

Q R M

BULLETIN ISSUED BY THE NORTHERN
BRANCHES OF THE WIRELESS INSTITUTE
OF AUSTRALIA, TAS. DIVISION.

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LAUNCESTON
TAS. 7250.

August 1975
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MEETINGS

- Aug. 1st Northern Executive meeting
- Aug. 8th Northern Branch Civil Defence Rooms
Bourke Street 8p.m.
- Aug. 12th North West Branch, Lakins Hall, Ulverstone 8pm.

Y.R.C.S. MEETINGS

- Aug. 9th
& Aug. 23rd Kings Meadows High School 10am.
- Aug. 9th
& Aug. 23rd Lakins Hall Ulverstone 2pm.

CONTENTS.

- Aug. 9th-10th European CW.
- Aug. 16th-17th Remembrance Day
- Aug. 23rd-24th All Asian CW.

August 1975.

Q.R.M.

page no. 2

Editorial

The Remembrance Day Contest will be on again shortly: in fact on the 16th and 17th of August. This contest involves a perpetual trophy which is awarded annually for competition between Divisions of the Wireless Institute of Australia. It is inscribed with the names of those who made the supreme sacrifice and so perpetuates their memory throughout Amateur Radio in Australia. This contest is known as "the friendly contest" and so, I hope, it will be again this year. It is disappointing to see that repeaters will not be allowed (except for satellites) but Rule 11 does allow for skeds to be made using repeaters and this should help V.H.F. operators to some extent to gain more contacts. So V.H.F. operators drag out your tunable gear and get it ready to help the Tassie score this year and if we can get a large participation we should be able to bring home the trophy. A look through the results last year and comparing it with logs of the contest show that some operators did not send in their logs, so please enter and more importantly after you have send off your log to:

Remembrance Day Contest,
Federal Contest Manager,
W.I.A. Box 67,
East Melbourne, 3002.

This must be done to enable it to reach there by Wednesday 17th September 1975.

73's and good luck,
Graeme VK7ZGG

Looking Back

Extract from Minutes

11 July, 1958

"7LZ proposed that we write to ARRL as Lord Howe Island has been made a separate country that Tasmania likewise be so recognized. Would also suggest that we deal with ARRL and that a copy of page of A.R. Radio T.V. & Hobbies (both giving Tas official status) be forwarded to press on claims.

Extract from Minutes

8 Sept, 1955

"We are pleased to receive the news that Ed Bovis has now received the call VK7ED, Transferred from G- Land.

Northern Notes:

These notes will be brief this month as I was unable to attend the meeting and have gleaned comments from those who did attend.

It would appear there was some discussion but no decisions reached regarding the thought by some that the meetings are too formal and regimented.

A tour of the Examiner was proposed in lieu of/or as well as the October meeting (tour to be on a Wednesday night) and further discussion on this will take place at the next meeting.

A letter has been sent to the Launceston City Council requesting specific details regarding terms and conditions of leave for the clubrooms. We hope to have a reply next meeting.

It is a pleasure to welcome three new members, these being: Stuart Beveridge, Byron Delworth and Harvey Skegg.

It appears that callbooks will be published on a yearly basis thereby doing away with inserts.

The Byelaws are now being printed and should be available at the next meeting.

The next lecture arranged by Wally VK7ZWX will be given by Mr. Green from Weedon & Co. on Stocks and Shares (we should be able to make much money after this lecture.)

73s Graeme VK7ZGG

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DANNY APTED
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RAVENSWOOD

PHONE 391069

P.S. He even has a colour T.V. for you to view while your order is being filled.

North West Branch Notes

Amazingly enough it seems like only last week that the last notes I wrote were sent in. Still down to the nitty gritty.. Our July meeting did not really go with a bang as our new treasurer VK7MX was unable to make it; this combined with a generally poor attendance made it a fizzer but this was made up for by a very short meeting and thus time for a good natter among members afterwards. Enough with the last meeting, the next one is coming up soon and we are having a Junk Night. So if you have anything to dispose of from dud finals to wheelbarrows bring it along and we will auction it off. Remember no junk, no auction. Limit of 1 truckload per member.

The North West Branch has appointed a committee to get a local repeater under way and this committee has really been moving. A sight has been found at "Loana" just west of Ulverstone. A local construction firm has built and donated a prefabricated shed for the site and power has been arranged. The shed will be installed on site as soon as the weather will permit. (We hope it will be up by the time you read this.) Construction has started on the actual repeater but at this stage the committee is concentrating on the shed etc. One last note is that a collection is being taken up locally to pay for cooking lessons for one of our younger members. Seems he spent a short while in hospital with food poisoning, only a mild touch though fortunately.

Till next month

73's VK7ZAQ.

A.B.C. WARNING ON FM RECEIVER TUNING RANGE extract

The following warning on FM Broadcast receivers has been circulated by the broadcasting Control Board.

SIR,

The Australian Government has accepted in principle the recommendations of the commission of Inquiry into FM Broadcasting in the frequency range 88-108 MHz.

The commission has recommended that the televised transmissions operating within this frequency range be progressively transferred to other channels, with CH. 5 to Ch. 5A to (101-108 MHz-) being cleared first, followed after some years by Ch. 4 (94-101 MHz) and at a later date if necessary, by Ch. 3 (85-92 MHz)

Action is currently being taken to transfer the Newcastle national TV station from Ch.5 to Ch. 5A to free the band 101 108 MHz for FM transmissions in Sydney and Newcastle. It is therefore clear that the initial development of FM transmissions will be in the 92-94MHz and 101-initial of 108 MHz ranges.

All parties are therefore warned that FM receivers designed for the domestic FM bands in Japan (76-90MHz.) or Western Europe (87.5-104MHz). Will be unsuitable for reception of the Australian FM transmissions as now licensed or being planned. Interested purchasers of FM receivers should be advised that only those covering the whole frequency range 88-100MHz. will provide adequate reception.

HF NOTES. JULY. De VK7BC.

Conditions have been erratic on the higher bands this month with the lower three providing most of the listening mostly during the hours of darkness.

160 Metres. CW from East and west W land, and some JA has been heard during the evenings at about S3 tc4, with mainland VK8s above the S9 mark. No phone was heard.

80 Metres Good strength CW and Phone signals heard from W and Oceans during the evenings at weekends.

40 Metres. European and W stations heard most days CW and Phone early mornings and late afternoons with plenty of activity probably fallout from the large holes in the higher bands.

20 Metres Openings appear to be becoming shorter as the year passes, not a lot of activity was noted and little heard of the two ARRL contests and even less of the two south american ones.

Short openings at around 2100/2300z and between 0300/0600z seemed to be the order this month.

15/10 Metres. These bands have not been tuned this month from this QTH, however, with a tri band Quad on the stocks more may be heard next month with a little bit of luck.

The RD contest should promote some increase in activity on the HF bands this year, with CW counting for double points the bands should come to life for one weekend. If Robin dusts his key and John cleans his camera, Col and Den their mikes. And if Peter gets a fix on the space debris the RD trophy is as good as back in VK7.

7BC received the first Calgary Centennial award issued to VK7 this week, it's quite a nice sheepskin too, especially as it does not require any IRC's Hi.

73 de 7BC. Frank.

FOR SALEFOR SALE***FOR SALE***FOR SALE***

1 only Commercial CRO
good to 400 khz at -- 3dB.

1 only Victor Pyrox Hanimatograph
early model 16mm. sound projector.

Both items in working order but need some attention.
Reasonable offer will secure.

Frank Richards.

East Tamas Highway
Dilston

Phone 281333

VHF Notes By Joe VK7ZGJ

There has been almost no activity on both 6 and 2 metres. With only the FM channels being used. To help promote VHF activity the ATHOL JOHNSON VHF contest will be held in conjunction with the RD contest.

RULES FOR THE CONTEST

There shall be one division, transmitting open.
All times in GMT commencing 0800GMT 16th August to 0759 Hrs. GMT Sunday 17th August.
One point per contact per band may be claimed.
When using FM a contact via any other mode is worth 5 points.
A station may be worked every two hours.
Repeaters and satellites may be used.

CYPHERS: Before points may be claimed for a contact serial numbers must be exchanged and acknowledged. The serial number of 5 figures will be made up of the R.S. reports plus 3 figures. Numbers exchanged for the RD may be used for scoring in this contest.

All log sheets shall carry call sign;

--
Name,
Address
Score Claimed
Type of Equipment Used.

And a declaration

"I hereby certify that I have operated in accordance with the rules."

Signed _____

Date _____

All logs to be returned not later than one month after the contest to

The VHF Officer,
P.O. Box 1311
LAUNCESTON 7250.

We trust that you will enjoy yourself doing the contest and don't forget to return a log both for the RD and the ATHOL JOHNSON.

73 s

Till next month
Joe VK7ZGJ.

Ladies Page
Ginger Fluff Sponge

$\frac{3}{4}$ cup sugar
4 eggs
Pinch salt
1 dessertspoon golden syrup
 $\frac{1}{2}$ cup corn flour
1 teasp cocoa
1 teasp cream of tarter
 $\frac{1}{2}$ teasp carb soda
2 dessertspoons P. flour

Beat eggs & sugar & salt well. Add golden syrup & beat a few minutes longer. Sift all dry ingredients 3 or 4 times together, then add to egg mixture. Divide into 2 sponge tins & bake in hot oven for 15 to 20 minutes.

* * * * *

Recipe for a Growing Boy

Take a scattering of Freckles,
Across a little Nose,
Add a pair of well scuffed Shoes,
Some patched & muddy Clothes,
Mix in a sandy crew Cut,
Eyes of laughing Blue,
Sunburned cheek, a toothless Smile,
Grinning up at You,
Then stir in cuts and Bruises,
A pocketful of Stones,
And add a large Capacity,
For lollipops and Cones,
Measure shouts and Laughter,
Add feet that can't be Still.
Tend the mixture well and Watch,
With loving care Until,
At last the Precious Mixture
is finished, and you can
Be sure that restless Little Boy
Will be a fine Young Man.

* * * * *

Noelene XYI Ed VK7HE

My apologies to Noelene, the Banana Loaf and Pumpkin Pie
in the June issue were also contributed by her.
(Editor)

Co-Axial Cables.

Part three(3)

Last month we started by looking at some of the definitions applicable to co-axial cables, spoke about some of the difficulties of manufacturing and gave a personal opinion as to what happens to that expensive bit of co-ax you bought if you don't give it the care and attention it deserves.

This month it is proposed to digress further on definitions and on cable care.

Power Rating and Temperature.

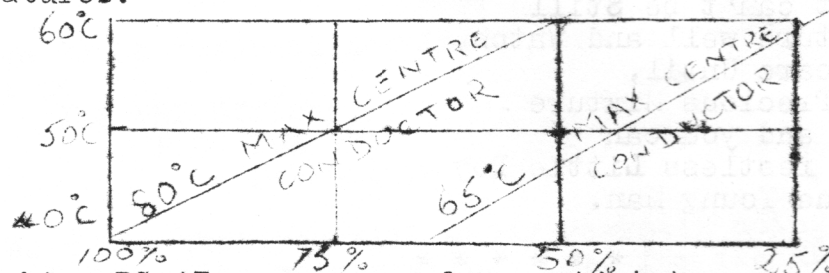
Power rating which is another important consideration is related to the over all size of the cable and is significantly influenced by the value $\frac{D}{d}$.

This is the governing ratio, assuming matched lines and optimum ambient temperature of 40°C.

In these days of using co-ax to jump from, say, driver stage to output stage it would be well if heed was taken to choose a piece of cable with dimensions large enough to carry at least 50% more power than you expect to get. The writer has seen many a piece of equipment (and this applies also to receivers) not given of it's best because a nice piece of small diameter co-ax was used instead of something a bit bigger. Minuturisation is all very nice but not very efficient if you dissipate your power between chassis in the connecting cable. Look at some of the plumbing in UHF and SHF installation, its not always used to prevent attenuation!

Conductor temperatures of polyethylene dielectric co-ax cables are operated between 65°C and maximum of 80°C.

Look at the following table to give you some idea as to what happens to power in relation to ambient and conductor temperatures.



Taking RG 17 as an example which has an approx. power rating of 930 watts at 500MHz at 40°C. If ambient is expected to be 50°C we must derate to 75% giving us only a power rating of 700 watts.

Go back to your inter connecting cable of 0.15" outside diameter which you hope is transferring 1 watt to the Power amp stage. Got the message. Smell something cooking! Note your power is lower than calculated.

V.S.W.R.

Another very important consideration related not only to power but to attenuation is Voltage Standing Wave Ratio. This is the ratio of the voltage maximum to voltage minimum existing on a co-axial cable.

Page two (2)

It occurs when there is discontinuity or mismatch to the cable. i.e. Don't use a 50 ohm load on a 75 ohm system.

Any variation from the theoretically ideal causes a reflection of the incident wave. The reflected wave and incident wave produce a standing wave.

For maximum energy transfer, the importance of this relationship becomes most apparent.

In many systems a VSWR of 1.3 maximum can be tolerated, but the lower the VSWR the better becomes the finished system.

To understand this better the reader is referred to any chart showing VSWR power loss.

Some examples:- A VSWR of 1.6 results in 5% power being reflected. A VSWR of 1.9 results in 10% reflection. The scale is non-linear and power loss goes up rapidly with small increases in VSWR.

One of the difficulties in obtaining a low VSWR is readily seen when one realises that the VSWR of a component can be better than the VSWR of the whole system. This can introduce "Lumps" into a radiating system. i.e. the VSWR varies at different points.

These "lumps" are undesirable, they have been blamed for causing spurious emissions from transmitters, or it may be more correct to say that they do nothing towards attenuating as harmonic already on the line. Rectification of signal on the line is another problem traced to "Lumps". The only sure cure for this problem is to try for an ideally perfectly matched system of load - (connectors and cable.)

The author trusts that this series on some of the problems associated with co-axial cable has been of interest. During my researching I have certainly refreshed my memory.

So far it's all been theory, next month it is hoped to publish details of a simple measuring device that can be built to measure impedance of feeders and aerials.

The writer would like to thank my friends at S.T.C. Pty. Ltd. and Standard Wire for all the help and assistance given.

73s

VK7NR

A. Richardson.

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