

Q R M

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ZONES OF THE WIRELESS INSTITUTE
OF AUSTRALIA TAS. DIVISION

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EDITORIAL

By the time you receive this you will no doubt have been informed by the W.I.A. bulletin that you have a choice of councillors again this year.

But more important you will be asked to cast your vote in favour of one of the two motions which will be presented at the annual general meeting this year.

Both call for a change in the constitution to allow three branches to be formed in Tasmania, but that is where the similarity ends.

One proposal asks that you agree to one of the branches being Head Quarters, which is of course the system that we have had in this State for some 50 years.

The other idea is that Council be the governing body with the three branches having equal status within that framework, therefore giving every member in the State a chance to attend his nearest branch meeting and his voice will be as strong as that of any other member.

Please attend the annual general meeting and exercise your right to vote on these proposals.

JOHN VK7JV

MEETINGS

April 3rd NORTH WESTERN ZONE, LAKIN'S HALL, ULVERSTONE

March 9th NORTHERN ZONE, 8 HIGH ST, A.E.B. Rooms
slides of ANTARCTICA by COL VKØJV/VK7KW

March 17th W.I.A. ANNUAL GENERAL MEETING AND DINNER AT
THE GATEWAY MOTOR INN, FENTON ST, DEVONPORT

YRCS CLASSES

March 10 & 23RD 10 am KINGS MEADOWS HIGH SCHOOL ROOM 38

April 20th W.I.A. FEDERAL CONVENTION, LAUNCESTON.

NORTHERN NOTES

A few things going on at the moment for you to keep in mind.

The Zone's Annual Meeting has been postponed to April. Start thinking about the most suitable persons to fill the available positions.

A bulk order for crystals has been forwarded to the VK3 Division. When the crystals ordered are received the repeater frequency will be altered to be in line with VK3's ideas.

Subscriptions to "Ham Radio" and "VHF Communication" have been purchased by the Zone. It is intended to circulate these as rapidly and efficiently as possible.

W.I.A. National Easter Convention will be held in Launceston this year. We will be calling on assistance from members in various ways- please try to arrange your Easter holidays with this in view.

Be sure to attend the March meeting. 'Tiny Tim' Col Perger VK7KW ex VKQJV will fill us in, via his slides, with his activities during the last 12 months at Casey Base.

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Help make the Northern Zone's Raffle a success!

How many books have YOU sold ?

If you've run out get some more from Stavo, 7JV.

We only have to the 6th April to sell out.

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ZONE FEES

Northern members please note that Zone fees are now due. Remember that the Zone provides many of the facilities available to Hobart members and 't does this through your dollar subscription.

YEARLY SUBSCRIPTION \$1 all grades

Tear off and forward to W.I.A. Tas., Northern Zone,
PO Box 1010,
Launceston 7250

NAME CALL

ADDRESS

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NORTH WESTERN ZONE NOTES

All attention is now focussed on the Jubilee Dinner to be held at the Gateway Motor Inn, Devonport, on the 17 th March - not forgetting the Annual meeting. If you have not registered please do so without delay.

Our February meeting was well attended and a great deal of business dealt with including the Port Sorell Hamfest on 25 th February. By this time you will know what has happened.

Two metre activity appears to have eased off somewhat but there is still plenty. Tony 7AX has converted his new automobile into a mini powerhouse. To see the control panel is really something and it really works.

Tony journeyed to the Stan Wing Memorial Lookout at Presten for the John Moyle Field Day Contest and could be heard working mainlanders on 6 metres. Harold 7MZ was heard from the site at one stage and assisted with the installation of antennas.

A welcome visitor during the month was John, ex 7JF, now 3CDX. John looked over the old haunts and a very pleasant evening was spent with some of the local boys.

Ian 7ZIE has settled into the new QTH at East Devonport and so East has now 3 hams. I can no longer claim to be the "Voice of East Devonport" since the aliens moved in.
Hi.

Athol 7ZW was heard working portable in Devonport recently.

VHF openings have been rare since Christmas. Had the pleasure of doing some trout fishing with Harvey 2ZYZ. We were so absorbed that we forgot to talk radio.

CU next month 7MX

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Port Sorell Event

This was a resounding success once again. Thanks to the organisers for their efforts.

A rough count showed 30 amateurs (total about 70) in attendance. Proceedings were rather late in starting so not many of the scheduled events took place.

To control feelings a little more next year perhaps the rules of the cricket matc could be examined. Perhaps equal batting time could be given. A resounding win to the Northern Zone with some hilarious exhibitions from some players.

SILENT KEY

It is with regret that we record the passing of LON JENSEN VK7LJ on February 24th.

LON has been a tireless worker for the W.I.A. for many years and is well known to all members through his recent articles in the W.I.A. bulletin

Seems like everyone is now using IGL transceivers on 2 metres, latest orders are from Don VK7DB, Gordon VK7GW and Peter VK7PD. While on 2 metres, Joe 7ZGJ and BOB 7ZKF have been working on the construction of the handheld FM transceiver as described in the December issue of BREAK IN printed circuit boards for this unit have been photo etched by Ron 7ZPP and are available from him at \$1.40 for the two boards. RON's address is 215 Carella st Howrah. Peter 7PF is now using ssb on 2 metres for OSCAR and finds contacts coming much easier.

Trevor 7TB may not have been heard on air much lately but those days are fast closing to an end as the fully solid state transceiver he has been home brewing is as good as finished, I had the privilege of hearing both the receiver and the transmitter at work and it sounded real good. TREVOR has supplied me with the complete circuit for this unit, we'll try and transfer it to a stencil and put it in QRM for you. Its no wonder Kevin keeps running out of equipment, 24 hours after taking receipt of 50 neosid formers he had to send off another order, this time for 100 of them.

Our associate members haven't been idle either, there's been a lot of studying going on and Greame Reardon, Allen Davis and Peter Felthem took the AOCF exam a couple of weeks ago and all seem pretty confident, Good Luck fellows.

I don't know how they do it, I am referring to the business houses of the U.S.A. and England, they seem to be able to fill your order and have it in your shack within 10 days.

Being a loyal citizen I ordered my gear from Melbourne, I sent the money with the order last November and still haven't got the goods.

And now you know why we haven't any printed circuit board in stock.

Which makes you wonder why the Australian firms are protected too much.

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SUPPORT THE PEOPLE THAT SUPPORT YOU

Athol Lawes Electrics, Phillips-Astor Industries and Ron Carter Caltex Service Station in Kings Meadows have helped with printing costs and prizes for our raffle- so next time you need something why not see if they can supply it first.

TECHNICAL ARTICLES OF INTEREST

by 7PF

Break In, December 2 Mx Hand Portable

An interesting small .6 watt, 6 channel FM hand portable. This is from the Wellington VHF Group and a kit is available in NZ for \$55 as against \$100 for a larger set in 'Electronics Aust'.

The TX uses a 2N3866, the Rx is single conversion with 4 10.7 MHz transformers as a filter.

Specifications

Tx 8-10 kHz deviation .6W output
power drain 110 ma, 12 volt

Rx .5 uV 20 dB quieting
acceptance + 15 kHz
audio output 50 mW in a common
mike/ rocking armature earpiece

Size 2 $\frac{5}{8}$ " x 2 $\frac{1}{4}$ " x 8"

Weight 20 oz

Information Wellington VHF Group
PO Box 6243
Wellington, New Zealand

Since showing this information at the Feb Zone meeting a number of units are under way and much interest has been shown.

Frequency Synthesizer for 2 metre FM

"73" Oct & Nov 1972

This is the remainder of the article reviewed in QRM for December and gives circuits and layout. The author had trouble with VCO microphones while mobile when the oscillator was on the common circuit board. I believe the real trouble is in trying to go in 5 kHz steps; the whole design of the control loop and noise reduction is simplified by ten by using 50 kHz steps. Notwithstanding the design differences there are some useful ideas to be gleaned.

Power Lead Filter for 432 MHz

73 Oct 72

The author tests various means of decoupling power leads at 432 and arrives at an RFC with two bypass condensers each end; this gives about 50 dB loss.

An RTTY Selcal with TTL Logic

"73" Nov 72

This interests me as a means of decoding the RTTY telemetry for AO7. Each letter is fed into a shift register and compared with a character store and, in my case, the required telemetry group would be selected and the remaining value read out on a nixie tube, that is, when I get a RTTY demodulator built.

TECHNICAL ARTICLES OF INTEREST contReciprocating Detector

"Ham Radio" March & Nov 1972

"The Aust. EEB" June & August 1972

This detector derives its name by the action of pulsating sidebands of a signal being converted to the circular motion of a continuous carrier. The best description, by the inventor, is in EEB and practical uses in a modified receiver in Ham Radio for March and a WWV 5 MHz TRF receiver in November.

Basically the detector is a product detector without a BFO the carrier being generated by a regenerative action with a narrow pass band; you could say that the signal introduces a ringing action. The synthesized carrier amplitude varies with the average signal; this is the whole secret of the derived benefits. The detector can be used on all modes except FM. On AM selective fading is much reduced and on all signals impulse noise is rejected because the narrow band filter stops the reference level increasing at a rate to match the impulse noise pulse so causing clipping. On CW the usual BFO introduced noise is reduced because the injected signal just matches the signal.

LOW POWER DX

G6XW apparently has been busy since retirement. In Radio Communications November 72 he describes aerial site tests with 1 watt speech clipped ssb. He describes the use of sloping ground as an aid to boost signals in the required direction and he says that as VK7LM on the north coast of Tassie, using drift wood lashed together as a support for a 14 Mhz inverted V on a steep slope ending in a cliff 150 ft above the sea, he worked OH4RF, LA5KG and other European stations. IN HAM RADIO for Nov. and Dec. 72 he describes the benefits and design considerations and some circuits that he has used. Going by his report the apparent increase in signal of 8 to 13 Db by RF clippers is well worth while if correctly done.

SATELLITE COMMUNICATIONS

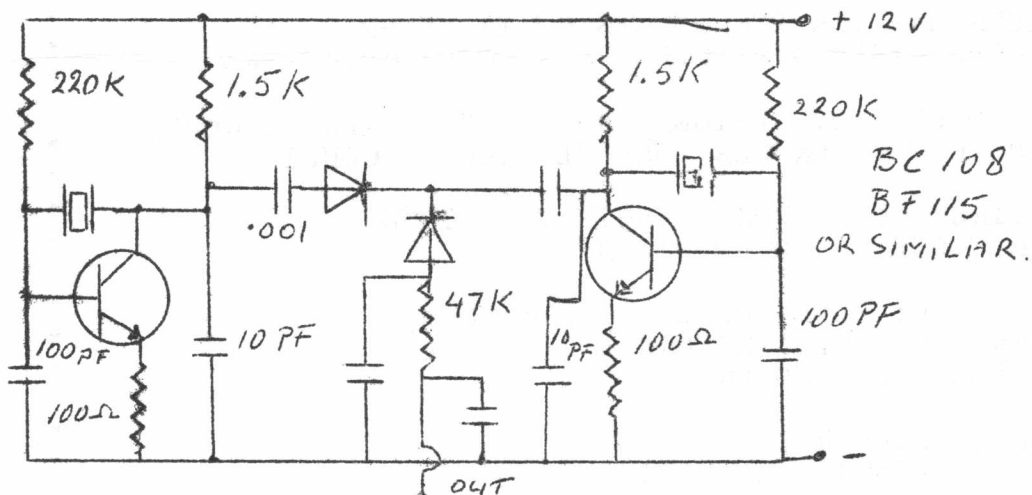
In HAM RADIO Nov. 72 Some broad requirements for communication is set out and in DEC. an article on polarization of satellite signals using the ATSI satellite. I actually heard some of the tests from Hawaii. To get a true circular polarised aerial system seems to be harder than at first appears, shown is the comparison of average gain of different arrays, a four element beam rotated for correct polarisation had a very good average and at times outperformed an 80 element crossed yagi.

I will try to have some more for you next Month

73 Peter VK7PF

CRYSTAL CHECKER

Being faced with the problem of measuring the difference in frequency between a large number of crystals, nominally of the same frequency, in order to construct a crystal filter, I used the following circuit.



The output will be the audio difference in frequency between the two crystals and can be used in a CRO or frequency counter or via an audio amp.

It also should be useful for grinding crystals to the same frequency.

Malcolm VK7 ZMS

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NOMINATION FOR OFFICE BEARERS, NORTHERN ZONE

Nominations are called for the positions of

President	
Vice Presidents	Bulletin Editor
Secretary	
Treasurer	

Nominations should be in the hands of the secretary by 13 th April.

I hereby nominate for the position of

Proposer

Secunder

I agree to accept nomination

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