

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

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Tas. 7250

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There seems to be a feeling among some of our members that QRM will improve if I have no part in it. As I have always worked towards the betterment of QRM and the Branch, it would be against those principles to stand in the way of any improvement and therefore will not seek re-election as Editor.

I would like to thank the members who have supported me and QRM with notes, articles and the general production of our newsletter. In particular I thank Joe Richter, who is not a member, who generously gave his time every month to print QRM for us.

John VK7JV
Editor

MEETINGS

- Mar. 10 Northern Branch Annual General meeting.
Clubrooms 34 Burke St. 8 p.m.
- Mar. 14 North West Branch, Lakins Hall Ulverstone 8 p.m.
- Mar. 18 Annual General meeting W.I.A. Tas. Div. 3 p.m.
Northern Clubrooms 34 Burke St.
Dinner at Kings Meadows Hotel 7.30 p.m.
- Mar. 12 Mini Hamfest at back of QTH of VK7ZBY, Launceston Airport

We regret that we are once more unable to present the Northern and North Western Branch notes as they have not been received at this time.

NORTHERN BRANCH PRESIDENT'S REPORT
as presented at the February meeting

During the year the Branch made some progress in the long line of things yet to be achieved. Club Rooms of a more permanent nature are now a reality and are slowly but surely being organized into something all members will receive much enjoyment from. AOC and Novice classes have been to the fore this year with excellent results being achieved. Activity in HF and VHF has increased not only from our members but throughout the State. This is evidenced by the large increase in outgoing and incoming QSL cards.

At the January Branch meeting, section 14 of our By-Laws were brought into line with section 98 of the Divisions Articles of Association which states " Each Institute Branch shall elect from amongst its members a Branch President and a Branch Vice-President, a Branch Treasurer and a Branch Secretary, who shall constitute a committee to govern the Branch. The Branch President shall also be a Vice-President of the Institute".

As in most cases improvements are made and based on past experience. During the last executive meeting it was discussed and to start off the new term of office bearers, the following positions are recommended for election:

EXECUTIVE

President
Vice-President (who would be the Equipment
Store Manager)
Treasurer
Secretary

OFFICE BEARERS

QSL Officer
Lecture Officer
Publicity Officer
WICEN
Educational and Librarian
QRM Editor
QRM Technical Editor
Club Room Manager
Broadcast Officer
Refreshments Officer

The reason for some of the changes are that the Vice-President who doesn't normally have much to do could take over the job of Equipment Store Manager. The fact that the present Executive open up the club rooms for the store and it is assumed that this system will continue, gives we feel a closer liason to the operation of the store and the other point is that the store is fast becoming the main stay of the Branch.

With regard to QRM, under the new set-up where all WIA members in the Post Code areas 7212 - 7304 are members of the Northern Branch and will automatically receive QRM, the need for a QRM committee is now required. That is why we strongly recommend the position of Editor and Technical Editor, with the added recommendation that the Editor co-op two other members to assist. We also suggest that the North West Branch be asked to provide a Sub-Editor and a Technical Editor.

The other major change is the recommended appointment of a Club Room Manager who would be responsible for the over-all operation of the Club Rooms.

To help those who would like to take on some position but feel they wouldn't know what to do, the present Executive will prepare a set of guide lines on each position which will be presented as soon as possible for ratification and use by members.

Some members have indicated their willingness to stand for positions and for your information they are;

Vice-President	Joe VK7JG
Treasurer	Tony VK7TP
QRM Editor	Mac VK7CCC
Education & Librarian	Brian VK7ZBY
Broadcast Officer	Brian VK7ZBY

It is anticipated that the following will stand again;

QSL Officer	Col VK7LZ
Lecture Officer	Wal VK7ZWX
Publicity	John VK7NJD

I do not intend to stand for any position this term but will give any assistance I can to any member in any position.

As Bill Tanner VK7TE has been one of the stalwarts in getting the Club Rooms and presently a member of the Club Room Committee, I will be putting Bill's name forward as Club Room Manager and hope he will accept.

I want to thank all members for their co-operation during the year, especially those in positions who worked so hard for the betterment of the Branch and Hobby. It has been a most interesting and rewarding year.

And finally I would like to say that your executive and Officers are there to try and help you and the cause of Amateur Radio so when they ask for your assistance don't hesitate.

Very 73

H.E. Hewens

H.E. Hewens VK7HE
President
Northern Branch 1977/78

DX notes by Col VK7LZ.

For the average DXer the most exciting news would be the possibility that Clipperton Island is to be re-activated and as the last time this Island was on the Ham bands was in August 1958 there is certainly going to be a heck of a line-up waiting for business to commence. The story going around is that a group of 8 French operators and HB9MX will make up the party and operation is due to commence on the 20th March for 7 days, usual DXpedition frequencies will be used and QSL's are via F6BFH, thats the story for what its worth but if you are wanting Clipperton Island keep it in mind.

Although its only South West Africa, sometimes called Namibia its scarce enough for a mention. ZS3WBC will be busy there from the 1st to the 7th of March, QSL's to Box 1234 Walvis Bay.

Its been mentioned that UK1KAA is operating from Franz Joseph Land but his QTH was Leningrad so I dont know, best QSO him and find out.

For those lacking Syria keep a lookout for OE6DK/YK. Horst is a member of the Peace keeping forces on the Syrian side of the Gollan Hights and comes up occasionally on 14 MHz SSB, at the time of writing this part of the world was coming through long path from 0500Z.

Although what happened a month ago doesn't do much for anyone, here is a list of stations logged at this QTH (bearing in mind that several didn't get listed).

3.5 MHz, CW - KX6DC, UL7GW, W, VE and JA.

SSB - KG6RT, W and JA.

I only listened on this band around 1000 to 1100Z on a couple of occasions.

7 MHz, CW - EI3CT, FM0COO, N4ZC/Kure Isl., KV4CI, W0NCA/HC1, VP2MUZ, KH6, W, VE and many Europeans.

SSB - CE0AE, N4ZC/Kure Isl. GW3AX, GW4NZ, XE1EL, DL, G, and JA.

All stations were heard between 0800 and 0930Z so there is plenty of scope here for listeners who want to burn the midnight oil.

14 MHz, CW - You'll have to ask Snowy VK7CH what happened here, all I QSO'ed was H5FXT, ZB2AV.

SSB - Europe, EA6EW, GI4GPC, GI4EPK, HB0LL, LX2LX, OY3H, M1D, 9H1FF. and most European countries are easily workable.

Africa, CN8CX, EA8OZ, H5COA, H5FXT, ZE7AV
ZE7JR, ZS2AF, ZS2OM, ZS1OU, ZS5KI, VE7CQX/SU
9J2GJ, 9L1CA.

South America, VP8PT, HF0POL, 8R1Q and the usual run of OA, HC, HK, CP, CE, LU, YV, and ZP stations.

North America, this area was wide open most nights local time with, FG, FM, FS, J3, KP4, TI, HI, VP2 XE, 8P6 all for the asking.

Asia, CR8, JY, OE6DK/YK, UO5, UM0, UL7, VS6, 4X4, 9K2DX, 9M6, 9V1 were all logged.

21 MHz, JA's seem to be audible most of the time, both on SSb and CW. W's come through from 2300 to 0100Z. KZ5BA was S9 from 0300 to 0500Z on the 18th of February. Europeans were copied at 1200Z one night. The Kure Island DXpedition was heard on SSB on several occasions.

28 MHz, WA8VOJ/Kure, WB8KLN/Kure, KG6, KH6, VE, VK, JA, W, ZL, P29 were the last I could do, all heard in the mornings our local time.

For those interested in CW contests the 1978 Commonwealth contest commences at 1200Z on the 11th of March and finishes at 1200Z on the 12th. All bands 3.5 to 28 MHz, using the first 30 kHz of each band. Its open to every country in the Brittish Commonwealth and each area in VE, VK and ZL counts seperate.

QSL INFO

C5AAC P.O. Box 227 Banjui, Gambia.

C5AAP A.M. Pomfret, C/o Brittish High Commission
P.O. Box 507 Banjui, Gambia.

FG7AN via VE3FXT KH6JFI and WA8VDJ via WA6PYN

OE6DK/YK via OE6DK OY3H via W3HNC

P29AC via F6CYL P29BB via VK2BAX

VP2MBB, VP2MDH, VP2MUZ via WB8MDH

9K2DX via W6LV

BV2B P.O. Box 101 Taipei, Taiwan.

Late news

The operators in the Clipperton Island Dxpediton due to commence on the 24th of March are;

FOØXA (F9JS), FOØXB (F5II), FOØXC (F6BFH), FOØXD (F6ARC),
FOØXE (F9IE), FOØXF (F6AKO), FOØXG (HB9AHL), FOØXH (HB9AEE).
Mellish Reef, VK2BJL is hoping to take a trip there in July,

VHF notes by Joe VK7JG.

6 metres has been very quiet with my last opening on 30th Jan. with VK4ZRF. Previous to this it was open to ZL on 22nd Jan. when 3 ZL's were worked as well as Eric VK5LP.

Over the past several years I have noticed that when 6 metres is open to ZL you can usually also work into VK5.

Dont forget that the equinox is approaching and we could get some T.E.P. openings to the Northern Hemisphere.

2 metres has been just the opposite with the band being open continuously for the past 5 days (16 to 20th Feb.), the Geelong repeater VK3RML could be worked mobile from almost anywhere in Launceston and from home the N.W. repeater was workable for the first time. At the bottom end of the band Kevin VK7ZAH and Daniel VK7DA have been active and on the 16th a VK6 was heard, Kevin called him but conditions did not last long enough to have a contact.

VK7 W.I.A. QSL BUREAU

This is intended as a guide should you wish to use the services of the Wireless Institute of Australia QSL Bureau.

When having QSL cards printed do not choose a heavy-weight type of card and make sure they are no larger than $5\frac{1}{2}$ "x $3\frac{1}{2}$ ". Outward cards larger than this can not be accepted in future. There are two reasons for this request, firstly, the postage depends on the weight and with the present high postage rates we have to watch this carefully. We can send 70 normal cards for the same cost as only 50/60 oversized or overweightones. Secondly, a big card will not fit in a normal sized envelope which means special envelopes which cost more, and they do not pack easily in bulk with other cards which will probably result in damage to the card.

There is no charge for inward cards but outwards are 2¢ each (non-members 5¢). This covers cost of postage, envelopes, P.O. Box rental and other incidental expenses.

Please sort your cards alphabetically into prefixes (Australia and U.S.A. into call areas). Writing the call sign on the back of the card and enclosing a slip showing the number of cards (if there are many) will help to make the job a bit easier.

A number of DX stations have QSL managers these days, so if you are given any special instructions at the time of the QSO, always show this on the back of the card, viz. "CT2BS via WA4CAD". I will then know to send it to the WA4 bureau. Unless it is sent as directed it is doubtful whether you would get a reply.

Inward cards for the North and North West Branches are sent to VK7LZ and VK7MZ respectively shortly before their monthly meeting dates and may be collected there. Cards for members in the South are taken along to the meetings. If you do not attend any of these meetings please try and arrange for some one to collect them for you. Let me know if you do not want your cards and they can be destroyed.

Current Call Books are held at the Bureau and the full QTH of any station may be obtained from me.

The Bureau address is, G.P.O. Box 371 D, Hobart 7001. but I would prefer that cards, enquiries etc. be sent to my home address, 95 Wentworth St., Bellerive 7018, Phone 44 2854.

Chas. Harrisson VK7CH
QSL Manager

FOR SALE

SE 501, 27 MHz SSB transceiver modified for use as a 2 metre transverter driver. Supplied with 2 crystals, one to cover 144 - 144.2 and the other 145.8 - 146 MHz

Joe Gelston 40 Lavender Gr. Phone 443882

IDENTIFY YOURSELF

At the Advisory Council meeting, held on Saturday 25th of February, reports indicated that the operating standards of amateurs have degraded to a point where it is now common to hear a QSO without any form of identification and quite a few with insufficient identification. This is particularly noticeable on the VHF FM channels.

Please do not follow bad examples and remember to identify yourself at the beginning and end of a QSO as well as every 5 minutes.

John VK7JV , Frank VK7BC

Official Observers

It seems Brian VK7ZBY has a drink problem. When out sailing with Mike VK7FB, Brian fell in it, the drink that is. It must have been a big glass Brian.

The WIA Broadcast on the 19th February was heard far and wide, a inversion to VK3 gave them a good copy on our Broadcast and quite a few called in for the call-back.

I believe that sometime in March Chris VK7UX will be here for a holiday from Botswana, if so that will be the time to organize a sked for that country.

Most peculiar are the sounds emanating from the phone when you dial 445000, sounded like SSB to me.

Merv VK7NMP has his tower in a erect position and a three element tri-band beam gracing the skyline of Invermay.

HARVEY K. SKEGG

(local Tasmanian VICOM agent)

for all AMATEUR RADIO EQUIPMENT

Opening Specials.

TS 320S - \$1085	FRG 7 - \$330
TS 520S - \$ 690	SSR-1 - \$265
FT 101E - \$ 845	TH3-Jr - \$195
IC 22S - \$ 270	Ringo ARX-2 - \$ 48
IC 502 - \$ 210	1 KW, Filter - \$ 33
IC 202 - \$ 210	6JS6 - \$ 12

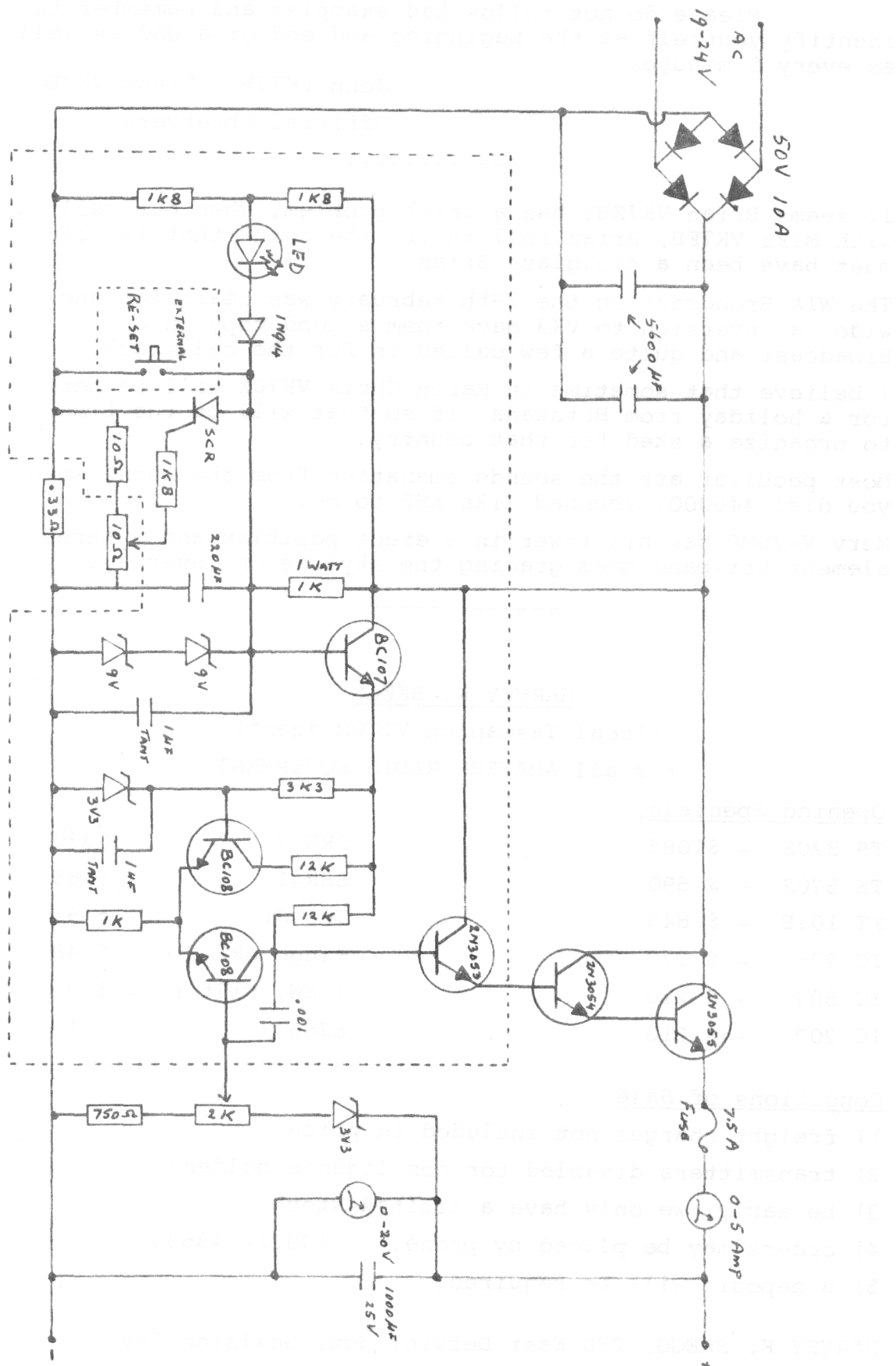
Conditions of Sale.

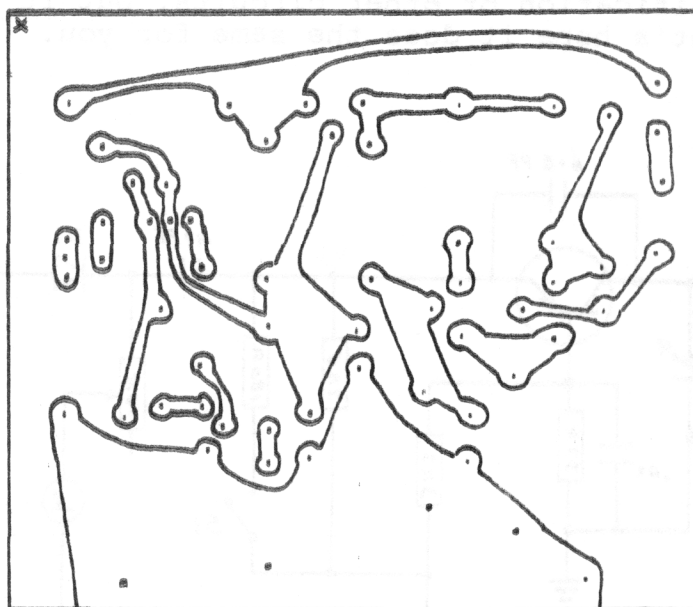
- 1) freight charges not included in price.
- 2) transmitters disabled for non licence holders.
- 3) be early, we only have a limited stock.
- 4) orders may be placed by phone. (002)- 436337
- 5) a deposit will be required.

HARVEY K. SKEGG, 280 East Derwent Hgw, Geilston Bay.

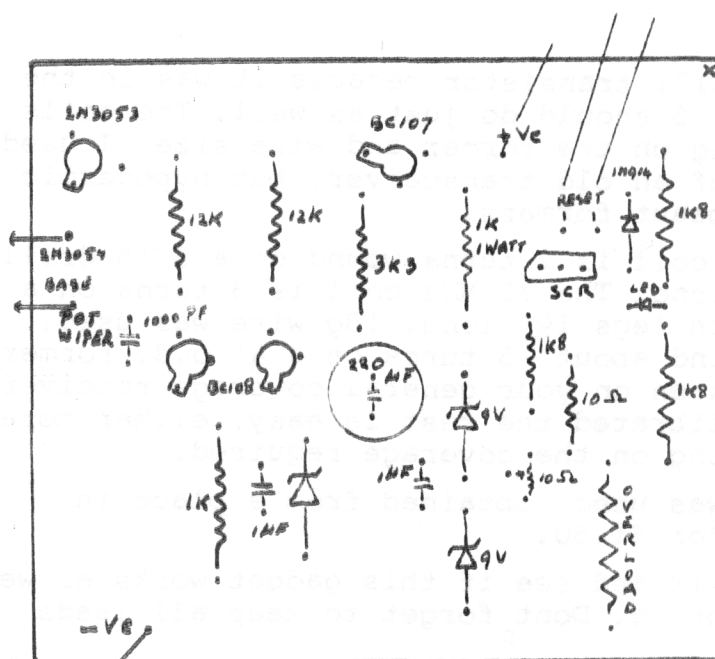
5 AMP REGULATED POWER SUPPLY, VARIABLE FROM 6 - 16 VOLT.

This circuit first appeared in QRM in October 1974 and as I am often asked for a photo copy it was thought a good idea to print the circuit. The original design is by John Reynolds VK3ZMU, the overload protection circuit was modified by John VK7JV.





COPPER SIDE



COMPONENT SIDE

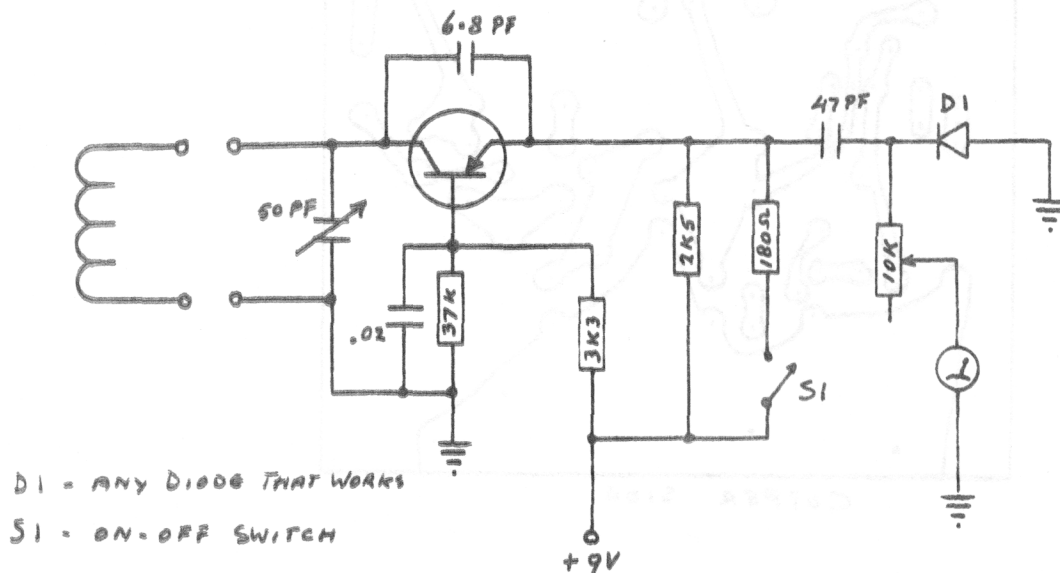
HF - VHF DIP OSCILLATOR

Reprinted from Eastern Zone News.

by Ray Price VK3AWQ

The writer had on many occasions, built up GDO's from circuits out of various magazines, only to find them either not oscillating at VHF frequencies or so full of false dips that they were virtually unusable.

The following circuit is of one that seems to behave itself on all frequencies, its not an original circuit, rather a modification of other circuits, but it works well for me. Let's hope it does the same for you.



I used an OC171 transistor because it was in the junk box, a AF114, 5, 6 should do just as well. The coils are cut and try, depending on the former and wire size. I used $\frac{3}{4}$ " o.d. formers out of an old transceiver, but hypodermic syringe bodies make beaut formers.

The 144 MHz coil is 2 turns wound on a 5/16 drill shank with legs $1\frac{1}{4}$ " long. The 72 MHz coil is 3 turns on a 7/16" drill shank with legs $1\frac{1}{4}$ " long. 18g wire was used. For the HF coils, wind about 15 turns on a $\frac{3}{4}$ " o.d. former with 26g wire and listen on your general coverage receiver. Once this coil is calibrated the rest is easy, either more or less turns depending on the coverage required.

A VU meter was used, obtained from a place in Little Lonsdale St. for \$1.50.

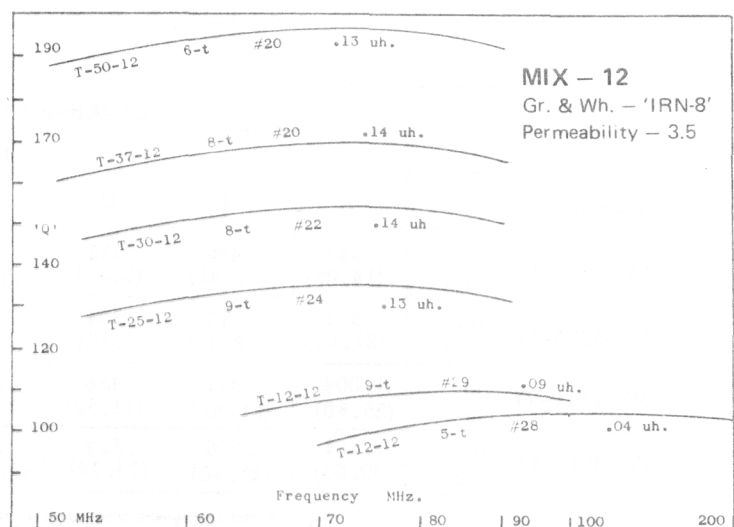
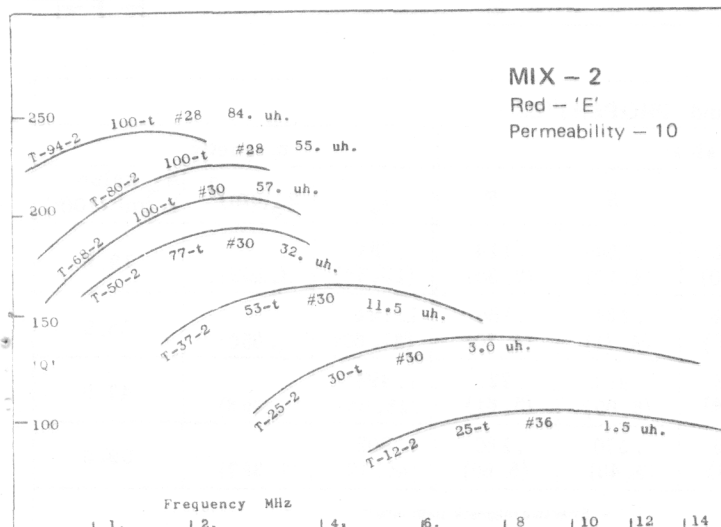
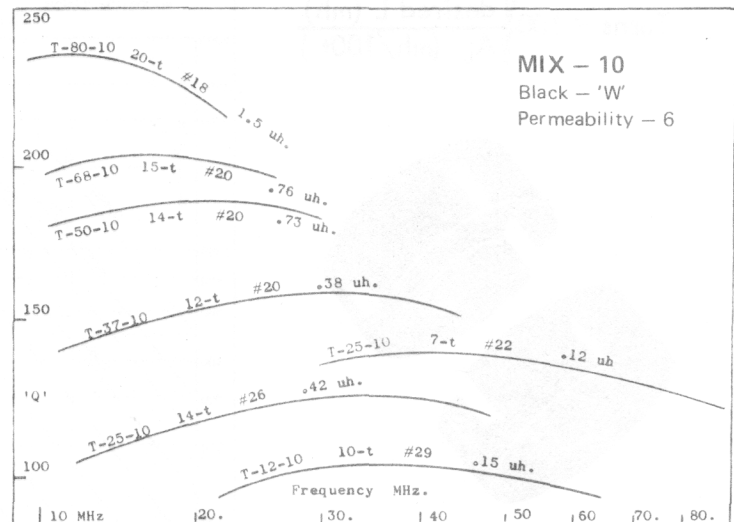
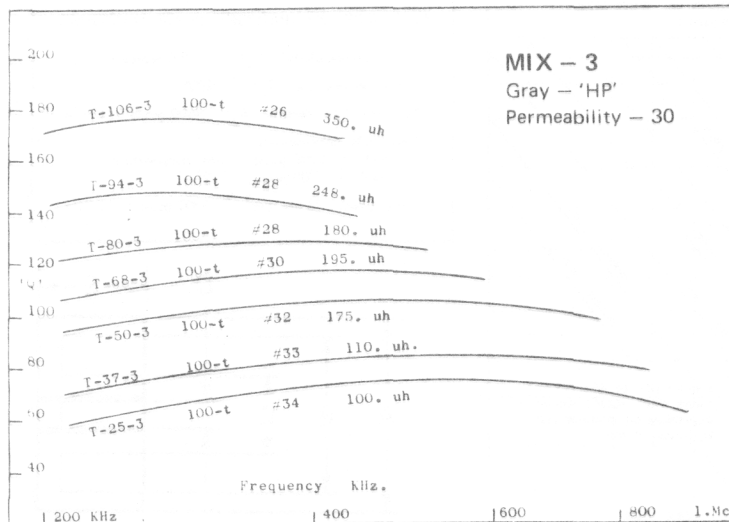
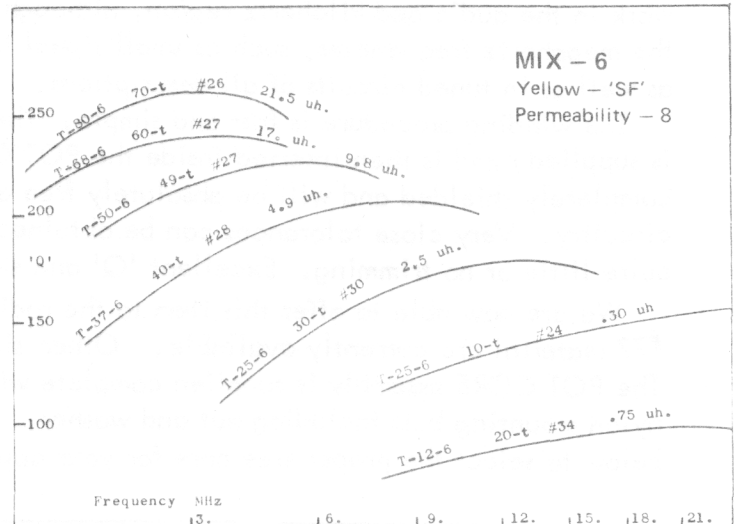
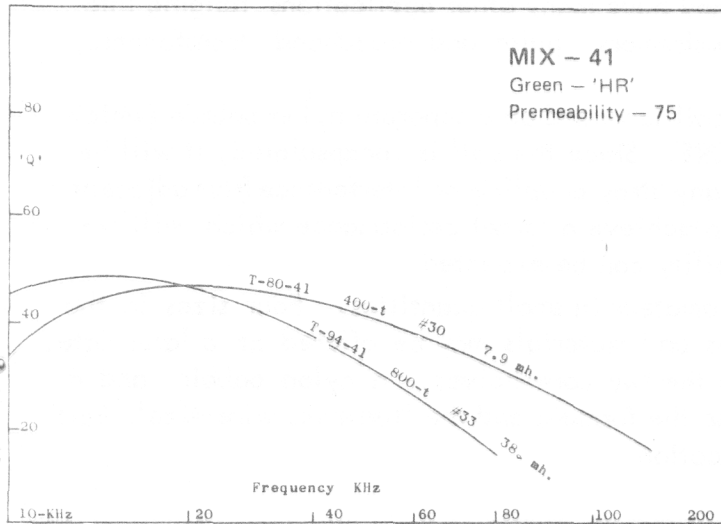
Well hop to it and see if this gadget works as well for you as it does for me. Dont forget to keep all leads short.

IRON POWDER TOROIDAL CORES

Q—CURVES

Revision A

The following Q-curves will serve as a guide in the selection of R.F. Toroid Cores for your application. Performance extracts are typical of a wide variety of cores in our supply.



POT CORES

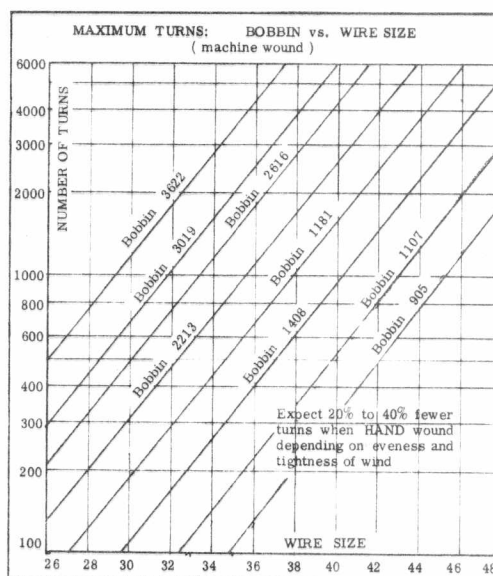
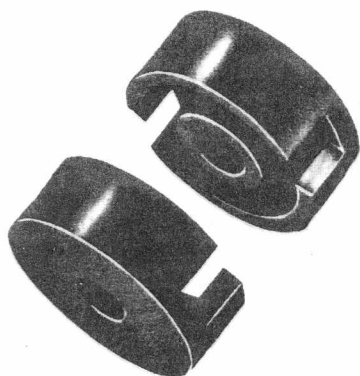
MANGANESE-ZINC #77 FERRITE MATERIAL

The POT CORE is an excellent choice of coil form when a great deal of inductance is needed using a very minimum amount of space. An inductance up into the Henries can be achieved using a POT CORE of considerably less than one inch in diameter. They are used extensively for filter work in the audio and kilohertz region, although they have many other applications ranging into the megahertz frequencies, such as small signal transformers, pulse and broadband transformers, as well as in tuned circuits of all descriptions.

The winding procedure is fast and simple. The coil is wound on a separate nylon bobbin (which is supplied) and is then inserted inside the POT CORE. Since the coil is encapsulated, it will be completely shielded and will be absolutely free of any stray coupling or interference from adjacent circuitry. Very close tolerances can be obtained to achieve a target performance which will require little or no trimming. Excellent 'Q' and stability can be expected.

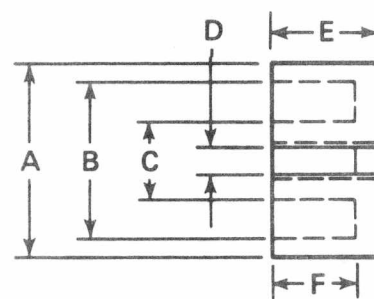
We are now able to offer this item to the radio amateur in small quantities. Four sizes in the #77 material are currently available. Other sizes and materials may be offered at a later date. The POT CORE assembly is supplied complete with the two core-halves, a nylon bobbin and a nylon mounting bolt including nut and washer. Use the formula and the 'turns vs. wire-size' chart below to select the proper size core for your application

$$\text{Turns} = 100 \sqrt{\frac{\text{desired } L \text{ (mh)}}{A_L \text{ (mh/100t)}}}$$



MAGNETIC PROPERTIES of #77 MATERIAL

Initial permeability (μ_0) = 1800 typical
 Curie temperature (T_c) = 200° C
 Saturation flux density (B_s) = 4600 gauss @ 10 Oer.
 Amplitude permeability
 4500 @ 2000 gauss, room temperature
 7000 @ 1000 gauss, 125° C
 Core losses: 12 mw/cm³ @ 1000 gauss, 10 KHz.



DIMENSIONS and PROPERTIES

DIMENSIONS and PROPERTIES										
		physical						magnetic		
Part No.		A	B	C	D	E	F	l_e	$A_e(\text{cm})^2$	A_L value L (mh/100t)
PC-1408-77	in. mm	.553 (14.05)	.465 (11.81)	.232 (5.89)	.122 (3.10)	.164 (4.17)	.114 (2.90)	.781 (19.84)	(.255)	19.6
PC-2213-77	in. mm	.851 (21.61)	.717 (18.21)	.364 (9.25)	.179 (4.55)	.264 (6.71)	.185 (4.70)	1.244 (31.60)	(.650)	36.9
PC-2616-77	in. mm	1.004 (25.50)	.851 (21.61)	.456 (11.58)	.218 (5.54)	.317 (8.05)	.221 (5.61)	1.498 (38.05)	(.956)	47.0
PC-3019-77	in. mm	1.181 (30.00)	1.000 (25.40)	.523 (13.28)	.218 (5.54)	.370 (9.40)	.260 (6.60)	1.802 (45.77)	(1.387)	59.0
A_e = Effective magnetic cross-sectional area. l_e = Effective magnetic path length.										

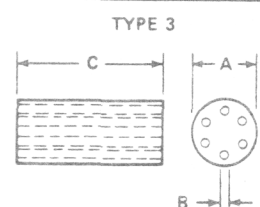
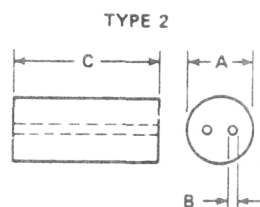
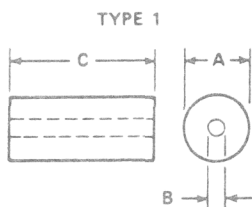
FERRITE BEADS

Ferrite-Beads are little dowel-like devices made from ferrite materials of various magnetic properties. They are electrically equivalent to a tiny RF choke when slipped over an electrical conductor or a component lead. They offer a simple, convenient, inexpensive and yet a very effective method of RF-shielding, RF-decoupling and parasitic suppression.

High frequency noise is apt to be generated in various parts of any high frequency circuit and most common suspects are power supply leads, ground connections and inter-stage connections. Also, conductors adjacent to the chassis, to each other, and to other components offer a convenient path for the transfer of RF energy from one circuit to another. The inductance and the distributed capacitance of some conductors can also support spurious oscillations in the higher frequency ranges.

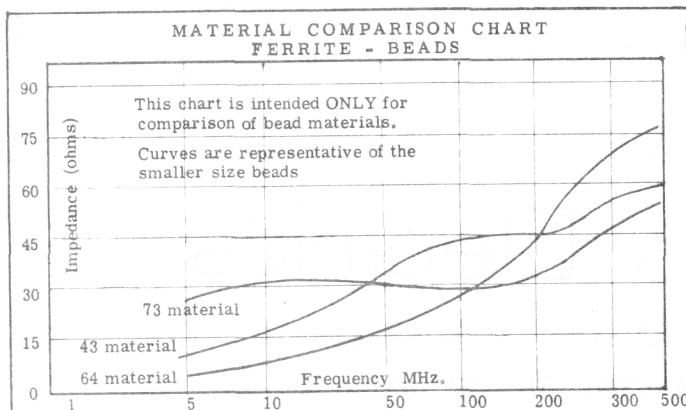
Part number	Type	Dimensions (inches)			Available materials			
		'A'	'B'	'C'	64	43	73	75B*
FB (--) 101	1	.138	.051	.118	X	X	X	X
FB (--) 801	1	.295	.084	.297	X	X	X	
FB (--) 2401	1	.380	.197	.190		X		
FB (--) 901	2	.250	.050	.417	X			
FB (--) 5111	3	.236	.038	.394	X	X		

Complete the part number with material designation in space provided (--)
 *Note: 'C' dimension for the FB-75B-101 Ferrite Bead, .128-inches.



Ferrite-Beads offer little, or no impedance to the lower frequencies and DC. At higher frequencies the impedance will increase appreciably and will tend to reduce or dissipate the unwanted signals. Because the Ferrite-Bead operates as a bulk device, it cannot be detuned by stray capacitance and it does not have to be grounded. It can easily be added to any electronic circuit simply by slipping it over the conductor or component lead suspected of carrying the troublesome interference.

The point at which attenuation becomes effective will depend upon the choice of bead-material. As shown in the material-comparison-chart, the #64 material will offer the greatest impedance above 200 MHz. The #43 material is the most effective between 50 and 200 MHz. and the #73 material is recommended for 50 MHz. and below. The FB-75B-101 Ferrite Bead will offer greatest attenuation at about 10 MHz. The attenuation above 500 MHz. becomes relatively flat for all materials, although the DB level may be different for various materials.



MAGNETIC PROPERTIES CHART				
Property	Unit	73 Material	43 Material	64 Material
Initial permeability		2500	950	250
Maximum permeability		4000	3000	375
Saturation flux density @13 oer	Gauss	4000	2750	2200
Residual flux density	Gauss	1000	1200	1100
Curie temperature	Deg. C	160	130	210
Volume resistivity	Ohm-Cm.	1×10^2	1×10^5	1×10^8
Specific gravity		4.8	4.3	4.7
Loss factor	$\frac{1}{\omega \mu_0 Q}$	1.6×10^{-5} @ .06 MHz.	2.5×10^{-5} @ 2 MHz.	5.3×10^{-5} @ 2.5 MHz
Coercive force	Oersteds	0.16	0.30	1.40
Temp. Coeff. of initial permeability	% / Deg. C	0.80	0.20	0.08
Frequencies of Maximum impedance	MHz	Below 50 MHz.	50 MHz. to 200 MHz.	Above 200 MHz.

A variety of types and sizes of Ferrite-Beads are in supply. The most popular being the '101' type, which will fit nicely over a #18 AWG conductor, and the '801' type, which will accept a #12 AWG wire. The FB-43-2401 is another Ferrite-Bead product which is widely used in the construction of 'ferrite-loaded' transformers, such as those found in the TRW-100 and the TRW-320 solid state power amplifiers. We also supply the 2-hole Ferrite-Bead and the 6-hole Ferrite-Bead, which are excellent little devices for wide-band chokes, baluns and transformers.

J.&T. GUNN PTY. LTD.

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