

Bulletin issued by the Northern
Branches of the Wireless Institute
of Australia, Tasmanian Division

June 1977
Vol.7 No.2

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Launceston
Tas. 7250

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MEETINGS

June 14th North West Branch, Lakins Hall, Ulverstone. 8 p.m.
June 10th Northern Branch, S.E.S. rooms, Charles St. 8 p.m.

A.O.C.P. CLASSES

Kings Meadows High School, Block B, room 35

June 13th Receiving Systems
June 20th " "
June 27th Transmitting Systems
July 4th " "

Y.R.C.S. CLASSES

YRCS classes are held every Tuesday (during school terms)
from 4 p.m. to 5.30 p.m. at
Kings Meadows High School, Block B, room 33.

CONTEST

June 11/13 VHF Mid Winter Field Day Contest

June 20th Deadline for the July issue of QRM
We badly need articles for future issues, can you
help? How about circuits with a note what it is
and what type of transistors, IC's etc.?

Northern Branch notes by Mac VK7CCC.

Twenty nine members and visitors attended the recent monthly meeting and discussion/film night held at Northern Motors in Launceston.

Amongst business discussed were the 3 motion put forward by Bill VK7AK, the first two were defeated, the last one "that the business of Branch General meetings not proceed beyond 9.15 p.m." was carried.

Peter VK7PF advised that Col VK7LZ, our QSL manager is up and about in hospital and progressing satisfactorily. A card has been sent from the Northern Branch members.

WICEN; Two meetings have been held recently, both were very poorly attended, should we continue ? Are you interested ? Contact Ed VK7HE if you want to become part of a very interesting and worthy group.

Our Lecture Officer Wally VK7ZWX, reminds you that at the next meeting the topic for discussion will be "Temperature Inversions" We look forward to a full house on 10th June at SES rooms Charles St.

Treasurers Report; The revenue statement for the year was presented by Peter VK7PD, a copy is to be found elsewhere in this issue.

A combined Annual Junk Sale come Barbecue is to be held at some future date at VK7CCC's property (a winter barbecue !) suggestions for a date please ?.

We must thank Northern Motors for the use of their facilities plus the eye opening innovations provided in their range of cars to reduce pollution. I wonder if pollution is not the lesser of two evils, the obvious initial and future servicing costs might produce a situation where no one can afford cars and our recreational lifestyle will be drastically curtailed - food for thought !

RTTY; Anyone interested in purchasing circuit boards for ST5 demodulator, autostart and powersupply please contact VK7CCC. Probable cost around \$12 - 15 for 3 boards.

----- See you next Month Mac VK7CCC

Congratulations to John Doolan VK7NJD and Mark Nightingale VK7NAM on gaining a pass in the May Novice examinations. As you can see they didn't waste any time getting call signs or to get on the air, John can be heard operating on 80 and 11 metres and Mark is operational on 11 metres but it wont be long before he'll show up on 80 and 15 metres.

WOULD YOU LIKE A NOVICE LICENSE ?

A Novice Amateur Radio course commencing Thursday 23 June at 7.30 p.m. Kings Meadows High School, room 23, is aimed at the October examination.

Enrolment via Adult Education Board offices. Fee payable to them is unknown at present. The instructor will be Reg VK7KK.

North West Branch notes by Wayne Gibson.

The April meeting was held on the 12th. Once again there was a very good attendance of members. The president was in the chair aided by a standing secretary Max VK7MX. Most items of business were of a routine nature. Ian VK7ZIE gave a short report on council activities. Ian said that R&L denied that the Novice License was of only two year tenure he also noted they were considering allowing novices to use part of 10 metres. Ian briefly outlined the agenda for the Federal convention and judging by the thickness of the wad of paper there will be little time for sight seeing.

It was officially announced that a repeater was now operating on repeater 3 from the Loonah site. The unit is not the NW repeater but the old repeater from the Southern Branch. This unit is on loan and operating on low power, about 10Watts.

A report was submitted to the meeting, in the form of the minutes of a meeting of the Repeater and Beacon Committee held on the 27th March, of current activities of that committee. A brief summary is as follows; a) 2 metre repeater, work is held up through inavailability of adequate cavities and poor receiver front end performance. b) 70 cm beacon, a design study for a solid state unit is being carried out. It is intended to replace the present valve unit as soon as possible. c) 2 metre beacon, nothing is proposed for this unit at this stage except to shut it down while testing the 2 metre repeater to avoid desensitisation problems. Please note that Ian VK7ZIE is the committee's spokesman.

The main motion of the April meeting was initiated by Brian VK7ZBL. The meeting passed the motion, that Council should be informed that the N.W. Branch would be willing to hold the 1977 Hamfest if requested to do so by Council.

A fly from the shack wall of one of the not so young members reported that, while trying to electrically restore an elderly wireless very many volts appeared on the sets tuning gang, I guess it must have come as a bit of a shock.

73 Wayne Gibson

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VHF Notes by Joe VK7JG

Once again I have nothing to report on activity. The 6 metre rig is always monitoring 52.050MHz when I am in the shack and I usually give at least one CQ during the evening but no results for the past month.

Dont forget the Mid Winter VK2 VHF Field Day to be held on the week-end 11th to 13th June. Start 1200 East Sat. 11th and finishes Monday 1200 East, 13th June, this is a long week-end. For further information refer A.R. May '77 page 24.

I have no reports of 2 metre SSB activity but I did hear John VK7JV using the Geelong repeater during the month.

If you have any old operational 2 m FM equipment for sale please let me know as there are several new "Z" calls looking for it.

73 Joe

H.F. Notes by Frank VK7BC and Col VK7LZ.

Conditions have been similar to those experienced last month with the longer openings on the 10 and 15 metre bands tending to take some of the load off 20 metres.

The ITU contest on the 15th and 22nd did not generate the expected DX activity one would have hoped for and most stations participating commented on the fact. The C.W. section seemed to draw most activity from the Eastern European area.

The I SSB'ers QSO party held over the 21/22nd weekend did bring some DX into the open, mostly on the top end of the 20 metre band.

28 MHz. KM6FC, 4Z4TT/VR1 plus JA's and W's as well as a few weak ZS's.

21 MHz. KALIOW, VS5MM, KZ5PM, 4Z4TT/VR1, VR3AK, VR1X, EA4QB with many W's, JA's and Europeans.

14 MHz. 7P8BC, VE8MA, ZM7AT, CR9, VR1, VR3, VP9, KM6, 9M8, ZK1 and the usual DX from Europe on CW.

7 MHz. Has not been worked from this QTH this month.

3.5 MHz. W's and Europeans heard with good strength both on SSB and CW. The ZL's continue to provide much of the activity with the various awards being looked for and with the increasing number of N calls, some healthy pile ups can be observed.

Col should be back on the bands again with a vengeance and compile his usual HF notes for next month.

73 de VK7BC

For those DX'ers who wish to keep their DXCC countries list up to date, the following amendments will be necessary.

DELETE; the three following VQ9 countries, Aldabra, Desroches, Farquhar. These are deleted as from 28th June 1976.

These three Islands were returned to the Republic of the Seychelles upon its independence last June. FH8 Comoro Island deleted as from July 6th 1975.

ADD; to your Countries listing, D6A Comoro Islands, FH8 Mayotte. For QSO's made on or after July 6, 1975.

These actions bring the grand total on the ARRL countries list to 363. This is made up of 319 current and 44 deleted countries.

73 de VK7LZ

FOR SALE

FOR SALE

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FOR SALE

IC-202, 2 metre SSB transceiver, very good condition, had very little use. \$170.00 or offer.
contact, John Mc Culloch VK7CCC

NORTHERN BRANCH W.I.A. TASMANIAN DIVISIONREVENUE STATEMENT FOR YEAR ENDING FEBRUARY 28, 1977

Sales		\$15 161.44
<u>Less</u> Cost of Sales		
Opening stock 1/3/76	\$ 1 313.95	
Purchases	\$15 432.21	
	\$16 746.16	
<u>Less</u> closing stock 28/2/77	\$ 2 007.44	
	GROSS PROFIT	\$14 738.72
		422.72
<u>Add</u> other income		
QRM	\$132.00	
Subs	\$232.50	
Repeater refunds	\$ 34.00	
Progressive dinner	\$205.00	
Interest	\$ 40.17	
Hamfest	\$411.65	
Commission	\$ 26.51	
Advertising	\$160.00	
Barbecue	\$ 19.00	
		\$ 1 260.83
		\$ 1 683.55
<u>Less</u> Expenses		
License fees	\$ 24.00	
QRM	\$178.00	
Petty cash expense	\$ 55.64	
Hamfest	\$401.11	
WIA Federal	\$ 54.00	
State library	\$ 4.80	
Barbecue	\$ 18.65	
Cheque books	\$ 12.80	
Twentieth Century Fox	\$ 17.10	
Repeater power	\$ 67.00	
Australia Post	\$ 15.00	
Progressive dinner	\$ 94.90	
Change cash tin	\$ 20.00	
Initial petty cash advance	\$ 15.00	
		\$ 978.00
	NET SURPLUS	\$ 705.55
Plus standing cash float		\$ 20.00
Plus petty cash on hand		\$ 10.40
	NET ADJUSTED SURPLUS	\$ 735.95

BALANCE SHEET AS AT FEBRUARY 28, 1977

<u>Liabilities</u>		<u>Assets</u>	
Acc. funds	\$2 671.60	Stock	\$2 007.44
Net Profit	\$ 735.95	L.B.S.	\$1 369.71
		Cash float	\$ 20.00
		Petty cash	\$ 10.40
	<u>\$3 407.55</u>		<u>\$3 407.55</u>

CLUBROOM ACCOUNT

Balance 1/3/76	\$2 069.49
Interest received	\$ 179.93
Fund raising	\$ 100.00
Balance 28/2/1977	<u>\$2 349.42</u>

AUDITED AND FOUND CORRECT.

B.C.Proverbs, A.A.S.A., F.C.I.S.
12/5/1977.

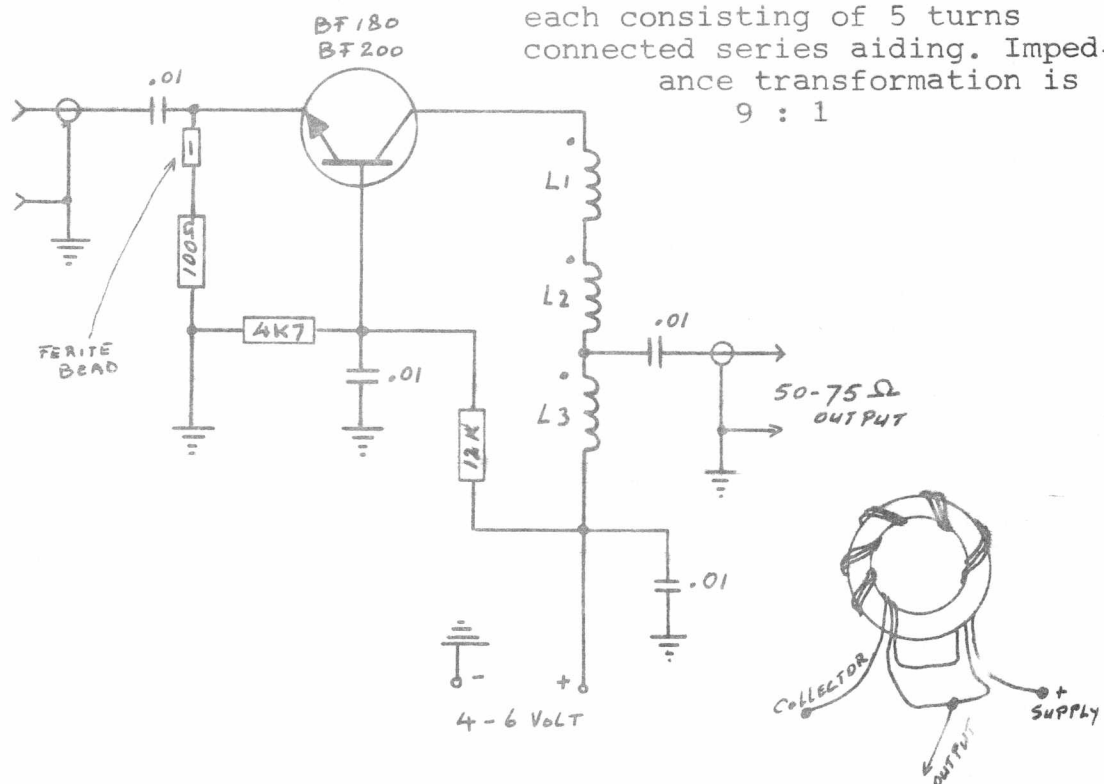
LOW LEVEL R.F. AMPLIFIER. by Trevor VK7TB

On building a digital readout system for a new communications receiver I found a need for a low impedance wide band voltage amplifier (50 - 75 Ohm input output impedance). A pre-amplifier that would amplify a level of about 20mV (across 50 Ohm) and have a voltage gain of about 15.

Initially this problem seemed quite straight forward, but after some investigation I came to the conclusion that trying to amplify low impedances over a wide band width in one stage presented results with gain often less than unity. The problem was diagnosed to gross impedance mismatching, using e.g. grounded source F.E.T.'s, grounded emitter bipolar stages etc. Why not a grounded base configuration? it has low input impedance (typically biased for 50 Ohm input) but a very high output impedance (typically 500K or greater). This high output impedance was stepped down by a 9:1 wideband transformer, not the perfect impedance match but sufficient to give a gain of 15 at the impedances shown.

An increase in gain can be achieved by allowing the stray capacitance plus the collector capacitance to broadly tune the output transformer. Terminated in these low impedances a bandwidth of at least 30MHz was achieved (10 - 40MHz).

L1, L2 & L3 are three windings each consisting of 5 turns connected series aiding. Impedance transformation is 9 : 1



The small toroid I had on hand was of unknown grading (it came from a piece of VHF equipment). This situation often results but with some experimentation with the number of turns soon gives optimum results.

Two important points when winding a transformer of this type is to see that the wires are twisted, at least 4 twists per inch and wound in a trifilar form.

Possible uses; Low noise wide band R.F. amplifier for receivers, Amplifier for pre-scalers, frequency counter etc..

NORTHERN BRANCH EQUIPMENT STORE.Resistors

$\frac{1}{2}$ and $\frac{1}{4}$ W	4¢
per 100	\$2.50

Capacitors

microplate	5¢
ceramic	8¢
electrolytic 4.7uF 16V	15¢
10uF 16V	16¢
47uF 16V	16¢
100uF 16V	22¢
220uF 16V	50¢
1000uF 25V	58¢
2200uF 25V	70¢

tantalum 10uF 16V	30¢
1, 2.2, 4.7uF 25V	25¢

greencaps .22uF 100V	18¢
.1, .047uF 100V	12¢
.01, .0047, .001uF 100V	8¢

<u>Trimmers</u> 3 - 9 pF	40¢
3 -12 pF	40¢
6 -40 pF	40¢

Crystal Sockets

'D' style xtals	27¢
'K' style xtals	38¢

Coil Formers

Neosid single bases	10¢
double bases	11¢
bakelite formers	8¢
single cans	10¢
double cans	11¢
F16 and F29 slugs	8¢
2 - 300MHz balun core	12¢

Printed Circuit Board

single sided per sq ft	\$3.25
double sided per sq ft	\$3.55

Relays

4 c/o	\$5.00
sockets	86¢
relay driver	\$1.70

Transistors

2N3563	29¢
2N3564	20¢
BC108	20¢
2N3866	95¢
BD135	62¢
2N3055	\$1.25
mounting kit	12¢

F.E.T.

2N3819	65¢
2N5245	60¢
3N210	90¢
U310	\$2.00

Diodes

1N914	9¢
EM408	10¢
1N4002	14¢
HP2800	95¢

I.C.'s

LM380 audio 2W	\$2.10
LM741 op. amp	40¢
MC1550 RF/IF	\$1.20
LM111h V/Comp.	\$4.40
MC1496 Bal/Mod.	\$1.35
Ua723 Volt/reg.	\$1.05
LM556 Dual/555	\$1.85

Co-axial fittings

B&L stand. plugs	20¢
PCB sockets	54¢
chassis mount	40¢
UHF PL259 plug	\$1.40
SO239 sockets	\$1.20
reducing adapt.	37¢
RCA - SO239 ad.	\$1.90
angle and T ad.	\$1.80
BNC stand. plug	\$1.30
socket	\$1.20

Log books	\$2.00
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BF200 transistors (just arrived)	50¢
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Also available, on order only, all ARRL and RSGB books, subscriptions to all magazines as advertised by Mag Pubs WIA in Amateur Radio.

Equipment advertised by Vicom is available, on order only, at advertised prices.

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