

# R S G B

JULY, 1957

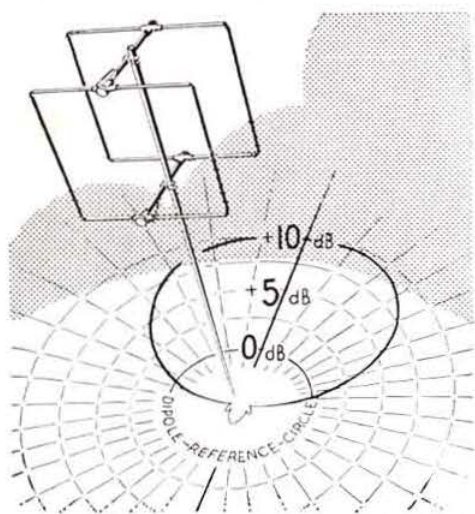
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2/6 Monthly

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN

VOL. 33, NO. 1

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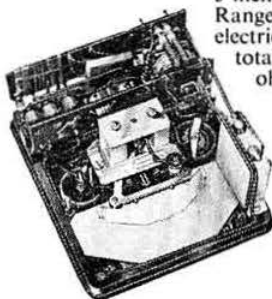
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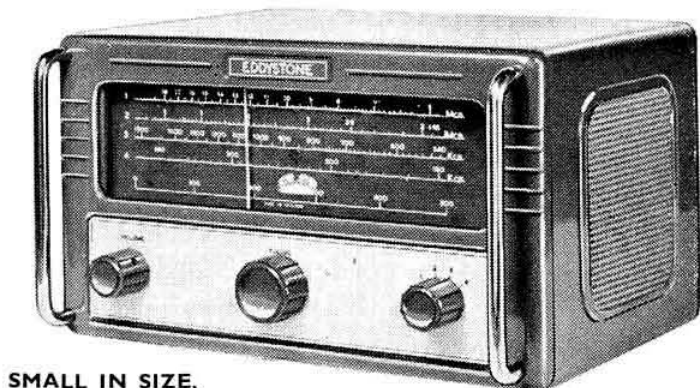
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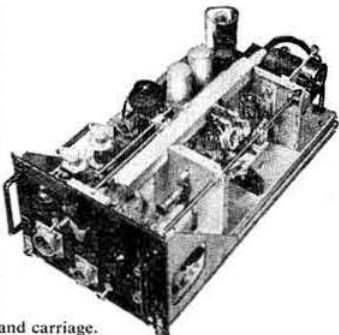
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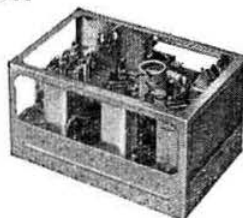
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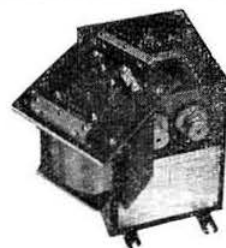
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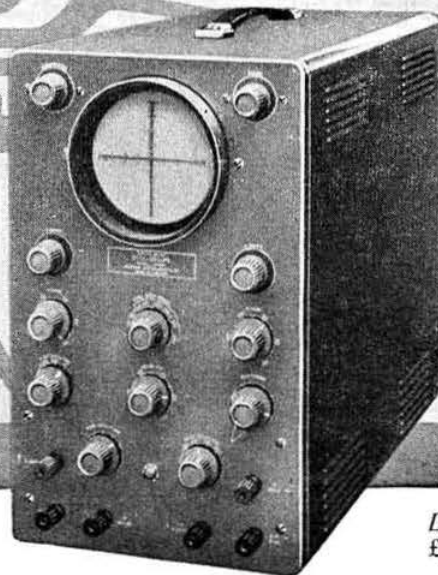
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# R.S.G.B. BULLETIN

—Devoted to the Science and Advancement of Amateur Radio—

Vol. 33 No. 1

JULY 1957

## CONTENTS

	Page
Current Comment (Editorial)	7
Propagation and the International Geophysical Year. By G. W. Slack (G5KG)	8
Simple Selectivity for the BC312. By D. W. Auton (G3IHI)	12
Sensitive Grid Dip Meter. By J. H. Adama (PA0FB)	13
A Slotted Two Metre Beam for a Room Corner. By M. J. Heavyside, B.Sc. (Hons.), M.Ed., Ph.D. (G2QM)	14
Four Metres and Down. By F. G. Lambeth (G2AIW)	15
Worked and Heard on V.H.F.	18
Slow Morse Practice Transmissions	18
Silent Key	18
Month on the Air. By S. A. Herbert (G3ATU)	19
Frequency Predictions. By J. Douglas Kay (G3AAE)	21
Mobile Column visits the New Forest Rally. By John A. Rouse (G2AHL)	22
The B.E.R.U. Contest 1957—Results	24
The Twenty-first B.E.R.U. Contest 1958—Rules	27
Tests and Contests	28
Amateur Television. By M. W. S. Barlow (G3CVO/T)	30
Council Proceedings	31
Society News	32
Radio Amateur Emergency Network. By C. L. Fenton (G3ABB)	34
Regional and Club News	35
Forthcoming Events	36
Letters to the Editor	37
Index to Advertisers	48

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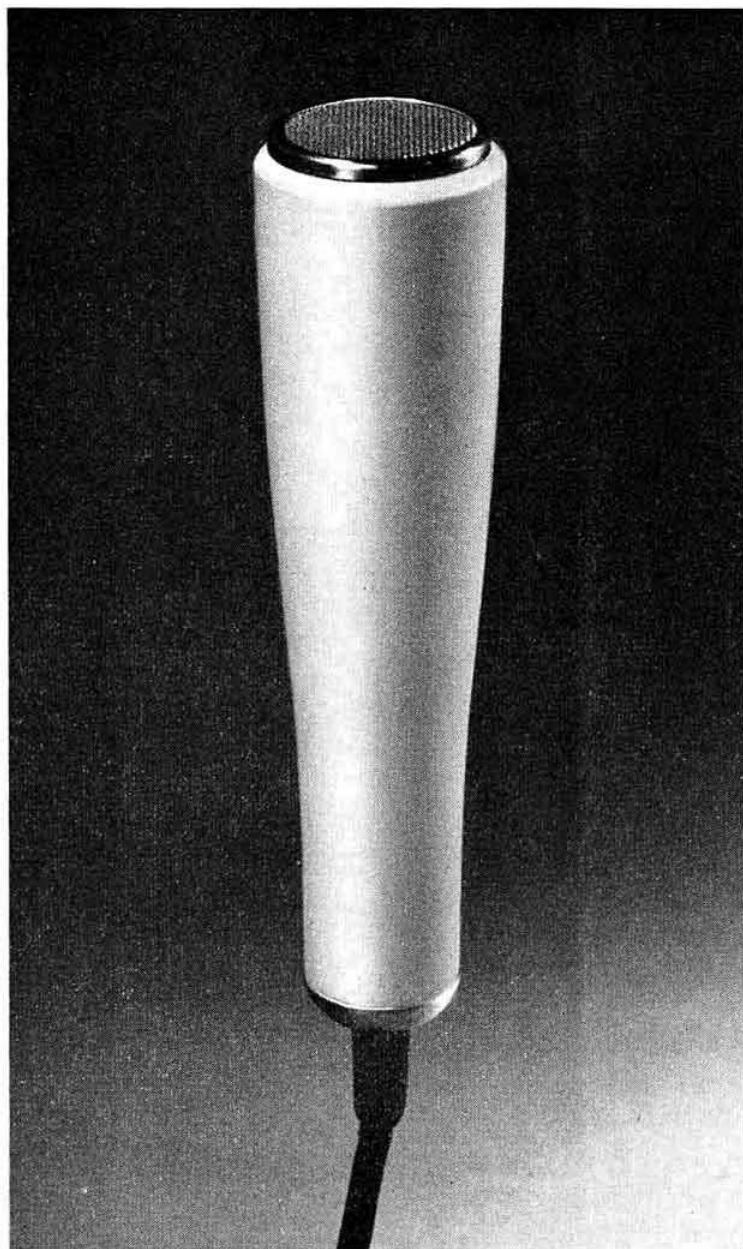
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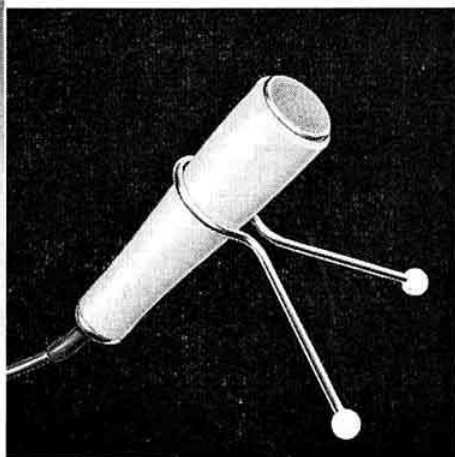
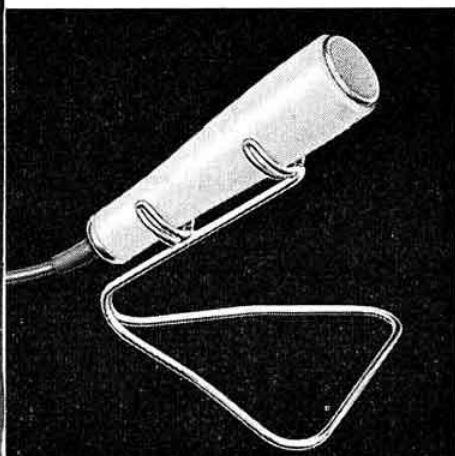
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# Current Comment

## Memo Pad

As evidenced by its change of cover colour with the present issue, the BULLETIN slides gently into a new volume, the thirty-third modest milestone along a radio road that stretches into the infinite future and whose beginning goes back to the early twenties, when the BULLETIN was in truth little more than a bulletin, evolved by a handful of enthusiasts and sped on its way by a much loved and well remembered amateur, Bevan Swift (G2TI), aided by J. A. J. Cooper (G5TR), Gerald Marcuse (G2NM) and Ralph Royle (G2WJ).

The start of a new BULLETIN volume is an appropriate moment at which to do a little reminiscing, not along the slightly sentimental lines of the foregoing but from a rather more strictly practical point of view, and within a much shorter compass of time—in fact, with the intention of reminding members of some of the matters of importance which have been discussed in these pages during the past volume. So let us look back to see what is still labelled “Action Now.”

“*Inquire before calling.*”—No major policy matter this: but with holiday time here again it is fitting to remind members of last year’s summertime suggestion that courtesy and convenience are best allied if, when on holiday, no member makes a fraternal call on a fellow amateur at a holiday resort without asking first! A postcard or telephone call is a cheap enough price to pay for avoiding embarrassment to caller and called-on.

*Council Nominations.*—“To asterisk or not to asterisk” the names of Council nominees at elections for Council membership is a subject which has already occasioned lively discussion among members. So far, the asterisk stays—by Council decision.

Five months still have to pass before the next election. Perhaps the show of interest there has been may result in a better “turnout of electors” than in past years: but these words appearing in July may need reiteration nearer the date to bring this circumstance about.

*The Presidential Address* last January was the vehicle for suggesting that there should be intensified discussion on Society matters among the membership generally.

“Make known to the Council your feelings at meetings and by correspondence,” said President Findlay. There is evidence that his invitation has not gone unheeded.

Intensified discussion among the membership results in turn in intensified work for the Council in handling the extra load; which is what the Council is there for, anyway. But can the increasing load be handled by a Council constituted as it is at present? This question was another that the President threw out to the members to mull over. As recently as last month the *pros* and *cons* of holding less frequent meetings of the full Council were discussed in this space, and while they may not need airing again thus soon, the point is worth making that the subject is down for discussion both at next month’s Council meeting and at the A.G.M. in December. It is a very live issue on which useful guidance to Council can be given by groups, clubs and individual members. Which brings us by easy stages to *A.S.R. Nominations.*—As from July 1 nominations of Affiliated Society Representatives should have been made by clubs wishing to have them. The major innovation of creating the post of A.S.R. on the same level as T.R. was discussed on this page in May. “Action now” should be taken by those concerned.

*And in Scotland* action is required within the next ten days to nominate new Zonal and Regional Representatives in the stead of James Taylor (GM2DBX) following his resignation.

*Action Now*, also, is called for, and no doubt will be forthcoming, in connection with the International Geophysical Year which began a fortnight ago and was fully dealt with in the last BULLETIN so far as Amateur Radio participation was concerned.

\* \* \*

There, then, is a “forward scatter” of currencies affecting some or all members in varying degree, taken at random and interconnected only fortuitously. Just how viable they will continue to be depends almost wholly on the interest taken in them by the members themselves.—J.H.

# Propagation and the International Geophysical Year

By G. W. SLACK (G5KG)\*

THE article entitled *Amateur Radio and the I.G. Y.*, published in the March 1957 issue of the BULLETIN, has prompted the writer to set down a few practical principles for the guidance of readers who may wish to contribute to the mass observations which are to be made in connection with the International Geophysical Year. He is not prepared, however, to enter into argument as to whether the average amateur can effectively compete with the highly organized and well-equipped scientific bodies which already exist; his view being that such an exciting opportunity should not pass us by, even if we only confirm, to our own satisfaction, the findings of others. The experience gained should far outweigh the time and trouble which may have to be expended.

It is with this thought in mind that the following paragraphs are submitted. It is hoped they may prove useful to those who wish to try their luck in solving the yet unsolved puzzle of the complete mechanisms which control "beyond line of sight" propagation at v.h.f. and u.h.f.

varies from year to year and month to month reaching a peak every 11½ years. Such a peak is approaching us at the present time and should reach a maximum this year. When a major activity is noticed it can sometimes be observed to repeat itself after a period of 27 days (the time taken for the Sun to make one complete revolution) (see Figs. 1a and 1b). This is not always true, however, because the activity may "quieten" during the period when the area affected is turned away from view of the Earth. During the period of the sunspot maxima the electron density of the three layers increases; the  $F_2$  Layer being as much as four times as dense at sunspot maximum as at sunspot minimum. Increased magnetic disturbances can also be noted at periods of sunspot maxima. Large increases of solar noise are also to be noted at this time and can be related to some extent to the sunspot number. Sunspots vary in size from tiny specks, known as minor centres, to relatively large areas (major centres). Sometimes these large areas are surrounded by a form of halo which at times develops into a ring or partial

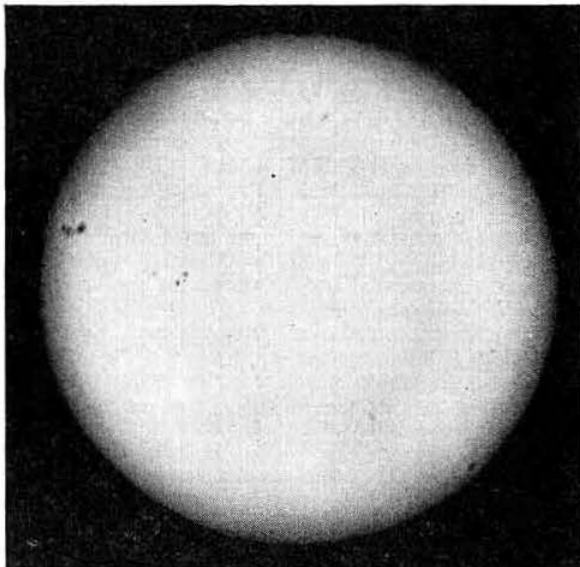
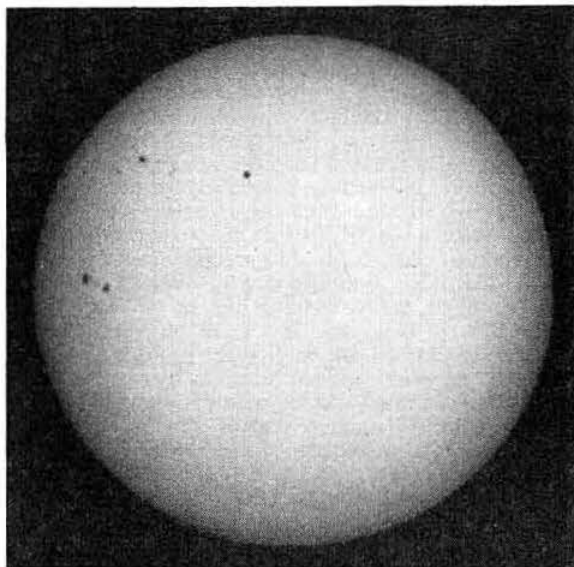


Fig. 1. Photographs of recent sunspot activity. (Left) February 22, 1957. (Right) March 21, 1957.

## Known Causes Which Affect Propagation at H.F. and V.H.F.

Before embarking on details it may be advisable to consider some of the known causes which affect propagation. These occur in three categories, namely (a) those which occur on the Sun, (b) those which occur in the ionosphere, and (c) those which occur near the Earth's surface.

### Solar Effects

Let us deal first with those causes that are associated with the Sun itself: the best known being referred to as sunspots, which can be observed at times with the naked eye, providing a sufficiently opaque filter is used. The number of spots

ring of minor centres. At periods of intense activity, i.e. when large centres are near the Sun's meridian, the possibility of auroral phenomena is increased, with attendant magnetic disturbances.

The next point to be considered is the radiation of ultra violet light from the Sun. This radiation is the most common source of ionization of the upper layers. At this point of maximum radiation the molecular density is relatively low. Intense ionization will take place and can be sustained, owing to the fact that the molecular density is low, and recombination is therefore less likely to occur (Fig. 2). The ultra violet is rapidly attenuated and therefore has much less effect on the lower layers. The amount or depth of penetration is dependent on the amount of radiation emitted from the Sun and the angle at which it approaches

\* "Appletree Cottage," Griffin Hill, Danbury, near Chelmsford, Essex.



the Earth, hence the variation between winter and summer conditions, otherwise known as seasonal variations.

At certain times the intensity of the ultra violet radiation increases suddenly, due to what is known as bright hydrogen eruptions. These may sometimes be observed in the visible spectrum of the Sun. Under such conditions the penetration can be such that it extends to the lower side of the *E* region, producing temporary ionization of an abnormal character below the normal *E* Layer. Such ionization is of short duration due to the high molecular density and attendant speed of re-combination. At these low levels, electrons collide so frequently with atoms and molecules that re-radiation is very inefficient. When this occurs the signals which are normally propagated by the ionosphere are attenuated, causing sudden fades of short duration. Known as "Dellinger fades" they often seriously interrupt long distance communication and broadcast systems. Sometimes, but not always, these bright hydrogen flares with their attendant Dellinger fades are followed by magnetic storms from 18 to 30 hours later. These magnetic storms may last for several days, during which time the ionized density of the *F*<sub>2</sub> layer is very low. This brings us to our third and last form of solar radiation.

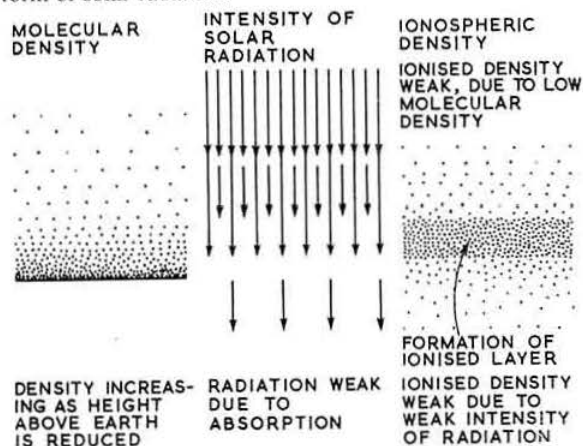


Fig. 2. Shows, diagrammatically, how an ionized layer is formed.

It is believed that at times of severe eruption at the surface of the Sun, calcium particles are forced away from its surface by radiation pressure. These particles travel through space at a speed relatively slow to that of light and in consequence arrive at the Earth's ionosphere some hours later than the observed flare, as seen, say, through a telescope. These particles are heavily ionized and can be said to "blast" the *F*<sub>2</sub> layer (a suitable analogy being the casting of a stone into a placid pool of water). This type of radiation is often referred to as corpuscular radiation. Streams of particles are shot out from the Sun and occasionally bombard the Earth. Ions and electrons from these streams are guided towards the magnetic poles causing visible *aurora borealis* and *aurora australis* displays. Clouds of electrons in violent motion produce abnormal compass variations and cause secondary currents to flow in telephone lines, submarine cables, etc. In extreme cases the compact ionospheric layers are completely shattered and thus disrupt sky wave communication for several days.

#### Ionospheric Effects

The conditions which may occur in the ionosphere itself will now be considered. In general the structure of the *E* layer is regular but at times it gives intense reflections up to frequencies far beyond the normal *E* critical frequencies. Under these conditions the *E* layer will shield the *F* layers so that no reflections will be obtained from them. The abnormal

*E* layer is most prevalent in summer time and often occurs in the middle of the night. The cause of this intense ionization is not definitely known but some experts are of the opinion that there is some connection with storm centres. There is evidence that ionization can be caused by meteors, which enter the Earth's atmosphere at great speed and become vaporized.

#### Near Earth Effects

Finally let us consider the effects which take place near the Earth's surface. Beyond line-of-sight transmission can often be achieved with the aid of certain weather conditions, the most common method being associated with either temperature or humidity inversions. Under normal conditions propagation at v.h.f. and u.h.f. is in the main restricted to the direct wave with some re-enforcement by ground reflection. The waves are bent slightly by diffraction in the atmosphere by virtue of a change of refractive index with height. In other words it has to do with the sheer weight and compressibility of the atmosphere. Because of the average density gradient of the air, the so called direct wave has a slight curvature, concave downwards. To give a practical explanation, the bottom of the wavefront travels in a denser medium and at a slightly slower speed than the top. This curvature is beneficial because it extends the practical horizon beyond that produced by purely geometrical construction, i.e. the horizon when the Earth's radius is 1.33 times the physical radius. When the wave passes over the edge of an obstacle, say a hill, it is diffracted in a similar manner to light and this makes it possible to receive a signal on the other side, although it would appear that the receiver is screened from the transmitter by the hill (Fig. 3).

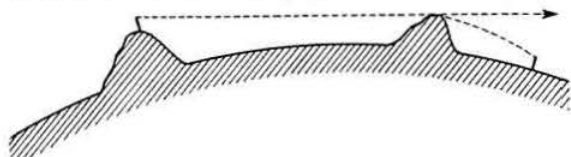


Fig. 3. Illustrates the diffraction of a radio wave over an obstacle.

A second effect which makes possible the most common form of DX contacts at v.h.f. is caused by a layer of warm moist air flowing over a layer of cold dry air. The resultant air-mass boundary is approximately level and may be sharply defined. Under such conditions the wave is reflected and contacts over distances of several hundreds of miles can be accomplished. This effect often prevails in the evening following a warm still day and when a high barometric pressure system commences to collapse (Fig. 4).

The foregoing remarks can only be considered to be a very brief summary of the mechanism of propagation but the author hopes they will have helped the reader to realize that it is a most complex study and that no rule-of-thumb answers to the problem can be formulated.

It is now proposed to deal with the practical aspects of the collection of information in a form which will provide the basis of reports and observations called for in the article by Dr. Smith-Rose.

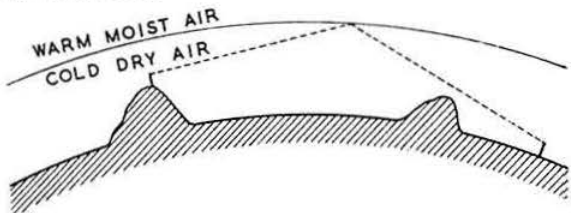


Fig. 4. Illustrates the reflection of a radio wave from an air-mass boundary.

## Study of Aurora at H.F. and V.H.F.

This is a difficult subject for the amateur to deal with unless he is armed with a prior knowledge of an expected happening. (This point will be covered internationally by announcing "Special World Intervals" to observers—Editor.) If a system of alerting observers is not possible, then daily viewing of the Sun for intense sunspot activity may be some guide. When large centres are observed near the meridian there is a possibility that an aurora may follow some 18 to 30 hours later. This, however, is not always true. Auroral propagation occurs most frequently at night and is rarely experienced between sunrise and noon. It occurs most frequently at the equinoxes and more often in years of high sunspot activity. Signals come only from low angles of elevation in roughly the northern quadrant, even though visible aurora may occur in any direction.

Cable and Wireless Ltd. make daily reports on Dellinger fades and those who have access to such reports may find them to be a useful guide to an expected aurora. Again, however, these reports cannot always be relied upon. Readers who possess instruments which can indicate changes in declination (indicating violent magnetic disturbances) may find them of value in predicting an imminent aurora.

Auroral propagation can be recognized by the fact that signals appear to come from the north although the call-sign may indicate an entirely different bearing. Telephony signals may be very distorted and may even be unintelligible. If c.w. is being used it may be impossible to beat the carrier with a b.f.o. the code being heard as a rushing noise similar to that of escaping steam. This is possibly due to a very high degree of Doppler shift introduced by back scatter from the aurora.

Aurora is usually accompanied by a rushing noise or sputter. This is sometimes mistaken for a "higher-than-normal" noise level. It will be noted that without the outside aids described, the chances of being at the operating position at the time of an aurora opening are somewhat remote. Sunspot observation is, therefore, possibly the only method left to the uninformed. The apparatus required need only be of a simple nature. A small telescope or theodolite fitted with a suitable filter is all that is needed. An absence of cloud is also essential!

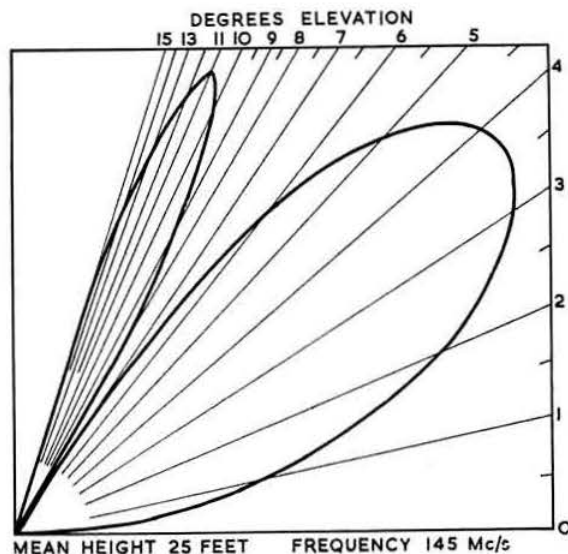


Fig. 5. Calculated vertical polar diagram for a 4-stack collinear array.

## Study of the Relationship between V.H.F. and U.H.F. Propagation and Meteorological Conditions

This study can be most interesting and many pet theories have been formulated by the amateur fraternity. New observers are advised to keep an open mind on the subject and apply themselves to a rigid and systematic form of observation. Full records should be kept and this is a job that should not be limited to those who transmit. B.R.S. members can make a very valuable contribution by keeping a steady listening watch at all times. Careful notes should be made of weather reports, published charts and forecasts.

The following records should be kept at all terminal stations: barometric pressure, air temperature, humidity, wind speed and direction. Cloud formations should be observed and when thunderstorms are expected, careful note should be made prior to and during the arrival of a storm centre in one's vicinity. It is hoped that the I.G.Y. organization will be able to give some information on such matters as the existence of sporadic E, temperature and humidity inversions, etc.

Those who have access to, and the time to study, completed weather charts up to, say, the 100 millibar region, will find them most useful as a means of cross reference with recorded DX openings and unusual happenings. A full and comprehensive log should be kept at all times. It is not possible to give advice on how and when to make these observations because no 100 per cent formula is known, apart from the fact that inversions are often noted when a high pressure area in a northerly region is quickly replaced by one in a much more southerly area. Such happenings can often be anticipated by daily observation of weather reports and charts.

## Reception Observation of Solar Noise in V.H.F. and U.H.F. bands

Observations of this nature can be most interesting and those readers who are fortunate enough to live in "quiet" areas should be persuaded to partake in this branch of investigation. It should be noted, however, that certain fundamentals must be observed, otherwise the results can be very misleading, and possibly little less than useless.

It is proposed to deal first with the basic requirements. These are as follows:

- A receiver with a good noise factor.
- An aerial system with as high a gain as possible.
- A means or method of measuring signal strength. An "S" meter calibrated in db or an oscilloscope that has been previously calibrated will be suitable. If such devices are not available the solar noise should be expressed as a ratio against ambient noise. (This applies also to the "S" meters where the solar noise should be expressed as db above ambient noise.)
- A horizontal polar diagram of the aerial system.
- Some method of taking a visible bearing and elevation on the Sun. A theodolite is ideal but ingenious readers will no doubt concoct other means of obtaining this information!

We can now consider the fundamentals to be observed.

**Vertical Polar Diagram.** It will be realized that the aerial system will consist of a number of lobes extending in the vertical plane. The number and relative amplitude of these lobes will be dependent on three factors:

- the number of elements extended in the vertical,
- the spacing between elements,
- the mean height of the array above the ground.

Factors (a) and (b) will determine the shape of the envelope in which the lobes will be contained. This is known as the grating factor and can be expressed as follows:

$$f(\beta) = \frac{\sin\left(m \frac{S^\circ}{2} \sin \beta\right)}{\sin\left(\frac{S^\circ}{2} \sin \beta\right)}$$

where  $f$  = intensity  
 $\beta$  = degrees elevation  
 $m$  = number of horizontal elements in stack.  
 $S^\circ$  = spacing of successive elements in degrees.

The calculation of the lobing structure is more complicated and is considered to be outside this article. All that need be known is the position of the point of maximum field strength in each lobe, expressed in degrees elevation. The first maxima can be expressed simply as

$$\sin \beta = \frac{\lambda}{4h}$$

$\lambda$  and  $h$  being expressed in the same units. For example, suppose an aerial is operating at a frequency of 150 Mc/s with a mean height of 25 ft. Then 2 metres (150 Mc/s) = 6.564 ft. and  $4h = 100$  ft. therefore

$$\frac{\lambda}{4h} = \frac{6.564}{100} = \sin \beta$$

therefore  $\sin \beta = .06564 = 3^\circ 46'$  approximately.

The next lobes will appear at  $3 \sin \beta$ ;  $5 \sin \beta$ ; etc. A calculated vertical polar diagram for a 4-stack collinear array is illustrated in Fig. 5.

It will be appreciated that solar radiation varies from day to day. All we are interested in, however, is to compare its day-to-day variation. We can be quite definite about the position of our own first lobe, therefore, all we need to do is to measure the amount of solar radiation when the Sun's angle is the same as that of our first lobe. Providing our equipment performance remains reasonably constant then the day-to-day variation can be measured with a fair degree of accuracy. The day-to-day variations of the equipment in use can be smoothed out by referring the measurement of solar radiation to ambient noise. In order to be able to measure the ambient noise correctly it is necessary to know the horizontal polar diagram of the aerial system.

**Horizontal Polar Diagram.** This can, of course, be calculated and for a stacked collinear array can be expressed as follows:

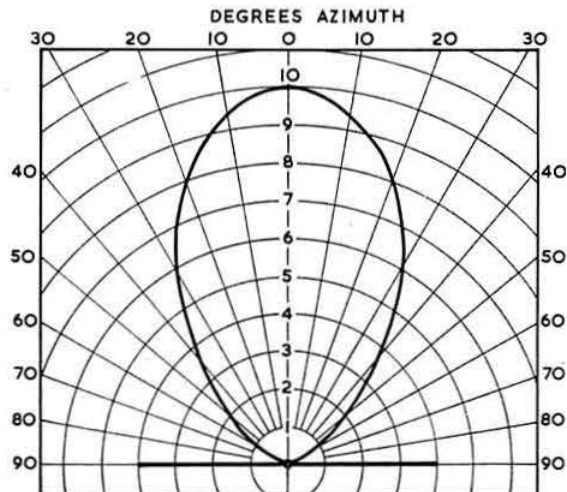


Fig. 6. Horizontal polar diagram for a 4-stack collinear array. Mean height 25 ft. Frequency 145 Mc/s.

$$f(\theta) = 2A \left[ \cos\left(\frac{S^\circ}{2} \sin \theta\right) \right]$$

where  $A$  for a horizontal dipole =

$$\frac{\cos\left(\frac{\pi}{2} \sin \theta\right)}{\cos \theta}$$

A horizontal polar diagram for a 4-stack collinear array with a mean height of 25 ft. and operating at 145 Mc/s is shown in Fig. 6.

For the amateur, however, it is possibly simpler to plot the diagram, using a low power oscillator sited some distance away from the aerial, and to measure the amplitude received as the aerial is rotated through each successive  $5^\circ$  of azimuth. A null should appear at approximately  $65^\circ$  away from the centre of the main lobe for a collinear array. When this null has been determined it can be used to establish the ambient noise reading.

#### Measurement of Ambient Noise

First the bearing in azimuth of the Sun, when it is at the correct elevation in relation to the centre of the first lobe in the vertical plane must be established (*Vertical Polar Diagram*). The aerial should then be turned either clockwise or anti-clockwise  $65^\circ$  from that point. As a null exists here the aerial will be least affected by the solar noise; the only noise measured will be the ambient noise, providing there is no local noise being generated on that bearing. The "S" meter should now be zero'd on the ambient noise.

#### Measurement of Solar Noise

The aerial is now centred on the Sun and a reading taken. This series of operations can be carried out quite quickly providing a correct drill is followed. For accurate results quickness is an essential because the Sun changes its position quite rapidly both in azimuth and elevation. Whilst the method quoted is somewhat crude it will give reasonably good results on a day-to-day comparison basis, and should help the observer to anticipate many unusual happenings.

#### Conclusion

This article can be considered only as a thumbnail sketch of a vast field of investigation and observation. An attempt has been made in the earlier sections to provide an outline background of propagation phenomena and to give in brief detail an account of some of the controlling forces which are known to exist. The article assumes that the reader has a nodding acquaintance with some of the terms used. Although it may contain many imperfections it is hoped that it will provide a practical guide to a most exciting subject.

#### R.S.G.B. BULLETIN PRODUCTION

**T**O enable the R.S.G.B. BULLETIN to be published in time for bulk postings to take place by not later than the 14th day of the month, the closing date for editorial copy, namely the 22nd day of the preceding month, will be strictly adhered to in future.

Feature contributors, Society Representatives and Club Secretaries will greatly assist the Editorial staff by posting copy to reach Headquarters by not later than the 20th of the month whenever possible.

Copy received after the 22nd day of the month will be held over for future use if still topical.



# Simple Selectivity for the BC312

By D. W. AUTON (G3IHD)\*

THE main difference between a good receiver and an average one is the degree of rejection of unwanted signals. S9 signals are fine but it is the station the receiver is tuned to that is wanted at S9, not the one 8 kc/s away.

Examination of the dashed curve of Fig. 1 will show that if the receiver is a BC312 or BC342 a considerable improvement in rejection is necessary if it is to be satisfactory for use in crowded amateur bands. The main reason for the poor selectivity is the low-Q i.f. transformers used. This is presumably deliberate to eliminate the need for re-alignment when valves are changed under active service conditions. A small, but worthwhile improvement can be obtained by removing R38 ("First i.f. plate circuit loading resistor") which is inside the first i.f. transformer.

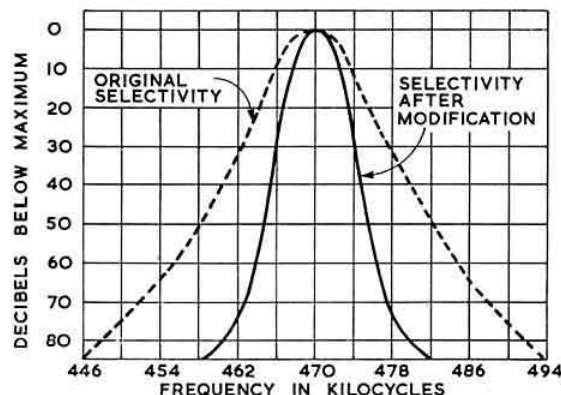


Fig. 1. Selectivity curves of the BC312 receiver before and after modification.

The most common method of obtaining a greater degree of selectivity is to use a BC453 "Q5-cr." This method was used by the writer for some time but it was eventually decided to try to obtain a similar degree of selectivity without an external unit.

## New I.F. Transformers

The method adopted was the replacement of the first and second i.f. transformers with pairs of small high Q ones, loosely coupled. The "first detector" i.f. transformer, which in most models contains the crystal filter, was not changed.

A sub-chassis was made up as shown in Fig. 2, and a top cap grid connection added to one of the new i.f. transformers. This transformer, an unmodified one, together with the 5 pF coupling condenser and the decoupling condensers, was mounted on and under the sub-chassis. New small tubular ceramic 0.01  $\mu$ F condensers were used to replace C56 and C58, the original decoupling condensers.

The four connecting wires inside the "first i.f." transformer were unsoldered so that it could be removed. Two quarter-inch holes were drilled in the chassis to give access to the bottom slugs of the new transformers. The connecting wires were then shortened and the sub-chassis wired into circuit as in Fig. 3. The sub-chassis is positioned over the alignment holes and secured to the chassis with four small self tapping screws.

\* 34 Redcliffe Street, Swindon.

A similar method was adopted in the replacement of the "second i.f." transformer. The only important difference was that the lip of the sub-chassis had to be bent under instead of out, as the space available is smaller.

Alignment is easier after modification than before and the circuits peak smoothly. Using simple equipment to align the receiver in its original state one gets the impression there is a fault, tuning is so flat.

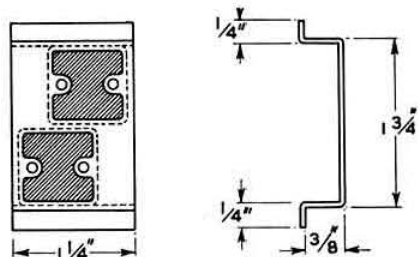


Fig. 2. Dimensions of the sub-chassis for the new i.f. transformers.

There was a slight loss of i.f. gain, due to the loose coupling employed. While this could be measured, it was hardly noticeable in use, due to improved signal to noise ratio. However, the i.f. gain can be restored by replacing the cathode bias resistors R19 and R24, with 330 ohm 1 watt resistors. The gain is then slightly higher than before modification.

The 6K7 i.f. valves in these receivers are much under-run. More gain can be safely obtained by using 270 ohm cathode bias resistors and 47K ohm screen dropping resistors in place of the original potential dividers. This is not necessary, or even desirable, if the r.f. section of the receiver is modified for increased gain.

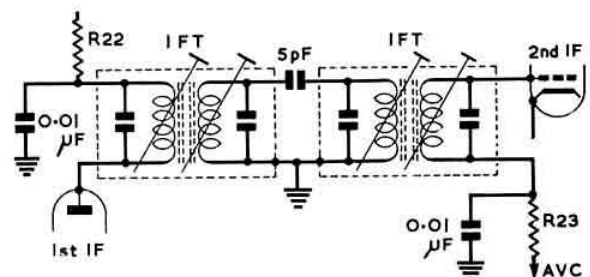


Fig. 3. Changes to the coupling between the i.f. valves using the new i.f. transformers. The additional components required for the complete modification are four 0.01  $\mu$ F tubular ceramic capacitors, two 5pF ceramic capacitors, two 330 ohm 1 watt resistors and four i.f. transformers (Repenco M.S.E.).

## Results

The writer's receiver is a BC312D, which has a conventional crystal filter. The selectivity with crystal out is as near optimum for telephony as is economically worthwhile using conventional tuned circuits at 470 kc/s. In the case of models without a crystal filter replacement of the "first detector" transformer also would probably be worthwhile.

The performance of the receiver now compares very favourably with later and far more expensive models, although this is not entirely due to the changes described here. Many others have been made to the r.f. and a.f. sections. The modifications described do provide the selectivity desirable in a modern receiver with little trouble and at low cost. They are in no way dependent on other changes.

# Sensitive Grid Dip Meter\*

BY J. H. ADAMA (PA0FB)†

THE circuit to be described provides a simple means of obtaining a higher sensitivity than is available from the usual kind of grid dip oscillator. Such oscillators measure the current flowing in the grid leak resistor. The meters frequently employed have a full scale sensitivity of 1 mA and the grid current may be of that order. If a resonant circuit is brought near the grid dipper a drop to about 0.9 mA is customary, since closer coupling increases the pull on the oscillator frequency. The use of a 100  $\mu$ A meter does not materially increase the sensitivity because it has to be shunted to accommodate the excess grid current. Alternatively the value of the grid leak resistor may be increased.

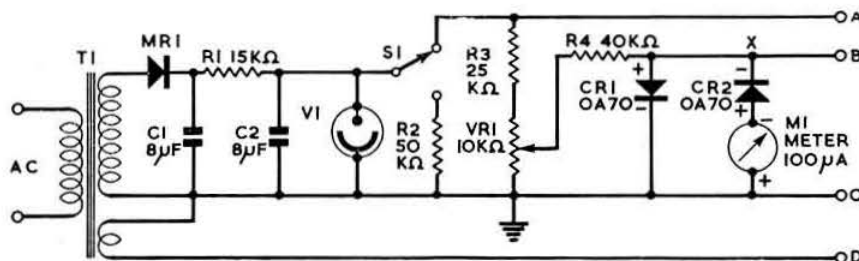


Fig. 1. The circuit of the power supply and the grid current metering arrangement.

The improved grid dip meter permits advantage to be taken of the greater sensitivity of a 100  $\mu$ A meter, in that a larger deflection is obtained or a looser coupling to the resonant circuit becomes possible.

## The Circuit

Fig. 1 shows the arrangement around the meter and includes the power supply. The components are built into a

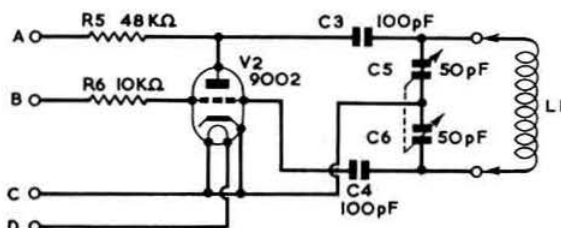


Fig. 2. The oscillator circuit. L1 is the conventional coil for the desired range.

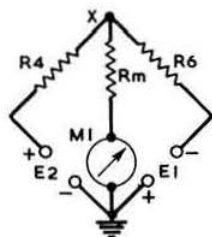
separate metal box. The germanium diodes CR1 and CR2 serve to protect the meter and are not directly involved in the measurement. Fig. 2 shows the circuit of the oscillator which is housed in a separate small box and connected to the parts of Fig. 1 by means of a 4-core cable.

The principle of the measurement can best be shown by reference to Fig. 3 which makes it clear that we are dealing with a bridge circuit.  $E_1$  is the voltage between grid and cathode of the oscillator and  $E_2$  is the voltage supplied at the slider of VR1.  $R_6$  is the grid leak,  $R_4$  is the balancing resistor and  $R_m$  is the internal resistance of the 100  $\mu$ A meter. With the values shown the deflection on the meter will be about 9 times as great as on a 1 mA meter placed in series with the grid leak.

## Adjustment

The meter has its positive terminal connected to the cathode side of V2 as is customary. The oscillator is switched on by means of S1 and VR1 adjusted to give full scale deflection. If a resonant circuit is brought near to the oscillator coil the reading will drop. It can happen accidentally that the coupling is too tight and the meter will swing past zero with possible damage to the movement. To avoid this, the diode CR2 is placed in series with the meter in such a manner that it becomes non-conductive whenever point X goes positive. The parallel diode CR1 takes over and bypasses the meter. Point X could also go positive as a result of an incorrect adjustment of VR1, or when the grid dipper coil is being changed, but again the diodes would protect the meter.

Fig. 3. Equivalent bridge circuit.



## Results

Coupling between the oscillator and the circuit to be measured can become very loose so that there is no pulling of the frequency, and the calibration of the grid dipper is not affected. With circuits in the 60 to 144 Mc/s range full scale deflection can be obtained at a distance of several inches.

## Region 1 Field Day, 1957

THE winners of this year's Region 1 Field Day were Liverpool (G3KOR) with 93 points, closely followed by Stockport (G3BY) with 84 points, who both operated single stations on the low frequency bands. Wirral achieved the highest combined score for two stations. Individual band winners were: 1.8 Mc/s—Southport; 3.5 Mc/s—Bury A; 7 Mc/s—Wirral A; 14 Mc/s—Wirral B; 21 Mc/s—Blackpool B. No stations operated on 28 Mc/s.

## New Subscription Rates

Home Corporate Members are reminded that the annual subscription to the Society is now 30/-. Members who renew their subscriptions by means of a Bankers' Order are asked to amend the Order to the new rate. A Bankers' Order can be obtained on application to Headquarters

\* This article was prepared for publication in the BULLETIN by A. H. Koster, Dr. Ing. (G3ECA) from the author's manuscript.

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# A Slotted Two Metre Beam for a Room Corner

By M. J. HEAVYSIDE B.Sc.(Hons.), M.Ed., Ph.D.  
(G2QM)\*

FOR operation in a corner of a living-room an aerial must be neat, stable and not too extensive in any horizontal direction. At the same time it must give as much gain as possible to off-set the effect of being indoors not far above ground. The skeleton slot seems to offer possibilities, but hardly gives enough gain as a single unit. Parasitic directors and a reflector cannot be used because the aerial cannot be placed in a corner of the room owing to their length and the effect of high impedance ends near walls, quite apart from the unsuitable appearance of such an array in such a position.

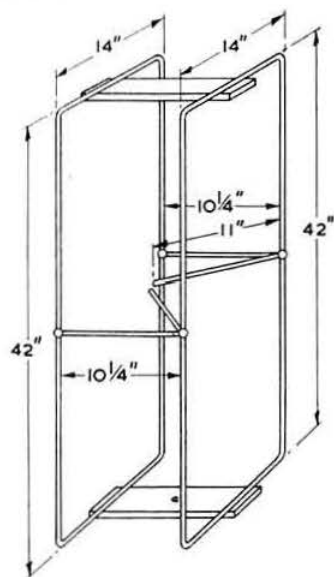


Fig. 1. Slotted two metre beam for a room corner.

The use of another slot as director or reflector was tried with some success, but owing to the ability of a slot to act as either a director or reflector due to its broad-band nature, only a sharper figure-of-eight horizontal radiation pattern was possible, giving equal results back and front. The second slot was then tried as a driven element, causing the tuning to be governed by the tuning of the transmitter or receiver. Best results were obtained with the second slot one eighth of a wave-length behind, driven  $45^\circ$  out of phase. Such an aerial, erected with the longer sides vertical, acts as a radiator or receiver for horizontally polarized radiation, being in effect four end fed horizontal dipoles, the feeders being quarter-wave sections, thus acting as insulators to the dipoles whose ends they separate though as conductors of the energy to or from those ends to the receiver or transmitter. This arrangement gave a back-to-front ratio considerably above unity and also brought in stations not previously heard whilst considerably increasing the transmitted signal, so that at a station about six miles away on the other side of a hill using 1.8 watts to a CV6 on 145.8 Mc/s gave a stronger received signal on the oscilloscope than did a 10 watt 1840 kc/s transmission.

\* 23 Bowling Hall Road, Bradford 4, Yorks.

## Construction

As the aerial was for indoor use only, it was made from  $\frac{1}{2}$  in. channel aluminium, of which a number of cut-offs were available, but any non-ferrous  $\frac{1}{2}$  in. material would suffice. Each slot consisted of eight pieces fixed together by nuts and bolts, there being four rounded corners easily bent by hand in such soft material. Any bulges were hammered flat. The pieces were overlapped 2 in. on each side, making a slot 42 in. by 14 in., as there was not room for the standard 45 in. by 15 in. slot to give enough ceiling clearance.

The two slots were held in position by two pieces of the channelling with holes drilled  $10\frac{1}{4}$  in. apart joining the centres of the long sides, and two pieces of insulating material, similarly drilled, fastened to the centres of the short sides, as shown in Fig. 1. The points connected by these insulating pieces should be at zero potential. Metal supports were tried but found not so good as the insulated ones. The aerial turns on a bolt through one of these insulating pieces near the centre under the point of balance. The  $\frac{1}{2}$ -wave feeders were bolted to the outside of the slots and the delta match sections, each 11 in. long, bolted to the inside by the same bolts. The inner ends of the delta match, where they join the 80 ohm twin line, are held 1 in. apart by a piece of perspex.

## Boy Scouts Jubilee Jamboree

DURING the forthcoming Boy Scout Jubilee Jamboree to be held at Sutton Coldfield, Warwickshire from August 1-10, 1957, an Amateur Radio Station will be operated under the call-sign GB3SP. The purpose of the station will be to give scouts who are unable to be present an insight to the historic proceedings as they are taking place. To this end the Postmaster-General has granted special facilities, including simultaneous operation on more than one band, and also permission to radiate a News Bulletin. This will be in addition to normal amateur station activities.

The News Bulletin will be radiated on one or all amateur bands from 3.5 to 28 Mc/s "on the hour" for about five minutes from 10.00 G.M.T. to 22.00 G.M.T. with special transmissions beamed to suit conditions at local times where possible.

Amateurs who visit the Jamboree will have no difficulty in finding the station, which will be dominated by four 80 ft. masts.

## Roman Catholic Boy Scouts Jamboree

THE Roman Catholic section of the Boy Scouts' Movement is holding a Jamboree at Buckmore Park, Chatham, from August 12 to 24, 1957. It is expected that about 15 nations will be represented.

The Medway Amateur Receiving and Transmitting Society will be operating a special jamboree station under the call-sign GB3BP on 3.5, 7, 14 and 28 Mc/s and it is hoped that it will be possible to send greetings from scouts at the Jamboree to their groups overseas. Offers of the loan of equipment have been received from Panda Radio Co. Ltd. (transmitter), The General Electric Co. Ltd. (receiver) and K. W. Electronics Ltd. (multiband aerial).

A special QSL card designed by the Medway College of Art will be used to confirm contacts with GB3BP.

## Mullard Factory Visit

A RECENT visit to the Mullard production plant at Mitcham, Surrey, included members of the East Kent Radio Society, Edgware and District Radio Society, Gravesend Radio Society, Kingston and District Radio Society, Radio Society of Harrow, and Worthing and District Radio Society. The visitors were able to see many aspects of receiver valve and cathode ray tube production.

# FOUR METRES



# AND DOWN

BY F. G. LAMBETH (G2AIW)\*

## First U.K./Algeria Contact on 4 Metres

On the evening of June 16, G5KW (Well Hill, Kent) had a QSO with FA3JR (Oran). G5KW received a report of RS4/58 while FA3JR was RS44/8, peaking to S9 + 10 db. The contact sets a new world record for 4 metres.

FA3JR is on 72.070 Mc/s from 12.00 to 13.00, 17.00 to 19.00 and 20.00 to 21.00 G.M.T. daily, looking for contacts with British stations. His transmitter has a QEQ04/20 in the p.a. running 25 watts input; the aerial is a three element beam.

G5KW worked F8GH (Beauvais) on June 20 for the first G/F contact on 4 metres. Several other French stations were worked later. G5MR has also worked F8GH using only a dipole aerial.

## New 70cm World Record

At 22.32 G.M.T. on June 19, 1957, G3HAZ (Birmingham) worked DL3YBA, about 16 km. east of Hanover, on 70 cm. G3HAZ received a report of RS59 and gave DL3YBA RST569. The distance is approximately 500 miles, thus setting a new world record for the band. The previous record was set up by WIRFU and W4VVE on June 12, 1954, with a contact over a distance of 410 miles.

DL3YBA also had contacts with G5YV, G5BD, G6NB, G2FNW and G2XV on June 19.

## Two Metres Wide Open

The 2 metre band was wide open in all directions on the night of June 19-20. Large numbers of DJ, DL, ON4 and PA0 stations were heard and worked by many Gs. GW8UH and 3BOC/M also worked Continental stations, among whom DL3VJ and 3IY were outstanding. DL3YBA and DL0HH were good signals. Highlights of the session were QSOs between DL3VJ and G3GXP and DL3VJ and GM6XW. GM3HLH, 3KYI and 4HR (Dundee) were strong in the Home Counties and had many contacts. At one period G5YV was heard in contact with an LA station.

GM2FHH who worked OZ, PA, DL and SM, reports that Gms from Aberdeen to Dunfermline thoroughly enjoyed the opening.

THE Third International V.H.F./U.H.F. Convention was held at the Bonington Hotel, Southampton Row, London, W.C.1, on May 25, and was attended by 118 members and friends. The proceedings commenced at 10 a.m. with a general get-together and many rag-chews were soon well under way. During the morning and after the lectures there were conducted visits to well-known surplus stores.

The lecture programme was opened at 2 p.m. by Mr. R. H. Miles of the G.E.C. Research Laboratories at Wembley who spoke about "Overtone Oscillators," illustrated by slides. Dr. Saxton of the Radio Research Station (D.S.I.R.),

Slough, followed with an admirable exposition of present theory and practice in Tropospheric Scatter. Bill Sykes (G2HCG) then gave practical demonstrations of the efficiency of the u.h.f. slot beams, with the aid of his "gang" (and then donated the beam as a prize!). D. N. Corfield (G5CD) gave a welcome explanation of the "Neutrode" circuit. Frank Smith (G2DD) ended the afternoon session with a short but very well received talk on the miniaturization of v.h.f./u.h.f. equipment, illustrated with examples of his own work.

The small but excellent exhibition was judged by Dr. Smith-Rose and Dr. Saxton, the two prizes being won by Arnold Mynett (G3HBW) and Pierre Millot (F3SK).

The President (Douglas Findlay, D.F.C., G3BZG) took the chair at the dinner in the evening at which there was an attendance of eighty-seven. During the proceedings Dr. Smith-Rose gave one of his excellent short talks in reply to the toast of "The Guests," whilst the toast of "The Visitors" brought welcome responses from F8NH (on behalf of the French contingent), PA0FB and EI2W. The London U.H.F. Group was honoured next, and Phil Thorogood (G4KD) replied suitably in characteristic vein. Harry Wilson (EI2W) then asked Dr. Smith-Rose to present the International V.H.F. Society's two Trophies to G4KD (Millan Trophy) and F3SK (Irish Perpetual Trophy) for the grand services they have rendered to v.h.f./u.h.f. in their respective fields. Pierre Millot (F3SK) greatly pleased the gathering with a thoughtful statement of latest v.h.f./u.h.f. developments in France.

Jimmy Mathews (G6LL) proposed a vote of thanks to all the speakers; the gathering fully endorsed his action with much applause.

The formal proceedings terminated with the usual "swindle" at which the prizes kindly donated by the trade and press were distributed to lucky possessors of the right numbers drawn by the only lady present (Meg Mills, G3ACC).

The day ended with conviviality around the bar, and from what we could tell, everyone had a happy time.

Among the non-G visitors present were F3SK, F9CQ, F8MX, F8TD, F8NH, PA0FB, EI2W, GW3GWA, GW8UH, VQ4FI, VQ4FW and VQ4AA/VQ3AA (G3LRM). A large number of Gs came from the Midlands and North and the Home Counties. London attendance was rather sparse, which is regretted as the DX visitors look forward to meeting the "locals" at these functions.

Thanks are due to all who took part, whether as speakers or officials, with a special appreciation of the efforts of the sub-committee formed for the purpose of the Convention. Lastly, but by no means least, a sincere "thank you" to those who supported the event—without them, all the preliminary work would have been in vain.

## Two Metre News

Conditions on 2m improved towards the end of the period, owing to anti-cyclonic weather, and the Continental stations (some rarely heard before) were coming in very well on June 13 and 14. The path appeared to shift laterally, sometimes the South was favoured and sometimes the Midlands and North, but rarely both together. The band is still not yet "open" in a consistent way, but has certainly

\* 21 Bridge Way, Whitton, Twickenham, Middlesex.



improved. GI and GM stations are being heard and worked again.

**B.R.S.15822** (Clapton, London) found June 13 and 14 "the tops." Many ON4 and PA0 signals were very strongly heard; G5YV and '3CCH were heard for the first time (G3CCH was at first thought to be a local signal!). G3BA, '4JJ/A and '2BVW have also been terrific signals lately.

**B.R.S.16075** (Shirley, Southampton) still with indoor dipole, has noted one or two good spells, and says it is nice to know that G5UF is back on the band. There are many /P and /M stations about, which adds greatly to the pleasure of this band. **B.R.S.18572** (Mitcham) has heard some good DX including PA0s. Whilst on leave recently G3LSP went /A at B.R.S.18572's QTH and worked over 50 2m stations in eight days; very good going for 10 watts into a 4-over-4 slot fed beam.

**B.R.S.19162** (Dewsbury) found stations from the West and Birmingham very good on June 12 with G6SN outstanding and '3IRA not far behind. On June 14 at 22.00 the band seemed full of PA0s all absolutely steady, no QSB or flutter. The first DL ever heard by '19162, DL1LB, was S9+ on phone. G3IJB was "40db above S9" calling "CQ South East." '6LI and '5BD were S9+ off the back of their beams. At this time nothing at all was heard from the South West, Birmingham, or Lancashire, and London stations were very little stronger than usual though possibly their beams were on the Continent. (This was true, the same effect was noted on Northern stations at G2AIW.) G13GXP was also heard for the first time. '19162 says many more stations could have been logged if there were better signing by phone stations. On June 18, '19162 heard his first OZ stations.

**B.R.S.20133** (Melton Mowbray) says conditions and activity have been rather kinder this period and G5KW was heard for the first Kent station. '20133 is proposing to get a 6-over-6 slot beam and erect it at 30 ft. which will get the aerial over the roof top for the first time. **B.R.S.20266** (Hereford) writes that he has three small units available which might be useful to a 144 (or 70) Mc/s operator. He wishes to exchange rather than sell. Will anyone interested please communicate with D. K. Powell, "Carisbrook," 67 Chandos Street, Hereford.

**B.R.S.20162** (Selsdon) missed out to some extent by reason of N.F.D. but during the listening time found conditions average or below except for two occasions. One important event of the month has been the return of G3BLP after two-and-a-half years absence. This really must shake the '20162 aerial! '3BLP is already "among the DX" again! **B.R.S.21136** (Ruislip) found conditions about average, good on May 22, 27 and June 2, but activity was very low.

**G2AHP** (Perivale) has worked 625 stations on 2m. Several new stations have made themselves known recently, the latest being G3GFN (Petts Wood) who has made a very nice transceiver (10 watts input). G6OX /M and /P was a welcome QSO lately. '6OX seems to be getting around quite a bit these days. At the time of working the QTH given (Christmas Common) appeared to be very appropriate to the weather and conditions.

**G8LN** (Plumstead) has been keeping the sked with G3ANB with fairly good conditions, but nothing exciting. The feeder system at '8LN has recently been lined up and fed through a co-ax relay which has made a great improvement. It is understood that G3VI and '3INU have recently changed locations and should be on again from their new sites soon. G3LOA is quite active on 2m and looking for QSOs. **G2JF** (Wye, Ashford, Kent) has again been hearing French stations including F8GH and '3LQ and thinks conditions have been fairly good in patches. **G5MR** (Hythe, Kent) gives a very similar report to that of '2JF. Several French stations were worked or heard on May 31, but there is little to report apart from this.

**G2CZS** (Chelmsford) has been on 10m but even that can bring some 2m news, as he was informed by VQ4GF (Nairobi) that '4GF, '4EV (ex-G3GBO) and '4FV are all equipped for 2m. '4EV has a 4-over-4-over-4-over-4 beam whilst '4GF uses 100 watts of carrier controlled phone with 800/900 volts on a QV03/20! '2CZS's own efforts include six new stations worked—G2ANT, '3JGY/M (Herefordshire), '3JR, '3LHA, '3LOK and '4DC. Conditions were good to the South and West between May 28 and 30 and to the North on June 13. On June 2 '2CZS was reported at "local signal" strength by London stations, including G2HDY (S.W. London). A personal QSO from G5BD recently led to a /M /P outing to Galleywood Common, near Chelmsford, where many stations were worked on '5BD's "Hamobile."

**G3JGJ** (Plympton) says many stations worked on 7 Mc/s are either equipped for 2m or getting gear together, and '3JGJ thinks more regular skeds—seven days a week if possible—ought to be arranged by the more enthusiastic stations, preferably those with good locations and those who don't mind being patient with S3 signal stations! The sked with G2FZC is still going strong every evening (seven days a week) 18.00-18.30 B.S.T.

**G5MA** (Great Bookham) has had c.w. QSOs with GM3EGW, G3CYY/P (Northumberland, very rare), GW3BOC/P (Flintshire), G13GXP, G2FO and PA0FB on phone. GM2FHH and DL1LB have been heard again.

**G3EMU** (Canterbury) encountered patchy conditions but from May 29-31 ON4s and PA0s were worked. The first F for many months was heard on the 30th. Field Day proved that '3EMU's 4-valve receiver performed better than the transmitter. On the 14th his signals were going north with the E-DX, although the E-DX was not audible at '3EMU. G calls never before heard were, however, audible, and a great thrill was to work G3CCH (Scunthorpe), an old friend.

**G2DDD** (Littlehampton) reminds us that he and G3GHO (Roade) have worked every Sunday at 09.30 for a year. This kind of sked is very helpful as a means of judging conditions—we could certainly do with more of them.

#### Two Metres from Wales

**GW3GWA** (Wrexham) has been suffering from lack of activity lately. On June 14 conditions were however good, with a QSO with G5KG at R5S8/9 phone. Midland stations reported ON4s, PA0s and DLs coming in strongly but the only one heard at Wrexham was PA0WL on phone at S7. No QSO resulted, however, after many tries. The only stations worked since May 17 have been G3BA, '3IRW/A, '2FNW, '2BVW and '5KG "unless you like to count G6XM, '2ATK and '2FJR on 40 metres in one hour!"

#### Two Metres from Scotland

**GM6WL** reports that on May 27 he had another QSO with G18DV/P up on his mountain at Limavady. GM3EGW



Bert Allen (G2UJ) recording a new talk on v.h.f. work for the R.S.G.B. Recorded Lecture Library.

did not land any E-DX, but contacted G5MA and '6NB and gave G3BA (Sutton Coldfield) his first GM contact on 2m since he left Kirk-o-Shotts and on phone too! GM3NG had a good phone QSO with '2FHH while GM6KH worked G5BD and '5YV (rather difficult contacts on the key). G2NY (Preston) is heard on phone nearly every night. '6WL expresses the deep Scottish feeling on the passing of G3GPT, who worked most of them and made them all his friends. GM3LDU (Glasgow) is a new recruit to the band, having been greatly helped by GM6ZV. He made a few local QSOs. Unfortunately he will be in the China Seas for the next five years. '3LDU telephoned G2AIW whilst in London with the s.s. *Salmar* a few weeks ago. Around May 29 G2HCG/M made the band lively from various parts of Renfrew, Lanarkshire and the Bonnie Banks of Loch Lomond, finishing up through traffic in the City of Glasgow itself to his hideout at St. Enoch's Hotel. It was surprising how contact could be maintained, even in the City itself. EI2W was heard weakly on May 27 and better on June 2 when working another EI station. On June 9 a pleasant surprise was to hear GM5YV/P from near Jedburgh. GM6KH worked him on phone S9 both ways, GM3NG 569 c.w. and '6WL 599 c.w. Harold was returning via Westmorland to Leeds.

On June 12 GM6KH worked G5YV on phone very strongly with deep QSB. GM6XW (Larbert) back on the air with a new transmitter, contacted '5YV and '3CCH. On June 13, '6WL raised '5YV with bad fading and '3NG had similar experience. GM6KH had a QSO with G6XM, who is harder to raise at Tollerton. GM3HLH (Dundee) also contacted G5YV. On June 14 GM3NG (Carluke) worked GM3HLH and '4HR (both in Dundee) at excellent phone strength (RS58) with some fading. GM6ZV also raised both Dundee stations but the contacts were marred by local interference. Finally, on June 16, G5BD was heard in Glasgow whilst working GM3BBW (Edinburgh) and GM3HLH (Dundee) on phone and, later, GM2FHH on c.w., conditions having receded a little.

GM2FHH (Aberdeen) says the best opening for nearly two years was that of May 27 when London area stations were first class copy. G5YV was outstanding at S9++ for an hour, G5MA was heard for over two hours and again in the evening of the 28th when he was the only G south of '5YV copyable. DL1LB was the only Continental heard and was S6/7 for over 40 minutes. '2FHH was very pleased to work GI8DV/P. GM2FHH will be operating portable shortly using 5 watts on phone, 6 watts on c.w., with a "home brew" rig, including an all 12AT7 transmitter.

G5BD (Mablethorpe) asks "What is significant about the dates May 28-31?" and says that in the last four years this period has been the Continental highspot for 2m, and this year was no less than the others. Plenty of DL, ON4 and PA0 stations were heard and worked, with a welcome break-in from GM3EGW, '6KH and '3FGJ who were all heard. The very special opening, however, was June 13, 14 and 17—at one time a bedlam of PA0s all S9+ with PA0FP so strong as to be impossible to copy at normal r.f. Gain setting. DL0HH (Hamburg) a new one, and DJ1XX (Osnabruck) were on 145.8 Mc/s. On June 16-17 the three Dundee stations were heard and two worked on phone at S8. The Dundee calls are of course GM4HR, 3HLH and 3KYI. GM2FHH and 3EGW were also worked at good strength.

#### V.H.F. News from Ireland

EI2W (Dublin) has been very busy lately giving a good time to F8MX and F8NH. Among other visits, they went to Killarney and met EI4E who took them all for a motor launch trip through the lakes. '8MX and '8NH were received by the President of I.R.T.S., Mr. T. H. Green, and by the Past President, Dr. T. D. O'Farrell.

#### Continental News

PA0FB (The Hague) found on returning home from the Convention that conditions there had been well above average all the week. Many stations outside Holland were worked.

#### Four Metre News

G2ABD (Kenton) has had several QSOs with G5JU (Birmingham) on c.w. while EI2W (Dublin) reminds us that he is regularly active on 70-662 Mc/s.

Some very interesting news from F3SK (Asnieres) reports good conditions on May 26 when between 11.00-12.20 G.M.T. FA9VN (200 km south-east of Oran) heard the c.w. of F8NP, '8SX (Carignan) '8QL (80 miles north of Paris), '8LO (two miles south of Paris) and began a QSO with F9NN (five miles north of Paris). On June 2, near 12.00 G.M.T., FA9VN worked F8QL and '3GX (Paris), and between 17.00 and 18.00 G.M.T. FA3JR (Oran) worked F8QL, '3GX, '8LO and '8NB (three miles west-south-west of Paris), the strength of signals being sometimes S8/9. On June 10 F3SK was at the home of F9CH (three miles south of Paris, in a good location) and using a single dipole, the c.w. of FA9VN was heard. FA9VN had contacts with F9NN, '8NB and was heard by others, including F8GH (Beauvais). Algerian amateurs will call on 72 Mc/s every Monday between 10.00 to 11.00 G.M.T. beaming North.

In addition to the Oran QSO reported elsewhere (G5KW/FA3JR) '5KW was heard at S6/7 by F8QL (Bulles, Oise) 50 miles north of Paris. F3SK was visiting F3NJ (F8NH) at Romorantin, about 120 miles south-south-west of Paris. F8NH has built a cascade c.c. 4m converter and modified a 2m transmitter for 4 metre working. A temporary folded dipole made of 300 ohm twin lead was "lashed up" to a lath and mounted on the tower at 20 ft. On the Sunday evening at 20.30 G.M.T. FA3JR was heard and worked with phone reaching S9+10 db with QSB to S7. At 21.00 they had another QSO, this time with FA8BG (also in Oran) whose c.w. was S6/9. F3NJ's 15 watt phone was S8 in Oran.

#### Seventy Centimetre News

B.R.S.18572 spent some time listening during the 70 cm contest on a new converter similar to the G2DD, with an r.f. stage in front. Activity did not seem very good but 13 stations were heard. The aerial was a 7-over-7 slot fed beam 33 ft. above ground.

G5BD (Mablethorpe) still has a 100 per cent sked with G3HBW at 20.30 B.S.T. nightly. Recently new territory was broken by working PA0GER and PA0WAR. PA0FP has been heard. G5YV was worked at R5/9 on June 17. G5LL is very active on the band; both '5BD and '5LL use transmitters developed by the latter. '5LL has frequently worked '3HBW and recently had QSOs with '2CIW and '2XV.

EI2W (Dublin) has his 32 element beam working well, and will be on 434.7 Mc/s regularly looking for G and GM QSOs with an output of 10 watts.

GM5VG has tested out improved modulation on the 70 cm transmitter with satisfactory results. When GM3DDE overcomes some valve trouble, these two will be able to resume their "trans-Scotland" 70 cm phone link which it is hoped will be reliable and independent of weather or ducts or anything else! The first crossing of Scotland on this band was made on June 9 by the above two stations, '3DDE being RS56 and '5VG RS54/5. Since then GM3DDE has had a first two way phone QSO with '6KH (Hamilton).

G5MR (Hythe, Kent) was on the air for most of the 70 cm Contest on June 16, but heard nothing. He wonders if anyone heard him? '5MR is looking forward to the time when F8MX and '9CQ are back at St. Valery-en-Caux. G2JF (Wye, Ashford) says that '3EMU and himself are slowly preparing for 70 cm. '2JF unsuccessfully called G2JM (Somerset) recently, the first time this station has been heard.

G2XV (Cambridge) has recently completed an r.f. preamplifier for the converter using a 6AM4 in a trough line circuit, which appears to give some really worthwhile gain/noise improvement.

On the night of June 19, DL3YBA (near Hanover) heard G2FNW (Melton Mowbray) on phone on 70 cm at good strength. The distance is approximately 450 miles.

During the 70 cm Contest on June 16, G3HBW worked 29 stations including G3GZB/P (Clee Hills), G3JZG (Staffordshire), G5BD and G5LL (both in Mablethorpe) and G5YV (Leeds). Conditions are described as "mediocre."

Thanks for the response to the new deadline and good luck in your summer hunting. Let's hear from some portables next time please. Reports should arrive by July 18 certain.

## Worked and Heard on V.H.F.

### Two Metres

**B.R.S.15822** (Clapton E.5) May 15-June 15.  
Heard: G2AHP, 2AIH, 2AIW, 2ANT, 2BWW, 2CZS, 2DDD, 2FMJ, 2FNW, 2HDI, 2HDY, 2IF, 2MV, 2WJ, 2YB, 3ABA, 3AEX, 3ANB, 3BA, 3BFP/A, 3BII, 3BLP, 3CCH, 3CGQ, 3CNF, 3CO, 3CZY, 3DF, 3EIV, 3EOH, 3EVV, 3EYV, 3FCQ, 3FD, 3FPV, 3FQS, 3FG, 3FZL, 3GDR, 3GFN, 3GHI, 3GHO, 3GHR/P, 3GHR (Beacon), 3GSE, 3HBW, 3HII/M, 3HRH, 3IJB, 3IRW, 3ISA, 3IUL, 3JMA/M, 3JQN, 3JR, 3JWQ, 3KEQ, 3KEQ/P, (North of Wrotham), 3KFX, 3KHA, 3KQC, 3LHA, 3LIM, 3LOA, 3LOK, 3LSP/A, 4DC, 4HQ, 4JJ/A, 5DS, 5DW, 5KG, 5KW, 5LL, 5MA, 5NF, 5UM, 5YV, 6AG, 6AG/P, 6II, 6LL, 6NB, 6NF, 6OX/P, 6RH, 6YP, 6AL, 6N4ZK, 6PA0AG, 6CGA, 6GF, 6FC, 6HA, 6QT.

**B.R.S.16975** (Shirley, Southampton) May 19, June 17.  
Heard: G2AIV, 2BMZ, 2DDD, 2DND, 2HCG, 2YB, 3FIH, 3GHO, 3HHY, 3IUL, 3KEQ, 3LOA, 3NF, 3UF, 6AG, 6NB, 6OX, 6OX/P, 6C3EBK, 6W8UH.

**B.R.S.19162** (Dewsbury, Yorks) June 1-16.  
Heard: DL1LB, G2JF, 2YB, 3BLP, 3FAN, 3FIH, 3GHI, 3GHO, 3HBW, 3IRW, 3IRA, 3KBS/P, 3KEQ, 3LHA, 4DC, 5DS, 5DW, 5KG, 5KW, 5MA, 6NB, 6OX/P, 6SN, 6RH, 6VZ, 6G3XP, 6A0BL, 6CGA, 6FB, 6HA, 6RG.

Heard: June 18. DLOHH, IYY, 6SV, 6M2FHH, 0Z2KH, 3M (first ever).

**B.R.S.20133** (Melton Mowbray) May 18-June 11.  
Heard: G2BWW, 2CDB, 2CRL, 2FNW, 2FMO, 2FMO, 3BU, 3DLU, 3FUR, 3FUW, 3IVF, 3GSO, 3JWQ, 3JWQ/A, 3JWQ/P, 3JXN, 3LHW, 5BD, 3KW, 5YV, 8MW.

**B.R.S.20162** (Selsdon) May 14-June 13.  
Heard: G2AHP, 2AIH, 2AIS, 2ANT, 2AUD, 2BDP, 2BZ, 2CD, 2CIW, 2CPX, 2DDD, 2FCA, 2FM, 2FMJ, 2HDY, 2IF, 2MV, 2NR, 2QY/P, 2RD, 2UJ, 2WJ, 2XV, 2YB, 3ANB, 3BLP, 3CBU, 3CGQ, 3CNF, 3CO, 3CZY, 3DOR, 3EIV, 3EOH, 3EVV, 3EYV, 3FCQ, 3FD, 3FQS, 3FUR, 3FVG, 3FZL, 3GFN, 3GHI, 3GHO, 3GHR/P, 3GOZ, 3GSE, 3GTH, 3HBW, 3HRH, 3HTC, 3HXS, 3IAM, 3IIT, 3IJB, 3IRA, 3IRW, 3ISA, 3JQN, 3JR, 3JSQ/A, 3JTO, 3JW/P, 3KBS/P, 3KEQ, 3KEQ/P, 3KHA, 3KQC, 3KUH, 3LHA, 3LOA, 3LOK, 3LSP/A, 3MI, 3PV, 4DC, 4HQ, 4IB, 5BD, 5DF, 5HN, 5KG, 5KW, 5MA, 5NF, 5UM, 5YV, 6AG, 6AG/P, 6JP, 6LL, 6NB, 6NF, 6OX, 6OX/P, 6YP, 6KW, 6KZ, 6RX, 6YP, 6AL, 6KW, 6KW/M, 6LN, 6RW, 6SC, 6SC/P, 6SK, 6UQ, 6VZ.

**B.R.S.21136** (Ruislip, Middlesex) May 17-June 13.  
Heard: G2AHP, 2AIH, 2AIW, 2ANT, 2BDP, 2BZ, 2CPX, 2FM, 2HDI, 2IF, 2MV, 2QY, 2QY/P, 2TP, 3ABA, 3AEX, 3BII, 3BFP/A, 3BLP, 3CO, 3CZY, 3DF, 3DOR, 3ECA, 3EVV, 3FCQ, 3FQS, 3FUH, 3GDR, 3GFN, 3GHI, 3GOZ, 3GSE, 3GTH, 3HBW, 3IAM, 3IJB, 3ISA, 3IUL, 3JEP, 3JTO, 3JQN, 3KBS/P, 3KEF/P, 3KEQ, 3KQC, 3LHA/P, 3LOA, 3LSP/A, 3PV, 4DC, 5KW, 5MA, 5US, 5YH, 6AG, 6AG/P, 6JP, 6LL, 6NB, 6NF, 6OX, 6OX/P, 6YP, 6KW, 6KZ, 6RW, 6SK.

**G2JF** (Wye, Ashford, Kent) May 20-June 13.  
Worked: G2BMZ, 2FMJ, 2XV, 3BII, 3EVV, 3IOO, 3KFX, 3KQC, 3LOK, 5NF, 5UM, 8SC, PE1PL.

**G2CZS** (Chelmsford) May 24-June 13.  
Worked: G2ANT, 2HDY, 3ANB, 3CZY, 3GHI, 3IJB, 3JGY/M (Hereford), 3JMA/M, 3JR, 3LHA, 3LOK, 4DC, 5KW, 6XX. Heard: G3EIO, 3IRS, 3KFX, 5YV.

**G3EMU** (Canterbury) May 14-June 14.  
Worked: F3LO, 9LD, G2JF, 3CCH, 3IJB, 3JMA/M, 3KEQ, 4JJ/A, 5MR, 6N4HN, 4ZH, 4ZK, 6A0FB, 0BL, 0DFW, 0WO. Heard: DL1LB, G3DLU, 3FAN, 4DC, 5BD, 5NF, 6A0QT.

**G3M2FHH** (Aberdeen) May 25-June 14.  
Worked: DL1LB, G2FO, 3DLU, 3GDF, 3GHO, 3KUH, 5BD, 5KG, 5KW, 5MA, 5YV, 6NB, 6G8DV/P, 6M3BBW/P, 3KYI, 3NG, 4HR, 6KH.

**PA0FB** (The Hague) May 27-31.  
Worked: DJ1XX, G3DLU, 3EMU, 3IJB, 4DC, 4HQ, 5BD, 5KW, 5MA, 6XX, 6N4HN, 4ZH, 4ZK. Heard: LX1SI.

### Seventy Centimetres

**B.R.S.18572** (Mitcham) June 16.  
Heard: G2RD, 2FCA, 3FP, 3GTH, 3HBW, 3KEQ, 5DS, 5DT, 6NB, 6NF, 6AL, 6RW, 6SK/P.

## Slow Morse Practice Transmissions

B.S.T.	Call	kc/s	Town
<b>Sundays</b>			
09.00	G3GYV	1900	Hartford, near Northwich
09.30	G3BKE	1900	Newcastle-on-Tyne
10.15	G3FBA	1910	Bath
10.30	G3DGN	1930	North London
11.00	G3GZB	1900	Stockton-on-Tees
12.00	G2FXA	1850	Cheltenham
12.00	G3LP	1850	Northampton
12.00	G3KAN	1850	Belfast
12.00	G15UR	1860	Exeter
20.30	G3HTA	1850	near Salisbury
21.00	G2FIX	1812	Guildford
22.00	G3ARM	1919	
<b>Mondays</b>			
18.30	G3NC	1825	Swindon
19.00	G3LMT	1850	Exeter
20.30	G3LSF	1900	Southport
<b>Tuesdays</b>			
18.30	G2FXA	1900	Stockton-on-Tees
20.00	G2FCI	1850	Exeter
20.30	G3GZD	1905	Kingsbury, N.W.9
21.00	G3EFA	1855	Southport
21.45	G3ETP	1875	Lowestoft
22.30	G3JMX	1860	
	G3IIR	1915	Norwood
	G3GQK		
<b>Wednesdays</b>			
18.30	G3GCY	1830	R.A.F., Dishforth
19.00	G3HUB/A	1902	Chelmsford
21.00	G3HWI	1987	Blackburn, Lancs
<b>Thursdays</b>			
18.30	G3NC	1825	Swindon
	G2ABR	1919	Hull, Yorks
20.00	G3FCY		
21.00	G3GWT		
	G3KTO		
20.30	G3JQM	1878	Barwick, Yeovil
21.30	G3HMY	1850	Exeter
<b>Fridays</b>			
20.00	G2FNI	1875	Wirral
	G3EGX		
	G3ERB		
20.30	G3ICX	1915	Sutton Coldfield
	G3KLZ	1860	Bradford
21.30	G3INW (or G3KSS)		Bradford
	G3KEP		Bingley
22.00	G3KYU	1859	Bournemouth
<b>Saturdays</b>			
13.00	G2FXA	1900	Stockton-on-Tees
21.00	G3HWI	1987	Blackburn, Lancs
23.00	GM3HBY	1900	Glasgow

† Alternately.

## Can You Help?

● R. W. Harris (B.R.S.4029), "Dungarvan," 7 Burleigh Lane, Plymouth, who requires the manual and/or circuit diagram for the Canadian R.103 receiver? In particular, he wishes to know whether the oscillator is above or below the signal frequency, the value of the padding condensers, the alignment procedure and the number of turns on the coils for Bands 1 and 2.

## Silent Key

BERNARD BARSTOW (G3GPT)

It is with deep regret that we record the death, on April 24 after a long illness, of Bernard Barstow (G3GPT) of Longton, near Preston, at a comparatively early age.

V.h.f. operators particularly will mourn his passing. Although a relatively newcomer to 144 Mc/s, he had made his mark as one of the most successful v.h.f. DX exponents and his call-sign was well-known all over Northern Europe. Although in poor health for some time past, he was always cheerful, friendly and ready to help his numerous friends. For many years he was a sea-going operator and during the last war served as a Lieutenant (Signals) in the R.N.V.R.

As befitted a schoolmaster, he had a particularly soft spot for children. To his widow and family we extend our sympathy in their tragic loss.—J.B., H.M.S.



# THE MONTH

DATE TIME	FREQ.	STATION CALLED	CALLED BY	STATION HEARD OR WORKED				IF QSO RESULTED			REMARKS
				R	S	T	KC/S OR DIAL	MY SIGS.	TIME OF ENDING QSO		

# ON THE AIR

BY S. A. HERBERT (G3ATU)\*

**A**BOUT this time last year we were in the throes of a typical British Summer, whose icy blasts and constant rain-storms kept many a transmitter going full blast. Now last year's pale-faced enthusiasts are sporting coats of tan and taking refreshment from bottles quite unconnected with matters radio. And a very good thing, too, we can't help thinking. Those of us who checked the bands from time to time found short skip predominant for much of the day, but both fifteen and twenty metres have been providing some sparkling openings to the Pacific during the early mornings and also late at night, much to the delight of sundry country chasers.

## Fifteen Metres

Fifteen still holds a slight lead in popularity over the other DX bands and it has been open sometimes throughout the twenty-four hours, though it has a habit of closing completely and without warning for short periods.

**G8DR** (London, N.W.2) used 50 watts and a three element rotary for QSOs with **PJ2ME** (c.w.) and **EL1P**, **XE3BR**, **ET2PA**, **CR4AO**, **HI7LS**, **TG9AP**, **HH5MV**, **HK** and **HC** on phone. **B.R.S.20317** (Bromley) found **F9QV/FC** (17.40), **FB8BX**, **HE9LAA**, **LA1VC/G** (Queen Maude Land, 17.00), **PZ1AQ**, **UD6AL**, **UJ8AG**, **VP7NI/P**, **'9BU/P**, **ZS3AG**, **ZD2WAF** and **ZC5AL** (16.00-060) on the key, then logged **SV0WE** (Rhodes) and **ZK1BS** (09.45-195) on phone. Bill also heard a character signing **ST1NK**, who was being worked by dozens, believe it or not! **B.R.S.20249** (Sutton) heard the **SV0**, the **ZK** and **VS9AI**, all new ones and he logged **W6GRM/MM** (Malacca Straits) and **ZD2DCP** also.

**B.R.S.20135** (Newport, I.o.W.) dodged the Europeans and was rewarded by **ZK1BS** (09.40) for a new one. Other

\* Roker House, St. George's Terrace, Roker, Sunderland.

phone DX was from **KL7PIV**, **KH6AXH** (10.00), **KG6AGO** (19.00), **KA**, **JA**, **HS1A**, **'1B**, **VS4JT** (14.00), **CR9AL**, **ZD6RM**, **CR5SP** and **VQ6ST**—a goodly assortment. **B.R.S.20106** (Petts Wood) found some early morning openings producing **VS4JT**, **VS1FE**, **VR2AZ**, **'2DA**, **'2BC**, **VK**, **KA** and **JA**, **KH6** on phone, with **VK**, **JA** and the like, plus **3W8AA** on c.w. All these were logged between 06.00 and 10.00, which is interesting and seems to indicate that when conditions are right, areas such as **VS1**, **VS2**, **VS4** can be worked throughout the day. Other DX from Norman includes—on phone—**HB1MX/FL**, **OA4AU** (06.30), **KX6BQ** (17.00), **VP1EE** (04.00), **VP5CM** (18.30), **ZK1BS** (04.00 and 10.30), **FB8BX** (18.00), **HI7LMQ** (04.00 and 07.00), **ZP5JP** (Box 514, Asuncion), who is a **YL**, incidentally, **HH5EN** and **KG4AN**. **VS6CL** remarked that he had heard two **HLs**—**'2AC** and **'2AJ**—and that all **HLs** are University or School calls. **B.R.S.21279** (Oldbury) found **HS1A**, **BV1US**, **VS1s** (17.00-19.00), **HI7LMQ**, **'7LS** (19.00), **VQ6ST** (operated by **VQ2ST**), **ZC6UNJ**, **VU2RC**, the **S9 ZK1BS** and **HB1MX/FL** (Liechtenstein) on phone. Your commentator found **3W8AA** in a talkative mood and learned that Phan had worked **G5DQ**, **LA7Y**, **OK1FF** and **DL7AA** on five bands—c.w. of course.

## Twenty Metres

**G6XL** (Leeds), who worked the *Tahiti-Nui* early in April, has not heard the raft since May 3. **FO8AD** said she had run into a bad storm and was making for Juan Fernandez to effect repairs. (See later for the end of the story.) **'6XL** says his only QSO of note was with **CE0AC** (Easter Is.), who was strong and chirpy at 07.25, but he did hear **VR3G** (06.30-050) when the **VR3** was very weak and smothered by the attendant pack of **Ws**. **G3FPK** (London, E.10) writes from Cannes,



This picture was taken at a recent meeting of Northern Rhodesian Amateurs. Back row (l to r), **VQ2JB**, **VQ2PC**, Mr. Cairns, Mr. Bell, **VQ2FC**, **VQ2DA**, **VQ2HA**, **VQ2SP**, Mrs. J. Christie, **VQ2NS**, Mrs. R. Clasens, **VQ2HJ**, **VQ2JP**, **VQ2WM**. Front row (l to r), **VQ2AS**, **VQ2DC**, Mr. Meiklejohn, Mrs. **VQ2LB** and two junior ops, Mrs. N. Seymour, **VQ2SB**, **VQ2JC**, — and **VQ2RW**.



where the weather was wet and thundery! Before leaving, Norman managed to add some new ones to his score, UH8, 3V8, EA6AM (05.30), KZ5GO, KL7CDF (QSL via R.S.G.B.), FE8AH (09.00-085) and HK3JC, all on c.w., making him 93C. Heard but not connected with were rare items such as XE1DA (05.40), FO8AD (06.30 and what a pile-up!), FB8CC and HH2OT (QSL to W4HYW).

**B.R.S.20317** concentrated on c.w. and was rewarded by new ones FO8AC, '8AD, '8AG, '8AO, ZK2AD (09.00 to 10.00-008) and a Ghana ZD4, plus EL1L, FB8BX, GC3AAE, KH6AIK/KG6, UL7AB, UA0s 'KGA, 'RK (Yakutsk) and VP8BO. **B.R.S.20135** logged TG9AL on A3 at 08.00 and **B.R.S.20249** heard him, then pulled in U18KBA and UL7DA for new ones on A1. **B.R.S.20106** has been hearing FO8AD on phone at the high end of the band. TG9MQ and HH2HH were also on around 05.00 and on c.w., Norman listened to FO8AM (05.00), '8AG, '8AQ, LU3ZB (20.00), PJ2ME (04.00), ZK2AD (09.45, low end) and KR6AC (16.00). **B.R.S.21279** heard lots of W6 and some VE7 phones in the early mornings and logged XE1OU and VK0CJ (Macquarrie Is., 07.50) for new ones.

**G3ATU** finds MIH still very active on c.w. and heard VQ8AD working Europeans around 17.00, while a UA6 who was calling "CQ ZM" got exactly the number of replies from that island that one would expect! Flash: **FB8CD** is now active from Anjouan Is. in the Comoros on c.w. around '095. '3ATU QSO'd him at 20.00 G.M.T.

## Ten Metres

Business continues to be far from brisk as can be expected at this time of the year, but just wait until Autumn and see what happens!

**B.R.S.20317** found PJ2ME (15.00), CX1RY and OA4FA on c.w. and he heard FF8AP on phone, while **B.R.S.20135** heard ZD3BFC, '4BV, KP4 and CR6. **B.R.S.20249** heard YV3BD for his first YV on the band and W2JNA (S.S. African Dawn) was logged while in the South Atlantic. **B.R.S.20106** corrects last month's reference to VS8AG. It was VS9AG he heard and **G3ATU** must assume responsibility for the slip. Sorry! Norman's only DX this month was ZC6UNJ. **B.R.S.21279** has a QSL from K5HNY/KG6, who remarks that he has sent cards to some twenty European countries—including 41 Gs, a GM and a GI—worked on ten metres phone from March 6 to 31 last.

## The Other Bands

The lower frequencies come in for little comment at the moment, but forty metres still produces a certain amount of DX, even on phone, during the early hours, when **B.R.S.20106** heard K4AID, K4CUA, K4CBG, W2TDY and W3HSY, while he logged W4FRJ (03.30) on eighty.

**B.R.S.21279** found his interest aroused by *M.O.T.A.* mention of phone DX on forty so one morning he gave the band a try at 04.00 and promptly pulled in K3FXC, K3AKP and W9OKU.

## News from Overseas

Old Timer Eric Trebilcock, **B.E.R.S.195**, has just passed his 180,000th log entry in 31 years at the game! Already this year he has mailed 578 reports (and they are reports, too), so he says he isn't doing too badly! Among his incoming QSLs are Russians, some of them direct, but UH8 is still missing. If only UH8KAA would oblige! Eric is back on forty after a year and he hears Europe regularly. One day as an example produced G3FJT, G3IQE, LZ, SM, YU, F8, ON4, DJ, OK, UA and UC, all on c.w.—18.00 to 19.45 G.M.T.—with JA1EF and ZL1IG the only other signals on the band! As to Pacific DX, FK8AT is on 7 Mc/s c.w. daily, around 11.00 G.M.T. He is on Lifou Is., which is New Caledonia, just the same as the other FK8s. VK0CJ (Macquarrie Is.) is on c.w. and phone at various times. QSL him and all other VK0 stations via VK3RJ. VK9RH (Norfolk Is.) is still

active on phone, usually around 10.30 G.M.T. and Eric thinks he is the only station now on the island.

**B.R.S.20106** together with John Hall (G3CDK) and G4ZU was present at a gathering at the home of G2PL for a get-together with Stew Perry (W1BB) and his wife, who are on a visit to Europe. A pleasant evening ensued and thanks are due to Mrs. G2PL for some expert staff work in the background.

**G3AAE** learns from **UP2AS** that he and a number of other single operator stations have been ordered to close down, such well known calls as UQ2AN, UF6FB and UA6UI among others being affected. **UP2AS** had all the gear for his planned DXpedition to Tannu Tuva standing by. All the stations that have been closed down are, however, allowed to operate the local club stations.

In a letter from **K2OEA** to **G3AAE** it is learned that Danny Weil expects to sail again in the Autumn and plans to visit the following DX locations: ZD8, ZD9, Cocos, Kermadecs, VR5, VR6, CE0, CR10, Laccadives, Nicobars, Chagos, Seychelles and Tokelau. **K2OEA** has met Danny personally and the places listed above were quoted by Danny himself.

Finally **G3AAE** himself enjoyed a minor DXpedition to Jersey between June 5 and 19 when, operating a B2 as **GC3AAE**, over 200 contacts in 40 countries and all six continents were made on 14 Mc/s c.w.

The **A.R.R.L.** announces that **Ghana** has been added to the DXCC List as from March 5, 1957. QSOs made with ZD4 prior to that date continue to count as Gold Coast. All contacts dated April 1 and after with **Saarland** and **Trieste** will be considered as QSOs with Germany and Italy respectively.

**Vic Thorne** is now ex-**ZD6BX** and is on leave at 79 Blinco Grove, Cambridge. **ZD3A**, too, will be in the U.K. in August and will not be returning to Gambia, but he hopes to get to some equally exotic spot next year. Ted reports **ZD3E** as being in process of getting on the air—a long-awaited modulator is holding him up—and **ZD3BFC** has been watching the TV screen. Bill actually took some photographs of European TV programmes! **ZD3A** thinks his relief may be persuaded into taking a **ZD3** call. As **G5FI** is the General Manager, prospects seem relatively bright!

**G3CHM** (Eastleigh) hears from his old shipmate Terry Black (**ZB2J**) who was active six years ago while with the R.N. He is now back in Gibraltar as a civilian and is active on 14 and 21 Mc/s c.w. and n.b.f.m. with only five



This neat set-up belongs to well-known DX'er **UP2AS** in Kaunas, Lithuania, who has recently become a member of R.S.G.B. Judging by his shirt, the present vogue in men's attire does not originate across the Atlantic after all!

watts input, while a high-power transmitter is being built. His old log and QSLs were lost and so he has to start afresh, with a firm "one for one" QSL policy. His QTH is 8/13A, Sandpits House, Witham's Road, Gibraltar.

**ZC4II** says that great efforts are being made by the R.A.F.A.R.S. to get a station going on Masirah Island. Greg remarks that the latest from Iraq seems to indicate that anyone signing "YI" is very much under-cover. It appears unlikely that licences will be re-issued but '4II hopes to visit YI himself and find out the exact position. A QSL arrived from ET3XY, who may be reached via "Trent," P.O. Box 849, Addis Ababa. Feelingly, Greg says how nice it would be after a "CQ DX" not to be swamped with replies from U, YO, LZ, OK and the like! Finally, he says G3IDC—the much-travelled Frank Johnstone—is now in VSI for a tour of two years or so.

**G3BID** (London, N.W.3) has a QSL from FK8AS, who assures all who have worked him that a card will eventually be sent, although there will be a delay, as he is awaiting a further batch of QSLs from the printers. **VP8BZ** (Hope Bay, Grahamland) should by now be home at 2 Langdale Avenue, Mitcham, Surrey after his tour in the Falkland Is. Dependencies. At present, there are eleven main stations, distributed over the Antarctic mainland, South Shetlands and South Orkneys and all the operators—numbering fifteen or so—have amateur licences. Equipment is standard and comprises R.C.A.4336 transmitters and either CR100 or Eddystone 750 receivers.

**G5ZJ/VU2ZJ** remarks that although the number of VU licences is increasing—the latest list shows some 150 stations issued with call-signs—the almost complete lack of equipment and components makes it difficult for most of them to put together any worthwhile gear. G2MI would like to know the present QTH of ex-ZD4BK. Can anyone help?

#### Tahiti-Nui Lost

The tiny balsa-wood raft which has for months past been carrying five intrepid men from Polynesia across the vast wastes of the Pacific in an attempt to reach the Chilean coast, met her end on the night of May 26. **G3KYT** (Orrell, Lancs.) deserves congratulations on his prompt action, taken after he picked up an SOS from the raft on May 19. He telephoned the news to Seaforth Radio, who passed it to Portishead and so through to Valparaiso, where the distress

call had also been heard. The Chilean authorities ordered the frigate *Baquedano* to assist and she reached the raft and took it in tow, hoping to reach Juan Fernandez Is. However, when still 200 miles from the island, *Tahiti-Nui* turned turtle and sank. Fortunately, all five members of the expedition were safe on board the frigate and duly reached Chile unharmed. **G3KYT** has received thanks from the Chilean Embassy, the G.P.O. and from The West Coast of America Telegraph Co. of Chile, from whose letter the above has been extracted.

#### Certificates and Awards

Details of two new awards are to hand. The Denver Radio Club Inc., announces the "Mile-Hi Award," which carries a year's subscription to either *CQ* or *QST*. The certificate is so named as Denver is just about a mile above sea level. The **Kroonstad Radio Club** of South Africa also announce a certificate. Full details of these awards can be obtained from G4CP—and with a s.a.c., please.

The new printing schedule now in force should ensure the *BULLETIN* reaching you in good time from now on and reports for the August *M.O.T.A.* should reach your commentator not later than July 18 so that he in turn can submit the copy to Headquarters in good time. Meantime, happy hunting and lots of new ones. 73.

#### Singapore Hobbies Exhibition

**SINGAPORE ROTARY CLUB** recently held a Hobbies Exhibition in the Victoria Memorial Hall at which an Amateur Radio stand arranged by **VS1GQ**, **VS1DU** and **VS1ER** was one of the attractions. Two complete stations were in operation each evening while other equipment on show included oscilloscopes, frequency meters and transistorized equipment.

Visitors to the stand were invited to write their names and addresses in the visitors' book so that further information on Amateur Radio and details of free Morse classes by **VS1ER** could be sent to them later—an idea that could well be followed at other exhibitions. **VS1GQ** says that "After counting the entries in this (book), I can only say that provided all goes well there is going to be a tremendous increase in the number of VSIs on the air in the near future!"

## Frequency Predictions for July, 1957

PREPARED BY J. DOUGLAS KAY (G3AAE)

BAND	NORTH AMERICA	CENTRAL AMERICA	SOUTH AMERICA	NEAR EAST	MIDDLE EAST	FAR EAST	SOUTH AFRICA	AUSTRALIA	ANT-ARCTICA
M.U.F.	26 Mc/s 1200	31 Mc/s 1930	37 Mc/s 1600	36 Mc/s 1400	31 Mc/s 1600	27 Mc/s 1000	40 Mc/s 1400	28 Mc/s 2200 LP	35 Mc/s 1300
28 Mc/s	1200	1800—2100	1030—2200	0800—2000	1400—1700	1000	0730—2200	2200 LP	1200—1600
21 Mc/s	1000—0000	0700—0200	0930—0500	ALL DAY	0700—2300	0700—2000	0700—0100	0700—1000 SP 1000—1530 LP 2100—0200 SP	1000—1900
14 Mc/s	ALL DAY	1730—1130	1730—1000	ALL DAY	1400—0700	1400—0200	1430—0200	0000—1000 LP 1400—2300 SP	1600—0800
7 Mc/s	0400	2300—0730	0000	1800—0700	0000	2000	0000	1800 SP	0000
3.5 Mc/s	0400	0000	0000	0000	0000	2000	0000	1800 SP	0000

These predictions are based on information provided by the Engineer-in-Chief of the Post Office. All times are G.M.T. Between May and September Sporadic E propagation may result in very short skip conditions on the higher frequency bands.

## The New Forest Mobile Rally

BY JOHN A. ROUSE (G2AHL)\*

NEARLY 150 people converged on Stoneycross Aerodrome on June 16 for the second New Forest Mobile Rally organized by the Bournemouth and District Amateur Radio Society. The sun blazed all day but a pleasant breeze helped to keep the temperature bearable despite the heat wave. With not a cloud in the sky the scene was set for another highly successful gathering.

Mobiles came from as far apart as Coventry, Enfield, March, Leigh-on-Sea, Gloucester, Bristol, Bournemouth, Guildford and Southampton. Altogether about 36 were there including G2AHL, G2BCX, G2BRR, G2CAJ, G2CDN, G2DSW, G2FIX, G2FK, G3BHS, G3CGE, G3CIM, G3COJ, G3ENG, G3ERN, G3EVV, G3FKO, G3GMN, G3HCK, G3IES, G3ION, G3IRA, G3ISZ, G3IVP, G3JSJ, G3JTQ, G3JUC, G3JXA, G3KAS, G3LHH, G3LOO, G3WW, G3XC, G4AP, G5PP, G5SN and G6OX. Of this number, 23 were equipped for Top Band, five for 80 metres, ten for 2 metres and seven for other bands. The control stations, G2HIF/P and G3GYK/P, operated on 2 metres and Top Band respectively. G2HNO acted as "receptionist" and compiled the list of mobiles present.

On the equipment side, it was interesting to see that only three ZCIs, so popular a year or two ago, were in use. The present tendency is clearly for mobileers to build compact, well-designed equipment specially for the bands in which they are interested, though units of the Command equipment series are being used in modified form by many operators, no doubt due to their small size, ready availability and ease of conversion for amateur use. The receivers are proving

particularly popular, both for operation on the bands for which they were designed and as i.f. strips in conjunction with crystal controlled and other converters.

One of those using such as set-up is G3ENG/M who has one of the new Minimixer converters feeding into a 1-5 to 3 Mc/s Command receiver, thus covering all the amateur bands up to 28 Mc/s. Used with an adjustable whip just forward of the windscreen on his Minx's off side the arrangement provides excellent reception on all frequencies, with plenty of bandspread. G3EVV/M operates on Top Band, 10 and 2 metres, with a separate transmitter for each band with an associated converter feeding into a common i.f. strip. An adjustable 8 ft. broadcast whip, with top loading provided by a multi-coloured fluorescent spiral for Top Band, is the aerial for the high frequencies, with a 19 in. whip for 2 metres on the roof of the Consul. The small aerial is mounted on a home-made base fixed to the roof with small rubber suction feet obtainable from Woolworths at four for sixpence.

One of the mobiles which raised much interest was the motorcycle mobile of G3IRA, consisting of a miniature rig for 2 metres comprising a combined 4-valve super-regen receiver and transmitter. The 6AK5 p.a. stage delivers 100mW to the single skeleton slot with one reflector mounted on the back of the motorcycle. Nonetheless, excellent results are obtained and G3IRA/M worked G3LOK in the Isle of Wight from Stoney Cross. Another motorcycle mobile was the Top Band installation of G2FIX. Both outfits are a great tribute to the ingenuity of the amateurs concerned.

G2CDN was one of the few stations equipped for operation on the DX bands. His equipment is almost entirely American-made and consists of an Elmac receiver and transmitter. The receiver, a ten valve dual conversion affair, has an adjustable squelch control and variable b.f.o. injection for s.s.b. reception as well as normal features such as a noise limiter and voltage stabilization. The transmitter will run up to 60 watts input, v.f.o. or crystal controlled, but G2CDN is only running about 12 watts at the moment. With this input, DX contacts are regularly made on 15 and 20 metres. The aerial is an adjustable whip with a matching network to ensure a correct match between the base of the aerial and the feeder.

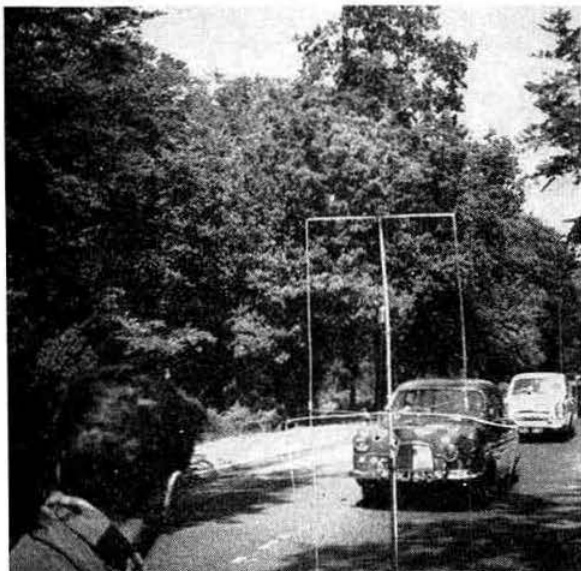
Another interesting rig was that of G2BRR. The transmitter consisting of a v.f.o. and 12A6 p.a. may sound fairly conventional but the companion Top Band receiver employs transistors—a logical step for the mobileer as transistors become more readily available and suitable for higher frequencies. An example of the successful use of surplus equipment was the TCS12 installation of G3KAS in the boot of the car.

Large loading coils for the lower frequencies are a familiar sight at mobile rallies but just about the largest ever is that of G3ERN who uses a loading coil running the whole length of his Bedford van, the whip being mounted at the rear of the roof. Another unusual sight was the portable aerial carried by G6OX/M for operation from a fixed position—a ten element 2 metre long Yagi on a mast mounted on a base on the luggage rack, the end protruding down through the sunshine roof opening for convenient rotation from the operating position!

As at every mobile rally, there was plenty to be seen, plenty of ideas to be noted and admired—and plenty of rag-chewing in the best traditions of Amateur Radio. The Bournemouth and District Amateur Radio Society is to be congratulated on another excellent event. We are sure we speak for all those present when we say we are looking forward to next year's New Forest meeting.

### Out and About with the Mobiles

From July 28 to August 11 G3KVF will be operating as DJ0AF/Mobile in Germany, and will appreciate contacts. It seems that the German Authorities are prepared to issue



Mobiles on the road just before the turning on to Stoney Cross Aerodrome. In the foreground, is the skeleton slot with reflector on the rear of G3IRA/M's motorcycle. G3IRA himself is on the left of the picture. (Photo by G2AHL)



licences for such operation to foreign amateurs making short visits to their country.

G5CP employed the days of petrol rationing to good effect and produced a new transmitter consisting of a Geloso bandswitched v.f.o. driving an 807 in the p.a. On the receiving side a Minimitter converter feeds into an R103 receiver at 6 Mc/s. All this equipment is mounted under the dash, the power supply being remotely controlled by means of relays, the generator and batteries being mounted in the boot. For 10, 15 and 20 metres 39 ohm coax is used to feed quarter wave whips, whilst on 40 and 80 metres 72 ohm cable is used with loaded whips. So far, contacts on phone have been made with all W districts, VE1-3 and 6, VO1, 2 and 4, VQ5, CR9, 4S7, PY7, ZB1 and CN8 as well as many Europeans. Only a VK or ZL is needed for WAC/M! Two mobile-to-mobile contacts have been made with W3 stations, one on 10 metres and one on 15.

During Easter, G8ML was mobile in Wales and despite limited time, worked GM3JFG (Invergordon), G3GRA (Plymouth), G3CGD (Cheltenham), G3AKX (Sale), GW3LKK/P (Anglesey) and GW3KHY (Llanon) on Top Band using an 8 ft. centre-loaded whip from a field overlooking Cardigan Bay. For two weeks commencing July 20, he will be in Cardiganshire again.

G2DTQ has found Top Band mobile using a modified ZC1 Mk 2 and an 8 ft. loaded whip of considerable use while temporarily resident in Wolverhampton. A CQ call brought directions to a local meeting and mobile contacts with G3LGK, G6WF, G3JYZ, G3AGW, G6UI and G3KMY.

A new Welsh mobile is GW3FPF who is operational on Top Band.

G3DQ has a Palco Bantam transmitter, Elmac PMR7 receiver installed on the glove shelf of his A90 and a Yankee centre-loaded 8 ft. whip. The whip is mounted on the front wing alongside the broadcast aerial. DX worked with this arrangement includes VQ4, LU6, OH, SM, LA, HB, DL, EA and I on 20 metres and VP6WR on 15. SM5GR in Stockholm was worked mobile-to-mobile. G3DQ found the following points useful in eliminating interference: normal suppression of plugs and ignition system; bonding of the silencer to the chassis; earthing of the bonnet to the main



The longest loading coil of all, belonging to G3ERN/M, was installed on top of a Bedford van. The whip can be seen at the rear of the roof. By comparison, G3CIM's loaded whip mounted on the Ford Prefect (foreground) was very modest indeed. (Photo by G2AHL)

chassis with a substantial strap; the screening of all leads and careful bonding to earth; suppression of the clock and windscreen wipers. Regular cleaning of the transmitter and receiver switches with carbon tet. has also been found desirable. Weather-proofing of the loading coil, particularly if it has a sliding contact, is essential.

After a recent visit to Guildford for a Red Cross meeting in connection with R.A.E.N., G3ELZ was in practically constant contact with Top Band stations on his journey home to Grimsby via Chelmsford. Very similar results were achieved during the outward journey but as part of it was during a weekday morning activity was naturally rather low at that time. It is not possible to quote all the contacts G3ELZ made but one deserves special mention. During the trip from Guildford to Chelmsford contact was made with G4DC, who was later visited. After leaving there, a fuse blew and G3ELZ suddenly went off the air. However, as time was pressing, it was decided to continue the journey and replace the fuse later. When this was done, it was found that G4DC had been so concerned at the sudden QRT of G3ELZ he had gone to the spot from where he had last heard signals to make sure all was well. A fine example of the Ham Spirit!

G3ELZ's gear comprises an e.c.o./b.a./5763 p.a. running 9 watts input, modulated by p.p. 6BW6s, a 1.5 to 3 Mc/s Command receiver and a 12 ft. base-loaded whip on the rear bumper. During the trip mentioned above, contacts were made up to 175 miles.

G3CTE has sent details of G3EYO/M, which consists of a B2 Minor receiver and a 40 watt bandswitched transmitter covering all bands from 10 to 80 metres. The power supply is a dual voltage generator (560 and 265 volts). Various modifications have been made to the receiver, including the fitting of a separate a.f. gain control and a 6AQ5 output stage which drives an elliptical speaker mounted on the sun visor. As the receiver is very stable and has adequate sensitivity on 40 and 80 metres, it is planned to use crystal controlled converters ahead of it for the other bands. The

(Continued on page 33)



G2HIF (seated) and G3JLH (Chairman, Bournemouth and District Amateur Radio Society) operated the 2 metre control G2HIF/P. This picture was taken just before they had to move to the shade of the interior of the car. (Photo by G2AHL)



# The B.E.R.U. Contest 1957

## Activity, Entries and Sunspots Soar

**M**ORE stations, more contacts and more logs have combined to make the Twentieth B.E.R.U. Contest, held on January 26-27, 1957, among the most successful ever. Credit for this belongs partly to the better propagation conditions on the higher frequencies and partly to the simplified scoring system which considerably reduced the effort required to submit an entry. Altogether 550 Commonwealth stations took part, compared with about 400 last year, approximately 250 in the British Isles and 300 overseas in more than 50 of the call areas. North America was particularly well represented this year with more than 100 Canadian stations active. Oceania contributed about the same number but African activity was rather disappointing with only 50 stations joining in the fray. More than 150 logs were received, an increase of about 50 per cent over 1956.

### The Leading Stations

For the first time ever, a Canadian amateur—Victor J. Williams (VE3KE) of Ramsayville, Ontario—emerges as winner of the Senior Contest. His total of 4,267 points came from 495 scoring contacts, including 90 which carried bonus points, and gave him a clear lead of some 300 points from George J. Dent (VQ4AQ), many times winner but who this year must be content with second place. George F. Barrett (ZC4IP), with relatively modest aërials, made some 489 contacts and finished only 40 points behind VQ4AQ. Fourth—and once again qualifying as the leading British station—was F. J. U. Ritson (G5RI) of Hexham, Northumberland, hotly pursued by G6CJ, G5DQ, G3FPQ and G2DC. By careful selection of bonus-qualifying contacts (several bettered 100 such contacts), British stations were just about able to hold their own despite the uneven distribution of activity. If activity overseas continues to increase we may yet see another British winner.

VK6RU in ninth place, VK2GW in tenth place and VK9XK in twelfth place showed that the summer conditions which tend to make the going tough for stations in the Southern Hemisphere can be overcome, at least to a considerable extent, by determined operating. Unfortunately dates nearer the equinoxes are already well occupied by other contests. It is however noteworthy that this year the first four stations were all in different continents.

In the Junior Section (henceforth to be known as the Low Power Section), Jac C. van Wyk (ZS6R) continues his long record of success, though both ZB1BF and G3IDC bettered the 2,000-mark and finished within 200 points of ZS6R's fine score of 2,250 points from 215 contacts.

The Receiving Section also provided a close finish, less than 150 points in 2,500 separating the first four entries. Winner was W/Cdr. A. R. Gilding (G3KSH) of Kenton, Middlesex, using an HRO and 67 ft. aerial, with J. L. Hall (B.R.S.19107) of Beckenham, Kent as runner-up.

### Equipment

The leading stations employed an impressive array of equipment as the accompanying table shows. An analysis of the gear used by the 26 stations (23 Senior, 3 Junior) that bettered 2,000 points suggests that the majority have aërials capable of directing a goodly number of decibels in desired directions, either by means of fixed rhombic, Vee or long wires, or by rotating varying numbers of the shorter though just as deadly elements. But the owners of multi-band, centre-fed type of "Zepp," even at low heights, can still put up a good show, and on the higher frequencies the ground plane is deservedly popular. But for sheer ease of installation, ZL3JA's aerial must take the prize; he simply hitched his

transmitter on to a receiving aerial of unknown length left by the previous BCL occupant and proceeded to knock up 2,335 points.

On the receiving side, there is growing evidence that the screwdriver and soldering iron are coming back into their own again; at least four out of the 26 2,000-pointers had home-built receivers, while many of the type that come in packing cases had been extensively modified. Most popular were HRO (5), AR88 (5) and Eddystone 888 (4). Transmitters in this batch of entries included only a few commercial set-ups, while the overwhelming majority of rigs still rely on either an 813 or 807s to produce the amps in their aerial meters.

### Conditions

Conditions vividly reflected the change in maximum usable frequencies compared with recent B.E.R.U. contests. A table of DX contacts from the U.K., based on a selection of logs, shows that 14 Mc/s remained open almost continuously throughout the 48 hours; 21 Mc/s was useful from about 07.00 to 20.00 while 28 Mc/s stayed open for about 10 hours each day—from 08.00 to 18.00. Part of the table, covering the first 24 hours, accompanies this report. The decline of activity on 7 Mc/s was probably greater than the conditions warranted, as these permitted DX contacts throughout much of the night and early evening. Except for VE/VO/G contacts, 3-5 Mc/s was almost deserted—particularly on the second night when most contestants snatched some much needed sleep—though good contacts, including VQ2 and ZL3 were made from the U.K.

### Comments

The standard of operating in B.E.R.U. enjoys a deservedly high reputation and it is with regret that we must record that at least one well-known entrant was remarked to be using methods of queue jumping that proved highly unpopular with other contestants. Most stations consider it is better to



Vic Williams (VE3KE) winner of the B.E.R.U. Contest (Senior Section).

finish a few points lower than to risk losing their reputations.

Most competitors took easily to the new and very popular method of scoring but a few logs had to be completely re-scored. Final scores may puzzle those who note that only multiples of five should appear—the answer is that odd points may be deducted for minor errors in the exchange of reports, etc.

In the receiving section, the Contests Committee was pleased to note that entries this year reached double figures, but there was evidence of some carelessness in recording call-signs and even of mixing up the two ends of contacts (i.e. overseas stations were logged as having been received when it was clear from the serial numbers that in fact it was the local end of the contact that was being received).

### What You Thought

"Grand contest—for me certainly the best ever. Like the new scoring system."—G3BDQ. "Great do... the British Empire can still make the biggest noise on the band"—VE3EAM. "Conditions extremely poor on all bands."—VQ2RG. "Contest brought me four new countries and completed W.B.E.—the contact with Papua made it really worth while."—G2BLA. "With my QTH it is like playing golf on a course which is all bunkers and no greens."

—G3FBA. "Herewith an answer to the appeal for more entries. . . . Perhaps it would encourage the more bashful if scores less than the half-way mark were not published."—GM3UU. "My first year in B.E.R.U. but certainly not the last."—G3JJG. "Thank you for the new rules. It is a pity it starts on my busiest day of the week."—G8KU (a sentiment that finds an echo from G6GH).

"Conditions held up well throughout, even if BCI complainants did not!"—G3JZK. "Might I suggest 36 hours is enough?"—G6XL (ZD2DCP is also for this). "Why does everybody pound away in the first 20 to 30 kc/s of each band?"—G3FPK (who may like to know that VE8OW was in Eureka, N.W.T.). "Only had to listen and there were five or six stations calling me, certainly a novelty that could happen only during B.E.R.U."—VE3ADV. "Cannot understand why so few VKs take part—its the best in the Calendar. . . how about the old dates in April?"—VK3ZC. "My first B.E.R.U.—very enjoyable."—G3GGS. "Conditions here worst for some time. . . very exciting and instructive, hope to be around next year."—ZL1APM.

"For some reason the transmitter refused to work on 28 Mc/s on the Sunday"—G3AAE. "True to tradition, B.E.R.U. brought out all the incipient faults; the beam developed a crackle, the wavechange switch became

## RESULTS—B.E.R.U. CONTEST 1957 (SENIOR SECTION)

Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts
1	*VE3KE	4267	495	29	G3EYN	1784	109	55	GM3CIX	1174	78	82	G3FPK	605	33
2	*VQ4AQ	3943	420	30	GM3EOJ	1775	131	56	G3GKI	1160	76	83	G5WVP	600	27
3	*ZC4IP	3903	489					57	*ZE6JX	1095	77	84	G2WQ	595	27
4	*G5RI	3359	240	31	G5ZK	1744	101	58	*VK3ADW	1090	66	85	VQ2RG	580	64
5	*G6CJ	3129	230	32	*MP4BBL	1720	224	59	G5CP	1075	59	86	G3ISV	555	31
6	G5DQ	3115	223	33	VO6N	1718	236	60	*G3GWO	1060	64	87	G8KU	549	30
7	G3FPQ	3065	206	34	G3EBH	1700	100		*VK7CH	1060	68	88	VK2BA	510	35
8	G2DC	2644	185	35	G3CYS	1657	100					89	VO2S	505	65
9	*VK6RU	2530	202	36	*VQ2GW	1650	170	62	VE3ADV	1024	100		G3GUP	485	25
10	G3FXB	2529	174	37	MP4BBE	1644	211	63	G2AJB	1020	48				
				38	G5HZ	1624	113	64	VE2APH	970	138	90	G3JJG	475	23
11	*VK2GW	2390	226	39	*VQ6LQ	1572	164		G2DU	945	45		G3JBR	475	19
12	*VK9XK	2370	214	40	*ZS5U	1570	107	65	ZL1APM	945	66	92	GM3UU	470	22
13	G6XL	2355	151		*ZL4BO	1570	162		VK3XU	945	65	93	G3FBA	469	22
14	*ZL3JA	2335	202					68	G3COJ	919	43	94	G6PJ	424	25
15	*VOID	2300	325	42	G5MR	1550	102	69	G3GGS	915	42	95	VE1ZL	405	33
16	*ZB1HKO	2289	320		VE8OW	1509	200	70	G2DPD	870	49	96	VE5AT	385	37
17	VO3X	2274	315	43	G2TH	1495	75						VE3AVS	385	41
18	*ZD6BX	2265	185	44	G3GFG	1489	110		G3VW	855	43	98	G6CL	369	18
19	G2LB	2240	193	45	ZL3HI	1484	144	71	G3JZK	855	47	99	VK2AYA	340	16
20	G2QT	2219	144	46	*VE1EK	1455	196		VK2PV	855	47				
				47	G3BDQ	1434	83	74	VK5MY	820	52	100	VK3PL	325	17
21	G5JU	2200	172	48	G6XN	1403	101	75	G3DBJ	800	40	101	G4BD	299	20
22	G8KS	2148	160	49	G2PS	1395	99	76	G6GH	795	43	102	G2BLA	275	11
23	G2HPF	2095	123	50	G3BYM	1354	80	77	VE3MB	749	70	103	G6WV	225	9
24	G3HCL	1995	120					78	VE7MD	744	58	104	G3WVP	210	10
25	VK2QL	1910	139	51	G5US	1315	90	79	G3APN	684	41	105	VK2AFA	200	8
26	*VE2YU	1863	205	52	G3AAE	1309	82	80	G3KAY	665	36		VE3CEM	185	13
27	G5RP	1809	110	53	VE2DR	1304	165					106	VE2RL	155	18
28	G6RC	1800	115	54	*457MR	1230	114	81	VE3EAM	664	89		ZS1O	125	7

## RESULTS—B.E.R.U. CONTEST 1957 (JUNIOR SECTION)

Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts	Posn.	Call-sign	Pts.	Con-tacts
1	*ZS6R	2250	215	7	G5MP	1167	62	13	*ZS5JE	719	40	20	G4LX	594	31
2	*ZB1BF	2141	230	8	*ZD4BQ	1140	100	14	*ZD2DCP	705	66				
3	*G3IDC	2072	135	9	*DL2UY	1078	120	15	G8JR	655	36	21	*VK3ZC	570	34
4	*VQ2GR	1644	165	10	*VQ4KPB	1025	65	16	*V5IEL	650	34		VP8AI	420	49
5	GW3AHN	1420	92	11	*ZL2ARL	1012	75	17	*VQ6AB	638	72	22	GM4GK	325	21
6	*AP2RH	1170	118	12	*V56DN	995	77	18	G3GNS	620	38	23	VE3DDU	315	31
								19	*ZL1MT	595	31				

\* Certificate winners.

† Invalid—late entry.

‡ Invalid—no declaration.

## RESULTS—B.E.R.U. CONTEST 1957 (RECEIVING SECTION)

Placing	Call-sign	Points	Placing	Call-sign	Points
1	*G3KSH	2706	6	G3EUE	1785
2	*B.R.S.19107	2653	7	B.R.S.19771	1030
3	B.R.S.20206	2579	8	B.R.S.17241	835
4	B.R.S.15822	2575	9	B.R.S.195	730
5	B.R.S.20317	1860	10	B.R.S.2292	620

\* Certificate winners

# HOW THE LEADERS MADE THEIR SCORES

Call-sign	Bonus Contacts per Band (3-5-7-14-21-28 = Total)	Transmitter	Receiver	Aerials
VE3KE	4-10-38-24-14 = 90	p-p. HK54s (300W)	SX-16	Three 7 Mc/s $\frac{1}{2}$ $\lambda$ in phase (3-5/7); 3-el. rotary (14); Bi-squares (21); Stacked bi-squares (28).
VQ4AQ	0-15-37-27-13 = 92	6V6-6L6-807-100TH (150W)	AR88	Vee beams and rhombic.
ZC4IP	4-7-29-23-10 = 73	Command types (120-150W) ACT20 (mod.) 28 Mc/s (40W)	HRO (mod.)	136 ft. end fed; 14 and 21 Mc/s dipoles; rotary cubical quad (28).
G5RI	6-14-36-29-17 = 102	LG300 (813 p.a.) (150W)	HRO (mod.)	Two Vee beams and rhombic.
G6CJ	6-13-32-28-20 = 99	BC221-mult.-p.a. (150W)	AR88	Vee beam; $\frac{1}{2}$ $\lambda$ vert. (3-5); loaded wire vert. (14); spaced verticals (7/14 rx.).
G5DQ	5-13-33-28-21 = 100	LG300 (150W)	AR88	$\frac{1}{2}$ $\lambda$ vertical (3-5); $\frac{1}{2}$ $\lambda$ dipoles (7, 14, 21); ground plane (28).
G3FPQ	6-10-38-34-14 = 102	813 p.a.	double super + BC453	272 ft. centre-fed Zepp (all); 2-el beam (14); quads (21/28).
ZS6R	0-9-22-22-6 = 59	6V6-807 (24W)	NC200	Folded dipoles (7/14/21/28).
ZB1BF	4-8-17-11-10 = 50	6V6-807-807 (25W)	HRO	138 ft. end fed; sloping dipoles (7/14/21/28).
G3IDC	6-6-22-24-12 = 70	6J5-6AU6-6V6-QV06-20 (25W)	Eddystone 888	E-W Vee (350 ft. per leg).

temperamental, and the v.f.o. resorted to frequency jumps."—G3BYM. "Very high winds and the coax to my 14 Mc/s beam must have broken on Sunday evening."—G6XL. "Interesting and enjoyable contest, new scoring a great help. Receiver trouble (the first in three years). . . Would ask the G boys once they have collected their 20 points to move off the frequency."—MP4BBL. "One of the high voltage rectifiers got an internal short-circuit . . . and had an EF91 die in the exciter . . . these 48 hour contests take it out of an old transmitter . . . be there next year (complete with spares)."—G2HPF.

"With activity on all bands, the 48 hours were fully taken up, and the end came all too soon."—G5MR. "Fine spirit and excellent conditions . . . made this the most enjoyable B.E.R.U. or any contest so far."—G5ZK. "See you all next B.E.R.U. under the call VO1DX."—ex-VO3X. "Participating in this B.E.R.U. has been a very great pleasure and is the outstanding event in Amateur Radio as far as I am concerned."—VO1BD (ex-VOID). "Another most interesting and enjoyable Empire contest held under propagation conditions that must have been new and somewhat fantastic to many competitors . . . in six consecutive contacts all six continents were worked."—G2DC. "Cannot the two sections be renamed 'High Power' and 'Low Power' . . . believe me there is nothing 'junior' about successfully working in B.E.R.U. from G with 25 watts."—GW3AHN (Thanks for the suggestion—see 1958 rules).



Jac van Wyk (ZS6R) again led the Junior Section.

Wish we could quote more of your interesting and appreciative remarks but if we did there would be no space for the "Coming of Age" B.E.R.U. rules. See you next January!

## Check Logs

Check logs are gratefully acknowledged from G2XG, 3AIM, 3CEG, 3CXM, 3EEM, 3GSZ, 3HLY, 3KPJ, 5GH, 5HB, 6YQ, G13VJ, ST2NG, VE1DB, 1OM, 2ATU, 3DIF, 3EK, 3YV, 4CQ, 6VO, VK2HW, 3XB, VP7NM, VQ8AB, VS2DZ, ZE3JJ and ZLICK.

## DX CONTACTS FROM GREAT BRITAIN

(Based on a cross-section of B.E.R.U. logs)

JANUARY 26, 1957	
00.00	(7) VQ4, ZS, VE1, 3, 8.
01.00	(7) VQ4, 6, VO, VE1, 2, 3; (14) VE8.
02.00	(3-5) VO, VE1; (7) VQ4, 6, VO, VE2, 8; (14) VO, VE2, 3, 4, 5, 6, 7, 8.
03.00	(3-5) VO, VE1, 2, 3; (7) ZS, VQ6, ZD4, VE2, 3; (14) VQ4, VE3.
04.00	(3-5) VO, VE1, 3; (7) VQ6; (14) VO, VE2, 3.
05.00	(7) VE3; (14) VE2, 3, 6, 8.
06.00	(7) VE3; (14) VP7, ZL3, 4, VE1, 2, 3, 6, 7.
07.00	(3-5) VE2, 3; (14) ZL1, 3, VQ6, VO, VE1, 2, 3, 4, 7, 8; (21) ZL1, 4, VQ4, ZD6.
08.00	(3-5) ZL3; (7) VE2, ZL3; (14) VK2, 3, 5, 7, ZL3, 4, ZD2, VE2, 3; (21) VK2, 4, ZL1, 2, 4, MP4, ZS, ZD2, VQ4, 6; (28) VQ4.
09.00	(14) ZK, VK2, 3, 5, 7, 9, ZL3, 4, VE1, 2, 3; (21) VK2, 3, 4, 6, ZL1, 2, 3, 4, VQ4, 6, ZD2, VE2; (28) ZK, ZL1, MP4, ZS, ZD6, VQ4.
10.00	(14) VK5, 6, 7, ZL1, 4, VE3; (21) VK3, 4, 9, ZL3, 4, ZS, VQ4, 6, VE8; (28) MP4, ZS, ZD6, VQ4.
11.00	(14) ZL1, 3, 4, VO, VE3; (21) VK2, 3, 4, 6, 7, 9, ZL1, 4, VQ6, VP6, VE3, 8; (28) VK2, 4, VS6, MP4, ZS, ZD2, 6, VQ4.
12.00	(14) VK2, ZL1, 3; (21) VK2, 4, ZL1, 4, VS6, MP4, ZD2, VQ4, VO, VE2, 3, 4; (28) VK9, VS6, ZE, VE2.
13.00	(14) ZL3; (21) VK2, 4, ZL3, 4, VS6, ZE, VQ2, 4, VE2, 3; (28) VK9, VQ2, VE2.
14.00	(14) ZL3; (21) VK2, 3, 4, 9, VS6, VQ4, VE2, 3; (28) ZS, ZD6, VQ2, VO, VE2, 3.
15.00	(14) VK2, 6, 7, 9, VS1, AP, MP4; (21) VK9, VS6, ZD4, 6, VQ4, VE1, 3; (28) VQ2, VO, VE1, 2, 3.
16.00	(14) ZL3, 4, VK2, 5, 6, 9, VS1, MP4, VE6, 7; (21) VU, MP4, ZS, VQ2, ZD6, VO, VE1, 2, 3; (28) VE1, 2, 3, 5.
17.00	(14) VK2, ZL3, VS1, 2, ZS, ZD6, VE7; (21) MP4, ZS, ZD4, VQ2, VO, VE1, 2, 3; (28) VE1, 3, 5, 6.
18.00	(14) ZL2, 3, VS1, 2, ZS, ZE, VQ2, 4, 8, ZD2, VE1, 2, 7; (21) ZS, VQ2, VO, VE2, 3, 6; (28) VE3.
19.00	(14) VK2, ZL3, 4, 457, MP4, ZS, ZD6, VQ2, 4, VO, VE2, 3, 7; (21) VE3.
20.00	(14) VK2, ZL2, 3, 4, 457, MP4, ZD9, VQ2, 4, ZS, VO, VE1, 2, 4; (21) VE2.
21.00	(7) MP4; (14) VK3, ZL3, 457, VQ4, VO, VE1, 2, 3.
22.00	(14) ZS, VE2, 3.
23.00	(3-5) VQ2; (14) VE2, 3.

# The Twenty-first B.E.R.U. Contest 1958

## Highlight of the R.S.G.B. Contests Calendar comes of Age

RADIO amateurs throughout the British Commonwealth and Empire are invited to take part in the Twenty-first B.E.R.U. Contest to be held on January 25 and 26, 1958.

The simplified rules and scoring system introduced for the 1957 contest will again apply, with only minor alterations to the wording to clarify the meaning in a number of places. It will be noticed that the names of the three sections of the contest are now High Power, Low Power and Receiving.

With high maximum usable frequencies, 14, 21 and 28 Mc/s should again offer excellent opportunities for DX work.

The Contests Committee is arranging to secure the maximum amount of overseas publicity but solicits the assistance of all members in bringing the dates and rules to the notice of operators throughout the Commonwealth.

### B.E.R.U. CONTEST, JANUARY 25-26, 1958

Name \_\_\_\_\_ Contest Section \_\_\_\_\_ Claimed score \_\_\_\_\_  
 Address \_\_\_\_\_ Call-sign \_\_\_\_\_  
 Transmitter \_\_\_\_\_ Input power to final stage \_\_\_\_\_ watts  
 Receiver \_\_\_\_\_ Aerial(s) \_\_\_\_\_

Date	Band Mc/s	Time GMT	Call-sign of station worked	My report of his signals	His report on my signals	Points claimed	Bonus Points	Leave blank
26	14	0005	G3XXX	569001	559002	5	20	
26	14	0009	VK2ZZZ	579002	569034	5	20	
26	14	0012	GM3YYY	569003	579012	5	—	
26	21	0730	GW8XXX	589004	589054	5	20	
Total (Points Claimed + Bonus Points)						20	+ 60	= 80

Declaration: I hereby certify that I have operated within the terms of my licence and in accordance with the rules and spirit of the contest. I agree that the decision of the Council of the R.S.G.B. shall be final in all cases of dispute. I certify that the input power to the final stage of the transmitter was \_\_\_\_\_ watts.

Date \_\_\_\_\_ Signed \_\_\_\_\_

### Rules

- The contest is divided into two sections, namely: (a) High Power—maximum licensed power; (b) Low Power—maximum input 25 watts.
- The contest (both sections) will start at 00.01 G.M.T. on Saturday, January 25, and end at 23.59 G.M.T. on Sunday, January 26, 1958.
- The contest is open to all fully-paid-up members of the R.S.G.B. within the United Kingdom; to all British subjects outside the U.K. but within the British Commonwealth and British Mandated Territories; and to members of British Forces of Occupation operating properly authorized stations. All entrants agree to be bound by the rules of the contest.
- Only the entrant will be permitted to operate the station for the duration of the contest.
- Entries must be set out as shown in the example above, using one side of the paper only. Entries must be postmarked not later than February 10, 1958, and must be addressed to the Contests Committee, Radio Society of Great Britain, New Ruskin House, 28/30 Little Russell Street, London, W.C.1. The closing date for acceptance of entries is March 31, 1958.
- Operation is restricted to the following bands: 3-5, 7, 14, 21 and 28 Mc/s. Transmissions must be of type A1 (pure c.w.) only, and frequent tone reports of T8 or less may result in disqualification.
- Entrants must operate within the terms of their licences. The input to the valve or valves delivering power to the aerial must not exceed 25 watts in the Low Power section.
- Contacts may be made with any station using a British Commonwealth or DL2 call-sign, except contacts within the entrant's own call area. British Isles stations may not work each other for points, and contacts with unlicensed stations in places where licences are obtainable will not count for points. The decision as to whether or not a station is valid will rest with the R.S.G.B. Contests Committee. Only one contact on each band with a specific station will count for points. Duplicate contacts should be logged, but no points claimed.
- Each completed contact will score 5 points. In addition a bonus of 20 points may be claimed for the first contact with each new Commonwealth call area (as defined in the appendix) on each band. All British Isles stations (G, GC, GD, GI, GM and GW) count as only one call area.

10. Serial numbers must be exchanged and acknowledged before a contact can count for points. The serial number of 6 figures is made up of the RST report plus three figures which may start with any number between 001 and 100 for the first contact and will increase in value by one for each successive contact, e.g. 559087 for the first and 439088 for the second contact, etc.

11. A trophy or miniature will be awarded to the winner of each section, and certificates will be awarded to the first three entrants in each section. In addition a certificate will be awarded to the leading entrant in each call area regardless of the number of entrants in his call area provided that his score exceeds 1,500 points in the High Power section or 750 points in the Low Power section. A certificate will be awarded in each call area in which there are ten or more entrants, to the runner-up, provided his score exceeds 1,500 points in the High Power section or 750 points in the Low Power section.

### Receiving Contest

- To count for points the log must show, in columns, (a) date, (b) band, (c) Time G.M.T., (d) station heard, (e) serial number sent, (f) station worked, (g) points claimed, (h) bonus points claimed. CQ or TEST calls will not count for points.
- Each logging will score points in the same way as contacts in the transmitting contest (see Rule 9 earlier).
- The same station may be logged only once on each band.
- Logs must be addressed and postmarked as for entries in the transmitting contest.

### Appendix

The following call areas are recognised for the purposes of scoring in the B.E.R.U. Contest:—

G, GC, GD, GI, GM, GW—as one call area.	VQ8 (Mauritius).
MP4 (Bahrein, Muscat & Oman).	VQ9
MP4 (Qatar).	VR1 (Gilbert & Ellice Islands)
MP4 (Trucial Oman).	VR1 (British Phoenix Islands).
VE1	VR2
VE2	VR3
VE3	VR4
VE4	VR5
VE5	VR6
VE6	VS1
VE7	VS2
VE8A-L (Yukon Territory).	VS4
VE8M-Z (N.W. Territories).	VS5
VK0 (Australian Antarctic).	VS6
VK0 (Heard Island).	VS9 (Aden).
VK0 (McQuarie Island).	VS9 (Maldiv Islands).
VK1	VU2
VK2	VU4
VK3	ZB1
VK4	ZB2
VK5	ZC2
VK6	ZC3
VK7	ZC4
VK9 (Norfolk Island).	ZC5
VK9 (Papua).	ZD1
VK9 (New Guinea, Bismark & Admiralty Islands).	ZD2
VO	ZD3
VP1	ZD4
VP2 (Leeward Islands).	ZD6
VP2 (Windward Islands).	ZD7
VP3	ZD8
VP4	ZD9
VP5 (Jamaica)	ZE
VP5 (Cayman Islands).	ZK1 (Cook Islands).
VP5 (Turks & Caicos Islands).	ZK2
VP6	ZL1
VP7	ZL2
VP8 (Falkland Islands).	ZL3
VP8 (Graham Island).	ZL4
VP8 (Sandwich Islands).	ZM6
VP8 (South Georgia).	ZS1
VP8 (South Orkney Islands).	ZS2
VP8 (South Shetland Islands).	ZS3
VP9	ZS4
VQ1	ZS5
VQ2	ZS6
VQ3	ZS7
VQ4	ZS8
VQ5	ZS9
VQ6	AP
VQ8 (Chagos).	ST2
	457
	DL2



# Tests and Contests

## First 144 Mc/s Field Day, May 5, 1957

ENTRIES for the first Two Metre Field Day showed a welcome increase in numbers, particularly in the mobile section. Six of the nine mobile entrants made it clear that—at least for part of the time—they were independent of aerials erected on terra firma alongside the car.

No less than a quarter of the logs were accompanied by comments. The best word that could be found to describe conditions was "average," though the great majority called them "poor." The weather received little more flattery, with rain in places on a generally cold day. Two entrants had snow storms! Activity was also described as poor.

In spite of all this, the winning portable made nearly 100 contacts, and about three quarters of the logs show contacts exceeding 100 miles, the best being one of 283 miles between GD3BOC/M and G3FAN. A study of the contacts made shows that, for most of the time, there were virtually two separate events taking place, one in the North and one in the South, with very few contacts between the two areas. Most of the longer distances were covered during two periods—one around mid-day, and the second towards the end of the contest.

As has become usual on this band, very few c.w. contacts were made. Some of the remote entrants, after spending hours trying to resolve unresolvable modulation on weak carriers, repeat the plea for some signing on c.w., and for some listening with the b.f.o. on. However, several stations at both ends of the table showed both that they carried a key and that their receivers were capable of handling c.w.

### Leading Stations

The leading station, G8SB/P, located eight miles south of Buxton, had 15 of his 96 contacts over ranges exceeding 100 miles. His transmitter used 6AG5/5763/5763/832, with 10 watts input, modulated by push-pull 6V6s, to a 4-element Yagi at 18 ft. His 6J6/6J6/12AT7 converter fed a home-built superhet at 8 Mc/s. He made contact with 26 other portable and 13 mobile stations, and held a lead of nearly 1,700 points over his nearest rival. He made 9 c.w. contacts.

The runner-up, G3BA/P, operated from the Lickey Hills, eight miles south of Birmingham, with 21 watts input to an 832, feeding a 10 element Yagi. For reception, a crystal controlled cascade converter fed a Command receiver. He had seven contacts exceeding 100 miles, and worked 31 other portables and ten mobiles. He used telephony for all his contacts, but worked one station who was using c.w.



Members of the Liverpool and District Short Wave Club operating during the Region I Field Day.

## Results—First 144 Mc/s Field Day, May 5, 1957

### PORTABLE SECTION

Posn.	Call-sign	Approximate Location	Con- tacts	Best QSO (miles)	Pts.
1	G8SB/P	Buxton	95	157	8507
2	G3BA/P	Birmingham	76	176	6824
3	GW2HCL/P	Chester	77	185	6327
4	G3NL/P	Malvern	61	174	6303
5	G3JWQ/P	Buxton	78	129	6147
*	G3KFT/P	Cheltenham	55	111	5910
6	G6XM/P	Leicester	69	226	5487
7	GW3GWA/P	Wrexham	62	143	5236
8	G3FD/P	Dunstable	69	113	4737
9	G3WU/P	Basingstoke	72	256	4684
10	G3JWA/P	Woldingham	87	130	4600
11	G3BFP/P	Brighton	66	125	4524
12	G3KEQ/P	Guilford	84	147	4396
13	G3ION/P	Shaftesbury	46	132	4377
14	G3GGR/P	Stratford-on-Avon	44	107	4130
15	G2DSW/P	Winchester	56	108	3900
16	G3KSR/P	Newbury	49	90	3677
17	G6OX/P	Wetherham	68	118	3612
18	G5OB/P	Southampton	41	151	3542
19	GW8UH/P	Newport, Mon.	33	130	3238
20	G3HII/P	Whitchurch	44	145	3118
21	G3JZW/P	Luton	52	107	3098
22	G3HKT/P	Winchester	38	102	2958
23	G3DVQ/P	Guilford	62	80	2856
24	G3KPT/P	Bristol	30	120	2583
25	G2AHL/P	Guilford	50	77	2448
26	G3KJM/P	Wigan	38	140	2289
*†	G5LK/P	Catherham	48	70	1953
27	G3ATM/P	Huddersfield	38	115	1909
28	G3DVK/P	Rotherham	27	90	1622
29	G3HAN/P	Oakham	14	66	820
30	GM2CHN/P	Mugdock, Stirlingshire	7	42	123

### MOBILE SECTION

1	GD3BOC/M	Douglas/Ramsey	29	283	4983
2	G3ENY/M	Ludlow/Bridgnorth	45	135	4099
3	G3IUD/M	Mow Cop, Cheshire	45	118	2705
4	G3AYT/M	Penistone/Holmfirth/ Ashton	44	114	2217
5	G6SN/M	Birmingham	32	83	1914
6	G3HZK/M	Coalville	30	78	1483
7	G5BD/M	Spilsby/Alford	11	115	1218
8	G8MZ/M	Birmingham	14	72	894
9	G4IB/M	Battle/Crowborough/ Limpfield	23	61	859

\* Invalid—no declaration. † Invalid—late entry.

### Mobile Section

GD3BOC/M operated at several locations in the Isle of Man, using a commercial equipment with 10 watts to a 4-over-4 slot fed Yagi. To him goes the credit for the greatest distance covered in the contest, with his contact with G3FAN in the Isle of Wight. He made a second contact (with G8UQ/P) exceeding 250 miles, and of his 29 contacts, only nine were over less than 100 miles. He worked two other mobiles—both at over 100 miles—and 13 portables.

The runner-up, G3ENY/M, operated from five locations in Shropshire. His transmitter input was 4 watts to a 6J6, with alternative aerials—either a halo 19 in. above the car roof, or a dipole with reflector. He covered the 100 miles range three times and worked eight mobiles and 21 portables.

### Equipment

Little information is given about the receivers used, though many employed cascade r.f. stages.

The 832 remains the most popular transmitting valve for portables, followed by the QV04/7 and QQV03/10. These account for 16, 4 and 3 transmitters respectively. Other

types used were: 832A, QOV03/20, 5763, 12AT7 and 6C4. In mobile transmitters, the QV04/7 was favourite, appearing in four equipments. The remainder used QOV03/10, QOV03/20A, 832, 6J6 and 12AT7.

Aerial types used covered a wide range, varying from 3 to 16 elements. The 4-element Yagi was the most popular. Mobile aerials varied from a 5-over-5 to a quarter-wave whip, with the 3-element Yagi most common.

#### Check Logs

Check logs are gratefully acknowledged from G2QY/P, G3MI, G3HBW and GW5SA/P.

#### Second 144 Mc/s Field Day, 1957

R.S.G.B. members throughout Europe are invited to take part in the Second 144 Mc/s Field Day, 1957, to be held on August 18. The rules are the same as for the first 1957 event published on page 420 of the March, 1957, issue of the BULLETIN with the exception of the necessary changes of dates.

On this occasion, two weeks will be allowed for the submission of entries, which should be addressed to the Contests Committee, Radio Society of Great Britain, New Ruskin House, Little Russell Street, London, W.C.1, and bear a postmark not later than Monday, September 2, 1957.

Stations must be operated either /P for the main contest or /M for the mobile section. Mixed logs cannot be accepted. Check logs from fixed stations will be most welcome.

#### Low Power Field Day, 1957

NO change has been made in the rules for this popular contest which will take place this year on September 1.

##### Rules

1. The event will commence at 10.00 G.M.T. and finish at 17.00 G.M.T. on Sunday, September 1, 1957.
2. The event will be confined to fully-paid-up Corporate Members of the Society in the prefix zones G, GC, GD, GI, GM and GW. Such members may enter individually, but multiple-operator entries will be accepted. The declaration must be signed by the holder of the call-sign used by the station, who will be regarded as the entrant.
3. Operation will be restricted to c.w. (A1) in the 3.5 and 7 Mc/s bands.

### Contests Diary

#### 1957

- August 18 - - Second 144 Mc/s Field Day<sup>1</sup>
- August 25 - - 1250 Mc/s Tests
- September 1 - - Low Power Field Day<sup>2</sup>
- September 7-8 - - European V.H.F. Contest<sup>3</sup>
- September 7-8 - - National V.H.F. Contest<sup>3</sup>
- September 8 - - D/F National Final<sup>4</sup>
- October 5-6 - - Low Power Contest
- November 9-10 - - Second Top Band Contest
- November 16-17 - - Second 70 Mc/s Contest
- November 23-24 - - 21-28 Mc/s Telephony Contest<sup>5</sup>

#### 1958

- January 25-26 - - B.E.R.U. Contest

<sup>1</sup> See page 29, R.S.G.B. Bulletin, July, 1957.

<sup>2</sup> See page 29, R.S.G.B. Bulletin, July, 1957.

<sup>3</sup> Both under Region I I.A.R.U. rules. See page 422, R.S.G.B. Bulletin, March, 1957.

<sup>4</sup> See page 29, R.S.G.B. Bulletin, July, 1957.

<sup>5</sup> For rules, see page 516, R.S.G.B. Bulletin, May, 1957.

4. Only one contact with a specific station on each band whether fixed, portable or mobile, will count for points, but duplicate contacts should be logged.

5. Each contact shall include an exchange of RST, QTH and a serial number starting between 001 and 100 and increasing with each successive contact, e.g. RST559001 Oxford, etc.

6. Entrants receiving frequent tone reports lower than T8 may be disqualified.

7. Each transmission must include the letters LFD and the figure 3 or 7 according to the band in use, e.g. LFD 3 K.

8. Equipment shall be entirely independent of the electrical system of any vehicle, and of supply mains.

9. The total weight of all equipment must not exceed 20 lb. The following items, if provided, must be included in this weight: receiver, transmitter, power supply, batteries, headphones, key, frequency meter, aerial wire, insulators, earthing device and spares—in fact, all radio and electrical apparatus and accessories taken to the site.

10. Subject to the weight limit, there are no restrictions on the number, type or height of aerials that may be used.

11. Entrants must comply with the terms of their transmitting licences.

12. Scoring: FIVE points may be claimed for each contact with a portable or mobile station, and ONE point for each contact with a fixed station.

13. Proof of contact may be required, and competitors must be prepared to satisfy the Contests Committee that their equipment conformed to the rules.

14. Contacts with unlicensed stations will not be permitted to count for points.

15. Entries must be addressed to the Contests Committee, Radio Society of Great Britain, New Ruskin House, 28-30 Little Russell Street, London, W.C.1, and must bear a postmark not later than Monday, September 9, 1957. Entries must be written or typed on one side only of foolscap or quarto paper, and must be set out in the form shown below. The declaration must be signed.

16. The Houston Fergus Trophy will be awarded to the winning station, at the discretion of the Council.

#### LOW POWER FIELD DAY, SEPTEMBER 1, 1957

Name \_\_\_\_\_ Claimed score \_\_\_\_\_  
 Home address \_\_\_\_\_ Call-sign \_\_\_\_\_  
 Site of Station \_\_\_\_\_  
 Transmitter \_\_\_\_\_ Receiver \_\_\_\_\_  
 Aerials \_\_\_\_\_ Power supplies \_\_\_\_\_  
 Other equipment \_\_\_\_\_ Total weight \_\_\_\_\_ lb.

Time G.M.T.	Call-sign of Stn. worked	My report on his signals	His report on my signals	Location	Band Mc/s	Points claimed
10.05	G3—/P	569001	449001	Bath	3.5	5
10.18	G2—/P	449002	449004	Slough	3.5	5
10.23	G5—/M	459003	559001	Oxford	3.5	5
10.29	G4—	579004	449	Bexley	7	1
TOTAL:						

Declaration: I declare that my station was operated strictly in accordance with the rules and spirit of the contest. I also declare that the weight of my apparatus as defined in Rule 9 was \_\_\_\_\_ lb. I agree that the ruling of the Council of the R.S.G.B. shall be final in all cases of dispute.

Date: \_\_\_\_\_ Signed: \_\_\_\_\_

#### D/F National Final

DETAILS of the 1957 D/F National Final are as follows:

**Sunday, September 8**

**Organizer:** G. T. Peck, Dell Cottage, Horsleys Green, Stokenchurch, Bucks.

**Frequency:** The frequencies of the two transmitters, which will be between 1.8 and 2 Mc/s, will be announced at 13.00 B.S.T.

**Map:** Ordnance Survey, New Popular Edition, Sheet 159.

**Assembly Point:** Old Loop Road to the north of A40 at the top of Dashwood Hill, two and a half miles west of West Wycombe. N.G.R. 798949.

**Assembly Time:** 13.00 B.S.T.

**Duration of Contest:** The contest will start at 13.30 and end at 16.00 B.S.T.

Intending competitors should notify the Organizer at least seven days in advance, stating the number in their party requiring tea, which will be held at The Little Abbey Hotel in the main Amersham Road, one mile east of Great Missenden.

# Amateur Television

By M. W. S. BARLOW (G3CVO/T)

ACTIVITY has been centred recently on the various exhibitions and shows that are occurring. Birmingham are putting on a display at the Scout Jamboree in Sutton Park in August, and hope to have two vidicon cameras running by then. One belongs to George Flanner (G3KBA/T) who has transmitted pictures from his own very poor v.h.f. site to club meetings in the city. G3DFL/T and G3LDW/T are two more television stations active in the area; a 70cm TV net is strongly supported.

The Dagenham Town Show takes place on Saturday and Sunday, July 13-14. This is a good excuse for a big get-together of Home Counties enthusiasts. Romford group are supplying a 5527 iconoscope camera and a slide scanner which utilises two 9 in. TV sets for the working parts; Chelmsford are bringing a vidicon camera and some video effects producing equipment—the latter allowing for “wipes” and inlay and overlay effects; from Bishops Stortford and Dunmow, G3KOK/T and G2WJ/T are bringing their big studio cameras, whilst Cambridge hope to send along Matilda, the taxi-mounted TV station, plus another studio camera. This sort of exhibition is primarily an “operating” exhibition, all the equipment being tied together and used just as it might be in a complete amateur TV studio of giant proportions. In the case of the Dagenham Show, the television exhibit will be the only representative of Amateur Radio, although a mobile station may accompany Matilda on her rounds to give “talkback” and “studio sound” links.

Yeovil and District Amateur Television Society hold weekly meetings, and have a 5527 camera, a slide scanner and a transmitter (G3AST/T). The latter is to be installed at a fine v.h.f. site. The expected range should be in the 20 or 30 mile region. High Wycombe have now completed their camera chain, but are not at the moment contemplating going on the air with it, as none of their members has much v.h.f. experience. G3LQR/T, on the other hand, is near

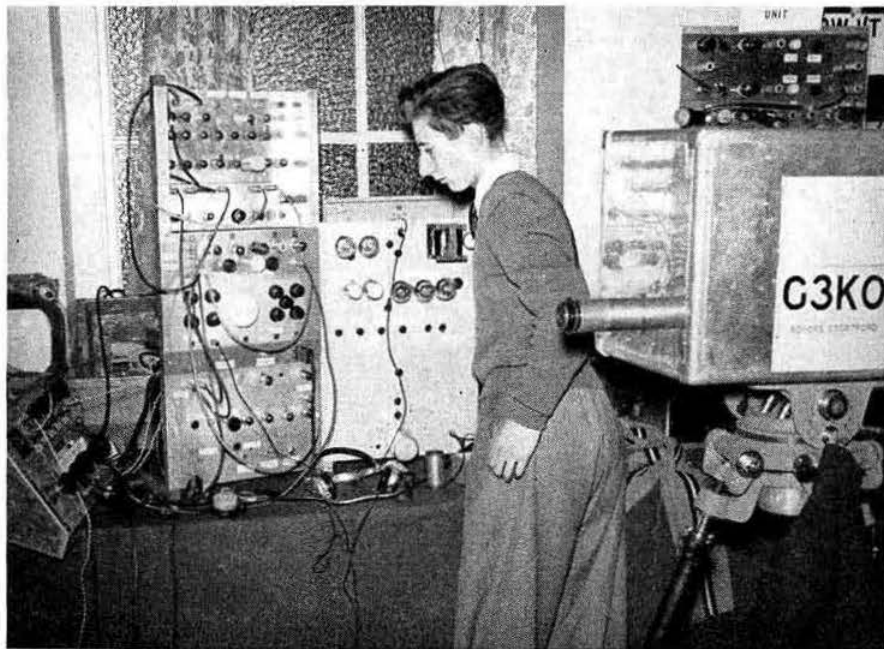
Colchester, and has an SCR522 driving a QV06/40 tripler, with the intention of working G2WJ/T and possibly the Dutch amateurs. For a video source he has only the B.B.C. or his sync generator, which can generate simple test patterns. G3KWD has a sync generator and a monoscope tube, and has converted the popular APQ2 radar jammer unit for use on 70 cm. The r.f. section can be used virtually unmodified apart from the heater transformer, whilst the 931A and amplifier can be used for a flying spot scanner amplifier. G3CUH (near Chelmsford) has a slide scanner under construction, and G3GZW is building a monoscope at Basildon. G3EKE/T will shortly be on 441 Mc/s from Norwood, very close to G3CTS/T, the Television Society's transmitter, which is now in regular operation. G3AKJ/T should be active soon using a G8SK-type 6J6 transmitter. GM8FM in Edinburgh asks where are the other TV enthusiasts in Scotland; from what we hear, most of them seem to have come South!

## Overseas News

The situation in most overseas countries is totally different to that in the U.K. Here we have many stations separated by 15 or 20 miles scattered about; overseas the usual case is 5 or 6 stations in one town, and then a gap of hundreds or even thousands of miles to the next. Thus DX reception and the like is not encountered, simple arrays giving adequate signal strengths over the small ranges required. In Perth, Western Australia, for instance, VK6EC and VK6WJ are only two miles apart, and can radiate pictures to any part of the town with ease. Their nearest /T outside is over 3,000 miles away! In Montreal, there are 12 /T stations active, with another eight building, all within the city limits. However, the U.S. border is only 35 miles away, and there is some competition to make the first VE/W television contact.

## Change of Scribe

The writer is departing in the autumn for Canada, and Alwyn Stockley (G3EKE/T, 4 Norbury Court Road, London, S.W.16), London Editor of *CQ-TV*, has kindly offered to continue this column. Au revoir.



Brian Partridge (G3KOK/T) has a typical Amateur Television installation. Visible here, left to right, are a vision mixer panel, with 9 in. monitor at the rear, a rack containing the sync. generator, test pattern generator, waveform monitor and camera control unit, a power supply rack, and a 3 in. image orthicon camera. All the units were designed and built by G3KOK. The rack just visible behind the camera is part of G2WJ/T's equipment.

# Council Proceedings

*Résumé of the Minutes of the Proceedings at a Meeting of the Council of the Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.1, on Monday, May 20th, 1957, at 6 p.m.*

*Present:* The President (Mr. D. A. Findlay in the Chair), Messrs. W. H. Allen, C. H. L. Edwards, K. E. S. Ellis, F. Hicks-Arnold, J. H. Hum, W. H. Matthews, W. R. Metcalfe, A. O. Milne, L. E. Newnham, John Clarricoats (General Secretary) and John A. Rouse (Deputy General Secretary).

*Apologies for Absence* were submitted on behalf of Messrs. H. A. Bartlett, W. A. Scarr and J. Taylor.

*Absent:* Messrs. R. H. Hammans and H. W. Mitchell.

\* \* \*

## *Ostermeyer Trophy*

It was reported that Mrs. F. Ostermeyer (widow of the late Mr. E. Dawson Ostermeyer, G5AR, Past President) had offered the Society a silver trophy for annual award, the basis of the award being recognition of good workmanship.

*Resolved* to accept with thanks the trophy offered by Mrs. Ostermeyer.

It was agreed that Mr. Edwards and the Secretary should draft a few simple rules governing the award of the trophy.

## *Resignation of Mr. Taylor*

It was reported that Mr. James Taylor (GM2DBX) had been advised by his doctor not to travel to London at least for the next few months. After weighing up all the facts he now asked the Council to accept his resignation from the office of Zonal Representative and Region 13 Representative.

*Resolved* to accept, with regret, the resignation of Mr. James Taylor from the Governing Body and from the office of Region 13 Representative.

## *Cash Account*

*Resolved* to receive and adopt the Cash Account for April, 1957, as prepared and submitted by the Secretary.

## *Reports of Committees*

### *V.H.F. Convention*

*Resolved* to accept a recommendation of the Committee in respect to the provision of raffle prizes for the V.H.F. Convention.

### *Contests*

*Resolved* to accept recommendations of the Committee in respect to the 1956 and 1957 21-28 Mc/s Telephony Contests, the First 1957 Top Band Contest and publicity for future contests.

### *Finance and Staff*

*Resolved* to agree in principle to the provision of a retirement pension for the Deputy General Secretary.

## *Report of General Secretary*

### *Membership*

*Resolved* (i) to elect 98 Corporate Members and nine Associates. (ii) to grant Corporate Membership to five Associates who had applied for transfer.

The Secretary reported that 43 of the 669 members whose subscription had become due on February 1, 1957, became three months overdue on April 30, 1957, and that 12 of the 669 members referred to above had written to resign.

The Secretary reported that the nett gain in membership for the ten months from July 1, 1956, to April 30, 1957, was approximately 300.

## *Affiliated Societies*

*Resolved* to grant affiliation to the Labuan R.A.F. Amateur Radio Society.

## *Radio Hobbies Exhibition*

*Resolved* to authorize Mr. Thorogood to proceed with his plans for organizing a Radio Hobbies Exhibition in the Old Hall of the Royal Horticultural Society during the week October 21-27, 1957.

## *National Convention, 1957*

It was reported that the University of Nottingham could not provide facilities for the holding of a Society Convention at a time in the year which would ensure good support. The latest period available during 1957 was from August 28 to September 1.

The President's decision to inform the University authorities that the dates suggested are not suitable was endorsed.

## *Argentine and Chile Stations in the Antarctic*

Consideration was given to correspondence from members and groups of members all of whom had written to protest against the views expressed by the Society's QSL Manager in his *Letter to the Editor* published in the April 1957 issue of the BULLETIN. Consideration was also given to the decisions reached by the Council when the question of handling cards from Argentine and Chile stations operating in British Antarctica was first raised in 1950 and again in 1952. After a lengthy discussion it was

*Resolved* unanimously to record that the Council adheres to its previous decision not to handle cards from Argentine and Chile stations operating from British Antarctica.

It was agreed to prepare a statement for publication in the June 1957 issue of the BULLETIN.

## *Short Wave Listeners' Cards*

Consideration was given to a letter from the East London Group in which it was stated that a recent issue of the German publication *DL-QTC* had carried a statement to the effect that "the I.A.R.U. recommend the discontinuance of short wave listener cards."

It was agreed to advise the East London Group that the Society has no knowledge of the alleged recommendation.

Mr. Milne stated that the R.S.G.B. QSL Bureau would continue, as hitherto, to handle cards to and from short wave listeners.

## *R.S.G.B. Films*

It was agreed that there would be no objection to the loan of films to the Radio Society of Southern Rhodesia providing adequate precautions were taken to ensure their safe return to England.

## *Mr. E. Brown, G3CSP*

Counsel's Opinion in the case of "E. Brown and the Sheffield Corporation" was submitted.

It having been reported that Mr. Brown is again transmitting it was agreed, on the recommendation of the Region 2 Representative, to take no further action in connection with the matters which had prompted the Council to seek a legal opinion.



## 420-460 Mc/s Band

It was reported that as a matter of long-term planning the G.P.O. are now working on the lines that the present Government use of the 420-460 Mc/s band should, after a period of some years, be reduced and that the band should then be allocated as follows:

420-430 Mc/s Fixed and Mobile Civilian Service.

430-460 Mc/s Government Services. Amateurs to operate on a basis of non-interference to such services as at present.

The G.P.O. stated that the use made by Government services of the band 430-460 Mc/s would be of such a character that restrictions on amateur activities through the band would only be slight. Amateurs would, in fact, gain in freedom of use of the whole 430-460 Mc/s band at least as much as they would lose by the allocation of 10 Mc/s (420-430 Mc/s) to civilian services.

## Administrative Radio Conference

It was reported that no Frequency Planning Committees had yet been set up by the Post Office in preparation for the next I.T.U. Radio Conference which it is believed will be held in Geneva during the summer and autumn of 1957.

## V.H.F. Manager's Conference

The Society's V.H.F. Manager (Mr. F. G. Lambeth, G2AIW) reported on the matters discussed at a meeting of Region I V.H.F. Managers held in Paris on April 27-28, 1957.

## B.B.C. Programme

It was reported that the B.B.C. proposed to feature Amateur Radio in a new series of programmes dealing with hobbies.

## I.G.Y.

Various matters of detail in connection with the forthcoming International Geophysical Year were discussed and decisions reached.

The meeting terminated at 9.25 p.m.

BOOK THE DATE NOW

## South Wales

## Regional Meeting

SATURDAY, SEPTEMBER 21, 1957

AT THE

PARK HOTEL,  
PARK PLACE, CARDIFF

## Programme

Assemble - - - -	2 p.m.
Meeting - - - -	2.45 p.m.
High Tea - - - -	5 p.m.
Lecture and Raffle Period	6 p.m.

Tickets, price 12/6 per head (which includes high tea with alternative menus), available from Mr. E. White, GW3LAD, 41 St. Alban Avenue, Heath, Cardiff. Hotel accommodation and luncheon can be arranged for those who give prior notice when ordering tickets. To assist the organizers and hotel management early reservations are essential.

# Society News

## Licence Examinations

THE G.P.O. is again arranging to conduct technical examinations and Morse tests for the Amateur (Sound) Licence in the autumn, provided sufficient applications are forthcoming.

The technical examination will be held on Saturday, October 5, 1957, from 2 to 5 p.m. at the following centres:

Armour House, St. Martin's-le-Grand, London, E.C.1.  
Radio Surveyor's Office, Ministry of Transport and Civil Aviation, 2 Bute Place, Cardiff.

Radio Surveyor's Office, Customs House, Dock Place, Leith, Edinburgh 6.

Applications to sit the examination, accompanied by a remittance for the entrance fee of 25s., must reach the Wireless Telegraphy Section, Radio Services Dept., Union House, St. Martin's-le-Grand, London, E.C.1, **not later than September 7, 1957.**

Morse Tests will be held at the Head Post Offices in Birmingham, Cambridge, Derby, Leeds and Manchester during the first week in September, 1957, provided there are sufficient candidates. Application forms may be obtained from the Radio Branch, Radio Services Dept., Post Office Headquarters Building, St. Martin's-le-Grand, London, E.C.1. Completed application forms, to which the entrance fee of 10s. must be affixed in stamps, must be posted to the Wireless Telegraphy Section, Radio Services Dept., Union House, St. Martin's-le-Grand, London, E.C.1, **to arrive not later than August 20, 1957.**

## Courses of Instruction

COURSES of instruction for the Radio Amateurs' Examination and for those who wish to study radio have been arranged at the undermentioned centres: *Brentford Evening Institute*. The following courses will be held during the coming session, starting in the week commencing September 23:

- R.A.E. Course for students wishing to take the examination in May 1958 (Wednesdays).
- Morse for Radio Amateurs (Tuesdays).
- Radio Servicing—first year (Mondays).
- Radio Servicing—second year (Thursdays).

Classes (i), (ii) and (iii) are suitable for students with no prior knowledge of the subjects. All classes are held between 7 and 9 p.m. The fee is 30/- for one class for one session: each additional class taken costs 2/6 only. Enrolment will take place during the evenings of September 16 to 20.

*Ilford Literary Institute (High School for Girls), Cranbrook Road, Ilford (adjacent to Gants Hill station, Central Line).*

Enrolment for the Radio Amateurs' Examination and Morse classes will take place from 7 to 8.30 p.m. from September 9 to 13. Morse classes will be held on Mondays from 7.30 to 9.30 p.m., the R.A.E. classes from 7.15 to 9.15 p.m. on Wednesdays. The fees will be 20/- and 30/- respectively. Students from other areas will be admitted as out-County students provided the Local Authority is informed. Those who intend to enrol are advised to send their names to C. H. L. Edwards (G8TL), 28 Morgan Crescent, Theydon Bois, Essex, at once so that a place may be assured.

*Northwood Evening Institute, Potter Street, Northwood Hills, Middlesex.*

Two courses will be held next session, one assuming no knowledge of radio and covering the whole R.A.E. syllabus, and a more advanced course for students with knowledge of basic theory. Enrolments will take place between 6 and 8 p.m. on September 16, 17 and 18. Classes will commence on September 24. The instructor will be G. P. Anderson, A.M.I.E.E. (G2QY).

## The European Band Plan

PLANNING of the high frequency amateur bands was originally put forward by the R.S.G.B. and unanimously adopted by the European Societies represented at the I.A.R.U. Conference in Paris in 1950, and confirmed by the Region I I.A.R.U. Conference in Lausanne in 1953. The plan, which is voluntary, is as follows.

Frequency Band	Type of Emission
3500—3600 kc/s	Telegraphy only
3600—3800 kc/s	Telephony only
7000—7050 kc/s	Telegraphy only
7050—7150 kc/s <sup>1</sup>	Telegraphy and Telephony
14000—14125 kc/s	Telegraphy only
14125—14350 kc/s	Telegraphy and Telephony
21000—21150 kc/s	Telegraphy only
21150—21450 kc/s	Telegraphy and Telephony
28000—28200 kc/s	Telegraphy only
28200—30000 kc/s <sup>2</sup>	Telegraphy and Telephony

<sup>1</sup>7100—7150 kc/s Shared with broadcasting which has priority  
<sup>2</sup>To be 28200—29700 kc/s later

## Intruders

WITH reference to the paragraph published in the June issue of the BULLETIN (page 554), Mr. Haylock, G3ADZ, regrets that he will not be able to enter into correspondence with individual members who send him reports, except under very special circumstances. All reports will, however, be acted upon and a note of the results will be sent to the originators of the reports in due course.

Volunteers for intruder watches are still wanted from the following areas within the British Isles: G (West Country and East Anglia), GW (South Central), GM (One South and one North), GI and GC.

Offers should be sent direct to Mr. Haylock, 3 Norris Gardens, Havant, Hants.

## National Radio Show

HEADQUARTERS will be pleased to hear from members willing to do stand duty at the National Radio Show at Earls Court from August 27 to September 7, 1957.

Volunteers will also be required to man the R.S.G.B. stands at the Radio Hobbies Exhibition to be held at the Royal Horticultural Society's Old Hall during the week October 21 to 27.

## Congratulations

TO Brigadier L. H. Harris, C.B.E., Engineer-in-Chief of the Post Office whose promotion to Knight Commander of the Most Excellent Order of the British Empire was announced in The Queen's Birthday Honours' List published last month.

The same Honours' List recorded the appointment of Group Captain E. Fennessy, Managing Director, Decca Radar Ltd., to be a Commander of the same Order.

Major C. F. Kirby (B.R.S.21172) was appointed an M.B.E.

## The Television Society Transmitter

OWING to the summer holiday period at Norwood Technical College, the Television Society transmitter (vision 427 Mc/s, sound 423.5 Mc/s) will not be radiating its normal test signals from July 13 to September 8, 1957.

Normal operation (that is transmissions on Mondays, Wednesdays and Thursdays from 7-9 p.m.) will be resumed on September 9.

## Affiliated Societies

THE following are additions to the list of Affiliated Societies published in the October 1955 issue of the R.S.G.B. BULLETIN:

Newbury and District Amateur Radio Society, c/o J. A. Gale, 1b Bartholomew Street, Newbury, Berks.

R.A.F. (Labuan) Amateur Radio Society, c/o 2714135 Cpl. Wallis, R., R.A.F. Detachment, Labuan, British North Borneo.

## Casual Vacancy on the Council Zone D Representative

Mr. W. J. Green (G3FBA) of Bath and Mr. R. T. Poeton (G3CTN) of Bristol having been duly nominated to fill the casual vacancy on the Council occasioned by the resignation of Mr. R. G. Lane, a ballot now becomes necessary.

Corporate Members resident in Zone D (Regions 6 and 9) are invited to record a vote for one of the two candidates in the form prescribed below.

## Ballot for Zone D Representative

I wish to record my vote in favour of Mr. ....  
 for the vacant office of Zone D Representative. I  
 certify that I am a fully paid-up Corporate Member  
 of the Society.

Ballot Papers must be posted in sealed envelopes containing no other communication. Envelopes must be marked "Ballot" and addressed to the General Secretary, Radio Society of Great Britain, New Ruskin House, Little Russell Street, London, W.C.1, to arrive not later than 12 noon on Monday, July 29, 1957. The envelope must be signed by the member voting who must state his call-sign or B.R.S. number on the outside of the envelope only. The Ballot Paper itself must not be signed.

Only Corporate Members resident in Regions 6 and 9 may vote.

## Mobile Column

Continued from page 23

transmitter line-up is 6AQ5 crystal oscillator, 6AQ5 buffer and LS50 p.a. Modulation is provided by an EF91 speech amplifier, 12AU7 driver stage and a pair of 6AQ5s driven on the grids and screens.

## New Valve for Mobile Use

G2AHL has recently been trying one of the new Brimar 6870 valves in a low power 10 metre mobile transmitter with excellent results. It is easy to drive and normally requires no neutralizing. For class C operation, only 20 volts negative are required. Grid drive must not exceed 3 mA, 1 to 2 mA being ample. In the G2AHL/M rig, the grid drive is 2 mA through 10K ohms. Up to 250 volts may be used on the screen—in fact, the screen voltage should be as near to 250 as possible—and up to 300 volts on the anode. The valve is rated to give 4 watts r.f. at 70 Mc/s and is estimated to have an output of about 5 watts at 28 Mc/s. It is understood to perform well at 144 Mc/s. The 6870 has a B9A base, 12-6 or 6-3 volt heater, and was designed for mobile use. It costs 30/-.

## West Kent Mobile Rally

The West Kent Amateur Radio Society is holding its second Mobile Rally on Sunday, September 15. Full details will appear in the August issue of the BULLETIN. Meanwhile, mobile enthusiasts are asked to note the date.

Once again, thanks are extended to all those who help to make Mobile Column possible by sending in reports and suggestions. It is hoped that it will once more become a regular BULLETIN feature. The number of mobile licences has increased by nearly one-third in the last twelve months and reports from those new to the fun of mobile operation are invited as well as from regular supporters. As always, technical ideas and descriptions and photographs of equipment will be particularly welcome.

Finally, a suggested slogan for all mobile operators:  
**Drive to Safety.**

# Radio Amateur Emergency Network

By C. L. FENTON (G3ABB)\*

REQUESTS for contacts in various counties continue to arrive from the British Red Cross Society and St. John Ambulance Brigade. In many cases it is possible to satisfy the request, but in a few cases there is no local official. We all know that, in an emergency, every amateur would hasten to help, and would place all his knowledge and equipment at the disposal of the authorities without reserve. But such aid, without prior exercise and organization, could be of little use. Given a few prior test runs with B.R.C.S. and S.J.A.B., with an agreed Control Station and an Area Controller to co-ordinate things, the aid could be invaluable. We still need more members and more Area Controllers, and your help would be appreciated. Register now with R.A.E.N., and nominate your Area Controller without delay; or, better still, volunteer as Area Controller yourself.

## East Coast Flood Warning Scheme

Details of the East Coast Flood Warning Scheme, together with its associated map, and a copy of the B.R.C.S. leaflet to its officials on co-operation with R.A.E.N., have now been circulated to all County and Area Controllers.

## French Emergency Network

R.E.F. has had an Emergency Network in operation since 1955, and incorporates some 70 stations. In 1956 the members of this network maintained permanent listening watch for the isolated amateurs of North Africa, and last May were following the raft *Tahiti-Nui*, FO8AP/MM.

Emergency traffic is liable to be handled on 3510, 7020 and 14040 kc/s.

Training schedules are as follows:

Each Thursday at 19.30 G.M.T. on 3510 kc/s.

Each Sunday at 08.00 G.M.T. on 7100 kc/s.

It is requested that these channels be left clear when the emergency net is in operation.

## News from the Groups

Worcester now have ZCI transmitter-receivers installed in a British Red Cross Society ambulance, and also at Red Cross Headquarters. It is hoped to improve the aerial arrangements shortly. Monthly meetings are held at the Headquarters, and all members have joined B.R.C.S. A successful exercise was held jointly with Birmingham on May 19, and further exercises are planned for the near future.

Members of the **Norwich** group co-operated with the B.R.C.S. in a very successful exercise at Snetterton Motor Racing circuit on May 19. Three out-stations were set up at strategic points around the track, with a base station alongside the mobile hospital. The base station, operating from a.c. mains, was on permanent stand-by, whilst the out-stations, to conserve battery power, reported in every 15 minutes. In the event of accident and injury, the out-station could, of course, call the base station immediately. Fortunately, the only crashes did not involve injury to the drivers. 160m and 10m equipment was utilized, the latter suffering from some ignition QRM. B.R.C.S. officials were extremely pleased with the service rendered, whilst the participating stations, G2UK/P, G2YU/P, G4KO/A, G3HRE/M, G3HRK/M, G3JMU, and Mr. J. Sutton, thoroughly enjoyed the exercise and the day's thrills and spills.

**Birmingham, Stafford and Worcester** all co-operated on May 19 in a joint exercise. The imaginary scene was that a major railway accident had occurred at Brownhills, and that

Birmingham B.R.C.S. had sent out a mobile team to assist rescue work, Worcester being warned to stand by. (In actual fact, the B.R.C.S. mobile team and ambulance were at the site of a motor-cycle scramble). The messages handled, except service messages, were devised by B.R.C.S., and handed in by them at the appropriate time, so that the R.A.E.N. operators had no warning of what was to follow. G3CNV acted as Control, assisted by G3LNN. G3JPN was at Brownhills, and G3LNS, assisted by Messrs. Line and Arundel, acted as reserve station. G3AVE, assisted by G3INL, and Messrs. Blunt and Roberts, were at B.R.C.S. Headquarters. G6BV, operated by G2DOF, assisted by Messrs. Shepard, Platten and Breedon, acted as link between Birmingham and Worcester, with G3LEL operating at Worcester. G3ABG stood by and assisted as necessary, whilst G3GLQ signed in and offered assistance if required. G3KWH, assisted by Messrs. Hayward and Schaeter, was in the net and present at Brownhills. The County and Area Controllers toured round during the exercise. British Red Cross officials were well satisfied with this comparatively large-scale exercise, but there are a few points which require attention within our own organization. Thanks are expressed to non-participating stations for leaving the operating channels clear of QRM on both 1980 kc/s and 3600 kc/s.

## Emergency Calling Frequencies

The following calling frequencies will be used by R.A.E.N. stations in the event of an emergency:

1980 kc/s	14100 kc/s
3600 kc/s	21150 kc/s
7050 kc/s	28200 kc/s
145 Mc/s	

In an emergency stations will call CQ QRRR DE G... and QSY to a mutually agreed frequency immediately after establishing contact. All emergency frequencies should be monitored as much as possible.

A late report from **Leicester** reports that they also have been co-operating with B.R.C.S., a joint exercise being held on June 16. Operating with a station at B.R.C.S. Headquarters, and one at the scene of the incident ten miles away, the link was maintained on 160 metres. On-the-spot communications were carried out using a 2 metre mobile rig with three walkie-talkies. The Red Cross County Director was well pleased with the results of this exercise, which will shortly be repeated over a long distance covering the length of the county. Participating stations were G3AWM/M, G3ATL/M, G3BMD/M, G3GXZ/M, G3HAN/M, G3FQY, and a listener, Mr. J. Tranmer.

## Appointments and Resignations

The following appointments have been made:

**Area Controllers:** V. J. Bloor (G3UD), 26 Leveson Road, Hanford, Stoke-on-Trent; N. Clarke (G3FQY), 69 Buller Road, Belgrave, Leicester.

**County Controller:** M. H. Kind (G3GXZ), 62 Clifford Street, South Wigston, Leicester.

The following have resigned: S. Poole, formerly County Controller for Essex; M. H. Kind, formerly Area Controller for Leicester, on appointment as County Controller; W. S. Horsfall, formerly Area Controller for Blackpool.

R. A. M. Crust (G3MC), Chatham Area Controller, now resides at "Cwmarn," Grove Green Lane, Weaving, near Maidstone, Kent.

\* Hon. Secretary, R.A.E.N. Committee, "Niarbyl," Gay Bowers, Danbury, Chelmsford, Essex (Danbury 518).



## Regional & Club News

**Aldershot and District Amateur Radio Society**—The R.A.E. class and Morse practice sessions are well attended. Fortnightly meetings are held at "The Cannon," Aldershot. *Hon. Secretary:* S. E. Hume, 25 Kingsway, Aldershot.

**Amateur Radio Club of Nottingham (G3EKW)**—The club meets on Tuesdays at 7.15 p.m. at Woodthorpe House, Mansfield Road, and new members are always welcome. The Top Band transmitter has been re-built and the 40 and 80 metre transmitter is now receiving attention. Morse classes are held under expert instruction. *Hon. Secretary:* F. V. Farnsworth, 32 Harrow Road, West Bridgford, Nottingham.

**Bristol**—A discussion on the design and construction of modern amateur transmitters took place at the June meeting. Several members, including G2FYT, G3IFV, G3KPT, G6GN, G3JMY, G3CHW and G3RQ, demonstrated the equipment they are using and described the circuits employed. A demonstration of other equipment in use by local members, including audio amplifiers, measuring and test equipment, will take place at the July meeting. Members with suitable gear are invited to take part.

**British Amateur Television Club (South-west Essex)**—Recent lectures have been on video amplifiers, the conversion of the APQ2 radar jammer, and an effects amplifier. The club studio is nearing completion. Meetings are held on the third Wednesday in each month. *Hon. Secretary:* D. W. E. Wheeler (G3AKJ), 56 Burlington Gardens, Chadwell Heath, Essex.

**British Amateur Television Club (South London)**—The club meets on the first Friday in each month in a large, well-equipped room at 4 Norbury Court Road, S.W.16. Recent lectures have been on pulse generation and a 5527 camera chain. *Hon. Secretary:* L. A. F. Stockley (G3EKE), 4 Norbury Court Road, London, S.W.16.

**British Amateur Television Club (High Wycombe)**—The club camera is complete and the studio is rapidly taking shape. A lecture on sync generators was given in May, and in June visits were paid to five amateur TV stations. Meetings are held on Mondays. *Hon. Secretary:* K. Cooper, Hayreid, Gallows Lane, Sands, High Wycombe.

**British Amateur Television Club (Chelmsford)**—The club has lost the use of the old studio but three new ones are being built. In May G2WJ showed his Test Car C monoscope camera and in June a vidicon camera chain was demonstrated. *Hon. Secretary:* M. Barlow (G3CVO), 10 Baddow Place Avenue, Great Baddow, Chelmsford.

**Bury Radio Society**—On September 14, the Society's Hamfest will be held at the Derby Hotel. The programme will include Dinner, the usual "swindle" and the film *Race for Life*. Tickets, which are limited in number, may be obtained, price 10/6 each, from the *Hon. Secretary:* L. Robinson, 56 Avondale Avenue, Bury.

**Cornish Radio and Television Club**—This is the new title of the West Cornwall Radio Club which has been re-organized. It is hoped that under the new name the club will appeal to a wider circle. To keep more distant members in touch a monthly bulletin, *The New Link*, is being published at 5/- p.a. Meetings are held at the Y.M.C.A., Falmouth, on the first Wednesday in the month at 7.30 p.m. *Hon. Secretary:* J. Brown (G3LPB), c/o W. A. Thomas, 38 Lower Market Street, Penryn, Cornwall.

**Crystal Palace and District Radio Club**—At the meeting on July 20, A. J. Worrall (G3IWA) will give a talk entitled "Hints on the Design and Construction of Power Packs." It is expected that some rather unusual examples will be shown. There will also be a meeting on August 6. Both will be held at Windemere House, Westow Street, Crystal Palace, S.E.19, and start at 7.30 p.m. *Hon. Secretary:* G. M. C. Stone (G3FZL), 10 Liphook Crescent, Forest Hill, London, S.E.23.

**Flintshire Radio Society**—In May, a demonstration of Top Band mobile operation was given to Holywell Grammar School by GW3CF/M, GW3FPF/M, GW2CCU/M and GW2FVZ/M, the control station being GW3JGA/A. A 16 mm sound film was made at the local N.F.D. site at the Nant Hall Hotel Paddock when two stations were in operation. More than 35 local members and their families went along to help.

**London Members' Luncheon Club**—Stan Vanstone (G2AYC) took the chair at the June meeting and welcomed DJ3JZ from Stuttgart, ZE3JJ from Salisbury, Southern Rhodesia, and W9JDF as well as a number of out-of-town visitors. All amateurs visiting London are sure of a warm welcome at the



Meetings of the Ayrshire Group are held every month at the Royal Hotel, Prestwick. In this picture are GM3KJG, GM3GUJ, GM3LLP, GM3JIG, A.1377, GM2ACQ, GM3FLY, GM3KJB, GM3JPW, GM4PW, GM3KET, B.R.S.10053, GM3FMD, GM3KJF and GM3LJX. (Photo by GM3IHU)

next meeting on July 19 at 12.30 p.m. at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road, W.1. Those intending to be present are asked to telephone the *Hon. Secretary:* Frank Fletcher (G2FUX), on Ruislip 2763 or R.S.G.B. Headquarters (HOLborn 7373) at least 24 hours in advance if at all possible.

**Medway Amateur Receiving and Transmitting Society**—The Society's annual visit to Southend will take place on August 25. This year other clubs are invited to join the party. Full details of the programme may be obtained from W. E. Nutton (G6NU), 42 Richmond Road, Gillingham, Kent.

**Slade Radio Society**—On July 19, W. E. Merrill will give an important talk on "Safety in the Shack." Other arrangements include a visit to the Scout Jamboree in Sutton Park on August 2 and a discussion on "Coil Design" opened by N. B. Simmons on August 16. The club room at Church House, High Street, Erdington, is open every day of the week. Instructional and constructional classes are held on Tuesdays and Wednesdays. The Slade Net will be on the air on July 26, August 9, and September 6. *Hon. Secretary:* C. N. Smart, 110 Woolmore Road, Erdington, Birmingham 23.

### REGIONAL REPRESENTATIVES

- Region 1.—North Western. B. O'Brien (G2AMV), 1 Waterpark Road, Prenton, Birkenhead, Cheshire.
- Region 2.—North Eastern. J. R. Petty (G4JW), 580 Redmires Road, Sheffield, 10, Yorkshire.
- Region 3.—West Midlands. W. A. Higgins (G8GF), 28 Kingsley Road, Kingswinford, nr. Brierley Hill, Staffs.
- Region 4.—East Midlands. E. S. G. K. Vance, M.B. (G8SA), 43 Blackwell Road, Huthwaite, Sutton-in-Ashfield, Notts.
- Region 5.—Eastern. T. A. T. Davies (G2ALL), Meadow Side, Comberton, Cambridge.
- Region 6.—South Central. N. F. O'Brien, F.B.I., A.C.C.S. (G3LP), 143 Brunswick Street, Cheltenham, Gloucestershire.
- Region 7.—London. F. G. Lambeth (G2AIW), 21 Bridge Way, Whitton, Twickenham, Middlesex.
- Region 8.—South Eastern. Office Vacant.
- Region 9.—South Western. W. J. Green (G3FBA), 82 Bloomfield Avenue, Bath, Somerset.
- Region 10.—South Wales. C. Parsons (GW8NP), 90 Maesycoed Road, Heath, Cardiff, Glam.
- Region 11.—North Wales. F. G. Southworth (GW2CCU), Samlesbury, Bagillt Road, Holywell, Flintshire.
- Region 12.—East Scotland. L. Hardie (GM2FHH), 91 Inchbrae Drive, Garthdee, Aberdeen.
- Region 13.—South-East Scotland. Office Vacant.
- Region 14.—West Scotland. D. R. Macadie (GM6MD), 154 Kingsacre Road, Glasgow, S.4.
- Region 15.—Northern Ireland. J. W. Douglas (GI3IWD), 54 Kingsway Park, Cherry Valley, Belfast.

R.S.G.B. QSL BUREAU: G2MI, BROMLEY, KENT



## Forthcoming Events

### REGION 1

**Blackpool (B. & F.A.R.S.).** — Wednesdays, Gadsby Street Hall, off Nelson Road.  
**Bury (B.R.S.).**—August 13, 8 p.m., George Hotel, Kay Gardens.  
**Chester (C. & D.A.R.S.).**—Tuesdays, 7.45 p.m., Tarran Hut, Y.M.C.A.  
**Crosby.**—Tuesdays, 8 p.m., over Gordon's Sweetshop, St. John's Road, Waterloo.  
**Lancaster (L. & D.A.R.S.).**—August 7, 7.30 p.m., George Hotel, Torrisholme.  
**Liverpool (L. & D.A.R.S.).**—Tuesdays, 8 p.m., Room "A," Wavertree Community Centre, Penny Lane, Liverpool, 18.  
**Manchester (M. & D.R.S.).**—August 5, 7.30 p.m., Brunswick Hotel, Piccadilly, Manchester.  
**Manchester (S.M.R.C.).**—Fridays, 7.45 p.m., Ladybarn House, Mauldeth Road, Manchester, 20.  
**Preston (P.A.R.S.).**—Wednesdays, 7.45 p.m., 48 High Street, off Lancaster Road.  
**Southport.**—Thursdays, 8 p.m., Sea Cadets' Camp, Esplanade.  
**Stockport (S.R.S.).**—July 17, 31, August 14, 28, The Blossoms Hotel, Buxton Road.  
**Warrington (W. & D.R.S.).**—July 18, August 1, 15, 7.30 p.m., Royal Oak Hotel, Bridge Street.  
**Wirral (W.A.R.S.).**—July 17, August 7, 21, Y.M.C.A., Whetstone Lane, Birkenhead.

### REGION 2

**Bradford.**—August 20, 7.30 p.m., 66 Little Horton Lane.  
**Doncaster.**—August 6, 7.30 p.m., Lord Nelson Hotel, Cleveland Street.  
**Hull.**—Second and last Tuesdays, 7.30 p.m., "Royal Oak" (Tony's).  
**Leeds.**—Wednesdays, 7.30 p.m., 4 Woodhouse Square.  
**Pontefract.**—August 1, 15, 8 p.m., Queen's Hotel, Tanshelf.  
**Rotherham.**—Wednesdays, 7 p.m., "Cutler's Arms," Westgate.  
**Sheffield (S.A.R.C.).**—July 24, 8 p.m., "Dog and Partridge," Trippet Lane.  
**Slithwaite.**—Fridays, 7.30 p.m., 3 Dartmouth Street.  
**South Shields (S.S. & D.R.C.).**—July 31, 7 p.m., Trinity House Social Centre.  
**Spenn Valley.**—July 24, August 7, 7.30 p.m., Temperance Hall, Cleckheaton.  
**York.**—Thursdays, 7.30 p.m., Club Rooms, Y.A.R.S., Fetter Lane.

### REGION 3

**Birmingham (M.A.R.S.).**—July 16, 7 p.m., Midland Institute, Paradise Street (Slot Aerials, B. Sykes, G2HCG). (Slade)—July 19, 7.45 p.m., Church House, High Street, Erdington. (South & Bournville).—Tuesdays, 7.30 p.m., No. 4 Committee Room, Cadbury's, Bournville.  
**Coventry (C.A.R.S.).**—July 15, 29, 7.30 p.m., H.Q., 9 Queen's Road. (Coventry Group).—July 19, 7.30 p.m., Vine Street School, (Courtauld).—Wednesdays, Courtauld's Limited, Foleshill.

**Solihull.**—July 29, August 12, 7.30 p.m., Civil Defence H.Q., Sutton Lodge, Blossomfield Road.  
**Stourbridge & District.**—July 19, 8 p.m., White Horse, Amblecote. August 13, 8 p.m., King Edward VI School.  
**Wolverhampton.**—July 29 (Rag Chew), Nechells Cottage, Tettenhall.

### REGION 4

**Alvaston.**—Tuesdays, Thursdays, 7.30 p.m.; Sundays, 10.30 a.m., Boulton Lane, Alvaston, Derbyshire.  
**Chesterfield.**—Tuesdays, 7.30 p.m., Bradbury Hall, Chatsworth Road.  
**Derby (D. & D.A.R.S.).**—Wednesdays, 7.30 p.m., Room 4, 119 Green Lane, Derby.  
**Ilkerton (I. & D.A.R.S.).**—No August meeting.  
**Leicester (L.R.S.).**—July 15, August 12, 7.30 p.m., Leicester.  
**Lincoln (L.S.W.C.).**—No August meeting.  
**Newark (N. & D.A.R.S.).**—August 11, 7 p.m., Northgate House, North Gate, Newark.  
**Northampton (N.S.W.C.).**—Fridays, 6.30 p.m., J-Beam Aerials' Factory, Weston Favell, Northampton.  
**Nottingham.**—July 19, 7.30 p.m., Basford Hall Miners' Welfare, Nuthall Road, Cinderhill.  
**Peterborough.**—August 7, 7.30 p.m., 21 Hankey Street.  
**Scunthorpe (S.A.R.S.).**—July 16, August 1, 13, 7.30 p.m., Talbot Hotel, Earl Street.  
**Retford & Worksop.**—No July or August meetings.

### REGION 5

**Chelmsford.**—August 6, 7.30 p.m., Marconi College, Arbour Lane, Chelmsford.  
**Great Hallingbury.**—September 15, 2.30 p.m., "Normandale," New Barn Lane (G6UT's Annual Ham Party, Ladies Welcome).  
**Norwich.**—Fridays, 7.30 p.m., The Golden Lion, St. John's, Maddermarket.

### REGION 6

**Cheltenham.**—August 1, 8 p.m., Great Western Hotel, Clarence Street.  
**Cheltenham (C.A.R.S.).**—Wednesdays, 8 p.m., Club Room, St. Mark's Community Centre, Brooklyn Road.  
**Gloucester (G.R.C.).**—Thursdays, 7.30 p.m., The Cedars, 83 Hucclecote Road.  
**Oxford (O. & D.A.R.S.).**—July 24, August 14, 7.30 p.m., Club Room, Cherwell Hotel, Water Eaton Road, Oxford.  
**Portsmouth.**—Tuesdays, 7.30 p.m., British Legion Club, Queen's Crescent, Southsea.  
**Southampton.**—August 3, 7 p.m., 1 Prospect Place, Above Bar, Southampton.  
**Stroud.**—Wednesdays, 7.30 p.m., Subscription Rooms.

### REGION 7

**London (L.M.L.C.).**—July 19, August 16, September 20, 12.30 p.m., Bedford Corner Hotel.  
**London (U.H.F. Group).**—August 1, 7.30 p.m., Bedford Corner Hotel.  
**Acton, Brentford & Chiswick.**—July 16, A.E.U. Rooms, 66 High Road, Chiswick, W.4.

**Bexleyheath (N.K.R.S.).**—Second and fourth Thursdays, 7.30 p.m., Congregational Hall, Chapel Road, Bexleyheath.  
**Chingford.**—For date and venue phone: Wanstead 2321 or Silverthorne 1740.  
**Croydon (S.R.C.C.).**—August 13, 7.30 p.m., Blacksmith Arms, 1 South End, Croydon.  
**Ealing.**—Sundays, 11 a.m., A.B.C. Restaurant, Ealing Broadway, W.5.  
**East Molesey (T.V.A.R.T.S.).**—August 7, 8 p.m., Carnarvon Castle Hotel, Hampton Court, ("Tape Recorder Electronics," Alan Mears, G8SM).  
**Harlow & District.**—Tuesdays, 7.30 p.m., rear of G. E. Read, (G3ERN), 6 High Street, Harlow, Essex.  
**Holloway (G.R.S.).**—Mondays (R.A.E.), Fridays (Club), 7 p.m., Grafton School, Eburn Road, Holloway, N.7.  
**Ilford.**—Thursdays, 8 p.m., G2BRH, 579 High Road, Ilford.  
**Norwood & South London.**—July 19, 8 p.m., ("Design and Construction of Power Packs," John Worrall, G3IWA), August 16, ("Using the Mains," Cyril Waterer, G2HP), Windermere House, Westow Street, Crystal Palace.  
**Slough.**—August 6, QTH from G2HOX, 13 Quaves Road, or G3YD, 5 Parklands Avenue, Slough.

### REGION 9

**Bath.**—July 15, September 16, 7.30 p.m., 12 James Street West. (No meeting in August).  
**Bristol.**—July 19, August 23, 7.15 p.m., Carwardine's Restaurant, Baldwin Street.  
**Exeter.**—August 15, 7.30 p.m., G3HTA, 12 Clevedon Close, Pennsylvania; September 12, 7.30 p.m., G2FCI, 5 Glenmore Road, Heavitree.  
**Falmouth.**—First Wednesday in each month, 7.30 p.m., Y.M.C.A., Bar Road, Falmouth.  
**North Devon (Bideford).**—August 1, 7.30 p.m., G3BO, "Rosebank," Westcombe, Bideford.  
**Plymouth.**—Alternate Tuesdays, 7.30 p.m., Virginia House Settlement, Barbican.  
**Torquay.**—Second Saturday in each month, 7.30 p.m., Y.M.C.A., Castle Road.  
**Weston-super-Mare.**—Second Wednesday in each month, 7.30 p.m., Albert Hotel, Sea Front.  
**Yeovil.**—Wednesdays, 7.30 p.m., Grove House, Preston Road, Yeovil.

### REGION 10

**Cardiff.**—August 12, 7.30 p.m., "The British Volunteer," The Hayes, Cardiff.  
**Neath and Port Talbot.**—August 6, 7.30 p.m., Royal Dock Hotel, Briton Ferry.  
**Pontypool.**—Tuesdays, 7 p.m., Educational Settlement, Rockhill Road.

### REGION 11

**Prestatyn (F.R.S.).**—September 2 ("Uses of r.f. in landline communication"), Railway Hotel. (No meeting in August).

### REGION 14

**Glasgow.**—Summer recess.

## Lincolnshire Hamfest

THE annual Lincolnshire Hamfest, organized by the Lincoln Short Wave Club, will be held at the Lincoln Technical College on August 11. An excellent programme, including a junk sale, has been arranged. The Council of the R.S.G.B. will be represented by Cliffe Metcalfe (G3DQ). Tickets, price 7/6 each including a substantial tea, may be obtained from R. Sadler, 14 Hainton Road, Lincoln.

**HAVE YOU AMENDED YOUR BANKERS' ORDER TO THE NEW RATE OF 30/- PER ANNUM?**

## Vidicon Camera Tubes

AS the result of a misunderstanding, in last month's BULLETIN the English Electric Valve Company were incorrectly stated to be able to supply bona-fide amateurs with reject camera tubes. This is not so, and Mr. M. Barlow (G3CVO) wishes it to be made clear that reject camera tubes by various manufacturers are only available through the British Amateur Television Club as a special concession. Such tubes cost from £25 each, and are subject to various restrictions. An import licence is required in the case of overseas buyers. Further information can be obtained from Mr. Don Reid, 4 Bishop Road, Chelmsford, Essex.

**HAVE YOU AMENDED YOUR BANKER'S ORDER?**

# Letters to the Editor...

Neither the Editor nor the Council of the Radio Society of Great Britain can accept responsibility for views expressed by correspondents.

## Council Meetings

DEAR SIR,—I am very glad the Council have taken the step of allowing members to comment on the proposal to reduce the frequency of Council Meetings. For my part I do not find much favour in the proposal at this stage although I can well understand the reasons which have prompted the suggestion.

Firstly, I cannot believe the Society is in such dire financial straits to warrant a proposal on grounds of economy which would in effect reduce representation, particularly when I read in the same Council Proceedings that consideration is being given to the purchase of a house. If we were in a difficult financial situation then a different set of circumstances would exist and obvious merit would lie behind a similar proposal but as things are at the moment I can find no justification in economies being made in the democratic processes of the Society, if at the same time we are to spend money in fresh fields.

My second reason is that I can well envisage a Committee of the Council having to exercise fairly wide power, and also would tend to be composed of the more longer service Members of Council. This latter point is not bad in itself but if our Society is to make progress a certain amount of new blood is constantly needed in the Council. However, I suggest a Committee consisting of older Council Members wielding wide powers would tend to have a discouraging effect on younger members from standing for Council and would therefore be bad for the Society.

Finally, I cannot accept that a body of say five people, will necessarily deal with business any more efficiently or expeditiously than a body of seventeen people. Whilst it is true that a Committee can be too large I cannot see that a council of seventeen should be so unwieldy so as to prevent efficient disposal of business. Far more influential features in this respect are, how the meeting is conducted by the chairman, how much detail is gone into, etc., and therefore I can find no merit in the suggestion from the viewpoint of efficiency.

Yours faithfully,

Enfield, Middlesex.

P. ELTON (G3GOZ).

DEAR SIR,—My first impression of the scheme for reducing the number of full Council meetings is that it has one great advantage.

The number of members able to undertake monthly visits to London is very limited; witness the vacancies for Zonal Representatives, but there are many more who would be willing to stand for Council if they knew that they would only be called upon to make four trips a year.

However, there must be one safeguard in any such scheme to prevent too much power being given to the smaller Executive body. Any Council member must have the right to demand a meeting of the full Council at any time should he feel that the Executive body has failed to act in accordance with the best interests of the Society.

The smaller body should only deal with day to day matters and should have no powers to make major policy decisions without at least a postal ballot if not a meeting of the full Council.

No doubt some will see in this a deep-laid plot to concentrate power in the hands of London members but I feel that in reducing the amount of time Council members need spend travelling to and from HQ there will be no reason why each Zone should not have a Representative chosen by ballot from a larger number of candidates than at present.

On one point the proposal is very vague and should be clarified. A great deal of work is undertaken by Council members sitting on the Society's various committees, Technical, GPO Liaison, Contests, etc. How are these committees to function under the proposed scheme? Perhaps Council will enlighten us on this point.

Yours faithfully,

Tottington, near Bury, Lancs.

JOHN E. HODGKINS (G3EJF).

DEAR SIR,—As a member of the Society for many years I view with mixed feelings the suggestion to have what in effect would be two Councils.

I would agree that the cost of holding monthly meetings is something that must be considered carefully by the membership but I think it rather unfair, in the Editorial of the June BULLETIN, to specify a particular large figure for the expenses of one member who, duly elected by the membership is entitled to be there. The fact that it costs £200 to have the services of a (Scottish) member on the Council is not relevant. After all, some day a Scottish member might be President. Surely the point to bear in mind is whether the total expenses of Council meetings held monthly is or is not warranted by the service which the Society is getting.

The idea that a meeting of the Council of the R.S.G.B. is something of a test of mental and physical stamina is to my mind ridiculous unless—and I do not believe that it is so—the staff-work all down the line is inadequate. Quite frankly, if some of the present Council feel that the duties are too much for them, then there is the alternative. I still think it is the reddest of red herrings!—having myself done committee work for many years.

Another thing that the membership must remember is that the business of the Society should be carried out by those most fitted to do so, by those knowing the problems and by those able and willing to give the time, energy and effort to effect true representation and that because of those requirements the membership must be prepared to foot the bill. It would be short-sighted policy and suicidal in the end to cut down the expenses of management to such a degree that the best men could not be used.

I hope and trust that a good and honest mutual agreement will be effected. Do not let us have anything like another split in the affairs of the Society for the sake of a few pounds.

I have rather a horror of those Extraordinary General Meetings unless it be really extraordinary important business.

Yours faithfully,

Aberdeen, Scotland.

EDWARD G. INGRAM (GM6IZ).

## Amateur v. Commercial

DEAR SIR,—I would be very glad if you could afford me a little space in order that I may comment on the letters from Messrs. H. Edge (G6GD) and M. E. Tapson (G6IF) in the June issue.

Firstly I would like to point out that the station using commercially built apparatus does not automatically turn the station operator into a commercial station operator, as is suggested in one of the letters. Surely that would only occur if the said operator was paid to operate or was using his station for profit, otherwise it would seem that an amateur cricketer must fashion his own bat in order to retain his status!

This recurring argument that the amateur who uses commercial transmitters, or only works telephony, is in some way a "phoney" seems quite nonsensical to me. I work and enjoy both telephony and Morse, I have built my own equipment and have also just purchased a commercial transmitter but I can assure your correspondents that no one pays me to indulge in my hobby.

I would not be so rash as to agree with G6IF that all owners of motor cars do not know what goes on under the bonnet, or that all the operators of stations with commercial transmitters do not understand them. I would also hesitate to assert that all the builders of their own "rigs" are fully aware of what may happen when they switch on!

The term "Amateur Radio" covers such a very broad field today that your two correspondents' attempts to restrict it to their own conceptions are, although valiant and understandable, doomed to failure like all attempts to put the clock back and keep it there.

Yours faithfully,

Twickenham, Middlesex.

J. H. LORD (G3BIA).

DEAR SIR,—How very welcome were the forthright views expressed by both G6GD and G6IF in the June BULLETIN. Many of us must have felt the same way on reading the May issue.

What a great pity it is that since the amendment to the amateur licence, numbers of those privileged to hold one have seen fit to flout the very meaning of Amateur Radio by operating complete commercially equipped stations. If lack of time for constructional work is the plea, may I instance my own case? My job takes me away from home for days at a time, and of course there are always the usual chores, such as decorating and gardening to mention only two, but nonetheless I just feel that I cannot ignore the principles of this fine hobby, so I build my own equipment.

It comes to something when these so-called amateurs even have to resort to buying commercial aerial systems!

Finally, I can't help wondering why the front page of the "Bull" itself is regularly devoted to advertisements for commercially made equipment when it would be much more in keeping with what I hope are the views of our esteemed Council for the space to be devoted to "ads" for components. Many principles in life today are "going for a Burton" so let us do all possible to keep Amateur Radio the way it always has been.

Yours faithfully,

Maidstone, Kent.

JACK WARNER (G3ABZ).

DEAR SIR,—I have read with interest the two letters in your June issue headed, "Is it Amateur Radio?" Both Mr. Edge and Mr. Tapson suggest that amateur operators of commercially built equipment are not quite playing the game. This criticism has of course been made on and off for almost forty years, so I suggest that we must first establish what the 1957 complaint actually is.

Presumably both authors utilize good commercially made components such as fixed and variable capacitors, resistors, plugs and sockets and so on. It is not improbable that many of these components are identical to those in the commercial equipments. Should this be so, the complaint should be directed against commercially assembled equipments as opposed to home assembled equipments. Thirty years ago, users of components, excluding valves, not entirely home made were the targets of the critics, but with the passing of time, we presume that this practice is no longer objectionable. So, an amateur who prefers to pay for a collection of commercially built components to be wired together is now inferior to the person who elects, or has the time to spare, or enjoys doing the job himself. As the latter as often as not uses a layout or circuit design provided by other than himself, our June critics seek to place a halo around the head of the semi-skilled manual labourer.

Now lest it be thought that I am over-simplifying the view, may I say that I have had some success in Empire and World Amateur Radio Contests in the last two decades, firstly using almost entirely truly home-built equipments and later, home assembled equipments and more latterly, commercially assembled components. Providing one follows a few simple rules, can read English, has no abnormal number of thumbs on each hand, has the time and patience, I am convinced that there is no reason why either class of amateur should not start the contest at H-Hour on equal terms. In my experience, it is operating and contest ability which almost completely decides the final placings and not the fact that the boxes of assembled components are commercially or self autographed.

I say "almost completely" because I admit that some amateurs blessed with deep pockets, or who have the ability to have made their pockets deep, or for one reason or another operate from superior QRAs, have an advantage, but this applies whether their rig is home-made or from manufacturers' stock. It is, however, a surmountable disadvantage, for I know well one amateur who operated with considerable success from a QRA at which outside aerials were forbidden.

I sincerely believe that contests are fun and that the final placings reflect fairly accurately the operators' contest and operating experience, and that opinions to the contrary smack a little of the dog in the manger. This is not the Amateur Radio spirit.

Yours sincerely,

ERIC COLE (G2EC).

(Brigadier E. S. Cole, C.B.E., is Deputy Chief Signals Officer, Signals Division, S.H.A.P.E.—Editor.)

DEAR SIR,—Having read the "anti-commercial" letters in the June BULLETIN I feel compelled to write to point out that there are many good reasons why commercially-made equipment is used almost exclusively by some amateurs.

My own case I am sure is typical of many, the principal reasons being shortage of time and lack of space. Before the war I designed and built all my own gear and even managed to carry out the time-consuming duties of a T.R., besides a number of other activities. Now, like many of those licensed just pre-war, having acquired business and domestic responsibilities and having lead rather a nomadic existence, I have had to dispose of all my old gear and workshop equipment. Many of us who find ourselves in this position are happy to buy a commercial rig so that in our few moments of spare time we can get straight on the air.

I wonder if commercial rigs really are the menace in contests that G6GD would have us believe? The average factory-made table topper is a 30-40 watt job, whereas the man who builds his own naturally uses all the watts he is allowed. The home-made rig can be specialised though the factory made one being usually multi-band and multi-purpose is technically a compromise and therefore less efficient.

The comment by G6IF about not knowing what goes on under the bonnet appears somewhat unfair. On looking round he will find most of the shiny gear is owned by the old hands who have learned the hard way. So far as the newcomers are concerned a reasonable theoretical standard is ensured by the R.A.E. and the practical experience they will soon get by servicing equipment which needs a lot more know-how than the old breadboard or the conventional rack and panel.

It must surely be remembered that Amateur Radio covers a broad field. It includes experts in theory who are hopeless at construction, constructors who build from the circuits of others and who have not much of a clue themselves, those for whom communication is second to experiment and those whose only joy is in operating.

Yours faithfully,

East Barnet, Herts.

F. H. SPENCER (G4AH).

DEAR SIR,—I am interested in the remarks of your correspondents in the June BULLETIN regarding the use of commercial equipment for the 21/28 Mc/s Contest.

In order to clarify the position, I wish to point out that my 144 Mc/s and 1.8 Mc/s transmitters are completely home built and also the power packs, speech amp and modulator for my commercial DX rig.

Since obtaining my licence in January 1938, I have, until recently, enjoyed building all my transmitters and beams for all bands but find that the re-sale value is practically nil, whereas a commercial rig does command a good second-hand value.

Yours faithfully,

Sutton Coldfield, Warwickshire. D. A. G. EDWARDS (G3DO).

(Mr. Edwards won the 1956 21/28 Mc/s Telephony Contest organised by the Society—Editor.)

DEAR SIR,—As a participant in the First R.S.G.B. Telephony Contest, I should like to comment on the two letters in the June issue of the BULLETIN.

One of your correspondents referring to the use of commercially built equipment asks "Is this really Amateur Radio?" I say yes, typically so. Every licensed amateur has the freedom to equip his station exactly as he pleases. The attitude that an amateur station should be composed of amateur-built equipment is a narrow-minded one and one that went out in the 1930's. I cannot see any reason why amateurs using commercially built equipment shouldn't operate in such a contest as this on equal terms with amateurs using home-built gear. Amateur-built equipment can be, and is, constructed to give equivalent performance to its commercial counterpart.

The important factors in a contest are:

- (1) the skill and experience of the operator,
- (2) the aerial system(s) used,
- (3) the location.

The leading stations in the high power section are all well-known DX operators with consistent results down the years, and a change from commercially built equipment to amateur constructed gear would not, in my view, have made any difference to their positions in the table of results. The statement "anyone with average operating ability could achieve similar results given the same commercial equipment" is absurd.

Assume the contest rules were amended so that there are two classes of competitors:

- (1) "Amateurs" (those using amateur-built gear),
- (2) "Commercials" (those using commercially built gear).

Now, where do you draw the line as to where a competing station ceases to be "Amateur" and becomes "Commercial"? I take it that if a station has any item of equipment in use which was commercially built, he is automatically classified as a "Commercial"? Thus stations using Class "D" Wave-meters, BC221's or a RF24 unit to extend the tuning range of the home-built receiver automatically become "Commercials"? On this basis, out of the total licensed stations in the U.K., it will be found that there are very few who are not using some item of equipment which was commercially built. It follows that the



"Amateur" entry in this Contest would have been very small (if not nil) and the "Commercial" entry practically the same as the published table in the May issue. So we are really back where we started!

Sir, we must move with the times, it is 1957 not 1930.

Penylan, Cardiff.

Yours faithfully,

T. HIGGINSON (GW3AHN).

P.S. All the equipment at this station is home-built, with the exception of the Eddystone 640 receiver and the Class "D" Wavemeter. If I had the ready cash and the desire, I, too, would be the proud owner of a commercially built station!

(Mr. Higginson was the winner of the Low Power Section of the 1956 21/28 Mc/s Contest organised by the R.S.G.B.—Editor.)

DEAR SIR,—I was very pleased to see the letters in the June issue, as they put in print opinions I have held for some time. I have never understood how stations using manufactured equipment can be called "amateur stations." Complete manufactured transmitters and receivers are cases in point. Even with a fair chance of a clean signal and no TVI, there is no excuse for their use. The situation is probably worse than realized, because I believe the use of manufactured components in so called home built equipment is now widespread. Examples quickly spring to mind of fixed resistors and condensers, and, although difficult for the true amateur to believe, there are several, if not scores of stations who use manufactured variable condensers and transformers.

There are operators who disagree with my views, and in personal conversation it has been suggested that the word amateur only means unpaid, and also that clean signals and good operating are the major requirements, however, I am sure that these views are in the minority.

I fully agree that bonus points should be given to completely home built stations.

It is unfortunate that the subject arose out of details given of telephony contest winners, because needless to say, the true amateur only uses c.w. and not with a fancy key either, so 73 to all true amateurs.

Yours faithfully,

Blackheath, Birmingham.

JACK MANN (G3AAM).

DEAR SIR,—I have read with interest the two letters published in the June issue of the BULLETIN under the heading "Is it Amateur Radio?" and would like to reply most emphatically—"It is."

In common with many another of my contemporaries I built all my own equipment in pre-war days and, an examination of old QSL cards indicates the average reports obtained were no better or worse than I receive today from a more or less commercially built station.

But what a change in circumstances! Pre-war I had a fair amount of space available as a shack, ground available for aerials and, what is far more important, time available to "fiddle" as well as operate. Today I have the restricted space of a Central London flat and only little time to operate.

Amateur Radio is not necessarily confined to constructional work. There are many interpretations of the term; for many of us it means the ability to communicate with old friends in many lands, and make new ones. Whether on home built or commercially built equipment is of little importance, but what is all important to the large number with limited facilities and time, is the ability to get on the air when one wants to, and that, in general, I feel, is why commercially built equipment is becoming so popular. The possession of such equipment surely does not indicate complete lack of technical competence!

As far as "Contests" are concerned, my own experience is that the possession of an efficient aerial system and the constitution of an elephant are of far greater importance to success than possession of commercial equipment!

Yours faithfully,

London, S.W.1.

G. R. SCOTT-FARNIE (G5FI).

(In pre-war days Rowley Scott Farnie was the Society's District 10—South Wales—Representative. He served in the R.A.F. during the 1939-45 War, attaining the rank of Group Captain—Editor.)

DEAR SIR,—Having been a listener and experimenter, since 1910, may I say I agree entirely with the views of your other correspondents on the matter of commercial equipment raised in your June issue. For an amateur to purchase the latest receiver or transmitter at a cost of £100 or more, can hardly be termed Amateur Radio. The same may be said of members holding academic distinctions such as B.Sc. and A.M.I.E.E. Are they in

the amateur class? Another disturbing factor is the use by certain amateurs of call signs in advertisements connected with their private business, generally radio. I am sure the G.P.O. never intended call signs to be thus used.

Yours faithfully,

Ruislip, Middlesex.

C. STOKES (B.R.S.21,136).

### A Dearth of N.F.D. Operators

DEAR SIR,—There has recently been much argument as to the merits and demerits of the concession by which new licencees are allowed to use telephony, but a new aspect of it has just come to light. For a number of reasons there was a great shortage of N.F.D. operators in this locality this year. Some of the reasons were quite normal and legitimate but one was most disturbing to find how many newly-licensed amateurs were unwilling to "have a go." Closer investigation suggests that the concession is very largely to blame, for c.w. operation is to a great extent an "acquired taste" and we, in this area, have ample evidence that sufficient attention is not being paid to it by newly-licensed amateurs, so much so that the running of two stations this year was, for us, quite out of the question. Indeed we barely managed to keep one station going, solely owing to lack of c.w. operators.

I do not seek to indulge in a pointless "c.w. v. phone" controversy; to my mind an amateur should be ready to use either, as required.

Local opinion is definitely against the concession.

Yours faithfully,

Bexleyheath, Kent.

DAVID W. WOODERSON (G3HKX)

### How It Works

DEAR SIR,—Reference the technical query "How Does it Work" on page 547 of the BULLETIN, whilst not able to offer a positive solution to the query "How Does it Work" I feel that the arrangement depicted is sufficiently similar to my own aerial to permit of my comments. The aerial in use at G2WI is a "double extended Zepp" with an 80 ft. top fed in the centre with 39 ft. of tuned feeders. Comparing this with the aerial shown the differences lie in the length of the 300 ohm section (34 ft.) and top.

The functioning of the G2WI aerial is easily explained by considering the entire length of wire around the system which approximates to 158 ft.; this, with the tiny loading coil used at the lower end of the feeder, enables the system to resonate at 14, 21, and 28 Mc/s as there are approximately 5, 7, 9 half waves in this length at these frequencies. In a symmetrical system such as this, this means that one half-wave will always appear around the bottom of the feeder thus giving a current-feed point. In practice it is possible to dispense with the inductance and feed direct with 75 ohm co-axial cable and the system then approximates to that depicted in the original and I would confirm works most successfully on the frequencies mentioned. Any slight differences in the dimensions (i.e. overall length of wire) is probably accounted for by the use of 300 ohm ribbon.

It is interesting to note that within wide limits, provided the figure of 158 ft. of wire is kept constant, the manner in which this is shared between top and feeder does not greatly matter, though of course with the top cut very short and the feeders very long the efficiency falls and the radiation pattern alters.

I shall be very interested to hear other readers' comments.

Yours faithfully,

Eltham, London, S.E.9.

B. A. M. HERBERT (G2WI).

(We hope to publish in our next issue a symposium based on other letters from members who believe they know how the aerial works!—Editor.)

### "Captured in Tibet"

DEAR SIR,—Bob Ford is to be heartily congratulated for having written an exceptionally interesting book. His "Captured in Tibet" ought to be read by all amateurs. I bought my copy immediately the book was published and already it has been on loan to several friends. All agree that the book is a classic. Buy, beg, or borrow a copy now.

I should like to thank Bob for having made available for us this detailed account of his experiences in Tibet and China.

Yours truly,

Stoke-on-Trent, Staffs.

V. J. REYNOLDS (G3COY).

### Can You Help?

● C. Clancey (G3LMJ), 1 Court Farm Road, Nottingham, London, S.E.9., who wishes to know the connections to the five pin plug on the German receiver Funk-Horch-Empfänger-Dora (Fu.H.E.D.) which uses twelve RV2P800 valves and covers approximately 24 to 60 Mc/s?



## New Books

**HI-FI YEAR BOOK** (Second Edition). Published by Miles Henslow Publications Ltd., 99 Mortimer Street, London, S.W.1.

In the main, through the medium of its articles, this book summarises the progress in Hi-Fi equipment made during the past 12 months. In its directory section it lists the ranges of current equipment, together with abridged specifications, prices, and manufacturers' addresses.

In each chapter available equipment has been presented, alphabetically, in directory form with relevant technical data. Subjects dealt with include Pick-ups, Amplifiers and Pre-Amplifiers, Output Transformers, Noise in Reproducers, Radio Tuners, Tape Decks, Stereophonic Sound, Microphones, Speakers and Enclosures, Acoustic Lenses, Plastic Foam, Room Acoustics, Components for Home Construction, Transistors. *The Hi-Fi Year Book* costs 10/6.

**TRANSISTORS CIRCUITS AND SERVICING**, by B. R. Bettridge. Published for *Wireless and Electrical Trader* by Trader Publishing Co. Ltd. 24 pages. Page size 8½ in. x 6 in. Price 2/6.

This handy little booklet explains in simple practical terms how transistors work, how they are used in radio circuits and the best methods to employ when servicing equipment that uses them. The treatment is almost entirely descriptive, mathematics being avoided.

The physical properties of the transistor are explained and a comparison drawn between its behaviour and that of the more familiar thermionic valve. Various kinds of circuit that are used with transistors are shown and an explanation given of how they amplify and how power supplies are fed to them and stabilized to compensate for temperature change. The author refers to servicing hints as they arise, and to some of the pitfalls that may occur. A simple method of testing transistors is described.

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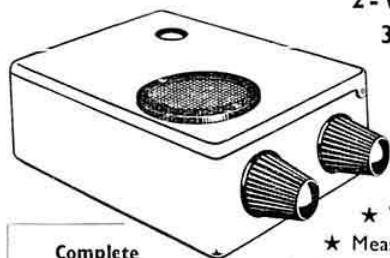
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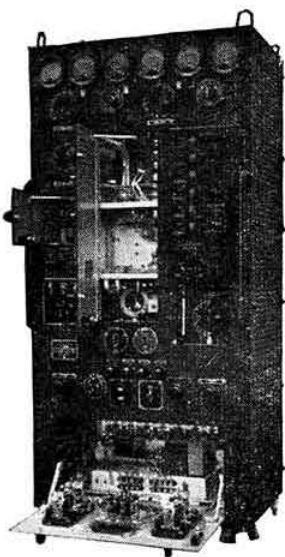
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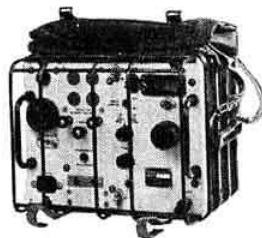
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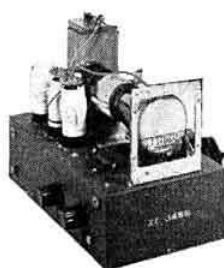
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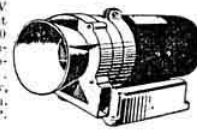
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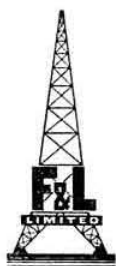
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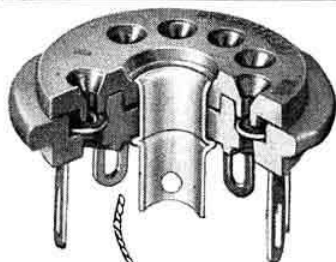


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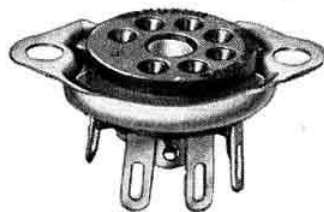
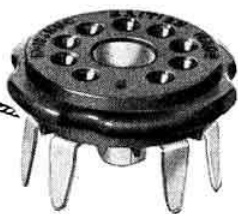
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(Continued on page 48)



(APPOINTMENTS SECTION continued)

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2. Good technical training with qualifications equivalent to R.T.E.B. radio or television servicing diploma; City and Guilds radio II; or P.M.G. certificates.
3. Experience and training in H.M. forces to standards similar to that outlined in 1 and 2 above.

Applicants are invited to submit complete résumé of past experience, personal details, etc. to Arts and Sciences Dean's Office, American University of Beirut, Beirut, Lebanon.

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## R.S.G.B. Bulletin

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### INDEX TO ADVERTISERS

	Page
American University of Beirut .. .. .	43
Avo Ltd. .. .. .	1
Bentley Acoustic Corporation Ltd. .. .. .	44
Brookes Crystals Ltd. .. .. .	Cover ii
Candler System Co. .. .. .	40
Cosmocord Ltd. .. .. .	6
Cossor Instruments Ltd. .. .. .	4
Electronic Precision Equipment Ltd. .. .. .	42
E.M.I. Institutes .. .. .	42
Exchange & Mart Section .. .. .	47, 48
F.M. Co. .. .. .	Cover iii
Francis & Lewis Ltd. .. .. .	45
GSTN/G3HSR .. .. .	Cover iii
Harris, P. .. .. .	Cover iii
Henry's (Radio Ltd.) .. .. .	41
Home Radio (Mitcham) Ltd. .. .. .	42
H.P. Radio Services Ltd. .. .. .	Cover iii
J.P. Electric Ltd. .. .. .	46
K.W. Electronics Ltd. .. .. .	42
Labgear (Cambridge) Ltd. .. .. .	Front Cover
Lawrence Electronics .. .. .	46
McMurdo Instrument Co., Ltd. .. .. .	45
Minimitter Co. .. .. .	Cover iii
Padgett, Alfred .. .. .	44
Panda Radio Co., Ltd. .. .. .	p. 40 & cover ii, iv
"Popular Mechanics" .. .. .	46
Proops Bros. Ltd. .. .. .	3
Radiocentre .. .. .	46
Radio, Television & Instrument Service .. .. .	44
Relda Radio, Ltd. .. .. .	43
Rolls-Royce, Ltd. .. .. .	48
Smith, H. L. & Co., Ltd. .. .. .	Cover iii
Southern Radio & Electrical Supplies .. .. .	46
Standard Telephones & Cables Ltd. .. .. .	Cover ii
Universal Electronics .. .. .	Cover iv
Webb's Radio .. .. .	2
Whitaker, H. .. .. .	42
Young, Chas. H., Ltd. .. .. .	2

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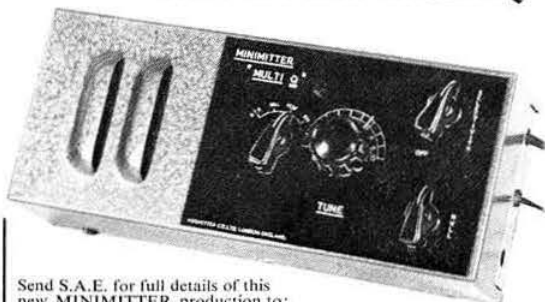
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