

THE WIRELESS INSTITUTE OF AUSTRALIA

MONTHLY BULLETIN.

Tasmanian Division.

JULY 1961.

Box 851J. G.P.O.

HOBART.

PRESIDENT.

Mr. T. Allen

VK7AL.

TREASURER.

Mr. C. Harrison

VK7CH.

SECRETARY.

Mr. K. Millin.

VK7KA.

Registered at G.P.O. Hobart for transmission by post as a periodical.

GENERAL MEETING. The next General Meeting of the Tasmanian Division will be held at the Club Rooms, 147 Liverpool St. on Wednesday, July 5th. at 2000 Hrs. VISITORS WILL BE WELCOME and please introduce your guests to the President or Secretary.

LECTURE.

The Lecture this month will be given by Mr. W. Nisbet, VK7BN. Bill has entitled his lecture "Interstate Aircraft Radio Systems". This promises to be a very interesting evening so disregard the weather and come along. Anyway, there may not be any rain that night (I hope).

NORTH-WESTERN ZONE. The next Meeting of this Zone will be held at Lakin's Ha 11, Ulverstone, on Tuesday July 4th. and will be a social one. The Meeting will start at 8 p.m.

There will be a mammoth auction as well as a Lecture by Mr. K. Saxon, VK7AI, on SSB.

NORTHERN ZONE. The next Meeting of this Zone will be held at the residence of Mr. Robin Harwood, 5 Helen St. on Friday July 14th. at 8 p.m. I understand that one boards the Newstead 'bus and alights at Stop 11 in order to reach this address.

V.H.F. Group. This group's next Meeting will be on July 19th. in the Clubrooms. everyone, with or without an interest in V.H.F., is welcome.

Our Secretary is now Mr. B. Eyre, VK7ZBE.

1 Maryville Esplanade.

SANDY BAY. HOBART.

At our June Meeting, the following Members were elected to the Lecture Committee.

Mr. E. Cruise. VK7EJ.

Mr. M. Watson. VK7ZAK.

Mr. R. Emmett. VK7ZAO.

In discussion it was resolved not to have, as normal practice, formal lectures, but to concentrate instead on demonstrations and exhibitions of equipment and techniques by our own Members. This would provide a service which is not always possible within other activities of the Division., and should prove of interest to all Members. One such activity under consideration involves the collection of various items of test equipment, (from various sources) and a demonstration of their application in ensuring that your receiver is operating to the best of its ability. Anyone wishing to could bring along their gear and see how crook it really is :

2 Mx. Activities.

Most operation is centered, at the moment, on 2 mx. chief item of interest being our weekly north-south skeds. To date, reception of southern station VK7ZAO has been consistent, if wanting in signal strength. Two-way contacts have not yet resulted although, during this period, signal believed to be VK7PF & VK7LZ have been heard by VK7ZAI & VK7ZAO. Later in year, with more favourable atmospheric conditions and better receivers down south, we hope to crack the barrier.

Whether or not these skeds will continue is uncertain, however a two-way sked of 5 minutes each would keep up interest and ensure "nothing out of the box" is missed.

In line with this, much building activity is taking place- particularly with receivers, VK7ZAK is trying out a preamplifier using 6AM4's, VK7ZAO/Q- whose receiver hasn't been the same two weeks running, hopes to be using a 6CW4 Nuvistor.

New Stations on this band are VK7ZAS using a 522 tx and rx. VK7ZAZ is trying out a 522 tx. and VK7ZAY is somewhere between 1 Mx. and 2 Mx., has yet to decide whether to go up or come down.

Local Happenings.

VK7ZBE (and VK7ZAI) have been operating portable at Kelso, working Launceston 5 and 9 on 2 mx. Seems Bryan's new beam and rx. are working well.

A new station in operation is VK7ZAN, on 1 mx., from Sandy Bay, Richard's beam will probably be 70 ft. above ground level soon - on top of Hytten Hall !

Congratulations to Neville Fisher on passing the first section of his ticket. Nev. will be sitting for the C.W. next time. Best of luck, and we expect to hear you on 2 mx. in the interim.

VK7ZAI now has a 140 watt "portable" rig in operation on 2 mx. also the generators to run the "thing".

Only one lone 6 mx. DX opening worked recently - VK2 on May 24th - anyone work anything 27 days later.

Seems likely that the next Ross Hull Contest will be run on a mileage basis. If you've any ideas on this score, come along to the next divisional meeting and air them. We'll be needing a section for 10,000 Mts. now - believe the VK2's have worked 5 miles on this band.

(Signed) R. K. EMMETT, VK7ZAO

S.W.L. GROUP.

Last Meeting: 11 members attended for the meeting which was begun at the Club Rooms. The junior members were split into groups of two, making only two groups as only four of a possible twelve turned up. These groups were then taken by senior members to two of 5 Amateur Stations which kindly offered their services.

The resulting set up was:-

VK7CT:- 5 persons (2 juniors included) in charge of Ted Beard, our President (L7002/VK7ZAU).

VK7KA:- 3 members (2 juniors in charge of Nev. Fisher, L7013)

VK7JB & VK7KS, Dickie Rogers (L7004/VK7ZAN) and Lawrence Shultz (L7017) went to these Q.T.M.s, first to Charlie's, then Jack's.

VK7ZZ:- Yours Truly, Mike Jenner (L7007/VK7ZAV) was entertained by Ian.

These five stations were in contact with each other in a round table which was joined later by VK7MY in Cremorne who provided some added interest for the boys.

The Amateurs concerned thoroughly enjoyed themselves and the conversation finished up (as always, when Ken and myself get a chance to have words) on the subject of C.W.

Our sincere thanks go to 7CT/7KA/7ZZ/7JB & 7KS for their co-operation, and although the attendance disheartened the organisers somewhat, it is hoped to try this again, and with more success, we hope.

Next Meeting. Nothing has been planned at time of writing, but members will be notified via VK7WI.

Listener's Reports. L7013, Neville, is perhaps our most constant listener at the moment and has received a couple of Q.S.L. cards.

I, (L7007) heard a VK2 on 6mx. at 2055 hrs on the 24/5/61, using only a dipole for an antenna. His sigs were 5 and 9 for a time.

No other news at time of writing.

It would be appreciated if members would write to me so that I have something to put in this Bulletin, so how about it, chaps? The more letters I get on activities etc. the bigger and better this article will become.

Interstate News. The Mainland Clubs are gaining new members all the time, but seem to have the same difficulty as we do. That is, attendance at our meetings. It is rumoured the Maurice Cox, S.W.L. Group AR. Sub Editor, has applied for a transfer and may be coming to Tasmania.

Technical. I have nothing for this section this month, but next month will probably supply dope on converter design and building.

That's all for this month, chaps. Remember, if there is any news, or anything of interest happening in your locality, write and let me know.

73 MIKE JENNER, SW.L. GROUP SEC.
L7007/VK7ZAV.

CLASS "F1" EMISSION. The PM.G Dept. has notified that it is prepared to authorize use of Class F1 emission (maximum frequency shift 850 c.p.s.) on all Amateur Service Bands on a trial basis until 31st. March 1963, inclusive, when the position will be reviewed in the light of operating conditions then obtaining.

In this connection, you will know that, in accordance with the conditions as set out in paragraphs 135 and 136 of the Departmental publication "Handbook for Operators of Amateur Wireless Stations" it is required that -

"135. The operator of an amateur station shall transmit the call sign of the station being worked and the call sign allotted to the station that he is operating at the beginning and the end of each session, and at least once in every five minutes during the session."

"136. Callsigns must, in all cases, be signalled in full and in such a manner as to leave no doubt as to their identity and must include the nationality prefix letters "VK"."

In respect of the above quoted conditions, it is required that an amateur station licensee who uses Class F1 emission that transmission of the callsigns shall be effected either by hand speed morse code (Class A1 emission) or radiotelephony signals.

It is suggested that you keep this information for future reference. The above quoted paragraphs apply at all times, whether or not you use Class F1 emission.

REMEMBRANCE DAY CONTEST. This Contest will be held next month, 12th & 13th. August. About time you gave the rig a check over ready for this event, hope that all the other Divisions in the Commonwealth do the same and that the Contest is the unqualified success that it has been in the past.

SUBSCRIPTIONS. At the Council Meeting held on July 22nd. last it was decided that those Members who have not paid their Subscriptions by July 6th. will forthwith have their names removed from the Circulation List for "Amateur Radio". THIS IS YOUR LAST OPPORTUNITY? SO DO SOMETHING ABOUT IT. NOW.

Subs. received 19/5/61 to 22/6/61. VK7ZAL, VK7GB, VK7RL.
Messrs. D. Porthouse, G. Vignaud, W.D. Barrett, Dr. G. Reber, L.Grainger, J. Forster, D.Bulman, K. Parnell. THANK YOU.

VK7WI BROADCASTS. Your attention is again drawn to the fact that the broadcast is re-transmitted on 3672 Kc/s, and on the 50 and 144 Mc/s bands. The first named is for the benefit of the Country Members and if conditions do not favour 7146 Kc/s it should be possible to hear the news on this frequency.

JAMBOREE-ON-THE-AIR. Stations signifying their intention to take part in this event this year to date are :- VK7GC, VK7TE, VK7RL, VK7CT, and VK7ZZ.
If you want to help the Boy Scouts with this event, please let me know as soon as possible or, if you don't like writing letters, let Jack, VK7JB know on the Sunday Round-up.

LATE NEWS. I have heard over the air this morning that the Annual General Meeting of the NORTH-WESTERN ZONE will be held at Iakin's Hall, Ulverstone, on August first next. So make a note of this date and

QSL BUREAU BOX NUMBER?

For the umpteenth time, and, I hope the last, the QSL Bureau Box number is,

3 7 1 B. G.P.O. Hobart.

Do N O T send QSL cards to the Divisional Box Number. PLEASE.

TECHNICAL.Audio Frequency Range for Amateur Phone Work.

There is a considerable case for the restriction of the A.F. range used by Amateurs. The low audio frequencies in a male voice are quite powerful wave forms, but they convey very little to the intelligibility of a signal so if they are reduced or even eliminated the intelligibility will not suffer but the power of the transmitter can be used more effectively in transmitting the essential frequencies.

In the case of SSB and DSB transmissions it is essential to cut the low frequencies and in some cases the higher frequencies too. In the case of a phasing type SSB system the design of an audio phasing network to cover a large frequency range is very difficult, and the usual types cover only the range 300 to 3000 c.p.s. If any frequencies outside these are present the suppression of the unwanted sideband will be degraded. In the case of the filter type system the cut-off near the carrier, i.e. for low frequency sideband is not sharp enough to suppress the unwanted low-frequency sideband. This will not increase the band width but will make reception difficult. In the case of DSB the difficulty lies in its reception with conventional receivers, which can only successfully receive DSB if they are selective enough to eliminate the unwanted sideband. As their selectivity characteristics are usually worse than that of the transmitting filter it is most important that no low frequency side band exist.

The first result therefore of response tailoring is more effective transmission. Secondly the high frequencies do not contribute greatly to the intelligibility of the signal, in fact they do not usually get past the highly selective modern Ham receiver and their main effect is to provide an unnecessarily broad signal. An audio frequency bandwidth of 1000 Hz is down 6 db. at 300 and 3000 c.p.s. will do nicely for Amateur phone work giving quite natural sounding quality whilst providing effective transmission and minimizing interference to others.

Method.

One way of restricting the pass band is the use of filters, but these are usually complicated and expensive. A simpler and cheaper method is the tailoring of the interstage coupling components.

Low Frequency Response.

This is done by restricting the size of the coupling condenser in R/C systems. In order to get a sufficiently sharp cut-off it is necessary to operate on two stages. The rest of them may have normal components and response. The requirement then is two stages which are both 3 db. down at 300 c.p.s. The best stages to operate on are the first two. First the grid leaks shown (R_g) should be reduced to 250 K ohms. If the amplifier is a pentode the reactance of the coupling condenser at 300 c.p.s. should equal R_g plus R_l .

i.e. $2\pi f_c C = R_g \text{ plus } R_l$
and for 300 c.p.s. cut-off

$$C = \frac{1000}{2(R_g + R_l)} \text{ in uf.}$$

For example, if R_l is 250K as is typical then

$$R_l \text{ plus } R_g \quad 500,000$$

and

$$C = \frac{1000}{2 \times 500,000} = \frac{1000}{1,000,000} = \frac{1}{1,000} = .001 \text{ uf.}$$

(To be Continued).

Seems that typewriters were not designed by mathematicians, at least mine has not some of the signs which are necessary so will have to do them by hand. Only hope that I put the right signs in the right place.

Seems to be all this month. Just a further reminder about the Subs. There are still 35 Members who have neglected to attend to this matter, and considering that they were due on March 1st. I think that even these 35 Members would agree that they are well overdue. If you happen to know anyone who hasn't paid up and apparently doesn't read the Bulletin, see if you can needle them into doing the right thing.