



The Quarterly Journal

Of The

Royal Signals

Amateur Radio Society

OFFICERS OF THE SOCIETY

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THE GENERAL SECRETARY,
11th SIGNAL REGIMENT (DEPOT),
VIMY LINES,
CATTERICK CAMP,
YORKSHIRE.

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(Next issue August 1962)

REPORT FROM THE GENERAL SECRETARY

Over 153 copies of the first 'Mercury' were distributed to members and to all CSOs. This issue will likewise go world-wide, and with membership now over 110, even more copies will be needed this time. This is a very healthy sign and I am grateful to all those who have supported the Society. Overseas membership is still very disappointing and many overseas Command representatives have not yet been notified to me. This 'Mercury' includes a list of members, corrected to date of going to press, and I hope this will enable many ex-members of the Corps to renew old acquaintances.

Members will also see at the back of this 'Mercury', an amended rule 5. This was changed by a Council Meeting because it was found that affiliated clubs were paying 5/- and getting the same facilities as ordinary members who paid either 2/6 a year or £2.2s.0d. for life membership. The council has therefore re-classified membership. The last page of 'Mercury' makes this clear. Clubs are now very welcome to apply for affiliation at 10/-, but will not be able to take part in the Purchasing Scheme.

The Society will also welcome applications for financial aid to set up Clubs. A recent grant from Corps funds will enable some aid to be given. However, self help will still have to form the basis of a club, for the Society is unable to provide all the equipment. Any equipment bought must obviously be accounted for and applications should include:-

- (a) Present equipment.
- (b) Numbers of members, including how many are paid up members of the Society
- (c) Who is responsible for the running and accounting of the Club.
- (d) The financial state of the Club, including fees charged for membership.

It will be realised that the prime aim is to get overseas clubs on the air first. All applications should be first sent to the Command representative who will see what aid can be given by the CSO's branch first. The Command representative will then forward applications to me for submission to the Council. The Society is most anxious to give help to Clubs but funds are limited. Unit commanders will also no doubt realise the excellent help given by Nuffield Grants which should be applied for.

The Members Purchasing Scheme is doing well now although it was slow to start. Members will note a reduction in the number of firms but this has been caused by lack of demand for their gear. Originally the scheme was operated in conjunction with RAFARS and once our Society was in the swing of things, we would operate separately. The discount is so good that several users have already paid for their life membership out of it!

A QSL design contest is hereby launched! Members or affiliated Clubs are invited to submit a design for QSL Card for R Sigs ARS. The idea is that one side of the Card will show the design and the call sign of the station and the other the station data. The Society will then sell these cards at a favourable rate. A prize will be awarded to the winner and a black and white copy shown in the next 'Mercury'. I urge you all to have a go. Submit designs to me please, by the middle of May 1962.

GB3RCS - the Society's own special call sign-kindly reserved by the Radio Branch of the GPO, has already appeared on the air from 29 Jan - 3 Feb. 62 at "Meet the Army" Exhibition at Middlesborough. Over 100 special QSLs have already been sent out. The next time GB3RCS will appear will be on July 7th and 8th from the Old Comrades Reunion here at Catterick. The HQ station will be open all the time and visitors are very welcome. GB3RCS will be on all bands, AM, SSB and CW, operated by HQ staff at Catterick plus a few local amateurs. The club will be signposted, but a Cubical Quad atop a 60 feet tower can be seen from 11th Signal Regiment area. Incidentally G3CIO, HQ Station's own call, will appear somewhere in the RSGB 21/28 mc/s phone contest results and in the RSGB Affiliated Societies contest results.

Finally, may I end this report to you on a warning. Material for this Mercury has come entirely from the Regular Army and AER (Wot! No ex-Corps Amateurs able to help?). No overseas Member has yet given us any details on the overseas Clubs and their activities. Very few contributions mean a poor Journal - YOUR journal - and if 'Mercury' is to continue to interest and inform, members must help. Articles need not be masters of the English Language, nor typed on expensive paper. I can always read it and reshape the article if necessary. The Society will pay a small fee in future to those kind enough to spare the time to give us a contribution. How about it?

73' s from G3NJM

MEMBERS PURCHASING SCHEME

Certain manufacturers will allow us some discount, but if the discount is to be kept, the turnover must be fairly regular.

In view of the continual changes of discount, members requiring-

- a. Tx, Rx (Kits or already built)
- b. Components
- c. Aerials

should first inquire from the Treasurer if the desired make can be obtained more cheaply through us. The Treasurer will then inform you of the discount and how much you should send. This will include carriage.

YOUR REPRESENTATIVE

There is a Representative in each Command at home and overseas. Your representative is there to help and represent you. Your problems should be sent to him and should he not be able to help, he will contact Headquarters. Please use your Representative and let your wishes be known to him. Will Command representatives confirm their addresses as soon as possible. Will CSO's branches who have yet to nominate a Command representative, please let me have their nominations as soon as possible.

G3NJM

TA/AER Representative

Captain A. TAYLOR, R Signals (GW8PG),
37, Peckerill Road,
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Northern Command Representative

Captain (TOT) A.C. EARL R Signals (G3FGN),
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Southern Command Representative

Lt Col Sir E. NEPEAN, Bart. (Retd) (G5YN),
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Eastern Command Representative

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OC, 236 Sig Sqn (COMCAN),
BFPO 10,

NEARELF

Major J.R.T. PATERSON, R Signals,
Signals Branch,
HQ NELF,
BFPO 53.

FARELF

Captain K.W.E. FERGUSON, R Signals,
Signals Branch,
GHQ FAREAST LAND FORCES,
c/o GPO SINGAPORE.

Your Contributors

Four authors have Generously given their time and skill to send us their articles for 'Mercury'. As I happen to know all of them personally, I can give you some gen. about them.

G3DSS, Major G.S.SYMONS is our Treasurer. He is an expert on SSB and has been a keen and experienced sidebander for at least 5 years. He has built and experimented with many types and designs of SSB exciters and their power supplies. G3DSS has been largely responsible for the efficient and active HQ station and he has spent many hours of his spare time in building aerial towers or rewiring the benches or some such unselfish activity. He also is an expert on silicon diodes - and has learned the hard way! (Is it 15 you've blown?)

G3IBB, S Sgt. (F of S) R, WALMSLEY, is serving with 8th Signal Regiment. He is always to be found in the middle of deep technical discussions on club nights, explaining his arguments most thoroughly. He is a keen CW man (which is rare up here - as we're all SSB types!) and during the recent Affiliated Societies Contest was happily working his own make and design of electronic key around 30 wpm. He has, however, at last seen the SSB light and is going off on a posting in July with a KW Viceroy.

GW8PG, Captain A. TAYLOR, is, of course, our TA rep. In civilian life he is Senior Project Engineer in charge of a large section producing technical handbooks for data processing equipment (phew). He is a keen and active member of 404 Sig Sqn TA - the famous former Army wireless Reserve Sqn AER. This Squadron is too well known for me to add anything but if you hear GB3AWR work 'em - for 404 Sig Sqn TA are at Annual Camp.

Last but by no means least is G3EJF, WO II J.E. HODGKINS, another member of 404 Sig Sqn and the editor of their Amateur Radio Newsletter "Broadcast". But has the great honour of having a wife who is also a licensed Radio Amateur - it must be absolute bliss - no worries about working DX late at night etc.!

I hope many more of you will follow the lead of these brave authors. We'll pay for articles wef date. Come on - have a go!

G3NJM

A Quart from a Pint Pot

by G3DSS

Every time I move, the same problem comes up. My station just won't fold up small enough. I nearly always leave half behind (to the local hams delight) and have to build anew at the far end. About six moves ago I decided that power supplies were not only too heavy for MFO, but were most easily replaced. Since then I have always used a separate, power supply for my transmitter, and have burnt out several receiver power packs by trying to run the Tx off them in order to get on the air quickly. I think I now have the problem licked. The answer lies in economy supplies and Silicon diodes. It helps too, to operate SSB and so reduce the average drain on the power supply.

You can read the theory of these Silicon diodes in any modern text book. All that matters is that they are small, light efficient and now cheap. The only thing to watch is their Peak Inverse Voltage rating. If this is exceeded you will probably need a new transformer, since they usually fail into a short circuit. This can be taken care of by the use of an old fashioned fuse. I use 10-50 ohm resistors, which also act as surge limiters and burn out before the transformer.

The permitted output voltage of a supply using these diodes depends on the circuit used and the piv rating of the diodes.

For example, in Fig 1, a half wave rectifier circuit is used. If the voltage as read on an AC voltmeter across the secondary of the transformer is 200 v the peak voltage will be $200 \times 1.4 = 280\text{v}$, and the output voltage across the condenser may rise to 230v. A quick check on the non conducting half cycle will show that the peak inverse voltage across the diode is 560v (280v on the condenser, in series with 280v across the transformer secondary).

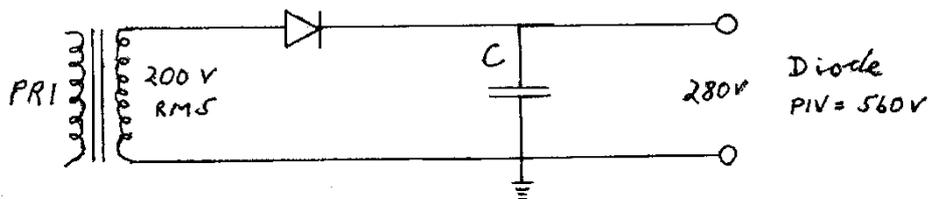


Fig.1

The full wave circuit, Fig 2, with a transformer showing 200 - 0 - 200v rms, will have the same voltage across the output condenser, but needs two diodes, each subfud to 560v piv.

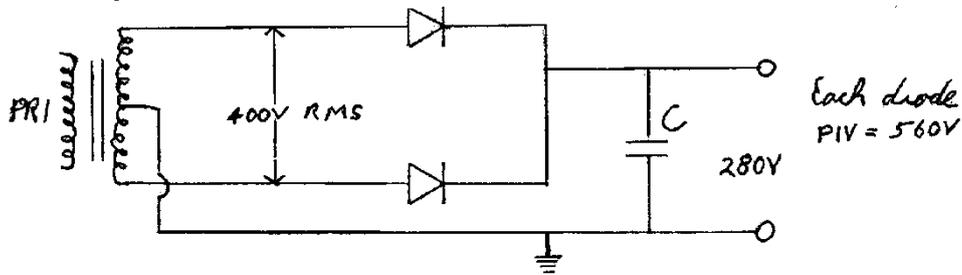


Fig. 2

The bridge circuit of Fig 3 with the same 200 - 0 - 200 transformer as that used in the full wave circuit of Fig 2, will give a maximum voltage across the output condenser of 560v, and requires only 4 diodes of 560v piv rating. As a bonus, 280v is also available at the centre tap.

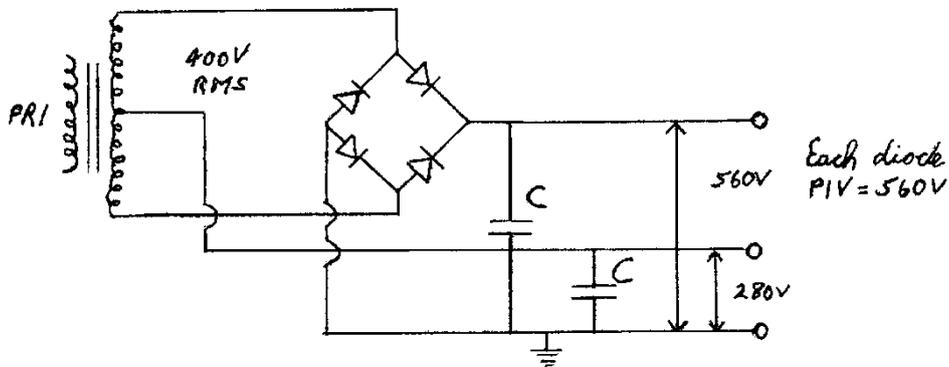


Fig. 3

All these output voltages are the off load voltages, and will depend on the load and size of condenser, but are the maximum values which may be expected. However they will be higher than voltages available from similar hard valve or selenium rectifier circuits, since the forward resistance of the Silicon diode is very low. I run a 180 pep sideband exciter similar to the G2DAF design. It uses 14 valves and has a QQV0 6 - 40 at the final stage The power supply is a chassis 6 x 4 and weighs little. It uses a C core transformer of 300 - 0 - 300 and 4 Silicon diodes of 1000v piv (8/6 each) the final kicks to 250 mA at around 800 volts and the remaining stages take about 100 mA at 250 volts. The circuit is shown in Fig 4.

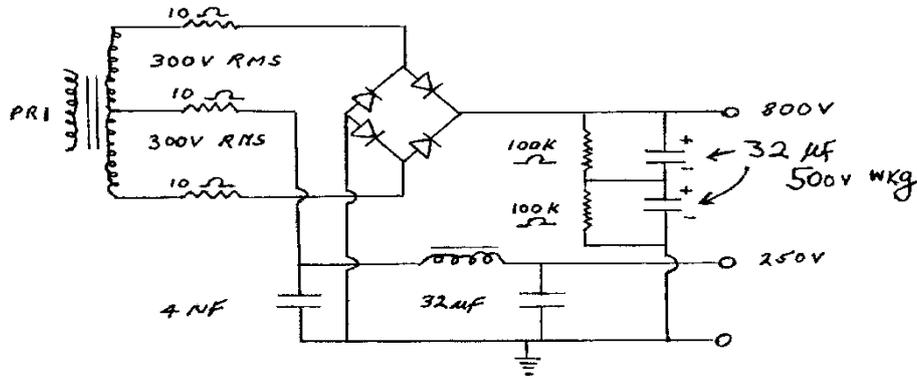


Fig. 4

Next time I move the locals will be out of luck - at any rate as far as power supplies are concerned.

Further thoughts, 11 diodes later!!

The back resistance varies from diode to diode, so that if a chain is used the piv may not split equally. This can be overcome by paralleling each diode with a resistor of 100 - 500k. These being lower in value than the back resistance of the diodes ensure that the piv is split evenly between the diodes.

When using a "good" transformer, e.g. C core a high voltage transient appears across the secondary when switching on. This may exceed the piv of your rectifier and break down a diode. Fortunately it is easily reduced by a small capacity of 200-500pf. This can be placed across the entire secondary, or one across each chain of diodes. The working voltage should be as high as possible. A suggested circuit is shown at Fig. 5.

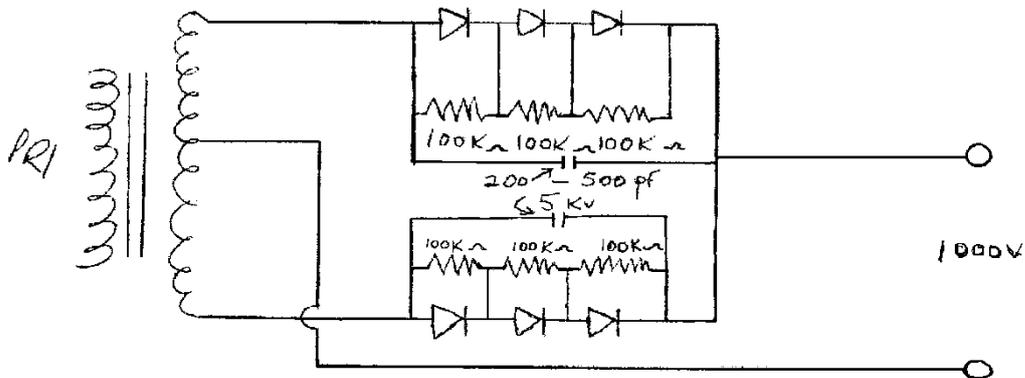


Fig. 5

Voltage Regulation - The Use of Neon Tubes

By G3IBB

All neon tubes have certain 'vital statistics' which include:-

- (a) A range of current over which the voltage across them remains substantially constant.
- (b) A minimum voltage at which the gas ionises, called the striking voltage (V_{ST}).
- (c) A working voltage (V_{WG})

These characteristics may be found in the 'Radio Amateurs Handbook', etc..

If the neon tube is to work correctly, it is good practice to select a value of current flow through the neon which lies in the middle of its current range. For example - if a neon tube has a current range of from 5 - 30mA, the current through the neon (I_N), should be chosen to be about 15mA. This means that the load current (I_L) should decrease by 10mA or increase by 15mA: the voltage across the load remaining constant.

The problem is to select a suitable value for the dropping resistance R_B in Fig. 1

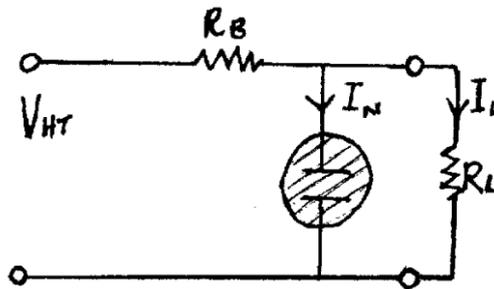


Fig. 1

This may be calculated from $R_B = \frac{V_{HT} - V_{WG}}{I_N + I_L}$ the equation:-

For example - with a supply voltage (V_{HT}) of 300 volts, and a neon tube with a current range of 5-30mA, a working voltage of 150 volts and a striking voltage of 180 volts, find a suitable value for R_B when the load current is 15mA.

(Note:- load resistance

$$R_L = \frac{V_{WG}}{I_L} = 10K).$$

A suitable value for I_N would be 15mA; in the middle of the working range of the tube.

From the equation:-

$$R_B = \frac{300 - 150}{15 + 15} \text{ K ohms}$$

i.e. $R_B = 5\text{K ohms}$

The use of these equations are best illustrated by three examples.

(1) A neon tube has the following characteristics:-

$$\begin{aligned} V_{WG} &= 150\text{v} \\ I_{WG} &= 5 - 30\text{mA} (I_N = 15\text{mA}) \\ V_{ST} &= 180\text{v} \end{aligned}$$

What is the minimum value of load (i.e. maximum load current which may be used with a supply voltage of 300v ?

From equation (1) :-

$$R_L(\text{min}) = \frac{300(180 - 150)}{15(300 - 180)} \text{ K ohms}$$

i.e. $R_L(\text{min}) = 5\text{K}$ (corresponding to 30mA maximum load current)

Any greater load resistance may be used (i.e. any smaller load current), of course and the value of R_B is found as before. (It is not necessary to check the strike voltage).

(2) It is desired to stabilise a load of 20K at 280v. A 500v supply is available and the striking voltage of the neon tubes available will not exceed 420v. What must be the current range of a neon tube to satisfy these conditions?

From equation (2):-

$$I_N = \frac{500(420 - 280)}{20(500 - 420)} \text{ mA}$$

i.e. $I_N = \underline{43.75\text{mA}}$

In this case, if I_N corresponds to half the maximum current of the tube, the neon must have a maximum current range in the region of 81.5mA. An STV289/80 would be the obvious choice.

(3) Using the same neon tube as the first example, and a load current of 50mA, what is the minimum supply voltage that can be used?

From equation (3):-
$$V_{HT}(Min) = \frac{3 \times 5 \times 180}{15(3 \times 14 - 180 + 150)}$$

i.e
$$V_{HT}(Min) = \underline{540v}$$

Any supply greater than this may be used, of course, and the value of R_B calculated as before. If a 600v supply were available;

$$R_B = \frac{600 - 280}{28 + 50} \text{ K ohms}$$

i.e.
$$R_B = \underline{4Kohms}$$

Finally, the power rating of R_B may be found from the equation:-

$$W = (V_{HT} - V_{WG})(I_N + I_L)$$

In the last example,

$$W = \frac{(600 - 280)(15 + 50)}{1000}$$

i.e.
$$W = \underline{20 \text{ watts}}$$

Brain Teaser

A black box has five terminals. The resistance measured between any pair of terminals is 1.5 ohms.

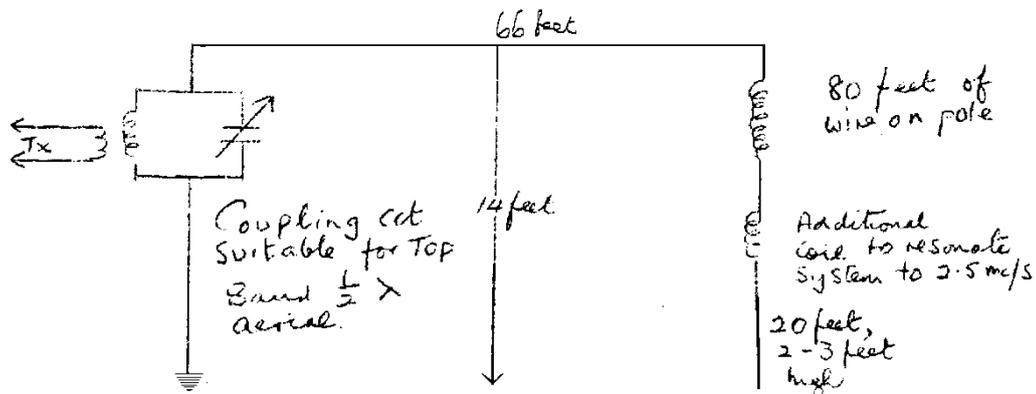
What's in the box?

(Answer next time)

AN END-LOADED TOP BAND AERIAL by GW8PG

The writer is fortunate enough to be able to put up a half wave aerial for Top Band use at his GW QTH, but at G8PG/A in Cheshire the best aerial which can be erected is a 66 foot end-fed wire about 14 feet high. Matters are further complicated by the fact that the earth lead is about 25 feet long. Attempts to operate the 66 foot wire as a base loaded Marconi were not at all successful. The outgoing signals were poor, owing to most of the current being dissipated in the base loading coil, and the presence of this coil in the vicinity of the transmitter caused serious RF feedback troubles. In order to get the RF out of the shack it was decided to load the aerial at the far end sufficiently to allow it to be parallel tuned at the shack end. As a first experiment a coil consisting of 80 feet of wire was wound around the pole which supports the far end of the aerial. The average diameter of this coil is about 2½ inches and the length about 10 feet. The shack end of the aerial was parallel tuned and the earth connection used. The improvement in results was startling. Signal reports increased by 2 or 3 S points and the RF feedback troubles disappeared completely. An interesting feature was the excellent reports received from mobile stations at distances of up to 30 miles, and the good reception of such stations. It is felt that this is due to radiation from the long vertical coil. After tests it was found that the loading was still not quite as good as it might be. Investigation with a GDO revealed that the top plus loading coil was resonating at 3.3 mc/s. A further coil, plus 20 feet of wire a few feet above ground, was added to the system and adjusted to give resonant frequency of 2.5 mc/s. When this was connected to the parallel tuned aerial coupler the transmitter loaded perfectly and results since have been excellent. Local stations comment on the strength of phone signals and all parts of the UK have been worked on CW under summer conditions. The HF band performance of the 66 foot wire has not been spoilt, probably due to the large coil at the end acting as an RF choke at these frequencies.

While lack of time has prevented a full investigation into the theory of operation of the system, it is considered that the 66 foot top is functioning as if it were a piece taken from near the centre of a half wave aerial, where current and radiation are at a maximum. This theory is obviously supported by the fact that the aerial can be voltage fed, and also by the excellent results obtained.



AN INEXPENSIVE AERIAL MAST by G3EJF

If you are well in with the Quartermaster you've probably borrowed a 34 footer and with the assistance of a number of muscular friends have put the thing up, but let's suppose you've no friends except the XYL and urgently need some means of getting the sky wire where it will be some good. here's how you can make a 30 foot stick for about thirty bob and erect it with the help of only one other person (the XYL).

You need three 16 foot lengths of rough sawn 2" x 2" timber (7d a foot), planed timber costs a penny a foot more. Try to get lengths that are free of large knots as these would weaken the structure. You also need three bolts of about ½-in diameter 7-in long complete with nuts and washers, two bolts of the same diameter but only 4-in long with nuts and washers, a piece of wood about 2-ft 9-ins long, 3-in x 1-in will do nicely, and the necessary rope or wire for the guys.

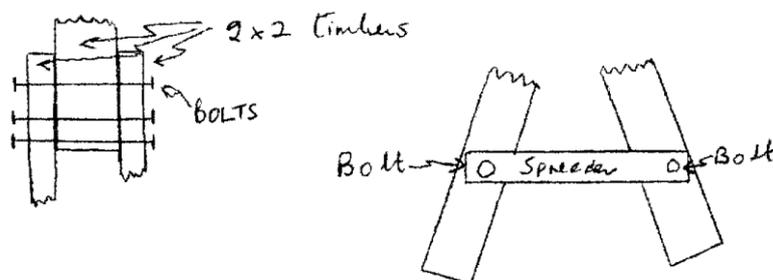
Lay the three lengths of 2 X 2 on the ground as shown in the drawing so that they overlap by about 2-ft 6-ins. Clamp them somehow (get the XYL to sit on them) and drill the holes for the bolts. Help the XYL to her feet and place the bolts in position. About 2-ft from the bottom of the two lower lengths drill holes at right angles to the bolts at the joint and also drill holes 2-ft 6-ins apart in the piece of 3 x 1. Splay the legs of the mast and bolt the 3 x 1 as a spreader.

Fix three guys and a halyard to the top of the mast and two guys at the middle and you're ready to put it up. With the XYL stopping the bottom from wandering walk the mast up so that the legs are at right angles to the direction of the aerial and fix the two centre guys in line with the aerial. Providing you don't pick a windy day it is quite easy to hold the mast upright whilst this is done. One of the top guys should be directly in line with the aerial to counteract its pull and the others should be placed at 120 degrees to the first. If the installation is to be permanent it may be advisable to stop the feet from wandering by driving stakes into the ground alongside them and binding with wire.

Painting the wood with creosote will help to prevent rot and it is a good idea to give the nuts and bolts a good coating of grease, as you may want to pull it to pieces some day.

This A-frame mast is quite stable. One in use on Field Day on uneven ground swung through ninety degrees when rain caused the guys to shrink and lifted one of the feet off the ground, despite this it stayed up and swung gently back again as the guys dried.

With the increased use of sectional steel scaffolding, wooden scaffold poles are difficult to obtain and the A-frame is a very convenient and cheap substitute.



The Meanest Match

by
G3NJM

Several designs have been published that measure power in the aerial feeder.

They all show whether the power is forward or reflected. Here is a simple design which will enable you to include Top Band - which is surely one of the most important bands as regards aerial efficiency.

Construction is simple and sure-fire. Most components will be in the junk-box except for the meter. If top-band is needed, a 50 microammeter is needed otherwise a 500 microA meter will suffice. 50 microammeters are available for 20/- from Testgear Components of London.

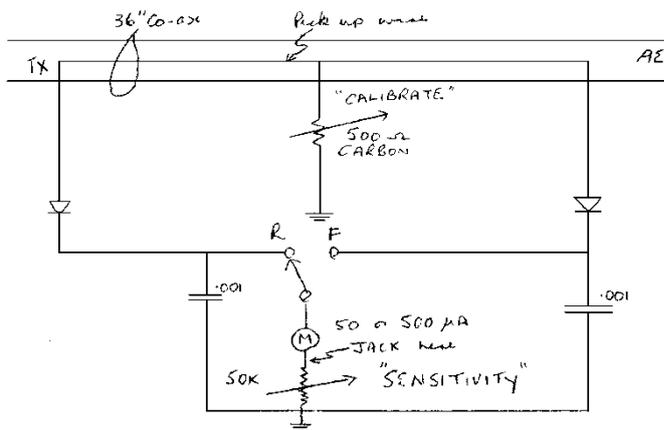
Co-ax with holes along the insulation between centre conductor and braiding is needed. Take two 18 inch lengths and carefully insert a 24" length of 32 swg enamelled wire in one of the holes of each length of co-ax. Now solder together the two pieces to make one 36" length, but ensure the junction of the enamelled wire is still accessible. Now we have one length of co-ax with a pick-up wire along the whole length which extends 3" each end. Be careful that the two ends of the pick-up wire do not get pulled back in again or you'll spend some minutes poking around! Wind the co-ax in a hank around the meter when you build it into its box.

That's about all - follow the circuit diagram and it will work.

Personally I find an Eddystone diecast-box makes an excellent if expensive housing.

Calibration is simple. Connect TX socket to TX, AE socket to a dummy load and load up your TX. Switch to "Reflected Power" and adjust Calibration for a ZERO reading at the same time reducing the "sensitivity" control until an absolute zero reading is obtained. Now switch to "Forward Power" (watch the needle doesn't wrap itself round the stop!) and you will obtain a full scale deflection, depending on the "sensitivity" control setting.

As the 50K pot is common to both reflected and forward power, it can be calibrated in terms of SWR.. Finally if you want to monitor the audio, insert a phone jack between the meter and 50K pot. Its all pretty simple but you'll wonder how you did without it!



Review of the RSGBs "Radio Amateurs' Handbook"
by G3NJM

The 3rd edition, some 11 years after the 2nd edition, has recently been published and costs £1 16s. 6d. post free from the
RSGB,
New Ruskin House,
28/30 Little Russell Street,
LONDON W. C.1.

It contains some 500 pages divided into 22 chapters which include fundamentals, transmitters, receivers, aerials and operating notes. The book is printed on good quality paper and is strongly bound. This is considered an excellent point as the book will not fall apart after a few years service. The book fulfils a long awaited need amongst Radio Amateurs and those interested in Amateur Radio.

Technically the book is sensibly and logically presented, and a novice will find. he is carefully brought along and then presented with practical and efficient circuits, the components of which are readily obtainable. For the more experienced the book is an excellent reference and yet still offers the Radio Amateur a number of new techniques that have previously been the subject of articles or complete books.

Illustrations are plentiful and clear and are backed up by bold circuit diagrams. The book cannot hope to cover every aspect of Amateur Radio in minute detail, but every facet has been generously and well treated. I consider that this book is very well worth the money.

General Points

DO PRINT your- name and address when writing to HQ. Many of you still forget and if you include your number this helps enormously. It helps us to help YOU.

DON'T write direct to manufacturers about R Sigs ARS discounts - please deal only with the Treasurer, Major G.S. Symons, G3DSS, 8th Signal Regiment, Catterick Camp, Yorks.

DO write to your Command rep if you have problems - CSO's branches are always willing to help if they can. This keeps the Command rep in the picture.

DO let us have articles for Mercury, especially you overseas members. The "other man's station" idea has yet to be exploited.

DO Inform G3DSS of any changes of address. Command reps are especially urged to let us know when their tour is approaching its end so that a relief may be nominated.

Finally, DO support the Purchasing Scheme. G3DSS will always advise you about this and tries to give YOU an efficient service. Remember most delays occur at the manufacturers end and in the time it takes to deliver large packages by train.

LIFE MEMBERS

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7	Capt.	J.E.P.Philp	G3NJM	12 Rawinson Road, Catterick Camp
10		H. Ward	G3EMO	24 Manor Way, Woolton, Liverpool 25.
16		D. Dumbleton	G3HCM	321 Tile Hill Lane, Coventry, Warwickshire.
17		D.A.W. Clarke	G4JT	94 Ennersdale Road, Kew, Surrey.
19		P.B. Gaunt		2 St. James Walk, Horsforth, Nr. Leeds
22	Major	J.W.W.Cock	G3HN	12 Church Hill, Purley, Surrey.
23		N.I. Bower	G5HZ	Little Priors, Peppard, Henley-on-Thames, Oxon
25		T.W.Mitchell		7 Burlish Crossing, Stourport-on-Severn, Worcs.
29		E.R. Frarey	G3DMK	31 St. Johns Road Hipswell, Catterick Camp, Yorks.
30		E.W. Ashley	G3OHJ	188 London Road, Romford, Essex.
32		B.C. Terrell		c/o Bank of Montreal, Montreal, Quebec Province, Canada.
39	Major	D.W.J. Haylock	G3ADZ	3 Norris Gardens, Grange Estate, Havant. Hampshire
40	Sir	E.Y. Nepean	G5YN	Greystones, Teffont, Salisbury, Wilts.
42		D.C. Mainhood	VS9ADM	c/o Pobol 1158 Tawahi, Aden,
43		J. Pijou	G3CRP	7 Gloucester Walk, London W.8
45	Major	J.L. Donne	G3NWZ	Lisburn, 82 Kings Ride, Camberly, Surrey.
46	WO I	R. Webb	G3EKL	2 Sig Regt, BFPO 22.
47	Capt.	P.V.C. Dolan	G3PCV	HQ Mess, R. Signals
48	Brig	Ridley Martin		CSO Eastern Command
49	WO I	R.E. Howard		3 Sqn, 14 Sig Regt, Worcester Road, Droitwich, Worcs.
61	Major	J. C. Clinch	DL2ER	HQ 1(BR) Corps, BFPO 39
68	Capt.	A. Earl	G3FGN	AAS Harrogate
76	Major	D. Barry	GW3ONU	All Arms, Junior Leader Regt, Tonfanau Camp, Towyn, Merioneth.
78	Capt.	R.A. Macheath		HQ 1(BR) Corps, BFPO 39
79	Lt.	J. Passmore	G3PNE	1 Sig Regt, BFPO 32.
85	WO I	D.A. Bowden	DL2AB/G3PNF	205 Sig Sqn, BFPO 24.
88	Major	B.H. Townson	VS9AST	HQ Middle East Command, BFPO 69
96	Major	W.D. Capjon		38 Lyons Crescent, Tonbridge, Kent.
97		J.A. Clark	GM2HIK	The Boal, Reswalie, Forfar, Angus.
100		T. C. Wylie	G3MEF	Wylcot, Manor Park, Barnstaple, Devon.
107		J. McIntosh	GM3IAA	Broom Park, Gradlehall, Inverness.

Annual Members

Members No.

5		W.E. Caughey	G12DZG	55 Gilnahirk Park, Cherry Valley, Belfast.
6		J.W. Blackery	GM3GFO	Kirmay Road, Crail, Fife.
8		J.W. Roberts	G3OKX	34 Preston Avenue, Alfreton, Derbs.
9		A.E. Wakeman		29 Islmaton Road, Southville, Bristol 3
11		B. Haywood	G3MKR	15 Tunnicliffe St, Macclesfield, Cheshire.
12		W. Short	G2HNP	88 Lynn Road, Newbury Park, Ilford, Essex.
13	Capt.	E.J. Walke	BRS-22870	13 Southbrook, Place, Micheldever, Winchester, Hants.
14		R. Parsons	GI3HXV	45 Erinvale Ave, Finaghy, Belfast
15		G. Courtenay Price		Hilcourt, Freshwater East, Pembroke
13	Major	C.W. Andrews	MC G2TP	Haslemere, Pilgrims Way, Dorking, Surrey.
20		P.H. Jackson		15 Oldfield St. Leeds 12.
21		A.J. Rawlings	G3PFC	43 Mackie Ave, Filton, Bristol.
24		F. A. Herridge	G3IDG	96 George St. Basingstoke, Hampshire.
26		A. Taylor	GW8PG	37 Pickerill Road, Greasby, Upton, Wirral, Cheshire.
27		E. Davies	G3PGM	Tape Lane, Hurst, Reading, Berks.
28		R. Webster		138 Parklands, Little Sutton, Cheshire.
31		D.C. Jack	EI3AH	Dungar Park, Roscrea, Co. Tipperary, Eire.
33	Sgt	Threlfall		8 Sig Regt
34	Cpl	Burton		47 Bede St. Roker, Sunderland.
35	L/Cpl	King		59 Godfrey Avenue, Whitton, Middlesex.
36	WO II	Richardson		8 Sig Regt
37	S/Sgt (F of S)	R. Walmsley	G3IBB	8 Sig Regt
38	Sgt	Nixon		School of Signals
44		A. Butler		8 Sig Regt
50		J. C. Foster	G2JF	Wye College, Nr. Ashford, Kent.
51	Major	R. P. Little)	
52	Major	R.A. Lawson)	
53	WO II	Foulkes)	
54	S/Sgt	Blackwood)	3 Sqn, 42 Sig Regt TA, Signal House,
55	S/Sgt	Hughes)	Score Lane, Liverpool 16
56	S/Sgt	Jamieson)	
57	Cpl	Hughes)	
58	Cpl	Johnson)	
59	L/Cpl	Moffitt)	
60	L/Cpl	Corner)	
62	Sgt	Akehurst	G3OAZ	106 Llanmiloe Estate, Pendine, Carmar, S. Wales.
63	Capt.	F. Sweet	G3CIV	30 Preston Road, Lytham, Lancs.
64	L/Cpl	Barlow		31 Princess Ave, Warsop, Mansfield, Notts.
65	L/Cpl	Jorwett		70 Spring, Road, Bedford.
66	Sig	Buckley		Whitecross Road, Tideswell, Brixton, Debs.

Annual Members (Cont'd)

67	Sig	Roper		133 Dartmouth Road, Forest Hill, London S.E. 23
69		M. Ireson	G3OKB	Church Lane, Bulwick, Corby, Northants.
70	S/Sgt	Bennett	G3HJI	Sgts Mess, 9 Sig Regt, BFPO 53
71	L/Cpl	Wilson)		
72	Sig	Hainsworth)	ZC4SG	
73	Sig	Fleming)		2 Tp, 2 Sqn, 9 Sig Regt, BFPO 53.
74	Sig	Marriage)		
75	WO II (F of S)	Brown V.		4 Sqn, 14 Sig Regt, Cobbett Hill, Normandy, Guildford, Surrey.
77		P. S. Harris	G3IUH	32 Avondale Road, Waterlooville, Portsmouth, Hants.
78		F.S. White	G3JFW	82 Nottingham Road, Hucknall, Nottingham.
80	Sgt	Tanner	G3NOT	24 Signal Regt.
81		A. Stanley		4 Thorley Lane, Bishop Starford, Herts.
82	Capt.	J.W. Douglas	GI3IWD	54 Kingsway Park, Cherry Valley, Belfast 4.
83	Cpl	F. Nicholson	ZC4SS	3 Sqn, 9 Sig Regt, BFPO 53.
84	Sig	M. J. Bagg		2 Sqn, 9 Sig Regt, BFPO 53.
86		H. Tallis		12 Zetland St, Clackmannan
87		W.A. Sinclair	GM3KLA	ARK, Haroldswick, Shetlands.
89		E. Ross	G3LWS	Scurragh Lane, Skeeby, Richmond, Yorks.
90	S/Sgt	J. Cooper	G3DPS	Crossways, Blandford Camp, Dorset.
91	WO II	Shelley	G3NZY	8 Signal Regt.
92	Sig	Brown-Greaves	G3NOL	2 Sqn, 8 Sig Regt, Catterick Camp
93	Sig	Whitehead		8 Sig Regt.
94		J. Ashford	G3KYU	9 Well Meadow Gardens, Copthorne, Shrewsbury, Shrops.
95		J. Harvey		2A The Avenue, Rubery, Nr. Birmingham.
98	Cpl	Haddleton		2 Sqn, 24 Sig Regt, Catterick Camp
99	S/Sgt	Graham		2 Sqn, 8 Sig Regt, Catterick Camp
101		P. Gordon	GM3NXA	2 Kintillo Road, Bridge of Earn, Perthshire.
102		D.F. Craig	GM3AWF	3 Riverview Terrace, Bo'ness, W. Lothian
103	Sig	Careless		2 Sqn, 8 Sig Regt.
104	Major	R.J. Hughes TA, TD		Farleigh, 65 Harlands Rd, Haywards Heath, Sussex.
105	Capt.	A.D. Hall TA		3 Sqn, 42 Sig Regt TA, Signal House, Score Lane, Liverpool.
106	2/Lt	Titterington TA		3 Sqn, 42 Sig Regt TA, Signal House, Score Lane, Liverpool.
108		J.K. Fidler	G3OYP	4 St. Lawrence Drive, Eastcote, Pinner, Middlesex.

NEW RULE 5

The amended Rule 5 is shown below. Those members with the old Rule 5 are asked to cut out the new one and paste it over the old.

5. MEMBERSHIP

The Society shall provide for the following classes of membership:-

- (a) Ordinary Membership shall be granted to individuals who are past or present members of Royal Signals, who are not for the time being members of an Affiliated Club or who are interested in amateur radio as a hobby.
- (b) Associate Membership shall be granted to Amateur Radio Clubs of Commonwealth Armies.
- (c) Affiliated Membership. Provision shall be made for R Signals Clubs or any Amateur Radio Clubs and Societies having a loose allegiance to the army to become affiliated to the Society at a cost of 10/-. Such Clubs and Societies will not be eligible to take part in the Members Purchasing scheme.
- (d) Honorary or Life Honorary Membership free of all subscriptions or dues, but having all privileges of full membership, may be granted to such persons, who in the opinion of the Council of the Society, have rendered outstanding service to the Society.

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