

THE WIRELESS INSTITUTE OF AUSTRALIA

TASMANIAN DIVISION

BOX 8510, G.P.O., HOBART

OCTOBER 1963

MONTHLY BULLETIN

PRICE 6d

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

GENERAL MEETING.

The next monthly meeting of the Division will be held in the Club Room, 147 Liverpool Street, Hobart, on WEDNESDAY, 2nd October 1963, at 2000 hours.

Our lecture this month will be given by Inspector H. Lockley, of the Hobart Police, and his subject "Police Radio System in Tasmania". Inspector Lockley is in charge of the Police radio throughout the State, so it should be a very interesting evening. Visitors as usual are very welcome of course.

NORTH WESTERN ZONE.

The next meeting of this Zone will be held in Lakin's Hall, Ulverstone, on TUESDAY, 1st October, at 2000 hours. At the time of going to press I have no information regarding the activities for the evening.

NORTHERN ZONE.

The next meeting of the Northern Zone will be held at 102 Charles Street, Launceston, on FRIDAY, 11th October at 2000 hours. John Forster VK7JF will give his talk on "Series Coded Modulation" postponed from last month.

I. T. U. FUND.

Contributions are still very slow in coming in, so much so that the matter was discussed at length at the last Council Meeting, and it was decided to allocate quotas to the Zones in an effort to speed up matters. As you know, this Divisions quota has been fixed by Federal Convention at £200, and this has been divided up as follows: Northern Zone £35, North Western Zone £35 with £130 for the rest. This is roughly proportional to the number of full members in each Zone. We would appreciate advice from the two Zones no later than the third Monday in each month, as to what their total is in order that we may include it in the Bulletin.

The I. T. U. Fund is one of vital concern to every licensee - not only members of the W. I. A. With this in mind we would suggest that every licensee in your area be approached - special efforts at meetings etc. usually means that the same few who are showing an interest in the Division by coming along to meetings, are continually being "bitten".

We acknowledge with thanks donations this month from VK7RK, VK7ZAK, Harry Harjano, H. A. Wright, and the Avalon Theatre per VK7GB.

Total to date :	Northern Zone	£2
	North Western Zone	2-10- :
	The Rest	24- 2 ³ / ₈ 9d
		<u>£28-12- 9d</u>

Not a very inspiring total for four months is it?

COUNCIL MEETING.

The next Council Meeting will be held in the Club Room, on MONDAY, 21st October at 1930 hours.

SEE YOU AT THE HAMFEST - 2/3rd NOVEMBER

HAMFEST.

This will be held on SATURDAY, 2nd NOVEMBER and SUNDAY, 3rd NOVEMBER at the same location as last year - on Mr. J. B. Muirhead's property at Campbell Town on the Cressy road, right at the bridge over the Macquarie River, about 6 miles from the town.

Interest is running at a high level and given good weather we confidently expect an even better roll up than last year. For those who missed out last year it is a must - and we feel sure that those that were there will certainly come along again.

There will be a small registration fee this year to help in covering incidental expenses, but as this is only 2s/6d per member (the rest of the family get in free) it shouldn't break anyone. At the last general meeting a sub-committee consisting of Ted Cruise VK7EJ, Barney Watson VK7ZAK, Don Porthouse and Peter Schulz, was appointed to organise the event and they are still anxiously waiting for someone to write to them with a few suggestions. The VHF Section are organising transmitter hunts and I believe one or two other ideas to keep you amused, are on the drawing board.

As you know this spot is ideal for a camping week end, plenty of wood, water and trees for putting up antennas. For those who prefer accommodation there is a hotel and a motel in Campbell Town, but you will have to make your own bookings. There will be barbecue on the Saturday night, bring your own meat but refreshments will be available at a nominal charge. BUT BRING A GLASS.

It is doubtful whether the next Bulletin will be out in time to include the latest news on the hamfest, so listen to the VK7WI broadcast for any further information.

COUNCIL REPORT by VK7EB

The September meeting of Council was held in the Club Room, on Monday 17th. All members were present except VK7ZAI who is away on official business.

Business, briefly, consisted of the following items: Inwards and Outwards Correspondence. Accounts - passing for payment. Report on Youth Radio by VK7EB. Report on the Jamboree of the Air. Discussion on the Hamfest and I.T.U. Fund. New Members and Federal business.

It is interesting to note that there are now 191 registered members in the Tasmanian Division. As the Constitution only allows for 200 members your Council has resolved that the legal Officer Ian Nichols VK7ZZ investigate the steps necessary to increase the allowable membership to 300.

Welcome to the six new applicants for membership this month. These will be recommended at the October General Meeting.

Youth Radio: At long last the sets of duplicated information sheets have arrived. Zone Secretaries will be forwarded a copy, also Schools who have not as yet received an issue. Yours truly will now be flat out in writing to all Y. R. Clubs - copies of all correspondence will be forwarded to Zones concerned.

Hamfest. Date first week end in November. How about some suggestions from the North and North West Zones?

JAMBOREE OF THE AIR.

A reminder that this takes place on October 19th and 20th. Understand that following a meeting at Scout Headquarters recently, various troops have been allocated to the stations taking part, but I am sure Ted Beard would like to hear from others interested.

NEW MEMBERS.

We welcome the following new members: Full: Basil Barnes VK7BL, Ted Cooper VK7ZEC, Max Sidebottom VK7SK and Associates: P. Hildyard, G.K. Rieger, R. J. Mutton, R. Davis, R. J. Geeves. (Notice that I had already included some of these chaps in last month's Bulletin)

It is pleasing to note that although we had to cancel the membership of nine members for non-payment of dues, our total membership is now 15 more than at 28/2/63.

BULLETIN.

Any items of general interest are always welcome for publication in the Bulletin. Let either the Secretary or Treasurer have them by the third Monday in each month. We would be very pleased to receive regular notes from the North and North Western Zones. What about it Zone Correspondents?

H A M F E S T - S A T U R D A Y A N D S U N D A Y. 2/3 NOVEMBER

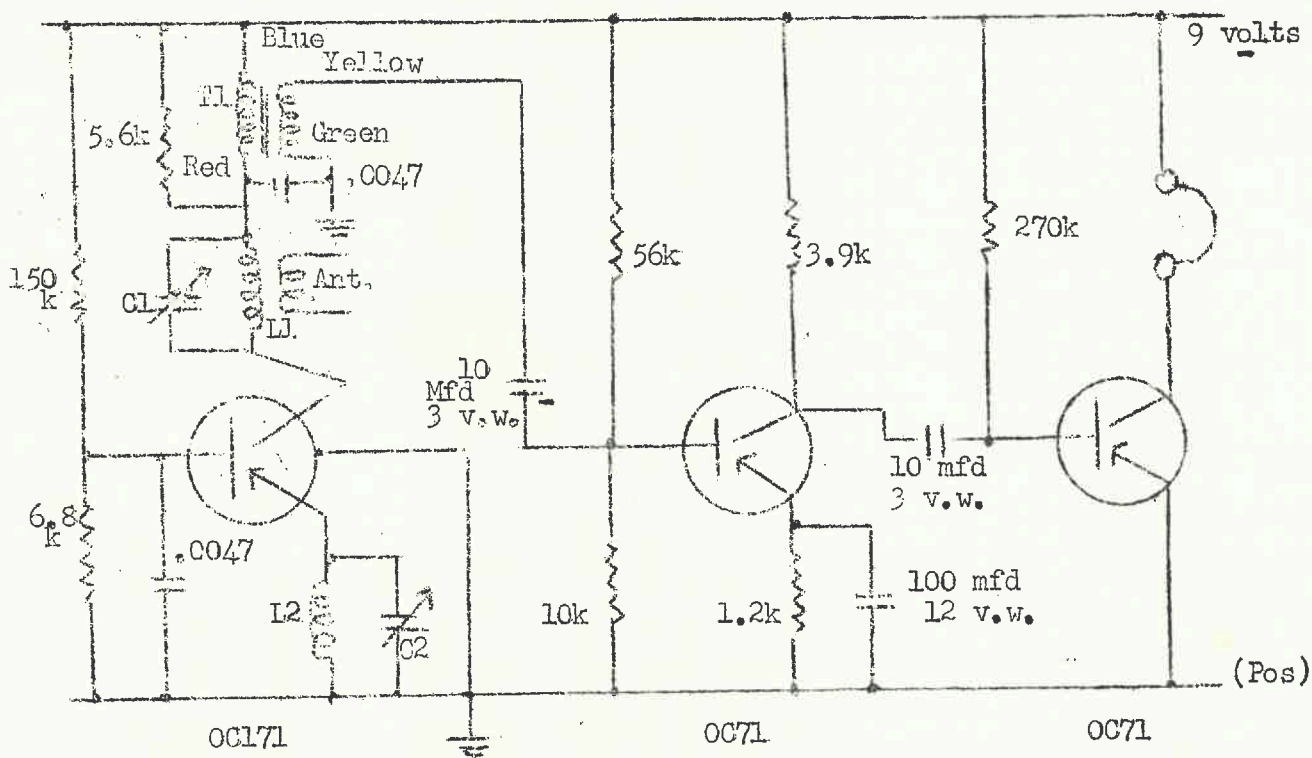
At the coming Hamfest it is intended to conduct 2 mx transmitter hunts on foot in conjunction with a miniature transmitter. To participate in these and other activities you'll need a 2 mx portable receiver. The following receiver is ideal for the job. In the past it has been the custom to employ valve type superregens. With the advent of transistors it was decided to build a transistorized version to overcome the size, weight and battery drain of the valve types.

The unit described performs very well, is small, light in weight and is simpler to build than its valve counterparts. The cost is about £3 - £4. No 2 mx transistor super-regens seem to have been described, so the final design was arrived at by experimenting with designs for other frequencies. An inexpensive OCL7L transistor is used as the super regen detector and seems to work quite well up to about 200 mc/s. The design is therefore suitable for use on 50 mc/s and other frequencies in the region.

Feedback from emitter to collector is provided by inductive coupling between L1 and L2, which are both tuned to the signal frequency by C1 and C2. Main tuning is by C1, adjustment of C2 controls the amount of feedback. Two audio stages were used in the prototype driving low impedance disposals type phones. For high impedance phones one stage may be sufficient, modifications being shown.

The unit was constructed on a piece of matrix board 7 holes by 3" long. Philips trimmers (3 - 30 pf) were used for tuning, coupled to a piece of P.V.C. tubing. Any small variable condensers 20 pf or so would be ideal provided the size was small and the insulation ceramic or equivalent. The layout of the detector is not very critical, the main requirements being that L1 and L2 are parallel and all leads as short and direct as possible. Layout of audio stages is not critical. The trimmers are mounted vertically with appropriate holes enlarged to pass the trimmer lugs. The coils are mounted on the opposite side of the board to the trimmers, and are parallel $\frac{1}{2}$ " apart.

The receiver may be installed in any suitable metal case - in the case of the prototype this was 4" x 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ ". A 5" x 3" chassis would be quite suitable. Some means must be made for providing variable antenna coupling. The coupling coil, a single turn loop could be mounted on an insulated rod, supported in an old pot bushing in the front panel.



- C1, C2 - 3 - 30 pf Philips trimmers.
L1 3 turns No. 18 $\frac{3}{8}$ " dia. x $\frac{1}{2}$ " long.
L2 18" No. 24 closewound $\frac{1}{4}$ " diam. (wound on high value 1 watt resistor or other suitable former. (Continued page 4)

(Continued page 4)

SEE THIS RECEIVER WORKING AT THE HAMFEST.

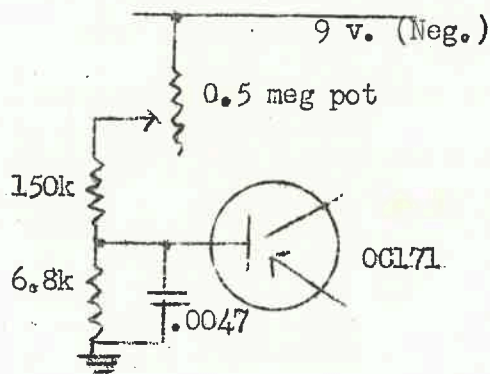
Two Metre Super regren (Continued)

For high impedance phones substitute phones for 3.9k in collector circuit of first OC71.

T1 - Transistor interstage transformer (miniature) 4000 ohms to 2000 ohms C.T. (Type JDR 27)

All resistors $\frac{1}{2}$ watt. .0047 are disc ceramic.

If regeneration control desired, add 0.5 meg pot as below :



Adjustment.

This is facilitated by the use of a signal generator covering 100 - 200 mc/s, or with harmonics in this region, as the prototype tuned from about 100 - 190 mc/s. Despite the wide tuning range the receiver was easy to tune with virtually no hand capacity. An 8 pf Philips trimmer if available would give a slower tuning rate.

With a 3 - 30 pf trimmer 144 mc/s should occur with C1 two thirds out. With C1 in this position C2 is adjusted until the circuit comes into oscillation as evidenced by the familiar superregen hiss. (If a sig. generator is available the frequency can be checked and C1 adjusted as necessary. C2 will have to be changed every 10 mc/s or so to keep the circuit oscillating.

If for any particular setting of C1 the detector does not oscillate throughout the range of C2 either (i) C2 L2 are not tuning to the signal frequency or (ii) base bias insufficient. 150k resistor must be reduced.

Neither of these steps should be necessary.

Once the band is found, a modulated signal, preferably tone, is tuned in and C2 adjusted for cleanest audio signal. Adjustment of C2 will detune the receiver slightly so that readjustment of C1 may be required.

SPLATTER by VK7TEB:

The following is something for which I accept full responsibility. I also must confess that VK7CH advised me against it, refusing to play any part whatsoever.

Who Lost It?

Monsieur D'Emden cr crunched behind the wheel of his large black limousine, intent on reaching a most important meeting outside the town of Stonehold. Beside him on the seat of the car, lay a sinister black box - the purpose of his visit. Further to the north, at the appointed meeting place called l'Akin's Hall sat a group of electronic experts, impatiently waiting to examine our hero's ingenious equipment - capable of transmitting intelligence without wires.

Suddenly the black car screeched to a stop - Monsieur D'Emden was lost. In a strange country with no one to turn to. Out of the shadows loomed a local - after a few well chosen words our hero was directed to a hall approximately 200 kilometers away - a meeting was in progress - the Town Brass Band! Further instructions set him on a course to another rendezvous - the Rotarians! The town's only "radio active cab" suddenly appeared, the driver well experienced in the art of "setting a course". Away went our friend, only to find where there should have been a right hand turn there wasn't!

To finalise, the local "cop" crept in the story somewhere - where I am not sure - eventually our friend homed on the correct QTH - how - again I am not sure - ask him.

The facts revealed in the story are true. Only the names have been changed to protect the innocent.

Pleased to see your photo, working during the R.D. in the local Burnie paper, Sam - given up smoking?

(Sorry Tod run out of space! VK7CH)

STOP PRESS. FURTHER FIELD TESTS BY THE DESIGNER OF THE SUPER REGEN. RECEIVER DESCRIBED IN THIS ISSUE, HAVE SHOWN THAT AN 8PF TRIMMER IN THE COLLECTOR CIRCUIT IS DEFINATELY PREFERABLE TO THE 30PF. 8PF WERE NOT AVAILABLE AT THE TIME OF CONSTRUCTION OF THE ORIGINAL UNIT.

Well, another month has rolled by and Xmas will soon be with us. As you all probably know, the Ham Fest is to be held over the first weekend in November, which is not that far off, so out with the mobile equipment and lets make this even more of a success than it was last year. From the sound of things, most of the chaps from down south will be there and we are all looking forward to meeting members from the north.

BAND ACTIVITY?

50mcs. Still the usual crew active on this band in the south. No news of activity from the north.

144mcs. We are very pleased to welcome to our ranks none other than Ian (Ramble On) Nichols, 7ZZ. Ian is running 20 watts output with an 832 and dragging in RF from all around the town with a Nu-Vista converter which is mounted on the transmitter chassis. At the moment a 4 element yagi beamed on the Mountain is in use but Ian hopes to have a fully rotateable 10 element job around Xmas.

Rick, 7ZAT, has been quite active of late on 2. Nice to hear you about again Rick. Another station heard more often lately is Lee, 7KC. Edgar, 7RY, is now on the band also on 144.625 and is using a super regen. receiver.

Mr. W. Nickols has been appointed VHF officer for the North West Zone and notes from said zone will occupy this position on the VHF page from now on. Very nice to hear from the boys up there and pleased to hear of the activity also.

NORTH WEST ZONE.

At the last meeting on September 7th there was much interest shown in the 2 meter communicator demonstrated by Geoff, 7ZAS. Good to see you Geoff.

Frank Richelme, an ex PAO, has moved from Burnie to live at Smithton and is now working for the PMG at Stanley. After settling in to his new residence, Frank will sit for his AOCPP exam.

Terry, 7TT, is experimenting with a single tube 2 meter walky-talky and Bob, 7EAA, is modifying his 522 receiver and is considering using a turret tuner to change bands. Harry, 7ZBH, would like to go mobile on 2 but can't afford a crystal, Hi.

73, W. Nickols, L7015.

NEWS IN BRIEF.

Winston, 7ZAP, is now married, and at the time of writing, is on his honeymoon. Best wishes from us all OM and all the best for the future.....

SEPTEMBER MEETING.

15 members attended and although there was a lot of discussion, not much business was on hand. The main item of interest was the 420mcs. band. It appears that the Gentleman's agreement will be, Mod. Osc's., pulse etc up to 432 mcs. 432 to 436 reserved for xtal locked operations, exclusively, and TV operations centering on 440 mcs.

An item of interest was brought to my notice by one of the members. That is, that the firm of Philips in Hobart have supplies of ceramic condensers from 8 to 50PF. The firm is only too pleased to help Amateurs, and will stock any item for which there is sufficient demand.

The rest of the evening was devoted to studying the construction of the super regen. described in this issue. Wilf's was carefully scrutinised for ideas, and the unit was fired up and tuned to a signal from a transistorised transmitter, which I believe is to be used for short range fox hunts at the Ham Fest. The suggestion in the stop press at the head of the page is recommended, as tuning is a little difficult with the 30PF trimmer. The 8PF gives a tuning range of 140 to 160 mcs. whereas the 30PF covers from 120 to 160 mcs.

Thats all for this month, 73's
Mike Jenner, VK7ZAV.

