



MERCURY
10th ANNIVERSARY
THE JOURNAL
OF THE
ROYAL SIGNALS
AMATEUR RADIO SOCIETY

NUMBER 36

SUMMER 1971

MERCURY : SUMMER : 71
CONTENTS

Official Addresses & Society Information.....	Inside cover
The General Secretary's page & Proforma.....	1
Aspiring comic's section & Proforma	3
Notes from the Society Treasurer	4
Amendments Section	5
The Tenth Anniversary. Notes from G3EJF	6
Welcome to New Members Section & Lancashire Lads Reunion	7
Notes on DXPED to Isle of Skye.....	8
A Study of Test Gear (By G5YN)	9
Mercury Mailbag	14
Award rules for RSARS Disabled Operators	16
ACF/CCF Radio. Marlborough v Oundle School.....	18
Technical assistance for KW equipment owners & more on ZC6AA	19
Apollo Amateur Package	19
Dave's page. QSL Bureau information.	20
G3HKR The Army Apprentices College Station.....	21
More on the Sounder v Buzzer Operator	21
10 th Anniversary Activity Weekend Information.....	22
Cadet Forces Section (By Ian Jolly)	23
The Applicayshun (?) of HOLMES LAW !!!?	23
RSARS Awards List and Roll of Honour	24
Late Extra.....	25
Mick Morphey's Giant Sale	26
Holiday Information for RSARS Members. The Cornwall Ham-Radio Holiday Centre	27
RSARS Membership Application (Please pass to a friend if mot required)	28
RSARS MEMBERS SUPPLIES ... ORDER FORM.....	Back Cover

The General Secretary's Page

Well now! How does a new General Secretary address the many and varied members of the Royal Signals Amateur Radio Society. Shall I start by choosing a sumptuous title which will determine the text that follows, or shall I write the text and then choose a title? Well, not having any journalistic experience to fall back on, I will have to try, if possible, to ignore the dilemma and scratch out a few words on the Society scene as seen from G4RS.

Before I do so, let me introduce myself. My name is Bill Graham, my callsign is G3KPQ, other callsigns used in more exotic parts of the world are VS1FO and ST2AS. I took over the job of General Sec at the beginning of the year. Unfortunately, Jack Cooper, the previous Secretary, was posted in September, and in the interim things were kept going by Tom Gumbrill, Dave Llewellyn, Ray Vasper and the treasurer, Gordon Titchmarsh.

Those of you who have joined the net on 3720Khz on Tuesday and Thursday evenings will have heard Tom Gumbrill's melodious tones on many occasions. Tom has been a staunch supporter and manager at G4RS for the best part of four years. He leaves for Northern Ireland in August so we can expect him to join the net from GI land using his homebrew linear (2-4CX250B) which is nearing completion. Bob Morrison G3VPZ, has also left for DA5 land, that leaves Colin as the main G4RS operator and he has just passed an entrance examination so he may be going on a trade upgrading course early in the New Year.

Dave Llewellyn G3TAN/268 has had a bright idea. He has suggested that all the information about the Society which we send out to new members could be collated into booklet form. We have updated the information and some of the rules. Dave is putting it together and we hope to print it and distribute it to all members by the end of the Summer.

You will no doubt have noticed that Mercury has been cut down to a more manageable size both from the point of view of collation (which at present is done by machine) and the weight of the package we put into the post. The hope is that we will be able to maintain it at approximately 30 pages. In practical terms it means that we require enough copy to fill sixty sides of paper four times a year. Without your help this cannot be done. What is going on in your neck of the woods? Have you got gear that you would like to dispose of? Do you require information on a black box you have just acquired? A fellow member may be able to help you. If you have carried out a modification or designed some practical device which has streamlined the operation of your station, then write it up, the Editor of Mercury will be delighted to have it.

I mentioned in the Spring newsletter that details of the Open Day at G4RS would be published in this edition. They are as follows:-

- 1030 hrs.....GB3RCS talk in stations open on top band 1.9Mhz approx., and two metres 145.5Mhz. G4RS will also be operational on 80 Mtrs 3.720Mhz.
- 1200-1300.....Members sign in at G4RS, station inspection, conversation and pre-lunch drink at the bar.
- 1300-1330.....Light luncheon. Would you please let me know if you require luncheon which will cost you 30p. This sum will include tea and cake at 1600 hrs.
- 1330-1400.....Guided tour of inspection of Professional Equipment (HF).
- 1400-1500.....Lecture. (Content yet to be decided).
- 1500-1600.....Annual General Meeting.
- 1600.....Afternoon tea.
- 1700.....Dispersal.

We will be delighted to welcome members of the National Mobile Society.
If you do decide to visit us, please stay on the Blandford Camp Ring road. Signs directing visitors to the station will be placed on this road.

SUMMARY OF EVENTS (taken from the Spring Newsletter).

19th-20th June.....RSARS 10th Anniversary Activity Weekend.
26th-27th June.....The Old Comrades Weekend at Catterick Camp.
27th.....Longleat Mobile Rally.
18th July.....Open Day and AGM at G4RS at Blandford Camp.
22nd Aug - 18th Sept.....Special Station to commemorate the 900th Anniversary of Richmond Castle, Yorkshire.

+++++

The Schedule of operation of G4RS/GB3RCS is repeated elsewhere in this issue, and additionally for your convenience, the proformas which were sent out with the Spring Newsletter.

73

de

Bill Graham

+++++

TEAR ALONG THIS LINE

To: The General Secretary, From: Name
RSARS, Blandford Camp.....RSARS No.
Dorset Callsign (If any)

Please book me a camping/caravan/motor caravan site at Longleat Park for an overnight stay, Saturday night 26th June 1971.

Signed.....

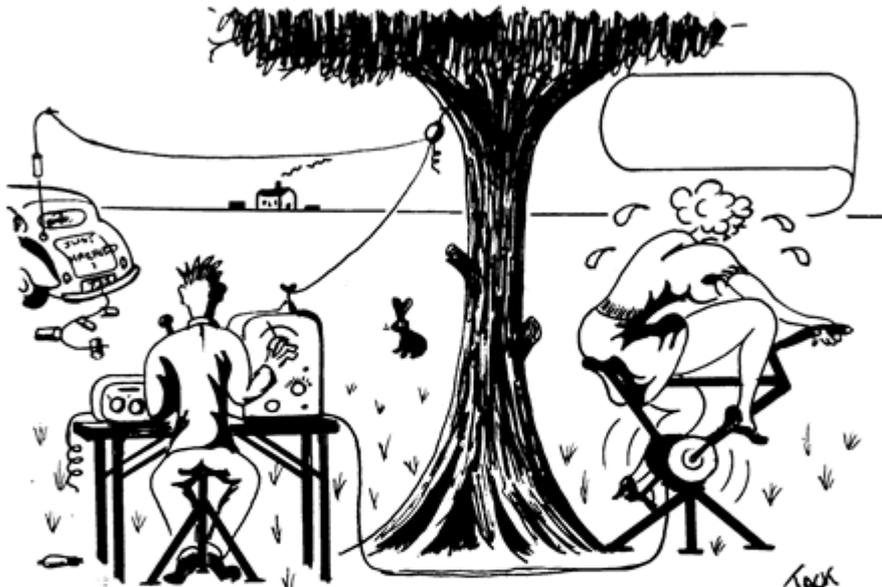
THERE IS A FURTHER PROFORMA ON PAGE 3 FOR THE HQ STATION VISIT

THE ASPIRING COMIC'S SECTION

Below is a sketch handed in by one of the staff at the HQ station. As you can see, the OM is in his glory, but the XYL has obviously got something to say about the situation. The problem is WHAT.

A small reward (unspecified), will be handed over to the inventor of the most apt caption to go with the situation shown. The picture need not be returned to the Gen. Sec., just a suitable caption on a postcard or mentioned in a letter next time you write to HQ. Have a go.

GDLK



SORRY! I CANT QRO. O.M. THE WIFE WOULDN'T LIKE IT!

To: The General Secretary,
RSARS, Blandford Camp
Dorset

From: Name
RSARS No.
Callsign (If any)

I intend to visit HQ station at Blandford Camp on Sunday 18th June 1971

I hope to arrive at.....hours. Number in party

Signed

Meeting starts at 1200 hours and finishes at 1700 hours

AMENDMENTS

The following changes in QTH have been notified. Members are asked to amend their copies of membership lists as follows:

RSARS	Call	Amendment
	No.	
053	DL5YO	L/Cpl G. Gibson, A1 Troop, 2 Sqn., 1 Div HQ & d Signal Sqn, BFPO 32.
137	G3PDS	Mr. W. Lawrence, 44, Offmore Road, Bartley Green, Birmingham. B32 3PY.
144	G3PHK	Mr. R. Lock, 8, The Martlets, Huggetts Lane, Willingdon, Sussex.
164	G3OEK	Mr. A.E. Knevet, Sandygates, 28, Elphinstone Road, Highcliffe on Sea, Hants.
170		Lt. P.L. Maloney, 248, Gurkha Sig. Sqn., BFPO 1.
189	G3OUF	Mr. D.A. Evans, 2, Meadow Drive, Amersham, Buckinghamshire.
248		Lt. C.J. Durham, 225 Signal Sqn. BFPO 63
264	VS9MT	WOII D. Sugden, 605 Signal Troop, RAF Gan, BFPO 180.
276	G3MCG	Mr. H.P. Dadd, "Stone Sea", Middlewood Green, Earl Stonham, Nr. Stowmarket, Suffolk.
298	G4AGN	Mr. J. Porter. ISSUED WITH NEW CALLSIGN.....(Congrats OM).
348		Mr. J. Hudson, 86, Ramsgate Road, Broadstairs, Kent.
385	G3OSY	Mr. R.H. Joll, 82, Deane Drive, Galmington, Taunton, Somerset.
425		Mr. D. Hirst, Present address unknown. Mercury returned.
474	G3XFV	Mr. I.R. Cutler, 49, Clare Avenue, Darlington, Co. Durham.
532	MP4TCX	Mr. J.S. Walder, Present address unknown. Mercury returned.
553	G3IUD	Mr. R.A. Norrington, "The Holts", Porthallow, St. Keverne, Nr. Helston, Cornwall.
564	G8SC	Mr. C. Collins, Central Mediterranean Relay Station, P O Box 506, Valletta, Malta.
567	G3VVH	Mr. G. Weare, Present address unknown. Mercury returned.
592	G3AUU	Mr. A.J. Hill, 9, Trull Green Drive, Taunton, Somerset.
606	VK6WO	Mr. R. Norcross, 33, Caladenia Way, Koongamia, West Australia.
613	G3NOB	Rita Shepherd, 59, Plantain Road, Loughborough, Leics. LE11 3LZ.
614	G3HPJ	Tom Shepherd, 59, Plantain Road, Loughborough, Leics. LE11 3LZ.
619	G3RSV	WOI R.H. Dowsett, 3, Blandon Road, Ruddington, Nottingham.
678		Sigmn. F.A. Roe. "A" Tp., 6 Armd Bde, HQ & Sig Sqn, St. Sebastian Barracks, BFPO 32.
706	MP4TDJ	Mr. D. Hebden, 127, Abbey Road, Basingstoke, Hants.
709		Cpl. A. McNamara, Present address unknown. Mercury returned.
745	9M2DL	Mr. W.P. Sandeman, C/O Ipoh Club, Ipoh, Perak, Malaysia. The previous Address given was Ipoh Radio Club to which address all editions of Mercury Have been sent.
763	A 7053	Mr. D. Cohen, "Coomtaka", Coombe Park, Kingston on Thames, Surrey.
776	G3JMO	Mr. A.L. Taylor, 8, Heythrop Drive, Acklam, Middlesborough. Teeside. QTH and No. confirmed.
799	GM4AEA	Mr. J.B. Hammond. Present address unknown. Mercury returned.
803	G3NT	Now resident at 3, Cleveland Drive, Romandy, Northallerton, Yorks.

PLEASE NOTE

To all members intending to give notice of a change of address, additional call signs or any other change of circumstance that requires a change to be made in our record system; PLEASE PRINT THE CHANGE TO BE MADE, IN BLOCK LETTERS, so that we get everything right the first time. Please also quote your membership number whenever you write to the Headquarter Station. Mni Tks.

THE TENTH ANNIVERSARY

To mark the 10th Anniversary of the Royal Signals Amateur Radio Society, I asked John HODGKINS, G3EJF a fellow with a lot of seniority (004), if he would write a potted history of the Society from embryo to formation. He very kindly agreed to do so. Here it is.....

General Secretary

TEN YEARS LATTER

On the 23rd of June 1961 in a long since demolished hut at Blandford Camp the Inaugural Meeting of the Royal Signals Amateur Radio Society was held with General COLE G2EC in the chair.

In some ways the beginning of RSARS may be traced back to the day in 1952 when the War Office gave its blessing to the formation of an Army Emergency Reserve unit to recruit radio amateurs and to be known as the Army Wireless Reserve Squadron. The Squadron's first Commanding Officer was Dennis HAYLOCK G3ADZ, later to operate as MD5ADZ during the Suez operation of 1956.

As was only to be expected amateur radio had considerable influence in this unit and its successors 2 Press Communications Signal Squadron and 404 Signal Squadron. By 1955 the Army Wireless Reserve Amateur Radio Society had been formed and a two page duplicated news sheet with the title BROADCAST soon appeared. Every year during annual camp G3AWR made its appearance on the bands and training exercises were carefully arranged to cover as many rare counties as possible.

Whilst BROADCAST was primarily a unit amateur radio newsletter and AWRARS a unit amateur radio club an outward looking policy was present from the start. Non-members of the Squadron were invited to join and in 1956 we find G2EC an Honorary Vice President of the Society. By 1959 the subject of some sort of affiliation between army amateur radio clubs was being actively discussed. It was stressed in the Summer 1960 issue that official approval of an organisation to cover amateur radio in the Army would be a prerequisite of success and such an organisation would need to be based on a Regular Army unit. Encouragement was soon forthcoming from among others - 205 Signal Squadron, 21 Medium Regt. RA and 65 Signal Regiment TA.

Fortified by this support a meeting between G2EC and G3ADZ discussed the formation of a national army amateur radio society. General COLE was now Director of Telecommunications and General WHISTLER Signal Officer in Chief. It is no exaggeration to say that it is due to these gentlemen that our Society came into being. The idea that had been nurtured by a small reserve army unit passed to the higher echelons and Commands and Units were circularised to send representatives to a meeting at Blandford to consider, for administrative reasons, the formation of a Royal Signals amateur radio society. It was surely no coincidence that this meeting was held during the annual camp of 404 Signal Squadron AER.

A proposed constitution and rules prepared by G3ADZ were discussed and hopes expressed on what the proposed society could achieve. General WISTLER was invited to become President and G2EC accepted election as Honorary Vice President. A General Secretary and Treasurer (Ted PHILP G3NJM and Stan SYMONS G3DSS) were elected.

Shortly afterwards the SO in C gave his approval to the meeting's proposals and ROYAL SIGNALS AMATEUR RADIO SOCIETY started on the road which leads to this issue of MERCURY but that is another story.

WELCOME SECTION

The following new members are welcomed to the Society:

- 803 G3NT Robert. Oliver, 3, Cleveland Drive, Romandy, Northallerton.
804 -- T.R. DARVALL, Chillies, Crowborough, Sussex.
805 G3VXE G.F. BRINDLE, WOs/Sgts Mess, School of Signals, Blandford.
806 -- G. DONN, Henri Dunantiaan 115, Apeldoorn, Holland.
807 DA1DU Buddy R. CHAMBERS, Sig Ops Co (HANAU) USASTRATCOM-EUR
AP 09165 New York.
808 -- M.J. HARROD, Middleton A, Christs Hospital, Horsham, Sussex.
809 G3NL G.W. PARKES, 43, Oldbury Road, Worcester. WR2 6AA
810 -- J. BROWN, 229 SIGNAL Sqn. BFPO 45
811 MP4TDU K. STRAW, 74 Belper St., Leicester.
812 -- A. PARRY, 229 SIGNAL Sqn. BFPO 45
813 -- I. RUSHMER, 229 SIGNAL Sqn. BFPO 45
814 -- S. RAWSON, 229 SIGNAL Sqn. BFPO 45
815 G3ZOJ B.D. CORPER, 54, Nightingale Place, Woolwich, London, S.E. 18
816 -- C.H. HUSSEY, 24, Frome Road, Trowbridge, Wilts.
817 DL4MI I.M. MacDONALD, HQ Suspect, Karlsruhe, APO N.Y. New York 09164
818 G3YYU M.O. BINNS, 10, Northdene, Birtley, Co. Durham.
819 -- A. HUNTER, 77, Bruce Gardens, Inverness, Scotland.
820 G2AZW C.V. KNIGHT, 65, Marlborough Lane, Charlton, London S.E.7
821 G3CXE D. BRABNER, 33, Peashill Close, Sileby, Leics. LE12 7PT
822 A7050 M.A. BAILEY, 13, Buttenshaw Ave, Aborfield, Berks.
823 MP4TDYL STAINTON, 222 Signal Sqn., Sharjah, BFPO 64
824 DA2YY J. HARDING, A Sqn., QDG, BFPO 45.
825 VE3GUN J.A. MASON, 38, Gordon Rd., Willowdale, Ontario, Canada.
826 G3ZVD W.K. ALLEN, 67, Goose Lane, Wickersley, Rotherham, Yorks.
827 G3NOF D.L. McLEAN, 9, Cedar Grove, Yeovil, Somerset.
828 -- J. KELLEY, 12, Carter Road, Stoke Aldermoor, Coventry, CV3 1BX,
Warwickshire.
829 G8AHH D.G. LOMAX, 25, Canning Road, Parklands, Walsall, Staffs.
830 -- Leonard CROOKS, 4, Victoria Grove, Fairfield, Stockton-on-Tees, Teesside.
831 ZS1KZ Herbert J. CARSTENS, 24 Dunluce Ave., Claremont, Cape Province,
South Africa.
832 A6986 Paul Jeffery LEACH, 20, Mersey Road, Heaton Mersey, Stockport, Cheshire.
833 -- Norman Jenkin, BEM, 125, Lambeth Street, Blackburn, Lancs.
834 GM3ZHG J.A. JUDGE, 2, Rockall Drive, Simshill, Glasgow.
835 G3SDM R.F. ELLIOTT, 7, Hirst Drive, Rotherham, Yorks.

LANCASHIRE LADS REUNION.

Word has just reached us of a proposed reunion for past members of the SIGNAL PLATOON, 8th BATTALION, SOUTH LANCASHIRE REGIMENT to be held in the Autumn of this year. The Battalion was disbanded in late 1942 and all the members of the platoon were posted to the Royal Signals for the rest of the war. Any RSARS member who would like to go to this gathering, should write or telephone to the following:- RSARS 396, EDDIE BULL, 6, BROOKLYN DRIVE, ELLESMERE PORT, WIRRAL, CHESHIRE, L65 7EG. Or Telephone. 051-355-5978.

A STUDY OF TEST GEAR By G5YN

Whether he likes it or not every Amateur must equip his station with a certain minimum number of basic items of measuring equipment; the number and variety depending on the extent and nature of his activities. The quantities which he most frequently needs to measure are direct and alternating voltages and currents and resistance. The alternating quantities may be at power, audio or radio frequency. The measurement of frequency, not necessarily of course to laboratory standards of accuracy, is also of great importance. There may also be occasions when it is desirable to measure inductance and capacity.

The measurement of unidirectional quantities

The most elementary indicator of the presence of voltage, whether alternating or direct, is the human body. Most people are aware that the application of an E.M.F. produces nervous and muscular reaction. However the indications can only be qualitative and the use of the human body in this way is not recommended. It is insensitive to low voltages and the application of too high a voltage can result in destruction of the indicator.

The most common device for measuring direct and alternating current and voltage is the multi range meter. This is built round an instrument known as the d'Arsonval or moving coil galvanometer shown diagrammatically at figure 1.

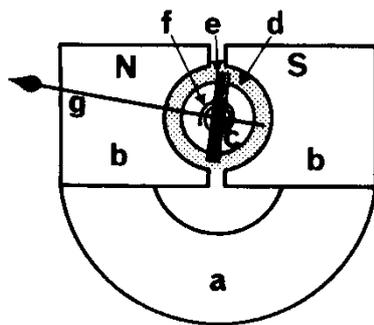


Fig.1

- a. Permanent Magnet.
- b. Soft Iron Pole pieces.
- c. Cylindrical soft iron core.
- d. Radial magnetic field.
- e. Rectangular coil of wire in (insulated)
wound on light metal former.
- f. Hairsprings. There is one at each end of the coil.
- g. Pointer.

A rectangular coil of wire wound on a light metal former is pivoted to rotate in a uniform radial magnetic field. This is produced by a permanent magnet with soft iron pole pieces having a cylindrical gap in which is supported a cylindrical soft iron core. The coil is pivoted to rotate in this gap, its movement being restrained by a pair of hair-springs which also serve to carry the current to and from the coil. The current flowing in the coil produces a magnetic field proportional to the ampere turns in the coil which, reacting with the field produced by the permanent magnet, produces a force tending to rotate the coil against the restraint of the hair-springs. The restraint offered by the hair-springs is proportional to the deflection, Hook's law, so that the rotation of the coil and hence the rotation of the pointer carried by it is proportional to the current flowing through it. Hence the scale is linear.

To measure a small current the coil must be wound with a large number of turns of fine wire. To measure a heavy current the coil must be wound with a few turns of heavy gauge wire. To enable one movement to measure a wide range of currents the coil must be wound with sufficient turns of wire to make it sensitive enough to give full scale deflection when carrying the smallest current required. When a larger current is to be measured the excess current is by-passed by a parallel

resistance known as a shunt. The circuit diagram and method of calculating the value of the shunt is given in Figure 2.



Fig. 2

Where R_s is the resistance of the shunt.
 R_g is the resistance of the meter.
 n . This is the number of times by which the original meter scale is to be multiplied.

$$R_s = \frac{R_g}{n - 1}$$

A moving coil voltmeter comprises a galvanometer in series with a resistance so that the total value of resistance limits the current to that required for full scale deflection of the galvanometer when the maximum value of voltage which it is required to measure is applied. The series resistance is known as a multiplier. The circuit diagram and method of calculating the value of the multiplier is given in Figure 3. The resistance of the galvanometer can usually be neglected except at low voltages as its value will be small compared with that of the multiplier.

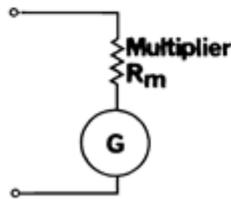


Fig. 3

Where R_m is the resistance of the multiplier.
 R_g is the resistance of the meter.
 V is the desired full scale voltage.
 I is the current required for full scale deflection in Amperes.

$$R_m = \frac{V}{I} - R_g$$

An instrument used for measuring high voltages, particularly in high resistance circuits is the electrostatic voltmeter the principle of which is illustrated in Figure 4. It consists of two fixed and one moving sector like a differential variable capacitor. The fixed sectors A and B are insulated from each other. C is pivoted at P and its movement is controlled by a hair-spring h. A and C are in electrical contact. The voltage to be measured is connected across the terminals T and T₁. R is a high resistance to limit current flow in case of flash over. A and C carrying like charges repel each other. B and C carrying opposite charges attract each other. C therefore rotates from position A towards position C. The scale is basically square law and the direction of rotation is independent of polarity

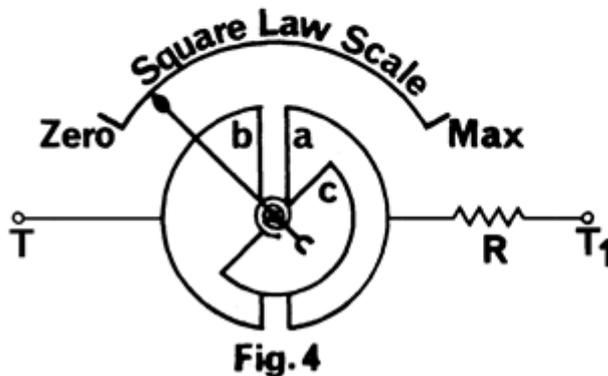


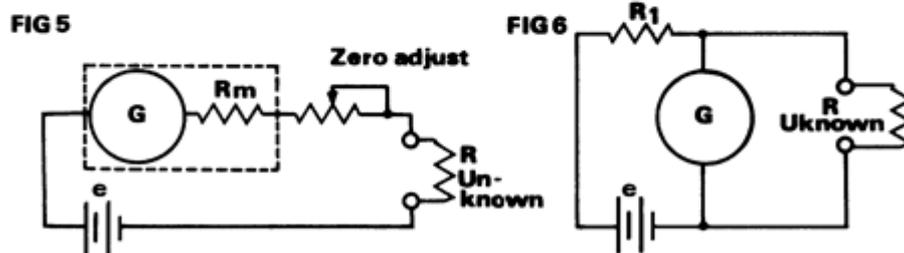
Fig. 4

This instrument is mentioned as a matter of interest but there is seldom a need for it in an amateur station. The station multimeter will normally have a scale high enough to check the HT supply

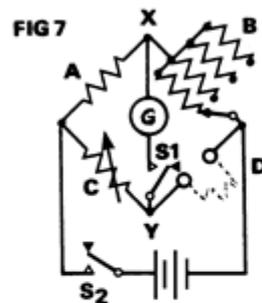
It is therefore suitable for use on both DC and AC. The scale shape can be adjusted by varying the plate shape. The sensitivity can be adjusted by varying the number of plates. For a typical 150 volt f.s.d. instrument there would be 13 moving vanes. For a 3500 volt instrument there would be one moving vane.

Resistance

A moving coil galvanometer can also be used to measure resistance. The basic circuit for measuring high resistance is given in Figure 5. The multiplier R_m is adjusted so that the battery e produces full scale deflection with the terminals A - B shorted. The variable resistor is required to adjust zero as the battery voltage falls with age. For measuring low resistance the basic circuit is given at Figure 6. R_1 is adjusted for full scale deflection with A - B open circuit. The unknown resistor shunts the galvanometer. The lower the resistance the lower the deflection. Resistance scales are non linear and are normally hand calibrated.



Mention must be made of two other methods of measuring resistance. They are the Wheatstone Bridge and the "Megger" (a registered trade mark abbreviation of megohm meter). The circuit diagram of the Wheatstone bridge is given in Figure 7. When the bridge is balanced points X and Y are at the same potential and no current flows in the galyo. The unknown resistance D is measured in terms of the standard resistance C. The ratio of the ratio arms is made variable so as to give the bridge a wide range of measurement. Ratios of 1:1, 10:1, 100:1 and 1000:1 are normally provided.



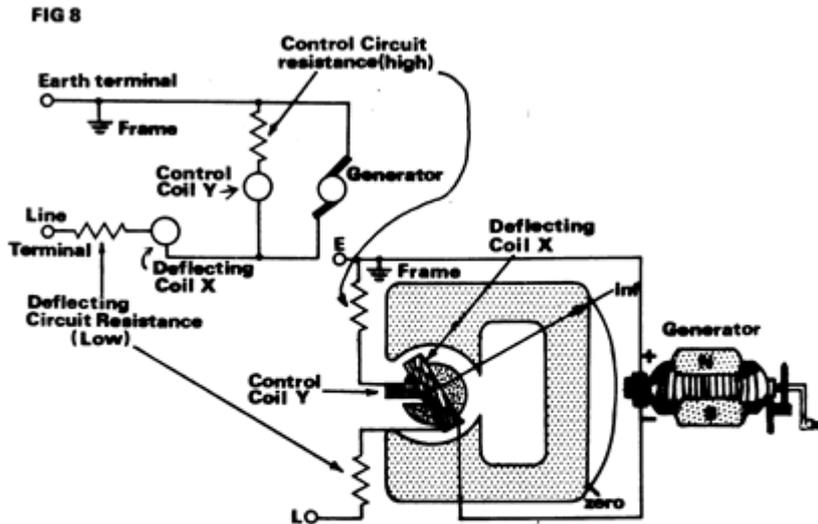
- A and B Ratio arms.
- C. Accurate calibrated variable resistor.
- D. Unknown resistor.
- G. Sensitive centre zero Galvanometer.

$$\frac{A}{B} = \frac{C}{D} \quad \therefore D = C \times \frac{B}{A}$$

Insulation Testing

The Megger consists of a hand generator developing 250 or 500 volts stabilised by a centrifugal slipping clutch device and a "ratio meter" type of movement illustrated diagrammatically in figure 8. The meter has one coil, the "control coil", connected in series with the generator and the unknown resistance. There is no control spring and the movement comes to rest at an angle to the magnetic field which depends on the ratio of the current in the two coils.

Modern portable Meggers have their high voltage developed by a transistor converter powered by a self contained battery.



Alternating Quantities

For measuring alternating currents and voltages a number of types of movement is available. High grade panel mounting meters for power frequencies are of the dynamometer type illustrated diagrammatically in Figure 9a. Here the field is produced by a pair of fixed coils connected in series and a moving coil. The latter is pivoted and controlled as in a d'Arsonval movement. The two fields interact causing the moving coil to rotate. It is a square law instrument. The direction of deflection is independent of the directive of the applied voltage or current and the scale is cramped at the low and open at the high end. By reason of the inductance of the coils it is only suitable for power frequencies.

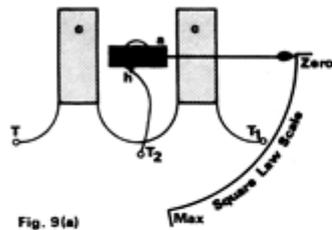


Fig. 9(a)

An amateur wishing to monitor his mains voltage would not be likely to use one of these expensive instruments but rather one of the simpler instruments to be described later.

- a. Moving coil.
- c.c. Fixed coils.
- h. Control spring.

The moving coil is only suitable for carrying a small current. Therefore in the Ammeter connection, Fig 9(b), R_1 is small and c.c. may carry a heavy current. R_2 is high so that A only carries a small current. In the voltmeter connection Fig 9(c), all three coils carry the same current.

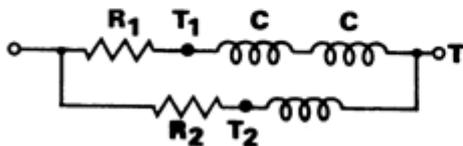


Fig. 9(b)

9b. Ammeter connection. R_1 low. R_2 high.

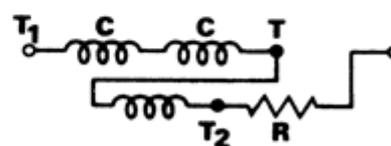
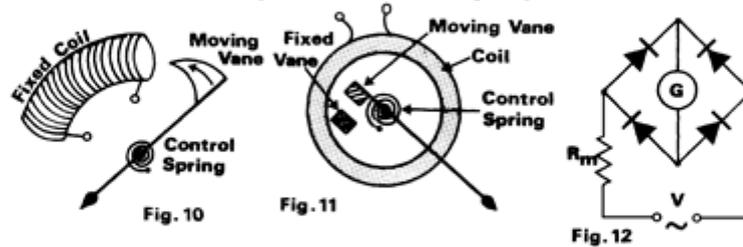


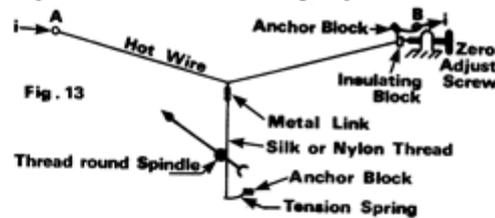
Fig. 9(c)

9c. Voltmeter connection. R is suitable multiplier value.

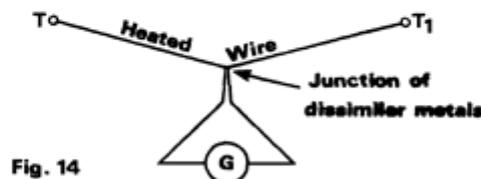
Simple robust portable instruments are usually "moving iron" of the moving vane (attraction) or repulsion type. The former is illustrated at Figure 10. The current in the coil magnetises the vane and attracts it into itself against the restraint of the control spring. The latter is illustrated at Figure 11. The current in the coil magnetises the two iron vanes with the same polarity so that they repel each other. These are also square law instruments. For greater sensitivity and accuracy and for use at audio frequencies a moving coil galvanometer with rectifier and normal shunts and multipliers is used as at Figure 12. At radio frequencies all these instruments suffer from self inductance and capacitance which reduces their accuracy and makes them frequency conscious.



An instrument used in the early days for measuring R.F. current was the hot wire ammeter. Current whether direct or alternating of any frequency passing through a wire heats it to an extent proportional to I^2R . The wire when heated expands. The expansion is communicated to a spindle carrying a pointer through a mechanical multiplying system. Thus the deflection of the pointer is proportional to the square of the current. The basic layout is illustrated at Figure 13. They are only of moderate accuracy, have limited overload capacity and suffer from zero creep.



A more accurate instrument and that now most widely used is the thermocouple galvanometer. A wire heated by the passage of the R.F. current heats one junction of a thermocouple. The voltage developed by the couple is proportional to the difference in temperature of the two junctions. The rise in temperature is proportional to the square of the current. This is therefore again a square law instrument. This instrument, the elements of which are illustrated in Figure 14, is reasonably accurate and robust except that it suffers from limited overload capacity. For greater accuracy the junction is enclosed in an evacuated bulb.



For R.F. voltage measurements a valve voltmeter is normally used. This instrument has wide application in the field of measurement of direct and alternating voltages particularly in high impedance circuits where the current drawn by simple galvanometers will upset the circuit conditions. This instrument has already been described by me in an article in an earlier issue of Mercury so no more need to be said about it here. (To be continued)

MERCURY MAILBAG.

Due to the postal dispute, the interesting letters file is somewhat small. This makes my job that much easier in that I have little to leave out. It also means that there is a little less for you to read in the way of other members information. If you have something of interest to write about, please feel free to drop a line to the General Sec. or editor.

From Berlin.....Sean Ryan gives the latest gen on the activity from the club stn, which does a lot of RTTY work. Local QRM prevents regular contact with G4RS on 80 but no problems getting out on the other bands. The club needs the manual for the Auto-Trans 6S4, if any other members can provide Sean would be very grateful.

RSARS members may like to know that Sean is shortly leaving for the sunny shores of VK land. He has recruited more members for our, Society than any other member and has also assisted the HQ station in getting on the air with the T100 teleprinter and the RTTY station by giving us a set of 45 Baud gears. We all look forward to a big signal QSO with Sean from VK6JR and wish him and his family all the very best in their new QTH.

From Lancashire....Cliff G4CJ, asks if any others in our Society were ever in 55 Div. Signals from 39 to 43 or the Waziristan Signals from 43 to 45. Cliff says "...taking Bombay morse from a Madrassi operator who was trotting up a hill behind a mule pack set, wearing phones and a morse key is very good training. One only occasionally hears worse on the bands and one wonders what these ops sending bad morse sat at a table would do if they sweated along behind a mule..."

It's a point Cliff, hope none of the bad ones you have heard belong to us....hi.

From South West Africa.....Martin Smith ZS3MS points out that only currently licensed amateurs from the UK and Rhodesia are likely to receive a ZS callsign and all others would be required to take the technical examination and do the 12 wpm morse test. Whether or not the amateur will be required to do 12 months on CW depends on the state of the PMG's liver. The technical exam follows our own and is in two parts. Pt.1 Radio Regulations. Pt.2 Theory. Members are asked to tune the occasional ear in the general direction of ZS and maybe have a QSO with Martin.

From Northumberland..... P Huntsman, G3KBQ would be interested to hear from anyone who has information on testing of inverted V ants. We have never had an article of any depth on this type of aerial and if any member would have any useful information on this subject, I would be pleased to make room for it.

From Germany.....Capt. Mike Taylor asks if anyone can assist him in his search for an AC mains PSU TYPE 6211/A for use with the Redifon GR 410 SSB TX/RX. Mike is currently struggling along with a 24 volt invertor. Any info to Mike please at this address....G SD BRANCH, HQ 1 BR CORPS, B F P O 39.

From Warwick.....Joe Goddard, RSARS 147, suggests that technical articles are not included in the Mercury, then greater space would be available for other items of an RSARS nature. (I agree John but then my file would be full of letters complaining about the lack of technical articles....Hi).

And from Manchester, just to show that the editors statement is true, comes the following....From Mr A Dobson (G3NUI)...".In the March 1968 copy of Mercury G3JXL promised to write an article about a matching FM tuner for his excellent Stereo amplifier. This has not yet appeared. Has JXL broken his arm, left the country, or what?..." he continues..."Would also like to know if G3EJF is still experimenting with direct conversion receivers? Isn't it time we had another article from him....(what about it John if you are still interested).

From Scotland....Mr J B Hammond would like to dispose of the following books and the needy are asked to send only a SASE. First come, first served.

ONE BNRS RAE COURSE. ONE SET (5) DOUBLE SIDED CARDS TUNING CHART OF RADIO TX BC610E, FOR TUNING UNIT TU54. RSGB BULLITINS. MAY 58, JAN 66. 1967

AWARD RULES FOR THE DISABLED

Rules for Disabled members of the RSARS, to be read in conjunction with the existing rules for Ordinary, Associate members and Clubs affiliated to the Society.

1. The following RSARS Operating Awards are available free of charge to those Ordinary and Associated members of the Society who are disabled, with effect from 1st January 1971.

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

2. Transmitting members located at "HOME" ("HOME" being defined as located within the bounds of ZONE 14) must submit confirmation of two-way contacts with other member stations, including G4RS as follows:-

Class III -	12
Class II -	25
Class I	- 50
Special Award-	100

3. Listener members located at "HOME" must submit confirmations of having heard transmitting member stations as in Para 2 above.

4. Transmitting members located "OVERSEAS" ("OVERSEAS" being defined as located outside the bounds of ZONE 14), must submit confirmations of two contacts with other member stations including G4RS as follows:-

Class III -	8
Class II -	16
Class I	- 32
Special Award-	70

5. Listener members located Overseas must submit confirmation of having heard transmitting members Stations as in Para 4 above.

6. Overseas members who move "Home" may count any confirmations gained overseas towards the awards in para 2 and 3 above.

7. Home members who move Overseas may NOT count any confirmations gain at "Home" towards the awards in para 4 and 5 above.

8. 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 person's 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 members moving from the "Home" area to the "Overseas" area (and vice versa) can be contacted ONCE only in each area.

9. **ONLY FULL PAID UP MEMBERS OF THE R.S.A.R.S. MAY CLAIM THE SOCIETY AWARDS.**

10. Members must 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 license 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.

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

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

13. 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. 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 with 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 certify that the claimant is a disabled operator, and 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)

Claimants Signature:

Date:

2nd Witness:

Name:

Call-sign:

Address:

Appointment (National Society)

Claimants Signature:

Date:

14. The Awards Manager will retain the certified list and/or check list returning any confirmations and the Certificate awarded to the member. The Certificate will be forwarded under separate cover.

15. Subsequent claims need not include the previous confirmations.

16. The Awards Manager will submit an "Application for RSARS Special Award" form to the General Secretary who will order the Plaque in the case of claims for the Special Award. The Plaque will be forwarded to the member concerned as soon as possible.

17. Contacts for the RSARS Operating Awards are effective from the 1st January 1970 only.

18. Applicants for all the Awards (both transmitting and receiving) can submit all cards for SSB/AM or CW.

AWARDS MANAGER:

G3VIS
"Heatherlea",
12, Linton Rise,
Catterick Camp,
Yorkshire.

Tel: Catterick Camp 2507.

These rules are subject to alteration in the next issue of MERCURY.

CCF/ACF RADIO....MARLBOROUGH VERSUS OUNDLE SCHOOL O.T.C.

In the last edition of Mercury I published a letter from Ian Jolly about the first efforts to get wireless introduced for use on school A/CCF Radio networks. The following has since been received from Edgar Wagner, G3BID.

In your article "A Short History of the CCF/ACF Radio Network", you mention -

"Radio first made its appearance when Marlborough took out two Amateur Call signs in the mid 1930s."

I feel you might like to know for the record that while I was at Oundle 1920-1924, the Oundle School O.T.C., as it was then called, had two wireless detachments each consisting of a wireless transmitter and receiver, a pair of sectional masts supported by guy ropes and a large copper gauze earth mat.

The basic source of power was, of course, lead acid accumulators, as now, and the transmitter power supplies were TVT's or "Tuned Vibratory Transformers". As I remember it the apparatus was only capable of transmitting Morse, no telephony facility being available. There were basically two types of valve, the "R" valve for receiving and the "T" valve for the transmitter.

All the equipment was transported by manpower, and I vividly remember one detachment setting out under the Master in charge to a point some miles away, while I was very happy to be left with the "home" detachment. After allowing a suitable time - several hours, we were to start transmitting and listening for a reply from distant station.

We were able to follow the progress of the distant party through our signals telescope and eventually when they had transported their station for some hours, we saw them setting up the station. We began transmitting but heard no reply.

Eventually we spotted something white waving in a tree and through the telescope saw someone in the tree sending flag signals with a white cloth and a stick.

The message repeated several times read "You have got all the "T" valves."

This explained why no signals were heard. When the distant detachment returned we expected great anger from the officer, but he returned in very good spirits, saying our signals had been received at good strength and very clearly, and he was very pleased with the performance.

The two detachments went with the school O.T.C. to Strensall, near York in about 1923 or 1924 for a week's camp with O.T.C.s from other schools.

When it came to the big exercise with all the other school O.T.C.s, our wireless detachments were not allowed to take part as they were the only wireless detachments there at the time, and it would have given our "side" an unfair advantage had they been used.

I mention this little episode as evidence that radio (or wireless as it was then called) had already made its appearance in the school O.T.C.s (the predecessors of the CCF) in about 1923 or 1924.

The school also had an amateur licence "2CH" at that time. The "G" was never used as no one expected to be heard outside the country.

"2CH" was more active in attempting broadcasting than amateur communications as they are known to-day. The B.B.C. - British Broadcasting Company - had only been formed in 1922 and was not a monopoly, and we were enthusiastically trying to broadcast Handel's Messiah and Bach's B minor mass sung by the school choir and accompanied by the school orchestra in 1923 and 1924. The solo parts were sung by professional soloists.

It was about this time that we also tried to experiment on VHF, though no one called it VHF. We built a VHF transmitter and receiver at what later turned out to be about 2 ϕ -meters, and tried to demonstrate reflection. This was done by transmitting on a vertical dipole at the focus of a parabola

G3HKR.....CLUB STATION ...ARMY APPRENTICES COLLEGE...HARROGATE....AFF11

The Club Station at the Royal Signals Apprentices College Harrogate has taken on a new lease of life, having moved into new premises. By devious means, a lot of self help and assistance from numerous sources, a TA 33 Jnr beam sits atop a 65ft tower (ex Comcon 105ft) and two operating positions comprising a HW100 and a Viceroy and HQ170 have been installed. An 80 metre dipole at 50 feet completes the installation. Results indicate that a potent signal now radiates from the station, so much so that ideas of building a linear have been shelved. (Ask MP4TDA).

The club exists in support of the Amateur Radio Hobby for Apprentices, of whom there are about 20, either constructing electronic projects or studying for the RAE and the morse test. Hobby nights are on Mon, Tue and Thurs each week during the term from 1700 - 1800Z and G3HKR is active during these times particularly looking for overseas members. During club nights "Rubber Stamp" QSOs are not encouraged as the station is being used for demonstration purposes to encourage the club members to obtain their ticket.

G3HKR is active at many other times as there are four members of staff who hold their own tickets and are also RSARS members, two of whom live within sight of the station. (RSARS 061, 076, 130 and 131). Future plans envisage a 2 metre beam at 70ft, space having been left for one above the TA33 jnr, and, a 2mtr rig when time and finances permit.

RSARS members - particularly overseas are requested to make themselves known if G3HKR is heard on the bands.

MORE ON THAT SOUNDER VERSUS BUZZER METHOD OF SIGNALLING.

Dear Editor,

I am sorry to differ with your esteemed contributor GM3IAA (whose VS1AA antenna served me very well for some years), and who disagrees with my contemporary G3EYD's opinion..." any sounder operator can easily read a buzzer signal...". It would seem that Mr Mackintosh is also a contemporary of mine inasmuch as I too was trained as a GPO Telegraphist, having been one of several hundreds recruited under the London Polytechnic War Office scheme, (2 references needed), in 1915 where under youths would be trained to be ready, fully trained upon reaching the age of 18 at least.

Training took place in Biggleswade, Beds, where we were introduced to the morse code, when such was more or less memorised, training on the GPO sounder followed. At no time was a buzzer used and it took quite a while to read the "Silence" between the key clicks. A D3 was never in evidence although we copied diagrams and became fully aware of its faults.

Upon being remustered as "Sapper"(Office Telegraphist) and being still too young to go abroad, I served in the Biggleswade Post Office in direct contact with Telegraph Street London - we had three Brigades in our district. After some months, I and some twenty others were hurriedly sent to Newport Pagnell and then almost immediately to Norton Bks Worcester, where we were introduced to the Playfair code and to the Trench Set Mk1(/) NOT ONE of the tentative operators listening to its rather harsh splutter failed to read its message. Of those left in Biggleswade, quite a few who had failed exams were transferred to the RFC Kite Balloon Section.

yours faithfully,

H. Collins, G3COL,
148, Greenway Road,
Runcorn, Cheshire.

**URGENTLY WANTED....SOS URGENTLY WANTED....SOS URGENTLY WANTED
ITEM URGENTLY WANTED BY RSARS 176, G3EBO, Mr. R.G. Garland, 18,Bradvue Cres., New
Bradwell, Wolverton, Bucks.....A MANUAL OR INFORMATION SHEET ON THE No.1 (ONE)
Wireless set as used in 1940..... to give away or to loan for a short while.**

10TH ANNIVERSARY ACTIVITY WEEKEND 19TH/20TH JUNE

How many Royal Signals amateur radio stations can you work during the weekend between 1000 hours GMT on Saturday to 1800 hours GMT on Sunday?

You will be awarded one point for every UK station worked, 2 points for continentals, 5 points for stations located in the Near East, Middle East, and Far East, and a bumper 10 points for stations in VK, ZL, VE and W land.

The station with the largest number of points gained in QSO will be awarded a prize, so also will the SWL with the maximum number of QSOs logged. Please submit your check sheets to the Gen. Sec. laid out in the following form:

Time.	Stn. Worked.	RSARS No.	Points

SWLs change col.2
To "Stns. Heard"

SCHEDULE OF OPERATION FROM G4RS/GB3RCS. HQ STATION BLANDFORD CAMP.

SATURDAY 19th JUNE

Time (GMT)	Band	Approx. freq.	Mode.	Antenna.
1000 - 1200	40m	7050 kHz	SSB voice	Dipole
1200 - 1400	40m	7010 kHz	CW	"
1400 - 1600	15m	21180 kHz)	SSB voice	3 Element beam
	20m	14180 kHz)		
1600 -1700	15m	21030 kHz)	CW	"
	20m	14020 kHz)		
1700 - 1800	80m	3580 kHz	RTT 50 baud	Dipole
1800 - 1900	20m	14090 kHz	RTT 45.5 baud	3 Element beam
1900 - 2000	80m	3540 kHz	CW	Dipole
2000 - 2100	2m	145.41 mHz	SSB/CW	10 Element beam (1 st 20 min pointing N.) (2 nd 20 min pointing W.) (3 rd 20 min pointing E.)
		144.04 mHz	CW	
2100 - 2230	80m	3720 kHz	SSB voice	Dipole
2230 - 2330	20m	14280 kHz	SSB voice	3 Element beam pointed at VE & W
2330 on	160m		SSB/CW	Sloping dipole

SUNDAY 10th JUNE SCHEDULE

0900 -1000	40m	7010 kHz	CW	Dipole
1000 - 1200	40m	7050 kHz	SSB	"
1200 -1230	80m	3540 kHz	CW	"
1230 - 1400	80m	3720	SSB	"
1400 -1600	15m	21180 kHz	SSB	3 Element beam
	20m	14180 kHz	SSB	"
1600 -1700	2m	145.41 mHz	SSB	10 Element beam sched. as for Saturday
1700 - 1800	80m	3720 kHz	SSB	Dipole

Close down as from 1800 hours

Please post your entries on or before the 1st of July, addressed to the Gen. Sec. Winners will be announced in the Autumn edition of Mercury. Prizes will be a RSARS tie and lapel badge with the winners call sign/SWL number engraved on the scroll, alternatively you can choose other items in stock up to the same value

Gud Luck
de G4RS



CADET FORCES SECTION BY IAN JOLLY G8EOO RSARS 605

JY1 who has featured in the last two Mercury's is still active - Ian Suart RSARS 689/A6765 of Heversham Grammar School CCF has received not one but TWO QSLs from King Hussein. I was pleased to meet Ian together with G3WRY, G3XSN and G3DCA at the Amateur Radio Convention in Manchester during May.

Many thanks to Nicholas Rajan 740 and Tim Williams G3YOZ/746 who sent details of their activities. Nick is I/C the Royal Signals Troop at Marlborough College and Tim is one of the cadet sergeants but both can be found operating the CCF station under callsign 36. Equipment consists of a C11 tx (Serial No 001!) and an Eddystone 730/4, a C12 transceiver and a 12 set tx/ R107 rx for standby. Tim uses this equipment on both the CCF Net and the amateur bands (Those who op on 80 metres will probably have met him already). G3YOZ's home equipment consists of a homebrew tx for 80m and AR88D receiver together with other bits and pieces in the process of construction for 2 metres. Nick and Tim would like to thank Bill Neale G8AQT/304, the College electrician, who (to quote their letter) 'does a lot to help us in the signals and generally to keep the College alive'.

Congratulations to Mike Farrant 775 of King Williams College Isle of Man, who passed the RAE last December. Did any other CCF members also pass? Your 'scribe' took the same exam but passed the December 1971 exam (according to the pass slip !). The call arrived at the end of January during the Postal Strike and I can now be found lurking around on 2 metres under G8EOO (Extra Ordinary Operator - NOT Englands Original Operator HI) using a Pye Vanguard.

ZZV & 73 -- Gd DX. Ian Jolly.

THE APPLICATION OF OHM'S LAW!!!!???

WANTED

A reward of 10,000 microfarads will be paid for the capture of Hopalong Capacity who escaped from a cell, a leclanch'e cell, last night.

He is wanted for the induction of an 18 turn coil. He is also charged with conducting an A.C. motor across a Wheatstone Bridge.

Chief Inspector Maxwell the lightning arrestor, in an atmosphere charged with tension, stated resonantly that the criminal is armed with an eliminator.

The electromotive force has searched for him for several ampere hours in the surrounding magnetic fields without success. It is possible he may skip the country on a carrier wave with his new found friend an erotic ballet dancer called Decibel. If propagation takes place, they will almost certainly produce a number of odd harmonics.

Caution! Reactive elements are believed to have helped Hopalong's natural resistance to create a massive impedance, therefore officers should show no reluctance in attempting to suppress him.

A negative image of the wanted offender has been distributed on printed circuit boards to all megacycle patrols, and a potential barrier has been set up around the depletion layer on the other side of town.

Charges are under Ohm's Law.....

LATE EXTRA

DX hunters take note.

A letter has been received from L.F. Jarrett RSARS 698 informing me that he is going to Japan officiating at the Boy Scouts 13th World Jamboree to be held in JA land this coming August. A station is to be set up and will probably operate 24 hours a day from 1st to the 10th of August and the callsign will probably be JA2BSJ. Len informs me that there will be a mixed bag of operators from various countries, and his own operating may be spasmodic since the powers that be expect him to perform other duties - ridiculous? If you are fortunate enough to work him personally, confirmed by QSL, then the contact will count. Good Luck Len H.Q. stn will certainly be on the look out.

ARE YOU COMING TO THE BLANDFORD RALLY ON JULY 18th?

If you are the General Secretary would like to know. The itinerary shown in the Summer Mercury has been changed to accommodate a visit to the Museum before entering Princess Mary Hall for the Annual General Meeting. By the way the Cook Sgt has arranged quite a nice lunch consisting of.

<u>Starters</u>	Fruit Juice, or Soup.
<u>Followers</u>	Assorted cold meats and salad.
<u>Finishers</u>	Sweet and Coffee.

In the late afternoon you will receive a piece of fruitcake and a cup of tea. Now, you may ask, how much is this little lot going to set me back? It will cost you a mere 35 pence (children 20 pence). For those who find it difficult to think in terms of luncheon without an aperitif like, for instance a pint of wallop, the General Secretary has arranged with the PMC of the WO's & Sgts Mess (Ray Vasper) to borrow the necessary equipment to provide a bar for members use before luncheon. If you decide to come fill in the proforma and send it BY RETURN to the GENERAL SECRETARY. That way we can keep the wastage to the minimum.

73 DE

PS. BRING SOMETHING
FROM YOUR JUNK BOX
FOR THE
"BRING AND BUY SALE"

Bill Graham

▽

The General Secretary
RSARS
School of Signals
Blandford Camp, Dorset
From Callsign RSARS No.....

I intend to attend the Open Day at the HQ Stn at Blandford Camp and I will require Luncheon vouchers for (No. of adults) (No. of children) in my party.

Signed

MICK MORPHEY'S GIANT SALE

Lots of goodies going for sale at Mick's QTH so get your bids in as soon as possible to : WOII MORPHY, ROYAL SIGNALS, RSARS 057 at the addresses shown below. 5% of any money obtained from the sale of the following items, as a result of advertising in the Mercury, will be donated to the RSARS. (Many thanks Mick, thats very generous. Hope you make lots).

Eagle R.F. Field Indicator (RF 40)
Top Band Transmitter with power pack. (Home Brew).
Aerial Tuning Unit. (Redifon).
Xtal microphone 200C Eagle (50 ohm) w/desk stand.
Z Match.
Low pass antenna filter (band two) KW Electronics
AR 88 Receiver (in good working order)
Aerial Mast complete with guy ropes and insulating base and spike. (34 foot)
Battery charger 6-v/12-v Rectifier new and unused.
Transformer 620 0 620 volt 200mA
Coils (Denco)
Inductances: 10H 150 mA, 8H 200 mA
Box of Transistors (New and unused approx. 30)
Tuning Dials 100 - 1, 20 - 1 Ratios ,
Codar Preselector 30X

Many useful items of radio equipment both new and unused.
Coil wire.
Box of assorted Capacitors.
Box of resistors.
Box of assorted Plugs and switches
Valve bases and Screens
Junk box containing many useful items
Box of valves (approx. 100) including 6146, 807.

The Radio Amateur's Handbook (ARRL).
The ARRL Antenna Book
Single Sideband for the Radio Amateur
Novice and Technician Handbook
Radio Data Reference Book
The Amateur Radio Handbook

The above items may be seen at my home address (weekends only).

394, Astwood Road,
Worcester.

Telephone WORCESTER 53311

or Royal School of Artillery
Larkhill,

Salisbury, Wilts

Telephone BULFORD CAMP 3371 Ext. 449
(WORKING, HOURS ONLY)

PHONE: ST. TUDY 201
CORNWALL HAM-RADIO HOLIDAY CENTRE
 BERNARD BROUGHTON, G3XBR DOROTHY BROUGHTON
 HI-BEAMS, ST.TUDY, BODMIN, CORNWALL,
 ENGLAND.

AN INVITATION

To come and enjoy the complete freedom of furnished, self-catering accommodation. (Stay in bed all day if you wish). Situated in the delightful unspoilt village of St. Tudy, adjoining Broughton's Post Office General Store and opposite The Cornish Arms. Everything you need right at hand. Just bring your pyjamas and your GPO Transmitting Licence and operate G3XBR. Max legal power. 6 Element Beam. 65ft Tower. Over 400ft above sea level. Our aim is not only to make you comfortable and welcome but to make you want to come again and to recommend your friends.

73, Bernard and Dorothy Broughton.

GENERAL INFO.

All within 15 miles from St. Tudy (WAB = SX07) you find Blue Sea and Golden Sands: Golf Courses; Sea and River Fishing; Safe Bathing; Surfing; Water Ski-ing; Boating; Sailing; River and Sea Trips; Horse Riding and Pony Trekking; Gliding at Perranporth = 30 miles.

Your daily needs can be purchased at the General Store. Milk at the Garage = 1 minute walk. Butcher = 2 minutes walk. There is ample car parking space. Secluded Garden. Washing, Drying and Ironing facilities. Children and babies welcome but unsuitable for Dogs.

ACCOMODATION COMPRISES: Ground floor = Fitted and fully equipped Kitchen with Electric Cooker. Dining Room/Lounge with Television. Radio Room with 7ft Console. First floor = Three double bedrooms all H. & C. Bedroom 1 = 12'6" x 13'. Bedroom 2 = 11' x 12'. Bedroom 3 = 9' square. Close carpeted Bathroom/WC.

INCLUSIVE WEEKLY TERMS: August £20. July & Sept. £18. May, June and October £15. Other months by individual arrangement. If only two Bedrooms required, deduct £3 from these prices. Deposit 20%. No slot meters or other annoying "Extras". Bookings from Saturday to Saturday. Please vacate rooms by 10.a.m. to enable preparation for new arrivals by 3.p.m.

CENTRAL FOR TOURING MILEAGE TO:-

BODMIN 7 CAMELFORD 7 DARTMOOR 45 FALMOUTH 42 FOWEY 18 LOOE 25
 MEVAGISSEY 23 NEWQUAY 23 PADSTOW 15 PLYMOUTH36
 POLPERRO 23 PORT ISAC 9 ST IVES 39 TINTAGEL 11 WADEBRIDGE 7

+++++

So okay, it sounds like a good deal. Would be holiday trippers to Cornwall might like to drop Bernard a line at the above QTH. Happy Holiday.

+++++

ROYAL SIGNALS AMATEUR RADIO SOCIETY

MEMBERS SUPPLIES

- Members Notepaper - Approximately 6 1/2" x 8" good quality notepaper, headed "ROYAL SIGNALS AMATEUR RADIO SOCIETY, "Members Correspondence" and a figure of Mercury in Blue. Also space for Call-sign and Membership Number. New series but no increase in price.
- Members QSL cards - THESE ARE A BETTER QUALITY CARD AT THE OLD PRICE. All cards have a "Jimmy" with "Royal Signals Amateur Radio Society" and "Member Station" on the front and printed details on the reverse permitting the card to be used as a) a QSL for a QSO b) a SWL report and c) to acknowledge a SWL report. This is the basic card which can be overprinted with your membership number, call-sign, name and address etc., in RED, BLACK, GREEN or BLUE at a small extra charge. Minimum order quantities : Basic = 100, Overprinted = 500.
- Members Lapel Badges - In light blue, dark blue and green, with "RSARS" initials in black. All brooch fitting. Plain at 12p or with your call-sign or membership number on an attached scroll - 37p.
- RSARS Ties - In good quality Crimplene and Terylene, dark blue, with alternate angular rows of "Jimmy" and RSARS badge. Manufactured by a leading London Colour House at £1. 28p post free.
- Log Books - By N.W. Electronics. Good quality white paper, with over 100 pages. "Q" Codes, Reporting systems etc. 37p post free.

ORDER FORM.

To : General Secretary
R.S.A.R.S.
School of Signals,
Blandford Camp,
Blandford Forum,
Dorset.

From : _____

Date : ___/___/19___

Call-sign : _____

RSARS No. : _____

Please supply the following goods :-

		£	s	d
_____ Sheets of Members headed Notepaper	@ 42p per 100	_____	_____	_____
_____ Basic QSL cards	@ 50p per 100	_____	_____	_____
_____ Basic QSL cards	@ £1. 88p per 500	_____	_____	_____
_____ Overprinted QSL cards in (colour) _____	@ £2. 63p per 500	_____	_____	_____
_____ Plain lapel badge(s)	@ 12p each	_____	_____	_____
_____ Call-sign lapel badge(s) (_____)	@ 38p each	_____	_____	_____
_____ Society Tie(s)	@ £1. 28p each	_____	_____	_____
_____ Log Book(s)	@ 37p each	_____	_____	_____
1970 Annual Subscription	@ 50p	_____	_____	_____

Total : _____

All Post Free. Overprint colours RED, BLUE, BLACK or GREEN. I enclose Cheque/Money Order/Postal Order/Cash to cover total cost. Please cross Cheques and Postal Orders and Register cash.

Signature : _____