

THE WIRELESS INSTITUTE OF AUSTRALIA

TASMANIAN DIVISION

JANUARY 1966

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

MONTHLY BULLETIN

PRICE 6d.

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EDITORIAL

Another New Year is with us and with the Summer months DX seems a little more prominent on the HF Bands - likewise VHF - extremely good contacts being made from mobile installations. This would seem a good way to start the New Year - the activity, new fields, new bands and for the lucky ones, new equipment.

As kids we used to endeavour to turn over a new leaf - now adults, we give a sigh of relief after the mad commercialised rush of Xmas, and relax, or try to; remember the harmonics are on holidays. Instead of just coping with QRM and QRN as we know it, with a rare one popping up I sometimes have to battle thru girlish screams to hear what the other chap is saying - marvelous for the concentration and patience - just what doesn't our hobby teach us?

Now I have to finish this Editorial off - the XYL wants something done!!

See you next month

Ted VK7EB.

MEETINGS FOR JANUARY:

JANUARY 5 Headquarters General Meeting, 147 Liverpool St., Hobart, 2000 hours.

14 Northern Zone, Adult Education Centre, 51 York St., Launceston, 2000 hours.

17 Council Meeting, Hobart. 1930 hours.

19 Headquarters V. H. F. Group. 2000 hours.

Overmodulation does not help get that rare DX - it frightens them away but it can attract the wrath of your amateur neighbours plus the RI ! 90% modulation properly matched is far better in effect than over 100% improperly matched. Remember impedance matching is about one of the most important factors in designing efficient equipment - try it some time - then you will work those rare ones.

TECHNICAL

by Greg Johnston

Part 2.

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 socket 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.

Now just because the circuit includes the oscillator circuit shown don't think for a minute that I am 100% satisfied with it - I have spent a week stabilising it to the point where it will hold zero beat with a crystal oscillator for 5 to 10 minutes but as this is not adequate stability for SSB copy (armchair style) we do consider that there is room for improvement here, most likely in terms of a Vackar circuit (or use a xtal oscillator and tune the IF - Ed.)

As a parting sally, if you think your receiving set up is pretty good in terms of sensitivity and noise figure try this easy test on it. Remove the antenna and replace it with a resistor equal to the receiver's input impedance, if the receiver noise peaks up when the RF circuits are tuned through resonance then you can say your receiver has high sensitivity. At this stage, if the noise (i.e. internal noise) is say 6db down (i.e. 4:1) on that heard with the antenna connected then you can say that your receiver has an acceptable noise figure as well. Both these tests have been tried on the front end described, and on both counts things measure up. When we build a noise generator though, we'll endeavour to measure the performance in db style and present the figures as the final clue.

For the benefit of any fellow associates who may wish to have a crack at a beastie like this but desire more information on how to go about it I may be contacted sometimes at home - phone 82416 (not yet you don't - he's down with the penguins for about a year - Ed.)

Thank you Greg for a very interesting topic - for those who are interested I used the like new mixer in my SSB transceiver where it is very satisfactory, VK7CW used the same circuit in the transmitter section of his SSB rig and was quite pleased with the performance, especially in regards to its isolation capabilities which is a very good point to consider.)

73 until next month

Ted Beard VK7EB
for the Bulletin Committee.

NEW YEAR GREETINGS :

Your President and Council extend Best Wishes to all members of the Division and their families. May 1966 bring better contacts, better equipment, more members and less electrical noise - hi.

HEADQUARTERS GENERAL MEETING :

The lecture intended for the January meeting of the Division shall be delivered by VK7MF, Miles McGinniss. I have been told that the text is a mystery but it will be interesting. Surely it isnt about GO - Carts Miles ???????

CONGRATULATIONS ETC.

I must have hammered Greg Johnston a little too much on the technical article - first up Greg topped the State in the R. D. Listeners Section with a really F B score (congratulations Greg) second he flees to Macquarie Island and now I hear he has gone for a swim down there - well - as long as you dont start following a pretty little penguin around; then I will really start to worry (never mind the penguin).

Seriously, the call sign is VKOMI, so keep a look out on 20 chaps

APOLOGIES

I wish to apologise for a late Bulletin this month chaps, what with Xmas - the spirit and all that I must confess I delayed the bloke wot does the handle turning and those wot do the wrapping - promise it wont happen again - Ed.

FOR SALE

1 Only Geloaso G222-TR Transmitter condition as new, incorporating the 4/104 VFO plus modulator - only 18 months old. 60 watts fone; 75 watts cw.

Original cost £140 - owner will accept £50.

A bonus is also offered at no extra cost to the lucky purchaser which is

One only Geloaso M59 Dynamic Mike complete with zipper carrying case.

Interested persons to contact Athol Elliott, VK7ZW direct, Athol's address is :-

11 Turrung St., Cooeee, Burnie, N.W. Tasmania.

The following is not to be considered as an advertisement but as two people have prospered, one of them myself, I feel that the information should be passed on. There is available on the mainland adual vernier dial - 6:1 and 36:1 movement; cost 32/- plus postage - inner dial 2" diam. outer dial 1½". The dial is made by Jackson Bros., England and is somewhat the same in appearance as the Swan 350 dial.

I believe that DX is still rife on the VHF Bands - just a little tip - remember you arent the only one who wants to work it so keep your overs short, dont overmodulate, and remember the amateur code - to conclude, I dont wish to sound too thingo with these tips of mine but I seriously suggest the are adhered to as they are based on authentic observations - much better from me than from another source.

ANNUAL INDEX — EEB.

SUBSCRIBE to the EQUIPMENT EXCHANGE BULLETIN. P.O. Box 177, Sandy Bay, Tasmania

— The EEB is a technical periodical of a casual type, published as a hobby by the Sandy Bay Basement Laboratories, and featuring interesting articles and effective advertisements. Subscription still 3/- per year. Bound copy of Vol. I, 12/6 each, available ^{maybe} in January 1966. No more individual back-issues available, probably.

ANNUAL INDEX of the EEB. Volume 1: 1965

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2	1+	1	Use of reversed diodes.			6	Semiconductors Reference, I.
		4	SCR, II: Simple pwr supply.			7	Tape Recording, Part V.
3	2	1	SCR, III: Transients.	11	8+9	3	Back-biased diodes (concl.)
4	2+	1	SCR, IV: Transients.			6	Bibliography, Part II.
		4	Did you know? (Lab perils)			7	Volume Compression, I and II
5	3	2	SCR, V: Efficient control.			14	Tape Recording, Part VI
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6	3+	1	Protecting SCRs by diodes.	12	10	2	Fluorescent power?
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		2	PIV safety factors.			7	Answer to Puzzle.
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8	5	1	EEB Explored	14	12	2	Transistor Ign. Part III.
		3	SCR, VI: A practical variable-phase voltage control system with inherent voltage regulation. Nice.			4	Reversing battery polarity.
		5	SCR, VII: Uses of V_{BO} .			4	Reference List. Part III.
		6	Tape Recording, III.			5	Tetrode Transistors, Pt. II.
9	6	1	Train protection, again.			10	Annual Index, ie, this.
		2	More Laboratory Perils!			10	Field Effect Transistors.
		4	Tape Recording, IV.				
		5	High current power supplies, and heat sinks.				
		6	Semiannual Index.				

Please note that advertisements appear in each issue, though we have not listed them here. We have found them to be amazingly effective, and all this from a circulation which has only now reached 200! Tell your friends about us.

+++++
FIELD EFFECT TRANSISTORS are now available in Australia. It is rather startling to consider the possibility of running a loudspeaker directly from a crystal pickup, with only one stage of amplification, or to design a transistor voltmeter as one would a valve voltmeter. But the enthusiastic experimenter is emphatically to be cautioned that a device with an input impedance of 10^{15} ohms has one serious liability -- If the input circuit is allowed to remain completely open, it can accumulate enough static electric potential to destroy the transistor! Therefore keep the transistor's leads shorted until ready to install, and ensure that the input is always shunted by some resistance. Further details can be obtained from the manufacturer's specifications.....

