

THE T&R

# BULLETIN

A JOURNAL FOR  
**RADIO EXPERIMENTERS**

Vol. 17 No. 7

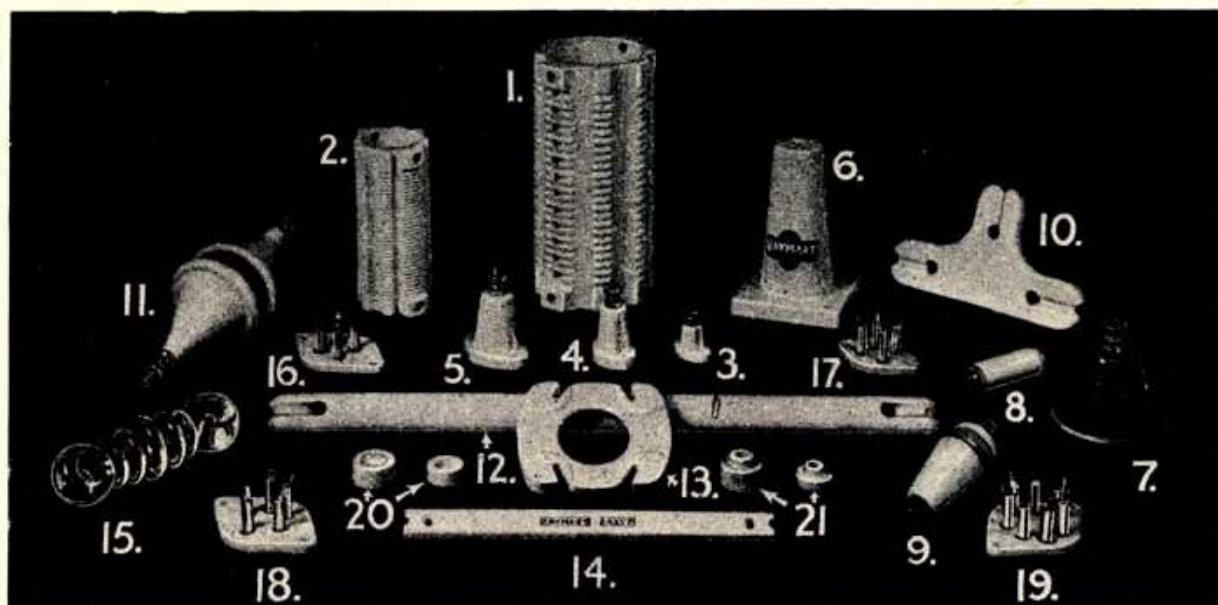
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## THE T. & R. BULLETIN.

THE T. & R. Bulletin is published on or about the 15th day in each month, and a copy is despatched free of charge to each member. Changes of address should be communicated promptly to the Headquarters of the Society.

THE General Editor will be pleased to consider for publication, articles of technical



## VOL. 17. No. 7.

or topical interest. Intending contributors are requested to indicate in advance the scope to be covered by the article under consideration.

ALL matters relating to Advertising should be addressed to:—

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# THE T. & R. BULLETIN

OFFICIAL JOURNAL  
OF THE  
RADIO SOCIETY  
OF GREAT BRITAIN



DEVOTED TO THE  
SCIENCE  
AND ADVANCEMENT  
OF AMATEUR RADIO

Hon. Editor: JAMES W. MATHEWS.

General Editor: JOHN CLARRICOTS

Advertisement Manager: HORACE FREEMAN

Vol. XVII. No. 7

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## WAR IN THE PACIFIC

SIX weeks have elapsed since war came to the Pacific, bringing in its trail that fateful edict which, for the time being, has set the seal on International Amateur Radio.

It is too early yet to write with authority of the duties which some of our American amateur friends will be called upon to perform now that their country is at war, but it is of interest to record that within a few hours of the general "close down" order being issued, the American Radio Relay League, through its official station WIAW, broadcast precise instructions to those who sought authority to retain the use of their stations for defence purposes. Reading between the lines of the Editorial published in the November issue of *QST*, and referred to briefly in our last issue, it seems probable that these stations will form emergency link networks in the event of air raids or during periods of grave national emergency.

It is good to know that the A.R.R.L. has, temporarily at any rate, succeeded in satisfying the U.S. Government that certain amateurs by virtue of their special training, are capable of performing tasks of considerable responsibility in the field of two-way communication. The American continent, because of its vastness, is clearly more suited to the employment of "amateur" stations in war-time than is the case in Great Britain. That the operators concerned will live up to the trust imposed upon them goes without saying.

There are some pessimists who have said "heaven help amateur radio if the U.S. becomes involved in war." We have never subscribed to such a view, for experience tends to show that once a country is at war, the fighting Services, and Government bodies generally, quickly appreciate the worth of the radio amateur. In the Services, in the Merchant Navy, in factories and in workshops, in research establishments and in technical colleges, the British amateur has set the pace and has usually, even as a trainee, towered head and shoulders above his colleagues. Is it not safe then to assume that the 50,000 odd American amateurs will make themselves equally indispensable to the vast war-time communications network which is being established in their country?

We can be certain that the A.R.R.L. will spare no effort in seeing that a comprehensive record is kept of the part played by its members. That evidence, when correlated with that prepared by the R.S.G.B. and other National Societies, will surely carry weight when the time comes to restore amateur radio once again to its rightful place.

In writing of war in the Pacific our thoughts instinctively turn to those who have come face to face with the invader in isolated outposts of the British Empire. We think especially of our amateur friends in Hong Kong and Malaya, some of whom we fear may be in enemy hands.

To all radio amateurs of the British Empire in the Far East, and to our colleagues in America, the Phillipines and Hawaii, we send greetings and good wishes, coupled with the hope that it may not be long before we hear once again their old familiar "ham" calls.

### A GRAND EFFORT

On the last day of the old year a handsome cheque for £6 8s. 0d. arrived to carry the Prisoners of War Fund beyond the £100 mark—a grand effort at a time when calls upon our resources fall thick and fast around us.

Within the pages of this issue there appears a further list of contributors who are warmly thanked for their generosity. Especially pleasing is it to note that several donations are from groups of members who are making a regular habit of "sending round the hat" at local meetings. *The little more how much it is.*

Hidden behind such phrases as "Somewhere in England" are stories which, if we could tell them, would bring pleasure to the parents, wives and relatives of our friends who are held prisoner in enemy hands. Suffice it is to say that in many parts of Great Britain where members are gathered together in work of national importance, those who are *not* hams in the accepted sense, have been to the forefront in making a contribution to the Fund. To them we offer a word of special thanks.

Now that the £100 mark has been passed the regular despatch of parcels for many months ahead is assured, but let us not rest content. The tempo of the war is speeding up and although we earnestly hope that no more of our members will fall into enemy hands, the possibility must not be overlooked. To ensure that no one is neglected, the Fund must be carried on throughout the duration of the war. We know that will be the wish of all who have contributed.

J. C.

## ANNUAL GENERAL MEETING

*Minutes of the Fifteenth Annual General Meeting of the Incorporated Radio Society of Great Britain, held at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2, at 2 p.m. on Saturday, December 27th, 1941.*

**P**resent:—Mr. A. D. Gay (President), Mr. E. L. Gardiner (Executive Vice-President), Mr. H. A. M. Clark (Hon. Treasurer and Hon. Secretary), Mr. J. W. Mathews (Hon. Editor), Mr. A. E. Watts (Immediate Past President), Mr. H. Bevan Swift (Past President), Messrs. S. K. Lewer and A. J. H. Watson (Members of Council), Mr. John Claricoats (Secretary-Editor) and about 50 members.

The President called upon the Secretary-Editor to read the notice convening the meeting, after which a motion from the Chair that the Minutes of the Fourteenth Annual General Meeting (as published in the February, 1941, issue of the Society's Journal) be taken as read, was unanimously adopted.

On a motion proposed by Mr. H. A. M. Clark, and seconded by Mr. H. Bevan Swift, it was unanimously resolved to adopt and approve the Annual Balance Sheet and Report. Mr. Swift, in seconding the motion, paid a warm tribute to the work of the Executive Council and congratulated the Hon. Treasurer for presenting such a satisfactory report.

The Secretary-Editor gave a resume of Council's Report for the Year 1940-1941 (the full report appears elsewhere in this issue).

The President, at this stage, drew attention to the very satisfactory increase in membership, pointing out that this was in no small measure due to members in and out of the Services who had infected their

colleagues with their own enthusiasm for amateur radio. He also spoke of the very high proportion of members now on Active Service.

On a motion proposed by Mr. E. L. Gardiner, and seconded by Mr. F. Charman, it was unanimously agreed to accept and adopt the Report of Council.

The President then announced that the following members had been duly elected to serve on the Council for the year 1942.

*President*: Mr. A. D. Gay, G6NF.

*Executive Vice-President*: Mr. E. L. Gardiner, G6GR.

*Hon. Treasurer and Hon. Secretary*: Mr. H. A. M. Clark, G6OT.

*Hon. Editor*: Mr. J. W. Mathews, G6LL.

*Members*: G. M. R. Scott Farnie, G. A. Jessup, S. K. Lewer, W. H. Matthews, W. A.

Scarr, E. H. Simmonds, and A. J. H. Watson.

Mr. Gay thanked the retiring members of Council, Messrs. Corfield and Wilkins, for their past loyal support and valued assistance.

On a motion proposed by Mr. H. A. M. Clark, seconded by Mr. A. J. H. Watson, it was unanimously resolved to appoint Mr. John Ockleshaw, Honorary Auditor for 1942.

On a motion proposed by Mr. H. Bevan Swift, and seconded by Mr. C. Cleland, it was unanimously resolved to record a hearty vote of thanks to the

(Continued on page 264).

## ANNUAL REPORT OF COUNCIL\*

In addition to the outstanding financial success achieved by the Society during the year under review, noteworthy progress has taken place in many other directions.

This progress, made at a time when participation in radio experiments is of necessity heavily curtailed, may at first sight seem difficult to explain, but those who have followed closely the trend of technical development since September, 1939, need little reminding that many people have discovered for the first time the fascination of the radio art as practised by amateurs. As a consequence they have been quick to appreciate that, although amateur radio lies semi-dormant in the practical sense, the wide field for development which will be open to them at the end of the war, requires a close study of the subject even under present conditions.

This, then appears to be the primary reason for much of the progress which Council has the pleasure of recording.

### Membership

During the twelve months covered by this report 719 new members were elected, a figure closely approaching the pre-war record of 783 registered in 1937-38. The nett gain in membership during the year was in excess of 400 which, when translated into comparative figures shows that at the end of the second year of war, the total membership was less than 200 below the peak figure of 3,600 recorded in August, 1939.

As a matter of interest, the membership has, since the end of the financial year, continued to increase until now (December, 1941) the total is on a par with the pre-war maximum of 3,600. The home membership total to-day is 300 in excess of the August 1939 figure and is thus the highest ever recorded.

Membership in the overseas section has fallen from approximately 500 before the war to a little below 200. It is pleasing to record however, that the majority of pre-war members residing in the British Colonial Empire, continue to support the Society. The chief drop has occurred in the foreign section and to a less extent in the Dominion section. In the latter case many young amateurs who were enthusiastic supporters of the B.E.R.U. in pre-war days are now serving overseas with H.M. Forces, and as a consequence have lost touch with the Society.

The Council desires to thank all those who have contributed to the satisfactory increase in membership.

### The T. & R. Bulletin

No falling off in the quality or quantity of material has occurred, in fact, on many occasions those responsible for the production of the Society's Journal, have been hard pressed to find space for the many contributions which have been forwarded.

In pursuance of the policy referred to in the last Report, every endeavour has been made to preserve a reasonable balance between technical and topical contributions.

The popular Service feature "Khaki and Blue" has continued to arouse considerable interest among all members, as have the "73," Ham Hospitality and Active Service lists, all of which have materially contributed to the popularity of war-time issues.

On the technical side Council has been pleased to welcome two new regular contributors in Mr. T. R. Theakston, B.Sc., 2DBK, author of "Mathematics for the Radio Amateur" and Mr. B. W. P. Mainprise, B.Sc., G5MP, author of "Field Operator's Vade Mecum," both of whom are thanked for their valued series of articles.

Mr. Denis Heightman, G6DH, and Mr. H. R. Heap, B.Sc., G5HF, have as Experimental Section Manager and Receiver Group Manager respectively, kept alive the Experimental Section in spite of many difficulties.

Our lady contributors Miss N. Corry, G2YL and Miss C. Hall, G8LY, together with Mr. A. O. Milne, G2MI, have continued to record current amateur activity on various frequency bands. They, no less than the District Representatives, Acting D.R.'s and Scribes, are thanked for their continued co-operation and interest.

Mr. Milne and Mr. R. Tunney, G8DD, are also thanked for preparing diagrams for publications.

The Council records its appreciations to the anonymous contributor "Commentor," whose articles, under the title of "Random Reflections," have evoked much interest.

The topical cartoons prepared by Mr. W. H. Matthews, G2CD, have also been welcomed as have the various Cross Word Puzzles and Technical Teasers.

To all contributors, the Council extends its warm thanks.

### Advertising

The volume of advertising has perhaps provided one of the most interesting features of the year. In peace-time an average of 12 pages per issue was considered satisfactory. During 1940-41 several issues contained as many as 15 pages of displayed advertisements, a tribute to the "pulling power" of the Society's Journal, and a compliment to the sound judgment of those members who are still in a position to purchase equipment and technical literature.

The Council wishes to thank Mr. H. Freeman, the Society's Advertising Manager, and those Companies who have given their support.

### The Amateur Radio Handbook (2nd Edition)

A year ago the Council reported that a first reprint of 5,000 copies of the Society's Handbook had just been put in hand. Deliveries actually became available in early January. By the beginning of March, the stock had become exhausted. A second reprint was then authorised, this time for 10,000 copies, but by the end of September this large quantity had also been sold. A third reprint, again for 10,000 copies recently became available, but supplies have already become exhausted. Since the outbreak of the war the total number of copies printed has reached the high total of 32,000, a sure indication of the popularity of this publication.

\* Read by the Secretary-Editor at the annual general meeting held at the Institution of Electrical Engineers, London, on December 27, 1941.

Very large quantities have been sold to the fighting Services, and to technical institutes engaged in providing instruction to recruits.

### Radio Handbook Supplement

Just prior to the end of the financial year Council authorised the preparation of a supplement to the Society's Handbook. The purpose of this publication is to provide members and others with up to date technical and mathematical information additional to that included in the Handbook.

In deciding to produce a supplement in preference to a third edition of the Handbook, Council were mindful of the fact that the majority of members already possess the Handbook, therefore it would have been unfair, unless a revision of the Handbook could have taken place, to offer a new edition which was only new in the sense that it contained several new chapters. The retail price for this new publication will be fixed at the lowest possible figure, for it is realised that the majority of purchasers will be members of H.M. Forces, many of whom can ill afford to pay high prices for technical information.

### American Publications

The special arrangements made at the outbreak of war whereby the Society places orders direct with the *A.R.R.L.* and *Radio Ltd.* have been continued. The service so rendered has been of value to many members who desire to keep abreast of new developments.

### Publicity

During the year Council authorised the printing of a publicity poster which has materially helped to make known the work of the Society in technical colleges, institutes, Services clubs, etc.

### District Activities

Most Districts have maintained interest by means of meetings, the outstanding being those held at Blackpool, Lincoln and Harrogate. The Council were represented at these and similar gatherings, all of which were well supported by Service personnel.

Town meetings have been reasonably well attended, although it is felt that more advance publicity is desirable in order to ensure the presence of Service members stationed in the locality.

With but few exceptions District Representatives have contributed regular news for publication in the Society's Journal. Evidence is forthcoming that the publication of District notes is appreciated, particularly by members on Active Service.

The Council records its thanks to all D.R.'s, T.R.'s and Scribes who have co-operated closely with Headquarters.

### Convention

A modified form of Convention was held in London during August. The support given to this venture fully justified Council's action in making the necessary arrangements. The miniature exhibition held in conjunction with this event was much appreciated. As a matter of historical record this was the first British exhibition of radio equipment held since the outbreak of war.

### Liaison with the Services

Close liaison has been maintained with the fighting Services, who have on several occasions sought the aid of the Society on matters of national importance.

### Liaison with the G.P.O.

Meetings of a cordial nature have taken place between representatives of the G.P.O. and Officers of the Society. At these meetings discussion has centred around the restoration of licences after the war, and matters connected with war damage insurance for amateur equipment.

Whilst it is impossible at the present juncture to announce any concrete plans for post-war operation, members may feel assured that the G.P.O. are fully appreciative of the work being done by members in and out of the Services. As far as can be judged at present, the G.P.O. is agreeable to the restoration of full licences to all pre-war holders.

For Service reasons, questions relating to frequency, power and other matters of detail cannot be considered officially at the present time.

Appreciating that a very large number of members now on Active Service may desire to apply for transmitting facilities at a later date, Council, in support of an editorial on the subject, has requested the G.P.O. to take up with the Departments concerned, the Society's suggestion that men employed in certain radio trades should be exempted from taking a Morse test, and any technical examination.

It is considered likely that the proposal made just prior to the war, whereby new applicants for transmitting facilities would be required to pass a technical examination, will be adopted when licences are re-issued. Applicants who hold adequate qualifications would, however, be exempted.

Negotiations in connection with war damage liability for amateur equipment impounded by the G.P.O. resulted in an official statement being issued, and this was published in the August issue of the Society's Journal. In this statement the G.P.O. stated that they are acting as bailees for the apparatus, which must be insured by the actual owner, namely, the radio amateur himself.

The Council, through its representatives, has been in communication with the Board of Trade on the question of the maximum amount of compensation which can be claimed for damage due to enemy action, irrespective of whether the equipment is retained by the owner or impounded. A statement in connection with this matter appeared in the December issue of the Society's Journal.

### Active Service Members

A complete record of all British amateurs serving their country in the Armed Forces of the Crown, continues to be maintained. Up to the end of September, the total listed had reached the high figure of 1,500. The Council extends its warm congratulations to those members who have been honoured by H.M. The King, for acts of bravery and devotion to duty.

### Silent Keys

The Society has not escaped the toll of war, 13 of its members having been called to Higher Service during the year. The Council records their names with a sincere sense of loss.



## ROLL OF HONOUR

|   |         |             |
|---|---------|-------------|
| Tel. Gilbert Blackah  | G3LI    | R.N.V. (W)R |
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| Sgt. W. Thompson  | BERS459 | R.A.F.      |
| P/O. D. White   | 2CDA    | R.A.F.      |
| Radio Officer   |         |             |
| G. W. Sands   | G3DC    | M.N.        |
| Radio Officer   |         |             |
| G. E. Flint   | BRS469  | M.N.        |
| 2nd/Lt. H. Atthill  | G8CV    | R. C. of S. |
| F/O. J. H. Emmerson   | G8HA    | R.A.F.      |
| L.A.C. L. Nash  | G4DA    | R.A.F.      |
| Radio Officer   |         |             |
| G. M. Hindle  | BRS3692 | M.N.        |
| Mr. A. Turner, G2XO, Mr. G. O. Marsh, G2GM, and Mr. G. J. Shorten, G2SQ, were killed by enemy action during air raids on England. |         |             |

### Prisoners of War

Council notes with pleasure that a Prisoners of War Fund has already received the generous support of many members, and an initial parcel has been despatched to all British amateurs, who are known to be held prisoner. Mr. Lamborn Edwards, G8TL, has very kindly offered to administer the Fund.

### Air Training Corps

Immediately the A.T.C. was formed a large number of members offered their services either as officers or civilian instructors. The assistance which they have been able to render to the Corps, especially in connection with Signals instruction, has been greatly appreciated by the Air Ministry and A.T.C. Headquarters. The influence of amateur radio has been strongly felt in all Squadrons where amateurs are assisting with instruction.

### British Empire Societies

Although contact with overseas Societies has been spasmodic, the Council has been glad to note that the Wireless Institute of Australia, the New Zealand Association of Radio Transmitters, and the South African Radio Relay League (Division 6), have continued to publish a monthly Journal.

Greetings are extended to the officers and members of these and other Empire Societies.

### British Empire and U.S.A. Amateurs

The Council has been pleased to welcome to membership a number of Canadian and U.S. amateurs now serving in Great Britain. It is hoped that all newcomers will report their arrival to Headquarters, so that arrangements can be made for them to meet members.

The Council desires to thank Mr. Fred Saxon, VE3SG, Hon. Secretary, Canadian Amateur

Operators Association, for the kind hospitality he and members of his Association have extended to Society members now serving in Canada. Their warm thanks are also extended to Mr. K. B. Warner, Secretary, American Radio Relay League, and his colleagues, for similar courtesies shown to members who have visited West Hartford.

Throughout the year Headquarters has maintained regular correspondence with Mr. Warner and other executive members of the A.R.R.L.

### European Amateurs

The Council has also been pleased to welcome to membership a number of European amateurs including representatives from Czecho-Slovakia, Norway, Jugo-Slavia, and Poland, who have reached Great Britain to serve with the Allies.

It was with special pleasure that the Council granted Honorary Affiliation to the Czech Radio Society in Great Britain.

### Council Attendances

The following is a list of Council attendances for the year ended December 31, 1941.

|                       |     |     |    |           |
|-----------------------|-----|-----|----|-----------|
| A. D. Gay             | ... | ... | 12 | out of 12 |
| W. H. Matthews        | ... | ... | 12 | " " 12    |
| D. N. Corfield        | ... | ... | 11 | " " 12    |
| A. E. Watts           | ... | ... | 10 | " " 12    |
| A. J. H. Watson       | ... | ... | 10 | " " 12    |
| H. V. Wilkins         | ... | ... | 10 | " " 12    |
| E. L. Gardiner        | ... | ... | 8  | " " 12    |
| J. W. Mathews         | ... | ... | 8† | " " 12    |
| S. K. Lewer           | ... | ... | 8  | " " 12    |
| W. A. Scarr           | ... | ... | 8  | " " 12    |
| H. A. M. Clark        | ... | ... | 7  | " " 12    |
| G. M. R. Scott Farnie | ... | ... | 1† | " " 6     |

† Absent on Active Service.

The other absences were due to causes outside the control of the members concerned.

### Future Plans

The Council anticipates that if the present progress continues until peace returns, it will be possible to bring to fruition plans which were being considered just before the war for the creation of a more comprehensive Headquarters. This would provide facilities for the erection of a Society station and the organisation of an experimental department.

At the conclusion of hostilities the Council also hopes that, in accordance with suggestions made from time to time, more provincial members will be able to serve on the governing Council.

In bringing this report to a conclusion the Council desires to place on record its thanks to all members for their loyal and continued support. In extending greetings they couple with them an expression of hope that the days of war may shortly pass away, and that the Society may reap the benefits which it has earned by whole-hearted participation in the national effort.

(Signed) A. D. GAY,  
President.

E. L. GARDINER,  
Executive Vice-President.

JOHN CLARRICOATS,  
Secretary-Editor

# CATHODE RAY OSCILLOSCOPES: THEIR PRINCIPLES AND USES

## PART I.

By J. D. MORRIS (2DRR).

*The importance of the Cathode Ray Tube cannot be too strongly emphasised. In this article the author describes the principles governing its operation and describes a typical circuit arrangement.*

*A special contribution dealing with the Time Bases is being prepared for early publication.*

FROM time to time there have been many suggestions in this journal as to how the average amateur may most profitably devote his efforts in the pursuit of his hobby in view of the withdrawal of transmitting facilities. A large number of these suggestions have naturally dealt with receiver improvements, but there must be many who would like to try their hand at something new. The Cathode Ray Oscilloscope has gained considerable popularity amongst servicemen, and it seems ironical that so few are to be found alongside amateur equipment.

### Theory of the C.R. Tube

Fig. 1 shows the main constructional features of a simple cathode ray tube. The tube itself consists of an evacuated envelope, in which are to be found, in order, the following electrodes: heater, cathode, grid, anode 1, anode 2 and anode 3. Following these are the two pairs of deflector plates, to which the test potentials may be applied. Most modern tubes will work equally well with either A.C. or D.C. applied to the heater, the heater consumption being comparable with that of an ordinary receiving valve. When heated, the cathode emits a constant electron stream which passes through the grid and through a small hole in each successive anode, and

In most tubes a grid is inserted between the cathode and first anode, whose function is to govern the anode current and hence the brilliance. In such cases the grid is connected to a variable source of potential enabling the intensity of the spot to be adjusted to suit individual requirements. This control is usually termed "Brilliance" or "Intensity."

By applying a difference of potential across one set of plates, the electrostatic field produced will cause the electron beam to move towards one of the plates, hence shifting the position of the spot on the screens. If voltages are simultaneously applied to both pairs of deflector plates, it is possible to cause the spot to take up any position on the screen. The plates arranged on each side of the electron beam are termed X plates, and those above and below are called Y plates. Since the movement of the beam is effected by a change in potential on the plates, the above type of tube is said to be electrostatically deflected. Magnetically deflected tubes are also available. In these the deflection is effected by two pairs of coils placed outside the tube with their axis at right angles to the tube axis. However, for most test purposes the former type of tube is preferable, since the input impedance is very high and therefore the circuit under examination is not appreciably damped.

### Focusing

In order that the fluorescent spot may be kept very small, it is necessary to prevent the electrons from dispersing during their travel. This is achieved by focusing the electron beam either by the introduction of a small amount of inert gas into the tube or by the more popular method of electrostatic focusing. Gas focusing is little used in modern practice as it is ineffective when the beam is shifted quickly, whereas electrostatic focusing is effective at all speeds, and is easily adjustable by external circuits.

### Waveform Production

The cathode ray tube is fundamentally a voltmeter capable of giving the graphical resultant of the two applied voltages on the X and Y plates, and since the electron beam has practically no inertia it is possible to read high frequency variations in the applied voltages. In practice we are usually desirous of indicating the voltage as a function of time, i.e., to indicate the actual voltage at all progressive instants of time. This is achieved by connecting one pair of plates, usually the X plates, to a source of voltage which repeatedly increases linearly between fixed limits at a frequency comparable with the frequency of the signal whose waveform is to be inspected. Thus we have a linear movement of the spot horizontally, usually from left

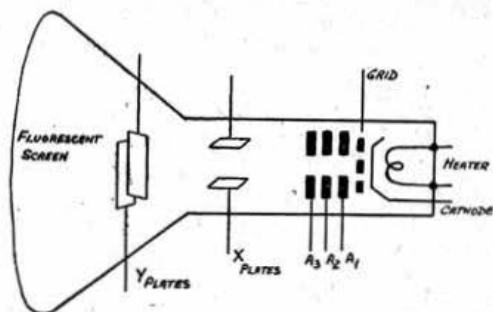


Fig. 1.

Shows disposition of electrodes in a three-anode electrostatic tube viewed from above.

since these anodes have progressively higher potentials applied to them, the electron beam is accelerated. Hence, by the time any given electron reaches the final anode it possesses considerable momentum. Consequently the majority of the electrons will continue to travel until they impinge on some part of the circular screen. This part of the tube, known as the fluorescent screen, is coated internally with a material which fluoresces under electronic bombardment, hence the point at which the electron stream impinges on the screen will be indicated by a green, or sometimes blue, fluorescence.

to right. In order that the return of the spot at the end of each traverse shall not be visible, the applied voltage must be of a saw tooth nature so that in effect the return movement is almost instantaneous. There are many ways of producing this waveform, the simplest being by means of a "Thyratron" valve, but as the subject of time bases is shortly to be treated very thoroughly in these pages it is not proposed to discuss them further.

### Typical Circuit

Fig. 2 shows a typical circuit for a cathode ray oscilloscope, from which it will be seen that the positive side of the H.T. power pack is earthed. This is necessary in the interests of safety, since the deflector plates are very nearly at the same potential as the final anode, so that if the final anode is at earth potential, the dangerously high voltage which would otherwise be present between the test leads and any earthed body is avoided.

As all normal A.C. voltages in radio work are developed with respect to earth, it is often convenient to earth one plate of each pair of deflecting plates, so that we are left with only one wander lead. This is standard service practice and facilitates rapid testing considerably.

Let us now consider the correct method of setting up the cathode ray oscilloscope for examining a simple waveform such as exists on say the output of a 1,000 c.p.s. oscillator delivering about 150 volts peak. Firstly, the brilliance control is set to minimum and the mains applied. The Y plate lead is connected to one oscillator output terminal, the other terminal of which is earthed. Since we wish to examine a 1,000 c.p.s. waveform, it will be necessary to use a fairly low time base speed in order to obtain only a few cycles on the screen. After advancing the brilliance control until the trace is just visible, the correct number of cycles can be obtained by adjustment of the "sweep" or "trigger" control. It is not necessary to know the time base speed, but it is worth remembering that the time base speed multiplied by the number of cycles traced, equals the input frequency on the Y plates. So far we have assumed that the test frequency and the time base frequency bear the same phase relationship at all times, but a little thought will show that either is liable to drift

slightly, with the result that the trace will also drift horizontally across the screen. To overcome this difficulty it is customary to feed a small amount of the test voltage into the time base in such a manner as to trigger-off the latter in step with the incoming voltage.

### Synchronisation Control

This injection is governed by a further control referred to as the synchronisation or "sync." control, the adjustment of which is fairly critical. In the first place the oscilloscope should be set up with the "sync." control in the fully off position and then advanced just sufficiently to render the trace free from drift. It should be borne in mind that the application of "sync." definitely distorts the waveform, but if used judiciously the amount of distortion is negligible. At high frequencies the amount of "sync." that can be applied becomes less and the setting is rather more critical.

### Vertical and Horizontal Shift

On most instruments there are two further controls termed "vertical shift" and "horizontal shift," the purpose of which is to move the spot, and therefore the whole trace, vertically or horizontally respectively. For example, it is usually necessary to adjust the spot so that it falls in the centre of the screen without X or Y plate voltages applied. It is also useful to be able to bring any part of the waveform towards the centre, especially if the applied voltages are such that the trace runs off the screen. These controls are effected by applying a small D.C. potential difference between either the vertical or horizontal plates, so as to cause the beam to have an initial deflection upon which are superimposed the test or time base voltages. Both these controls are continuously variable and need not be altered after their initial setting, as far as routine service work is concerned.

## The Dangers of Incorrect Operation

Before proceeding further with the use of the oscilloscope it is necessary to point out some of the ways in which damage can be caused by incorrect operation. By far the greatest source of trouble results from leaving the spot stationary, *i.e.*, without X or Y plate voltages, and manifests itself by the spot in question, usually in the centre of the screen, losing its fluorescent properties due to the active material being burned away. For a similar reason the brilliance control should be used very judiciously, as the serviceable life of the tube is reduced out of all proportion to the amount of fluorescence obtained.

With regard to the maximum voltage which can be applied between the plates, it is strongly recommended that the maker's figures are not exceeded, otherwise the tube may suffer seriously. Nearly all of the better type of oscilloscopes are provided with an attenuator or resistor network in the Y plate input circuit for use when it is desired to examine waveforms of such voltage as would normally cause the spot to run off the screen. The action is simple, usually consisting of a tapped resistor across the input, with provision for tapping the Y plates across different valves of the resistor hence utilising certain fixed proportions of the input voltage. This adjustment is often carried out by means of a plug which can be inserted into one of

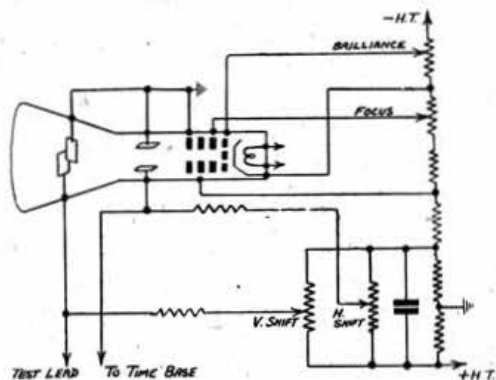


Fig. 2.  
Circuit diagram of oscilloscope, excluding time base,  
showing means of controlling shift, focus, and brilliance.

several pairs of sockets, each pair being marked with the appropriate reduction factor. Incidentally, the author recently investigated several cases in which the attenuator resistor had been burnt out in oscilloscopes of good repute, notwithstanding the fact that the voltages used had been well within the maker's rating. It was finally proved that in each case the instrument had been left connected for a considerable time with the attenuator in circuit. The only way to prevent this type of failure is by avoiding long tests necessitating the use of the attenuator.

Another point worthy of note is that many oscilloscopes dissipate a considerable amount of heat when in use, therefore the ventilation usually afforded by the holes or louvres in the top should not be rendered ineffective by placing other pieces of test gear, etc., on them.

When operating an oscilloscope in any place except a fairly dark room it is advisable to use some form of hood for viewing purposes, in order to exclude as much extraneous light as possible. This has a twofold advantage, inasmuch as the strain on the eyes is reduced, especially when used over long periods, and also enables a less brilliant trace to be used, with the obvious result of increasing the tube life as outlined previously.

In a later article the uses of the oscilloscope will be described, some of which necessitate the use of external amplifiers for amplifying the incoming test voltage.

(To be continued).

## A Novel Gramophone Pick-Up Device

By L. W. SMITH (2FSI)

THE accompanying sketches give details of a device which the writer has found extremely useful, and which may be of interest to other members.

It is intended mainly for use with a gramophone arrangement assembled in the form of a playing desk, and is designed to eliminate the human factor in the placing of the P.U. on the record. An added refinement is the use of a groove indicator, which, if divided with sufficient accuracy allows the P.U. to be removed from the record and replaced virtually in the same groove.

The sketches will, it is hoped, prove to be sufficiently clear for any mechanically-minded reader to follow.

In brief, the device consists of an ebonite rod, mounted eccentrically, constructed to bear down on a metal plate, fixed to the rear of the pick-up, when it is rotated. In practice, with the dimensions given, a quarter of a turn was found to be sufficient to lift the P.U. well clear of the record.

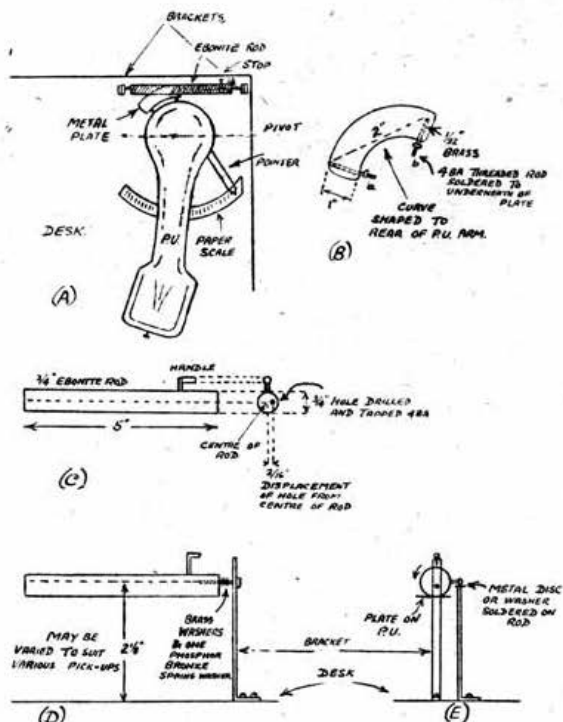
The dimensions are those used on the writer's own playing desk, but it is quite obvious that the shape of the metal plate will have to be varied to suit individual pick-ups.

As to the fixing of the metal plate, it is necessary to drill an elongated hole in the P.U. case to take

the support (a). It is then advisable to fix (b), so that the plate is held firmly but not rigidly, and then line up the plate before fixing (a).

In the shaping of plates other than that shown in the sketch, only one precaution is necessary; i.e. see that whatever the position of the P.U., there is plenty of plate surface underneath the rod. If this precaution is not taken, the P.U. (especially near the centre of the record) will be pulled over at an angle other than 90 degrees to the record. If this happens, it increases the difficulty of lowering back into the required groove.

In mounting the ebonite rod it is necessary to take up any play which may occur with spring washers.



Details of the Pick-up Device described by the author

### Groove Indicator

The groove indicator may consist of a thin metal pointer attached to the P.U. arm, mounted so that it just clears the surface of the desk when the P.U. is in the playing position. The paper scale can then be pasted on the desk itself.

The rod may be made of wood, if ebonite is not available, in which case it is advisable to fix it with wood screws. The handle can be made to suit the constructor's own taste.

Some form of stop is also required in order to prevent the rod being turned right over, and thus lifting the P.U. off the record again. The form used by the writer is shown in sketch (e).



# A CURRENT INDICATING DEVICE FOR THE BLIND EXPERIMENTER

*Here is an unusual article from the pen of a prominent Northern Ireland amateur, whose experiments have extended over many fields of study.*

By J. B. PARKE, D.Sc. (GI8PA)

SOME time before the war the writer, during a QSO with an amateur who had lost his sight, was startled to learn that his normal method of tuning his transmitter was to touch the tank coil and tune for maximum effect. Such a discovery naturally led to thought on current indicating methods which could be used by the blind. An investigation among those who were known to operate under the handicap of blindness, showed that the only idea in general use was to feel the needle of a milliammeter, either specially constructed for the purpose, or a normal type with the glass removed. The greatest difficulty appeared to occur when tuning for resonance, i.e. minimum dip, and also during neutralisation where, in some cases, very small changes in plate or grid current had to be observed.

## A Novel Suggestion

While considering the matter the writer hit upon the idea illustrated in the L.F. oscillator circuit shown. As is already well known, the note produced by such an oscillator depends largely upon the amount of high tension voltage applied. Using a Mullard PM 1 LF valve with an anode voltage of 3, the note is supersonic and as this voltage is increased, the frequency of oscillation drops right through the audible range until, with about 15

volts, it becomes a low-pitched buzz. The anode voltage necessary to produce such a suitable range of frequency variation depends upon the valve and associated circuit but is easily found by experiment.

If, instead of using a small battery to provide high tension for the oscillator, we employ the voltage produced across a resistance  $R$  by the flow of high tension current in the apparatus which it is required to observe, then any change in this current will be indicated by an alteration in the frequency of the note heard in the output of the instrument. If a small power valve is used in the oscillator, its output should be sufficient to be heard comfortably on a loud-speaker.

The value of the resistance  $R$  depends upon the type of valve used, but this can easily be determined by experiment. A suitable switch in conjunction with a number of resistances having values of 10, 100, and 1,000 ohms, would make a convenient multi-range instrument. Alternatively, a 1,000 ohms variable resistance (which might be adjusted to give any standard note) could be calibrated and marked to read milliamperes from the position of its control knob. This scheme will not, of course, give an accurate absolute value for the current being observed but it is very useful for tuning purposes. Additionally, a very good first approximation to the value of the current, can be arrived at once the oscillator has been calibrated by reference to a normal milliammeter.

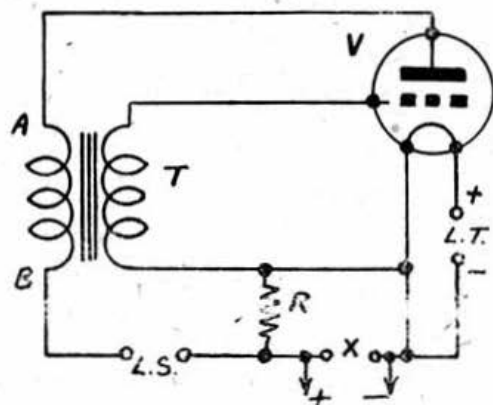
If the output of the instrument is too low to be heard in comfort on a loud-speaker, the addition of a low frequency amplifying stage would be necessary. In the apparatus constructed by the writer the note from the oscillator alone was easily heard.

## Connection to Transmitter

If the instrument is to be plugged into a high tension circuit, i.e. the position occupied by most meters in a transmitter, it should be remembered that the entire circuit, including the L.T. battery or mains transformer, will be at the same voltage to earth as the power supply of the stage under observation. This will not in any way alter its operation, but accidental contact by the operator would be dangerous. It is vitally necessary, therefore, that the oscillator and all associated parts, including loud-speaker, should be built into a suitably enclosed box and then placed out of harm's way, to avoid accident. The above difficulty could be overcome by observing the current in the cathode circuit of the stage being tested, but this would tend to alter its conditions to a greater extent than the original position in the high tension lead.

## Does it Work ?

The natural question arises—does the idea work ? The writer was able by its aid to tune his transmitter, including neutralisation, when blindfold, and the idea was then sent to an operator who had lost



Circuit of Current Indicating Instrument for the Blind.

$R$  — value to be determined by experiment or could be made variable (1,000 ohms).

$T$  — Any L.F. transformer whose primary will carry the plate current of the valve and having a ratio between 1:1 and 5:1. An OPMIC (Ferranti) was used in the original circuit.

$X$  — The leads at  $X$  go to position which would be occupied by a normal milliammeter. In the event of the valve refusing to oscillate, reverse connections to  $A$  and  $B$ .

(Continued on page 264)

## CLASSIFYING CONDITIONS

*It has often been said that the average non-transmitting amateur is interested only in collecting QSL cards or in building receivers. The author of the present article has demonstrated in convincing style that important work is possible in other directions.*

By C. R. BEAVEN (2BVD)

ONE of the most fascinating—and oft-neglected—sides of our hobby is that of “conditions.”

The success or failure of any signal radiated, especially on the higher frequencies, is governed by that ever fickle dame “Conditions”; and how often has that fact been brought home to us, whatever our interest in the radio world, be it amateur, commercial, service or broadcast!

To many amateurs the studying of conditions conjures up thoughts of magnetic storms, sunspots, local disturbances, together with a medley of expensive apparatus such as barographs, barometers and other paraphernalia of the laboratory. This side of the problem, however, can safely be left in the capable hands of the more learned.

In this short article the writer proposes to give an account as to how “conditions” affected him, and what came of studying the data correlated in the hope of attracting the notice of the more qualified in the possibilities and solutions of those results. No expensive apparatus was used at all, merely a modest receiver—to wit, an 0-v-1—a notebook and pencil, together with full employment of the powers of observation.

### First, the Weather

The problem of any possible relationship between the weather and the state of the ether has always proved of great attraction to the writer, and after many sporadic efforts he set himself earnestly to the task during the summer of 1939. In common with most A.A. men, a good deal of listening was done on the amateur bands, and in this case principally on 7 Mc. This band, as everyone knows, is subject to all kinds of vagaries in its behaviour, and many, many times has the thought arisen: “Could this erraticness be connected in any way with past, present or future weather?”

So the plan of attack was drawn up, and subsequently faithfully executed.

Each day, and as far as possible at the same time, the receiver would be switched on and the 7 Mc. band fully explored; all signals, both phone and c.w., were carefully noted, together with the general level of signal strength and the presence of atmospherics or “mush.” A miniature treatise as to whether the band was “alive” or “dead” or just “moderate” was added, and the whole entry in the log-book was qualified by a detailed entry regarding weather conditions.

Thus in the course of a few months an enormous wealth of data was accumulated, which was in due course very carefully examined, indexed, cross-referenced and even filed. Many were the spare hours spent in poring over that data; much tobacco was consumed, many watts of “midnight oil” burned, and many headaches ensued—all apparently to no avail, for there seemed no connection at all between the weather and fickleness of 7 Mc. Despair began to set in and the log-book was written up with “No relationship.” Dame Fortune then took a hand, and investigations scurried down another avenue of approach.

### Second, the Moon

The current moon theory was just about to be abandoned as negative when the writer was fortunate enough to hear a lecture by Capt. Ben Wallich (G6BW) at a meeting of the Bristol Section of District 5. Here G6BW expounded in masterly fashion, supported by graphs, gramophone records of DX contacts, etc., his proposition that conditions were best for DX work on 28 Mc. when the moon was between the last quarter and new. This statement had a profound effect on all his hearers, and amongst the barrage of questions was one which struck the writer particularly; it was as to whether G6BW had any knowledge of his theory being applicable to any band other than 28 Mc. G6BW replied that he had no knowledge since his main interest lay in that band.

This prepared new ground at 2BVD, and all the old data for 7 Mc. was again brought to light. Recourse was made to the almanac of a certain Mr. Moore, which gave sufficiently accurate information on the behaviour of our satellite; and once more the process of analysis was applied in the light of existing knowledge. Alas! disappointment was in store again, since there appeared no times best situated for DX in relation to any of the moon's phases as far as 7 Mc. was concerned.

One fact, however, struck the writer very forcefully, and once again the pages of data, the cards of the file, etc., were turned, and this time with results.

### Third, the Inspiration

Due apparently to the peculiar style of recording impressions in the log-book, a series of statements appeared at intervals, viz.: “Conditions did not favour ‘phones’ at all, but c.w. stations appeared normal.” This repetition gave birth to the idea that “conditions” followed their own peculiar laws. Prompt checking of data followed, which confirmed this idea, and it was soon established that any given state of activity (on 7 Mc.) would have its exact counterpart on some other occasion; also these states were truly definite and capable of repeating themselves.

The available data subsequently showed that there existed eight of these states of conditions, and at any one of them only certain signals at a definite maximum strength were available. The addition of a negative state brought the total to nine—the conventional number in radio practice.

Thus it became a simple matter to marshal the various items in order from 1 to 9.

### The DXC Code

The accompanying table will show clearly the variations in conditions and how the writer grouped them, non-technically and with the approximate S strengths of signals.

A further spell of close listening followed, and great attention was paid to the prevailing conditions



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By Manfred von Ardenne. In this book a very wide field is covered and the book deals with fundamental principles and early developments as well as with present-day methods and apparatus. It describes the theory and construction of the cathode ray tube; and it deals with the principal accessories, including the mains equipment, the pre-amplifier for increasing the sensitivity, the time deflection apparatus and photographic recording equipment. 42s. net.

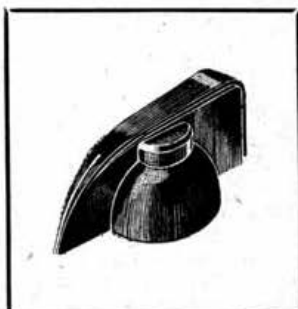
### RADIO RECEIVER SERVICING AND MAINTENANCE

By E. J. G. Lewis. A practical manual specially written to give the radio dealer, salesman, and the service man up-to-date and reliable assistance in the technical details of their work. A handy fault-finding summary, combined with the index, is a feature of the book. 8s. 6d. net.

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on the band, and each time it was found that conditions fell into its appropriate group.

Naturally a name had to be found, then, for this grouping, and eventually it was christened "the DXC Code," "DXC" standing for DX Conditions. As previously stated, no technical explanation is to be offered regarding the behaviour of conditions, since the writer is not in a position to furnish one at present; nevertheless the fact remains that certain laws are undoubtedly in force, as an investigation on the lines indicated will prove.

**Table showing the Classification of Conditions on 7 Mc.**

| DXC No. | STATE OF CONDITIONS.<br>Local = British Isles.<br>DX = European. | Approx. Signal Strength Levels.<br>S. |
|---------|--|---------------------------------------|
| 1       | DEAD FLAT. No signals heard.                                     | —                                     |
| 2       | POOR, with very weak DX signals                                  | 1-2                                   |
| 3       | MODERATE, with only DX signals                                   | 2-6                                   |
| 4       | MODERATE, with local and DX signals.                             | 2-6                                   |
| 5       | MODERATE, local signals only ...                                 | 2-6                                   |
| 6       | MODERATE, good for c.w. only ...                                 | 2-6                                   |
| 7       | OPEN, DX signals only ...  | 6-9                                   |
| 8       | OPEN, local and DX signals ...                                   | 6-9                                   |
| 9       | OPEN, local signals only ...                                     | 6-9                                   |

The uses of such a system proved manifold. For example, in log-book recording, an entry of a DXC number, with the addition of QSB or QRN, etc.,

will give an accurate picture of the state of the ether at any time. Again, on the transmitting side far greater accuracy in reporting can be achieved. In "the old days," i.e., prior to hostilities, it was customary to give the other station a plain signal strength report with no indication whatsoever of conditions prevailing at the receiving end. Let conditions govern signal strength! For example, if one adds, say, DXC4 to an S5 report, the other operator can then appreciate conditions prevailing at the receiving end and consequently form a far better idea as to how his signals are behaving. A plain S5 report conveys but little, since it could be S9 if conditions were different. The addition of some form of indication as to conditions puts an entirely different complexion on the matter.

It should be noted in passing that, as 7 Mc. was the band used, all British Isles stations were termed "local," and all Europeans "DX." Operations had just commenced on 14 Mc., using European signals as local, and extra-Europeans as DX, when the outbreak of war put a rude finish to a promising beginning.

One point arises in connection with the system, namely, the desirability of indicating the direction or source of the main DX signals. An experimental method was adopted whereby the prefix or prefixes of the country or countries best heard was added to the DXC indication.

It is hoped that this brief account of activities will prove of interest to certain readers who are better able to undertake the task of investigating the matter thoroughly. Should it provide the germ of an idea to someone, the writer will be amply rewarded in satisfaction.

## Letter to the Editor

### Reactivation of Valve Filaments

To the Editor of THE T. & R. BULLETIN.

DEAR SIR,—With reference to the article in the December issue regarding reactivation of valve filaments, I should like to raise one or two points.

Firstly, and most important, I feel that it is most undesirable to attempt to reactivate any valve which is still usable, for even in expert hands there is a danger of anything but an improvement being effected. This point will be further referred to later. Of course, if the valve is already unusable no harm will be done.

Secondly, local heating of the valve envelope (in order to release getter) is also in most cases likely to release gas and thus cause the valve to show considerable grid current. Often is this so to a degree as to cause visible haze within the valve, or even poisoning of the emitting surface.

Third, the treatment of reactivation which is suitable for indirectly heated cathodes, is unsuitable for use with filamentary types and *vice versa*.

Fourth, whilst the effect of a certain method of reactivation on one make of valve will produce a satisfactory result, the effect of the same method on another make, may produce a complete failure. This is due to the fact that nearly every maker uses different methods of manufacture and processing, a point which has been proved many times even by experts.

The results obtained by baking the filament depend upon whether the filament is of the thoriated or oxidised coated type.

As regards indirectly heated types the writer is correct in saying that reactivation should take place at about twice the normal heater volts, but the results are improved if current at a low voltage is drawn from the cathode. This is most conveniently done by utilising the control grid as the anode.

The results obtained with the 2 volt types were more likely due to poisoning of the filament by the gas released through heating the getter deposit than to the getter being deposited on the pinch. In practice, the only satisfactory method is to refire the getter in the getter "flag" by means of R.F. induction heating as is done in manufacture, but this is not very practicable for an amateur as it requires approximately 1/4 kilowatt of R.F., plus a permit to produce same!

It is regretted that it is impossible to go further into this matter in print, because the arts of activation and reactivation are to some extent trade secrets. In any case, as mentioned above, no guarantee could be given as to the results obtainable with makes other than those with which I am acquainted.

Yours faithfully,  
D. N. CORFIELD (G5CD)

### Thanks

The General Secretary and Miss Gadsden wish to thank all members who sent them Christmas and New Year greetings. These expressions of goodwill were greatly appreciated.

## EXPERIMENTAL SECTION

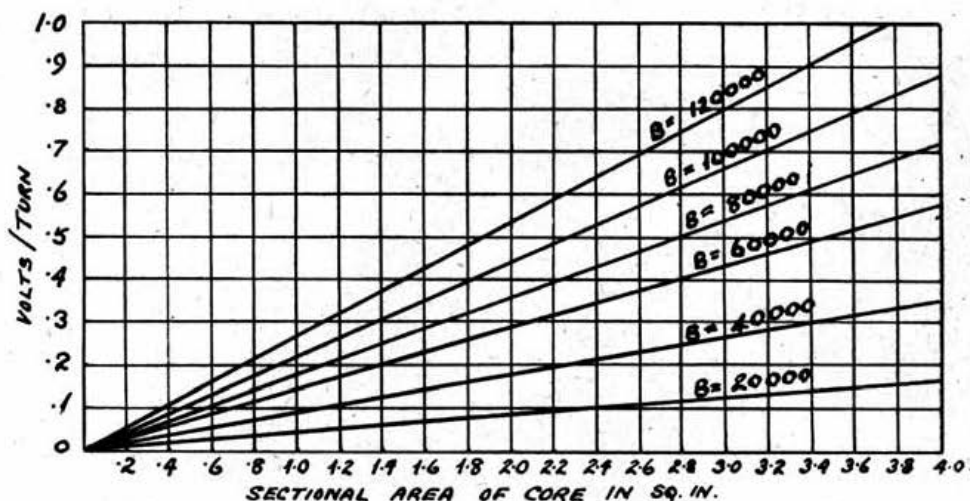
### Re-designing Transformers

UNDER present conditions it may be found that power transformers are difficult to obtain and expensive to buy, but second-hand transformers, marked "unknown rating" or for "rewinding," are frequently advertised at reasonable prices.

The following notes, which are offered to assist those readers who wish to design their own transformers, will be based on the assumption that only a certain core is available. They will, in this way, differ from data dealing with normal practice where

Flux densities of around 60,000 lines per square inch are usual and this figure should be taken for the initial calculations. If it becomes necessary it can of course be increased.

Having decided the required flux density and the sectional area of the core the volts-per-turn of the transformer can be read off from the accompanying chart. The flux density should be kept as low as possible consistent with a practicable size of winding, otherwise the core losses will be high. On the other hand, very low flux densities will produce less volts-



Volts-per-turn plotted against sectional area of core for various flux densities.

the core is designed to suit the requirements of an individual job.

The first task is to remove the original windings, then measure up the cross section of the core and the space between the centre and outside legs of the core into which the windings must be designed to fit. The voltages and currents required in each secondary should be tabulated and from these figures the total wattage required can be calculated. The secondary watts divided by 0.9 will give, approximately, the primary watts. From an examination of the curve published last month the required wattage should be compared with the core area in order to make sure that it is within the possible rating of the core; i.e. if 100 watts are required, the core should have an area of at least 1.8 square inches. In measuring the sectional area of the core, 10 per cent. should be deducted to allow for the stacking of the core which incidentally is not equivalent to a solid mass of iron.

### Volts-per-turn

The volts-per-turn are next determined from a knowledge of the core area and the flux density.

per-turn and larger windings, with high copper losses.

The basic formula upon which the design is founded may be expressed in two ways:—

Voltage induced in secondary =

$$\frac{B \times A \times N \times f}{10^8} \times 4.44 \text{ volts}$$

Volts per turn =

$$\frac{B \times A \times f \times 4.44}{10^8}$$

where B = Flux density in lines per square inch

" A = Area of core (sectional) in square inches

" N = Number of turns

f = Frequency in cycles per second

### Size of Windings

Having chosen the volts-per-turn, the number of turns for each winding can easily be calculated. Allowance must, however, be made for the voltage drop in the winding when it is loaded. This figure is obtained from a knowledge of the length of wire used in each winding, which can, in turn, be calculated from the mean length of one turn. In order to

determine the latter, it is necessary to find out what space each winding will occupy. This calculation is also used to ascertain whether the designed winding will fit on the core.

The size of wire is chosen from a consideration of the required current from each winding and is made in accordance with the principle mentioned in last month's Notes. Care must be taken to allow for all extra insulation when working out the space occupied by each winding. It is wise to allow at least 10 per cent. above the theoretical amount for crossovers, etc.

The choice of insulation is largely a matter of commonsense unless voltages above 500 volts are used. Commercial oiled linen and leatheroid are suitable for all interwinding insulation but, as additional protection, mica tapes with a tissue paper backing may be used. A fairly thick bakelite or cardboard former should be used between the coil and the core as there is danger of damaging the coil when the core is being built up.

### Primary Current

The primary current can be taken as the quotient of total secondary wattage divided by 0.81 of the primary volts. This assumes a power factor of 90 per cent.

It seldom happens when transformers are being designed, that the first calculations produce the required results; in other words, some factor becomes impossible. For instance, with the required number of turns and size of wire the windings may take up more space than there is available. It is then necessary to experiment with a smaller wire diameter and a smaller number of turns to produce a winding, with the required characteristics, which will fit into the available space. The first attempt can be made more certain by under-designing the transformer, i.e. by using low flux densities and wasting space and core, but this is a lazy and inefficient method.

Many interesting hours can be spent in finding out the effect of altering the various factors involved, for although it is not expected that the average amateur will be able to design an ultra-efficient transformer, an efficiency of 80 per cent. should be possible without much difficulty. Next month the notes will include an actual design example and some advice on calculating efficiency. G5HF.

### PROPAGATION GROUP

For the first time for several months we are in a position to refer to the activities of two of our Propagation sub-groups.

The *Aurora Sub Group*, having started a letter budget, the organiser, Mr. E. Banks (2CNC), 346, Hatfield Road, St. Albans, Herts, seeks the co-operation of all interested members, especially those who are located in Northern Scotland and Iceland.

The *28 Mc. Sub Group*, under the direction of Miss N. Corry, G2YL, are still flourishing, and some interesting discussions have taken place recently as to the "whys and wherefores" of H.F. propagation. Letter budgets continue to be circulated.

As was to have been expected, now that the sunspot minimum is approaching, the 28 Mc. band very frequently has nothing to offer in the way of DX signals. Perhaps this is just as well as so many people have other matters to keep them busy.

G6DH.

## Book Review

### RADIO RECEIVER SERVICING AND MAINTENANCE.

Third Edition. By E. J. G. Lewis. 253 pp. Published by Pitman. Price 8s. 6d.

The latest edition of this publication has been especially prepared for the guidance of the many dealers who are valiantly carrying on their servicing departments without experienced technical staff. To assist them, chapters have been included on Press-Button Tuning and Automatic Frequency Control. Among the other subjects dealt with are Fundamental Considerations, Valves and their Faults, Circuits, Servicing Equipment, Testing Components for Faults, Locating Faults in Receivers, The Superheterodyne Receiver, All-Wave Receivers, Radio-gramophones, Aerials, Earths and Interference.

The information given in regard to A.F.C., will prove especially interesting to amateurs who have experimented with circuits designed to avoid frequency drift. Commercial methods of overcoming this difficulty are discussed and advice given on the correction of A.F.C. faults. A typical discriminator circuit is illustrated and its operation explained.

No amateur who is *really* interested in receiver design, maintenance and servicing problems can afford to be without this up to date text book.

### Most Timely

*The Trader Publishing Co., Ltd.*, Dorset House, London, S.E.1, have just issued a List of Equivalent and Preferred Alternative Valves. At no time has such a list been more urgently needed, for dealers everywhere are continually being faced with the problem of finding equivalents to the valves originally fitted to a receiver sent in for servicing. The list, which has been compiled by the British Radio Valve Manufacturers Association, provides the relevant information on nine different British makes.

Valves are listed according to type and manufacturer and those printed on the same horizontal line are reasonable electrical equivalents. Certain groups are bracketed together, and an alternative, printed in bold type, on any of the lines encompassed by a bracket, may be used in place of any of the bracketed valves.

The list comprises 8 pages and cover and measures 10in. x 8in. It is punched and corded for hanging.

Copies are available from the address quoted, price 1/1 each, post free.

### The Wireless World Diary and Reference Book for 1942

Once again this old friend comes to greet us at the beginning of a New Year. In addition to the diary section, which provides a week per opening, a comprehensive reference section is included. In this section will be found several useful Abacs, conversion tables, data and formulae, frequency allocations, hints and tips of many kinds, notes on electrical interference, resistance values of metals, electrical and radio symbols, typical receiver circuits, valve bases, etc.

Published by *Hiffe and Sons*, Dorset House, Stamford Street, London, S.E.1, this all-the-year-round companion can be obtained from most stationers, price 2/9, including purchase tax.

# KHAKI AND BLUE

The many friends of Jack Drudge-Coates (ex G2DC-VU2FO) will join with us in offering him hearty congrats. upon his well deserved promotion to Major. Jack who is at Mhow, India, has recently met a number of overseas hams who have been attached to his school for training. He writes enthusiastically of their ability and mentions that all did exceedingly well on their respective courses. Their amateur experience has proved to be invaluable, and it has been due to this fact that they have been recommended for special duties.

G2MI records further news from Mhow in his monthly article published elsewhere in this issue.

A hearty welcome to P./O. Dudley Nourse, VK2DQ, who provided an exception to the rule by contacting Headquarters shortly after his arrival in England. Dud, a Wireless Operator, Air Gunner, hailing from Broken Hill, N.S.W., expects to be at No. 1 S.S. early in January where further ham contacts are awaited. We note from District 7 news that VK2DQ has been entertained by the Bourne-mouth boys.

H. G. Newland, G5ND, a moving spirit behind the now dormant Olympians Radio Society, informs us of his promotion to Ft./Sgt. As he was married in September he receives our dual congratulations. Last month he was recovering in hospital from a minor operation, but by now should be either at No. 6 S.S. or at No. 10 R.C. His present home address is "La Boisselle," Somerset Avenue, Blackpool. He sends greetings to old friends in District 15.

Apropos G8IG's enquiry last month, we understand from A.C.2 Kenny, BRS3825 that Charlie



## HAMS HIT MHOW

During recent months many amateurs have been stationed at Mhow, India. Here are a few of them. Left to right standing: C. D. Nodder, P. G. Smith, HB9AY, Major J. Drudge-Coates, VU2FO, W. Timbrell, BERS.371, H. F. Thorne, G3IF, A. J. Kindness, BERS.266. Left to right sitting: Cpl. Collins, VU2DB, A. B. Crawford, C.Q.M.S. T. Arnold, VU2AN, H. M. Hodgeman, XU8HM, Lt. J. T. Blackwood, G3TG.

Miller, VK2ADE is serving with the R.A.A.F. somewhere in South Wales.

News is to hand of Sgm. J. B. Kay, G3CO, now a prisoner of war in Italian hands. According to Mr. Kay, senior, there are two other amateurs in the same camp but due to censorship difficulties, it has not been possible to check their calls. By devious means, however, G3CO has been able to hint that the calls are G4LB and ZL1DR, neither of whom are members. Can anyone provide confirmation or otherwise?

G3CO is very fit, and through his father he requests that his best wishes be conveyed to old friends.

Mrs. Johnson advises us that her husband, J. S. Johnson, G3KB, is now serving as a Corporal at an R.A.F. station overseas. He sends 73 to old friends.

W. J. Barker, G3NQ, who is with a Western Electric Film Unit in the Orkneys giving shows to Army, Navy and Air Force personnel, would like to meet amateurs serving in that area. Contact can be established c/o G.P.O. Kirkwall, or via his home address, 22 Beecholive Avenue, Mitcham, Surrey.

Cpl. D. Mayes, GM6SJ, serving abroad with the R.A.F., sends greetings to all old friends *via* his fiancée, Cpl. E. M. Tasker, of the W.A.A.F. GM6SJ would like to receive letters, which should be addressed 761158 Cpl. D. Mayes, R.A.F., c/o R.S.G.B.

Ft./Lt. Jack Hum, G5UM who is, or was until last month, serving as a Squadron Signals Officer in the North of Scotland, sends New Year Greetings to all "Welwynites" and others who helped at the 1.7 Mc "Armchair Station" during past N.F.D.'s.

G5UM mentions that until recently his station Signals Officer was Ft./Lt. R. C. Lawes, G5ZV, one-time member of the C.W.R. Group MQB. 5ZV is now on his way to the East. ZL2AG is serving as a Radio Mechanic with 5UM but neither is looking forward too gaily to what appears to be an early move to even colder climes. They feel, however, that there may be some compensation in their Arctic abode as already several hams are installed there. So even if the ordinary amenities are lacking ham spirit won't be.

Ft./Lt. E. Humphrey Swain, G2HG, an enthusiastic V.H.F. worker in pre-war days—now stationed in Oxfordshire—sends greetings to all old friends.

Friends of Norman B. Yates, 2HBK, will be sorry to learn that he was invalidated out of the R.A.F. last month. He will welcome letters at his home "Grasbil," Wainfawr, Carnarvon.



South Wales members in particular will be glad to hear that L.A.C. Henry Abraham, GW3AJ, is fit and well, somewhere in the Middle East—we suspect YI. During his stay in Egypt earlier in 1941, he had the pleasure of attending a Ham Conventionette organised by Frank Pettitt, SU1SG. We have had no details of this meeting, but according to 3AJ "it was a treat to get back to the old 'ham' atmosphere once again." He thanks all who were present, for a most enjoyable evening and sends a special word of appreciation to SU1AX for risking his neck to bring a party back to camp without headlights!

GW3AJ was one of those who attended the Ham Meeting, held at sea, organised by Ken Walker and Sam Pollard. He wishes to be remembered to all who were at that never-to-be-forgotten meeting.

Unconfirmed news has been received that G. E. Cooper, G3PP, is a prisoner of war. Has anyone details?



T. L. Stevens, G3XV, whose home is in Wellington, Shropshire, is now a Writer in the Royal Navy.

Our most regular overseas correspondent, Eric Trebilcock, BERS195 of New Guinea, writing some weeks before war came to the Pacific, sends various items of news concerning Australian amateurs in the Forces.

According to Bill Moore, VK2HZ, who is in Malaya with Oswald Dykes, 2AIJ, there are 30 or more Service hams in that part of the Empire. He has met VS1AL. F/O. Murray Orr, VK3OR (R.A.A.F.), has died from illness. Vaughan Marshall, VK3UK, has been promoted to S/Ldr. Syd Madden, VK6MN, M. Myers, VK2VN, and Bill Moore are all Pilot Officers. Joe Kilgarriff, VK5JT, himself a Sergeant in the R.A.A.F., has two sons serving as P.O.'s in the same service. Joe is well over fifty years of age.

Eric Trebilcock's last ham visitor was VK6MN.

From a Press cutting we learn that F/O. A. A. B. Slight, R.A.A.F. (VK2ZA), a Signals Officer at Central Area Headquarters, was awarded the M.B.E. (Military Division) in the last Birthday Honours.

L.A.C. L. D. Hubbard, 2FRM, now with the R.A.F. in Salisbury, Southern Rhodesia, would appreciate occasional letters from old friends in District 13 and elsewhere. Correspondence should be addressed to him via 45 Albert Road, Evesham, Worcs. 2AJW, 2BLJ, and ZE1JK are serving with him. They are forming a Club in camp and hope to meet many other amateurs in the course of time. ZE1JR has been contacted.

P/O. Laurie Ridgway, G2RI (East Midlands D. R.) having forsaken "the bind" at No. 1 S.S., is now having a "quiet, peaceful time" at an important F.C. station in East Anglia. We suspect he has a special interest there, as it is the same station he served at before going to No. 1 S.S.! He has met a number of overseas amateurs including WILYG and other Americans who have been on a visit to see the "pretty pretties." Laurie sends greetings to all old friends at home and abroad.

On his last night in Blighty Cpl. J. T. Nisbet (R.A.F.), GM3SM, sent an article for publication. As we have not received his overseas address, we are employing this medium for acknowledging receipt in the hope that he will see a copy of this issue. Nisbet discovered that his new C.S.O. was to be Ft./Lt. Harry Groves, 2BGN, whose departure for an overseas destination was referred to last month.

Capt. R. S. Broom, BRS3401, now serving with the R.A. would like to meet District 6 members. He can be reached c/o "Thatcher Lee," Bay Mount, Paignton, his home address.

Sgt. A. G. Davies, G2PC, who is with the R.A.F. at a station in Oxfordshire, bemoans the fact that after living in a "hams paradise" he is now a "lone bird." He has tried the usual stunts (BULL. under arm—call sign on respirator case) but no one has fallen for the bait.

He mentions that A.C.2 Bamber, G4GL, died recently as a result of a fall in the blackout. The call G4GL was held by Park Hill School, Birkenhead, so presumably Mr. Bamber was an operator at the school station.

A.C.1 R. Kenny, BRS3825, asks for news of 2HGG to whom he sends 73. Letters should be sent c/o



Sgt. Air Gunner P. Pearce, G4AA, of Croydon, whose photograph we reproduce herewith, has been reported missing whilst on operations. We hope to hear shortly that he is safe.

30 Churchbury Road, Enfield, Middx. Kenny has recently been stationed in South Wales.

From Iceland comes news of Alec Heathcote, G3JR, now a P./O. in the R.A.F. He has already made contact with TF5C and is hoping to meet other Iceland hams before he returns. Alec would like to hear from J. A. Burt, G4AB, P./O. Brabington, G5ZO, and P./O. R. Thornley, 2DAF, as well as other old friends of happier days.

Cpl. R. J. Rider, G8IX, writing from an R.A.F. station in the Isle of Harris, mentions that he has as companion, L.A.C. Barlow, ZL11Y.

Ldg. W/T. Mech. "Bill" Hamer, G3WT is now at an R.N. Wireless Station in Fifehire, and has Jack Brown, G3PI, as comrade-in-arms. He seeks news of G6KS (R. Signals). Where are you hiding, Harry?



The unique two-colour Christmas Card designed by A.C.2 P. Beer G3AM, who is serving in Egypt.

Most unique of the many airmail and airgraph Christmas cards received at H.Q. was the one reproduced above. The design, presumably a wood-cut, was imprinted on the inside of a standard overseas air-mail letter envelope.

G3AM mentioned that it was an "amateur" production, but all who have seen the card consider it to be of high professional merit. Beer, who is with the M.E.P. in the M.E., has met several amateurs including the second op. of SUICH.

H. S. Chadwick, G8ON, pre-war T.R. for Worksop, having passed out from the W.O.M. Course at No. 1 S.S. with his "props," has recently been promoted Corporal instructor at the school. He seeks news of Gunner R. A. Simpson, G8SD.

Apropos the paragraph published in District 14 notes last month, Pte. Ken Moody, G3VY, of Sheffield, points out that his name and call were spelt incorrectly. He has recently remustered as a Radio Mechanic in the R.A.O.C. after serving in the R.E. (Postal Section). He can be located at Tofts Garage, Braintree, Essex.

"Early Bird" Harry Willets, 2FPI, writing from the M.E. under date of September 14 last, mentions that he made the A.C.1 grade in an abbreviated W.O.M. Conversion course. He says that if he had read the "Vade Mecum" articles more carefully before the board he would have done better, because several of the questions were answered for him by G5MP! Needless to say, the exam. paper was set by a ham! No names—no pack drill!

Harry sends congrats. to G3IY upon winning the M.M., and asks that his greetings be extended to all "Early Birds."

A.C.1 Philip Nicoll (G5ZN) has been posted from Lancashire to an R.A.F. station in Yorkshire where he found G3WN. and G3YQ working as radio-mechanics.

Sgmn. J. D. Baker, BRS3766, serving with the R. Signals has met VE4AHH, 3 LX, 3AOA, W2JUI, W8IYU and W7FHZ at various service Clubs in London. He suggests that all who visit the American Eagle Club, the Beaver Club, and Y.M.C.A. should look out for overseas amateurs. A QSL card on the notice board would probably be the easiest way of making contacts.

A.C.2 C. R. Beaven, 2BDV, is now at No. 5 S.S., where he hopes to meet many members. He has been busily engaged in fitting out the school with a nice 500 watt Tx. What a temptation for an A.A. man!

The question has been asked: Is Gunner Denise Bullough 2ATB, the first pre-war YL amateur to join the Services? We believe the answer is "Yes."

A.C.2 A. W. Ryley, G4NX, whose home is in Birmingham, writes from No. 3 S.S. to say that he has not yet met a single ham at the School. We would again urge the "resident population" at this school to follow the lead set by No. 1 S.S. and fix a regular meeting each month. G4NX sends cordial greetings to his friends in the M.A.R.S. He also urges all District 3 members to send news to the scribe.

F. G. Hoare, G2DP, is anxious to receive news of Tim Teehan, ZL2SK, of Donnevirk, New Zealand. Tim enlisted in the R.A.A.F. shortly after the outbreak of war, and sailed from Melbourne during July 1940. Information should be sent to G2DP at 6 Dunheved Close, Thornton Heath, Surrey (phone Thornton Heath 2849 after 6 p.m.).



Bernard Hutton, 2BFH, of Tooting is now serving with the M.E. Forces.

G6CL was pleased to receive at Headquarters Airgraph Christmas cards from many old friends including Lt./Com. W. E. G. Brigden, G6WU (Syria), Sq./Ldr. Ken Jowers, G5ZJ, Ft./Lt. Stan Henton, G5VU, Ft./Lt. H. F. Maddox, BRS2828, Lt. K. E. S. Ellis, SU5KW, Cpl. Rowland Shears, G8KW, Cpl. R. A. Archer, 2AXP and L.A.C. Don Duthie, GM6IW.

It is regretted that it is not possible to reproduce the many novel designs used for these cards.

### News from No. 1 S.S.

Although the attendance at the December meeting fell short of expectations, those who attended had an enjoyable evening. Several new arrivals were warmly welcomed by the "resident population."

At the next meeting, to be held on Monday, January 26th, a Radio Quiz will be a prominent feature and this will be followed by a short technical lecture.

All Society members at the School are cordially invited to support this meeting when final plans will be made for a Hamfest to take place at an early date.

Mr. Norman Davis, G6TV, 57 North Parade, Sleaford, who is Hon. Secretary of the R.A.F. A.R.S., and organiser of the meetings, wishes to thank all those who sent him Christmas and New Year greetings. He will be pleased to hear from members at the School who find difficulty in contacting other amateurs.

### ARE YOU AT No. 1 S.S. ?

If so, you are cordially invited to attend a Meeting in Hut 2 at 18.30 hours.

MONDAY, JANUARY 26.

### Farmyard Cackle

From the *Country Farmyard* (which should not be confused with the *Country Churchyard*), comes the news that a "Farm Hams Club" has been formed. As the membership includes some twenty-odd "hard-boiled" hams (not eggs), all of whom are listed on Service records as "one glass men," a non-treating rule has been introduced during sessions of the Club. Official meetings take place thrice weekly (not nightly, as some one asked us to print), but for security reasons we are not permitted to disclose the subjects discussed. We understand, however, that much "Chit chat" centres around such vital topics as "The Care and Exercise of Prisoners."

It is rumoured that among recent arrivals are George Dakin, G8DN, and J. A. Edwards, G3SR. George's steady influence should ensure that January milking schedules are not missed.

Sewing commences soon.

### Gibraltar Amateur Radio Society

Amateur Radio is now well established in Gibraltar as a direct result of the formation last November of the G.A.R.S. Fortnightly meetings are being held and good attendances are reported. Much interest was shown at the meeting on December 5 when the Society's President, Sq./Ldr. MacDowell (GI5MZ), opened a discussion on the ideal 25-watt rig for 40, 20, 10 and 5 metres. Although arguments waxed fast and furious and no final agreement was reached, it appeared that a combination comprising 6L6-6L6-807 was the nearest approach to the ideal.

It is hoped to commence the construction of two V.H.F. transceivers which GI5MZ expects will eventually get down to 200 cm.

The Society membership now totals 35 and since the last notes appeared a welcome has been extended to several new members including Messrs. Tipper, O'Donnell, Hing, Morgan, and 2CNJ.

As there is a considerable shortage of technical literature the writer appeals to home members to forward magazines and text books which they may have to spare. These should be addressed to Lt. S. Isaacs, Royal Signals, Gibraltar, who will arrange for their distribution.

### Ham Meeting in SU

Mr. W. E. Marsh, SUIWM (President of the Experimental Radio Society of Egypt) whose address is now 3 Rue Kattini, Tanta, Egypt, requests all members of the Society, serving in the Middle East, to communicate with him. The E.R.S.E. hopes to arrange a fully representative Ham Meeting in Egypt during the next few months, whilst a Victory Convention is being planned!

All members who find themselves in the region of Tanta are cordially invited to call upon SUIWM. Recent visitors have included G2GB, 4AR, 5HI, 5VU and 6CW.

### Servicemen's Data No. 1

We have been requested to publish from time to time data which may prove helpful to certain Service members.

#### Ale and Beer Measure.

|                     |      |                         |
|---------------------|------|-------------------------|
| 2 pints             | make | 1 quart or pot          |
| 4 quarts or bottles | "    | 1 gallon                |
| 9 gallons           | "    | 1 firkin of ale or beer |
| 2 firkins           | "    | 1 kilderkin             |
| 2 kilderkins        | "    | 1 barrel                |
| 1½ barrels          | "    | 1 hogshead              |
| 2 barrels           | "    | 1 puncheon              |
| 2 hogsheads or      |      |                         |
| 3 barrels           | "    | 1 butt                  |

#### Conversion.

|            |   |                                |
|------------|---|--------------------------------|
| 1 ham      | = | $\frac{1 \text{ firkin}}{x}$   |
| 1 farm ham | = | $\frac{1 \text{ barrel}}{y}$   |
| 1 roc.     | = | $\frac{1 \text{ hogshead}}{z}$ |
| 1 hon'ed   | = | 1 puncheon <sup>a</sup>        |

## ON ACTIVE SERVICE

## TWENTY-EIGHTH LIST

WE publish below our twenty-eighth list of radio amateurs on active service. Additional details and corrections should be advised to Headquarters as early as possible. The present list contains information received up to January 2, 1942.

| Rank and Name            | Regiment or Branch  | Pre-war Call or B.R.S. |
|--------------------------|---------------------|------------------------|
| L./Cpl. K. Abbey ...     | Royal Warwick Regt. | 4570                   |
| Cpl. H. D. Ashworth ...  | R.A.F. ...          | G4PY                   |
| Sig. N. L. Avery ...     | R.C. of S. ...      | G2KC                   |
| Cpl. R. Briggs ...       | R.A.F. ...          | 4602                   |
| A.C.2 F. J. Browne ...   | " ...               | 4538                   |
| A.C.1 K. C. Cantwell ... | " ...               | 4626                   |
| L.A.C. G. Clare ...      | " ...               | 4648                   |
| L./Cpl. D. M. Clowe ...  | R.A.O.C. ...        | 4632                   |
| Sgt. R. C. Cowan ...     | R.A.F. ...          | 4610                   |
| L.A.C. G. F. Cousins ... | " ...               | 4371                   |
| Sig. D. M. Downing ...   | R.C. of S. ...      | G13ZX                  |
| Pte. G. H. Fisher ...    | R.A.O.C. ...        | 4639                   |
| A.C.2 R. B. Forge ...    | R.A.F. ...          | 4616                   |
| Sig. C. R. W. Garton ... | R.C. of S. ...      | 2FZV                   |
| Sig. G. E. Heywood ...   | " ...               | 4605                   |
| Cpl. J. A. Hunt ...      | R.A.F. ...          | 2FSR                   |
| Pte. D. K. Kelly ...     | Royal Warwick Regt. | 4571                   |

| Rank and Name                   | Regiment or Branch | Pre-war Call or B.R.S. |
|---------------------------------|--------------------|------------------------|
| L.A.C. M. S. Killen ...         | R.C.A.F. ...       | Ex-CT2AA               |
| Sgt. L. W. Lackey ...           | R.A.F. ...         | 4624                   |
| P./O. T. W. B. Lambert ...      | " ...              | 3706                   |
| Sgt. W. A. Miller ...           | R.A.O.C. ...       | 4614                   |
| S./Ldr. F. N. MacDowell ...     | R.A.F. ...         | GI5MZ                  |
| P.O. T. N. Nesbitt ...          | R.N. ...           | 4619                   |
| Tel./T.O. J. E. C. Nicholls ... | R.N.V.(W.)R.       | 3882                   |
| P./O. J. C. D. Nourse ...       | R.A.A.F. ...       | VK2DQ                  |
| Sig. W. W. Pollard ...          | R.C. of S. ...     | 4080                   |
| Gnr. G. F. Quigley ...          | R.A.O.C. ...       | 4611                   |
| L./Bdr. H. K. Saville ...       | R.A. ...           | 4633                   |
| A.C.1 E. C. Shakespeare ...     | R.A.F. ...         | 4622                   |
| A.C.1 E. Spetch ...             | " ...              | 2HKQ                   |
| P./O. W. F. Thomson ...         | " ...              | 3425                   |
| 2nd Lt. B. M. Thimont ...       | R.C. of S. ...     | 4640                   |
| A.C.1 J. M. Tomlinson ...       | R.A.F. ...         | 4621                   |
| L.A.C. W. J. Tonkin ...         | " ...              | 4604                   |
| Cpl. B. Tootell ...             | " ...              | 2CKC                   |
| A.C.2 W. H. Varney ...          | " ...              | 4330                   |
| Seaman R. Williams ...          | R.N.P.S. ...       | G6HQ                   |

73.

**G2IK** (42, Norton Road, Bristol, 4), to G3AQ, 3BN, 3RQ, 3SK, 3YH, 3YK, 4CM, 5JU, 5KT, 5UH, 8TC, 2BVD

v v v

**G3AI** (Forest Gate, London, E.) to G2LB, 2SO, 3KZ, 5SS, 8JM, 8WV and all old friends.

v v v

**G3FT** (R.N.), to all members of the Romford, Brentwood, Ilford, Southend, Chelmsford, Sheppey, Edgware, Blackpool, and Gibraltar A.R.S. and friends, old and new.

v v v

**G3GH** (Knowle, Braunton, N. Devon), to all old friends of the air. To Eric Trebilcock, BERS195, special greetings.

v v v

**G3WT** (R.N. W/T. Station, Scotland), to G2HV, 3FT, 3VF, 6KS, 8DI, 8TR, VE3UH, VK2KS, 3UH, ZS6DQ, 2DCG, BRS4098, and all Liverpool members,

v v v

**G3YY** (R. C. of Sigs.), to G2UJ, 2XC, 2ZV, 3JF, 3KJ, 3LK, 3WR, 5TX, 6LK, 2CMH, 2DDD, W8JFC and all old 56 Mc/s. friends.

v v v

**G5ZN** (R.A.F.), to G2RB, 3IY, 3KT, 3NL, 3SJ, 3VO, 5MV, 6VQ, 8FI, 8IX, 8NL, 8TD, 2BFB, and 3.5 Mc. friends.

**G8HG** (261 Norris Road, Sale Moor, Cheshire), to G3LB, 3OQ, 3PY, 3QV, 3RY, 3SR, 4HK, 4JN, 8KS, GM3NG, 2FJS, 2FMQ and all old friends.

v v v

**G8IJ** (R.A.F.), to G2BH, 4JJ, 5IV, 5RV, 8CK, 8KI, 8KU, 2AGH.

v v v

**G8ON** (R.A.F.), to G2NJ, 2RI, 6MN, 6PZ, 8WS, 8OM, 8OT, 8SD, 2CAJ, 2CSA.

v v v

**GM3SW** (R.A.F.), to G4IB, GM3HY, 3UU, 8SQ.

v v v

**GW3AJ** (R.A.F., M.E.), to G2JL, 3VQ, 3HK, 5TN, 6BK, 6PF, 8IQ, GW2NG, 2BG, 2HH, 8CT, 4DHM and all other Cardiff members.

v v v

**2DRR** (R.A.F. Iceland), to G3CI, 3ZK, 4HK, 5MY, 2BIB, 2BKO, VE4MG, ZLI1Z.

v v v

**2FRM** (R.A.F.), to G2RC, 3HG, 3TA, 5UX, 2BLA, 2FFM and 2FWA.

v v v

**2HBK** (ex R.A.F.), to G3NW, 4DS, 5JU, 6PC, 6WL, 8BD, 8IQ, 8NS, 2BRJ, 2CCM, 2CQJ, 2HFR, VEIMB.

v v v

**BERS195** (Salamana, Br. New Guinea), to G2JB, 2ZQ, 4AB, 5CI, 8LO, 8NH, 8NS, 8TI, GI5QX, VO4Y, VP5PZ, BRS250.



# PRISONERS OF WAR FUND

## Donations

The General Secretary acknowledges, with grateful thanks, the following additional donations to the Fund received up to January 5, 1942.

|   | £  | s. | d. |
|---|----|----|----|
| D. Low, G5WU ...  | 2  | 8  | 0  |
| C. L. Cooper, G4IH ...  | 5  | 5  | 0  |
| Anon ...  | 5  | 5  | 0  |
| J. C. Wicks, 2BIR ...   | 10 | 6  |    |
| A. E. Ashfold, GW5AB ...  | 3  | 6  |    |
| H. C. Turner, G5OJ ...  | 5  | 0  |    |
| T. P. Allen, G16YW ...  | 1  | 5  | 0  |
| M.A.R.S. (per 2FDR) ...   | 3  | 0  | 0  |
| E. Rose, 2DRT ...   | 5  | 0  |    |
| E.S.C. Ltd. Staff (per G5LT) ...                                | 1  | 1  | 0  |
| D. Alan Dyer, GW8UH ...   | 10 | 0  |    |
| F. Marshall (Father of G2XQ, who is a Prisoner of War) ...      | 10 | 0  |    |
| Archie Brown, G2WQ and Colleagues ...                           | 15 | 0  |    |
| Mr. Brown (Father of G2WQ) ...                                  | 1  | 0  | 0  |
| W. P. Stevens, BRS4022 ...                                      | 4  | 6  |    |
| H. E. Gill, G8SO ...  | 5  | 0  |    |
| W. H. Malcolm, G6WX ...   | 2  | 2  | 0  |
| Anon ...  | 5  | 0  |    |
| Anon ...  | 2  | 2  | 0  |
| A. N. Le Cheminant, G6AC ...                                    | 7  | 6  |    |
| "Khaki Bury" ...  | 11 | 6  |    |
| Mr. A. Richardson (Father of 2CXT) who is a Prisoner of War ... | 1  | 1  | 0  |
| Mr. and Mrs. L. Cooper, G5LC ...                                | 11 | 6  |    |

|  | £  | s. | d. |
|--|----|----|----|
| N. Brandon, 2BZN ...   | 2  | 6  |    |
| C. Cleland, G2CN ...   | 10 | 0  |    |
| H. J. Sherry, G6JK ...   | 1  | 0  | 0  |
| J. A. Brymer ...   | 1  | 0  | 0  |
| A. Jotcham, 2FWB ...   | 4  | 0  |    |
| District 7 (Croydon area) per F. G. Hoare, G2DP (2nd donation) ...   | 10 | 0  |    |
| 58 Hams and others "Somewhere in England," per R. R. Smith, G6TQ ... | 6  | 8  | 0  |
| "A Hampshire Group," per L. J. Morgan, 2HNO ...                      | 2  | 6  | 0  |
| E. Rose, BRS4550 ...   | 5  | 6  |    |
| F. Barnard, G4FB ...   | 5  | 0  |    |
| H. B. Bennett, G8PF ...  | 10 | 0  |    |
| F. E. Howlett, 2AFT ...  | 1  | 0  | 0  |
| H. J. Carter, G3AI ...   | 10 | 0  |    |
| C. W. Packe, G3OJ ...  | 5  | 0  | 0  |
| District 13 (per L. Sanderson, G8TN) ...                             | 10 | 0  |    |
| Hon. John Forbes, EI8N-G4JL ...                                      | 1  | 0  | 0  |
| E. F. Prior, G3SH ...  | 1  | 3  | 9  |
| H. Binns, G8TF ...   | 2  | 0  | 0  |
| Anon (2nd donation) ...  | 1  | 7  | 0  |
| O. C. Hill, BRS4044 ...  | 10 | 0  |    |

Previously acknowledged ... 70 1 6

Total to date ... £120 16 3

## Silent Keys

### "A. J. Alan," G2ST.

It will come as a surprise to many members to learn that "A. J. Alan," whose death occurred last month, was an experienced amateur transmitter. Mr. Leslie Harrison Lambert, for that was his real name, lived in Notting Hill, London, and was a member of the Society many years ago. Although we have no record of his transmitting activities he held the call sign, G2ST, right up to the outbreak of war.

As a raconteur he had no equal. His mystery stories broadcast by the B.B.C., earned for him the appreciation of a vast unseen audience.

In the words of *The Times*: "His quiet, clear diction, the interest of his stories, and the delightful relief of the anti-climax made 'A. J. Alan' distinct as an entertainer."

The fact that he was a radio amateur may explain the reason for his outstanding microphone technique.

We shall all miss him.

J. C.

### Peter Seath, G4FI.

Friends of Peter Seath, G4FI, will appreciate the loss to Amateur Radio of one of its keenest followers. Peter was taken prisoner in the Middle East, but subsequently

succumbed to pneumonia from which he died in hospital.

The Whitstable Radio Amateurs join in extending their heartfelt sympathy to his parents. 2BIB.

### Gavin Sampson, ZL4AI

It is with much regret that we record the death of G. G. Sampson, ex ZL4AI. Until he came to England a few years before the war Gavin was one of the best known overseas amateurs, his work during B.E.R.U. Contests, and as an Empire Link Station earning for him well deserved praise. He was a B.E.R.U. Senior Contest winner and with his co-partner, Jack Callender, ZL4BT, put up amazing performances year after year.

He joined Standard Telephones & Cables Ltd. shortly after he arrived in England and from that time onwards dropped his active association with the amateur movement. He took out a British amateur licence but made no serious attempt to set up a station.

He met his death in an aeroplane accident whilst carrying out highly important work for the R.A.F.

An outstanding personality, Gavin Sampson will be mourned by all who knew him as ZL4AI. J. C.



I can assure them of an excellent time in a very cool spot, with a fire each evening to keep them warm. It is strange that out here in a matter of 4 hours from Colombo, you leave fans behind and are glad to sit in front of a fire!"

### New Guinea

Two letters, one written in August and the other in October, come from Eric Trebilcock. In August the rainfall had reached 120 inches with more to come. We hope that by this time nothing heavier than rain has fallen in the locality. He mentions KD4HOC on Swan Island, West Indies, heard on 14 Mc. phone and CW during August and wonders if this counts as a new country.—Should think not O.M., but we shall have to argue it out later!

He remarks on the excellent signals received from Daventry on 16, 19, 25 and 31 metres and how eagerly the news bulletins are devoured as they come over. Eric has warned us that his work was making increasing calls on his time so that he spent less time on the bands. For one so keen it is probably a good thing that this is so now that our bands are empty!

Best of luck, O.M., and here's to the time when you will be logging 'em once more.

### India

Major Jack Drudge-Coates, VU2FO, writing from Central India, where he is busy training signals officers, has VU2AN, 2AR and BRS371 on his staff. "Without exception," he says, "all the ex-hams do exceedingly well on our course and many of them get special jobs where their amateur experience is invaluable."

In connection with these training courses they have run several 56 Mc. field days, using home-made gear. The country around is ideal for 56 Mc. with plenty of nice bumps about 2500 feet within reasonable distance. After one of these the participants met at his place for a ragchew which must have been one of the largest ham gatherings ever held in India.



Major Jack Drudge-Coates, VU2FO, revives memories of 56 Mc. Field Days.

VU2AN also refers to this memorable meeting and sends a list of recent amateur Cadets at the school.—XU8HM, HB9AY, old G6XR (Bromley), G3TG and G3IF. Most of these have now left as 2nd Lieut. signals officers and are dispersed in various parts of this wicked world. G8PQ was last heard of in Risalpur and VU2EU is probably, by this time a Foreman of Signals.

### South Africa

*Ham Chatter*, the ZS6 magazine, continues to come through regularly and maintains its high standard. ZS6AJ is in Nairobi, wondering whether he is going north or south. Hearing that a newcomer to camp wanted to see him he was delighted to meet ZS6DA, who he thought was one of the "goners" in the recent fighting, but it was him alright so they "downed some Scotch to celebrate his 'demise'!"

*Postscript*.—Don't forget, to send in those tit-bits of news and keep the old flag flying! Thanks to all those who sent seasonal greetings.

G2MI.

## The 28 Mc. Band

WITH amateur activity at its lowest level for over 20 years, and with sunspot minimum conditions well on their way, it is not surprising that the number of signals reported on the band during December was nil.

A welcome report from G4MR for the period November 27 to December 27 shows that the highest frequency signals heard all came from the Western Hemisphere, viz., LSA2/LQB4 27.5 Mc/s. logged on eight days, HRX7 27.7 Mc/s. on December 9, and LSB 28 Mc/s. on December 26. G4MR found this latter date the best of the month, and from 15.40 to 16.10 G.M.T. logged many U.S.A. stations above 25 Mc/s., e.g. WMGJ 28 Mc/s., WAJ, WEJ and WKC 27 Mc/s., and WAR on 26.7 Mc/s. and neighbouring frequencies.

W5XAU the only 26 Mc/s. U.S.A. broadcast station identified, was audible on November 27, December 6, 8, 9 and 26. On 25.1 Mc/s., W2XWE was a strong signal on December 8 and also heard on December 23 and 26. Weak carriers in the band, which may possibly have been amateur signals, were heard on November 27, 29, December 3 and 7.

The only European harmonics reported were DEU 26 Mc/s. on December 6, RIP 25.4 Mc/s. on December 21, and IGB 24.9 Mc/s. on December 26.

N. C.

### Advice Wanted

Mr. R. M. Jeremy, 2CMJ, 10 Broadway Avenue, Harlow, Essex, wishes to affix a pick-up to an Ekco Model AW70 receiver, but he has no copy of the circuit.

Advice is also sought in regard to the addition of a pre-amplifier to improve reception of long distance signals. Can any member oblige with some information?

### A Suggestion

AC2F. A. Beane (2CUB) makes the suggestion that members on active service should wear a wristlet watch strap, or suitable chain, upon which has been tightly rivetted a replica of the R.S.G.B. emblem. The advantage of this method of identification will be apparent to those who work in Signals cabins and workshops.

# BRITISH ISLES NOTES AND NEWS

## District Representatives and Deputies.

**DISTRICT 1 (North-Western).** (Cheshire, Cumberland, Lancashire, Westmorland.) MR. H. W. STACEY (G6CX), "Sandleas," Edisbury Road, West Kirby, Wirral, Cheshire.

**DISTRICT 2 (North-Eastern).** Yorkshire (West Riding, and part of North Riding.) Acting: MR. A. O. MILNE (G2MI), 1 Kent Drive, Harrogate, Yorks. Telephone: Harrogate 2161.

**DISTRICT 3 (West Midlands).** (Shropshire, Staffordshire, Warwick, Worcester.) MR. V. M. DESMOND (G5VM), The Chestnuts, Hanley Castle, Worcs. Telephone: Hanley Swan 41.

**DISTRICT 4 (East Midlands).** (Derby, Leicester, Northants, Notts.) Deputy: MR. W. M. VENDY, (G6VD), 9 Cecilia Road, Leicester.

**DISTRICT 5 (Western).** (Gloucester, Hereford, Wiltshire.) MR. R. A. BARTLETT (G6RB), 31 King's Drive, Bishopston, Bristol. Telephone: Bristol 46960.

**DISTRICT 6 (South-Western).** (Cornwall, Devon, Dorset, Somerset.) MR. W. B. SYDENHAM (G5SY), "Sherrington," Cleveland Road, Torquay. Telephone: Torquay 2097.

**DISTRICT 7 (Southern).** (Berkshire, Hampshire, Oxfordshire, Surrey.) MR. W. E. RUSSELL (G5WP), "Milestones," Westfield Road, Mayford, Woking, Surrey. Telephone: Woking 1589.

**DISTRICT 8 (Home Counties).** (Beds., Cambs., Hunts., and the towns of Peterborough and Newmarket.) MR. S. J. GRANFIELD (G5BQ), 47 Warren Road, Milton Road, Cambridge. Telephone: Cambridge 56444.

**DISTRICT 9 (East Anglia).** (Norfolk and Suffolk.) MR. H. W. SADLER (G2XS), "The Warren Farm," South Wootton, King's Lynn, Norfolk. Telephone: Castle Rising 233.

**DISTRICT 10 (South Wales and Monmouth).** Scribe: MR. S. HOWELL (G5FN), 90 Coleridge Avenue, Penarth, Glam.

**DISTRICT 11 (North Wales).** (Anglesey, Carnarvon, Denbighshire, Flintshire, Merioneth, Montgomery, Radnorshire, and parts of Shropshire not in District 3.) Deputy: MR. C. SPILLANE (BRS 1060), "Woodside," Meliden Road, Prestatyn.

**DISTRICT 12 (London North and Herts.).** (North London Postal Districts and Herts., together with the area known as North Middlesex.) MR. S. BUCKINGHAM (G5QF), 41 Brunswick Park Road, New Southgate, N.11. Telephone: Enterprise 3112. Scribe: MR. P. R. SOLDER, (G5FA), 35 Torrington Gardens, New Southgate, N.11. Telephone: Enterprise 4347.

**DISTRICT 13 (London South).** To be appointed.

**DISTRICT 14 (Eastern).** (East London and Essex.) MR. R. L. VARNEY (G5RV), "Arvika," 184 Galleywood Road, Chelmsford, Essex. Telephone: Chelmsford 3394.

**DISTRICT 15 (London West).** (West London Postal Districts, Bucks., and that part of Middlesex not included in District 12.) MR. H. V. WILKINS (G6WN), 539 Oldfield Lane, Sudbury Hill, Greenford, Middlesex. Telephone: Byron 3369.

**DISTRICT 16 (South Eastern).** (Kent and Sussex.) Deputy: MR. W. A. SCARR, M.A. (G2WS), 8 Beckenham Grove, Shortlands, Kent. Telephone: Beckenham 1131.

**DISTRICT 17 (Mid-East).** (Lincolnshire and Rutland.) DR. A. GEE (G2UK), "Stonehaven," Horncastle Road, Boston, Lincs.

**DISTRICT 18 (North and East Yorkshire).** (East Riding and part of North Riding.) MR. E. MITCHELL (G5MV), 40 North Marine Road, Scarborough.

**DISTRICT 19 (Northern).** (Northumberland, Durham, and North Yorks.) MR. R. J. BRADLEY (G2FO), 36 Raby Road, Stockton-on-Tees.

**SCOTLAND.** MR. JAMES HUNTER (GM6ZV), Scottish Records Officer: 51 Camphill Avenue, Langside, Glasgow. Telephone: Langside 237.

**NORTHERN IRELAND.** MR. J. N. SMITH (G15QX), 19 Hawthornden Drive, Belfast. Telephone: Belfast 63323.

New Members are cordially invited to write to their local Representative, enclosing a stamp if a reply is required.

## DISTRICT 1 (North Western)

**I**n spite of Christmas attractions reports have come through in good style, which is most gratifying.

**Stockport.**—G3IR has arranged to hold a meeting at his home on January 25th, at 2 p.m. The address is "Alasdair," Chester Road, Poynton (two minutes walk from Poynton Station, on the main road and on the opposite side of the bridge from the church). Five members have already promised to attend but more are wanted. R.A.F. members in the area will be sure of a welcome. Meetings are to be held monthly and the date of the next will be settled on the 25th instant.

**Bolton.**—It was a great shock to those Boltonians who knew him to learn of the sudden passing of Jim Bolton, G4KT, of Blackburn, and we extend our deepest sympathy to his wife and family.

Six local members and two visitors comprised the

attendance at the monthly meeting, held on December 6. Despite the small attendances at these gatherings, each one has been thoroughly enjoyed and it is hoped that this enthusiasm will be maintained throughout the New Year.

Service members posted to the town continue to contact the T.R. and, if the numbers warrant it, weekly meetings will be organised later on.

This month a welcome is extended to our first YL member, Miss Mabel Shackle, BRS4618. She needs no introduction to a large proportion of the locals, who already know her as 2DVQ's sister.

2FPI, who is receiving the *Bulletin* regularly in the Middle East, has sent a p.c. of the Sphinx in response to a paragraph published in the May Notes. He also airgraphs, on a later date, that his New Year resolution is "bigger, better and more letters," so look out.

5VN who is still busy as a civilian instructor with



the R.A.F., was seen in 4IA's shop the other week-end, whilst home for a few hours.

The next Sunday afternoon meeting will be held at 2BDA's home, 18, Mornington Road, Bolton, on February 1, at 2.30 p.m. Visiting members will be welcome and for the benefit of those unacquainted with the town "B," "N" or "O" trams from the station pass the end of Mornington Road (1d. fare).

(via 2DVQ)

**Whitehaven.**—G6ZT mentions the fact that five members frequently met in District 19 every Friday night, including 8HQ. On coming to Whitehaven 6ZT made friends with 2AUM. A letter from 2AUM says that he and 8HQ of Darlington left England in the same draft but did not find each other until the end of the trip, less than twenty-four hours before they had to part. Hard luck, O.M.'s! 2AUM has been in hospital but is now convalescent. Nothing more has been heard of 3HJ so it is not known if he has yet arrived at his destination overseas. An Xmas card has been received from 2BMJ, now in Rhodesia. 2AYH has a copy of August QST which he found in a train at Carlisle. These hams do get round! By the way, any member passing through Carlisle will probably find 2AYH in the Parcels Office. Ask for Walt Nicholson; he doesn't know that he has extended this invitation yet! We have to welcome to membership BRS's 4541 (Harry Tinnion) and 4547 (P. Dunn), but contact with the latter has not yet been established.

Members record their thanks to Mrs. 6WR and Mrs. BRS4541, who have very kindly harboured several of our meetings. Other meetings are held in "The Flea and Earache"! Address on request.

G6ZT was sorry to note that there were no notes from his own District (19) last month. What about it? Happy New Year everybody. (via G6ZT).

**Bury.**—There is nothing to report, but the D.R. is informed that Captain Vance (G8SA) is now at Wellington Barracks, Bury, and would like to meet those members who are still available.

**Manchester.**—G2OI has written and complains, quite rightly, that he cannot forward notes if members do not report to him. His list of members has been destroyed, otherwise he would look them up. Like most of us, he is extremely busy and cannot afford the time to chase after you, so what about it? Make it a New Year resolution to drop him a line! He will be glad to see any member on Tuesday, Thursday or Friday evenings, or he can be reached by 'phone on Eccles 3946. 2RA, serving as Radio Officer in a tanker, was reported missing some time ago but it is now learned that he is a P.O.W. in Germany. (Details to H.Q.'s, please.—Ed.)

G2OI sends his best wishes for the New Year to all members, especially those with the Forces, and hopes to hear from those in the Manchester area before the next issue goes to press.

**Blackpool.**—G8GG writes from No. 1 S.S. with news he has gathered in his travels. 2OA and 2XO are at Bolton, where 8GG hoped to join them. 8DI is somewhere near Grimsby. 2CWW, now a Ft./Sgt., was recently on leave from GI and reported 5MS to be a W.O. Will 5MS please get into touch with 8GG? 3IM and 8NU are at home, the latter being busy with the local police. 6VQ was last heard of at Darlington. 4PY is on the move all the time.

The D.R. has received a note from BRS4569 who is one of the few Civil Aviation Radio Officers still flying around the British Isles. He has completed

just under 1,200 flying hours since January, 1941, and has contacted G5CZ, 6IA, 2FRV and 2QG at various places. He sends best wishes to 3FX, 3JJ and 2GS and will be glad to attend meetings in the Liverpool area if some can be arranged.

The D.R. sends his very best wishes for 1942 to all members in District 1 and elsewhere.

### Forthcoming Events.

- |         |  |
|---------|--|
| Jan. 25 | District 5, 3 p.m. at 17 Colston Avenue, Bristol.  |
| " 25    | District 12, 3 p.m. at G6CL, 16 Ashridge Gardens, Palmers Green, London, N.13.                                     |
| " 25    | Scotland "A" District, 2.45 p.m. in the Coffee Room, Y.M.C.A. Residential Club, 100 Bothwell Street, Glasgow, C.2. |

### DISTRICT 3 (West Midlands)

**Birmingham.**—At the meeting of M.A.R.S. held on Sunday, 14th December, the President, Mr. E. C. Naylor Strong, gave an impromptu lecture on designing and constructing a two-valve receiver.

This proved to be very interesting as Mr. Strong has spent many months experimenting with stability and frequency calibration, and has evolved a set which is accurate enough to be used as an oscillator. The lecturer also described his experiments with a direct reading dial, and promised at a future date to bring along his own design of dial which is now in course of construction.

Seventeen members were present in addition to F./Lt. W. Craig (GM6JJ) a welcome visitor.

2FDR.

### DISTRICT 4 (East Midlands)

**Nottingham.**—Although the attendance at the last meeting, held at 2AOO, was disappointing, a most interesting talk was given by Mr. A. Bloamer on the subject of receiving oscillators for V.H.F. work. The third of Mr. Bloamer's V.H.F. talks will be given at the meeting, to be held at 8DD's, 37 Meadow Road, Beeston, on January 30, at 7 p.m., when it is hoped that the attendance will be larger.

Our old friend, 5TT, who has had the misfortune of spending the greater part of the last four years in hospital, would like to borrow books on any radio subject, his QRA is: T. Caldicott, Main Street, East Bridgford, Notts. 5TT promises to look after them and return them safely.

Should any future local meetings be arranged to take place before the Bull. arrives, details can be found in the Monday evening edition of the *Nottingham Evening Post*, under the column headed "The Wireless Whispers."

**Leicester.**—Last month a paragraph was inserted with the object of finding out whether local meetings would again be popular. It is known that there are still about twenty-five members living at home in the area, but out of this number one member and one only has offered to support such meetings; from the others there is just silence.

*Derby.*—Although it is rather late to do so, we offer our deepest sympathy to the relatives and friends of Mr. Mephram, 2CWA, who, as wireless operator, went down with his ship during the early part of the war.

From G8HX (Mansfield) we learn that 8DY is the most "radio active" member at his station. 8MR is hearing a lot of DX in Anglesey. 8OT is in the Orkneys. 3XA is overseas. 8NS is fit and well again. EI4F is in the R.A.F., and studying at Leicester. 2CVV, who was home in Derby recently, managed to fit in a talk over old times with 2OU. Another Derby member, 3BG, who has been in Belfast for the past 10 months, sends 73 to Notts and Derby members. 8SI would like the present QRA of 3UP (ex-C.W.R.), of Stoke-on-Trent. 2BAP has now been moved to the South East coast and has a VE4 for C/O; he sends 73 to all in Leicester. BRS3319 writes from the South that he is still fit, well and happy. 5UQ, still working for Air Ministry, is expecting to be moved to a new QRA shortly. G6VD.

#### DISTRICT 5 (Western)

*Bath.*—A welcome report comes from G2IW, who states that only two of the original transmitting members are left, namely, G8DX and himself. G8JQ comes on leave occasionally and looks in. G6BW is now living in the town but he is very busy.

*Salisbury.*—BRS4289 of Amesbury, who has recently joined the Society, would like to meet others in the locality.

*Bristol.*—The December meeting, which took place at G6VF, was well attended; among those present were G5KT and 2BSU, both home on leave. The usual ragchew ensued. The next meeting will be held on January 25, at 17 Colston Avenue, Bristol, at 3 p.m. The D.R. sends best wishes for 1942 to all members, coupled with the hope that the coming year may see our chances of getting back on the air become brighter. G6RB.

#### DISTRICT 6 (South Western)

We are disappointed to find that no notes of any kind have been sent in from the various centres of the district. This is unfortunate, but we hope that T.R.'s will remember to report anything of interest which takes place in their respective areas.

An interesting letter has been received from G3ZL, whose former QRA was Weymouth. He is with the R.A.F. in Southern Rhodesia, and appears to like the change! He sends his 73 to G5KT of Bristol, 3SB of Minehead, 3GH of Braunton, 3PU and all other members of the 1.7 Mc./s Propagation Group.

The D.R. would like to take this opportunity of wishing all members of District 6, wherever they may be, a Happy and Prosperous New Year. G5SY.

#### DISTRICT 7 (Southern)

*Bournemouth.*—It has happened at last—a VK has been found! A hearty welcome to P./O. Dudley Nourse, VK2DQ, of Broken Hill, N.S.W., who has been meeting the gang and telling some fine tales of ham radio down under. 2DQ tells us that on Monday evenings he could never get many mA into his final because of the juice used by the housewives of Broken Hill in attacking the day's washing with electric irons!

G4IJ reports meeting a W9 who related some pretty stories about kilowatt rigs. 3VY had the misfortune to spend Xmas Day in hospital, somewhere in Essex. (Speedy recovery, O.M.). 4179 and

4363 were home on leave during the festive season, but 2FSL was not so lucky. He reports from Wales, where he is still busy on Admiralty work. Finally, congratulations to 3UN on his recent promotion.

The arrival of 1942 sees Bournemouth as keen a centre of ham activity as any in the country—but the T.R. still wants notes please. (via 2HNO).

*Coulsdon and Purley.*—G3IG reports by letter that he has met very few hams since arriving in GL, but he has had the good fortune to meet ZL2AH. He wishes to be remembered to all old friends in the District.

A welcome is extended to a very "old timer" from South London—Mr. Prior, G5RR. 4458 contemplates building a two-stage pre-selector; whilst 3003 has constructed a frequency meter. (via BRS3003).

*Croydon.*—The December meeting, held at BRS4150, was attended by G2DP, 2JB, 2KU, 2VB, 3FK, 3FP, 3ST, 4NI, 8TN, 2HHD, 1545, 3003, 4150, 4314, 4324 and 4584. 4150's Super-het is now working quite well after a few alterations. 2FWA is still indirectly connected with "ham radio" as he is working with 8CR's son in the R.C. of S. We are very sorry to report that Sgt. Pearce, 4AA, has been listed as missing, but hope that by the time this is in print some reassuring news will have been received about him. 4584 has been redecorating his shack after it had been knocked about by the house painters. 4314 is busy on A.R.P. work but just manages to arrive at the meetings. 3724, 4NI, and 2DP are working together on amplifiers. G3VN has been home on leave from Iceland. VE3KE, with his YL paid a visit to 2FWA and at a few moment's notice an informal meeting with G2DP, BRS3003 and 2FWA was arranged. A cordial welcome is extended to Peter Pennell, G2PL, the "Cambridge Micro-watt," who has come to live in this area.

At the last meeting a collection for the Prisoners of War Fund was taken and it was decided to continue the practice every month.

The next meeting will be held at BRS4314, 15 Parson's Mead, West Croydon (first turning on the right down Derby Road, which faces West Croydon Station) on February 8. Everyone will be welcome. Should these notes catch the eye of any overseas amateur in this area will they please get in touch with G2DP, at 6 Dunheved Close, Thornton Heath. (via 2DP).

*Maidenhead.*—BRS3732 sent an interesting letter to the D.R. who was surprised to have his reply returned to him with the notification that no one of that name was known at the QRA given.

*Oxford.*—Membership in Oxford is on the up-grade. Welcome to 4585 who has joined us. The locals are still active with radio despite A.T.C., A.R.P., etc. The next meeting will be held on January 25, 1942. Write to 8PX for details. (via 8PX).

*Guilford.*—We were very sorry to learn that 6GS is ill in hospital in Malta. (Best wishes for an early recovery, Bill.—D.R.). At the time of writing these notes the January meeting had not been held and as a consequence the date of the February meeting cannot be announced. It will, however, take place towards the end of the month and will be announced in the next issue.

The D.R. wishes to thank all who sent Xmas and New Year cards and to reciprocate hearty good wishes. G5WP.

**DISTRICT 8 (Home Counties)**

To the members who found time to spare a thought for the D.R. at Christmas, many, many thanks. Their cards and greetings were very much appreciated.

*Cambridge.*—We are glad to welcome Mr. Arthur Porter (2CDX) to membership. He is well known in local radio circles, and was Hon. Secretary of the Cambridge Short Wave Club for several years. At present he is busy building a 10-valve receiver, 5DQ and 8FF were home on leave at Xmas. Peter is now in an O.C.T.U. of the R.C. of S., while 8FF has recently been commissioned in the R.A.F. Both were looking very fit, and were eager for District news. A pleasant evening was spent in reminiscence. 5DR, still working for the Air Ministry, was home recently, and over the phone told of the many hams he meets in his travels. We hear that 8SY is as keen as ever, but deplores the little leisure time available for radio. Others still in the town include 2PU, 2XV, 5JO and 5PC.

*Huntingdon.*—G5RL now an ACI, finds repair and maintenance work a welcome change from operating. He has just heard from 8ST, who was in the Punjab at the time of writing. No one seems to have heard from XZ2DY for a long time. 5OV is still at his old job with the Air Ministry. 4AZ was searching for an electric train for the junior-op. at Xmas—or is this to be pop's new hobby? 6FL is still with Murphy's at Welwyn.

*Bedford.*—G3JU, who is renewing acquaintance with old friends in this area, has just received confirmation of a contact with W4FAZ on 1.7 Mc. CW, using 3-6 watts, and of the reception of W5BFM on 1.7 Mc. phone. 2DPQ is now settled in the R.C. of S. His station must be a paradise for the ham-mind. He mentions meeting G8VG, GM6RI, GM2UD, G4NY, GM3LO, BRS3740, and BRS3821, but believes that many others are hams. BRS3585 hopes that he may be posted there when his call comes. SPIHA still in the area, is searching for some one with an Avo Meter to spare. Local members are anxious for news of 2FFG, can anyone supply?

The New Year is already several days old, but we hope that it is not too late to wish everyone the best of good luck. G5BQ.

**DISTRICT II (North Wales)**

*Prestatyn.*—The December meeting was held at Vale View on the 28th, and although this was rather too soon after the Christmas festivities, an attendance of 13 was recorded. We were glad to see GW3YR and GW3KY once again. Others present included ZL1CP, GW4CK, and GW3CF (both home on leave from the R.A.F.). G6HQ, 2HIY, BRS1060, 2731, 3044 and 4027.

ZL1CP gave a very interesting talk on conditions in ZL, whilst GW3KY brought along a heap of valves, which claimed the attention of many of the party. He disposed of many of them at bargain prices. After refreshments, a discussion followed on the post war possibilities of Amateur Radio.

Later in the evening seven members visited BRS2731's QRA, during which time our host entertained us with several banjo solos.

GW3CF has recently been posted to a station within about 20 miles of his home QRA. 3CK has returned to London as an instructor. 3PY (R. Signals) has recently visited local members.

Several of the "Shy or Elusive" VK's mentioned recently in the BULL. are known to be in District 11, but apart from one GW, none of the locals have made contacts.

The next meeting will take place at Vale View, Meliden Road, Prestatyn, at 2.30 p.m. on Sunday, January 25. All are cordially welcomed to attend.

Members who cannot attend Prestatyn meetings, are invited to send brief activity reports so that they can be included in these notes. It will then be possible to cover the whole District, instead of one area as at present. District members outside Prestatyn who can arrange a meeting in their own town may count on the support of BRS1060 and others, providing sufficient notice is given. BRS1060.

**DISTRICT 12 (London North and Hertford)**

Ten members attended the December meeting, held at G8TY. This falling off in numbers was probably accounted for by the fact that the meeting took place close to the Xmas holiday and also to the discrepancy in the fixture date. G4DC brought along a fine example of a home-built bug-key, which he will probably use with one of his famous relays when he gets back on the air. We were pleased to see Ernie Prior, G3SH, who had flown home from South Wales for the holiday. Our thanks are due to Mrs. Howard for so kindly providing refreshments.

The following new members are welcomed to the District this month: 2DWB, 2FQX, BRS4533 and 4582. Letters have not been so plentiful but we were glad to hear from G6OV, 6TQ, 2DTD, BRS3425 and 4073. Now what about that New Year's resolution you other fellows?

We hear *via* G6QM that 8VM has joined the R.A.F. as a pilot and that he is looking forward to "dishing it out" instead of having to take it, as he has been doing in the Merchant Navy for the last two years. (Best of luck, O.M.). GM3LO, who has come to work in the District sends 73 to all North London friends of the old 7 Mc. days. Incidentally he was one of 5FA's last contacts before the close down. 2DTD, of Hitchin will be pleased to welcome the G2YS R.S.G.B. group on his "home day." Furthermore, he is looking forward to attending any meetings that may be arranged. G6TQ has been prevented from attending local meetings owing to clash of duties, but he did splendid work by starting a subscription list for the Prisoners of War Fund among hams and others with whom he works. As a result the sum of £6 8s. 0d. was sent to G6CL. Dual congratulations to W. F. Thomson ("Tommy"), BRS3425, on his engagement and on his commission in the Admir. Branch of the R.A.F. (Good luck, O.M.). We also extend congratulations to S. C. Ash, G6OV, who has recently been commissioned in the Training Branch, R.A.F.V.R., and is serving as Signals Officer with the 393 (Finchley) Squadron, A.T.C. A local meeting recently took place at Bushey between 2BUP, BRS2196 and 4073 at which a discussion took place on V.H.F.

As the next meeting will be held at war-time H.Q. —G6CL, on Sunday, January 25 (phone PALmers Green 3255), at 3 p.m.—let's see if we can break the previous record attendance of 35. Bring your own chairs and beer!

Immediately after returning from his well-earned Xmas leave, G3SH, had a unique experience. He was aboard a "Wimpey" with a VE as wireless op.,



when during the course of some tests, they discovered that no less than five hams were operating at the ground station with which they were in contact.

G5FA.

### DISTRICT 13 (London South)

*South-Western Area.*—Fanfare of trumpets! Out of the blue both wandering "Logs" have come home to roost. Their task has grown—for after starting out by "covering" an odd half-dozen members a month, they now have to make the rounds of nearly thirty. With two books running, O. M. Theakston would calculate that this means two days per member for writing and posting. Do your best, chaps!

Everyone seems to be building amplifiers (audio, of course!) and chasing, what the W's call, "hi-fi." Looks as though we might get some quality audio in these parts after the war. G3DF finally abandons pentode output for the good old PX4. He would like suggested lists of good test records, preferably what he neatly calls "long-hair" music. (Any offers? Long or short hair, it's all the same to us—Ed.). 5PY, still in Devon, is trying to QSO 3AD personally in those parts. He remains puzzled over the peculiarities of B.B.C. reception in his district. (Do any of the "Big House" brethren read these notes? If so, what about enlightening a customer?)

G2OX corrects a misinterpretation in last month's notes. He was *not* at Dunkirk, but he tells a fighting tale of BCL trouble! Says his gear now consists of 'phones and a pair of pliers—only needs an aerial, a receiver, a transmitter and a licence. 2CZM (R. C. of S.), who signs in as a guest-artist, mentions that his work makes 56 Mc/s look like long waves. 6QN gives some interesting dope on cut-off filters for needle scratch. Can anyone tell us whether scratch frequencies peak at any point in the spectrum above 3500 c.p.s.? 2HKZ sends some interesting comments on conditions during recent Auróra (8QH saw this in Edinburgh—400 miles from his receiver!). HKZ has a new communication receiver a-building. BRS4263 sets us a puzzle from commercial practice. (You had us floored here—but wait till the Logs have been round, O.M.!) He also is building a new receiver—a super with two RF stages on 300 Mc/s. 4292 has been trying RC coupled push-pull PX4's in a new amplifier. He has four other hams to ragchew with at the works. (All R.S.G.B. members, O.M.?) 3AD, who reports by letter, gives news of the District 6 meeting held at Newton Abbot. Any member west of Oxford who sees an end of aerial wire lying around should pull on it; 3AD is probably at the other end.

G2JK reports a new QRA by 'phone and enquires after the Junior B.E.R.U. trophy which he won just before the war. Let's see, now, what *was* Junior B.E.R.U.? (This was a District trophy, which according to G2WV, is being held in safe custody.—Ed.).

Several members in this area will be sorry to hear that Mr. R. K. T. Stevenson, G6LW, has joined the Silent Keys after a short illness. A good scout and a real ham. 6XP and 8HN please note.

Will 3CU, 2HKZ and BRS4206 please send present address to 8QH? Has anyone written to G4OO? G8QH.

*South Central and South-East Areas.*—The December meeting was attended by 17 members,

who record their thanks to G2VB for having allowed his QRA to be used twice in succession. G2GZ and 8TN were pleased to welcome several recently elected members and hope they will continue their support. G2JK, although unable to attend, met several members on their way to the meeting and sent his 73 to all present.

G2JB has now been promoted to the rank of Corporal, and receives our congrats. An Airgraph has been received from G5WG in the Middle East wishing District members good luck during 1942. BRS4324, having almost completed an 8-valve Superhet for 56 Mc. work, reports having tried out a 56 Mc.  $\frac{1}{2}$ -wave Rotary beam with good results. 8GTN and G2GZ thank local members for the excellent support given to them during 1941 as well as for their efforts in keeping the District well on the map.

The next meeting will be held at 2HHD, 85 Bedford Hill, Balham, S.W.12, at 11 a.m. on Sunday, January 25. (Nearest station, Balham). 8GTN.

### DISTRICT 14 (Eastern)

*Chelmsford.*—G6LB is making progress with his modified superhet design incorporating two stages of pre-selection using EF8 valves. 5HF continues to think up bright ideas for the Experimental Section. We are sorry to lose 5CA, but wish him success in his new job. 2SA spends most of his spare time with the H.G., and is taking an interest in the Burnham-on-Crouch Signals Section. 5RV spent Christmas with 8PB who "wangled" leave after passing out from his O.T. unit as P./O. 3VD (Cpl. Pettit, R.A.F.) met 5RV in Chelmsford recently and introduced a prospective new member. 3BS sent a cheery Christmas greetings telegram. 2KG is still sweating out East! 6LL managed to spend a couple of days with 6LB and 5RV during his recent leave. 2KT and 2YI reported by land line to say they are both very busy and have as their goal in the war effort—to get back on the air! 4GF sent greetings from Norfolk. 5RV has climbed in and out of a lot of Wellingtons, Hampdens, etc., but has not managed to get a trip aloft yet! 2CVA, in a letter received some time ago, remembers the pre-war Chelmsford "Hamfests," and sends greetings to all the old gang. He is an L.A.C. 2AHN, writing from Leytonstone, is an enthusiastic new member and an analytical chemist by profession. (Welcome, O.M.).

*Ilford.*—G3MD says 3YY, referred to in last month's notes, is at Brighton not Sheffield. 3TS, of Sidecup, paid a flying visit to 3MD. 2XP is getting District 7 interested in frequency measurement. 8UO, 3OA, 3IV and 6HU report busy. 8TL has had good news from 8PC.

*Romford.*—G3FT reports from the provinces, and says he is sorry that Romford has "missed the boat" lately. He has signed up the following new members since arriving home from abroad: 2DXL, 2DXI, 2DBT, Mr. Cousins and Mr. Wislin. Cousins is an L.A.C. training for air crew. 2CWF and 3CP are working on R.A.F. radio equipment. The Vice-President of Romford Radio Society is a W./Op. at Aden (R.A.F.). A news letter is being circulated amongst local members. 3WT, from Liverpool, was in Romford with 3FT recently. 2BVN ("Early Bird") Stevens met 3FT in town a few weeks ago looking resplendent as a Sgt./Observer. He is with a night



fighter Squadron. News is wanted of G4MP, believed to be training as Pilot in Canada (QST please copy). Will GW2XZ please write to 3FT at 3 Geneva Gardens, Chadwell Heath?

Happy New Year to all District 14 members everywhere, from your D.R., who thanks you for splendid support during the past year. G5RV.

#### DISTRICT 15 (London West, Middlesex and Buckinghamshire)

The December meeting proved to be one of the best of the year. Ten members attended including G3HT (now F./Lt., R.A.F.), 8WR (now Sergeant, R.A.F.) and BRS3894 who holds a commission in the R.A.O.C. All three were home on leave. Others present were G3BQ, 3SU, 4AQ, 5IJ, 6WN, 8KZ and 6RW who was home for the week-end. G8WR is now stationed in London and hopes to get along to future meetings.

Further letters have arrived from G3GY who is still fit and well in the M.E. He longs for the day when he can return to England. 2FUX is in digs, in his old pre-war holiday resort and has his family with him. Although he has whistled "CQ" and "Test" many times he has yet to meet a ham in his camp, other than his corporal. 3BQ in a letter tells of having volunteered for military service long ago, but was turned down as medically unfit. His interest is in V.H.F. and his shack resembles a gas-pipe depot.

The D.R. would like to thank everyone who sent Christmas cards. He, himself, found no time to send any this year.

No one has come forward with an offer of a QRA for the January meeting and as the D.R. is not sure of Sunday working, he is unable to arrange accommodation at his own home. G6WN.

#### DISTRICT 17 (Mid East)

The writer has been pleased to accept the position of District Representative and in doing so records his thanks to Council. He trusts that all members resident in No. 17 will send news for inclusion in these columns.

*Lincoln.*—G3XM, in his usual monthly letter, says he meets 8DI occasionally, and that he was QSO, G3SK, via land line recently. The latter is "contemplating" marriage—we like the word!

*Boston.*—2BQC is now safely spliced! Spring must be in the air because we now hear that Arthur Oughton has just become engaged. (Congrats. to you and the YL). 6LH is still fully occupied with his model aircraft. 2UK, who continues to await that letter from 8DI, wishes to thank 3XM and 5IG for their Christmas cards. BRS4304 is very busy these days. G2UK.

#### DISTRICT 19 (Northern)

The D.R. takes this opportunity of wishing all members good luck for 1942 and thanks those who sent him greetings.

News is again rather scarce this month. BRS4546 writes to say that his YL is now his YF. (Congrats. OM). 2FWX now claims the honour of being the "most confirmed" in the R.S.G.B. after 6ZT's recent "break-down," as he calls it. 5RI expects to be home on leave towards the end of the month when he hopes to meet as many of the Newcastle gang as possible. Finally, 5QY, at present with the M.E.F.,

writes to say that he is fit and well and has travelled considerably since joining R.A.F. He claims the first W.A.C. in Beer Bottle Labels! G2FO.

#### Scotland

To all members, a very Happy New Year.

Don Duthie, GM6IW, who is in the Middle East, sends good wishes to all old friends by means of an Airgraph Christmas card. Greetings are also to hand from GM6JJ, GM2NQ and 2HHX. Douglas Gillies, who writes from the other side of the Atlantic, tells of experiments with crystal receivers and of broadcasting over a C.B.C. network. A long letter is to hand from Bill Anderson, 2FQO, who outlines his activities since the outbreak of hostilities. Members interested in the W.F.S.R.A. are invited to write to him.

At the December meeting of "A" District, Mr. David Niven, 2CHN, was re-appointed D.O. Glasgow members were glad to welcome as visitors, GW8JY, G2MY, 3SL, G6YR and BRS4860. In a most interesting chat Mr. Niven gave details of his experiences and experiments with Franklin Oscillators for frequency measurement.

The next meeting will be held on January 25, at 2.45 p.m., in the Coffee Room, Y.M.C.A. Residential Club, 100 Bothwell Street, Glasgow, C.2. We again draw attention to the fact that the usual entrance to our meeting place is closed and entry may be gained through the main entrance hall of the club and down the rear stair. GM6ZV.

## Letter to the Editor

The Editor does not hold himself responsible for opinions expressed by correspondents.

### Supersonic Vibrations

To the Editor of THE T. & R. BULLETIN.

DEAR SIR,—I was particularly interested in the letter from Mr. Aldous, BRS1006, in the December issue, and as the one who "threw the cat among the pigeons," may I thank him for showing me that I was not completely "crackers" when I wrote originally, although after reading some of the letters that followed, I was beginning to think so!

When I suggested that a mechanical vibration might have similar characteristics to a radio frequency wave, I was not thinking that the vibration itself might be heard, but that two supersonic vibrations of the same frequency, separated by some distance, might so affect the intervening atmosphere (ether?) as to make ordinary speech audible between the two points. I was thinking of reeds or pipes, as the source of high frequency vibrations, which explains why I suggested this as a possible way of communicating between native tribes. It looks as though it might be an easy job to make up the necessary devices to try this out, and I cannot see how the P.M.G. could object, although the Lunacy Board might!

Yours faithfully,

W. R. BROOKS (2DRO).

# HEADQUARTERS CALLING

## November Council Meeting

*Resume of the Minutes of a Council Meeting held at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, on Saturday, November 15, 1941.*

*Present.*—Messrs. A. D. Gay, E. L. Gardiner, A. E. Watts, W. H. Matthews, W. A. Scarr, H. V. Wilkins, H. A. M. Clark, D. N. Corfield, S. K. Lewer, A. J. H. Watson and J. Clarricoats (Secretary-Editor).

*Apology.*—Mr. J. W. Mathews.

1. Ninety-eight applications for membership were approved, 29 of which were accompanied by references. The remainder had been proposed by Corporate members. Four resignations were accepted.

2. The Annual Accounts were examined and approved for submission to the membership at the Annual General Meeting.

\*3. Honoraria were awarded to Messrs. T. R. Theakston, B. W. F. Mainprize, H. R. Heap, S. K. Lewer, R. L. Varney and R. Tunney, for their outstanding contributions to Society publications during the year ended September 30, 1941.

4. It was reported that those members who had sold meters or instruments to the Services in answer to the W/T Board appeal would be receiving payment during November.

†5. In connection with the W/T Board appeal, it was reported that a letter of thanks had been received by the President from Lord Hankey, the Minister charged with the responsibility of co-ordinating the requirements for radio personnel for the Services.

6. The Annual Report of Council was considered, approved and adopted.

7. It was reported that the stock of the 4th printing of 10,000 copies of *The Amateur Radio Handbook* (which became available on October 21, 1941) was almost exhausted due to unprecedented demands. It was agreed to place an order for a further 10,000 copies.

\*8. In connection with War Damage Insurance, it was reported that the Board of Trade had indicated their willingness to remove the limiting clause of £50, and that members serving with H.M. Forces would be treated very sympathetically if damage should occur.

\* These items were referred to in the December, 1941 issue of this Journal.

† This item was referred to in the November, 1941 issue of this Journal.

## District Representatives 1942

The Council has been pleased to appoint Dr. Arthur Gee, G2UK, of "Stonehaven," Horncastle Road, Boston, as Representative for District 17 (Mid East) in place of Mr. W. Grieve, G5GS, who has ceased to be a member. Dr. Gee has for some months acted as District Scribe, and it was due to his energetic efforts that a successful Conventionette was held in Lincoln last August.

The Council has also decided to recognise the hard work put in during the past year by Mr. Charles Spillane, BR51060, "Woodside," Meliden Road, Prestatyn, by appointing him Deputy D.R. for District 11 (North Wales) in succession to Mr. N. E. Read, G6US, who, owing to business pressure has not been able to participate in District activities.

Mr. P. G. Solder, G5FA, who deputised for Mr. Seymour Buckingham, G5QF, during his illness, has been appointed Scribe to District 12 (North London).

All other District Representatives and Deputies have been reappointed.

## Gibraltar Amateur Radio Society

The Council has been pleased to grant Honorary Affiliation to the Gibraltar Amateur Radio Society. In extending greetings to this newly-formed Society, the Council expresses the hope that it may be the means of bringing together all radio amateurs stationed at the Rock.

## An Important Post Requires Filling

The General Secretary would be glad to hear from any member who wishes to be considered for a position as teacher of radio in a technical college. The scale of pay would be about £7 per week.

Applications will be passed for attention to the authorities concerned.

Envelopes should be addressed "Teacher of Radio," c/o R.S.G.B., 16 Ashridge Gardens, London, N.13.

## Books Wanted

Mr. Lamborn Edwards informs us that several of our colleagues who are prisoners of war have intimated that they would like to receive technical books.

Members who have well-loaded bookshelves and who would care to donate one or two volumes to this deserving cause, are asked to send them to Mr. Edwards at "Speedway," Bartholomews Lane, Sudbury, Suffolk. Books on the following subjects are in chief demand:—

General Electrical Engineering.

Aero-dynamics.

Economics and Monetary Systems.

In addition, biographies, and books of travel and fiction would be welcomed. "Thrillers" are also wanted!

Radio and television books are barred as the Nazis will not permit any prisoner to possess information which might enable him to build a transmitter!

## The Navy needs a Receiver

Tel. A. P. Kerford-Byrnes, G6AB, who is serving aboard H.M.S. "Alisma," is anxious to obtain a broadcast receiver for the entertainment of the ship's crew during periods of duty at sea. He has tried to purchase a suitable receiver but as the ship's mains are 110 volts D.C. his quest has so far proved abortive.

G6AB would prefer an all-wave superhet if possible as his ship is often 1,000 miles from land. Pick-up sockets would also be advantageous as a tone arm and 110 volt motor can be obtained.

Failing a larger set, an American midget with the line cord resistance removed would probably fill the gap.

The ship's company are prepared to pay up to £10 for a suitable receiver.

If any member is in a position to assist, he is requested to write to Tel. Byrnes at his private address: "Haywire," Holland-on-Sea, Essex, or c/o H.M.S. "Alisma," c/o G.P.O., London.

## The Crystal Position!

We are still able to supply experimenters with Crystals for Frequency Sub-standards and Band-Pass Filter Crystals, but deliveries are not what they used to be in the piping days of peace:

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## Skilled Operators

Skilled W/T Operators are required in practically every branch of the Services—Navy, Army, Air Force as well as for the Mercantile Marine, Commercial Companies and for other work of National Importance.

Many who would like to become W/T Operators are located too far away from the few schools which they might attend, whilst others cannot spare the time taken in travelling to and from classes.

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 R. A. DELAHUNT (G4QD), Glenfield House, Liverpool Road, Longton, N. Preston, Lancs.  
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**Radio Society of Great Britain**  
 16 ASHRIDGE GARDENS - LONDON, N.13

## ANNUAL GENERAL MEETING—

(Continued from page 232).

President and Council of the Institution of Electrical Engineers, for permitting the Society to use the Institution for meetings. The motion was carried with acclamation.

This terminated the official business, after which Messrs. S. K. Lewer and E. L. Gardiner delivered a Lecture Demonstration entitled "The Cathode Ray Tube and its applications."

At the conclusion of the lecture the President moved a hearty vote of thanks to the lecturers. This was carried with acclamation.

Mr. Gay expressed his pleasure at seeing many Service members present, and on behalf of Council extended a special greeting to amateurs from overseas.

He asked the London members in attendance whether they would be willing to support occasional, or perhaps monthly meetings, at the Institution of Electrical Engineers. On a vote being taken it appeared that some 35 members would welcome such meetings if fixed for Saturday afternoons. The President stated that Council would consider the matter and advise the membership of its decision.

The meeting terminated at 4.40 p.m., after which about 40 members took tea at Slaters Restaurant.

## A CURRENT INDICATING DEVICE FOR THE BLIND EXPERIMENTER—continued from page 239.

his sight. He found the scheme completely satisfactory and certainly a very great improvement on anything he had used before.

It is appreciated that this article may seem a little ill-timed when transmission is suspended, but it is felt that those amateurs who are blind (and there are at least ten such in Great Britain alone) might wish to get the idea going in readiness for happier days ahead.

## How to Court a Radio Girl

- If she wants a date—Meter.
- If she comes to call—Receiver.
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- If she won't be true—Eliminator.

W9IKS in Y.L.R.L. Harmonics.

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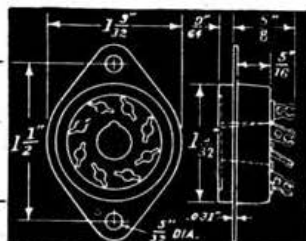
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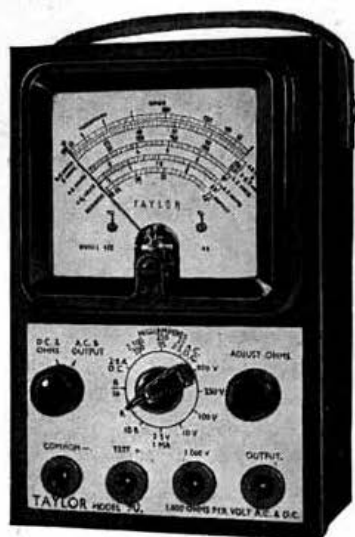
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## EDDYSTONE '358'

### Communication Receiver



### EDDYSTONE "358"

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