \$14.00 inc. tax. Crystal not included.

All kits include all parts and easy to follow step by step instructions.

YET ANOTHER PRE-AMPLIFIER

Suggested layout of P/C board is shown actual size below

L1 & L2 wound close spaced on
neocid formers

all components available X stock
Northern Zone equipment store.

