

**R·S·G·B**

# **BULLETIN**

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN

**December 1945**

*The original front cover for this edition was not available.*

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**AROUND**



**THE DISTRICTS**

**DISTRICT 1 (North Western)**

D.R.: H. W. Stacey (G6CX), "Sandless," Eddisbury Road, West Kirby, Cheshire. Hoylake 337.  
Scribe: A. B. Wright (G6FW), 106 Knowsley Road, St. Helens.

**Ashton-under-Lyme & District.**—At the meeting held on November 18, three new members were enrolled. The full attendance was 16. The Chairman (BRS4567) announced the formation of specialised groups. We are glad to report that 2FXW is recovering from his recent illness, and that G3BY is expected home shortly. Next meeting, Sunday, December 16, 2.30 p.m. G5PX.

**Burnley.**—GSUA and 2BFB, whilst on leave, contacted the T.R. G5ZN has met 8TD and 3VO. 2RB and 3WU are known to be active. G5ZN.

**Liverpool.**—Twenty members, including several newcomers, attended the meeting on November 24. A committee of four members was elected to assist the T.R., after which two very interesting talks were delivered by Mr. Chandler on Sound Films and the Altimeter. There will be no December meeting. The next will be held on Saturday, January 26.

**Oldham.**—Three members were present at the last meeting, including VU2AN, now residing at 94 Burlington Avenue, Oldham. We wish 2HCX a speedy recovery from his recent operation. Next meeting at G8TN, 51 Gainsborough Road, Oldham, on Friday, December 21, at 7 p.m. Will all local members please rally round? G3PD.

**Rochdale.**—The first meeting of the Rochdale Society was attended by G3BN, 5AL, 6QA, 2HCL, BRS10,694, 8401, 9228, 7083, two J.A.'s and two prospective members. The inauguration of Morse classes will be the subject for discussion at a future meeting. BRS7083.

**West Cumberland.**—G3BW, 3SY, 4NS, 4PU, SDP, and 2DWG were among those present at an enjoyable meeting held at 8RZ on November 17. Under discussion was the Editorial in the November BULL, the steps to be taken to induce new members to attend, and suitable programmes for future meetings. We welcome 4NS and 4PU, now demobilised. The T.R. expressed disappointment at the failure of new BRS members to attend meetings. They are asked to get in touch with G3BW. G6CX.

**DISTRICT 2 (North Eastern)**

D.R.: C. A. Sharpe (G6KU), 56 Moore Avenue, Wibsey, Bradford. Bfd. 10772. Scribe: H. Beadle (G8UO), 13 Chandos Street, Keighley, Yorks.

**Barnsley.**—G5IV asks that new and old members should contact him at 5, Whitehill Terrace. The first post-war meeting of the Barnsley club was held recently at the home of 5IU. G2BH, 4JJ, 5IU, 5IV, 6PY, 8TZ and 2BFF were present.

**Bradford.**—The D.R. suggests a sale and exchange night. An alternative suggestion is to send wants or disposals to the D.R., who will circulate a list. The results of G6KU's recent appeal for support in forming a Bradford Radio Society were very meagre. Such a Society is needed and could be started if 50 per cent. of the Bradford membership gave their support, what about it? 3HA has returned after three and a half years overseas. 8JD is heartily sick of the "Glamorous East" after five and a half years of it. 10,297 (R.N.) is a Radar mechanic and has made two unsuccessful attempts to attend the Glasgow meetings. 4FU has been visited by 4AV, who is now demobbed. 4584, having returned from overseas would like reports from 3KF on his completed six valve super. 6KU has received a call from 6CB and his wife, who is an ex-W.A.A.F. wireless op. 2BXS wishes to meet members in the Saitara and Shipley area.

**Huddersfield.**—10,389 (London) stationed in town, was recently married. Congrats. O.M. He has built an 18-valve communications receiver.

**Leeds.**—G4MC (S.E.A.A.F.) has seen some Jap gear which is quite good. 10,667 (R.A.F.) is hoping for repair. In the near future and is building a small receiver for his kit bag. He hopes the DX stations will soon put in an appearance. (They are already there O.M., see "Mota"). 9789 is not in H.M. Forces as was recently stated in these notes.

**Osselt.**—2AQN, now demobbed, would like data on Telefunken valves types RS237 and RL12/P35. We hear that SKP is opening a radio shop in Horbury.

**Sheffield.**—"Valve Voltmeters" was the subject of a talk given by Mr. I. S. Christie at the last meeting. 6PJ has now been demobbed and has great plans for the future. 10,562 is P.O./R.M. in the F.A.A. The December meeting is on the 19th, after which we revert to the old arrangement of the fourth Wednesday in each month.

**Skipton.**—8676 is still collecting gear for his receiver. 4RX awaits "the day".

The D.R. and Scribe send Season's Greetings to all District 2 members wherever they may be. G8UO.

**DISTRICT 3 (West Midlands)**

D.R.: V. M. Desmond (G5VM), "The Chestnuts," Hanley Castle, Worcester. Scribe: E. J. Wilson (2FDR), 48 Westbourne Road, Olton, Birmingham.

Friends of Lt.-Cmdr. A. C. Edwards, G6XJ, will be glad to hear that he has resumed his duties as Commercial Manager to Stratton & Co., Ltd., Birmingham, having recently been released from the F.A.A.

**Birmingham.**—At a meeting of M.A.R.S. held on Tuesday, November 20, Mr. Bernard George gave a most interesting demonstration of the practical application of the Cathode Ray Oscilloscope. Thirty-three members and visitors were present.

**Covenry.**—During November, two meetings of C.A.R.S. took place. Lectures were given by GZZT on "Transmitters," and by Mr. Watts on "Plastics." The T.R. welcomes home G3YO, 2JR and 2LU, and sends Christmas Greetings to all. G5GR.

Reports have been received from 8391 in Paiforce, 10,827 in S.E.A.A.F., 8023 of Malvern. Congrats. to C.Q.M.S. Boot on his recent marriage. 2FDR.

**DISTRICT 4 (East Midlands)**

Deputy D.R.: Albert E. Cliptone (G8DZ), 77 Julian Road, West Bridgford, Nottingham.

**Leicester.**—Eight members attended a meeting on November 18 at 21X, when a discussion on 56 Mc/s. took place. Impounded gear is already being returned here and members are getting down to the task of re-designing. G2IX.

**Nottingham.**—We are pleased to see members returning from the Forces, the latest being G6HY, who has been out in the Far East for five years, three and a half years of which were spent in a Jap prison camp. The D.D.R. has received a visit from BRS7933, of Bath, who was on leave from B.A.O.R.

A special feature of the recent visit to Messrs. Ericsson's of Beeston was that members were invited to bring along their receivers and other instruments for calibration on laboratory standard equipment.

It was decided at our last meeting to divide into two groups, one for those interested in reception and the other for transmission enthusiasts. Meetings will finish with a Morse class. We still have plenty of room at meetings for the many members who have not yet paid us a visit. All will be made welcome. The D.D.R. sends his best wishes for a Merry Christmas and a Happy and Prosperous New Year to all members at home and abroad. G8DZ.

**DISTRICT 5 (Western)**

D.R.: R. A. Bartlett (G6RB), 31 King's Drive, Bishopston, Bristol. Bristol 46960.

**Gloucester.**—A very successful meeting was held at the "Spread Eagle" Hotel on November 1, 8BK, SWI, 3MA, 2HIC, 2DZG, 4775, 5508, 6464, 6890, 7395, 7857, 8823, and 10,445 being present. 5508 was elected acting T.R. and 7857 scribe. The question of further meetings was discussed and it was decided to hold them fortnightly. Hope was also expressed that the use of a clubroom might be obtained. The usual rag chew then ensued with some caustic comments on the "military necessity" which keeps us off the air. A second meeting was held on November 13 when those present included 5BK, 5DA, 8DT, 2BJF, 4775, 5508, 6564, 6890, 7857 and 8848. A welcome was extended to the Cheltenham members present. It is hoped to resume meetings shortly in both Cheltenham and Stroud. 6564 gave an excellent impromptu paper on "Measuring Instruments."

**Swindon.**—G3JO (Acting T.R.) reports visits from 3HC, 3HS, 8YP, and 2CGAN. 5651 writes offering to assist in getting local meetings going again. It is hoped to hold the first early in the new year. Will all who are interested please get in touch with the T.R.

**Bath.**—G3JQ has intimated that he is willing to take over as acting T.R. Our thanks are due to 2FW for the able way in which he has carried on during the past few years. 8JQ would like to contact local members and hopes to obtain some publicity in the Press.

**Salisbury.**—The D.R. has recently heard from 2ACC, who until he went into the R.A.F. was T.R. He has now been released and hopes to get the Salisbury and District Short-Wave Society going again soon, when affiliation with the R.S.G.B. will be renewed.

**Bristol.**—A number of the local members responded to an invitation to attend two lectures on "Atomic Energy" at the Bristol University Physics Theatre and found them very interesting. Owing to the late date, the report on the November meeting is held over until next month.

A very welcome letter has reached the D.R. from G6LM, who mentions that he hopes that with the return of the "basic" he will be able to meet old friends again. 2RT expects to be demobbed this month, he will reside in Gloucester.

General.—Preliminary Notice: April 14, 1946, has been fixed as the date of our P.D.M. Details later. G6RB.

**DISTRICT 6 (South Western)**

**D.R.:** *W. B. Sydenham (G5SY), Sherrington, Cleveland Road, Torquay. Torquay 2097.*

**Taunton.**—A meeting held at the Y.M.C.A. on November 1, was attended by G3SB, 5AK, 6LY, 2ABA and 2DRW.

G8US is now back in "civvy street" and 3AM expects to be out soon. 6GM is solving the power problem by the installation of a generating plant, which will take the place of his wind genny. 3GH will be unable to recommence activity for some time. Due to indisposition 3BO will not be active until the new year, but would welcome news from 2DOW and other members not mentioned above.

**Torquay.**—If members in the area would like notes included, please write to the T.R. (G2GK), before the 22nd of each month. BR9720 and 9721, on their visits to the T.R., have assisted in searching for "ham" signals. The D.R. and T.R. enjoyed the meeting arranged by the Exeter group on November 10.

**Penzance.**—We have had to say "goodbye" to G4CT and 8OH, who have now returned to their homes in the north. 3KO is busy making various recordings. 6LV is building a speech amplifier and modulator. We were surprised to discover 8748, who has been among us all the time, but kept very quiet. 3IV is planning a C.O. P.A. outfit using a pair of 807's for the P.A.

The D.R. wishes the President, Council, the Secretariat, the T.R.'s and all members of District 6, a very Happy Xmas, and a most Happy and Prosperous New Year.

G5SY.

**DISTRICT 7 (Southern)**

**D.R.:** *W. E. Russell (G5WP), "Milestones," Mayford, Woking, Surrey. Woking 1589*

Season's greetings and best wishes for '46 from the D.R. and T.R.'s of District 7.

**Croydon.**—Thirty-five members attended the October meeting including: G2DP, 2HP, 2LW, 2OW, 2VB, 3DF, 3ST, 4DC, 4KY, 4NI, 5BT, 6IO, 8RN, 2HHH, 1545, 3003, 3512, 4324, 4458, 4584, 6894, 7943, 8130, 8417, 8955, 8996, 9110, 9287, 9514, 9631, 10,946, Messrs. Cherry, Dyer, Graves and Ulrik. Time curtailed an enjoyable lecture on "Radar" by Mr. Castle, BR9514, which will be continued at the January meeting (see "Forthcoming Events").

Visits were made recently to the B.B.C. Checking Station at Tatsfield. Both parties had interesting and enjoyable outings thanks to Mr. Daly, G2VZ, and others at the B.B.C.

G2DP.

**Couldean.**—2ANR is now back in this country after spending a good deal of time in Malta and with the B.A.O.R. 10,251, writing for the first time with the R.A.F. in C.M.F. 4458 has passed his medical and expects to be with the R.A.F. shortly. The T.R. would like to hear from more members particularly the newer ones. (Phone UPL8765.) BR83003.

**Portsmouth.**—The South Hants Transmitting Society held their second meeting on November 1. There are now 19 members with the promise of more to come. A Victory Dinner and Reunion will be held at Havant in January. Will old members who are interested get in touch with G8WC? Welcome home to G2XC (who is back from service with the R.A.F.) and to G8BD.

G8WC.

**Reading.**—An attendance of 28 at the November meeting included some old-timers we hope to see more regularly in future. The meeting kept the D.R., Mr. Russell, busy answering questions on Society and Licensing matters for nearly two and a half hours. It is hoped that some of the difficulties standing in the way of a rapid solution of the latter problem were better appreciated. See "Forthcoming Events" for details of the next meetings.

**Weybridge.**—The November meeting had the pleasure of hearing a most instructive lecture on 28 Mc/s. Transmitters by G6NA. A discussion followed which perhaps not unexpectedly changed in topic from 28 Mc/s. to licences which carried the meeting on through tea and some time after!

Hearty congrats. to G2ZC, who married Dr. Falconar on November 15. G5WP.

**DISTRICT 8 (Home Counties)**

**D.R.:** *S. J. Granfield (G5BQ), 47 Warren Road, Cambridge. Tel.: Cambridge 54644.*

**Cambridge.**—A very successful District Meeting was held at "The Jolly Waterman," Chesterton Road, on November 23, when over 30 members and guests were present including XZ2DY, Z86H and W9LFF. It was decided to hold monthly meetings in future, two in Cambridge, followed by one in another of the towns in the District. The next meeting will be on Friday, January 4, 1946, when a feature will be the sale of surplus gear. Vendors should attach a label bearing name and reserve price. 5DR will conduct the auction and one penny in the shilling will be taken for District funds.

**Peterborough.**—G2NJ, who is now stationed at Barnet, Herts., has had a pleasant meeting with 2PL and 6NA, both formerly of Cambridge. 5NP is still resident in the town, but 5NX has moved to the South coast. 2UQ and 3DY have been demobbed from the R.A.F. and were able to get over to the Cambridge meeting. 2UQ has been in India and 3DY in Ceylon. Both are keen to get on the air again. M. Ellis (2CAZ) formerly of Epping, is now resident at 10 Fulham Road, and would like to contact other members.

**March.**—G3BK and 3WW are making active preparations, having accepted delivery of their gear from the P.M.G.

**St. Ives.**—G5RL, who expects to be demobilised shortly plans to be busy on a new shack and station as soon as he gets home.

Apologies to XZ2DY for omitting to include him in the welcome to guests at the recent District Meeting. We did not have time to hear of his war experiences but expect that he has a story to tell all right.

**Bedford.**—G4OL reports that he and 5FO are overhauling and reconstructing.

**Luton.**—Enthusiasm here is chiefly maintained by the younger members who have formed a Radio Club. 5CS is now resident in Watford, and Maurice Everitt, formerly B.B.C., is now in the Army. The T.R., A. G. Tearle (G3KG) of 26 Farley Avenue, would like to compile a list of local members as soon as possible. A postcard with name, address, etc., would be most helpful.

The D.R. takes this opportunity of extending "Compliments of the Season" to all members—may the DX'ers soon be "Locals" again. G5BQ.

**DISTRICT 9 (East Anglia)**

**D.R.:** *H. W. Sadler (G2XS), The Warren Farm, South Wootton, King's Lynn, Norfolk. Castle Rising 233.*

**Yarmouth.**—The T.R., 2BXJ, reports having met P. Blackwell. He has also heard from Messrs. Harrison and Baker. The latter is in the M.E.F. and expects to operate shortly under a 4 letter X call. He has met W9ZAA.

New member Mr. Rieches, of Bradwell, is welcomed, 2BXJ is hoping for a contact with him.

**King's Lynn.**—The return of impounded apparatus is causing renewed local interest. G2XS.

**DISTRICT 10 (South Wales & Monmouthshire)**

**Acting D.R.:** *H. H. Phillips (GW4KQ), 80 Cottrell Road, Roath Park, Cardiff. (Cardiff 4512 during business hours.)*

**Cardiff.**—A record attendance, which included GW2UH, 2XZ 3VL, 4FN, 5BI, SAM, 8UH, G5FN, 2FVD, 6655, 7589, 8780 and 10,640, was present at the November meeting when Mr. W. H. Westacott, 10,374, of 48 Hamilton Street, Canton, Cardiff, was unanimously elected Acting T.R.

**Swansea.**—No notes are to hand but the D.R. was pleased to be present at a well-attended meeting on October 31, when opportunity was taken to discuss at length various items dealing with the re-issue of licences and allied topics. Full particulars of monthly meetings can be obtained from the T.R., Mr. W. Bowen, GW4CC, Thistle Dhū, Upper Killay.

**Carmarthenshire.**—A welcome is extended to GMSMQ, now at Llandyssul, but who shortly hopes to take up residence in Carmarthen, where he is anxious to contact members. 8MQ, having had considerable experience in Scottish "H" District, thoughtfully offers his assistance, which is appreciated, in organising meetings in this County and members who are desirous of participating therein are asked to contact J. Millie (Hafod Lon, Saron, Llandyssul) at the first opportunity.

**Cardiganshire.**—BR9318 has recently been posted to this County and is anxious to contact members.

**Newport.**—Several new members have been introduced in recent months and a resumption of activities may be foreshadowed. 10,640 seeks news of other members whom he would like to contact and the writer will be pleased if all members at present in and around Newport would drop a card advising whether they be interested in resuming meetings, so that arrangements may be started.

**General.**—The Acting D.R. will endeavour to attend official meetings throughout the District at regular intervals, when opportunity will be taken to give members as wide an outline as possible of Society activities. Questions of District and Society interest will be appreciated at any of these meetings.

GW4KQ and the T.R.'s associate themselves in sending Seasons Greetings and good wishes to all District members wherever they may be. GW4KQ.

**DISTRICT II (North Wales)**

**Deputy D.R.:** *C. Spillaine (BR81060), 14 Queensway, Prestatyn, North Wales.*

**Prestatyn.**—Congrats to P.O. Stellig, GW4CK, on his recent promotion to commissioned rank as Radar Officer at Scampton 4CK has contacted 30S and the Gainsborough group and thanks 30S and others for their grand hospitality.

BR82731, who recently paid us a visit was also a visitor to the Liverpool P.D.M. BR81060 is again home, so will welcome a call from visitors.

**Rhyl.**—BR85520, homeward bound after a 20 months trip, finds his QRA is now in N. Cornwall. GW5FU is back in harness as "Mine Host," GW4CK and 1060 recently called to sample his brew and enjoyed a rag chew in addition.

BR85770 (India) has only 10 months more to go before coming home.

Arrangements are going ahead for a North Wales P.D.M. next summer. BR81060.

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

**D.R.:** *Seymour Buckingham (G5QF), 41 Brunswick Park Road, New Southgate, N.11. (Enterprise 3112). Scribe: C. R. Stevens (2DHF), 22 Bramford Court, Southgate, N.14. Palmers Green 0548.*

**North London.**—There is no meeting report this month as it was held too late for inclusion in these notes.

G4BC has now "returned to circulation" after three years in the Army. 6WU has also been "demobbed" and we understand that when licences are re-issued one of the first calls to be heard will be "Washington University." 6QM is struggling with a

Franklin oscillator and 8GS, who is now out of the R.A.F., is fighting with the same circuit. 2HDM would like to get into touch with 88PL.

Thanks are due to G5FA for carrying on during the absence of our D.R.

The D.R., T.R., and scribe join in wishing everyone the Compliments of the Season. 2DHF.

**St. Albans.**—The meeting held at the Peahen Hotel turned out to be a great success with a record attendance of 29. The General Secretary, G6CL, gave the proceedings an excellent start with the latest news on the licensing position, return of impounded apparatus, the reorganisation of the QSL Bureau (which met with general approval) and much other useful information about the Society. We were then given a real treat by Mr. H. A. M. Clark, G6OT, in the form of a talk entitled "Amateur Radio from 1921 to 1939," which was illustrated with many photographs and items of, what seemed to us, pre-historic gear as well as 60T's own personal experiences and original log books. The newer members were specially interested to hear about the part played by Amateur Radio (and G6OT and G6CL in particular) in an early Atlantic Flight by Kingsford Smith in the famous aircraft, The Southern Cross. We all admired and thank Mr. Clark for carrying on with his talk in spite of a severe cold. Those present included G2CN, 2GO, 3HS, 3KG, 4BC, 4GT, 5LL, 5UM, 6FL, 8FJ, 8TK, 2DHF, 2DHH, 2DWV, 2FWX, 2HAB, 2HDM, 3386, 3412, 4017, 7097, 7238, 8569, 8824, 8854, 9093 and 6CL's junior op.

Members join in wishing G3YY a speedy recovery and offer congrats to 8824, 5WJ and 5UM on being released from the Royal Navy, Army and R.A.F. respectively.

The next meeting will be held at G5UM (see Forthcoming Events) who would welcome a P.C. from those attending. It is proposed to discuss amongst other things, the projected Mid-Herts. V.H.F. Network which received many promises of support when the suggestion was made at the last meeting.

BRS3412.

### DISTRICT 13 (London South)

**Acting D.R.:** S. E. Langley (G3ST), 52 Dumbarton Road, S.W.2.  
**Scribe:** W. D. Gilmour (G2YB), 35 Grangecliffe Gardens, South Norwood, S.E.25.

The combined November meeting was again well supported, 35 members being present. Arrangements were made for two visits to the B.B.C. Receiving Station at Tatsfield. The visits have now taken place. Both were very interesting and much enjoyed by the 24 members who attended.

**South Eastern Area.**—A well attended meeting was held at the home of 4DC (63 Erlanger Road, S.E.14) who has kindly consented to act as A.R. for that area in order to recreate interest. The QSL section was discussed and strange criticism was passed. It was decided to send a letter to the R.S.G.B. on this matter. 4DC has arranged to hold regular monthly meetings at his address on every third Sunday in the month at 3 p.m. (Please note day and time.)

**South Western Area.**—Will all members in the S.W. area get in touch with the scribe, or attend the Croydon meetings, with a view to appointing an A.R.

**General.**—BRS7943 is prepared to draw Braille circuits for blind members; he is also interested in radio control of models. 10,469 would like to contact members interested in Radio Control of aircraft. G5OX and his wife have been located at long last, both are well. This news will interest some of the old timers.

G3ST.

### DISTRICT 14 (Eastern)

**Scribe:** L. J. Fuller (G6LB), "Meadow Brook," Vicarage Lane, Great Baddow, Chelmsford, Essex. Telephone: Gt. Baddow 224.

**Chelmsford.**—The November meeting, first for some months, was very successful, six full call-signs being among the attendance. We are delighted to see G2KG in "civvy street" again, where G8PB soon hopes to join him.

Post-war activity was much in "the air" and after some discussion a resolution was carried, urging the responsible authority to return our gear, tell us their plans for our future, and regard our early return to activity with less concern than they appear to do at present. It was agreed to hold this resolution in abeyance until the issue of the November BULLETIN, in the hope that concrete news would be contained therein.

In view of the promise of an early return of our apparatus, it has come as a great surprise to learn from Southend-on-Sea Radio Inspector's Dept., that the G.P.O. Official Instructions on this vexed point were not received at Southend until Friday November 23, a week after the despatch of the above resolution to the G.P.O. No significance is attached to this, however.

Everyone now busy planning new rigs, and oiling their wrists. **Chingford.**—A record attendance of 21 was reported at the November meeting, at which G2XG spoke on "Oscillators." Many others took part in the discussion on various types for post-war conditions. It was proposed to evolve a local frequency plan to minimise mutual QRM. Future lectures, on dates still to be arranged, will deal with "Oscillography" and "Square Pulse Recording."

**Southend.**—G6CF, now back under a bowler hat, writes to say that at a meeting of some of the old Southend Radio Society members, G5UK, 2WG and 5VQ were among those present. It is hoped to arrange a proper re-opening meeting during December. It has already been decided to resume meetings and field-day activity as soon as ever possible.

G2SO, still at Chelmsford, is busy planning a new rig when he gets back to "the briny." G6LB.

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

**D.R.:** H. V. Wilkins (G6WN), 539 Oldfield Lane, Sudbury Hill, Greenford, Middlesex. Byron 3369.  
**Scribe:** E. Holt (2FZG), 36 Bulstrode Road, Hounslow, Middlesex.

Arrangements have been made to fix dates for District meetings throughout the coming year. In accordance with wishes previously expressed they have been fixed on Saturday afternoons. Dates provisionally arranged are as follows: January 19, Hayes; February 23, West London; March 23, Hounslow-Twickenham; April 20, Harrow; May 25, Aylesbury; June 22, Slough-Ashford; July 20, High Wycombe; August, 24 Ruislip; September 21, West London; October 26, Harrow; November 23, Edgware; December 21, West London. Objection has been raised by one member whose business prevents him attending Saturday meetings. Any other objectors? It is intended to arrange first-class lectures at all meetings.

A District Scribe has been found in Mr. E. Holt (2FZQ), 36, Bulstrode Road, Hounslow, Middlesex, who will take over as from January 1, 1946. He will handle District Notes and later will probably re-start the District Journal. Both G2UV (who took over its publication just prior to the war) and G5SR (T.R. for Harrow) have found it impossible to carry on and we thank them for their efforts in the past.

The D.R. would like to have either the present T.R.'s or A.T.R.'s confirmed in office or successors found. Particularly would he like to see representation in both Ruislip and Twickenham. Mr. Sheargold (G6RS), "Digswell," The Avenue, Sunbury-on-Thames, has accepted office for Ashford. We thank the resigning A.T.R. for his efforts in building up this section during the past year.

**Ashford.**—Eleven members attended the November meeting.  
**Hounslow.**—Eleven members attended a revival meeting at the beginning of November.

**Aylesbury.**—Mr. Bargman (7918), 28 Stanley Hill, Amersham, would like to see meetings in that town. Perhaps others with a like mind will contact him.

Various meetings have been held in other parts of the District, but the writer lacks news of them.

81P and 6014 announce the arrival of junior ops. (Congrats. O.Ms.—D.R.) Sq./Ldr. Newson (3GY) and Ft./Lt. Fletcher (2FUX), send 73. 4487 is with 7550 in Akyab, Burma; they hope to be on the air soon and have already obtained their QSL cards. GW2NG is house hunting in the district, 2RL and 7918 report for the first time. G6WN.

## ANNUAL GENERAL MEETING

FOLLOWING THE ANNUAL GENERAL MEETING

to be held at the

INSTITUTION OF ELECTRICAL ENGINEERS

Savoy Place, Victoria Embankment  
London, W.C.2

On SATURDAY, DECEMBER 29th, 1945  
at 2 p.m.

R. L. SMITH-ROSE

D.Sc., Ph.D., M.I.E.E., D.I.C., A.R.C.S.  
(Honorary Member)

will deliver a Lecture to the Society entitled

"RADIO LOCATION"

### DISTRICT 16 (South Eastern)

**D.D.R.:** W. A. Scarr, M.A. (G2WS), 8 Beckenham Grove, Shortlands, Bromley, Kent. **Scribe:** E. H. Tronell (2HKU), 27, Unity Street, Sheerness, Isle of Sheppey, Kent.

G4FB reports that 2FZG was married on November 10. 2AMG was best man. S. C. Terry, 1 Hillingdon Road, Barnhurst, is anxious to meet local members and has built a valve-voltmeter. 2DHV has visited 50Q and is now returning to C.M.F.

**Gillingham.**—On November 5 a party of M.A.T.S., members enjoyed a visit to the Kent Electrical Power Station.

**Herne Bay.**—G3NQ, 104 High Street, Herne Bay, has very kindly offered to hold local meetings in a room over his showroom, provide light refreshments and demonstrate his gear. Here is an excellent opportunity to get going in this area.

**Maidstone.**—M.A.R.S. meetings are held every Wednesday night at 7.30 p.m. in the Clubroom, 244 Upper Fant Road. On November 10 5XB visited the club and two members recently demonstrated commercial recordings and frequency response.

**Sussex.**—2FZTS was to be married on December 10. He is building a multi-meter and reports "loads of Yanks" on 28 Mc/s. 2HLF (Heathfield) reports hearing 30 W. stations and one VE3 on 23 Mc/s. on November 18 and a number of PYs on 14 Mc/s. 7412 expects to be demobbed in December, he asks whether anyone has a copy of THE BULL for February 1945 to spare?

Seasonal greetings are extended to all members with the hope that we shall soon be able to hold District meetings. Comments and suggestions welcomed! 2HKU.

### DISTRICT 17 (Mid East)

D.R.: A. C. Simons (G5BD), "The Elms," Church Road, Mablethorpe, Lincs. Phone 69.

G3OS, who is keeping things going at Gainsborough reports that two meetings held at his home during November were attended by G3WB, 40F, 30S, GW4CK, 4315, 8004, 9112 and 10,245. His 56 Mc. converter is completed and works.

11,169, our latest Grimsby member, is seeking information and contacts.

G8BQ and 6GH have not yet settled down to the humdrum of civilian life but no doubt will be ready when the "off" signal comes. 4GX has had a visit from 41F and is hoping that other members in Grimsby and Cleethorpes will follow suit. 5BD, now safely installed in his new home is organising the layout to the best advantage.

2BQC finds Australian hospitality very good. He is hoping to obtain a VK2 call and to get on the air before he returns home. G5BD.

### DISTRICT 18 (East Yorkshire)

District Scribe: S. Davison (G6SO), 10 Sydney St., Scarborough. G6SO regrets the absence of notes last month owing to ill-health causing his absence from the District.

Hull.—The November meeting took the form of an exhibition of valves of many types, ranging from the V24 and Dutch "R" valves, to modern Acorns, including an 832 "doorknob" twin beam tetrode. Other interesting specimens shown were a "Loewo" three-in-one-valve, 1926 vintage, the original indirectly heated triode (1926) and a 35T. We were very pleased to welcome back G5MN, who has just been demobbed; he has been in India and Burma for the last four years.

Local members are anxious to start up on whatever "National" frequency bands we may be allotted. If these include 5 metres and 2½ metres, several stations should be in operation within a few days of the word "go."

The acting T.R., G3PL, takes this opportunity to wish everyone a Merry Peace-time Christmas and a prosperous New Year.

G6SO also extends the seasonal greetings and a quick return to normal conditions once again. G6SO.

### DISTRICT 19 (Northern)

D.R.: R. J. Bradley (G2FO), 36 Raby Road, Stockton-on-Tees.

South Shields.—G6PB has returned from the M.E. and is now in Scotland. 6VG has been "demobbed" and is looking forward to "The Day." 5SB has built an audio amplifier and would like to hear from 6HF and 6LS. It is with deep regret that we report the death of 6XO and extend our sympathy to his wife and son on their great loss.

Newcastle-upon-Tyne.—G4LX has been in Newcastle recently and is looking forward to active ham life as soon as he is demobbed. Hearty congrats. to Mr. and Mrs. 2DDQ on the safe arrival of a son, Rodney. A meeting for R.S.G.B. members will be held at the Northern Radio Club, Norad House, 16 Stratford Street, Heaton, Newcastle-upon-Tyne, 2 on Saturday, December 22, 7-9.30 p.m.

Darlington.—BR8282 is a civilian again, but his radio activity is at present curtailed by lack of housing accommodation. 2CKN has built a new receiver and is at present making plans for a new shack.

Stockton-on-Tees.—G5XT, 2FO and 5QU are busy building U.H.F. gear. 3YK is said to be removing some of the dust from his shack. 3UG is now stationed in the District and hopes to be "out" shortly.

The D.R. and T.R.'s take this opportunity to send best wishes for Xmas and the New Year to all members at home and overseas. G2FO.

### Scotland

Scottish Records Officer: J. Hunter (GM6ZV), 51 Camphill Avenue, Langside, Glasgow, S.1. Langside 237.

Activity is expanding and this month a welcome is extended to "F" District. Returning members from the forces are asked to advise their D.O. of the fact.

"A" District (Glasgow and surrounding counties).

D.O.: D. R. Macadie (GM6MD), 154 Kingsacre Road, Glasgow, S.4. Scribe: J. D. Gillies (2FZT), 3 Berridale Avenue, Glasgow, S.4. Merrytee 4060.

Mr. Janes takes over as Chairman of the Glasgow Amateur Radio Club in place of Mr. Macadie, whose work is now No. 1 Priority. At the October meeting of the Club GM6MD delivered a short lecture on "Antennae" following which a brief description of German radio equipment was given by Captain Wallace Howland (W3HZA). The main address was given by visiting old-timer Mr. Eadie (GM4JO) his subject being "B.B.C. and other Beam arrays." GM4JO (locally known as "Joe") has changed W.O. rank R.A.F. for "Mr." but is settling down in the South and says he will erect a beam directed on Glasgow. A welcome was extended to the many visitors present, including John Kyle, GM6WL, and Ft./Lt. McDermid. Incidentally the attendance of 30 included 15 licenced amateurs. 2689 and GM2KP have been

demobbed and we are glad to have these two active enthusiasts back into the ranks of residents. GMSRJ is also understood to be home. 2FZT.

"B" District (Aberdeenshire and North).

Acting D.O.: T. Laing (GM6LG), 27 Viewfield Crescent, Aberdeen. Aberdeen 7765.

Last month's notes brought quite a response from members, many of whom are unfortunately still in the Services. GM3SF and 5YN are demobbed from the R.N.V.W.R. 5YN is now a radio engineer while 3SF is back to his old job as P.O. Engineer. Both are working in Peterhead. 3SF has just received a letter from Louis Gerbert, W8NOH, recalling when they were together in Algiers and the great "Hamfest" at Beni Messous, where they met F8BL, 8DY, G3CK, 6ZO, K6SRK, W5IUW, SMTE, 9MNT and others. W8NOH hopes to be on the air soon to make contacts with Aberdeen. (BRS members keep a watch on 14 Mc/s.) A preliminary meeting will be held on Friday, December 28, in the Green Room, Music Hall, Union Street, Aberdeen (enter by Golden Square) at 7.30 p.m. to discuss the possibility of setting up a local transmitting centre for the use of members, so please do not fail to turn up and bring your best QSL cards or what have you? GM6LG.

"C" District (Dundee, Angus, Forfar, Perthshire, etc.).

D.O.: Jas. Gouk (GM3NH), 4 School Drive, Downfield, Dundee.

A visit to the local Automatic Telephone Exchange has been arranged for December. Cpl. J. Kearns, R.A.F., is home on leave from Norway whilst GM4NR is back from Greece. GM3NH.

"D" District (Edinburgh, Midlothian, etc.).

D.O.: J. Wilson (GM6XI), 52 Macdowall Road, Edinburgh 9. Edinburgh 42153.

These notes go to the press before the first meeting. GM5YX, GM6LS and 2CFU have returned from the Forces. GM6XI.

"F" District (Stirlingshire, etc.).

Acting D.O.: C. Winton (GM6XW), The Point, Stenhousemuir, Larbert. Larbert 125.

Mr. Winton has kindly offered to act as D.O. A meeting will be arranged and members are asked to contact him so that they can be kept posted. GM6NX is back from Burma and expects to be demobbed in December, whilst GMSHP is out from the Army. 2nd/Lt. W. Peat is on his way to S.E.A.C. GM6XW.

### Northern Ireland

D.R.: J. N. Smith (GI5QX), 19 Hawthornden Drive, Belmont, Belfast. Phone: Belfast 63323.

Congrats to Lieut. E. G. J. Tucker (GI5DX), who has been appointed Headmaster of Portora Royal School. The news is via 5TK. 3ZX is on his way home from India, and intends to return to amateur radio circles as soon as possible.

GI5TK has been demobbed, and is at home once more. His first thought was to tidy the shack in readiness for the return of impounded gear; and the D.R. caught him in the act during a recent visit. The D.R. and T.R. send Christmas greetings to all members in the District, and wish them all a right good New Year. GI5QX.

### News from the Far East

Old timers will be glad to learn, on the authority of the "Sunday Times," that Mr. P. E. Earle, one time 8S18E, is safe after experiencing the hell of Sumatra. Mr. Earle was Singapore Harbour electrical chief prior to the war, and in earlier years was responsible for some of the first broadcast transmissions from Singapore.

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# NEW MEMBERS

THE COUNCIL HAS PLEASURE IN ANNOUNCING THAT THE FOLLOWING HAVE BEEN ELECTED TO CORPORATE MEMBERSHIP OF THE SOCIETY

## British Isles (Licenced Amateurs)

- G2DD \*H. F. SMITH, 74 Braithwaite Gardens, Stanmore, Mdx.  
 G2IP C. J. REED, c/o The Urban Electric Supply Co., East Bank House, Hawick, Scotland.
- G2JN \*J. G. STONESTREET, Pilots Lodge, Lower Hardres, Nr. Canterbury, Kent.
- G2NA \*H. FROST, The Shrubbery, Wood Rd., Codsall, Staffs.  
 G2OG J. M. HOGG, 9 Waverley Street, Dudley, Worcs.  
 G2PN \*A. POLLARD, 31 Donkin Terrace, North Shields, Northumberland.
- G2QB \*R. W. BAILEY, District Engineers Office, General Station, Perth.
- G2RA \*F. F. WARNER, 220 Folly Lane, Swinton, Manchester.  
 G2VX J. PHILLIPS, 79 Pelham Street, Ashton-under-Lyme.  
 G3AB \*H. LARTER, 18 Ribble Street, Bacup, Lancs.  
 G3AI \*H. J. CARTER, 27 Debeauvoir Road, Hackney, London, E.5.
- G3FU D. A. W. BALL, 96 Toynebe Rd., London, S.W.20.  
 G3GA S. HOLMES, 126 Browns-Hill, Green Road, Coventry.  
 G3GB H. B. SHIELDS, 10 Deal St., Droylsden Rd., Newton Heath, Manchester, 10.
- G3HU T. B. FOX, 73 Sun Lane, Gravesend, Kent.  
 G3HV \*D. R. IBBERTSON, 2 Parkside Row, Dewsbury Road, Leeds 11.
- G3IA \*S. C. BLACK, Avondale, Antrim Road, Glengormley, Belfast.
- G3IJ C. HARRIS, 43 Albert Street, Fleet, Hants.
- G3JH \*H. W. HERMAN, 122 Shaftesbury Avenue, London, W.1.
- G3KT E. A. THOMAS, 34 Woodland Grove, Farnborough, Hants.
- G3NJ \*F. JACKSON, The Cottage, Crookhill Hall, Conisbrough, Nr. Doncaster.
- G3OD T. J. LACOCK, Berrylands, Lansdowne Rd., Bridport, Dorset.
- G3TQ \*P. ANDERSON, 53 Caledonian Rd., West Hartlepool, Co. Durham.
- G3TY A. J. HARSANT, 22 Greystoke Court, Hanger Lane, London, W.5.
- G3UZ \*F. G. SADLER, 154 The Guinness Trust, Stamford Hill, London, N.16.
- G3WF \*D. R. COCKINGS, Avondale, Easemore Lane, Redditch, Worcs.
- G3WK G. H. MARTIN, 22 Deepdale Street, Sutton in Ashfield, Notts.
- G3WW \*R. F. THURLOW, North House, Wimblington, Nr. March, Cambs.
- GM3ZH F. W. ADAM, The Elms, Galashiels, Scotland.  
 G3XL J. A. MANN, 9 Castle Rd., Worle, Somerset.  
 G4BA \*D. SCOTT-JOB, R Signals, H.Q. Officers Mess, Caterick Camp.
- G4CD \*J. JUDSON, 57 Parkland Drive, Leeds 6.  
 G4DR \*D. P. M. URQUHART, 7 Padwell Lane, Thurnby, Leics.  
 G4PH J. P. SEDDON, Winneydene, Wooldale, Nr. Huddersfield.
- GW5BI \*V. J. BARTLETT, 171 City Road, Cardiff.  
 G5HZ \*N. I. BOWER, Oak Cottage, Water End, Heme Hempstead, Herts.
- G5NC \*H. OSBORNE, c/o Admiralty Signals, Royal Firt, Bristol 8.
- G5OU \*H. J. AHIER, 28 Bath Street, St. Helier, Jersey, C.I.  
 G5SB J. J. MONAGHAN, 60 Lemon St., Tyne Dock, S. Shields.  
 G5VV D. WOODS, 4 Ingram House, Sandy Lane, Hampton Wick, Middlesex.
- GW5XN \*R. H. CLAPP, 151 Stanwell Road, Penarth, Glam.  
 G6BO L. W. HAGGER, 30 Longley Rd., Harrow, Mdx.  
 G6CB \*R. L. CASTLE, 8 Derwent Road, Dewsbury, Yorks.  
 G6FB \*E. W. BURGIA, St. Anne's House, Kings Lynn, Norfolk.  
 G6FO \*A. J. E. FORSYTH, Lane End Cottage, Bledlow, Nr. Aylesbury, Bucks.
- G6HF F. J. BASSETT, 109a The Grove, Ealing, London, W.5.  
 G6MB F. HICKS-ARNOLD, c/o W. F. Rogers, 105 Station Rd., West Wickham, Kent.
- G6RO \*R. C. KAYE, 54 Bank Crest, Baildon, Yorks.  
 G6SI J. E. SIMMONDS, 12 Royal Albert Bldgs., Cartwright Street, London, E.1.
- G8AW \*R. G. WARNE, Western Place, Penryn, Cornwall.  
 G8DF \*A. E. MITCHELL, 2 Deemont Avenue, Aberdeen.  
 G8DY \*H. I. POPAY, 28 Wigley Rd., Scraptoft Lane, Leicester  
 G8GF W. A. HIGGINS, 35 John St., Brerley Hill, Staffs.  
 G8HS W. T. SHANNON, 20 Orangefield Cres., Belfast.  
 G8IK V. D. MORSE, 196 Douglas Rd., Acoccks Green, Birmingham 27.
- G8IV G. I. VOKES, Kiln Lane, Welton, Daventry, Northants.  
 G8MD \*J. A. DRINKALL, 61 Glenluce Drive, Farringdon Park, Preston.  
 G8MF \*T. DE PUTRON, Les Hubits, St. Martin's Guernsey, C.I.

- G8MX \*W. L. HECTOR, M. B., Cromar, Hitchin Road, Letchworth, Herts.  
 G8ND N. E. DALBY, c/o Miss Allen, The Bungalow, South Lightpill, Stroud, Glos.
- G8NQ N. L. STEPHENS, Holly Bank, Hereford Rd., Mon.  
 G8PG \*A. D. TAYLOR, 8 Grange Rd., W. Kirby, Cheshire.  
 G8TU \*H. E. SHIRT, 90 Egremont Rd., Exmouth, Devon.  
 G8YM W. J. DELANEY, 67 Colin Cres., Hendon, London, N.W.9.
- 2AAX A. M. ANDERSON, 93 Maybury Rd., Kingston-upon-Hull, Yorks.
- 2ABB \*H. F. NELL, 20 Balfour Cres., Newbridge, Wolverhampton.
- 2ADP J. E. ORAM, D.S.O., 35 Malmesbury Park Road, Bournemouth, Hants.
- 2AIM \*C. E. CLARKE, 65 Cecil Park, Pinner, Mdx.  
 2A0Z G. W. ASHFORD, College Farm, Clatcombe, Sherborne, Dorset.
- 2ASO \*G. H. SMITH, Lyndhurst, Vilette de Haut, St. Martins, Guernsey.
- 2AUF H. C. HOWARTH, 428 Stockport Rd., Denton, Manchester.
- 2AVP \*J. VAN PUTENBROEK, 97 The Crescent, Woodlands, Doncaster.
- 2AYQ J. E. BOWDEN, 3 Westcott Place, Swindon, Wilts.  
 2BFG C. R. CARTER, 29 South Esk Rd., Forest Gate, London, E.7.
- 2BGZ J. BATEY, 74, Dunloe Avenue, Tottenham, London, N.17.
- 2BHN L. R. RAYMOND, 15 Hillgrove Avenue, Hendford Hill, Yeovil, Somerset.
- 2BMJ \*T. D. JARDINE, 42 Aldermanhill Rd., Dumfries, Scotland.

A CORDIAL WELCOME IS EXTENDED  
 TO THE  
**505**  
 NEW MEMBERS  
 WHOSE NAMES ARE LISTED

- 2BRM \*M. J. BRIGHT, Parkgroves, Clayhill, Lyndhurst, Hants.
- 2BRR \*R. G. RUGG, 4 Hillside Ave., Woodford Green, Essex.  
 2BYL \*W. S. ROBINSON, Stonycroft, Cefn Coed, Merthyr Tydfil.
- 2CAT MAJOR W. C. ALCOCK, 59 Trg Regt., R.A.C., Barnard Castle, Co. Durham.
- 2CBM C. B. SCOTT-KESTIN, 27 Dane Road, St. Leonards-on-Sea.
- 2CHX \*C. E. HARWOOD, Eriesdene, Gannock Park, Deganwy, N. Wales.
- 2CPS F. G. MARSHALL, 92 Flemingate, Beverley, E. Yorks.  
 2CWV \*H. C. BROOM, Netherdreu, High Cross Road, Hardhorn, Blackpool.
- 2CYZ \*I. CAMPBELL-MURFIT, Sutherland House, Deal, Kent.  
 2DHK J. W. BARNES, 1 Cornwall Road, Dorchester, Dorset.  
 2DLK G. O. JONES, Radio House, High St., Llangefni, Anglesey.
- 2DQV W. HUMPHRIES, 68, Green Lane, Small Heath, Birmingham 9.
- 2DUQ N. HEARFIELD, 117 Blue Hill Lane, Wortley, Leeds 12  
 2DUU K. G. COE, 7 Basildon Avenue, Barkingside, Ilford, Essex.
- 2DWZ S. ARCHER, 2 Trafalgar Terrace, Trafalgar Street, Radford, Nottingham.
- 2FGJ S. LLOYD, 175 Gwynedd Avenue, Townhill, Swansea.  
 2FGM K. R. WOOTTON, 15 Cowper St., Ipswich, Suffolk.  
 2FIF L. W. BAZLEY, 7 DERAMORE Gdns., Ormeau Rd., Belfast.
- 2FIZ MISS M. K. CREESEY, 73 Fore St., Salcombe, S. Devon.  
 2FKS K. R. N. WILCOCK, 15 Ravensbourne Park, Catford, London, S.E.6.
- 2FHH \*L. HARDIE, 530 Holburn Street, Aberdeen.  
 2FLU E. G. NEWCOMBE, 65 Bracebridge St., Nuneaton, Warwick.
- 2FSH A. H. VAUGHAN, 5 Market Meadow, St. Mary Cray, Orpington, Kent.
- 2FSS J. A. CALEY, 37 Mardon Rd., Sheldon, Birmingham 26.  
 2HBJ D. SROTT, 47 Kingsway, Rochdale, Lancs.  
 2HKA A. GRUNDY, 4 Hildebrand Rd., Utting Avenue, Liverpool 4.

\* Denotes Re-elected.

- 2HIG J. G. BARKER, Uppergate Cottage, Ingleton, Via  
Carnforth, Lancs.
- 2HLL F. H. PICKARD, Stonegate Farm, Meanwood, Leeds 6.
- British Empire (Licenced Amateurs)**
- SUIDA \*MAJOR D. A. MACDONNELL, c/o Middlecot Cottage,  
Quarley, Andover, Hants.
- VK2AMP G. A. W. PRYOR, 24 Bay Street, North Croydon,  
Sydney, N.S.W., Australia.
- VK3OF \*F. P. O'DWYER, 190 Thomas St., Hampton, Vic.,  
Australia.
- VU2AL W. C. BROWN, 1 Carno Road, Caersws, Mont.
- VU2JG \*J. R. FARR, Whingreen, Cornwood, Ivybridge,  
S. Devon.
- V87CE \*CAPT. W. P. CAMPBELL, 3 Dalmeny St., Edinburgh 6.
- VK2XQ R. J. TRAILL, 47 Regent St., West Maitland, N.S.W.  
Australia.
- ZL2GH B. E. ATTEWELL, 785 Childers Rd., Gisborne, New  
Zealand.
- ZL4DQ \*MAJOR W. R. HAMILTON, Plastic Surgical Unit,  
Burwood Hospital, Christchurch, New Zealand.
- ZB1S E. A. VELLA, 39 Melita Street, Sliema, Malta.
- ZEI1L A. R. M. VINCENT, Post Office, Filabusi, S. Rhodesia.
- British Receiving Stations (B.R.S.)**
- 979 \*I. C. LAMB, 94 Prince of Wales, Mansions, Battersea,  
London, S.W.11.
- 3,015 \*G. CARTER, Brookside, Fittleworth, Nr. Pulborough,  
W. Sussex.
- 3,204 \*L. GROGAN, 6 Elmwood Avenue, Belfast, N. Ireland.
- 3,525 \*C. N. ROSS, The Braes, Kincardine, Fife, Scotland.
- 3,641 \*J. O. MATHEWS, 36 Talbot Hill Rd., Bournemouth, Hants.
- 4,282 \*T. COLLINS, 2 Redstone Rd., Manchester 19.
- 5,779 \*C. W. CLEMENTS, Elmshurst, Fernbank Rd., Ascot, Berks.
- 10,892 H. H. FOX, 4 Gorsey Leys, Overseal, Nr. Burton-on-  
Trent.
- 10,893 R. N. RIDGEWELL, 181 Broad Lane, Coventry.
- 10,894 C. J. COOMBES, 19 Prospect Rd., Newport, I.O.W.
- 10,895 F. HELLWELL, Clarendon House, Mytholmroyd, Halifax,  
Yorks.
- 10,896 D. R. EVANS, 12 Elba Street, Gowerton, Swansea,  
S. Wales.
- 10,897 F. J. SMITH, 4 Sandhurst Rd., Polygon, Southampton.
- 10,898 A. WHITFIELD, 23, Sefton Street, Nelson, Lancs.
- 10,899 H. SYKES, 7 Croft Rd., Cheadle Hulme, Stockport, Ches.
- 10,900 E. J. HARRIS, The Rectory, Mowsley, Leicestershire.
- 10,901 H. COLDWELL, 12 Harrison St., Stalybridge, Cheshire.
- 10,902 J. A. HORN, c/o Mrs. Loveday, 13 South Mount Street,  
Aberdeen.
- 10,903 G. BROWNING, 99 Marlborough Road., Tue Brook,  
Liverpool.
- 10,904 J. A. GILLAN, 41 West High Street, Elgin, Morayshire.
- 10,905 P. A. HARRIS, 79 Torquay Rd., Paignton, Devon.
- 10,906 C. H. ADAMS, 15 Martindale, East Sheen, London, S.W.14
- 10,907 F. W. BIDDULPH, 60 Wigginton Rd., Tamworth, Staffs.
- 10,908 K. G. CURRY, 45 Grove Rd., Weston-super-Mare, Som.
- 10,909 P. H. GREEN, 38 Costead Manor Rd., Brentwood, Essex.
- 10,910 R. J. KELWAY, Fernlea, Mill Lane, Torre, Torquay.
- 10,911 P. A. ROBERTSON, Fairfield, Stagsden Rd., Bromham,  
Bedford.
- 10,912 E. A. VINCENT, 30 Squires Bridge Rd., Shepperton, Mdx.
- 10,913 J. G. WALLING, Crofton, Merafield Rd., Plympton,  
Dorset.
- 10,914 J. N. McMILLEN, 22 Castlereagh St., Belfast, N. Ireland.
- 10,915 R. TILLYARD, West Park, Trevelick, Tintagel, Cornwall.
- 10,916 R. M. STEWART, Flour Mills, Coalisland, Co. Tyrone.
- 10,917 M. JONES, 305 Boxley Rd., Penenden Heath, Maidstone,  
Kent.
- 10,918 D. DAY, Drinagh, Dundry, Nr. Bristol.
- 10,919 J. S. PEEVOR, 12 Oak Bank, Galsby, Shipley, Yorks.
- 10,920 F. P. WHITAKER, 27 Temple Rhydding Drive, Baildon,  
Shipley, Yorks.
- 10,921 J. S. ROBERTSON, 27 Brian Cres., Crossgates, Leeds.
- 10,922 R. REYNOLDS, 43 Pendennis St., Anfield, Liverpool 6.
- 10,923 F. SPENCE, 11 Tweed Avenue, Peebles, Scotland.
- 10,924 H. G. KIRBY, 25 Market Square, Bicester, Oxon.
- 10,925 E. BRINKMAN, 81 Trafford St., Rochdale, Lancs.
- 10,926 R. A. CLOUGH, 30 Oakwood Avenue, Gatley, Cheshire.
- 10,927 T. A. WOOLMER, c/o Biggs, Swardeston, Norwich.
- 10,928 L. R. KIRBY, 39 The Greenway, Ickenham, Nr. Uxbridge,  
Middlesex.
- 10,929 C. E. GURNEY, Belmont, Wateringbury, Maidstone,  
Kent.
- 10,930 G. H. ADAMS, Hazelmere, Rodborough, Stroud, Glos.
- 10,931 B. J. BRINDLEY, 10 Nine Stiles Close, New Denham,  
Uxbridge, Middlesex.
- 10,932 E. CORDEN, 41 Parkville Rd., Prestwich, Lancs.
- 10,933 D. B. MARSDEN, 16 Trenham Avenue, Long Benton,  
Newcastle-on-Tyne.
- 10,934 F. M. KEMBALL, 49 Deyncourt Gdns, Upminster, Essex.
- 10,935 F. W. DAVIES, 14 Woodlands, Gwersyllt, Nr. Wrexham,  
N. Wales.
- 10,936 A. H. WELLS, 102 Bursleigh Ave., Wigston Fields, Leics.
- 10,937 C. A. KNIGHT, High Street, Boscastle, Cornwall.
- 10,938 H. HALL, Redbrae, Dalintober, Campbeltown, Argyllshire.
- 10,939 AIR COMMODORE C. M. CADELL, 128 Piccadilly, London,  
W.C.
- 10,940 A. W. HARRIS, 304 Tiverton Road, Selly Oak, Bir-  
mingham 29
- 10,941 A. E. WILLIAMS, 1 Park Crescent, Romford, Essex.
- 10,942 J. F. BLACKBURN, 4 Main Street, Limavady, N. Ireland.
- 10,943 D. V. ECCLES, 50 Hanford Ave., Orrell Park, Aintree,  
Liverpool.
- 10,944 A. F. RAY, Lower Blackstone Farm, Bewdley, Worcs.
- 10,945 D. HANCOCK, 3 Hospital Bridge Rd., Twickenham, Mdx.
- 10,946 M. R. HYSLOP, 2 Wotton Way, Chesham Surrey.  
(Trans. from Associate Grade.)
- 10,947 B. MURRAY, 36 Barkeley Drive, Scaford, Liverpool 21  
(Trans. from Associate Grade.)
- 10,948 W. H. SMITH, Peter Street, Shepton Mallet, Somerset.
- 10,949 C. L. PALMER, 95 Colombo Rd., Brighton 7, Sussex.
- 10,950 R. V. WATERHOUSE, 155 Eastwood Rd., Rayleigh, Essex.
- 10,951 O. S. JONES, 17 St. Anselms Rd., Hayes, Middlesex.
- 10,952 A. WHITELOCK, Gas House, Castle Eden, Co. Durham.
- 10,953 G. R. SILSON, 17 Easby Rd., Bradford, Yorks.
- 10,954 C. BOULTON, 2 Green Lane, Scaford, Liverpool 21.
- 10,955 J. J. SMYTH, 3 Alexandra Gardens, Portadown, Co.  
Armagh, N. Ireland.
- 10,956 R. C. SIMPSON, 37 Ebbens Rd., Apsley End, Heniel  
Hempstead, Herts.
- 10,957 H. E. GARROOD, 15 Corfe Avenue, South Harrow, Mdx.
- 10,958 H. R. SEARLE, 114 Leigham Court Drive, Leigh-on-Sea,  
Essex.
- 10,959 J. KIRSCH, 58 Woodley Rd., Leeds 3, Yorks.
- 10,960 R. G. BOUGHTON, 26 St. Johns Street, Bury St. Edmunds,  
Suffolk.
- 10,961 S. J. RODDAN, Smithwood, Poplar Grove, Prescot, Lancs.
- 10,962 L. A. WARDILL, 5 Burbage Rd., Herne Hill, London  
S.E.24.
- 10,963 K. GLUYAS, 30 West Rd., Lancaster.
- 10,964 T. H. HALL, 20 Brunstane Rd., Joppa, Edinburgh.
- 10,965 J. W. STEVENS, 43 Lamborough Hill, Abingdon, Berks.
- 10,966 C. W. KENT, Heathdeane, Aldershot Rd., Crookham,  
Aldershot, Hants.
- 10,967 W. T. ROOKE, 6 Newton St., Craven Arms, Shropshire.
- 10,968 H. F. WEST, 21 Stavordale Rd., Highbury, London, N.5.
- 10,969 J. R. TERRY, 287 Dale Street, Chatham, Kent.
- 10,970 G. LISTER, c/o 371 Leeds Rd., Dewsbury, Yorks.
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- 10,973 W. L. HEALEY, 47 St. Anns Hill Rd., Nottingham.
- 10,974 G. LEVINE, 31 Morgan Houses, Hessel St., London, E.1.
- 10,975 P. S. DIXON, Grendre, Ilsham Rd., Torquay, Devon.
- 10,976 K. H. PARKES, 159 Belgrave Rd., Longton, Stoke  
on-Trent.
- 10,977 E. L. MOLLART, 93 Dene Rd., Headington, Oxford.
- 10,978 J. R. ELSTOW, 38 Bridge Street, Maidenhead, Berks.
- 10,979 R. L. WARD, 1 Broad Oak Rd., Worsley, Manchester.
- 10,980 E. J. EWING, 44 Fitzjohn Ave., Barnet, Herts.
- 10,981 P. R. MELLORS, B.B.C. Hostel, The Village Farm, Upton,  
Warren, Nr. Bromsgrove, Worcs.
- 10,982 DR. E. H. YOUNG, 60 Massie Street, Cheadle, Cheshire.
- 10,983 D. A. BUTTERWORTH, 45 High Grove Rd., Cheadle, Ches.
- 10,984 E. A. FOWLES, 42 St. Olaves Walk, Streatham, London,  
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- 10,985 H. W. HOLLOWAY, No. 2 Flat, The Parade, Mitchley  
Avenue, Purley, Surrey.
- 10,986 F. ESLEY, 225 King's Mead, Pontefract, Yorks.
- 10,987 V. R. BAYLEY, 12 Radnor Park Cres., Folkestone, Kent.
- 10,988 D. BLACKHURST, 21 Brookside Rd., Brooklands, Cheshire.
- 10,989 I. C. MACKENZIE, Pitcullen Garage, Bridgend, Perth,  
Scotland.
- 10,990 G. COOPER, 11 Thompson Street, The Manor, Willenhall,  
Staffs.
- 10,991 R. TEESDALE, 23 Queen Street, Boston, Lincs.
- 10,992 W. J. COLEMAN, The Gables, Staplehill, Wimborne,  
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- 10,993 R. H. COOPER, 11 Thompson St., The Manor, Willenhall,  
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- 10,994 D. B. SLACK, 6 Brunswick Road, Rotherham, Yorks.
- 10,995 F. C. MASON, Cornerways, Bathurst Walk, Iver, Bucks.
- 10,996 F. WHITEHEAD, 54 Dorset Rd., Lytham St. Annes, Lancs.
- 10,997 C. ROBERTSON, 48 Grecian Street, Maidstone, Kent.
- 10,998 A. SUGDEN, 2 Willoughby Rd., Waterloo, Liverpool, 22.
- 10,999 J. DUCKWORTH, 546 Plodder Lane, Farnworth, Nr.  
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- 11,000 MRS. I. H. HILL, 53 Ravenhill Rd., Lower Knowle,  
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- 11,001 A. NEISH, 64 Ardnell Road, Glasgow, S.W.1, Scotland.
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- 11,004 R. G. FREEMAN, 10 Rouse St., Pilsley, Nr. Chesterfield.
- 11,005 G. W. YATES, 22 Farmleigh, Southgate, London, N.14.
- 11,006 G. K. KENT, 37 Park Court, Hampton-Wick, Kingston,  
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- 11,007 J. E. MILLER, 199 Banstead Rd. South, Sutton, Surrey.
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 11,047 A. TRACY-BOWER, 30 Bolan Street, London, S.W.11.  
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 11,055 H. C. LEEDHAM, 20 Carmarthen Av. E., Cosham, Portsmouth, Hants.  
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 11,059 I. APPLEBAUM, 97 High Street, Watford, Herts.  
 11,060 F. M. BROWN, 19 Stamford Road, Chorlton-cum-Hardy, Manchester, 21, Lancs.  
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 11,063 W. JARVIS, 190 Harrowby Road, Grantham, Lincs.  
 11,064 M. J. TRIVERTON, 33 Douglas Rd., Acocks Green, Birmingham 27, Warwickshire.  
 11,065 W. H. EDMUNDS, 28 Ramsgill Drive, Ilford, Essex.  
 11,066 A. R. POORD, Hill Top House, Quarrington Hill, Ferryhill, Co. Durham.  
 11,067 J. H. ASBERY, c/o 152 Marrow Brook Lane, Cove, Farnborough, Hants.  
 11,068 K. G. BOZON, Normanton, Grantham, Lincs.  
 11,069 D. M. THOMAS, Esgair, Llanwnog, Caersws, Mont., Wales.  
 11,070 B. H. FIDDINGTON, 67 Hinton Road, Herne Hill, London, S.E., 24.  
 11,071 E. W. HICKMOTT, 1 Brickwall Tree., Woodchurch, Kent.  
 11,072 J. C. ROSS, 4 Heathland Crescent, Sutton Coldfield, Warwickshire.  
 11,073 N. ROBINSON, Newlands, Bracaena Avenue, Falmouth, Cornwall.  
 11,074 L. BARRACLOUGH, The Firs, Elworth Street, Sandbach, Cheshire.  
 11,075 T. E. CATTLE, 64 Ulwell Road, Swanage, Dorset.  
 11,076 H. E. SAYERS, Primrose Villa, Fordwich, Nr. Canterbury, Kent.  
 11,077 J. GRAHAME, 63 Oxford Street, Bilston, Staffs.  
 11,078 W. J. LAWRENCE, 52 Church Rd., Manor Park, London, E.12.  
 11,079 R. J. JOHNSTON, 110 Castlereagh Rd., Belfast, N. Ireland.  
 11,080 R. E. VINCENT, 6 Fracklyn Gardens, Edgware, Mdxs.  
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 11,084 W. HILLS, Morwenna, Port Isaac, Cornwall.  
 11,085 W. A. SENIOR, 122 Charlton Rd., Westbury-on-Trym, Bristol.  
 11,086 R. PAYS, 146 Oaklands Rd., Hanwell, London, W.7.  
 11,087 O. J. GILL, 88 Barons Court Rd., Barons Court, London, W.14.  
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 11,089 L. R. DUNLOP, 28 Trafalgar Row, Wisbech, Cambs.  
 11,090 E. SHERLOCK, 134 Liverpool Rd., St. Helens, Lancs.  
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 11,092 A. C. ADAMS, 35 Water Beach Road, Dagenham, Essex.  
 11,093 T. E. ELHOLM, 70 Warwick Rd., Earls Court, London, S.W.5.  
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 11,099 R. E. PITT, 5 Prior Park Road, Bath, Somerset.  
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 11,103 W. FOYSTER, 76 Carthew Rd., Hammersmith, London, W.6.  
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 11,105 E. W. LOWDON, 27 Nantwich Drive, Edinburgh, Scotland.  
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 11,109 W. H. SHEARMS, 7 Preston Road, Hull, Yorks.  
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 11,116 K. W. HATHAWAY, Ferndale, Lower Rd., Chalfont St. Peter, Bucks.  
 11,117 A. H. MAY, Lyndon, Humberston Rd., Humberston, Cleethorpes, Lincs.  
 11,118 R. B. YATES, Grasbil, Waenfawr, Caernarvon, N. Wales.  
 11,119 P. J. LAMONT, 32 Netherton Grange, Netherton, Liverpool, 10.  
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 139 J. LOLLERGAARD, Hunderupvej 121, Odense, Denmark.  
 140 G. DELOR, 22 Rue Thiers, Moreuil (Somme) France.  
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 142 A. JULIEN, 14 rue Pierre Leroux, Paris VII.  
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 J. N. TRYE, The Cottage, Hartshill, Nuneaton, Warwickshire.  
 R. M. VELLACOTT, 29 Poplar Road, Sutton, Surrey.  
 A. WALKER, 10 Saint James Ave., Peterborough, Northants.  
 D. C. WARD, 42 Jasper Road, Upper Norwood, London, S.E.19.  
 R. C. WEBSTER, Danehurst, Christow, Nr. Exeter, Devon.  
 J. WILSON, 9 Elmfield Avenue, Northenden, Manchester.  
 G. WHITTINGTON, Jessamine Cottage, Peacemars, Gillingham, Dorset.  
 R. C. WOODDED, The Cottage, Longdon Hill, Evesham, Wores.

**Junior Associates**

- P. CAUTER, 4 Cavendish Mews, Hallam Street, London, W.1.  
 J. COLLINS, Malvern House, Standish Lower Ground, Nr. Wigan, Lancs.  
 T. DAWSON, 23 Field House Lane, North End, Durham.  
 A. HUNT-DUKE, 2 Hazelwood Houses, New St., Ash, Canterbury, Kent.  
 D. W. FORD, Woodlea, Oldington Woods, Kidderminster, Wores.  
 T. GODDARD, 18 Wollaton Street, Nottingham.  
 A. R. GRAVES, 55 Norman Avenue, Sanderstead, Surrey.  
 P. T. GRIFFITHS, 101 Broadwater Rd., Tottenham, London, N.17.  
 R. G. HENLEY, Bath Road, Sturminster Newton, Dorset.  
 K. W. JONES, 122 Crestway, Roehampton, London, S.W.15.  
 A. G. PRICE, 6 Ashwater Road, Lee, London, S.E.12.  
 J. W. TRAVIS, 66 Attercliffe Common, Sheffield 9, Yorkshire.  
 P. WALKER, 19 Ropsley Crescent, West Bridgford, Notts.  
 P. J. WILMOT, 335 Liverpool Road, Islington, London, N.1.

Note.—Changes of address which have taken place since election are not recorded in this list.

# R.S.G.B. BULLETIN

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No. 6

## ASKING FOR TROUBLE

WE hoped that our November issue would carry an announcement to the effect that licences had been re-issued, but that hope was dimmed when we heard from the G.P.O. that, *due to over-riding military requirements*, it was not possible to open up the DX bands for another four to six months.

Although we were disappointed we were prepared to accept the position, having been officially advised that the agreement had been fully endorsed by the United Nations. Our President made known the G.P.O. decision on Friday, October 19, 1945. At the same time every District Representative was sent a copy of the statement which was later published in the November BULLETIN. Incidentally the statement was issued within two hours of the G.P.O. authorising us its publication.

It is of subsequent events that we now write. Forty-eight hours after the President made his announcement, the General Secretary and several members of the Council reported amateur activity on both 7 Mc/s. and 14 Mc/s. Closer examination of the logs showed that the stations concerned were being operated by U.S. Service personnel in Far Eastern waters. It seemed clear that some unofficial local arrangement had been reached between the Allied Commanders and amateur operators, and further that a "blind eye" was being turned to this open "piracy." As the days passed, further, and even stronger, evidence came to hand in the shape of an official notice from the Central Mediterranean Force to the effect that pre-war licenced amateurs located in that theatre would be permitted to operate on frequencies

## OFFICIAL FLASH

LICENCES AUTHORISING OPERATION ON THE FOLLOWING FREQUENCIES :—

**28000kc/s—29000kc/s**

**58500kc/s—60000kc/s**

ARE TO BE ISSUED WITHIN THE COURSE OF THE NEXT FEW DAYS TO HOLDERS OF PRE-WAR RADIATING AND NON-RADIATING LICENCES WHO HAVE MADE APPLICATION TO THE G.P.O.

HOLDERS OF PRE-WAR RADIATING LICENCES WILL BE AUTHORISED TO USE **100 WATTS** ON 28 Mc/s. AND **25 WATTS** ON 58.5 Mc/s. (TELEGRAPHY & TELEPHONY).

HOLDERS OF PRE-WAR NON-RADIATING LICENCES WILL BE AUTHORISED TO USE **25 WATTS** ON BOTH BANDS SUBJECT TO THE MORSE TEST (TELEGRAPHY ONLY).

within the 7 Mc/s. amateur band during certain hours of the day, and with an input power of 50 watts.

Immediately this information reached Headquarters it was passed on to the G.P.O. and W./T. Board. To say that these Government Departments were surprised, is an under-statement. They talked of issuing orders to close down these stations, but whatever efforts they may have made they do not yet seem to have had any effect.

The week-end of October 28-29 produced a further spate of reports of activity on 7 and 14 Mc/s. Weird and wonderful call signs were heard but without doubt the majority of the operators were pre-war amateurs now in the Services. Evidence of activity in Germany, France and a dozen other European countries poured in to Headquarters.

Then, on November 15, came the news that U.S. and Canadian amateurs had been given permission to resume activities on 28 Mc/s. and 56 Mc/s. The week-end of November 17/18 found 28 Mc/s. open for DX during the afternoon. The result was obvious—dozens of European amateurs lost no time in affecting their first post-war QSO's.

It only remains now to quote from official R.S.G.B. records to show how seriously the Council view the position.

October 12, 1945. *Extract from report of meeting between representatives of G.P.O. and R.S.G.B.*

"Col. Angwin stated that some delay must occur before the international frequencies are re-allotted. Many military services were still occupying pre-war amateur frequencies and whilst every effort was being made to free them, Col. Angwin estimated that little relief can be expected for six months. Mr. Watts emphasised that a long delay in the restoration of amateur licences may lead to widespread piracy."

*Extract from letter written by the Society to Col. Sir Stanley Angwin, G.P.O., dated November 2, 1945.*

"We are perturbed about the position on the 7 and 14 Mc/s. amateur bands.

"We have been informed by the G.P.O. that the Services state that over-riding military requirements prevent us having these bands for four to six months. We have also been told by the G.P.O. that an agreement has been reached by the Allied Governments that the amateurs will resume their activities on the international bands at the same time.

"The fighting services of the U.S.A. and Great Britain are breaking this agreement by allowing amateur operation on 7 Mc/s. The U.S.A. are also

allowing their Service personnel to operate in the 14 Mc/s. band.

"It seems quite clear that the reasons given by the fighting services for our not getting these bands back now are incorrect. We again express the fear that the situation may get entirely out of hand if something is not done quickly. We would ask you to obtain international agreement for the 7 Mc/s. and 14 Mc/s. bands to be released for amateurs immediately.

"In view of the actions of the Services we can think of no adequate reason why the amateurs should be prevented from using these bands."

A similar letter was sent on November 7, 1945, to the Wireless Telegraphy Board.

\* \* \*

The Council hope that their strenuous efforts to expedite the re-issue of licences will bear fruit very shortly.

So that the shortage of staff or the printing of the licences should not delay matters the Society offered to have the licences printed in a few days and to defray the cost. The Society also offered to obtain volunteers to assist the G.P.O. with clerical work and with transport for returning impounded apparatus.

From the foregoing, members will appreciate that everything possible has been done on their behalf to expedite matters. It is hoped that patience will be exercised for a little longer, and that members will maintain the fine record for correct conduct which has characterised Amateur Radio in this country from the earliest days.

(Information was received on December 4th, to the effect that C.M.F. operation must now be confined to the 28 Mc/s. and 56 Mc/s. bands.—Ed.)

## THE NEW LICENCE

Just before closing for press the G.P.O. handed to the Society a copy of the new licence which will be issued to British Amateurs. The conditions of the licence are set out in full on pages 83 and 84.

It is important to notice that in future we shall be licenced as *Amateurs* and our licence will be for the establishment of an *Amateur* Wireless Station. This most desirable condition has been achieved as a result of years of effort on the part of the Society. Incidentally the use of "CQ" is now permitted. We shall have more to say about the new licence next month.

## FORTHCOMING EVENTS

- |         |  |         |  |
|---------|--|---------|--|
| Dec. 16 | District 4 (Leicester), 3 p.m. at 52 Regent Street.  | Jan. 6  | Districts 7 and 13, combined meeting, 3 p.m. at the Y.M.C.A., North End, West Croydon.   |
| Dec. 16 | District 14 (Chingford), 4 p.m. at A.T.C. H.Q., Pretoria Road. Discussion on Aerials, opened by G6FJ.                | Jan. 6  | District 12, 3 p.m. at G5UM, 9 Windermere Avenue, St. Albans (turning off Camp Road, near Camp School. Bus 391 passes the end of the road).                  |
| Dec. 17 | District 18 (Hull), 7.30 p.m. at the Imperial Hotel, Paragon Street.   | Jan. 6  | District 15 (West London), 5.30 p.m. at BR86275, 51 Rughall Avenue, Bedford Park, Chiswick, W.4.   |
| Dec. 19 | District 2 (Sheffield), 8 p.m. at the "Dog and Partridge," Trippett Lane. "Signal Generators" by Mr. I. S. Christie. | Jan. 10 | District 4 (Nottingham), 7 p.m. at The Foresters Hall, Peachey Street.   |
| Dec. 20 | District 4 (Nottingham), 7 p.m. at The Foresters Hall, Peachey Street.   | Jan. 11 | District 15 (Hounslow), 7 p.m. at The Scouts Hall, Sutton Estate, Great West Road.   |
| Dec. 21 | District 14 (Chelmsford), 7 p.m. at Smith's Radio Shop, 184 Moulsham Street.   | Jan. 12 | District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.   |
| Dec. 26 | Scotland "A" District, 7 p.m. in the Institute of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow.          | Jan. 12 | District 15 (Ashford), 6.30 p.m. at G6RS, "Digswell," The Avenue, Sunbury-on-Thames, Middlesex.  |
| Dec. 28 | Scotland "B" District, 7.30 p.m. in the Green Room, Music Hall, Union Street, Aberdeen (enter by Golden Square).     | Jan. 15 | District 3 (Birmingham), 6.30 p.m. at Chamber of Commerce, New Street.   |
| Dec. 29 | Annual General Meeting, 2 p.m. at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2.  | Jan. 16 | Edgware Short Wave Society, 8 p.m. at The Constitutional Hall, Edgware. Lecture and Demonstration by Mr. F. Charman, G6CJ. "Aerial Systems for the amateur." |
| Dec. 29 | District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.   | Jan. 18 | London Meeting at I.E.E., at 6.30 p.m. Tea at 5.30 p.m. Lecture by Superintendent G. Brown, G5BJ. "The Birmingham Police Radio System."                      |
| 1946    |  | Jan. 21 | District 18 (Hull), 7.30 p.m. at the Imperial Hotel, Paragon Street.   |
| Jan. 3  | District 4 (Nottingham), 7 p.m. at The Foresters Hall, Peachey Street.   |         |  |
| Jan. 4  | District 15 (Harrow), 7 p.m. at BR86527, 153 Belmont Road, Harrow, Middlesex.  |         |  |

*A cordial invitation is extended to Society members to attend any of the above meetings.*

# THE NEW LICENCE

The conditions of the new licence which will be issued to British Isles Radio amateurs are set out below.

1. *Radiotelegraph Conventions.*—The Licensee shall observe the provisions of the International Telecommunication Convention, 1932, and the Radiocommunication Regulations annexed thereto or those of any subsequent International Convention and Regulations which may replace them so far as they are applicable to amateur stations.

2. *Power and Frequencies.*—Messages shall be sent only on frequencies within the bands and by the types of emission specified hereunder and the total D.C. power input to the anode circuit of the valve or valves energizing the aerial shall not exceed that shown against the respective frequencies.

Power (in watts).	Frequencies (in kilocycles per second).	Approximate equivalent wavelengths (in metres).	Types of emission.
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The use of "spark" sending apparatus is specifically forbidden. Unrectified alternating voltage shall not in any circumstances be employed for the H.T. supply to the sending apparatus, and the H.T. supply shall be so smoothed that the value of the residual ripple voltage does not exceed 5 per cent. of the D.C. voltage.

3. *Frequency Control and Measurement.*—When in use, the sending apparatus shall be tuned to a frequency within an authorized band, which frequency shall be so selected and maintained that no appreciable energy is radiated on any frequency outside the limits of the band with and without the modulation applied, due allowance having been made for the inaccuracy of the calibrating device. A satisfactory method of frequency stabilisation shall be employed in the sending apparatus.

Where the sending apparatus is not crystal controlled there shall be kept at the station, and used whenever necessary (and on all occasions when the frequency used for sending is changed), a reliable frequency meter of the piezo-electric crystal type or other type approved by the Postmaster General, for measuring the sending frequency to an accuracy of not less than  $\pm 0.1$  per cent. Where the sending apparatus is crystal controlled the use of a separate crystal frequency meter as a calibrating device will not be compulsory, but a reasonably reliable frequency meter must be provided for checking that the sender is operating normally.

4. *Operator.*—The apparatus must in all cases be operated by or under the direct supervision of

5. *Sending Periods.*—The station may be operated at any time, provided that no period of sending shall exceed 10 consecutive minutes. Sending shall not commence without listening on the frequency which is to be used in order to ascertain, as far as possible, whether interference is likely to be caused thereby with any other station which may be working.

6. *Log.*—A running record shall be kept in a book of approved type (not loose-leaf) of all sending periods showing the date and time of each period and the frequency and type of emission employed (see Condition 2). No gaps shall be left between entries in the log. The record of sending periods shall in all cases be initialled at the time of recording by the authorized operator named in Condition 4.

7. *Receiver.*—The station shall always be equipped for the reception of signals sent on frequencies in current use at the station at any time by means of

continuous wave telegraphy, telephony and any other type of emission authorized in Condition 2.

8. (1) *Messages.*—Messages may be exchanged only with amateur stations (as defined by the International Radiocommunication Regulations) in this country or abroad. Except as is in this condition expressly provided messages exchanged by means of the station shall relate solely to the Licensee's private (but not business) affairs or those of the person with whom he is communicating and shall be in plain language. Special gramophone records for reproducing modulations of definite tones may be used for test purposes. Gramophone records, of the type intended for entertainment purposes, may be used on the condition that only one such record is used during the course of any day, the same record being repeated as desired; any record so used shall not have a playing time exceeding 10 minutes when played at the correct speed.

(2) The use of the station for (a) advertising or business purposes, (b) the sending or reception of news or the messages of persons other than the Licensee or the person with whom he is communicating, (c) the sending or reception of broadcast programmes, or (d) the sending or reception of social or political propaganda or the messages of any social or political organisation is expressly prohibited.

(3) The Licensee shall not receive any payment (either direct or indirect) for the use of the station or allow the station to be controlled by or used for the purposes of any social or political organisation.

9. *Secrecy of Correspondence.*—If any message which the Licensee is not entitled to receive is, nevertheless, received the Licensee shall not make known or allow to be made known its contents, its origin or destination, its existence or the fact of its receipt to any person (other than a duly authorized officer of His Majesty's Government or a competent legal tribunal) and shall not reproduce in writing, copy or make any use of such message or allow the same to be reproduced in writing, copied or made use of.

10. *Call Signal.*—The call signal G ( ) has been allotted to the station. The prefix of nationality, i.e. "G," must invariably be included in the call signal which may be sent either by morse telegraphy at a speed not greater than 20 words per minute or telephonically if the station is authorized to use telephony.

The call signal must be sent for identification purposes at the beginning and at the end of each period of sending.

In calling another station the call signal of that station must be sent and may be repeated throughout a period of not more than one minute, after which the signal "de" must be sent once and the call signal of the calling station three times. This procedure may be repeated but the time taken in calling must not exceed three minutes without an interval during which the operator must listen in the band of frequencies in which the call has been made.

In answering a call the call signal of the calling station must be sent three times, the signal "de" once and the call signal of the answering station three times.

When telephony is used the letters of the call signals may be confirmed by the pronunciation of well-known words of which the initial letters are the same as those in the call signals, but words used in this manner must not be of a facetious character nor be capable of undesirable misinterpretation.

11. *Inspection.*—The station shall be subject to the

approval of the Postmaster General and together with the record of transmissions and this licence shall be open to inspection at all reasonable times by duly authorized officers of the Post Office who will produce their cards of identity on request.

12. *Non-interference.*—The station shall be used in such a manner as not to cause interference with other stations outside the authorized bands. Sending shall at once be discontinued or postponed at the request of any Government or commercial station.

When telegraphy is being used the arrangement employed for "keying" the sender must be such as to reduce to a minimum the risk of interference due to key clicks being produced in neighbouring apparatus. Whenever, for any reason, the carrier wave of the sender is being modulated by any system of modulation, care must be taken to avoid over-modulation. Particular care must be taken to avoid unwanted frequency modulation of the carrier frequency. At all times every precaution shall be taken to prevent the radiation of energy at frequencies other than those which are necessary for the system in use.

13. *Aerial.*—If the station is situated within half a mile of the boundary of any aerodrome, the height of the aerial above the ground level shall not exceed 50 feet. An aerial which crosses above or is liable to fall upon or to be blown on to any overhead power wire (including electric lighting and tramway wires) or power apparatus must be guarded to the reasonable satisfaction of the owner of the power wire or power apparatus concerned.

14. *Control in Emergency.*—(a) If and whenever in the opinion of the Postmaster General an emergency shall have arisen in which it is expedient for the public service that His Majesty's Government shall have control over the sending and receipt of messages by means of the station it shall be lawful for the Postmaster General to direct and cause the station to be

taken possession of in the name and on behalf of His Majesty and to prevent the Licensee from using it and for these purposes or either of them to cause any part of or all the apparatus forming the station to be removed to such place as he may think fit and any person authorized by the Postmaster General may from time to time enter the premises at which the station is maintained for any such purposes as aforesaid.

(b) The Licensee shall not be entitled to any compensation in respect of the exercise by the Postmaster General of the power conferred by this condition which shall remain in force notwithstanding the withdrawal or modification of the Licence.

*NOTES.*—(i) *Use of Supply Mains.*—If power for the working of the wireless station is taken from a public electricity supply no direct connection shall be made between the supply mains and the aerial.

(ii) *Broadcast Reception.*—This licence does not authorise the reception of broadcast programmes for entertainment purposes. For the reception of broadcast programmes for entertainment a separate broadcast receiving licence is necessary.

(iii) *Copyright.*—This licence does not authorize the Licensee to do any act which is an infringement of any copyright which may exist in the matter transmitted.

(iv) *Return of Licence.*—When this licence is cancelled or superseded by a new licence it must be returned to the address given at the foot of page 1, together with any letters authorising additions or alterations to the terms of the licence.

(v) *Payment of Renewal Fee.*—The fee should be forwarded on the due date to the Comptroller and Accountant General, General Post Office, London, E.C.1, quoting the reference given at the foot of page 1. It is unnecessary to forward the licence when the renewal fee is remitted.

## The Franklin Drive

By T. LAING, GM6LG.\*

HAVING completed, some months ago, a Franklin drive almost identical to that described by G6LL in the September, 1945 issue of THE BULLETIN, the writer offers his experience to members who may contemplate constructing such a unit. Naturally the apparatus could not be tested in a transmitter, but useful data was obtained from its use as a general purpose oscillator.

Unlike the design described by G6LL, the writer has included in the cabinet the complete power unit, which being rather unorthodox, will be fully described.

The mains transformer is an ordinary G.E.C. bell-type, modified in the following way. First the bakelite case was carefully removed and the 230 volt primary and 12 volt secondary bobbins removed from the core; next, almost half the 12 volt turns were unwound to give an output voltage of 6.5 on no load. Over this winding a thin layer of presspan was placed over which were wound about 600 turns of 34 s.w.g., enamelled wire. This winding, which just clears the laminations when assembled, gives approximately 130 volts H.T. The completed transformer was then assembled, less bakelite housing, and stowed away in a corner of the chassis.

The rectifier is an old H.T. 17 Westinghouse unit cut in half and bolted through a hole in the cabinet. The reservoir condenser is made from a fluorescent lamp condenser removed from its original case and placed in a cocoa tin. The latter was filled with vaseline, then thoroughly soldered and the leads brought out through holes in the lid. By adopting

this method the condenser takes up less space. For smothering a small L.F. choke and standard 8 + 8 $\mu$ F electrolytic are used.

The valves are three Mullard type EF6's, two in the actual Franklin circuit and one in the buffer stage, the screen of which is keyed. The advantage gained by using this type of valve are low H.T. and L.T. currents, these being 7 mA. and .6 amp. respectively. Very little heat is dissipated and rapid cathode heating takes place. Actually the time taken for the whole oscillator to settle down to a steady frequency from cold is less than a minute, after which only very slight variations—about 100 cycles at most—occur due to mains fluctuations.

By keying the screen of the buffer stage and leaving the oscillator running, it is possible to just hear an S2 note in the receiver and so tune dead on top of any station heard before pressing the key.

Although the Franklin drive appears to possess great stability when rigidly built a word of warning to beginners is necessary. Unless the operator possesses a very accurate frequency measuring standard it is better to start with crystal control before attempting to use a variable drive unit. Experience should first be gained with it in use as a general purpose oscillator.

Although the design described may appear to have "Heath Robinson" characteristics an assurance is given that only the very best types of component are used in the actual tuned circuits, and a thorough engineering job has been made of the cabinet and its supports.

\* 27 Viewfield Crescent, Aberdeen.

# PLASTICS FOR THE AMATEUR

By A. G. CHAMBERS, M.I.R.E., A.M.(Brit.)I.R.E. (G5NO)

## PART I

**D**URING the past five or six years, considerable progress has been made in the comparatively new science of plastics and the radio and electrical industries have been those mainly responsible for its development. Thermo-setting plastics are used extensively nowadays for many kinds of electrical fittings, such as switches, sockets, electric irons and hairdryers, clocks, and radio cabinets.

The discovery of the new plastic materials was no accident. The chemists knew what they wanted, and continued their experiments until the desired result was obtained. Plastics are known to have been in existence many years ago. The Egyptians used a form of plastics, but Baekeland, in the latter half of the last century, was responsible for the discovery of the first modern plastic, the material now known as Bakelite being the result. Only recently, however, have intensive experiments been carried out with the bi-products of calcium carbide (the well-known chemical used for lighting old-fashioned bicycle lamps) which, after a number of complicated chemical reactions resolves itself into the new thermo-plastic materials which are now on the market. It is these new materials in which we are chiefly interested, since they possess excellent high frequency properties. The older plastics have been included in the data for the sake of completeness.

A large number of books have been written on the subject, but unfortunately some knowledge of chemistry is necessary for them to be understood; the object of this article, therefore, is to give to the amateur, in simple language, all the information that he will require to know, without going into chemical details. The writer is "an amateur like yourselves," and no chemist; with the exception that he has been fortunate in being able to compile information which, it is hoped, will be helpful when planning the post-war transmitter, or repairing some pre-war component extracted from the proverbial junk box.

### Classes of Plastics

Plastics are divided into two classes, namely, those which are Thermo-setting, and those which are Thermo-plastic. Thermo-setting plastics are of the hard brittle variety such as; Bakelite, Paxolin, Beetle, Tufnol and Panilax. As the name implies, once heat has been applied (that is during the moulding process), they set. Any further application of heat, either changes them immediately into a liquid form, or else they burn. Strictly speaking, they are not plastics.

Thermo-plastics such as Perspex, Alkathene, Distrene, etc., however, can be re-heated, formed into new shapes, and when cold will retain their new shape. If heated beyond the plastic state they turn into liquid, but again, on cooling, they pass through the plastic state before finally hardening.

Naturally, according to which class they belong, plastics are used where they are best suited. For example; it would be useless having a radio cabinet which, when placed near the drawing room fire, wilted when it became warm! Alternatively a cable which cannot be bent is of little value.

Unfortunately, plastics are known under many and varied trade names. The writer has counted thirty-eight, but there are many more; while in actual fact he is aware of only fifteen basic compositions.

### Thermo-Setting Resins

Now let us take them in order, commencing with the Thermo-setting resins:

#### Phenol—Formaldehyde Cresol—Formaldehyde

(Trade names: Bakelite, Catalin, Elo, Epok, Mouldrite, Nestorite, Paxolin and Rockite.)

Chiefly used for moulding. Brownish opaque material, which can be machined. It is insoluble, therefore cements of the solvent type, such as are used for Thermo-plastics, cannot be used. Bakelite cement G.11116 is a "cold setting" cement which is used with an accelerator Q.11117, making it set at atmospheric temperature. At 20°C. joints should be clamped for twelve hours, after which they will not come apart; but the article should be left for five or six days to harden.

Specific Gravity .. ..	1.28-1.52
Tensile Strength .. ..	6,000-10,000 lbs./sq. in.
Maximum temperature for continuous resistance to heat .. ..	250° F.
Water absorption (Immersed for 24 hrs.) .. ..	1.2%
Burning rate .. ..	Very low
Dielectric Constant at 1 Mc/s. .. ..	7.3
Power factor at 1 Mc/s. .. ..	0.24
Breakdown voltage ( $\frac{1}{8}$ in. specimen) .. ..	300-500 volts/mil.
Hardness (Brinell) .. ..	30-45

Uses: Has many well-known uses which are too numerous to list.

#### Urea Formaldehyde

(Trade names: Beetle and Mouldrite.)

Chiefly used for moulding; basic colour is white, but opaque, and like Bakelite, can be machined. It is insoluble but can be cemented by Beetle Cement E. with hardening powder A. at 40°C. It can be identified by heating in a flame, whence a strong smell of Formaldehyde and Ammonia comes off. The material chars but is non-inflammable.

Specific Gravity .. ..	1.45-1.50
Tensile Strength .. ..	9,000-12,000 lbs./sq. in.
Maximum temperature, etc. .. ..	160° F.
Water absorption etc. .. ..	1.2%
Burning rate .. ..	Very low
Dielectric constant at 1 Mc/s. .. ..	7.7
Power factor at 1 Mc/s. .. ..	0.036-0.039
Breakdown voltage ( $\frac{1}{8}$ in. specimen) .. ..	600-700 volts/mil.
Hardness (Brinell) .. ..	48-54

Uses: Control knobs, coloured panels and radio cabinets.

#### Phenol—Cresol—Urea & Aniline—Formaldehyde

(Trade names: Tufnol, Panilax, Delaron, Fraffolite, Micarta.)

Available in sheets, composed of alternate layers of paper and soluble resin which makes it very strong (note the higher tensile strength). Is yellow or brown in appearance and is also available in rods or tubes. It possesses excellent electrical properties with small water absorption. It can be machined in the same manner as bakelite and may be cemented by Ardus. The joint must be heated after application to at least 140°C. and sets in 5 to 10 minutes. A useful cement can be made by mixing one part Resorcinol with one

part Paraformaldehyde and two parts Methylated spirit. This mixture sets at 100°C.

Specific Gravity .. ..	1.30-1.40
Tensile Strength .. ..	10,000-20,000 lbs./sq. in.
Maximum temperature, etc.	250°F.
Water absorption, etc. ..	0.3-9.0%
Burning rate .. ..	Very low
Dielectric constant at 1 Mc/s.	6.0
Power factor at 1 Mc/s. ..	.03
Breakdown voltage .. ..	400-600 volts/mil.
Hardness (Brinell) .. ..	24-50

*Uses.*—Instrument panels. Where insulation is required in the open air this material is excellent, as it shows little shrinkage on prolonged exposure to climate conditions.

### Thermo-Plastic Resins

We can now turn to the more modern, and, as far as the amateur is concerned, the more interesting, Thermo-plastic resins:

#### Methyl Methacrylate

(Trade names: Perspex (I.C.I. Ltd.), Diakon, Lucite, Transpex (I.C.I. Ltd.) and Kallodent (I.C.I. Ltd.)

Available in powder, sheet, rod, tube, or liquid. It is a water-white transparent plastic with a high refractive index, and is thus often used to replace glass. Resistance to weathering and extremes of temperature is another excellent property. Being thermo-plastic, it can be shaped easily at 130°C. retaining its new shape upon cooling. Can be identified by heating in a test tube. It does not melt or char, but decomposes and a liquid distils off. Material can be machined, moulded or shaped. The liquid gives clear castings, an example of which is an aerial insulator made by I.C.I. Plastics.

Unplasticised "Perspex" is harder and has a slightly greater tensile and shear strength than plasticised material, but is slightly less resistant to impact.

At low temperatures the tensile strength and modulus of elasticity of "Perspex" increase, whilst the impact strength remains the same (*i.e.* the material does not become brittle) down to temperatures of the order of minus 40°C.

There are two cements for "Perspex," namely "Diakon" Cement No. 2 and "Perspex" Cement No. 6. As both are liable to become very viscous when exposed to the air, they should be kept in containers with well-fitting stoppers.

"Diakon" Cement No. 2 is a quick-hardening cement suitable for cementing "Perspex" to "Perspex" when the area of contact is relatively small. Joints made with this cement should be left undisturbed for about an hour, after which they will be sufficiently set to withstand handling.

"Perspex" Cement No. 6 is a slow-hardening cement and its use is recommended for cementing "Perspex" to "Perspex" when the area of contact is large. Joints made with this cement should not be disturbed for about three hours after cementing.

Specific Gravity .. ..	1.18
Tensile Strength .. ..	7,000-9,000 lbs./sq. in.
Maximum temperature, etc.	140-160°F.
Water Absorption, etc. ..	0.4%
Burning rate .. ..	Very slow
Dielectric constant at $5 \times 10^7$ c/s.	2.8
Power factor at $5 \times 10^7$ c/s.	0.02
Breakdown ( $\frac{1}{2}$ in. specimen)	390 volts/mil.
Softens at .. ..	60-70°C.
Refractive index (Transpex 1.) .. ..	1.4900
Hardness (Brinell) .. ..	18-20

*Uses.*—Has many uses. Opticians now use this

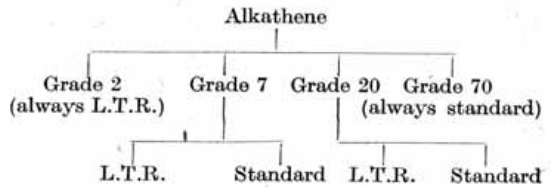
material successfully for making unbreakable lenses. Dentists use the powder for moulding false teeth and dentures. Aircraft factories use it for gun turrets; in general it is replacing glass. The amateur will no doubt devise many other uses.

#### Polyethylene (Polyisobutylene, polythene)

(Trade names: Alkathene (I.C.I. Ltd.) and Polybutine.)

Available in powder, sheet, rod, tube and film. Is a wax-white translucent material, which can be moulded, machined or shaped. Is tough, strong, or extremely flexible, according to grade, and has a low specific gravity. It resists all solvents when cold. At 60° to 70°C. it dissolves in benzene, carbon tetrachloride, turpentine and medicinal paraffin.

Alkathene, made by I.C.I. Ltd., is available in a number of grades according to viscosity, which can be summarised thus:—



Material which is not brittle at minus 25°C. is sold as "Low Temperature Resistant" (L.T.R.), whilst that which breaks at minus 25°C., but not at 0°C., is known as "Standard." Grade 2 is always "L.T.R." and Grade 70 always "Standard." In general, the lower the grade number the harder the material, and the harder the grade the lower the temperature at which it becomes brittle.

Polythene tapes are also available for the repair of H.F. Cables.

Specific Gravity .. ..	0.95
Tensile Strength .. ..	2,000 lbs./sq. in.
Maximum temperature, etc. ..	180°F.
Water absorption, etc. .. ..	Nil
Burning rate .. ..	Slow
Dielectric constant at $5 \times 10^7$ c/s ..	2.3
Power factor at $5 \times 10^7$ c/s .. ..	0.0003
Breakdown voltage (after 10 minutes, measured on a 0.020 in. specimen at 50 c/s.) .. ..	1,000 volts/mil.
Instantaneous breakdown .. ..	50% higher
Effect of Ozone .. ..	Very slight
Softens at .. ..	110°C.
Hardness (Brinell) .. ..	1.0-2.0

*Uses.*—Solid insulated and air-spaced H.F. cables, where the power loss must be small. "Telcothene," available in this country is a good example of low impedance cable using polythene as a solid dielectric. Other applications include moulded parts, such as cable ends, high voltage bushings, and condenser dielectrics. Its ease in working lends itself admirably to the home constructor.

#### Polyvinyl Chloride & Copolymers

(Trade names: Welvic chlorovene, tenatube.)

Is a basic white powder which when highly plasticised forms a rubber-like material used for the outer covering of H.F. cables. It is also available in thin sheets. It has excellent chemical resistance and is only slightly affected by water, and will withstand difficult atmospheric conditions. The thin sheet can be slit and wound into rolls of any width for insulation



and other purposes. Identification; when heated in a test tube, it browns immediately, turns black with little melting, giving off hydrogen chloride. Solvents are methylene chloride and chlorobenzene.

Specific Gravity .. ..	1.2-1.6
Tensile Strength .. ..	1,000-9,000 lbs./sq. in.
Maximum temperature, etc. . . .	150° F.
Water absorption, etc. . . .	0.2%
Burning rate .. ..	Nil
Dielectric constant at 1 Mc/s. . . .	4-3
Power factor at 1 Mc/s. . . .	.06
Breakdown ( $\frac{1}{8}$ in. specimen) . . . .	400-2,000 volts/mil.
Hardness .. ..	2-50 depending on type of material

Uses.—Used for outer cable sheathing, and when made in the form of systoflex is known as "Tenatube."

### Polystyrene

(Trade names: Distrene (B.X. Plastics) Transpex 2 (I.C.I. Ltd.)

A hard, transparent, water-white material having a characteristic tinkle when lightly struck. Available in powder, rod, sheet, tube or liquid, which can be moulded, shaped, or machined. (Transpex 2 is only available in sheets.) It has a very low power factor and dielectric constant, together with very high resistivity all of which remain fairly constant over a wide range of frequency. It is normally brittle, but when cold-drawn changes to a tough product with unimpaired H.F. electrical properties. Its density is low and the material shows great resistance to acids. In liquid form it is used for casting. Identification; when heated in a test tube it melts to a clear liquid which boils with slight discoloration and the characteristic smell of monomer comes off. Solvents; benzene, carbon tetrachloride and others. It is of interest to note that its power factor and dielectric constant is even better than quartz, steatite or mica.

Specific Gravity .. ..	1.05-1.07
Tensile Strength .. ..	5,500-8,500 lbs./sq. in.
Maximum temperature, etc. . . .	140° F.
Water absorption, etc. . . .	Nil
Burning rate .. ..	Slow
Dielectric constant at $5 \times 10^7$ c/s. . . .	2.6
Power factor at $5 \times 10^7$ c/s. . . .	0.0003
Breakdown ( $\frac{1}{8}$ in. specimen) . . . .	500 volts/mil.
Softens at .. ..	70° C.
Refractive index (Transpex 2) . . . .	1.5900
Hardness (Brinell) .. ..	20-30

Uses.—Used extensively in the making of low-loss coil formers. Available in lacquer form which is an H.F. varnish with outstanding electrical properties. Also used for numerous H.F. insulated supports. In general is a stronger material than polythene, but slightly more difficult to work.

### Cellulose Nitrate (Celluloid)

(Trade name: Xylonite.)

Available in rods or tubes in any colour from transparent to opaque, and can be cast in the form of film (well-known as "Cine-film"). It is suitable for compression or injection moulding from powder. It is easy to ignite and burns rapidly. Solvents are many, such as, Acetone, Amyl acetate, Ether, Alcohol.

Specific Gravity .. ..	1.35-1.60
Tensile Strength .. ..	5,000-10,000 lbs./sq. in.
Maximum temperature, etc. . . .	140° F.
Water absorption, etc. . . .	1.0-3.0%
Burning rate .. ..	Very high
Dielectric constant at 1 Mc/s. . . .	6.5
Power factor at 1 Mc/s. . . .	0.06
Breakdown ( $\frac{1}{8}$ in. specimen) . . . .	300-700
Hardness (Brinell) .. ..	8-11

Uses.—Well known.

### Cellulose Acetate

(Trade names: Erinofort, Celastoid, Bexoid and Cellmold.)

Resembles Cellulose Nitrate but is non-inflammable. It can be both compression and injection moulded. Identification; when heated in a flame it melts and chars, giving off a strong smell of cellulose and acetic acid. Solvents are many, such as Acetone and Benzene.

Specific Gravity .. ..	1.27-1.80
Tensile Strength .. ..	3,000-5,000 lbs./sq. in.
Maximum temperature, etc. . . .	140-180° F.
Water absorption, etc. . . .	1.5-3.0%
Burning rate .. ..	Slow
Dielectric constant at 1 Mc/s. . . .	3.2-6.2
Power factor at 1 Mc/s. . . .	.01-.05
Breakdown ( $\frac{1}{8}$ in. specimen) . . . .	250-800 volts/mil.
Hardness (Brinell) .. ..	8-15

Uses.—Photographic film, recording discs.

### Ethyl-Cellulose

(Trade name: Ethyl-cellulose plastic.)

Similar to cellulose acetate, is tougher and is outstanding for its resistance to very high temperature. Identification; when heated in a flame it chars, and readily melts with a smell of burning cellulose. Solvents; benzene, methyl acetate.

Specific Gravity .. ..	1.10-1.20
Tensile Strength .. ..	4,000-8,000 lbs./sq. in.
Maximum temperature, etc. . . .	140-180° F.
Water absorption, etc. . . .	1.5-2.5%
Burning rate .. ..	Slow
Dielectric constant at 1 Mc/s. . . .	2.0
Power factor at 1 Mc/s. . . .	.0135
Breakdown ( $\frac{1}{8}$ in. specimen) . . . .	400-750
Hardness .. ..	5-10

Uses.—Often used for insulating sleeving.

Part II will deal with the manipulation of plastics in general with a special reference to Distrene, Alkathene and Perspex, which are all easy to work if a few simple rules are obeyed.

(To be continued)

## Silent Keys

WE record with very deep regret the death on October 27 last of that Grand Old Man of Amateur Radio, Col. M. J. Dennis, C.B., E12B, of Baitinglass, Co. Wicklow, Eire. Col. Dennis claimed to be the oldest amateur in the British Empire, a claim which was never challenged. He began his experiments in wireless before the turn of the 20th century, but unlike many other pioneers he remained a true experimenter to the end.

Col. Dennis built his first spark transmitter in 1900 and later obtained a licence (call DNX) whilst stationed at the Royal Arsenal, Woolwich. During World War I he had the unique distinction of being allowed to continue his experiments when all other amateur stations had been closed down. His discovery of a new crystal detector—Tellurium-Lincite—later known as the Dennis Detector, was made about this time. Extensively employed in the Navy its use was said to have doubled reception distances, and it also possessed the valuable quality of retaining its sensitiveness even when close to spark transmissions from other ships.

On the occasion of his 73rd birthday in 1937, the writer, in company with Capt. G. H. Noblett, E19D, called upon Col. Dennis to extend greetings from the President and Council of the R.S.G.B. The truly amazing array of test equipment including crystal grinding calibration gear, which they saw during their visit provided striking evidence of his mechanical and electrical genius.

Col. Dennis was a Vice-President of the R.S.G.B. and a former President of the I.R.T.S.

The sympathies of all members are offered to his sons and other relatives. J.C.

WE also record with deep regret the passing of: Corporal Ronald Hayden Bailey, R.A.F., 2CQU who died on September 5, 1943, at Hintok River Camp, whilst a prisoner of war in Japanese hands. L.A.C. N. Whyvel, R.A.F., 2CMN, of Darlington, who was killed in Italy during March, 1945.

# STATION DESIGN AND PLANNING

By W. H. ALLEN (G2UJ).\*

## PART I.—INTRODUCTION

**F**OR the newcomer to Amateur Radio, the question next in importance to "What's it all about?" is "What apparatus shall I require?"

The articles which have already appeared in this journal under the name of Mr. A. O. Milne, G2MI, will have gone far in answering the first question, and it is hoped that this series of articles will perform a similar duty on the technical side.

In any activity it is beneficial to have some practical knowledge of how the apparatus in use works, but the radio amateur obtains his licence because he is interested in the experimental side of radio, and for him it is essential to know not only how to operate his station correctly and efficiently, but to know and appreciate why the apparatus he uses is designed and built in the way it is.

For this appreciation, a certain amount of the underlying theory must be learned. This does not necessarily mean just academic theory from textbooks, but rather what may be termed for want of a better name, "Practical Theory."

This can best be acquired by building the various pieces of apparatus oneself, and then experimenting with different values of components and different circuit arrangements, and noting the performance.

After a time it will be found that a certain "feel" for radio circuits and the value of the components composing them has been acquired, and it is then that one no longer requires slavishly to follow published designs and layouts, but is in a position personally to create designs.

The radio amateur has always been known for his ability to improvise, and it is a well-known fact that many of the most successful pre-war amateur stations were not those belonging to operators who could afford to spend large sums of money on their hobby, but were the product of ingenuity and a thorough knowledge of how to adapt the material on hand to new uses.

In the articles which follow it will be impossible to review from a technical angle the whole subject of radio from first principles, and it is assumed that the reader has some knowledge of the underlying theory of radio apparatus and has access to the R.S.G.B. *Amateur Radio Handbook* and *Supplement*, as well as one of the good American handbooks.

Practical designs for transmitters and receivers will not be given, but rather will points of design be discussed and hints provided as how to go about fitting out the post-war amateur station.

The essentials of an amateur station are:—

Aerial.

Transmitter.

Receiver.

Test and maintenance apparatus.

These may all be simple or elaborate, and the results obtained, and the ease of operation will depend upon their relative efficiencies, their suitability for the work they have to do and the skill of the operator, and not primarily upon their cost.

### The Aerial

The aerial should be the best that can be provided for the frequency bands it is desired to cover, and care spent on it probably pays a better dividend than on any other item in the station.

The subject of aerials is a big one, but it should be remembered that no matter how perfect the transmitter and receiver, it is the aerial which is the final

determining factor as to whether the signals will go out and come in as desired.

For this reason, the best arrangement is to employ the same aerial for receiving and transmitting, so it will be desirable to incorporate some form of low-loss switching so that this may be done with the least trouble and loss in efficiency.

### The Receiver

The qualities most desirable in a receiver are a good ratio of signal-to-noise, and adequate sensitivity and selectivity to enable the required signals to be received clear of interference from other transmissions.

There was a distinct tendency just before the war among amateurs, both experienced and newcomers, to buy ready-made communication receivers, even though all other apparatus in the station was home constructed. So far as the more advanced amateur was concerned, there was some excuse. He had undoubtedly used home-made receivers for some considerable time, and had obtained plenty of experience in their design and construction, and was disinclined for one reason or another to undertake the quite considerable work involved in producing for himself a modern communications receiver. The newcomer, however, was deliberately denying himself by this action the very experience he should have been seeking.

The author would be the first to admit that it is far easier to build a transmitter than a good-class receiver, and it is unlikely in the extreme that an amateur without previous experience could produce a result approaching that to be expected from a proved commercial product, with all the technical resources of a development laboratory behind it. All the same, the advice of learning to walk before attempting to run is applicable just as much to radio as to any other activity, and the inexperienced amateur is urged, at least at the beginning of his apprenticeship, to use a receiver which he has constructed himself.

The question of receivers of various types will be discussed at some length in a later section of this series of articles, as will also be the provision of test and maintenance apparatus.

### The Transmitter

The simplest transmitter that can be used is an oscillator with some provision for keying it. It will be shown, however, that although this would form quite a practical transmitter, it is better in many ways to employ the oscillator as a frequency-determining stage only, and to use a separate valve to amplify the R.F. power and transfer it to the aerial.

There are many different oscillator circuits in existence, but as they are very fully dealt with in the handbooks and technical publications, it is not proposed to detail them here. It may be useful to state, however, the fundamental principle upon which all oscillators work.

Part of the R.F. energy in the output circuit of the valve is fed back to its input in such a way that it reinforces that input, and if the amount of feed-back is more than sufficient to overcome the losses in the input circuit, a state of oscillation will exist. The frequency of the oscillation will depend upon the constants—inductance and capacity—of the input circuit, and its strength or amplitude upon the characteristics of the valve and the voltages applied to it.

The input circuit of a valve includes not only the

\* 32 Earls Road, Tunbridge Wells, Kent.

inductance and capacity of the coil and condenser forming the tuned circuit, but that contributed by the valve itself, the wiring, and other associated components.

Unintentional changes in oscillator frequency may be due to the following causes:—

(1) Capacity variations inside the valve itself due to heating effects causing physical change in the spacing of its various electrodes, or by variation of the voltages applied to those electrodes.

(2) Movement due to vibration or other causes of objects in the field of the coil or condenser, so varying their capacity to earth.

(3) Inductance variations caused by movement of objects in the field of the coil.

(4) Variation of the inductance of the coil due to its expansion and contraction caused by varying room temperature, or by heat from the valve or other components.

Methods for combating or minimising the above troubles are briefly as follows.

(1) (a) Running the valve well within its rated power input, and using some sort of automatic voltage stabilisation, at least on the H.T. supply.

(b) Employing a value of tuning capacity that will "swamp" small changes of valve capacity.

(c) Connecting the valve across only part of the grid tuned circuit. An explanation of this is given later.

(2 & 3) The cure for this trouble is fairly obvious; use a really rigid chassis to which is attached a well-braced panel, well shield all R.F. circuits, and arrange all wiring so that it can neither shift nor vibrate.

(4) Without some form of thermostatically controlled "oven" to contain the inductance, as is used in high-grade precision oscillators, one cannot prevent changing room temperatures from reacting upon the coil and condenser. Placing these components in a metal box away from the heating effects of the valve will prevent most of the troubles, and the use of fixed condensers with a suitable capacity/temperature co-efficient in parallel with the coil will go far in improving the long-term frequency stability of the circuit.

These "temperature-compensating" fixed condensers may be obtained in various capacities, the dielectric being such that in one type an increase in temperature will result in an increase in capacity, while in another type the opposite takes place.

The practice of connecting the valve across only part of its input circuit, mentioned in (1) (c) above, operates as shown in Fig. 1 (a) and (b).

In (a) the grid and cathode are connected across the whole of the tuned circuit CL, and any variation of capacity in the valve will have the maximum effect. The variable condenser  $C_{g/f}$ , shown dotted, represents the grid-to-filament (or cathode) capacity of the valve in each case.

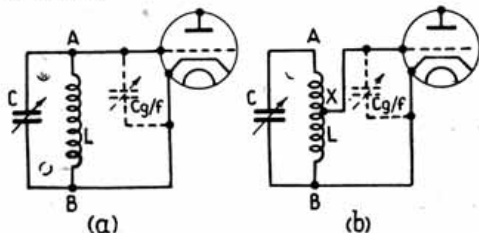


Fig. 1.

A method of reducing the effect of valve capacity on a tuned circuit.

If the grid now be connected to point X at the centre of the coil, an auto-transformer effect will be produced, AB acting as one winding and XB as the other, with a turns ratio of AB : XB = 2 : 1. From transformer theory it will be found that the effect of a changing capacity across XB will not be  $\frac{1}{2}$  but  $\frac{1}{4}$  or  $\frac{1}{2}$  of its previous effect. Thus, although only half the voltage across LC is now available at the grid of the valve, variations in its capacity have been reduced twice as much.

In practice, the position of the tapping point is arrived at by a compromise between stability and the required grid drive, and XB might have to include rather more than half the coil.

### The Crystal Oscillator

A large proportion of amateurs used crystal-controlled oscillators before the war, and doubtless many will continue to do so when licences are reissued.

The reason for this is not difficult to find, for a quartz crystal has the property of oscillating at one frequency only, and a transmitter so controlled and properly adjusted is incapable of working off frequency. This quality can be, of course, something of a disadvantage, in as much as one is limited to working on those frequencies for which crystals are available, but to set off against this is the knowledge that one cannot stray out of the band as is only too easy with a poorly-calibrated variable-frequency oscillator, or one for which no adequate frequency standard is available.

It was a condition of the issue of a licence, and doubtless will be again, that the operator should possess a crystal oscillating on such a frequency that both this, and its harmonics, would fall within the bands of frequencies allotted to amateurs. A certificate to this effect was supplied by the maker of the crystal, or could be obtained from the Society's Calibration Section; either guarantee was acceptable to the Post Office.

In the absence of a crystal, one had to prove the possession of some alternative form of frequency standard capable of the same order of accuracy; a somewhat more difficult and expensive proposition than the purchase of a crystal.

We will now consider some of the operating characteristics of crystal oscillators, various circuits being available in the *Handbook* and elsewhere.

As with all accurate sources of frequency, a large R.F. output should not be attempted, as this will result in overloading the crystal and, in extreme cases, in its fracture. Before such a catastrophe occurs, however, it is more than likely that oscillation will become irregular, both in amplitude and in frequency, for even a quartz crystal will change its frequency of oscillation if over-heated.

Either triode, tetrode or pentode valves may be employed as crystal oscillators, but it is better to use the latter two types in preference to the former in the interests of increased output and freedom from crystal heating and fracture.

The reason for this is that firstly, the sensitivity of the valve is greater, resulting in a larger output for a smaller input, and secondly, the grid-to-plate capacity is lower, resulting in less R.F. voltage being fed back and appearing across the crystal.

(To be continued)

### The Ham's Christmas

Some dream of Christmas white with snow  
And children glad with toys,  
While some there are whose hearts, I know,  
Are filled with other joys.  
But that my heart might all aglow  
Be on this gladsome day,  
Give me a multi-QSO.  
With friends who're far away.

GORDON K. ADAMS (2BOU).

# A DE-LUXE 60-WATTS AMPLIFIER

By G. MICHAEL KING, B.Sc. (G3MY)\*

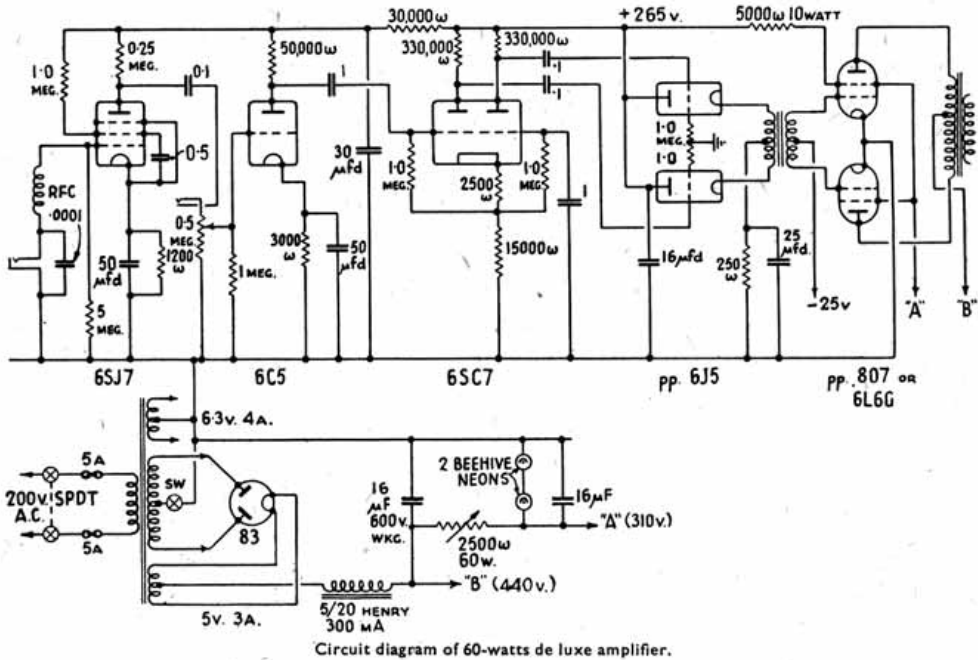
**T**HIS amplifier, built without any particular regard to cost, has been designed to produce the best possible results from valves of the 807 or 6L6 type.

It will be seen from the circuit diagram that the first two stages are conventional and make use of a 6SJ7 followed by a 6C5—both metal valves. It will also be noticed that a large amount of smoothing is used.

voltages, plus liberal amounts of smoothing, make an amplifier which is well-nigh perfect in performance.

The variable 2,500 ohms resistance feeding the output valve screens should be adjusted so that the neon lamps pass about 30 mA when the amplifier is quiescent. At full output these lamps dim appreciably but do not go out and the screen voltage actually changes from 310 to 306 volts.

All the previous stages are fed from this 310 volts



Circuit diagram of 60-watts de luxe amplifier.

The phase-inverter is a 6SC7 in a self-balancing circuit, which in turn feeds a pair of 6J5 G.T.'s in push-pull. The latter cathode-drive a pair of 6L6 G.'s or 807's.

The driver transformer was home-wound on an old mains transformer core and has a 1-1 ratio. The primary resistance is 750 ohms each side of centre tap and the secondary resistance 400 ohms each side of centre tap. The output valves are battery-biased and the quiescent plate current should be adjusted to between 90 and 100 mA. Maximum signal plate current in the output valves is 210 mA. Plate voltage on the 807's is 450 when quiescent and 440 volts on full load. The screen voltage is stabilised by means of two 5-watts neon lamps with base resistances removed.

As the screen current of the 807's only swings from 5 to 20 mA at full signal the screen voltage can be adequately stabilised without over-running the neon lamps.

The gain from the grid of the 6C5 is quite sufficient for a diaphragm-type of crystal microphone and the extra gain provided by the 6SJ7 stage makes the amplifier suitable for use with any type of low output-high-quality microphone.

Cathode driving the output valves together with the excellent regulation of bias, screen and plate

point, via a 5,000 ohms 10 watt resistance and a 16  $\mu$ F condenser. The first two stages are further smoothed with a 30,000 ohms resistance and a 30  $\mu$ F dry-electrolytic condenser.

## Japanese Receiver

The following extract from a recent letter received from G4MC (S.E.A.A.F.) will be of interest to members.

"Talking about receivers, a man here has brought one in from places East. It is of Japanese parentage and what a beauty. I had been given to understand that Japanese equipment was cheap and makeshift, but after seeing this job I am changing my opinion. It is an 8-tube super, everything screened including valves. The snag is power as it requires 135 v. D.C. and 12 v. filaments. Apparently it has an external power supply. I have yet to see the condensers gauged as well as these, they would make certain well-known makes look like tin plates. All resistances are in clips for quick interchanging. Tubes are British type numbers made in Japan, British type bases and pins. Wiring has been done by nuts and bolts like old British sets used to be. I think the reason for that being quick assembly. It is anything but cheap. Of course all resistances, transformers, etc., are of German make. It has all the usual controls, BFO, Receive/Stand by, Bandsread, but strangely no crystal phasing. We are hoping to try it out in the near future and will let you know the results."

## News Wanted

Mr. R. Nelson, G3VV, 331 Audley Range, Blackburn, Lancs., seeks news of Albert Garitte, ON4GD, whose last known address was 20 Chaussée de Bruxelles, Hennyères, Belgium.

## Articles Wanted

The General Editor will be pleased to receive offers of technical articles, especially those of a practical and constructional nature, dealing with equipment suitable for operation on the 58.5-60Mc/s. band.

\*51, Springfield Road, Sheffield 7.

## Annual Report of the Council of the Incorporated Radio Society of Great Britain, for the year ended 30th September, 1945

**T**HE year under review, marked as it was by the total defeat of Germany and Japan, has been one of consolidation and preparation. Every effort has been made to prepare for the early return of transmitting facilities and the eventual extension of those facilities which were suspended or curtailed at the outbreak of hostilities.

### The Financial Position

The financial position is fully described by the Honorary Treasurer in his report. It is desirable, however to emphasise that, with the return to peace time conditions, expenditure will rise considerably as services to members are extended and additional staff is engaged.

### The Licence Position

Throughout the year the Council has maintained the closest possible contact with the Government Departments responsible for the issue of amateur transmitting licences. A considerable amount of time has been devoted at Council meetings to the problems involved, and progress has been satisfactory.

The statement which was published in the March, 1945 issue of the Society's Journal aroused considerable interest, and received much favourable comment.

Whilst no final decisions had been reached up to September 30, 1945, the Council have every reason to believe that the reissue of licences will start at an early date. The controlling factor is not now security but rather the operational demands of the armies of occupation in Europe and the Far East. Very considerable use is still being made by the services of communication frequencies which fall within the pre-war amateur bands.

The Society is now represented on the Advisory ation of all pre-war amateur frequencies, has also made an official request to the G.P.O. that a new band between 21 Mc/s. and 21.5 Mc/s. be assigned to amateurs. It should however, be appreciated that this request, if granted, cannot become operative until after the next International Radio Conference, the date of which has not yet been fixed.

Of the very high frequencies the Council has requested the G.P.O. to allocate to amateurs eight



**The President, Council and Headquarters Staff  
extend Seasonal Greetings and Best Wishes  
for the New Year to Members everywhere**

Shortly after the end of the war in Europe, members were informed that applications for the re-issue of radiating licences could be submitted to the G.P.O. by those who held such licences at the outbreak of war. This arrangement was made with a view to assisting the G.P.O., as it was realised that considerable clerical work would be involved when the time came to reissue the licences. To date about 2500 applications have been received.

In September, holders of pre-war artificial aerial licences were informed that they could submit applications for full licences. The G.P.O. has agreed that these applicants will not be required to pass a technical examination; but they will be required to pass a Morse test or to submit evidence of their Morse proficiency. It is anticipated that a large number of pre-war A.A. licence holders will be exempted from the Morse test by virtue of the standard of knowledge gained whilst serving with H.M. Forces.

During the year a preliminary list of radio Service trades was published which it is hoped may carry exemption from Morse and or technical examinations. A further list is in course of preparation and is due to be published at an early date.

As the result of discussions between representatives of the Society and the G.P.O., a detailed statement dealing with licence-policy was approved for publication.

The salient features covered in the statement were:—

- (1) in future only three classes of transmitting licence will be issued.
- (2) the A.A. licence will not be reissued.

widely separated bands in that part of the spectrum between 144 Mc/s. and 21,000 Mc/s. It is not expected that these allocations will all be in harmonic relationship.

As the result of suggestions made by the Council, the G.P.O. has agreed that the holders of pre-war A.A. licences shall, on request, be allowed to retain their original call-signs with the addition of the International prefix. New licencees, of whom it is expected there will be several thousands during the next few years, will be granted call-signs in a new series embodying three letters after the numeral.

The Society is now represented on the Advisory Committee which has been set up by the City and Guilds of London Institute to deal with technical examinations for amateur licencees.

The Council has pressed continuously since the end of the war for the return of impounded apparatus, and although success had not been achieved up to the end of the year under review (due to the fact that the Statutory Rule and Order prohibiting the possession of transmitting equipment had not been rescinded) it is expected that the position will change soon.

An exchange of views has taken place regularly with the American Radio Relay League and other National Societies on matters relating to the restoration of licence facilities.

### District Activities

Although a very high proportion of the present membership is still on active service, most of the British Isles Districts have maintained their customary activity. Provincial District Meetings were held

in Leeds (April 22), Birmingham (May 26), Nottingham (June 23), Exeter (July 22), and Cardiff (September 22). Attendances generally were somewhat lower than in peace time but the keenness and enthusiasm shown by those present at the meetings left no doubts in the minds of the Council's representatives who attended, that the future well-being of the provincial district membership is fully assured.

The Council takes this opportunity of recording its sincere appreciations to all District Representatives, Scribes and Town Representatives for their whole hearted co-operation during the past year.

#### London Meetings

Due to enemy air attacks it was decided to suspend earlier plans for the revival of London meetings at the Institution of Electrical Engineers. Now that peace has returned a full programme has been arranged, and it is anticipated that the meetings will again attract large attendances.

#### Membership

The excellent progress recorded in recent years has been fully maintained. As at September 30, 1945, the total membership had risen to 9,646, representing an increase of 1,902 during the year, compared with 1,909 during the previous year.

The following list shows the number of members in each grade:—

Home (Corporate) Members .. ..	8,876
Life (Corporate) Members .. ..	38
Honorary (Corporate) Members .. ..	6
Associates and Junior Associates (under 17) .. ..	396
Overseas (Corporate) Members .. ..	330

The last mentioned figure includes a small number of British Isles members who are temporarily resident abroad, whilst a few British Empire and Foreign members temporarily resident in the British Isles are included in the Home (Corporate) Membership total.

During the year the Council has been pleased to consider and accept applications for re-election to membership from several European amateurs who were unable to continue their association with the Society during the war years. It is expected that the numbers will still further increase when currency restrictions are removed. Since the end of the war a number of home members who dropped their membership during the war have also rejoined.

#### The R.S.G.B. Bulletin

Due to paper rationing it has not been found possible yet to increase the size of the Society's Journal, but an improvement in the position can be expected at a reasonably early date. The technical level of contributions offered for publication has been well maintained, and every effort made to cater for the requirements of both advanced workers and newcomers to amateur radio. A series of elementary articles entitled "A Freshman's Guide to Amateur Radio" has been well received. The Council is now planning to publish a more advanced series of articles covering the practical design of amateur radio equipment.

The editorial staff have been assisted, directly or indirectly by several members and this opportunity is taken of recording the thanks of the Council to them.

It has not been possible yet to offer advertising space to many of the firms who have made application, but the Council trusts that an improvement in the paper position will permit them shortly to authorise the Advertising Manager to accept an increase in advertising.

#### Handbook and Supplement

These two publications have continued to attract

the attention of the membership and general public, and it is gratifying to report that a considerable quantity of both books has been exported to the Dominions, Colonies and foreign countries.

Steps will be taken during the coming year to begin work on a revised third Edition of the Handbook. No publishing date can yet be given but it is probable that the new edition will appear towards the end of 1946 or early in 1947.

#### The Post-war Amateur Market

In anticipation of an early restoration of transmitting facilities the Council produced in April a list of items which they considered would be in demand by amateurs during the post-war years. Copies of the list were circulated to approximately 200 radio concerns, many of whom expressed their appreciations to the Society for providing a valuable guide to post-war amateur requirements.

Shortly after the publication of the list, representatives of the Society met representatives of the Radio Component Manufacturers Federation, and a useful exchange of views took place.

#### Disposal of Surplus Government Radio Equipment

The Council has continued to negotiate with the various Government Departments concerned regarding the disposal to members of surplus Government Radio equipment. For many reasons progress has been slow but an assurance is given that every effort will be made to reach an arrangement which will give satisfaction to members.

#### Propaganda Committee

Believing that a greatly increased number of amateur stations will be operating within the next few years, the Council has appointed certain qualified members to serve on a Propaganda Committee. The function of the Committee is to propagate methods designed to improve operating procedure. Several editorials dealing with the work of the Committee have been published and favourably commented upon by old and new members alike. The Committee is planning to publish a list of hints on operation, together with a comprehensive list of operating signals.

#### Future Plans

The Council is giving the most careful consideration to the following subjects and announcements of its plans will be published as soon as practicable:—

- (1) The future of the QSL Section.
- (2) The future of the Experimental Section.
- (3) Provincial Representation on Council.
- (4) The election of Town Representatives.
- (5) Memorial to fallen Members.
- (6) Headquarters Station.
- (7) The future governing of the Society.

In addition it is planned to revive the Calibration and Technical Information Services. Additional staff to meet the proposed commitments is considered essential by the Council and it is hoped to be able to make appointments during the coming year.

It is the intention of the Council to encourage research and experiment in the many new phases of radio development which have been reported during recent years. Consideration will be given to the possibilities of pulse and frequency modulation methods, while every effort will be made to publish information of a constructional nature designed to introduce micro-wave technique on amateur frequencies.

**Contribution to the War Effort**

It is not yet possible fully to record the contribution to the war effort made by members, but the editorial published in the September issue of the Society's Journal recorded some of the less-secret duties undertaken by them.

The assistance given by members to all three Services has been fully recognised by the authorities.

The Council appreciates that the need for security still exists but they hope that at no distant date credit will be given to those who, because of their special knowledge gained as amateurs, were able to undertake responsible war-time duties. In like manner the Council trusts that recognition will be accorded to those professional members of the Society, who made outstanding contributions to the war effort.

**Prisoners of War**

The Council, no less than the membership at large, rejoices in the knowledge that all but one of thirty odd members who were held as prisoners of war in Germany returned safely to their homes. Letters, published in the R.S.G.B. Bulletin confirmed that the parcels sent by the Society were greatly appreciated by the recipients.

Up to the end of September little news regarding the fate of a number of members held prisoner by the Japanese had reached Headquarters, but the Council sincerely hopes that they are safe and in reasonably good health.

**Silent Keys**

The Council again mourns the passing of many members. Records compiled by Headquarters staff show that nearly 150 members lost their lives during the war whilst on active service. It is hoped to commemorate their supreme sacrifice in an appropriate form.

**Headquarters**

Due to the increasing pressure of business two junior clerks were engaged during the year, but it is clear to the Council that further technical and clerical assistance is urgently needed.

At the beginning of the war a staff of five was handling the business of 3,500 members—to-day with a membership approaching 10,000 the staff totals only four, including the two junior clerks referred to above.

The Council is appreciative of the valiant and determined efforts made during the past year by the General Secretary and Miss Gadsden, to continue the normal business of the Society, particularly during the time when Central London was under constant air attacks in the autumn and winter of 1944-5. During that period the office remained in full operation notwithstanding the fact that no additional staff could be obtained at that time. Business was carried on as usual and the Society's Journal appeared each month without fail.

With a return to more normal conditions and with increased staff available it will eventually be possible to entertain visitors on a more satisfactory scale than at present. Until that time arrives the Council trusts that members will notify the Secretary in advance (when possible) if they wish to see him personally whilst visiting Headquarters.

An appeal is also made to members to reduce to a minimum their correspondence with Headquarters. A very large proportion of the enquiries received are of a nature that could well be answered by District or Town Representatives.

**Acknowledgments**

In concluding this report the Council desires to place on record its thanks to all members who have

in any way contributed to the progress of the Society during the past year.

**Council Meeting Attendances**

The following is a list of attendances at Council Meetings for the year ended September 30, 1945 :—

Name	Attendances	Max. Possible Attendances
H. A. M. Clark	13	13
W. E. Russell		
E. L. Gardiner,	12	13
A. O. Milne,		
D. N. Corfield		
S. K. Lewer,	11	13
A. E. Watts,		
F. Charman		
F. G. Hoare		
A. J. H. Watson	10	13
A. D. Gay	7	13
*E. H. Laister	7	8
*K. Morton Evans,	8	8
*S. E. Langley	1	4
†H. W. Stacey	1	4
†G. R. S. Farnie	0	4

\* Elected January, 1945.  
† Retired December, 1944.

**Transmitting Apparatus May Now be Sold Without Permit**

For the purposes of record we give below a list of the Statutory Rules and Orders, affecting wireless, which were signed by the Postmaster-General (Lord Listowel) on November 5, 1945, and which came into force on November 14, 1945.

1945, No. 1417.—This Order revokes S.R. & O. 1939, No. 1689, which prohibited, except under the authority of the P.M.G.'s permit, the sale, purchase, letting, hiring, supplying, disposing of, acquiring or distribution of wireless and other apparatus of specific kinds. Valves capable of an anode dissipation exceeding 10 watts were removed from the Order revoked by S.R. & O. 1945, No. 476.

1945, No. 1418.—This Order revokes (a) the Order dated November 24, 1939, which regulated the use of wireless transmitters, and (b) the Wireless Telegraphy (Possession of Transmitters) Order, 1943 (b).

1945, No. 1419.—This Order revokes the Control of High Frequency Order, 1940 (a), as amended by the Control of High Frequency Order, 1942 (b). The Order now revoked provided that, except as therein mentioned, a person should not have in his possession any high frequency apparatus, that generated or used and had a maximum output exceeding 10 watts of electrical energy at a frequency exceeding 10,000 cycles per second, not being wireless apparatus.

**Contacts Wanted**

L.A.C. Moorwood, BRS. 6446, 322 M.U., F.R.S., B14 R.A.F. S.E.A.A.F., seeks contacts with members located or stationed in the United Provinces of India.

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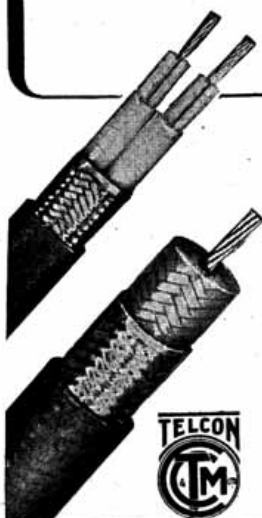
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# THE MONTH "ON" THE AIR

By A. O. MILNE (G2MI).\*

*We have taken a chance on it and changed the title, for if we are not actually on the air when this appears in print at any rate it will be near enough.*

WE are faced by a multiple dilemma; shall we have a good old moan at all and sundry connected with the re-issue of licences, shall we chance it and tell you that we are on the air, or shall we congratulate the authorities on performing a slick job and enjoy ourselves announcing a complete return to normal? Frankly, on December 3, 1945, we just do not know! At least we may console ourselves that our worries are of a different kind from those of a year ago when we were still wondering if the next minute would be Bang!—Finish!

Impatience is a quality which seems to increase exponentially when plotted against time and although we cannot, with justification say that our patience is exhausted, nevertheless, the whole position is very touchy.

Some members have been shooting at the Council because the Americans have started up on 28 Mc/s. ahead of us. We have even been accused of being "Yes Men" to the G.P.O. and thereby letting our own people down!

It is said that the "way of the transgressor is hard"; the way of an elected representative is ten times harder and that is a fact.

It does seem necessary here and now to tell some of our members quite straight that your Council is composed of active amateurs who are just as anxious to get back on the air as anyone else. Furthermore, the Americans, by a different system of licencing, have kept their licences current throughout the war. They could be reactivated at any time by a simple Government order. On the other hand, our licences were *withdrawn* and by law we are not allowed to transmit without a licence, written in plain language on a piece of paper. At the time of writing it is just that piece of paper, multiplied approximately 2,500 times, plus the same number of separate typing operations, which is holding things up.

Quite candidly, some of the hot air expelled by certain people who should know better has caused Council to lift its collective eyebrows—and that, to employ just one more cliché, is a masterpiece of understatement.

We have it on good authority that when the name of Arthur Watts is mentioned in official circles, strong men have fled into their inner offices screaming, "It's that Man again." The requisitions for notice cards "Conference—do not disturb" have shown a marked increase and an overwhelming number of eager officials volunteered to go to the Telecommunications Conference at Bermuda, for the sake of a little peace and quiet! Such reports are, of course, always liable to some exaggeration, but it is a reasonably safe bet that some of our good friends in St. Martins-le-Grand must have the letters "R.S.G.B." engraved on their hearts. Our worthy G.P.O. liaison officer, G6UN, is rapidly gaining a reputation for being the most charming, but persistent, unmitigated nuisance in London!

In order to disabuse certain of our members of the idea that the Americans always get there first, it may interest them to know that we have been informed by the Post Office that, so far as this country is concerned, 7 and 14 Mc/s. could be released at an early date. It is presumably the United States administration who are holding out on us and a cable has

been sent to the A.R.R.L. acquainting them of the position with the suggestion that they get down to Washington within the hour and raise merry — QRM.

## The U.S. Position

The U.S. went back on 28 Mc/s. and 56 Mc/s. as from November 15; the full "gen" is as follows:—  
28-29.7 Telegraphy.

28.1-29.5 Telephony.

28.95-29.7 Special (F.M., etc.).

56-60 Until March 1, 1946, then 50-54.

144-148 Telegraphy and telephony, I.C.W., and special, except for Washington D.C. and Seattle over a 50 miles radius from each Town.

\* \* \*

2,300-2,400

5,250-5,650

10,000-10,500

21,000-22,000

*All Frequencies are in Mc/s.*

There are no allocations between 148 Mc/s. and 2,300 Mc/s. as yet, because certain aeronautical allocations have still to be decided in this part of the spectrum. (There seems to be some doubt in official circles that U.S. amateurs *have* been activated above 148 Mc/s. The information here published comes from Capt. E. Ilott G2JK, who is in Washington. No statement had been received from A.R.R.L. up to 3rd December.—Ed.)

American signals have been coming through daily on 28 Mc/s. and the band has been wide open at times. Many of the European pirates quickly found their way down there and some have even been heard to say: "I am a real G in England but this is not my real call."

We can only say "Told you so" to the authorities, yes, as long ago as 1943!

## General

Reports have poured in from members all over the country in response to last month's request for dope on the pirates. So much information has come in that it would be impossible to mention more than a few of the many calls heard. Thanks are due to the following who kindly took the trouble to write: G2PL, 3PL, WP, 6RB, 8JR, NF, PW, 2ARA, FSC, HLF, BRS191, 2317, 3003, 3416, 3789, 3825, 4854, 6253, 8212, 9326, 9556, 10,275 and 10,811. The bulk of the story this month is an abstract from their combined efforts. If anyone has been omitted please accept our apologies. It has been rather a hectic month.

The star "pirate" is without doubt W9JGQ, operating "Fixed Portable" in Madrid, Spain. He has been a daily S9 plus telephony signal on about 14,150 kc/s. He says he has no licence and is operating with 400 watts. From noises "off" it seems likely that he is at an aerodrome somewhere. Although his references to Madrid are very circumstantial, it would not surprise us to find that he is at an U.S. Army Transport Command Airport somewhere else. Some of the 'phone contacts he has made are PB<sub>2</sub> in Germany, W5FCV in Ardennes, W2DTG, LA6G (14,040) obviously a genuine Norwegian and SU6ZY in Cairo.

It is certain that the Brazilians are back officially as many have been logged and in each case they check correctly with the pre-war Call Book. Altogether

\* 29 Kechill Gardens, Hayes, Bromley, Kent.

92 separate calls have been logged on 7 Mc/s. and 267 on 14 Mc/s., this includes the said Brazilians.

Some of the more interesting are D4USA, a W in Germany, W2HNP, who claims to have 1 kW in the Admiralty Is. LXIAC says he is in Switzerland and BIG claims to be in Turkey. TALAA of pre-war fame is back with us once again!

LA2UA, writing from Sola Seaplane Base in Norway, confirms that the Norwegians are back officially on 28 and 56 Mc/s. He sends greetings to his many friends in this country. Most of their gear was stolen by the Huns, but he says: "We hope to get hold of some German equipment to make up for it."

British 2FSR, now in Labuan, Borneo, says he is licenced as VS5AH and will be on the air soon (we wonder who licenced him). AC3SS is licenced and is operating from Gangtok, Sikkim, Thibet. Harry Baker, the operator of this station, tells us that he is 21 miles inside the Thibetan border and is on 14,150 kc/s. The local ruler, his son and daughter are all keen on ham radio and will probably be on the air themselves in the near future. Princess Kula, in particular, will be on the key of AC3SS sometimes. Reg Fox, of AC4YN, is also on the air again and his signals have been heard in this country as have those of 3SS.

BRS5360 sent a long list of calls heard, the "choice" ones being J6BA (off coast of Honshu, Japan), B4UP (Leyte), J9BB (Iwojima), XUSA (Chungking, 525 w), W2OBY/XU (Shanghai), J5UB (Osaka), FA8GB, XU2DP, XZ5WX, W9LZI, W3GNS, W6TZL, W1HLR (Saipan), VS5AR, PY7AN, VU5NT (Calcutta), and K5URL (Admiralty Is.), all of whom have been heard on 'phone.

HBMB is an official station in Berne, operator HB9CV. This station is in contact with the Swiss trains repatriating Swiss Nationals from Eastern Europe. KZIA is a pirate in Switzerland.

British Isles members of the R.S.B.G., who visited Belgium in 1935 will be glad to hear that the Director of Ruysselede Radio Station, who gave us such a warm welcome, is safe and well and was recently in Switzerland on official business. G6SM hopes shortly to be operating from Aden with the call VU8SM.

ZD4AG 14160, 'phone, says he is in Accra Gold Coast and has a strong American accent. EV1AB heard working W9JGQ, claimed to be on a ship off the coast of England.

It should be stated here that none of the "G" calls recently heard on the air is authorised. This includes the many G7's.

EP5SO is G5SO working from Iran.

### Good Work

The ways of Providence are indeed strange. GM6UU, better known as the "old man of the Mountains," recently bought an H.R.O.

It also happened that 6UU fell ill and had the set installed by his bedside. In the early hours of one morning during the recent great gale, he awoke and thought that to soothe his fevered brow he would do a little listening around the bands. On the 2 Mc/s small ship band he heard the trawler "Lord Beaconsfield" hard on the rocks at Arbroath, calling for help. Due to foreign QRM, their signals were unheeded by the coast stations. 6UU immediately telephoned the Edinburgh police thereby enabling the lifeboat to save the lives of 19 men. A train of co-incidences? Who shall say?

The Old Man assures his many ham friends that, the famous beard has been trimmed and the birds nests removed. "97 + 6 is 103 next Tuesday," he says. "I'm really the junior op. Grandad, the real old man of the mountains is still hale and hearty, but mentally a bit green.. He keeps muttering 'Dad de

Dad, Dad de Dad.' Says it has something to do with the Post Office. Between times he has his telescope fixed upon the road, looking for a green van. Sad to say it has not called yet!"

### Information Please

Does anyone have the story on JCKW, heard testing with gramophone records on 7220 kc/s. and asking for reports to be sent to AW5, G.H.Q., M.E.F. (Yes. Major Ken Ellis, SU5KW, Cairo, has the answer.—G6CL.)

### XA Calls

The following is a list of the XA calls issued in the C.M.F. theatre:—

XAAA	..	APO512, Caserta.
" AB	..	" " " " " " Carditello, near Capua.
" AC	..	GHQ, Caserta.
" AD	..	APO794, Rome.
" AF	..	APO782, Bagnoli.
" AG	..	" " " " " " Secondigliano.
" AJ	..	APO88, San Pietro.
" AK	..	APO782, Leghorn.
" AL	..	APO528, Naples.
" AM	..	746 AAF Base Unit, Naples.
" AN	..	747 " " " " " " Rome.
" AO	..	746 " " " " " " Palermo, Sicily.
" AP	..	" " " " " " Athens.
" AQ	..	" " " " " " Basi.
" AR	..	" " " " " " Naples.
" AT	..	" " " " " " Trapani, Sicily.
" AU	..	" " " " " " Tortorella.
" AV	..	747 " " " " " " Rome.
" AW	..	" " " " " " Pisa.
" AX	..	" " " " " " Corsica.
" AY	..	" " " " " " Sardinia.
" CK	..	3 Coy. 2GHQ Signals, Rome (G3CK).
" PQ	..	" " " " " " Capua.
" YM	..	1 " 2 " " " " " Caserta (G3YM).
" YS	..	" F " Liaison and Training Unit, Rome (G2YS).
" ZO	..	3 Coy. 2 GHQ Signals, Caserta (G6ZO).
" ZA	..	APO512, Caserta.

News has now been received that these C.M.F. stations are to operate on 28 and 56 Mc/s only.

Note.—Lists of call-signs as such are not required, but information about stations heard, location, personnel, power, etc., will be of interest. Keep writing. See you on the air!

Stop Press.—BRS2134, writing from Lancaster, Mexico, comments on the very sympathetic attitude towards amateur radio by the Mexican Government. Mexican amateurs were restarted on October 5, when the L.M.R.E. Headquarters station XE1CB XE1BN was opened by the Director General of Telecommunications in the presence of a distinguished gathering of officials and enthusiastic amateurs.

Applications for licences are made through the National Society and 120 provisional licences have so far been issued for all the pre-war bands except 56 Mc/s. BRS2134 has been licenced as XE1FE and hopes shortly to be active on 28320 kc/s.

### QSL CARDS

Under no circumstances should QSL cards be sent to R.S.G.B. Headquarters. The address of the QSL Bureau will be published as soon as suitable accommodation has been acquired.

## HEADQUARTERS CALLING

## COUNCIL 1945

## President:

ERNEST LETT GARDINER, B.Sc., G6GR.

Executive Vice-President: S. K. Lewer, B.Sc., G6LJ.

Honorary Secretary: H. A. M. Clark, B.Sc., G6OT.

Honorary Treasurer: A. J. H. Watson, F.S.A.A., G2YD.

Honorary Editor: Arthur O. Milne, G2MI.

Immediate Past President: A. D. Gay, G6NF.

\* \*

Members: F. Charman, G6CJ, D. N. Corfield, D.L.C.(Hons.), G5CD, Lt. Col. K. Morton Evans, O.B.E., GW5KJ, F. Hoare, G2DP, E. H. Laister, BR5386, S. E. Langley, G3ST, W. E. Russell, G5WP.

G.P.O. Liaison Officer: A. E. Watts, G6UN.

General Secretary: John Clarricoats, G6CL.

## October Council Meetings

*Resume of the Minutes of a Meeting of the Council of the Inc. Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.1, on Monday, October 15, 1945, at 5.30 p.m.*

Present: Messrs. E. L. Gardiner (President), S. K. Lewer, H. A. M. Clark, A. J. H. Watson, A. O. Milne, A. E. Watts, D. N. Corfield, F. Charman, K. Morton Evans, F. G. Hoare, S. E. Langley, E. H. Laister, W. E. Russell and J. Clarricoats (General Secretary).

(1) It was unanimously resolved to elect 5 Life Members (Messrs. H. A. M. Clark, G6OT, G. Openshaw, 2BTO, Ellis, SU5KW, Crabtree, BR58896, and Williams, 9595), 248 Corporate Members, 16 Associates, 6 Junior Associates, 2 Foreign Members and 4 Junior Associates to Corporate Membership.

(2) It was unanimously resolved to accept and adopt the monthly receipts and payments account.

(3) The Chancellor of the Exchequer wrote to thank the Society for its further loan of £2,000 to the Government free of interest.

(4) Mr. L. W. Jones, G5JO, wrote tendering his resignation as Deputy D.E. for District 8. It was agreed to write and thank Mr. Jones for his past services. Mr. S. Granfield, G5BQ, wrote agreeing to resume his duties as D.R. for the District.

(5) A Radio company wrote asking for a trading announcement to be published in the R.S.G.B. BULLETIN. It was agreed to inform the Company concerned that due to paper shortage it was not possible to accede to their request.

(6) It was agreed not to accept an application for re-election to membership received from an Italian amateur, on the ground that Great Britain is still legally at war with Italy.

(7) Various matters relating to the return of impounded apparatus, compensation for damage to such equipment, licence forms and the re-issue of licences were considered at great length. A statement dealing with the return of impounded apparatus was approved for publication.

(8) A proposal put forward that in future licences issued to amateurs for communication purposes as distinct from the licences for experimental purposes was debated at length.

(9) A memorandum in respect of copyright to be signed by all contributors to the Society's Journal was presented and approved.

(10) It was agreed to place orders for reprinting a further 30,000 copies of the Handbook at a cost of £3,065 and 20,000 copies of the Supplement at a cost of £1,255. It was reported that stocks of both publications had been reduced considerably since the last meeting.

(11) It was agreed that the President, Hon. Editor and General Secretary should represent Headquarters at the Liverpool P.D.M.

(12) The Technical Committee agreed to prepare for the guidance of the G.P.O. Liaison Committee, a short statement dealing with the application of frequency modulation and pulse transmission to Amateur Radio.

The meeting closed at 9.30 p.m.

*Resume of the Minutes of a Special Council Meeting held at New Ruskin House, Little Russell Street, W.C.1, on Sunday, October 28, 1945, at 10.15 a.m.*

Present: Messrs. E. L. Gardiner (President), S. K. Lewer, H. A. M. Clark, A. O. Milne, A. J. H. Watson, F. Charman, K. Morton Evans, F. G. Hoare, E. H. Laister, S. E. Langley, W. E. Russell, A. E. Watts, and J. Clarricoats (General Secretary).

(1) After a lengthy discussion it was resolved that the Society shall provide a QSL Service at a fee of 5s. per head per annum to British Isles members who wish to use it. The initial capital required to provide this service shall be charged to the Post-War Development Fund.

It was also agreed that the Society shall provide a similar service at a fee of 20s. per head per annum to non-members holding transmitting licences and resident in the British Isles.

It was agreed to appoint a QSL Management Committee (under the Chairmanship of Mr. A. O. Milne), to prepare a working scheme.

(2) After a lengthy discussion Council unanimously agreed to record that it is of the opinion that a Technical Advisory Committee, to correlate the experimental activities of the membership, would be preferable to an Experimental Section as heretofore constituted, and that the Experimental Manager and his present group managers be invited to meet the Council to discuss the matter.

(3) It was agreed to convene a meeting of all D.R.'s during the early part of 1946 to discuss with the Council matters relating to Provincial Representation on Council, the re-arrangement of Districts, the Election of Town Representatives, and the Future Governing of the Society.

(4) It was reported that information had been received from the C.M.F. that limited amateur operation had been authorised by Allied Headquarters.

(5) The draft Audited Annual Accounts for the year ended September 30 1945, were approved.

(6) It was agreed to publish a notice in an early issue of THE BULLETIN inviting members to give their views regarding the suggestion that the Society should create a memorial to fallen members.

The meeting closed at 5.10 p.m.

## STAFF VACANCIES

at

## R.S.G.B. HEADQUARTERS

Vacancies exist at Headquarters for an experienced SHORT-HAND TYPIST and a GIRL CLERK. Applicants should communicate with the General Secretary in writing stating age, salary required and qualifications.

## London Meeting at the I.E.E.

There was an attendance of about 250 members at the meeting held in the Lecture Theatre of the Institution of Electrical Engineers, London, on Friday, November 16, 1945, when the subject of "Aerial Systems for the Radio Amateur" was ably dealt with by Mr. F. Charman, G6CJ, author of the "Aerials" chapter in the *Amateur Radio Handbook*. At the conclusion of his address, Mr. Charman demonstrated, by novel methods, the radiation properties of certain well-known types of aerial systems used by amateurs.

Mr. S. K. Lewer, G6LJ, Executive Vice-President, apologised for the absence of the President, General Secretary and Honorary Editor, who were in Liverpool for the North-Western Provincial District Meeting.

A cordial vote of thanks to the lecturer was proposed by Mr. H. T. Pope, G3HT, and carried with acclamation.

## Christmas Holidays

Headquarters will be closed from 12 noon Saturday, 22nd December, until 9.30 a.m. Thursday, 27th December. The General Secretary will appreciate it if correspondence is reduced to a minimum during Christmas week.

## Annual General Meeting

The Eighteenth Annual General Meeting of the Society will be held on Saturday, December 29, 1945, at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2. The meeting will commence at 2 p.m.

Following the meeting Dr. R. L. Smith-Rose (Honorary Member) will deliver a lecture entitled "Radio Location." Due to catering and staff difficulties the Institution authorities regret that tea cannot be provided on this occasion.

## Council Ballot Scrutineers

The Corporate members named below, having offered their services were duly appointed at the meeting of the Society held on November 16, 1945, to act as scrutineers of the forthcoming Council Ballot.

Messrs. W. H. Allen, S. Buckingham, W. G. Irwin, A. M. Rix, P. R. Solder, and P. W. Winstford.

The counting of votes took place at Headquarters on Friday, November 28, 1945.

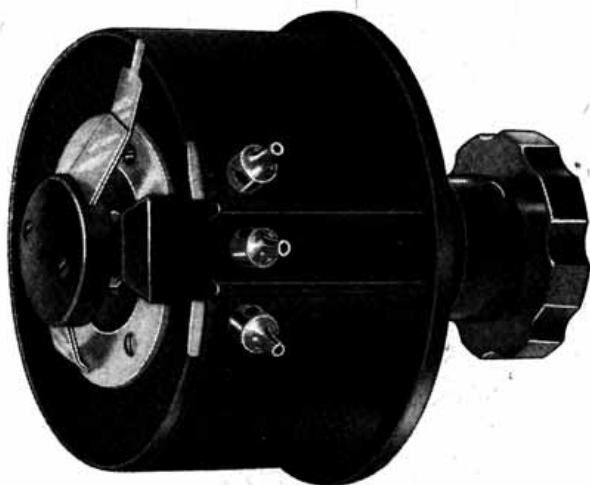
# P A I N T O N

## *Potentiometers*

Painton Continuously Variable Potentiometers are available in over 50 stock patterns and sizes, ranging from a 2-watt unit to one capable of dissipating 25 watts and are guaranteed in every case to be a typical "Painton" product of unerring high standard and efficiency.

All models now embody contact tip of Rhodium Plating which, although costly, has proved so successful in ensuring low contact resistance and the formation of a hard surface resistant to wear.

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# P A I N T O N

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### Small Advertisements

Members who make use of the Exchange and Mart Section are requested to note carefully the terms and conditions under which small advertisements are accepted.

During recent months our Advertising Manager has been put to considerable inconvenience due to the failure of advertisers to adhere to the terms and conditions. Incorrect remittances for the number of words contained in the advertisement, or advertisements containing more words than the maximum number permitted, are the two chief causes of complaint.

### Radio Control of Models

We are pleased to announce that Ft./Lt. J. Oswald Dykes, 2A1J, "Sunnybank," Llanthony, near Abergavenny, Mon., has agreed to act temporarily as organiser of the Radio Control of Models Group. To date 20 members have expressed interest in this subject. Ft./Lt. Dykes will be glad to hear from others similarly interested.

### Edgware Short Wave Society

Meetings in future will be held fortnightly at the Constitutional Club on the first and third Wednesdays at 7.30 p.m. for Morse and 8 p.m. for Discussions. In a short time the Library will hold a complete selection of technical books for experiments and study. New awards, in addition to the "Enthusiasts" cup are "Committee's" award for best lecture or paper, "Constructors" award for finest home constructed apparatus. At the last meeting Mr. K. Filken demonstrated the Panaramic Receiver. Future meetings will be "Unknown Quizzes" and general discussion night. It is hoped to run an Annual Dinner and Show in December. Membership now exceeds 50.

### Southend and District Radio and Scientific Society

Mr. J. M. S. Watson, G6CT, 23 Eastwood Boulevard, Westcliff-on-Sea, states that meetings of the above Society are to be resumed at an early date. Interested members are asked to communicate with Mr. Watson.

### "Chad's Club"

We are informed by Cpl. W. G. V. Shepherd, BR57222, that an Association, known as "Chad's Club," has been formed to promote social contacts between those who have served as Army Radio Mechanics. The Club is open to officers and other ranks, both male and female. The Association plans to publish a Journal and later to provide legal assistance to its members.

Full details can be obtained from the Secretary, Cpl. J. Kenney, Vincetts Cottage, Elphinstone Avenue, Hastings.  
The Association is in no way connected with the R.S.G.B., but no doubt many members will be interested in its activities.

### Welcome Home

We extend a warm welcome to the following members who have recently returned from Japanese prisoners of war camps!

Mr. J. MacIntosh, VS1AA, Posts and Telegraph, Department, Singapore.  
F/Lt. Archie Brown, G6MXZ, Singapore.  
L.A.C. R. Healey, G6HY, 94 Ingram Road, Bulwell, Nottingham.  
Lt. Tom Douglas, G3BA, "Hunstan," New Street, Daventry, Northants.

### Radio Measurements in the Decimetre and Centimetre Wavebands

On November 7, 1945, an interesting paper with the above title was presented to the Radio Section of the I.E.E. by R. J. Clayton, J. E. Houldin, H. R. L. Lamont and W. E. Willshaw.

This paper describes various types of valves for centimetre working, methods of measuring frequency and power, voltage and impedance. Further sections deal with signal generators and receiver measurements and the determination of aerial characteristics.

The paper will appear in Part III of the *Journal of the Institution of Electrical Engineers* and should be referred to by all members interested in centimetre waves.

### Station Photographs Wanted

A well-known firm of radio manufacturers, whose goods are regularly advertised in this Journal, are preparing a catalogue of components for the radio amateur. It is proposed to include in the catalogue a number of photographs of amateur stations. Members who would like to co-operate in this project are asked to submit photographs to the General Secretary, who will pass them on to the firm concerned. The sender's name address and call sign should be printed in block letters on the back of each photograph submitted.

### Standard Frequency Transmissions from WWV

Mr. O. C. Doley, BR54679 writes:—

"As a regular user of this service, I wish to report that an interesting change has taken place recently. The station now gives American Eastern Standard Time in modulated (400 cycle) C.W. every five minutes instead of the usual WWV, WWV. This is a very useful feature, for it means that one only has to listen to the transmissions for a maximum of five minutes in order to get the exact time to within 1/10,000,000 second—not forgetting to add five hours to give G.M.T.!

### Situations Vacant

Appropos the paragraph published in our June, 1945, issue we feel it desirable to explain that it has not yet been possible to pass on all of the letters received from Service members requiring appointments in the radio industry. To date well over 200 applications have been received, many from members who are unlikely to be released from Service duties for many months.

It is understood that a number of members have already been approached by interested firms and in some cases definite engagements have taken place.

Whilst the General Secretary will continue, to the best of his ability, to put members into touch with interested firms it is not possible for him to enter into correspondence with members on matters relating to employment. He will, however, be glad to hear from any radio concern interested in engaging Society members.

### Radio Amateur Call Book

Members who wish to have their call-sign, name and address listed in the *Radio Amateur Call Book* are asked to communicate this information direct to the Radio Amateur Call Book, Inc., 608 South Dearborn Street, Chicago, Ill., U.S.A., as soon as they receive their new licences. R.S.G.B. Headquarters cannot undertake to handle any correspondence on this subject due to shortage of staff. A. O. M.

### Side Slip

Our attention has been drawn to an error in the V2 section of the circuit diagram of the Franklin type Signal Generator published on Page 56 of the October, 1945, issue. The bottom end of the 1 megohm grid leak and the left hand end of the 5000 ohms potentiometer should have been shown earthed.

### Congrats

● To Capt. A. M. Houston Fergus, G2ZC, of Churt, Surrey, who was married on November 15, 1945, to Dr. Margaret Falconar, of Farnham. Capt. Fergus was for several years the Society's Experimental Section Manager.

● To Wing Commander Kenneth Jowers, G5ZJ, and his wife on the birth of a junior operator. The young man was born in Chase Bank Nursing Home, Southgate, London, on November 24, 1945.

● To Mr. H. Simpson, 2BXS, and his wife on the arrival of a daughter on October 27.

## EXCHANGE AND MART SECTION

MEMBERS' private advertisements 2d. per word, minimum charge 3s. Maximum words accepted, 100. TRADE advertisements 6d. per word, minimum charge 9s. Maximum words accepted, 50. An additional charge of 1s. 6d. is made for use of Box Numbers. TERMS: Cash with order. All copy and payments to be sent direct to Advertisement Managers, Parris Advertising Ltd., 121 Kingsway, London, W.C.2, by the 25th of the month for following month's issue.

ALL KINDS OF PRINT, especially QSL Cards.—Send your inquiries to G6MN, Castlemount, Worksop.

A.C./D.C. m.w. Midget receiver; first offer over £11 5s. secures. Gramophone turntable, B.T.H. pickup, in ebony cabinet (34 in. × 17½ in. × 15½ in.) space for amplifier, records, loud-speaker. First offer over £7 10s. secures; carriage extra. RK39, 21s. S.A.E.—HALL (GSLY), N. Waltham Rectory, Basingstoke. Tel.: Dummer 56.

ALL types of Eddystone short-wave components, mains transformers, L.F. chokes, Dubilier condensers, Dubilier power resistors. Valves: 6A7, 6D6, 78, 5Z4, 80, etc. S.A.E. with inquiries.—R. COCKINGS, G3WF, 101 Evesham Road, Headless Cross, Redditch.

A.1. SUPPLIES at real Ham prices. Avo, Taylor, Weston test gear from stock, 10,000 English and American tubes. Electrolytics, transformers, resistors, "P" coils, speakers, I.F.'s. "Wearite," Raymart and Eddystone components. State your wants. List for S.A.E. I ship C.O.D. and have export permit.—BR57370, 67 High Street, Chatham. Phone 2927.

A.MATEUR equipment designed and built to specification: transmitters, speech amplifiers, modulators, etc. All types of valves in stock. Personal attention to all inquiries.—G8WL, 26 Waverley Road, Kenilworth. Phone 775.

ALL Amateurs are invited to let us have details of special apparatus they require. Quotations willingly supplied. Transformers, chokes, of any rating constructed to your specification. Wireless Standard quality multi-ratio output transformers available, 35s. Send S./A. envelope for lists.—A.W.S., 16 Crystal Palace Parade, London, S.E.19.

BULLETINS, 1938-1945, few missing. Call Book, 1938. Offers or exchange.—BLACK (TOP), 16 Edina Place, Edinburgh.

BERRY'S (Short-Wave), Ltd., have immediate vacancies for counter staff. Applicants must reside in or near London, have good technical knowledge of communication and V.H.F. equipment. Please state (in writing only), age, experience, present occupation, salary required and when free, to 25 High Holborn, London, W.C.1.

BROOKES Crystals advise amateurs to order their crystals now to ensure quick delivery when frequencies are allocated, as all orders will be executed in strict rotation.—BROOKES CRYSTALS, LTD., 51/53 Greenwich Church Street, London, S.E.10.

CONCENTRATING on radio, G3HS offers large quantity stamps on and off paper, Colonial and Foreign, including war-time issues of Europe in £5 lots to clear.—D. BOFFIN, Farington, Berks.

COMPONENTS of every description. Send 1d. stamp for list.—R. F. ARMSTRONG (ELECTRONICS), LTD., Dept. TR12, 69 Eversley Road, Sketty, Swansea.

**COMMUNICATION** receiver for sale.—Three I.F. stages, A.V.C./B.F.O. 6K7's, 6Q7, 6F6 output, A.C. mains, £30.—**BANKS (2CNC)**, 7 Royal Crescent, Don Road, St. Helier, Jersey, Channel Islands.

**D.B. 20**, perfect condition, laboratory realigned, new valves, £20.—**Box 801, PARRS**, 121 Kingsway, London, W.C.2.

**EDDYSTONE 358**. New model with logging scale. Complete with power pack and speaker to match. Complete set of coils. Perfect condition. What offers?—**Box 800, PARRS**, 121 Kingsway, London, W.C.2.

**FOR SALE**.—7-valve short-wave battery superhet. Selling for less than cost of parts. All valves and components guaranteed perfect. Best offer over £10. Also midget moving coil, mains energised loudspeaker.—Details from **P. D. WHITAKER**, "Kledang," Sandon Road, Grantham, Lincs.

**FOR SALE**.—Communication receiver type 358X, by Eddystone, coils 90 kc. to 31 Mc., including power pack and loudspeaker.—**Box 795, PARRS**, 121 Kingsway, London, W.C.2.

**FOR SALE**.—Beat frequency oscillator by Furzehill, type No. 1 Mark II, with meter. Output 10 and 600 ohms, range 0-1,000 cycles.—**Box 796, PARRS**, 121 Kingsway, London, W.C.2.

**FOR SALE**.—Rotary transformer, new and unused, by B.E.E. Ltd., input 24 volts D.C., output 230 volts A.C., 50 cycles, 200 V.A.—**Box 797, PARRS**, 121 Kingsway, London, W.C.2.

**FOUR H.R.O. coil packs** (4-1-7, 2-9, .96-48, .48-18 Mc.), £8. Q.C.C. 100 kc. crystal, mounted, 25s. Offers invited. S.A.E.—**2FUF**, 6 Verulam Avenue, Walthamstow, London, E.17.

**FOR SALE**.—At bargain prices, large quantity of first-class Ham gear, including: G5NI oscilloscope and spare CRT, G5NI 5-valve mains pre-amplifier, 2-valve battery ditto, components from 250 watt (RK 28) phone transmitter including Thordarson 7827 double secondary transformer for simultaneous plate and screen modulation, numerous H.T. and L.T. and push-pull interval transformers, smoothing chokes and rectifiers, D.P.D.T. Ward Leonard H.F. slays, Ferranti and Weston meters ranging from 0/2 ma. to 0/500 mA, also 0/3000 electrostatic voltmeters, many valves, S.W. and other components and accessories. Enquiries invited. Unusual opportunity.—**Box 793, PARRS**, 121 Kingsway, London, W.C.2.

**FOR SALE**.—R.M.E. 70 receiver with or without D.B. 20 preselector. Best offer secures.—**COOPER**, "Fairbank," Smeeth, Kent.

**FOR SALE**.—Communications receiver, R.M.E. 70 plus D.B. 20, 100 per cent. condition, little used, £80 or offers.—**2AMG**, Oak Gates, Hixon, Stafford.

**G6FK** has for disposal one Eddystone factory constructed 56 Mc. sup.-reg. receiver (less valves); also National H.R.O. coils 50 to 100 kc., 100 to 200 kc., 180 to 430 kc. Sold separately. What offers?—**F. T. SMITH**, 25 Moor Street South, Wolverhampton.

**GUARANTEED** Ham supplies.—Meters, mikes, tubes, etc. Raymart and Eddystone agents. Aluminium chassis, etc., to order. Lists.—**STUCKS RADIO**, North Street, Sudbury, Suffolk.

**GW3GL** has just been released from the R.A.F., having served five years as a Cpl. Wireless Mechanic, is now restarting his business in dealing in radio gear, and, until premises are secured, is carrying on at the pre-war address.—**J. W. B. EVANS**, The Aplary, Conway, N. Wales.

**G8KZ**, **G8ZD** and **G3SH**, who are anxious to be of service to you, inquire: Do you need any gear? May we send our list? Are you a dealer in amateur requirements? If so visit, write or phone **HAMRAD WHOLESALE, LTD.**, 348 Portobello Road, Ladbroke Grove, London, W.10. Phone: LADBROKE 3143.

**"HAM"**, released warrant officer, W.E.M., R.A.F., age 32, seeks administration, sales or clerical situation with radio or electrical company. London area.—**Box 802, PARRS**, 121 Kingsway, London, W.C.2.

**MEISSENER 9001** signal shifter, £9. Hallcrafters type HT7 frequency standard, £9. Compact code oscillator, 30s. Ferranti M.C. 0-250 mA, D.C., 30s. Turner 0-250 mA, D.C., 15s. Ericsson 2000 ohm earphones, 15s. B.T.H. earphones, 10s. Electric wall clock, 70s. Midget receiver, £5. 7 tube communications receiver, £7. Battery receiver, 500 kc.—30 Mc., 60s., etc. S.A.E. enquiries.—**G2PL**, 14 Garden Close, Wallington, Surrey.

**MONOMARK** service.—Permanent London address. Letters redirected. Confidential. 5s. p.a. Royal patronage. Key tag. 9d.—Write **BMM/ON07A**, W.C.1.

**NEW B.I.E.T.** combined radio communications and technical electricity course offered, with B.I.E.T. consent, to budding radio engineer. Pressure prevents advertiser commencing same. Cost over £12 10s., accept £8 or nearest.—**KEN THOMPSON**, Alderton, Suffolk.

**NEW valves**.—1A7, 1N5, 1H5, 1C5, Z21, PM2HL, LP2, PM2A, MH4, VP4, PEN45, HL1320, 408UA, 25A6G, 6C5G, 1D6, CIC301. 10-watt A.C./D.C. amplifier complete, £10. Eddystone and Raymart components and others cheap.—Send S.A.E. for list to **N. RICHARDSON**, 75 Westgate, Peterborough.

**OFFERS**.—Six pre-war bound volumes of **BULLETIN**, July 1933 to June 1939.—**G8BQ**, 51 Fydeall Street, Boston, Lincs.

**R.S.G.B. BULLETINS** from vol. 1, copy No. 1 to date; vols. 1 and 2 book-bound, 3-13 bound "University" automatic loose-leaf binders, remainder unbound. Best offer for whole lot accepted to January 16 next. Several surplus meters m/c mA and HWA. State requirements. S.A.E.—**G6BT**, York Lodge, Beltinge, Herne Bay, Kent.

**RUNNING** a Radio Repair Business. No matter whether you are a newcomer or an oldtimer, you will find this manuscript full of useful ideas. Price 5s. 8d.—**V.E.S.(B)** Radio House, Ruislip, Middlesex.

**SALE**.—Lissen band-spread short-wave 3, 13 to 55 metres, with makers instruction manual, less batteries and phones, despatched post free, £3.—**A. STANSFIELD**, 62 Aireworth Terrace, Keighley, Yorkshire.

**SALE**.—Cathode ray oscilloscope, 2½ in. tube, horizontal and vertical amplifiers, hard valve time base.—**PRETTY**, 52 Regent Road, Leicester.

**SALE**.—Gents pre-war B.S.A. cycle, new condition. Offers!—**BR810.371**, 86 Eccleston Road, London, W.13.

**SALE**.—Copies of **QST**, July 1942-May 1944, inclusive, March 1943 missing. First reasonable offer accepted.—**BR84329**, 62 Wilworth Crescent, Blackburn, Lanes.

**SALE**.—New goods! 35T's, TZ40's, DET19, RK34, 80's etc., GU50, 813, U52, split stator double spaced 43 PF, 8s. 3d. 3-gang .0005, 10s. Single .0004, 5s. Meters Metvick 3½ in. overall 2½ in. scale, flush 0/100 mA, 0/150 mA, £1 15s. Radio-lab all-in tester, as new, volts, ohms, amps, Everette Edgcombe, A.C./D.C., £12.—**G8TF**, 39a Rastrick Common, Brighouse, Yorks.

**SALE**.—Unused Hallcrafters R. meter, £2 10s. Pair 1600 kc., I.F. transformers, £1 5s. 6N6 valves, 15s. each. Avon Universal, £8. Rola G.12, £7.—**HAZELL**, 34 Beachcroft Road, Leytonstone E.11.

**SALE**.—Ferranti A.C./D.C. multi-range testmeter, as new, with case, £6.—**BR84723**, 30 Falcon Grove, Nottingham.

**SALE**.—Everett Edgcombe all-purpose testmeter, just serviced by firm; offers! Wanted: Pair T40s.—**RICHARDS**, 2 College Street, Burnham-on-Sea.

**SALE**.—Universal Avomator with resistance for 1,000v., or exchange for 35 mm. enlarger.—**G3LB**, 25 Clotherholme Road, Ripon, Yorks.

**SALE**.—Several 4µF 750v. D.C. wkg., 1500v. D.C. test, block condensers, 5s. each. 4µF 450v. D.C. wkg. alum can electrolytics, 2s. 3d. each. Choke, 14 H. at 200/250 mA, impregnated, £1. 20v. A.C. miniature motor for remote control, etc., 7s. 6d. 20v. 5A trans 230v. input, 12s. 6d. Postage per order, 6d. All new and unused.—**G6CB**, 107 Bywell Road, Dewsbury.

**SALE**.—*Radio Engineering Handbook* (Henney 1941), 25s. *Electric Circuits* (Starr), 15s.; *Microvare Transmission* (Slater), 17s.; *Ladner and Stoner* (4th ed.), 27s.; all as new.—**SHANKLAND**, 7 Hart Close, Rugby.

**STAFF** appointments.—Webb's Radio expand and require technician/salesmen. Good scope for personality and ideas.

—Write full details to **G6VA**, 14 Soho Street, London, W.1.

**SERVICE** sheets supplied. Over 4,000 American and 5,000 British available. Quotations on receipt of requirements.

S.A.E.—**ARMSTRONG**, 136 Bickenhall Mansions, London, W.1.

**SUPER** quality P.A. tank tuning! Transmitting variable condensers 50 µF (1,250 volt) ex-Government contract, world-famous make, beautiful precision hand-finished job, new, boxed, £1 each; also fixed condensers oil-filled 3000 volt test, 1,000 volt working 0-1µF, 4s. 9d. each; 1µF (paper type) 500 volt working, 2s. 3d. each. All goods new and guaranteed.—**BR83854**, 82 Craven Park Road, London, N.15.

**TELE-RADIO** (1943), Ltd., for everything except your licence.

Transmitting valves (including new U.H.F. types just off the secret list). Partridge high voltage transformers. Denco "Maxi-Q" plug-in or chassis mounting coils. Pullin measuring instruments. "Spot-on" precision resistors and shunts.—177 Edgware Road, London, W.1. Phone: PAD. 6116.

**TECHNICAL** post sought by amateur just released R.A.F. W/O., W./Op. Mech. S. England or Scotland preferred.—**Box 798, PARRS**, 121 Kingsway, London, W.C.2.

**WANTED**.—*Wireless World*, March, 1945. 2-4 in. spark coil for private educational purposes, also geissler tubes in good condition.—Details to **FR/LT. FENN**, R.A.F., Fairford, Gloucestershire.

**WANTED**.—A.C. gramophone motor. State condition and price.—**CHADWICK**, 41 Woodville Avenue, Liverpool, 23.

**WANTED**.—12BSGT valve; also reliable Universal midget receiver.—**FR/LT. WHITE**, 14 Warren Road, Torquay, Devon.

**WANTED**.—Nos. 1 and 2 volume 21 R.S.G.B. BULLETIN, July and August.—**BR810.912**, 30 Squires Bridge Road, Shepperton, Middx.

**WANTED**.—N.C.44 and McMurdo 5D receivers, also Avometer model 7. All must be complete and cheap.—**Box D/15, PARRS**, 121 Kingsway, London, W.C.2.

**WANTED**.—Universal testmeter, Avometer, Avomator or Taylormeter, must be in good condition. Offers to **BR8325**, "Upwey," Springvale Road, Kingsworthy, Hants.

**WANTED**.—Converter 220v. D.C. to 230v A.C., 100 watts minimum output.—**BR87144**, Webton Court, Madley, Hereford.

**WANTED**.—National 81X, or similar A.C. communication receiver.—**Box D/24, PARRS**, 121 Kingsway, London, W.C.2.

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