



# MERCURY

**THE JOURNAL  
OF THE  
ROYAL SIGNALS  
AMATEUR RADIO SOCIETY**

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**ROYAL SIGNALS AMATEUR RADIO SOCIETY**

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G4RS OPERATES ON 3720 khz ( $\pm 2$ khz)  
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SPRING EDITION ..... APRIL

SUMMER EDITION .... JULY

AUTUMN EDITION ..... OCTOBER

WINTER EDITION ..... JANUARY

ITEMS FOR THE NEXT EDITION TO REACH THE EDITOR BEFORE 14<sup>TH</sup> MARCH 1971. THANK YOU.

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EDITORIAL COMMENT.....HOW TO LOOSE WEIGHT PAINLESSLY.

Well the warning did go out in previous issues about a reduced size of Mercury. I am only sorry that much of your favourite reading material has had to be omitted from the New Look edition, however, the reproduction of Mercury has involved the Reproduction Centre of the School of Signals in a great deal of extra work and this factor, coupled with the cost of sending out each issue, has made this step necessary. No need to feel glum however, only the quantity has been reduced, not I hope, the quality.

I intend to leave the main items such as Technical Topics, a reduced welcome section, the awards information from our man at the Mecca (Catterick to the uninitiated), the Contests Manager, Station Manager and Treasurer's pages together with the usual sections dealing with the general items of interest to RSARS members only. The Other Awards section will be omitted, as will other Hobbies and Snippets sections. In general, I hope to keep the editions down to about 25 to 30 pages and this, together with a better organised system of collating the 30,000 sheets of paper used to make up each issue, will result, I hope, in as good a Journal as you will get anywhere for the price.

On to happier topics....like money. The Society has been given a (Tax Free) grant of some £50, to be spent on improvements to the Headquarter Station equipments, I anticipate that all of this sum will be spent on test gear for the workshop side of the Club. As we all know accurate and reliable test equipment is as essential to an operator as his rig, be it homebrew or commercial. Visitors to the club will be encouraged to use the equipment we have here and to use the test equipment on projects of their own. The comprehensive library at the club station is also for use by all RSARS members, however the cost of sending a particular book or reference sheet to members, must be borne by them and a limited loan period imposed.

Happenings at the HQ include the arrival of Bill Graham, who is known elsewhere as G3KPQ, but here is in the exalted position of GENERAL SECRETARY to the Royal Signals Amateur Radio Society. Bill has taken over the post from myself and with the assistance of the remainder of Committee here, will, I am sure, get his feet quickly under the table and lead us all to great things in 1971.

It is ten years since the idea of forming a Royal Signals Amateur Radio Society was first put to a few dedicated members of our Corps at Catterick. The first ever "Mercury" consisted of 9 pages of general information about the society a was distributed to all the 22 members of the RSARS. This figure included the five operators of the then HQ station G3CIO, based at Catterick. Under the heading of "THE FUTURE", the hopes and dreams of the Society Officers were expressed in such a way, that even now, ten years later, I feel that their words must still apply to all our members.

"Our Society is very new and must learn to walk before it can run. Other famous Amateur Radio Societies have taken a long time to get going, so don't expect miracles overnight. Your officers are constantly aware of their responsibilities and will do everything possible for you. Even in 1961 letters still take up to a week to reach their world-wide destinations. The future if this Society is in your hands for the life-blood of it is the members themselves whose vital support we need. More members mean that the Society has bigger funds to help you. Finally, what could be better than that our Corps should succeed in running and operating a first-class Society that could well be a model for an Army Amateur Radio Society."

I can only hope that we have managed to make this Society all that it was thought it should one day be. If we have, I am sure that Amateur Radio throughout the world has benefitted by the interest shown by 22 Radio Amateurs, just 10 year

→ 3<sup>s</sup>

*Ray Vasher*  
G3VIY

MERCURY MAILBAG.

A SELECTION OF THE MORE INTERESTING BITS AND PIECES TAKEN FROM LETTERS RECEIVED HERE AT THE SECRETARIAL DESK, SINCE THE LAST EDITION WAS PUT OUT. ALL LETTERS ARE INTERESTING AND DESERVE A MENTION, HOWEVER, DO NOT FEEL MISSED OUT IF YOUR LETTER IS NOT SELECTED. REMEMBER I FEEL AS BAD ABOUT IT AS YOU.

FROM CANADA....HARRY BILLARD, VE8CB, is on the lookout for other RSARS members on the freq's 14160, 21300 and 28600 and uses a SB101, SB220, SB610, SB600, SB630, SB640 combination to snare the rare DX. The antenna is a TH6DXX on top of a 50ft tower. Reckon there should be no problems having a QSO with Harry using that little lot. Harry has the number RSARS 708. QTH INUVIK, NWT.

WALES.....Congratulations are in order for our man in Anglesey, Mr. H. W. Powell (690), who was awarded the Imperial Service Medal by HER MAJESTY QUEEN ELIZABETH II. The award was made for Meritorious service after the completion of nearly 30 years service with the RCT fleet at Portsmouth. Very well done, may your retirement be a long and happy one and congratulations for being rewarded as a result of a job well done.

Nigeria.....Mike Dransfield (139) in his last letter from the 5N2 QTH, asks if the fact that he operated four different calls from the same spot; ZD2JKO, 5N2JKO, 5N2AAF, and 5N5AAF, counts as some kind of record. I DON'T KNOW MIKE, NICE TO HAVE YOU HOME ANYWAY, AND AWAY FROM ALL THOSE NASTY PILE-UPS. CU SN ON 80 MEBBE,,,,?

Staffordshire.....Mr. R. S. Worton (249), asks if any member in our 800+ membership, remembers the work of the 1<sup>st</sup> SPECIAL AIR SERVICE, the SPECIAL BOAT SQUADRON, THE LONG RANGE DESERT GROUP and THE GREEK SACRED REGIMENT. If some of our Young Uns do remember such units, they may like to drop 2571115 R.S. Worton a line at his CANNOCK QTH.

New Zealand.....Mr. R.S. Banks 673/ZL1AUI, suggests that the cost of postage of Mercury to DX stations is added to the subscriptions of those stations, and continues "I feel that Mercury is the most interesting publication of its kind.....helps those located in far flung outposts of the Empire, to keep well up to date with the Society". WE LIKE TO THINK SO TOO RAY.

WEMBLEY..... Bill Corsham, G2UV/330, tells me that although he did not have a QSO with ZC6AA (AUTUMN 69 MERCURY), before the last war, Bill did manage to have a word with ZC6AQ in 1937, with ZC6FS in 1935 and with ZC6FF in 1934. Bill has now been an Amateur Radio operator for 57, YES, FIFTY SEVEN YEARS and is still active both on fone and key. GREAT BILL, I HOPE I AM AS ACTIVE MYSELF IN MY FUTURE YEARS OF OPERATING, AS YOU HAVE BEEN. HOPE I GET AS MUCH FUN OUT OF IT ALSO. YOU MUST BE OUR OLDEST OM.

CALIFORNIA.....John Neville, WA6CEB/557, lets us in on the mysteries of the Ex G Club activities on 14.347 Mhz, every Sunday of the month. Mode is SSB and stations start to check in around 1800 hrs GMT. Many members on the net are also RSARS DX members, and now that this is known to our membership, it offers a good chance to contact some stateside and DX members, and vice versa. LETS HOPE OUR UK BASED OPERATORS WILL HAVE A GO BILL, G4RS WILL CERTAINLY GIVE IT A TRY.



## OUT OF THE PAST by RSARS 111.

This is the first of a short series of stories based on true incidents which took place during and since the war. Though not completely about amateur radio, the Hero is one of us and his many involvements in radio generally, may make you smile. (Ed.)

'As he walked through the door I wondered where had I seen him before. One thing I did know was that someone was going to 'COP' it. My mind ran back through the years, then I had it...the workshops.....REME base workshops, somewhere up north during the war, about '41 or '42 and he had been a gun fitter or something, but just a second, I'd better give you the whole story.....lets call the hero JOE, its as good a name as any and somehow it seems to suit the chap.

Joe was sitting in the drivers seat of a Sherman Mk III idly scanning the compound, when into view comes this 'ere squaddie' carrying a brand new tool box and sporting a cut price battle-dress, looking as if he had stepped from a window in Saville Row, not a crease out of place and a perfect specimen of what was known in those days as 'one of the Brylcreem boys'.

"Hey soldier" said Joe. "Yes", replied the young lad.

"Say soldier can...

"What do you think this is.....muttered the squaddie pushing forward his arm on which was sewn the biggest sign of the 'Flying Arm-ole' ever to be seen.

"What's that" says Joe. "It means I'm a Radio Tech", said the lad.

"Just the chap I want to see" says Joe, "Have you got a piece of string?"

"String". "AYE Lad, String, I want to make an aerial."

"You're +@@@\* barmy!" roared the tech.

"No, No" says Joe, taking hold of the blokes lanyard, he slipped it from his arm, climbed back onto the tank and started to fasten it to the aerial input.

"Come on, jump to it, get up here and tie the other end to the tool box so there is a dip on the string and we'll soon have some music" with that Joe disappeared into the tank, only to re-appear a moment later. "It's no use man you will have to wet the end"

"Wet the.....".

Yes, wet the lanyard in that fire bucket, fasten it back and then jump in here" said our hero.

Well I must say, the radio feller was game and a couple of seconds later climbed into the turret.

"Now wise guy, this had better be good" he said.

Joe was sitting near the 19 Set and leaning over, flicks on the set, turns up the volume and slowly moves the dials.

"Shush..." says Joe, then...then .. Yes, it was there.

"Germany calling...Germany calling..".

"+@#@\$ hell!" Joe tutted at the interruption "Here's Vera Lynn" and the strains of 'We'll meet again' could be heard.

"Can you get the news" said the tech.

".....and today our troops were engaged..."

"The string, how does it work?"

"Ah" says Joe. "Its got to be wet and you shove it at a slight angle, then the radio waves get caught and the result is that they slide into the input...."

"\$@## impossible!!!"

"What I cannot understand" say's Joe, looking puzzled, "Is the funny part about this"

"What??"

"Well, "muttered Joe, "there's no batteries".

"No ruddy batteries?!"

"No, there are no bloody batteries!", said Joe.

"----\*\*\*---- roll on, it's a sheer impossibility." And with that the Radio tech tears around, only to find to his utmost dismay, an empty battery compartment.

Looking around slowly, Joe shook his head, climbed out of the tank and disappeared in the direction of the canteen. You know no one believed that radio wallah, though he wet that string time and time again. One or two kindly suggested the MO, and it was not long before a suitable posting was found.

And of Joe? Strangely enough he didn't seem to be around any more. If one asked about him, "---oh that chap, wasn't he posted, mmm, quiet sort of a chap". Now here he was back again in uniform after all these years and not looking a day older.

Slowly he looked around the hut, gave the slightest nod, dumped his kit, muttered something about a "cuppa tea" and left me with a strange feeling. Here he was again, this time with a 'Jimmy' in his cap. During this camp and several others I heard the whole of his story, a tale which started in the infantry and ended in the Royal Signals. In the next edition Joe becomes a Signaller in a well known infantry regiment and is assigned to the butts.....the year...1940.

Mr. A. C. FROST, RSARS 111.

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RSARS Cadet Section...by IAN JOLLY (605).

Ian sent along a large selection of CCF mail which he had received since taking over the CCF Section of Mercury. Cadets are invited to drop a line to Ian (QTH inside front cover) with details of equipment used and unusual Natnet happenings. If space permits, I shall be pleased to print snippets like the following, sent in to Ian from John, G3XYF. John's personal callsign on the CCF net is 79. He runs a homebrew Geloso Tx to about 25 watts, with a Hallicrafters SX 101A on the amateur bands. The gear for the Natnet is a homebrew Tx 807 PA, 807 VFO, (This boy sure has a stock of 807s..Ed.) and the modulator from the Geloso Tx (EF86, 12AX7 and a pair of 6L6s). The rx is an Eddystone 730/4 and a CR 100.

The antennae are a G5RV (RSARS 795), a 90ft end fed and more recently, a trapped dipole. John hopes to be able to join the Natnet soon using the School callsign 3B, using another homebrew Tx which is being built by John and G5VO, (RSARS 052 ).

RSARS OPERATING AND LISTENING AWARDS

Have any CCF/ACF members qualified yet? Details of the awards appear regularly in the Mercury and enable you to take an active part in the Society. Remember the Tuesday and Thursday evening nets on 80 meters and 21380 Khz on weekday afternoons for the RSARS DX NET. Contests and activity days are held on the last Sunday of each month. They all provide good times for catching RSARS members on the air.

73s es gud Dx De Ian Jolly RSARS 605

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ACKNOWLEDGEMENTS

The editor would like to acknowledge the following donations sent by our members and to say a **BIG THANK YOU** to all those who show their practical appreciation of the work being done here at the Headquarters, on their behalf.

From Bill, W3RX, RSARS MEMBER 649, a donation of \$25, which helped to pay nearly all the postage needed for the internal distribution of ""MERCURY". Bill Mansell, G2CPM, who sent us 400 used stamps for the RAIBC, as did RSARS No 690 Mr. H. W. Powell, GW5HUM.

Stamps were also donated by G3EJF, G3YSK, ZL1AUI, WA6CEB,G3WNI, and a last minute 10/- by 9M2DQ.

A typewriter was donated by Mike Morphey, RSARS 057, and it is hoped to be able to get it on the road in time to type out the next edition. Des Iles RSARS 651, sent us 10/- towards cost of Mercury postage during the year. Many members sent in a Christmas card for the Staff at your HQ station, they are on display around the club and will be taken down with due ceremony on 12<sup>th</sup> night. Many thanks to you, one and all.

## A SHORT HISTORY OF THE CCF/ACF RADIO NETWORK.....by IAN JOLLY (35C)

With an increasing mention being made in Mercury of Cadet Force signalling, it is hoped that this article will cast a little light on the past and present for those with little or no knowledge of the Cadet Forces.

Signals are nothing new to the Cadet Forces. 1875 saw the formation of the Signals Section at Marlborough College. During the following years up to the early 1930s signalling took the form of semaphore and lamp signalling joined later by field telephone and Fullerphone.

Radio first made its appearance when Marlborough took out two amateur callsigns in the mid 1930s; G5AC was the static station at the College and G2MS was a mobile station (What about reviving these stations?). From these two amateur callsigns under the guidance of the now legendary Commander A.R. Pepin, Officer i/c Signals at Marlborough, appeared a number of cadets experienced in building and operating radio equipment. Of particular interest were the 5metre 'walkie-talkie' sets built and improved by the cadets. These sets were later purchased by the Army for use in the Middle East. The cadets also built and designed VHF manpack set which had a vastly superior performance to WS13 which the Army had just developed. Commander Pepin was awarded the MBE for his contribution to Signals, both Regular and Cadet Force.

In 1938/1939 Commander Pepin started the Public Schools Network. Little is known of the early history. Marlborough was the Control Station of the Network which operated CW only on one to one links. Marlborough operated with the link signs of AOX and AOY; callsigns which were later used by ex-operators from Marlborough when operating the 'underground' transmitters built in the POW camps during the WAR. Other units on the Network believed to have included Christs Hospital, Winchester, Rugby and Cambridge University OTC.

The frequencies in use were 1.8 Mc/s and 3.5 Mc/s. Most of the equipment was homebuilt. Ralph Hill a cadet corporal at Marlborough in 1938 (and more recently of the Signals and Research Development Establishment!) remembers the station at the Armoury, Marlborough. The Tx for 3.5 Mc/s was crystal controlled, CW only, consisting of a single oscillator driving a push-pull triode neutralised PA. Input to the final about 100 watts. A similar set was built for 1.8 except the final used parallel tetrodes not neutralised. The power supply was interesting, the 400 volts for the HT was derived from 200 volts of accumulators in series with the town mains! (They were 220v DC in those days). The receivers were Eddystone modified consisting of 1 RF, detector and 2 AF stages. No official tests for operators existed but Commander Pepin insisted that cadets must be able to read without mistakes, 10 minutes of commercial morse live from a receiver at about 20 to 25 wpm.

Unfortunately the outbreak of war meant the closure of the Network until hostilities ceased.

Even less is known about the years after the War. Apparently immediately after the War, separate networks were started up in each of the UK Commands. Operation in CW only, was on different frequencies in each command. As cadets from different commands met on courses or sports fixtures etc., frequencies and callsigns were exchanged. G3IGG. A cadet signaller at King Edwards Birmingham in 1947, remembers that they allocated themselves the callsign QEX for use on the Northern Com. and 'Queen Easy' net. These unofficial intercommand nets later became recognised as the CCF/ACF INTERCOMMAND RADIO NETWORK. The command nets lived on for some time but gradually died out. Units operated at first on the command nets and when they became proficient enough, operation was permitted on the Intercommand net.

The Natnet of today consists of some 200+ callsigns operated mainly by CCF units in Public and Grammar Schools, Usually only about 10 to 15% of the stations are active at any one time. There are also a few ACF units on the net. Other units with callsigns include R.N.C. Dartmouth, R.M.A. Sandhurst, University O.T.C.s, Junior Tradesmans Regiments at Rhyl and Troon, 241 (Western Command) Sig. Sqn. at Chester and last but not least 30 Signal Regt. at Blandford.

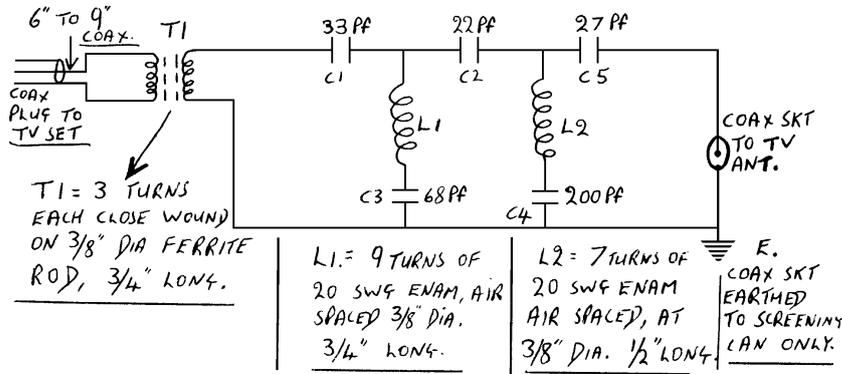




THE DIPOLE SAGA.

More letters/ideas coming in with every mail delivery, on the subject of the best method of feeding a dipole. A few of the novel ideas are reprinted for your perusal. The writer of the initial letter on the subject, Eric Lawrence, G3BIC/402 says the following points might be of interest to those who decide to adopt my suggestion of feeding a dipole or multiband dipole with twin using a balun at the TX end. During recent tests I found that by using the home-brewed G3HZP balun at the TX, I obtained results as stated in an earlier letter i.e., reduction of SWR and TVI. Now I feel prompted to report that the G8KW balun gave identical results. On 80, 20 and 10 mtrs little more than 1 : 1, but on 15 mtrs the SWR was 2 : 1, not bad compared with the SWR figures using coax and no balun.

However, the 'Hi-Gain' balun used in this method gave alarmingly higher SWR than when the dipole was fed with coax. The 'Hi-Gain' balun is physically produced for mast mounting to feed trapped multi-element beams - perhaps this has some bearing on the results, I don't know! I did mention earlier that I live about 1 mile from the Sutton Coldfield Television transmitter, and one might expect TVI problems here to be a piece of cake - it isn't. The signal is strong, so strong in fact that cross modulation is foul (I even get a good picture from the wife's electric cooker!!), (!! Ed.). Feeding my dipole as described together with the following H.P. filter (Fig. 1) at the TV set, effected a 100% cure of my TVI and that of G5LJ.



3/4" length of 3/8" diameter ferrite rod can be broken off a stick of ferrite by filing a circle round the rod with a triangular file. A sharp tap will then effect a clean break. No resonating of the coils appears necessary. The components can all be mounted on Veroboard and slipped into an emptied electrolytic can. The short length of coax is poked through a hole in one end and a coax socket mounted on an aluminium disc which is secured at the open end of the can. Line the can with paper before insertion to eliminate the possibility of component contact with the can interior.

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Continuing the never-ending saga of the dipole, further information is gleaned from a letter sent by EVAN, G5YN RSARS 40. Evan writes, 'I would like to add a few comments to the very interesting article and discussion on feeding a dipole aerial. From the electrical and efficiency point of view, it appears to me that it makes no difference whether the aerial is fed with coaxial cable with the balun at the aerial or with 72 ohm twin feeder with the balun at the transmitter. I would suggest that it is purely a matter of preference end engineering.

The point I wish to make is that a dipole feed with a matched-non resonant-feeder is a one band aerial. Only at the frequency for which the aerial is cut to be an electrical half wavelength long will,

- (a) Provided the aerial is a quarter wavelength or more above ground,
- (b) The centre impedance approximates to 72 ohms,



#### AMENDMENTS/DELETIONS AND ADDITIONS SECTION

All members are asked to amend their copies of membership lists and address sheets as follows.

- 003 G3DSS Mr. G.S. Symonds, Oaklea Farm, Bagber Road, Sturminster, Newton, Dorset.  
New QTH.
- 036 NO CALL Mr. T. Richardson, 30, Whitefield Drive, Richmond, Yorks.
- 039 G3ADZ Mr. D.W. Haylock, "Bowyers", Steep Marsh, Petersfield, Hants.  
This is the same QTH as before. Address only changed.
- 055 MP4TDR Sgt. Wynn, 668 AVN Sqn., BFPO 64. New QTH.
- 060 G3WEQ Mr. C. Collins, c/o 129, Rylston Road, Fulham, London SW 6. New QTH.
- 091 G3NZY Mr. R.L. Shelley, "The Britannia", Hemingbrough, Nr. Selby, Yorkshire.  
Tel. Hemingbrough 9483-327. New QTH.
- 097 VK3ET Mr. & Mrs. J.A. Clark, 49 Greenslopes Drive, Mooroolbark, Victoria 3138,  
Australia. New QTH.
- 105 G2CPM Mr. W.B. Mansell, 10, Wyndham Road, Shaw, Newbury, Barkshire. New QTH.
- 134 G2JF Mr. J.C. Foster, Sideways, Hastingleigh, Ashford, Kent. New QTH.
- 139 G3JKO Mr. M. Dransfield, The Spinney, Kings Lane, Southwater, Horsham, Sussex.  
New QTH.
- 170 NO CALL 2/Lt. P.L. Maloney, HQ Mess, Royal Signals, Blandford Camp,  
Blandford Forum, Dorset
- 248 NO CALL 2/Lt. C.J. Durham, HQ Mess, Royal Signals, Blandford Camp,  
Blandford Forum, Dorset.
- 277 G3OMT Mr. T. Russell, 40, Rotten Row, Litchfield, Staffs. New QTH.
- 285 GW3SVY Mr. Dennis, Scourfield, Llwynyclyn, Bancyfelin, Carmarthen. South Wales.  
New QTH.
- 293 G3RWF Mr. N. Henwood, 65, Russell Avenue, Wollaton, Nottingham. New QTH.
- 361 G3WZQ Mr. R.H. McGill, No3, Five Houses, 51, Mill Lane, Stock, Nr. Ingatestone, Essex.  
New QTH.
- 385 G3OSY Mr. R.H. Joll, 34, Mount Gould Avenue, Mount Gould, Plymouth PL4 9HA.  
New QTH.
- 406 G3XMZ L/Cpl C.A. Dodd, 132, New Ward Rd., Bulford Camp, Salisbury, Wiltshire.  
New QTH and Call.
- 407 ZL2AZT Mr. Gary D. Thomas, 5, York Place, Porirua, New Zealand. New QTH.
- 410 ZC4PS Lt. P.D. Smith, Royal Signals, 9<sup>th</sup> Signal Regiment, BFPO 53. New QTH.
- 432 NO CALL Mr. Alan Jamieson, 127, Moss Bank, Wmsford, Cheshire.  
This is a reissued number
- 440 G3ZCG Mr. Ken Young, 12, The Grange, Cubbington, Leamington Spa, Warwickshire.  
New QTH. (Tel. L/Spa 28106).
- 456 Delete all reference to holder who has now resigned. (No reason given)
- 521 G3WNI Mr. W. Lindsay Smith, Plot 6, Curtis Road, Ashdell Park, Alton, Hants.  
New QTH.
- 581 G3YMN Mr. J.B. Rhys, Sunny Bank, East Cliff, Porthtowan, Truro, Cornwall. New QTH.
- 718 DL5XB WOII P. Blacklock, 1 Sqn., 28 (BR) Signal Regt. BFPO 35. New QTH.
- 747 G3XWS Please amend Callsign to read G3XWS and delete G3ZWS.
- 782 G3ZKA Now confirmed as; Cpl J. Worth, 260 Sig. Sqn. (SAM), 36 Hvy Regt RA,  
Horseshoe Barracks, Shoeburyness, Essex.
- 783 G6DV Confirmation of issue to; Mr. C.N. Noke, 74, Stockport Road, Ashton-Under-  
Lyne, Lancashire.

SWR INDICATOR TIP by G3BIC.

There are many articles on home-brewed SWR indicators which are as accurate and reliable as any commercial equipment available. The following tip might facilitate provision of the sensing conductor when using coax for the H.F. SWR meter.

The insulation is removed for 2" at each end of a 24" length of semi air spaced coax as per sketch. A 1" piece of insulation is also removed from the centre of this length. The braiding is then opened in the centre to make a  $\frac{1}{4}$ " diameter area of exposed PTFE. See Fig1.

Then by using a sharp knife, slits are made in the PTFE to one of the air space holes. A 2' 6" length of 22 SWG can then be threaded through the holes as shown. This method is easier than removing all the insulation and pushing the braiding back as some articles suggest. The whole can then be coiled up and placed around the indicating meter or switch and connected as shown in Fig2.

Metering can alternatively be as shown or, by the use of ex-WD twin needle meters, or by using two separate meters such as the smaller Japanese type. The later suggestions eliminate the switch as shown, (SW1).

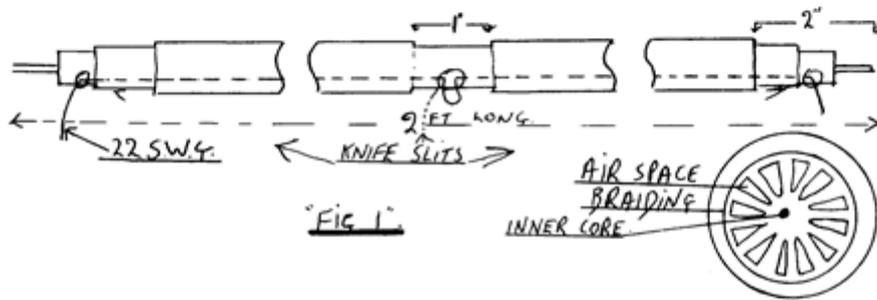
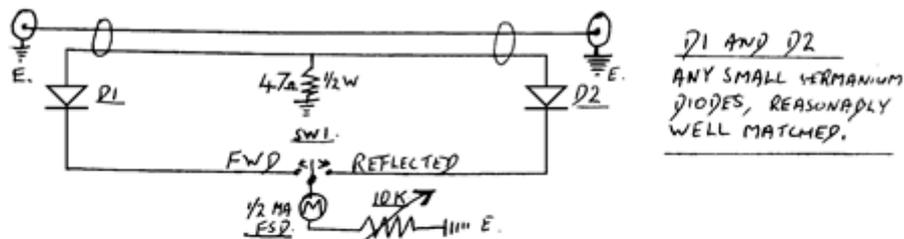


FIGURE 2.



D1 AND D2  
ANY SMALL GERMANIUM  
DIODES, REASONABLY  
WELL MATCHED.

THE "OKAY. YOU COULDN'T DO IT AND SO HERE'S THE ANSWER" SECTION.

The answer to the 'Black Box' is, calling the terminals "A" and "B" respectively, a series circuit from "A" via a 12.5 ohm resistor a coil of 0.0145H and a capacitor of 485 microfarad to terminal "B", also, right across the two terminals, a 25 ohm resistor for the DC. The only other additional clue necessary, is to say that at AC it is a series circuit. Editor.

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WANTED URGENTLY.

By Mr. T. S. Coltman, 22 Willow Poole Lane, Sutton Bonington, Loughborough, LEICS. LE12 5NN.

An FL8 Audio Filter to sell or give away or W.H.Y. Letters to G3TTH at the above address please.

AN APPEAL TO ALL MEMBERS.....FROM CANADA

"My station, VE3DDR, has faithfully checked into the 21-380 net, sometimes as often as 6 times a week." So writes Dennis Ratcliffe, RSARS 319, from his QTH in Ontario, Canada. He continues "... I usually check into the net between the times of 1200 - 1400 hrs GMT. My total contacts with different members numbers is 96 in almost 2 years of checking into the HF net. I have almost worked the magic number for an overseas member of 100 different membership numbers. May I offer some thoughts and comments, for a change in the Award rules.

That the members call sign be recognised, not the members number, because it is just as hard to work a member in DL, as it is when he is a G stn, especially when you are 2500 miles away, also more often than not, it is the most active stations that go from G to a Home posting in DL land. (agreed...Ed.).

Let me show you some of my contacts;

Example A. G3NKO, Ron also as GM3NKO and GI3NKO and DL5XF, count as 1 point.

Example B. G3VIY, Ray also as DL5YT AND VS9ARV and VS9KRV and VS9HRV. These count as 2 contacts.

Example C. DA2YW, Maurice also as VS6AA AND VS5MC counts as 2 points.

Here I had 12 contacts with members in different countries, but counts as only 5 for the award.

Two remarks come to mind. A line in MP4TDA's letter, (published in the Summer 1970 edition. Ed.) states, QUOTE "January went by and I made some 120 contacts" UNQUOTE, and a line in Mercury under the heading LF NET, QUOTE "This has meant that quite often the Net has consisted of over 30 sub stations" UNQUOTE.

When may I expect these conditions that allow for 120 contacts in one month and 30 different stations on during one net.??? The bands open up here at about 1230 hrs GMT and by that time most of you in Europe have had 4 or 5 hours of band openings to the east.

So may I say to the members, Pse check the 21-380 and 21-180 QRGs between 1200 and 1400 GMT. I would appreciate a contact with YOU. My thanks to the regular chaps who check in each day, Ray MP4TDA, G4RS with Colin, G3HWL Les and G3YBO Roger and several others. Thanks for the FB chats that we have had.

73 Dennis Ratcliffe. VE3DDR, G3FCL, DL2QD.

Editors comment. I think that most members of the society will agree with some of the points brought out in the letter from Dennis. The most striking comment is that which points out, that having worked 12 countries, Dennis can only claim 5 points towards his award total. It would appear, in that case, that it is easier for overseas members to obtain DXCC, than it would be for him to get sufficient contacts for the Special award. You may even agree that this is exactly as it should be. I think the main point is that, any slackening of the rules for the RSARS awards would tend to make them too easy to obtain and consequently, the interest in these 'Sheepskins' would fall off and may eventually lead to even less members checking into our nets.

All the awards can be won, given opportunity, openings, and willingness by all members to participate in our RSARS net activities.

145 award holders (including 4 overseas 'Specials') can't be wrong, but all are asked to turn their beams, or what have you, in the general direction of VE whenever you get the chance. (THANK YOU DENNIS FOR MANY FB QSOs. Ed.).

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ON THE AWARDS FRONT...by RON COX G3VIS

This issues shack aid is a pullout sheet which members are asked to use whenever they send in for any of the RSARS awards. A grand total of 145 different awards have been issued since the start of the revised programme, some idea of the numbers involved for each award are shown below. Special congrats are in order for Jimmy, 9M2DQ who has just had his application for the special award approved. (well done 2DQ, your plaque is on the way).

CLASS THREE AWARD, HOME MEMBERS, for contacts with 25 RSARS stns. = 56 awards.  
 CLASS TWO AWARD, HOME MEMBERS, for contacts with 50 members = 39 awards.  
 CLASS ONE AWARD, HOME MEMBERS, for contacts with 100 members = 21 awards.  
 SPECIAL AWARD, HOME MEMBERS, for contacts with 200 members = 3 awards.  
 These last three awards went to : No.1 G3XSN, No.2 G8VG, No.3 G3HWL.

CLASS THREE AWARD, OVERSEAS MEMBERS, for contacts with 12 RSARS stns. = 8 awards.  
 CLASS TWO AWARD, OVERSEAS MEMBERS, for contacts with 25 members = 8 awards.  
 CLASS ONE AWARD, OVERSEAS MEMBERS, for contacts with 50 members = 7 awards.  
 SPECIAL AWARD, OVERSEAS MEMBERS, for contacts with 100 members = 4 awards.  
 The SPECIAL OVERSEAS awards went to : No.1 VS6AA, No.2 MP4TAF, No.3 MP4TDA, and the latest issue goes to 9M2DQ.

And from Malaysia, comes "HOW 9M2DQ DID IT", to get the special award (DX) number 4. Jimmy is currently getting over a bad spell of illness in hospital and hopes to be back on the air by the end of January.

	CLASS III	II	I	SPECIAL	
SSB EUROPE	12	13	25	28	= 78
CW EUROPE	-	-	-	-	-
SSB OVERSEAS	-	-	-	22	= 22
CW OVERSEAS	-	-	-	-	TOTAL 100

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1. The following RSARS Operating Awards are available free of charge to ordinary and associate members and to clubs affiliated to the Society, with effect from 1st January 1970.

Class III - Certificate, Class II - Certificate, Class I - Certificate, Special Award - Engraved Plaque.

2. Transmitting members located at "Home" (defined below) must submit confirmation of two-way contact with other member stations, including G4RS as follows :

Class III - 25 confirmations, Class II - 50 confirmations, Class I - 100 confirmations, Special Award - 200 confirmations (See Para. 20).

3. Listener members located at "Home" (defined below) must submit confirmation of having heard transmitting member stations as in Para 2 above.

4. Transmitting members located "Overseas" (defined below) must submit confirmations of two-way contact with other member stations, including G4RS as follows : .

Class III - 12 confirmations, Class II - 25 confirmations, Class I - 50 confirmations, Special Award - 100 confirmations.

5. Listener members located "Overseas" (defined below) must submit confirmation of having heard transmitting members as in Para. 4 above.

6. Home members stations are defined as those located within the bounds of Zone14.

7. "Overseas" members stations are those located outside the "Home" area as defined in Para. 6 above.

8. "Overseas" members who move "Home" may count any confirmations gained "Overseas" towards the Awards in Paras 2 and 3 above.

9. "Home" members who move "Overseas" may NOT count any confirmations gained at "Home" towards the Awards in Paras 4 and 5 above.

(10. Contacts with member stations operating /A or /P etc.. WILL count towards RSARS Awards but only inasmuch as a contact with a fully paid up membership number is eligible ONCE only per "Home" or "Overseas" location (total two contacts). The call-sign of the member worked must have been officially issued to that member. Contacts by a member using another persons call-sign are NOT permissible. Therefore, contacts with a membership number within the bounds of the "Home" and "Overseas" areas can only be claimed ONCE per area, irrespective of the call-sign, prefix or suffix used. A member moving from the "Home" area to the "Overseas" area (and vice versa) can be contacted ONCE only in each area).

11. ONLY FULLY PAID UP MEMBERS OF THE R.S.A.R.S. MAY CLAIM THE SOCIETY AWARDS

12. Members will ensure that operating practices are maintained to the highest standards. Unassisted two-way contact must be made between the stations concerned. Relaying of reports by a third station is not permitted for Award purposes. Terms of licence must be strictly observed and members who are granted temporary licences for operation in other countries may be asked to submit proof of authorisation to R.S.A.R.S.

13. Members are required to exchange signal reports, membership numbers, names and QTH to qualify for confirmation of contact.

14. Claims for Awards will be made to the Awards Manager only, whose details are published below.

(15. Claims for the Awards may be made by Certified List as laid out below, signed by an Officer of a National Radio Society, or by two other licensed amateurs, one of whom must be a fully paid up member of the R.S.A.R.S. A check list of the call-signs and membership numbers must be included together with return postage or I.R.C. This rule can only be waived by the President and Council of the R.S.A.R.S.)

We, the undersigned, acting on behalf of the Royal Signals Amateur Radio Society, hereby certify and declare that we have personally inspected and checked a total of ..... QSL cards received by (Name).....(Call-sign) ..... (Address) ..... RSARS No. .... for contacts made by the above member. To the best of our knowledge and belief these represent contacts made by the above member in compliance with R.S.A.R.S. Operating Award rules (a copy of which has been seen by us) and in the true spirit of Amateur Radio under the terms of his official Amateur Radio Licence. We know of no reason why the issue of the appropriate Award should not be made.

1st Witness : Name : Call-sign :  
Address :

Appointment (National Society)

2nd Witness : Name : Call-sign :  
Address :

Appointment (National Society)

Claimants Signature: Date :





REGISTRATION OF NEW MEMBERS (G3TAN)

The following NEW members have been enrolled since the last edition of Mercury:

- 777 G3GUV T.J. GRIFFIN, FLAT 4, ST PETERS SCHOOL, GANIFORD, DARLINGTON, CO. DURHAM.
- 778 GI3ZKT T.E.HARDING, 29, SPRINGHILL AVE., BANGOR, CO. DOWN, NORTHERN IRELAND.
- 779 G3STM G. MOSES, 102, PLANE TREE DRIVE, CREWE, CHESHIRE.
- 780 DL5AA W.R. MEST, 4411 APT C-3, LINCOLN VILLAGE, 61, DARMSTADT, GERMANY.
- 781 G3WZS H.W. WILLIAMS, PHYSICS DEPT., UNIVERSITY OF SOUTHAMPTON, UNIVERSITY ROAD, SOUTHAMPTON.
- 782 G3ZKA CPL. J. WORTH, 260 SIG SQN. (SAM), 36 HVY REGT RA, HORSESHOE BARRACKS, SHOEBURYNESSE, ESSEX.
- 783 G6DV C.N. NOKE, 74, STOCKPORT ROAD, ASHTON UNDER LYNE, LANCS.
- 784 G3VSD J. RIMMER, 16, BUTTERMERE DRIVE, OSWALDTWISTLE, LANCS.
- 785 GM3LYI N.C. HEMDERSON, 81, OLD INVERKIP ROAD, GREENOCK, SCOTLAND.
- 786 G3ZDB T.N.J. ARCHARD, 43, PINE HILL, EPSOM, SURREY.
- 787 G2FCI A.J. WHITE, 5, GLENMORE ROAD, HEAVITREE, EXETER.
- 788 DL4UV J. GARCIA, 75, KARLSRUHE, 30-B TENNESSE AVE., PRV, WEST GERMANY.
- 789 G3KAE J.A. ROWLEY, 4, COASTAL ROAD, BURNISTON, SCARBOUROUGH, YORKS.
- 790 VK2PP M.D. LEGG, PO BOX 166, COWRA 2794, AUSTRALIA.
- 791 R.E. PEARCE, 37, BEAR CROSS AVE., BOURNEMOUTH, HANTS.
- 792 VK6MK H.T. MULDER, 2, BEDWELL ST., EMU POINT, WESTERN AUSTRALIA 6332.
- 793 H. CLARKE, 4, HUDSON CLOSE, LAMMACK, BLACKBURN, LANCS.
- 794 S/SGT F.J. HAYWARD, 20 ARMD BDE HQ & SIGN SQN, BFPO 14.
- 795 G5RV R.L. VARNEY, RESIDENT ENGINEER, PC&R, PO BOX 900, PORT MORESBY, PAPUA, T.N.P.G.
- 796 G3ZKD W. BALL, HOLLINGDRAKES, WARRINGTON ROAD, PENKETH, WARRINGTON, LANCS.
- 797 G3POA N.F. ADDISON, 17, WILBERFORCE HOUSE, YORK ROAD, LONDON SW11.
- 798 W9IWI J.N. JABLIN, 9124, N. CRAWFORD AVEMUE, SKOKIE, ILLONOIS, 60076, USA.
- 799 BRS20439 J.B. HAMMOND, 5, POLBROC PLACE, KIRKCONNEL, DUMFRIESSHIRE, SCOTLAND.
- 800 D.M. HOGAN, 'AVONLEA', DARKLANE, MALMESBURY, WILTS.
- 801 2LT. J. HUTSE, BUIZEMONTSTRAAT, 198, GERAARDSBERGEN, BELGIUM.
- 802 G.R. ONIONS, TRA 3-2, 2 SQN, 8 SIG REGT, CATTERICK CAMP, YORKS.

LIST ACCURATE AT PRESS TIME (16 DECEMBER 1970) ADDITIONS IN NUMERICAL ORDER IN NEXT EDITION.

Addition to new membership list: 767. Confirmed; D.S. MAJOR, VU2MD, PETIT MANSION, 85, SLEATER ROAD, BOMBAY, INDIA. PLEASE AMEND LISTS AS NECC. (G3TAN)

### TREASURERS CORNER

The treasurer would like to thank the following Annual members for their 1971 subscriptions. Will they please accept this as their receipt.

RSARS NUMBERS: 038, 151, 159, 167, 187, 194,225, 230, 231, 299, 304, 310, 318, 341, 393, 407, 435, 454, 484, 505, 530, 551, 574, 594, 599, 607, 608, 613, 614, 636, 642, 658, 677, 683, 690, 697, 710, 713, 715, 720, 728, 731, 732, 739, 740, 746, 753.

The following members converted to life membership: 349, 524, 586, 646, 692.

It would be appreciated if all dues were paid direct to the Treasurer, either by cheque or postal order, both of which should be crossed and made payable to ROYAL SIGNALS AMATEUR RADIO SOCIETY. Please clearly mark your envelopes with the word Treasurer, and enclose a S.A.S.E. if a receipt is required. Thank you for your continued support . Good DX in '71.

### THIS ISSUES MAD LETTER

And it comes from our immediate past Gen. Sec., Jack Cooper (090) who, delighted with getting away from all the HQ Station pressures and strain, sent the following humorous note from his new QTH in DL land.

Dear Mr Editor.

As a fully paid-up member of the R.S.A.R.S. I feel that I must protest. I have always been under the impression that the Autumn edition of Mercury was due on the 1<sup>st</sup> October. It is now 0003 hours 1<sup>st</sup> October 1970, and I have not yet received my copy. Although I appreciate that the postal services are not all that could be desired, I feel that if my copy is not here by breakfast time, I shall have no alternative but to refer the matter to the Human Rights Committee, The South Downs Preservation Society and the Peoples Dispensary for Sick Editors - in that order. To try and justify this entirely unacceptable delay with such excuses as pressure of work is grossly, well. unacceptable, as it is a well known fact that to be an Editor one has to be completely mad and mad people don't work. If lack of copy is the reason, I am prepared to submit material based on "The problems of Equipment Integration" or, "Back Street Bars I have known in Singapore", whichever is the sooner.

If distribution is a problem, may I suggest that a condition of membership is that all members maintain a RTTY station and G4RS prepares "Mercury" on tape, and, by boosting the power to 30 kW (to ensure a clear channel), provides up-to-date copy to all members with the minimum of delay. An interesting, and possibly profitable, sideline would be for G4RS to provide surplus RTTY equipment to all members at an exorbitant price. The profit from this venture could be used for the purchase, by the HQ station, of 100 Baud equipment, thus ensuring even faster delivery of "Mercury" to members. This would also mean that all members would need new, high speed receiver equipment and G4RS could, once more, cash in on this and perhaps, with the profits, purchase 400 Baud equipment. The possibilities are endless.

Regarding the 80 metre net. I have several times attempted to join this net by getting somewhere near the frequency and shouting "Break, Break, Break". So far, all that has happened has been a member come back to me enquiring "What's broken"?? My equipment here is only average, consisting of a Galaxy Mk VXXII, driving a 5 kW Linear (well almost), and it is located in the attic (I find that the Post Office types do not like climbing ladders).

Perhaps I should stop using VS2AA when calling into the net, and although my receiver dial reads 3912, I am sure that I am somewhere near the net frequency, in fact I had a QSY request from a station signing "BTV". I take it that this was G3BTV although I can't find him on the list. It could be that I misread BTM, after all, the calls are very similar.

I hope that the above will be of interest,  
75, (or is it 72s)

X.B.R, Unei-Eskwire.

### HQ Station Activity



Having now settled into our new surroundings we should first like to thank all members for their patience and co-operation during periods of enforced silence due to our move. The move was accomplished in record time mainly due to all the advice from EKL on how to wind handles on sixty foot towers and the speedy issue of G.S. shovels by the SSM to unearth the monster.

The photograph above shows Colin, G3YBT, sitting at the main operating position of our new station, the rig being familiar Heathkit equipment and the antennas in use at the moment are a G8KW Trap Dipole and a Mosley 3 el, Beam, unfortunately the rotator for the Beam is U/S but Colin is making quite a good standing except on a cloudy night when he can't see the North star for aligning the beam.

I would like to thank the following members for regular appearances on the 80 metre net under what can only be described as trying conditions at times: G2TT, KK, AVR, G3XSN, YSK, UAA, HSE, EYD, HWL, YYD, XMZ, WRY, DL5YO, XW, ON8GB, also many thanks to all other stations who call in to say hello. The overseas net on 21-380 has been a little quiet over the past quarter but we would like to thank VE3DDR, W3RX and MP4TDA for their regular support, Dennis, VE3DDR, is looking for G contacts on the net frequency about 1530 local every day, he needs about five more points for the special award so I am sure that members can help out there.

We are very pleased to have been able to welcome the following visitors to the shack over the past month, G8DK, G3EKL, G3DSS, G3XMZ (with XYL and family), and G3YBP. We are looking forward to seeing many more members over the next few months so please call in and see us if you are in the Blandford area.

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### HOW TO FIND THE THE NEW HEADQUARTER STATION

Having told you all about our equipment and what a good QTH we now have, it seems a good idea to give you some indication of where we actually are and how you can find our shack. Below is reproduced a map of the general Blandford camp area, with G4RS marked with an arrow in the top centre of the map. The 65ft tower is visible from all roads leading to the shack, the TH3 beam sitting on top of that tower will confirm your location.

