

THE WIRELESS INSTITUTE OF AUSTRALIA

TASMANIAN DIVISION

DECEMBER 1965

BOX 851J, G.P.O., HOBART

MONTHLY BULLETIN

PRICE 6d.

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EDITORIAL

As the twilight of 1965 approaches and the Festive Season commences, mankind all over the world extends the hand of greeting to his fellow man.

Unfortunately, due to differences in racial, religious, political and educational beliefs mankind has not as yet achieved the sublime state of mutual agreement. Yet at this time of the year he greets his fellow man in terms of friendship coupled with the joyous festivities of this annual period.

Amateur Radio possesses the unique quality of extending the hand of friendship to all corners of the globe - ignoring the differences of color, race, or creed and at all times of the year. In this purpose alone a small segment of the world's population is helping to foster and maintain a decent and consistent standard of living.

To those who are genuinely contributing to this cause, and who sincerely believe in it, I extend greetings for a very Happy Xmas and a joyous New Year to you and your families and may all that you strive for become a reality in 1966.

Ted VK7EB.

MEETINGS FOR DECEMBER :

- DECEMBER 1 Headquarters General Meeting, 147 Liverpool St., Hobart. 2000 hours
7 North Western Zone, Lakin's Hall, Ulverstone. 2000 hours
10 Northern Zone, Adult Education Centre, 51 York St., Launceston. 2000 hours.
15 Headquarters V. H. F. Group. 2000 hours.
20 Council Meeting, Hobart. 1930 hours.

WEDDING BELLS

Congratulations to David, VK7ZAY and his wife to be, Audrey, whose wedding is to be solemnised at Holy Trinity Church on Saturday 20th November. Best wishes are extended on behalf of Council and the Division.

HEADQUARTERS GENERAL MEETING

The Lecture intended for the December meeting of the Division shall be "Radio to the Rescue in Meteorology" by Mr. H. G. Bond BSc.

Mr. Bond is the Regional Director of the Tasmanian Bureau of Meteorology. In this capacity Mr. Bond is asking for the co-operation of all Radio Amateurs in a world wide Meteorological balloon tracking project - an outline shall also be given on some of the Radio aids used in weather forecasting.

CONGRATULATIONS

To Anne on obtaining her full call sign - there is no excuse now Mike. My spies tell me there could be a few more full calls coming up in 1966

FEDERAL COUNCILLOR

Nominations are invited for the position of Federal Councillor. Nominations to be submitted to Council by December 13th. 1965, and are to be signed by Proposer, Seconder and endorsed by the Nominee. Note all parties are to be financial licencees. Please show a little interest in your Division, your present Federal Councillor, VK7EJ because of family and business reasons would welcome a newcomer to this important position.

ROSS HULL MEMORIAL V. H. F. CONTEST 1965 - 66

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual contest which is held to perpetuate the memory of Ross Hull whose interest in V.H.F. did much to advance the art.

Date of Contest : From 1401 hrs GMT 11th December 1965 to 1359 hrs GMT 16th. January 1966.

Objects : Australian Amateurs will endeavour to contact as many other Amateurs in Australia and Overseas under the conditions of the contest.

Duration : Any consecutive 216 hours (9 days) within the dates mentioned above, this period to be at the choice of the operator.

Refer your copy of " Amateur Radio " for further particulars.

FOR SALE

Hallicrafters SX 25 Communication Receiver, 240 Volt. 1500kc - 30mcs with handbook. Good condition. Interested parties contact VK7RM who will be only too pleased to demonstrate the performance of this fine receiver. Purchase negotiations to be made direct with Rupe (VK7RM).

R. S. G. B. HANDBOOKS

More copies of this fine book are due to arrive soon. If you have not obtained a copy yet please advise the Hon. Sec. There will be only a limited number available so don't say you weren't warned - the numbers obtained for this Division alone speak for the value of this fine edition. Place your order now and you won't be disappointed.

MOBILE TRANSCEIVERS

Twenty four (24) mobile transceivers are coming to hand from mainland sources. For reasons beyond the control of Council and the Committee concerned it is regretted that some members have had to wait for their unit a little longer than intended. Every effort has been made to rectify the situation despite some suggestions to the contrary. If there should be any further doubts I would respectfully suggest bringing them forward at the meeting at the Hamfest.

SLOW MORSE TRANSMISSIONS

Listen to the broadcast for possible commencing date for slow C.W. transmission on the frequency 52.2 mcs. Time and days proposed 2000 hours Sundays, Tuesdays and Thursdays. Again may I make a suggestion. The operator would like acknowledgements at the end of each transmission. Remember he is good enough to give his time please don't let him think it is being wasted.

TECHNICAL

by Greg Johnston

Part 1.

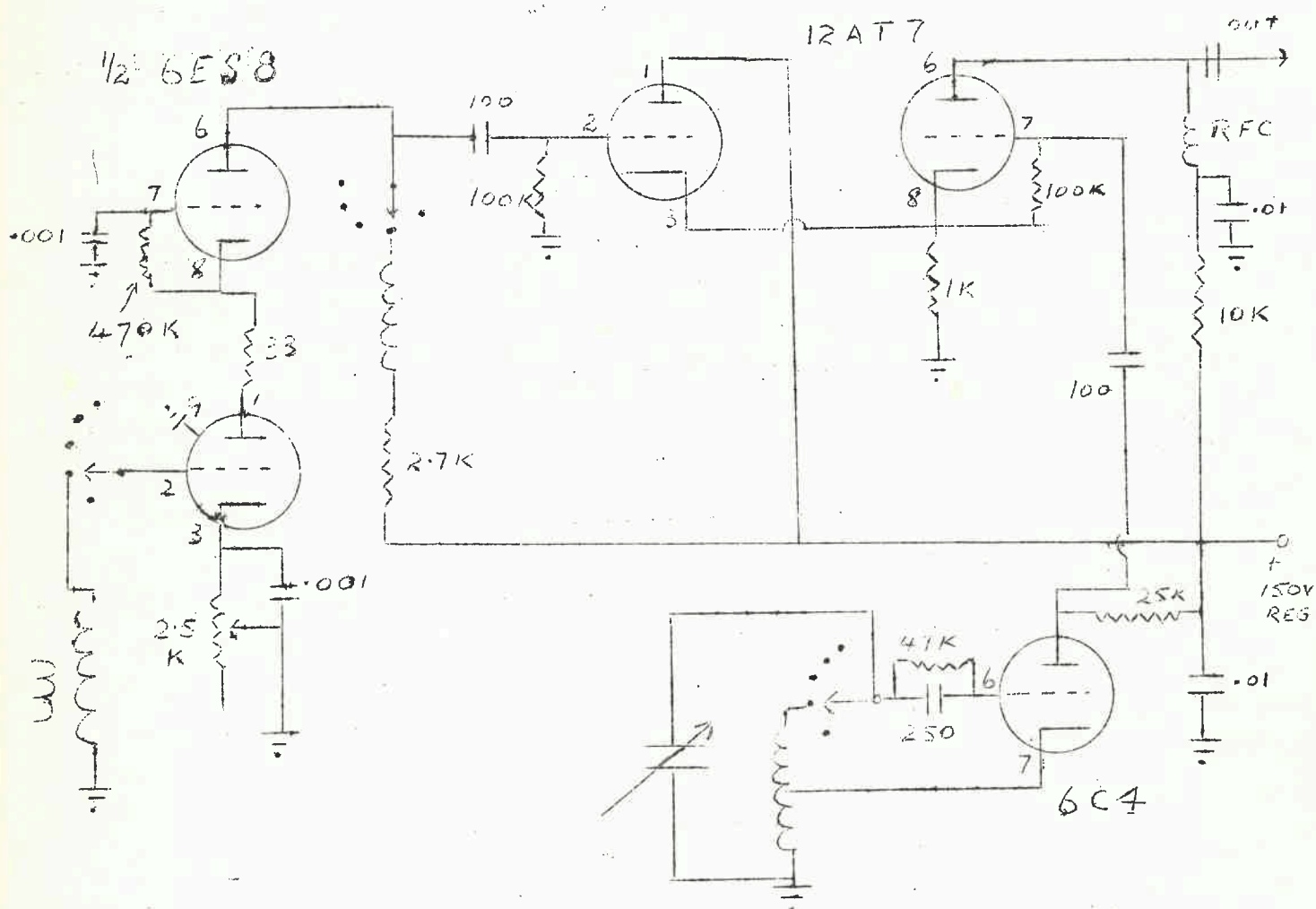
Well ye Ed has pounced and coerced yours truly into inflicting the following on the unsuspecting clan to which he devotes much of his spare time. Now, as the heading will suggest we talked too much about the low noise fruits of about 12 months endeavour thus giving the Ed his chance to pounce.

The original scheme was to construct a self contained " Celoso " type front end with low noise figures, and the circuit shown represents the "end" (for about a month anyway) product of the project. For a change, the time was spent most profitably as the animal certainly performs beyond all my expectations. (Agreed - hence small spacing, give the lads something to chew over during Xmas - Ed.)

It will be seen that the somewhat unusual line up includes a 6ES8 series cascode RF stage, 12AT7 " Like new Mixer " with a 6C4 variable oscillator producing frequencies appropriate to a fixed IF of 3.5 mcs for each band. As high impedance output was desired in my case the output was taken from an R.F.C. through a .01 uf condenser from the 12AT7 second plate. For low impedance output substitution of an IF Transformer for the RF choke and taking output from a link there, could be easily made. All tuned circuits (oscillator excepted) are broad banded and slug tuned for each band - this has not proved to be any disadvantage. At present only 20 and 40 mcs are covered with the same oscillator range of from 10490 kc to 10860 kc which gives neat coverage of 20 mcs and adequate 40 mcs bandspread.

Prior to the concoction of this particular front end the thought of reading an S2 signal virtually 100% (even without power noise) did not occur, but this particular dream is now a reality as signals really stand out of a quiet background also it has very adequate sensitivity. New Town kill - o - watt alley proved freedom from cross modulation and more than adequate gain. As we don't have the equipment to measure s/n ratios the performance comparisons are made with the hack converter (6AG5 RF, 6AG5 Mixer, 12AT7 oscillator) the comparison leaves no room for doubt, this low noise front end is a Rolls Royce and the converter an Austin 7 among front ends.

TECHNICAL = A HOT LOW NOISE RECEIVER FRONT END by Greg Johnston continued



One point to watch when getting the 12AT7 to mix is the amplitude of the injection voltage - much less voltage is required here than for a pentode. If the oscillator voltage is too high all sorts of spurious responses result with near zero output. No real trouble should be encountered with the RF stage stability provided the centre spigot of the valve and the shield (pin 9) are earthed properly. If this does not do the job then it may be necessary to insert a neutralising coil in place of the 33 ohm resistor between pins 1 and 8, this was not necessary in my own case. Sorry to cut you short here Greg but I shall conclude your fine effort next month. Ed.

73 until next month

Ted Beard VK7EB
 for Bulletin Committee.