

MARCH
VOL. 1 NO. 10.

REGISTERED AT G.P.O. HOBART
for transmission by post as
a Periodical. CATEGORY B.

PRICE 5¢.

PAGE 1.

"GOODBYE TO 1971"

Well it's time for the A.G.M. for 1972 in the Tasmanian Division of Wireless Institute and also in the Northern Zone.

During 1971 successful functions were held, firstly the A.G.M. and Dinner in Launceston was attended by approximately seventy people; also the "New Type" Hamfest was held at Evandale, this two day get-together was attended by over one hundred people including visitors from Victoria, New South Wales and America. Thanks must go to the girls in the kitchen and the organisers Kevin, Reg. and Brian VK7ZBY.

Other functions were held at National Park and Port Sorell. National Park is not the best place for radio communications, but it is very good for picnics, talking etc. North and North West members and families enjoyed the fox hunts, picnic and cricket match etc. at Port Sorell.

Monthly meetings in Launceston were very well attended during the year, averaging well over thirty members per meeting. Many interesting lectures were heard during the year and members also benefited from auctions of equipment and sale of new components at special prices. Thanks must go to Kevin VK7ZAH for all the work he has done running the equipment store, thanks also to Judith for putting up with the visitors and phone calls associated with equipment sales.

Thanks must go also to Ray VK7KK for his work as Secretary and organising throughout the past year. Our thanks also to John VK7JV for all the work he has done during the year; he has been a Councillor which has meant travelling to and from Hobart at night every month during the year at his own expense, general organising in the Northern Zone, selling equipment, and editing QRM. I think this is more than any one man should have to do. Thanks to Joy for her assistance.

Thanks also to Col VK7LZ for his work as QSL Manager and advice he has given during the year.

Our greatest achievement for the year in my opinion was the establishing of a fully licenced FM Repeater on Mt. Barrow; this has helped to bring operators together in our own area and State also during openings in Victoria and South Australia. Our thanks for this mighty job must go to Peter VK7PF and Bob VK7ZRF.

Thanks also to all the other members who helped to make the W.I.A. "go" in Tassie in '71, and to all the others - make sure you have more than twelve copies of A.R. to remind you that you were a member of the W.I.A. for 1972.

VK7ZLD.

COMING EVENTS

- | | |
|----------|--|
| MARCH 17 | ANNUAL GENERAL MEETING OF THE NORTHERN ZONE
IN THE AUDITORIUM OF RADIO 7LA, QUADRANT, LAUNCESTON. |
| MARCH 7 | NORTH WEST ZONE MEETING AT LAKIN'S HALL, ULVERSTONE. |

NORTHERN ZONE NOTES

The February meeting was attended by 24 Members. After the minutes were read and confirmed then the meeting adjourned for the sale of the remainder of Len 7BQ's equipment and was reconvened.

Disappointment was expressed in the roll up for the recent Fox Hunt; it was suggested that this was mainly due to holidays and that there would be more participation later in the year.

Meeting venues were discussed and it was resolved to use the York Street A.E.B. rooms rather than the Teacher's Centre or the High St. premises on a different night.

Peter 7PF reported on repeater activity and requested that contacts be kept short and that no duplex operation be undertaken. Some discussion took place on the running and maintenance cost of the repeater and it was resolved to open a fund for this purpose. Users of the repeater are requested to donate to this fund.

The next meeting will be the Annual General and will be held on the 17th March in the Auditorium of Radio 7LA in the Quadrant, Launceston. After the meeting Rex 7RB will present his lecture on Audio and distortion and give a demonstration of Hi Fi using a couple of 50 Watt Audio modules.

There will be no election for Councillors of the W.I.A. this year - which is a bit of a disappointment. However, the Northern Zones have a 2nd Councillor this year - Bill 7AK - congratulations Bill!

Rob 7RH now has a G5RV up and can be heard on all bands using an FT200.

Some news from Col VKCJV:

The trip to Casey was very calm and took $9\frac{1}{2}$ days which is a new record. Shortly after arrival they had a storm with winds of up to 115 m.p.h. taking down the 20 meter beam a ZL special. This has been put back on its perch and is operating as good as ever and can often be heard on 14.120 MHz, around 22.00 TASTIME. Col tells me that Casey is only 5 miles by land from the Wilkes station. Col has sent some 70 colour slides home of his trip over and the Casey which we will bring to a future meeting for viewing.

YVONNE, the lady with the typewriter is most upset, she had a previous engagement for the Port Sorell weekend and was unable to go up to do some 'sniffing' she said!

2 METER SKEDS between VK3 and VK6

INFORMATION received from STEVE VK3AKR indicates that skeds are kept every night starting on 20M 14.130 at 2300 EAST between VK3, AKR and ALK and VK6's, AB, SS, BE, XY, WA, ZED and ZFY. When ready the group OSY's to 2 meters, calling is done in 5 minute intervals as follows: VK3's calling every odd 5 min., VK6's calling every even 5 min., each having 2-5 min. calls.

NORTH WEST ZONE NOTES

The February meeting was fairly well attended and routine matters were dealt with. Some time was devoted to the Port Sorell field day on the 27th which will be over when you read this.

At the close of business, Ken 7KH showed some most interesting colour slides, taken during his recent stay in Japan. It was evident that some J.A. Hams really advertise their connection with Radio. Call signs printed on the side of cars dwarfed Joe's effort into insignificance!

We have had some very good V.H.F. openings here. Too good in fact as Mt. Barrow and BGLR2 repeaters were getting tangled. At times one was not sure how or where the signal was arriving. All active members on 2 meters made contacts with VK3. On one occasion the band was open for nearly three days. There have also been openings on 6 meters so the V.H.F. boys have been well pleased.

The WX has been hot and humid and this seems to favour conditions for openings.

On the weekend 12-13th Feb. Tony 7AX and Harold 7MZ set up camp on the top of Barren Hill lookout near Preston, height about 1,000 feet, and worked the National Field day contest.

Tony made an exciting start by stepping onto a broken bottle, resulting in a dash back to Ulverstone and surgery. Undaunted, he returned to the site and carried on. More excitement at bedtime with scorpions scuttling round the tent. Frustration when a resistor open circuited in the two meter rig, more when the 30 Amp. soldering iron flattened a battery, nasty words when a pair of leads were applied back to front, and really harsh words when the petrol driven charger gave up the ghost. Things became so desperate that a battery was fitted into Graham's (7ZGS) car and his XYL Sue went for a drive about to put some herbs into the battery.

Determination paid off as the boys worked VK7 and VK3 on 2M, and VK2, VK7 and VK3 on 6M. Harold also made contacts on h.f. Quite a few visitors and helpers turned up including XYL's Rosemary, Sue, Lucy, Glen and Lyn. 7MX did an excellent job by boiling the billy. The whole stunt was voted a huge success!

Two of our associates face the music...er... the examiner shortly and we will await results with bated breath. Good luck chaps!

Congratulations to our new Councillors and to our old Federal Councillor, Hi. Good on yer TED.

7MX.

AMATEUR TELEVISION (A.T.V.)(PART 6.)

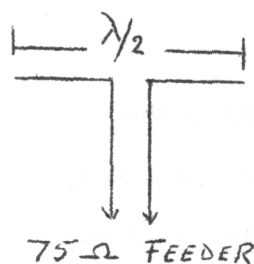


Fig 1

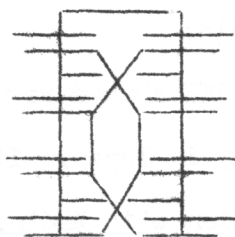
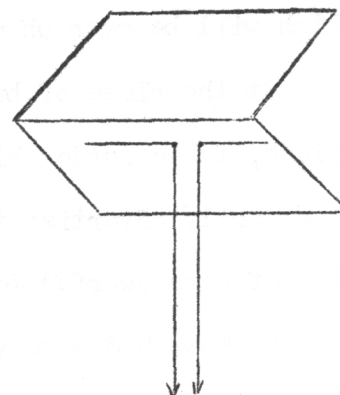


Fig 2



75 Ω FEEDER

Fig 3

AERIALS

Bandwidth again is the dominant factor in the design of aerials for A.T.V. work. As can be appreciated, it is a waste of time having a transmitter or converter with an excellent frequency response and coupling it to an antenna with a narrow bandwidth.

Long multi-element yagis therefore are not generally used for T.V. work unless certain design precautions have been taken. The simplest aerial to use for cross town contacts, is the humble dipole $\lambda/2$ as in Fig. 1. For those interested I have built the collinear as in Fig. 2, (multiple dipoles in phase) but have not yet put it to the test.

The antenna shown in Fig. 3 is known as the corner reflector and can give approx. 12Db of gain. Figures 2 and 3 can be used for longer contacts and the dimensions can be extracted from R.S.G.B.

This completes this short series of articles on A.T.V. for the present. I would like to point out that most of the ground I have covered, is how I myself interpret same. If some of the statements put forward do not agree with anyone, please let me know - better still, why not print it in Q.R.M.

For those interested in pursuing this interesting phase of amateur activities, I suggest you become a member of the "British Amateur Television Club." Subscription is \$2.00 per annum. Members receive a quarterly magazine "CQ-TV", postage included.

Write to:-

THE MEMBERSHIP SECRETARY,
BRITISH AMATEUR TELEVISION CLUB,
MR. NICHOLAS SALMON,
"COBBOLDS",
MAGDALEN LAVER,
Nr. ONGAR,
ESSEX. U.K.

I must apologise for not having the list of reference articles on A.T.V. ready, however I will endeavour to have them printed in the near future.

TONY, VK7AX/T.

AMSAT - OSCAR - C.

This is now the name given to the satellite that is hoped to be launched in July. A-O-B has not been scrapped but changes have been made necessary due to a reduction in available launch weight.

A-O-C will most likely consist of:

- (1) Amsat 145.9 to 29.5 MHz linear translator (see QRM for Dec.)
- (2) The VK command system
- (3) A morse telemetry with output on 29.45 MHz
- (4) A code store
- (5) Solar powered with one year life

The morse telemetry and code store has not been given much publicity so here are some details:

Telemetry

Measurements made in the satellite are converted from analog to digital form thence into morse code. A sample of this might be received -

H1	171	118	139	156	
	248	200	297	214	
	363	377	324	380	HT.

The first figure indicates the line number and the start and finish of a sequence by HT.

Code Store

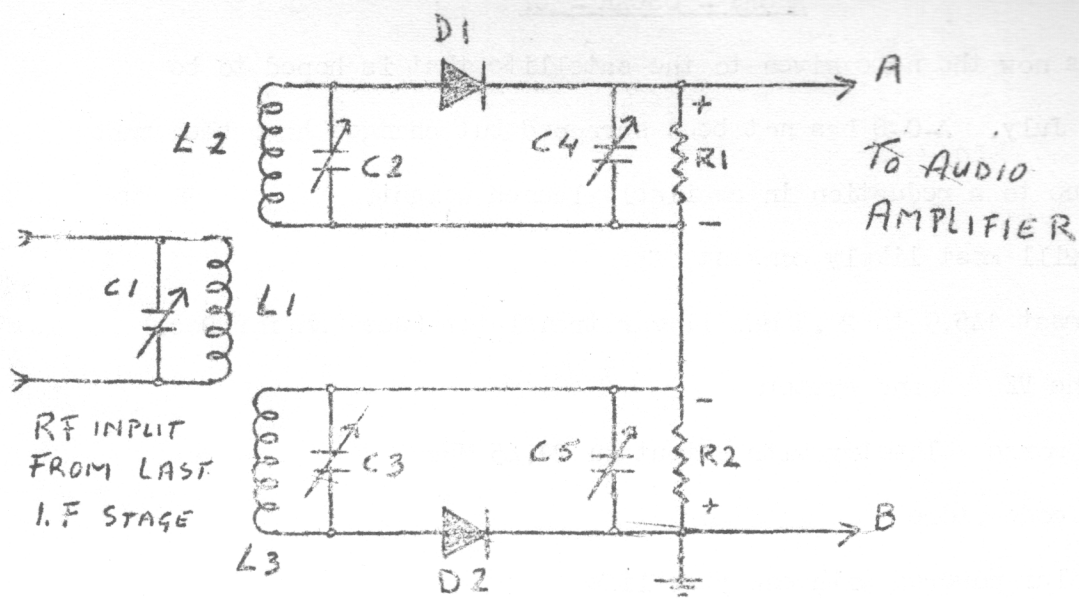
This has been designed to store from five to ten words of a morse message. This is broadcast continuously, until re-programmed, and can be used to pass on orbital information, repeater status etc.

It is believed that the telemetry and code store will be both on the one frequency.

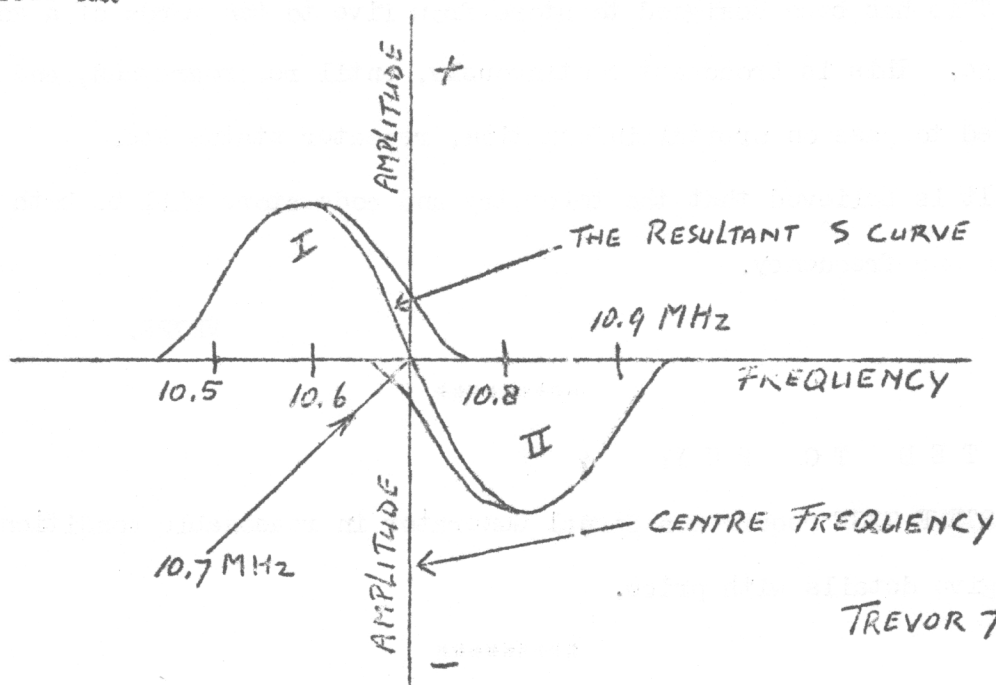
VK7PF.

W A N T E D T O B U Y:

STEVE 7ZSF requires a Signal Generator in reasonable condition. Please give details with price.



The triple tuned discriminator was an early forerunner of the modern FM detector. It is seldom used today, but it is useful in explaining the operation of the more complex Foster - Seeley discriminator. L_1 is inductively coupled to coils L_2 and L_3 and the three are physically arranged on a former, so that an equal distribution of energy will occur. L_1 and C_1 are tuned to the carrier frequency (e.g. 10.7 MHz). L_2C_2 is tuned to a frequency lower than L_1C_1 , and L_3C_3 to a higher frequency than L_1C_1 . Note there are two secondary circuits containing separate diodes and load resistors. The D.C. voltages developed across these load resistors are of opposite polarity; consequently, the net voltage taken from the output terminals AB will be the difference between the voltage across R_1 and the voltage across R_2 . If the applied frequency varies from a point below the resonant frequency of L_2C_2 to a point above it, the curve of the voltage across R_1 with respect to the frequency appears as curve I. Maximum voltage is produced across R_1 at the resonant frequency of L_2C_2 . The voltage falls off above and below this frequency. The voltage across R_2 possesses a similar characteristic except that its peaking point is at another frequency. The polarity of the DC voltage across R_1 is opposite to that across R_2 , so the curve of the voltage across R_2 with respect to frequency can be placed as curve II. The voltage at terminals AB is equal to the voltage across R_1 , plus the opposite - polarity voltage across R_2 .



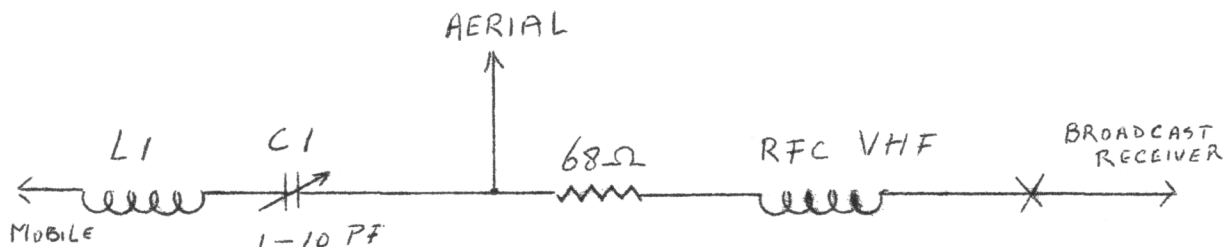
TREVOR 7TB

MOBILE HINTS

Ignition, generator, alternator and other noises that creep into the receiver are not always the fault of the vehicle. When they are, it is sometimes impossible to clean up the vehicle. But the following can be tried; material required: Braid from old co-axial cable and a handful of assorted self tapping screws. Try bonding the following: bonnet to bulkhead, radiator to front grill, front grill to earthed battery terminal, exhaust pipe both front and rear to car body, engine to chassis. To prevent creaks and groans from body panels rubbing together, the manufacturers often apply a "gunk" between panel joints, this is not very good for electrical bonding but can be overcome by driving self tapping screws through adjacent panels, in concealed places naturally; QRM in the receiver when switches are operated can be caused by faulty and or dirty battery terminals. Try scraping bright the inside of the terminal and the outside of the battery post. Connect up and then vaseline the terminals. Do not vaseline the battery post before connecting the battery lug. Carbon ignition leads are OK if in good order, if not fit a suppressor, Fire type L3 are very good.

Alternators, generators, distributors, coils, windscreen washers and other noise producing devices can usually be quietened with a hand full of capacitors. Bond the antenna earth lugs securely and filter the input power lead.

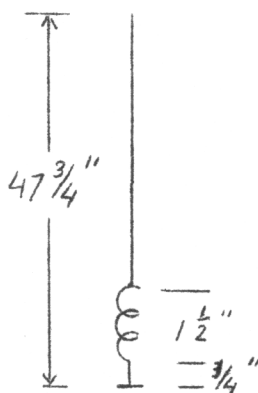
Naturally the reduction of "noise" is more noticeable in AM equipment.



If you don't like drilling holes in your vehicle, then try the above gimmick. In place of the Broadcast aerial fit a VHF type for the band you work on and install the above gadget to split the antenna between the Mobile rig and B.C. Receiver, L1. for 2 metres 4 turns 3/8" diam. spaced. 6 Metres 10 turns 3/8" close wound. To adjust, plug a power meter between antenna and splitter and adjust C1 for maximum indicated power output. Insertion loss of Tx is negligible. Insertion loss on Broadcast receiver can be high enough to loose distant stations. If this is a problem, insert a 100PF (approx) variable capacitor at X and adjust for best volume on a weak B.C. Station.

This is the only snag with this splitter but it's better than a car full of holes.

7ZNR.

2 METRES 5/8 WHIP AGAIN

COIL. Wind about 11 turns 14 gauge enamel wire spaced over 1 1/2". For best results mount in centre of car roof.

ADJUSTING. Make sure Transmitter output is turned to 50 OHm. Adjust coil spacing for best S.W.R. If this cannot be obtained to a reasonable value say 1:1.5 then a slight adjustment to the whip length is in order. If some sort of power meter is on hand then it should be installed between the antenna and transmitter and the whip length further adjusted for maximum forward power. This may not coincide with the best S.W.R. Experience has shown that the whip usually turns out shorter in practice than theory states.

7ZNR.

Note to full members of the Wireless Institute

It is expected that the agenda of the Annual General Meeting to be held in Hobart on March 18 will contain items of concern to Northern members. Members who cannot attend are urged to exercise their vote by proxy.

Items 67 and 70 of our Articles of Association state;

67. The instrument appointing a proxy shall be in writing under the hand of the appointer and shall be deposited at the registered office of the Institute at least 24 hours before the time appointed for the meeting.....

70 But the powers of a proxy may be limited to such extent as the member giving it may think fit. A statement detailing such limitations, if any, shall be presented at the same time as and attached to the proxy

NOTE It is assumed that the registered office of the Institute is 147 Liverpool St., Hobart.

Proxy form

.....
I..... a member of the Institute
hereby appoint Mr also a Member of
the Institute to act for me as my proxy and in my name to do
all things which I myself being present could do at the
meeting of the Institute to be held at
on the

Signature.....Witness.....
.....

Northern Zone, Full members

The Meeting on March 17 will be the Annual Meeting of the Zone. Office bearers to be elected include, President, Vice-President, Secretary, Treasurer.

Nominations are called for these positions and the forms below should be in the hands of the Secretary prior to the meeting.
.....

I hereby nominate for the
position of.....

Proposer.....

Seconder.....

I hereby accept nomination

.....
I hereby nominate for the
position of.....

Proposer.....

Seconder.....

I hereby accept nomination