

R·S·G·B **BULLETIN**

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN

March 1946

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AROUND



THE DISTRICTS

DISTRICT 1 (North Western)

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

Burnley.—This month we welcome back G3SJ and wish him every success with his new business venture in this town. 2CSG, who has applied for his full call, visited the T.R. 31Y and 3WU are busy tuning up on 28 Mc/s. 8UA is due for demobilisation soon, in the meantime he has built two transmitters at his unit. 2BFB will be back with us soon too. The T.R. would like local members to make themselves known to him. G5ZN.

Bury.—G2GA, 3ZN, 8NL, 8QS, 3656, 4101, 4891, 7391, 8230, 9678, 10,811 and 11,494 were present at the meeting on February 2. G2GA was re-elected T.R., 8QS elected deputy T.R., and 8NL as Secretary-Treasurer. A further meeting will be held at the end of March; further particulars can be obtained from 2GA at 37 Nelson Street, Bury. 8QS and 8NL offer Morse tuition, those interested please contact them. 4891.

Liverpool.—Two meetings were held during February, at which a total of more than 50 members were present. Volunteers are called for to contribute short papers on any radio subject. The T.R. will be glad to receive offers. Visits to several interesting centres are being arranged for an early date. See "Forthcoming Events" for dates of next meetings. G8AZ.

Stockport.—At the meeting on February 11 Mr. S. A. Mills' most interesting lecture on "Quality Reproduction" was received enthusiastically by the members. On February 18, the "ragchew" night passed pleasantly, topics of all varieties being discussed at length. Membership of the local Society now numbers 47. 11,306.

West Cumberland.—At a meeting held at 2AUM on February 16, those present included 6WR, 8DP, 3SY, 3BW, 4PZ, 2DWG and 2AUM. Thanks are expressed to 8DP for his very interesting talk, and we are hoping he will be able to give us many more in future. Next meeting, March 16, venue will most likely be Beckett's Radio Shop, Roper Street, Whitehaven. G3BW.

General.—Members in this District will be interested to learn that band markers will be radiated each Sunday at 1000 G.M.T., on 28 Mc/s., and at 1015 G.M.T., on 29 Mc/s. Identification will be "VVV DE G8AZ."

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.—Sympathy is extended to 5IV on the death of his mother. 4JJ gave a talk on Radar at the last club meeting which was attended by 8NM, 6PY, 6LZ, 5IV, 5KM, 5UA, 3PG, 2BH, 2BFF, 2AYX, and 11,131, the latter on leave from R.N. 6193 is now an equipment officer in Ceylon.

Bradford.—Twenty-six members attended the meeting at 66 Horton Lane. Meetings are now being held there at 8 p.m. on alternate Mondays. 6KU is building his transmitter which has 50 wires to the control panel. 3HA is now at Melbourne. 6PL has a 5 metre receiver working well. 5HB is on Radar with the French army and has contacted F3MN. 11,421 is welcomed to membership.

Doncaster.—BRS193 hopes to reform the local Society and has inserted a notice in the local Press. 2BOJ awaits his Morse test, but is informed by the G.P.O. that they have no oscillator.

Halifax.—2BMO is anxious to start local meetings. Those willing to assist should write to him at Croft Farm, Norwood Green, Nr. Halifax. 3UI is now back home after being a P.O.W. since Singapore. 3ZK has been demobbed.

Huddersfield.—G5VD hopes to call a meeting shortly.

Leeds.—BRS3572, now demobbed, has finished binding the BULLETINS of the last five years.

Osselt.—2AQN is now demobbed and thanks 3RU for information on Telefunken valves. 6JH has had his gear returned.

Sheffield.—Congrats to 4JW who was recently married to Miss Phyllis Mason. 2AS, 2HQ, 2IQ, 2LT, 2MF, 3FN, 3IZ, 3MY, 3TC, 3VY, 4OY, 5TO, 6LF, 810 and 8RX are active on 28 Mc/s.

Skipton.—8676 is going overseas on duty but his departure has been delayed owing to his expectation of a happy event.

York.—9671 (R.A.F., C.M.F.) hopes to be home in September and will bring a wife with him.

General.—3777 has been inspecting German radio gear and considers it good stuff. 8UO craves the indulgence of those who have written him and not yet received a reply, all letters will be answered in due course. G8UO.

DISTRICT 3 (West Midlands)

D.R.: V. M. Desmond (G5VM), 92 Worcester St., Birmingham, 5. Scribe: E. J. Wilson (2FDR), 48 Westbourne Road, Olton, Birmingham.

Birmingham.—A meeting of M.A.R.S. was held on February 19, when Mr. G. Brown opened a discussion on Exciter Units. Fifty-five members and visitors were present. At the suggestion of Mr. Higgs it was agreed that a Crystal Frequency Register should be kept.

Coventry.—Regular meetings of C.A.R.S. are now taking place and by the time these notes appear in print, they will have held their first post-war dinner. G2YS is welcomed back to civvy street.

The following have been heard on 28 Mc/s.: G2LU, 2AV, 5PP, 5SK, 6YU, 6WX and 8LH. G5GR.

Malvern.—Meetings of the T.R.E. Amateur Radio Society are being held fortnightly. The only local calls on the air are G5VM and 8DM on 28 Mc/s. The following expect to be operating in the near future: G2AX, 8AO, 3YL, 3KA, 5RI, 2HNM, 2FJD and 2FRW. 2FJD.

Newcastle, Staffs.—It is much regretted that there has been little response to the announcement made last month. Those interested should contact Mr. P. A. Arnold, 2ARR on Newcastle 67430.

It is proposed to start a District frequency register. Will all members willing to co-operate kindly forward full details of frequencies, QRA, etc., to the Scribe? 2FDR.

DISTRICT 5 (Western)

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

Bristol.—Thirty-six members attended the February meeting, when G5LEF, G6UR and 4775 were made welcome. 2BAR asked for information about the 807, and in the ensuing discussion some helpful suggestions were made. 6TO gave details of work on 56 Mc/s. and asked for more reports. He also offered an exhibit of "Raymart" gear for the next meeting, which was accepted with thanks. BRS members were asked for suggestions as to the type of lecture or talk which would be most helpful to them.

Swindon.—A meeting was held at 3JO on February 23, when 13 members, including SDA of Cheltenham and 3HS of Faringdon attended. A committee was elected and it was decided to hold fortnightly meetings. G8SX and 3KJ are newcomers to the area. 4AP is very active on 28 Mc/s.

Moreton-in-the-Marsh.—2FZO now out of the R.A.F., is settling down to the job of getting on the air. He would like to hear from 8LJ and sends 73 to 6XT and GW3CF. G6RB.

DISTRICT 6 (South Western)

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

Torquay.—At the February meeting which was held at the Y.M.C.A., 2BMZ, delivered an interesting talk on a versatile exciter unit which he exhibited. Later, BRS1006 gave all the latest news on radio and sound reproduction. Those present included G2GK, 3HW, 3ID, 5SY, 2ARA, 2BMZ, 2CAA, 2DYM, BRS1006, 5834, 9720, 11,552 and 11,695. The T.R. has started a crystal register; the first two registered were on the same frequency!

The next meeting will be on March 16, 6.30 p.m., at the Y.M.C.A. It will include four Technical Sound Films.

LONDON MEETING

at
The Institution of Electrical Engineers
Savoy Place, Victoria Embankment, W.C.2
on FRIDAY, APRIL 12th, 1946

LECTURE

"Amateur Transmitter Design"

by

Capt. R. L. Varney, A.M.I.E.E. (G5RV)
Tea 5.30 p.m. Commence 6.30 p.m.

Penzance.—At the February meeting G2JL gave an interesting talk on "Centimetre Radar." Members present were: G2JL, 2NL, 3CC, 3KO, 4IV, 4BC, 6LV, 6RF, 6ZT, 8AW, 2DDR, BR579 and 10.498.

Taunton.—At the Y.M.C.A. on February 14, a discussion took place on the pros and cons of 10 metres. Those present were: G2JM, 5AK, 6LY, BR510, 253 and 5AK Junior.

North Devon.—Congrats. to Mrs. Myler, G3GH, on the award of the B.E.M. announced in last month's BULLETIN.

G5SY.

DISTRICT 7 (Southern)

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

Croydon.—SU5KE, home on leave, visited 4NI and the T.R., through whose station he made some QSO's with old friends. The latter has erected a rotary beam atop his 44 footer. See "Forthcoming Events" for details of meetings. Please note the extra meeting at 2FWA on April 14.

Condon.—G4BW according to reports, is doing some entertainments work in Hanover. 2MV has worked V.K. and KAI on 28 Mc/s. 3179 has been demobbed. 4458 is training as an R.A.F. electrician in the Midlands. BR53003.

Portsmouth.—It was agreed at the February meeting to run the District 7 P.D.M. in the Portsmouth area this year. 5OB (Southampton) and 6RW (London) were welcome visitors. Welcome home to 3WZ after six years with the M.N. and a speedy recovery of health to 4FA after his long illness. G2XC, 5UI, 6SS, 8JB and 8WC are active, whilst G5XY is busily building.

G8WC.

Bournemouth.—Welcome home to G4IJ and 3BR. 3BM QSL'd his first G on 28 Mc/s. by a telegram to the North, only to find that G5DL is now only five miles away! Meetings take place on the last Thursday of each month at 45 Parkwood Road, Boscombe, at 7 p.m.

G2NS.

Guildford and Weybridge.—The February meeting at Guildford saw a near record attendance of forty. G6NA opened a discussion on the best lines for the newcomer to adopt in planning his rig. A hearty vote of thanks was accorded to G5RS for his work in arranging these meetings. G3UY, 3ZI, 5WP, 5YA, 6NA, 8LG and 8VH are active. See "Forthcoming Events" for details of next meeting—postcard please to G6NK, 32 Waverly Road, Weybridge.

Reading.—No report is to hand, but it is known that there is considerable activity going on in the erection of rotary beams!

G5WP.

DISTRICT 8 (Home Counties)

D.R.: S. J. Granfield (G5HQ), 47 Warren Road, Cambridge. Tel.: Cambridge 54644.

Cambridge.—Two meetings have been held since these notes last went to press. On February 1 G2PU gave an excellent lecture on "Aerials for 5 and 10 metres." Messrs. Labgear, of Cambridge, and Mr. Tremaine, G8PB, contributed to the success of the evening by helping in the construction of ingenious models used in the demonstration. On February 23 a further meeting was held, when the chief item was a very practical lecture by G5IG on "Transmitters for 5 Metres."

2PU and 5OV have taken advantage of the opening up of the 28 Mc/s. band to renew acquaintance with many stations on the other side. 2DT, 2PU, 2XY, 5BQ, 6DR, 5FO and 8SY have been running an inter-com. network with battery outfits on "Five" and much useful information has been gained while the bigger rigs are being rebuilt or overhauled.

Bedford.—G5PA, after six years in the R.A.F., is now demobilised. He was recently married to a W./O. in the W.A.A.F. We wish good luck to first and second ops.

Leighton Buzzard.—G2FH, also ex-R.A.F., is active on 80 Mc/s. using a "Beam." He would welcome co-operation from members within 20 miles of his QRA, "Browhead," Hillside Road, Leighton Buzzard.

Peterborough.—2NJ and 2FWA travelled from Barnet for 2PU's lecture, but had to leave early owing to the calls of duty. 2NJ devoted his leave to rebuilding his station.

March.—G3BK has erected two 40 ft. telescopic steel masts and was just ready to start up on 28 Mc/s. when the band faded out.

Luton.—G3KG is working feverishly to complete his new station which is nearing completion. He hopes to be active on 58 Mc/s. shortly.

The next District meeting will be held at the Jolly Waterman, Chesterton Road, Cambridge, on Friday, March 29, when a further junk sale will be held. Members should bring surplus items with label bearing name and reserve price.

There must be many members in the District who do not yet receive notification of meetings, or items of news which come to hand from H.Q. A postcard with name, address and call-sign will be much appreciated by the D.R.

G5BQ.

DISTRICT 9 (East Anglia)

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

The first post-war P.D.M. will be held in Norwich on Sunday, May 5, providing we can guarantee a reasonable attendance. We have been promised a visit on that occasion by several members

of Council. In order that we can go ahead with our plans it is vital that the D.R. be informed within a week of this notice appearing, as to how many members will be able to attend.

Norwich.—G2MN recently received a visit from 2BZN, who has come to Long Stratton from District 12. We are sorry to hear that 5IX will be working in Bucks, but hope to find him in Norwich on occasions. G8VW has received his licence and we understand that Police Sgt. K. J. Dodds, of Thorpe is becoming very active as a BRS.

Yarmouth.—2BXJ is full of reports and we regret that lack of space will not allow us to publish full details. G3RW, 2999 and 2BXJ are active.

King's Lynn.—G3IP is on 28 Mc/s. 2XS welcomes a new member now in India (A.C.1 L. C. Bumfrey of Wisbech). 5UD is active. G2XS.

DISTRICT 10 (South Wales & Monmouthshire)

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

Cardiff.—Amongst the surprise visitors at the February meeting, at which an attendance of 29 was recorded, were VS6AO, GM4GR (now resident at Newport), GW3AJ (Cwmearn), 4467 (Port Talbot) and two BRS who also travelled from Cwmearn. Following the short historical talk on the Experimental Section, many members joined in discussion on this subject.

GW2UH, 4FW and 8UH have been successful in effecting good 28 Mc/s. DX contacts when conditions have permitted. GW5WU has now arrived in South Africa, whilst 5BI has just been "demobbed."

The next meeting will take place on Monday, April 8, at Park Hotel, Park Place, Cardiff, commencing at 7 p.m., at which Mr. E. J. Woolhouse of Cardiff Technical College will give a talk entitled "The Heavyside Layer" with particular reference to fading, sunspots and the like. A cordial invitation to be present is extended to all members.

BR510, 374.

Swansea.—The inaugural meeting was supported by 15 members which included GW3AX, 3XY, 4CC, 4NZ, 2HDX, 2FYV, 2HIB, and 4005. 3AX, 4CC report activity on 28 Mc/s.

A complete programme of meetings for the ensuing year has been prepared and those taking place in the immediate future will be held at Hotel Metropole, Wind Street, Swansea, commencing at 7 p.m. on March 27, April 10, and 17. Local members are asked to take note of these dates and their support is strongly urged.

GW4CC.

Carmarthen.—Apart from the general apathy and limited membership in this area, long journeys are involved compared with other sections, and, although insufficient support prevented the immediate organisation of meetings, GWSMQ (53 Little Water Street, Carmarthen) hopes that more promising news may be published shortly.

Newport.—The D.R. would be pleased to receive offers of assistance from members desirous of resuming meetings in this locality.

General.—Council has allotted the weekend, September 14-15, for the District meeting to be held in Swansea and arrangements are now proceeding, details of which will appear later. Meantime, strong support is indicated within the district. GW2HH, whom many "old-timers" will recall, recently reports moving to Bridgend and wishes to be remembered to all acquaintances.

GW4KQ.

DISTRICT 11 (North Wales)

D.R.: F. J. E. Starkey (GW6KY), "Ewton," Gronant Road, Prestatyn, North Wales. Scribe: C. Spillane (BR5A060), 14 Queensway, Prestatyn.

So far no members have reported being active on 28 Mc/s., but many are getting ready.

Rhyl.—GW5FU has rebuilt his transmitter and receiver into a bureau. The result is a masterpiece. 5520, late of Rhyl and an ex-M.N. Radio Officer, now has a shore job with Plymouth Rediffusion Service and finds that G8TX is their Regional Engineer.

Llandudno.—GW3J1 is demobbed and 2CRF is building a Preselector.

Rhos on Sea.—9692, at present at 51 R.S., Bangalore, India, would like to correspond with members living in Rhos.

Colwyn Bay.—F. H. Charnley, BR59958, "Westbourne," Marine Road, Colwyn Bay, Tel. 2933, has come to live in the Bay, and would like to meet local members.

Bangor.—11,125, now demobbed, reports many amateur contacts with Service and home-built rigs from Raigoon, where he and 4467 were until recently, stationed. (Call sign to G2MI, please.—Ed.)

Prestatyn.—GW3CF has acquired a trophy 5. 4CK has built a transmitter for use at home during leaves. He is at present at Wing, Bed's, where G6Q1 and BR57449 are in the signals section. 5837 is now in Jerusalem. 9587 is at Cirencester and is building an SW Receiver. 2731 is erecting aerial systems at his hillside home, about 500 ft. above sea level. Does he need poles?

General.—4410 should be demobbed this month. 3044 is in Calcutta. 4073 has left the District for a course on Ship's Electrics at Eastbourne.

VE4YG, now back home and taking a university course on radio, sends 73 to District 11 members.

The North Wales P.D.M. is to be held in September at Prestatyn. G6CL and others will be along to represent H.Q.

BR5A060.

Editorial Note.—Extending a welcome to our new D.R., Mr. F. J. E. Starkey, GW6KY, we are happy to announce that Mr. C. Spillaine, BR51060, has kindly agreed to continue his work as scribe.

DISTRICT 12 (London North and Herts)

D.R.: *Severnham Buckingham (G5V F)*, 41 Brunswick Park Road, New Southgate, N.11. (*Enterprise* 3112). **Scribe:** C. R. Stevens (*2DHF*), 22 Bramford Court, Southgate, N.14. *Palmer's Green* 0548.

North London.—The most successful meeting for the past two years was held at the home of 2DHF on February 24, 18 members being present. 3386 demonstrated a single valve time base used in conjunction with a cathode ray tube, the effectiveness of the circuit was seen on an oscilloscope on which the linear sweep and extremely rapid fly-back was noted. Another member demonstrated an extremely compact transmitter and receiver. Thanks are due to Mrs. Stevens and Mrs. Laister for the tea provided. **2DHF.**

Important Notice.—It has been decided to hold future Area Meetings at "Merryhills" Hotel, Bramley Road, Enfield West, on the first Friday evening of each month commencing on April 5. It is hoped that the new arrangement will enable a greater number of members to attend meetings.

Enfield.—G5ND, 6AM, 8SK, 5VY, 2DWY, 2FMV, 2FVX, 2DGW, 2HDM, 2DLX, 1174, 5825, 4249, 11,162 and B. Ellis attended a successful meeting at 8SK and 5VY, groups of members remained in contact via a 59 Mc/s. link for 50 mins. Transmitters demonstrated at 8SK included types using C.C., V.F.O. and M.O.F.A. All present were surprised at the performance of a V.H.F. Super on 28 Mc/s. DX and on local 59 Mc/s. signals. At 5VY transmitters were thrown out of gear and members were given the task of realigning them stage by stage by the aid of meters. Thanks are due to the ladies for their hospitality.

The next meeting will be held at 8SK on March 17 at 3 p.m., when members frequency meters will be calibrated. **G5VY.**

St. Albans.—G5UM has been active on 28 Mc/s. and 9093 has been released from the Army. All local full call members are invited to co-operate in the formation of a frequency register so that those purchasing new crystals can avoid frequencies already occupied by the old timers; a note from those able to receive 5 metre transmissions would also be appreciated by the T.R., who regrets last month's report was not quite accurate due to his misunderstanding a verbal report. The T.R. would like to hear from any of the following who are still in the neighbourhood, G2CY, 2NO, 3JX, 6SF, 8QK and 2008, all of whom were active before the war. Please write to BR53412, 18 Sandfield Road, St. Albans.

DISTRICT 13 (London South)

D.R.: S. E. Langley (*G3ST*), 52 Dumbarton Road, S.W.2. **Scribe:** W. D. Gilmour (*G2V B*), 35 Grangefield Gardens, South Norwood, S.E.25.

At the last combined District 7-13 meeting, which was supported by 42 members, Mr. Castle concluded his talk on Radar for which we thank him.

The D.R. would welcome offers from members willing to give short talks for the benefit of our younger members on transmitters, aerial systems, U.H.F. gear.

G2VB is now compiling a register of QRA's and asks members to forward him full particulars, including the bands they are using for transmitting and receiving. He and G2LW wish to borrow a reliable compass, any offers please? Would G3LS and FSXE please contact G2VB?

The meeting held on February 17 at the home of G4DC, 63 Erlanger Road, New Cross Gate, was as usual a pleasant get-together, but unfortunately 4DC was in no tender mood after receiving his gear back from the G.P.O. This evidently explains the absence of notes.

The Scribe has arranged for a regular meeting to be held on the 4th Sunday in each month in the South Western Area. The first will take place on March 24, at 3 p.m. at the home of Mr. H. G. Hughes, 57 Kingswood Road, Wimbledon, S.W.19 (first turning on the right over level crossing past South Wimbledon Tube Station). **G3ST.**

DISTRICT 14 (Eastern)

D.R.: L. J. Fuller, Meadow Brook, Vicarage Lane, Great Baddow, Chelmsford, Essex. Tel.: Gt. Baddow 224.

Chelmsford.—Of the half-dozen locally held licences, G2KG is the only one who has really got going; using his "clothes-post" aerial he has made several DX contacts. Interest in the monthly meetings seems to be at a somewhat low ebb.

Chingford.—A dozen members attended the last meeting, which G2XG regards as very good.

Hearty congrats. to G3JM and L. Law on the arrival of junior ops. Will all Chingford members please contact their Acting T.R., G2XQ, 7 Cranworth Crescent, E.4?

Grays.—We are glad to receive a first report from the newly-formed Grays Club. G4FN, who lives at Westcliff, but is an old citizen of Grays and still works there, has taken the area under his wing as Acting T.R. While G2VH and 3GF are the only two active on 28 Mc/s. the latter, together with 3LM, 4FN and 2C1W,

are still awaiting their gear to be returned by the G.P.O. This burning question was the chief topic at their meeting, for which meeting thanks are due to G3GF and his wife, for the hospitality extended.

Romford.—Mr. T. Delvin, 2FLK, The Greyhound Hotel Chadwell Heath (Seven Kings 1033), who takes over from 2FXM as Acting T.R., requests news from members. G3CQ asks for co-operation on 56 Mc/s.

Southend-on-Sea.—The February meeting was well attended, despite bad weather. Rebuilding was the chief topic for discussion. G5UK is the only active station to date.

General.—New members are asked to note that details of local meetings appear regularly under "Forthcoming Events."

G6LB.

DISTRICT 15 (London West, Middlesex and Buckinghamshire)

D.R.: H. V. Wilkins (*G6W N*), 539 Oldfield Lane, Sudbury Hill, Greenford, Middlesex. *Byron* 3369. **Scribe:** E. Holt (*2FZQ*), 36 Holarade Road, Hounslow, Middlesex.

General.—Only a dozen members attended the District meeting held at the A.E.U. Room, Chiswick, on February 21 to hear a most interesting lecture on "Radar" given by Mr. Macnamara, who was heartily thanked on conclusion for describing and illustrating this most complex subject in a manner that could be understood by all. It is a great pity that such a lecture attracted so few members—the loss was theirs who stayed away.

Hounslow.—A meeting was held at The Scouts Hall, Hounslow West, on February 1, at which eight members were present to take part in a general rag-chew. It is important that as many members as possible should attend the District meeting on March 26 at the same address when the D.R. will give a report of the West Midlands P.D.M.

Twickenham.—A meeting was held at 23 Warfield Road, Hampton, at which, sad to relate, no Twickenham members attended although G6RS and 2CRD arrived from the adjoining area; a very happy evening resulted. Now then you Twickenham members, rally round on March 23.

Ashford.—A record attendance was made at G5RD's QRA on February 9 when a most enjoyable evening was spent listening to a talk by BR511,154 on his experiences at DF stations in the R.A.F. This was followed by Morse practice and a demonstration by G5RD on his frequency modulation receiver; the quality of the transmission was truly uncanny. Whilst there appears to be a growing activity in this area the A.T.R. would like to know what has happened to the several members who attended meetings some months ago and have since faded out.

Slough.—G3GZ, G3XJ, G3XC, G6RH and G6PR are active on 28 Mc/s.

Stony Stratford.—Mr. C. H. Arman (*BR511,581*) of "Mansfield," London Road, Stony Stratford, Bucks., wishes other members in the area to contact him with a view to arranging a local meeting.

Why no reports this month from the A.T.R.'s for Aylesbury, Edgware, Harrow, Hayes and High Wycombe? **2FZQ.**

DISTRICT 16 (South Eastern)

D.R.: W. H. Allen, M.B.E., (*G2U J*), 32 Earls Rd., Tunbridge Wells, Kent. **Scribe:** E. H. Trowell (*2HKU*), 27 Unity Street, Sherrin, Isle of Sheppey, Kent.

Rasthorne.—BR57412, planning a four-valve V.H.F. receiver for A.C. mains, hopes to be licensed soon.

Maidstone.—G8UC completely re-building his station, 10,101 experimenting with V.H.F. arrays using telescopic aerials, 10,917 has built a super-regenerative receiver using a 955. At the last meeting 7387 gave a talk on DF and 10,842 demonstrated his new superhet.

Gillingham.—The M.A.T.S. have arranged a meeting for April 7 (see Forthcoming Events) and hope to have a large attendance. The D.R. and 2MI (Honorary Editor) expect to be present and the Maidstone club have promised to give their support. J. E. Watson, VE9EW, 66 Sturdee Avenue, has attended local meetings. GBA and 6NU are on 28 Mc/s. C.W.

Beckenham and Bromley.—Fifteen members were present at the meeting held on February 2. 2FQJ has just been presented with a daughter. Society members who do not receive notices of local meetings should call RAV 2071.

Crayford.—H. L. Overton, 4CW, 6 Lower Station Road, would like to contact members in nearby towns with a view to forming a group. His pre-war address was Exmouth Devon.

Sheppey.—3GW is building a 90 watt transmitter. 4OU is re-building both transmitter and modulator. 2HKU has built a receiver for 28 Mc/s. and erected a double doublet aerial. He has a 58 Mc/s. "resonant lines" type of transmitter using a TVO3-10. 2DCU is welcomed to the Island and he expects to be operating shortly.

Tunbridge Wells.—50Q is getting good DX on 28 Mc/s. with 50 watts C.W. and a 14 Mc/s. Windom. 2UJ is also active and has worked several W's with an indoor "end on" aerial. He uses break-in with receiver muting. 5KV and 6OB are building.

Tonbridge.—4FB is on 28, and also uses an indoor aerial.

Bexhill.—2AX and 6QB are running a joint station at 'AX's QRA. Alternative 813 and P.P. 807 finals are being tested, and many DX contacts made with a Windom aerial. **G2UJ.**

DISTRICT 17 (Mid East)

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

Most of the old timers are active on 28 Mc/s., but there is little doing on 60 Mc/s. at the moment although G4GX and 2VY have made contact. 5LL is waiting for a pair of new valves to put his transmitter on 60 Mc/s. 30S has made R9 phone contacts with W. 3WB is building a new superhet. 40P has his licence no 4315 has applied. 2FT is making progress towards a low power job. 2AAS hopes to be on the air soon. No news from Boston but DX contacts are known to have been made from there. 8SH has worked Z86 and several W's including W6. 5BD has worked a number including a W5 with an indoor doublet.

Book July 7 for what is hoped to be a bumper P.D.M. at Mablethorpe. G5BD.

DISTRICT 18 (East Yorkshire)

District Scribe: S. Davidson (G6SO), 10 Sidney Street, Scarborough.

Hull.—With the gradual re-issue of licences, the 10 metre band is becoming quite active. Stations heard include G2QO, experimenting with an electrically operated "bug"; 4LH, using a novel but successful method of modulation; 5PQ, using 100 watts to a pair of 807's; 60S, who has worked several DX stations; 5MN, using an 807 PA; 8IM, using 100 watts to a T55; and 3PL, using 20 watts to an 807. Other stations building gear are 2KM, 2XA and 8UL. 3IU is building a receiver; he was the first station re-licensed in Hull (January 16).

Several former A.A. men are busy polishing up their Morse in readiness for the test, and Morse practice transmissions are taking place on Monday, Wednesday, Friday and Sunday evenings at 9 p.m., the rota being shared at present by 4LH, 5PQ and 3PL. There is no news of activity on five. 17 members attended the February meeting, including some old-timers who have just returned from the Services. It is hoped to arrange a visit to the B.B.C. Ottringham station during the Spring or Summer. Will transmitting members please let 3PL have their crystal frequencies for a new crystal register? QRA 79 Hayton Grove.

A hearty welcome is extended to all new members.

G3PL.

DISTRICT 19 (Northern)

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

Catterick.—G2TA has now WAC on 28 Mc/s. phone.

The Catterick Radio Club have acquired a wavemeter, C.R. oscilloscope, Avometer and an AR88 receiver which has been kept busy on 28 Mc/s. recently. During the past two months the following lectures have been given: "Amateur Radio Transmission" and "Transmitter Design," by SRF; "Test Gear Construction" by BR510,548; "The Generation and Measurement of V.H.F." by 2TA; "Antenna Systems" by Cpl. Green (visitor); "Amateur Radio in U.S.A." by W9AZT; and "Super Regeneration" by Sigm. Leech.

Newcastle.—G6PU is now active on 28 Mc/s. after being off the air since 1934.

Sunderland.—Will members residing in Sunderland please forward to the T.R. (F.O. W. Stockburn, R.A.F.V.R., 40 Netherburn Road, Sunderland) their name and address, so that a meeting can be arranged? G2FO.

Scotland

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

Scottish Conventions will be held in Edinburgh and Glasgow on June 15 and 16. Members are asked urgently to advise GM6ZV in respect to Glasgow and GM6XI in respect to Edinburgh of their intention to be present. Great difficulty is being experienced in finding accommodation without being able to indicate reasonably accurate numbers. The assistance of all members is requested, so that negotiations can be started.

"A" Area (Glasgow and surrounding counties).

A.R.: D. R. Macadie (GM6MD), 154 Kingscave Road, Glasgow S.4. **Scribe:** J. D. Gillies (2FZT), 3 Berridale Avenue, Glasgow, S.4. **Merrylee** 4060.

The January meeting of the Glasgow Amateur Club had an attendance of 37 who enjoyed the topical talk given by Mr. John B. Rimmer, BR59503, on superhet receivers for 56 Mc/s. 18 calls were noted in the attendance book. GM2KF, 2MG, 3NK, 3YS, 4NK, 6ST, 8AH, 8CH, and 8MJ have been heard on 28 Mc/s. 3YS is on 58 Mc/s. otherwise activity on this band is nil. The Scribe started the ball rolling in Glasgow by taking the first G.P.O. Morse test, so roll up the A.A. men. It is hoped to increase activity on the air and a local register is being prepared for data purposes. All active members please inform the scribe or 6ZV by phone or P.C. re particulars of frequency, power and times of operation?

"B" Area (Aberdeen and North).

A.R.: A. G. Anderson, B.Sc. (BR55557), 87, Braemar Place, Aberdeen.

GM3RL and 6LG are active on 28 Mc/s. Negotiations are afoot for acquiring premises for Area H.Q. This would be a decided advantage since lack of accommodation has been the main

difficulty in organising meetings. BR56107 is now a P./O. in the R.A.F.

"C" Area (Dundee, Forfar, Perthshire, etc.)

A.R.: Jas. Gouck (GM3NH), 4 School Drive, Downfield, Dundee.

On February 10, 16 members took advantage of the facilities offered by the local Chief Constable in permitting a visit to the police wireless installation. The outing was a great success and many present were forced to revise their opinions of police wireless methods. Thanks are due to our guides, Inspector Wilkes and the radio engineer, Mr. Cairnie. Activity in the area is smouldering so far but is expected to burst into flame very soon. GM5SC, 3IX and 3NH have been on 28 Mc/s.

"D" Area (Edinburgh & Midlothian, etc.)

A.R.: J. Wilson (GM6XI), 52 Macdonell Road, Edinburgh 9. **Edinburgh** 42153.

The February meeting was well attended and members listened with interest to a talk by Mr. Blyth, GM5YX, on his experiences in E.F.P. from the outbreak of war onwards. He will certainly be "detailed" when field days roll along again. A welcome visitor to his native heath was VU2IP, who gave a most interesting resumé of conditions in India from the Amateur standpoint. Old timers welcomed the reappearance of ex-GM5IG along with other new members. GM6LS, 6SR, 6UU and 3BZ are going ahead on 28 Mc/s. and doing well. Meetings are scheduled for March 28 and April 25. Please see details in "Forthcoming Events."

GM6XI.

Northern Ireland

D.R.: J. N. Smith, B.E.M. (GI5QX), 19 Hawthornden Drive, Belmont, Belfast, N.1. Phone 63323.

For the first time since 1939 a Provincial District Meeting is to be held in Northern Ireland. All members resident in the Province are asked to book the date—Saturday, May 18, and to note the venue—C.P.A. Building, Howard Street, Belfast. Full details will be published next month. We understand that "Clarry" is to attend and that at least four members of Council will be with him. We should be in for a very enjoyable weekend. Up to the time of writing (February 20) licences had not been reissued to GI amateurs, this in spite of the fact that fees were sent off five weeks earlier. We hope the licences will arrive before all the 28 Mc/s. DX disappears!

Mr. Verhoef, a well-known pre-war Dutch amateur, asks, in a letter to GI6YW, for radio literature. Can anyone help? Mr. Verhoef is now married and resident at Rijswijk Haagweg N.Z., Holland. He served in the Resistance Movement during the war and is now working in the G.P.O. Laboratories at the Hague.

GI8JS is now in England where he hopes soon to put his station on the air. He sends 73 to all old friends and promises to work as GI8TS when he visits his Native Land. GI5QX.

Blackpool and Fylde Radio Transmitters' Society

It is proposed to hold a revival meeting of the above Society late in March. Interested members should contact Mr. H. Fenton, G8GG, 25 Abbey Road, Blackpool, and inform him which evening is the most suitable.

Dum Dum Radio Experimental Group

As foreshadowed last month, a club bearing the above title has been formed in Dum Dum, India. The Secretary is 1877976 A.C. Owen, W. R., BR55673, Radar Section, 52 Squadron, R.A.F., S.E.A.A.F.

Twenty-one persons were present at the inaugural meeting held on February 1st.

One of the Group membership conditions states that "all members agree to become members of the R.S.G.B."

We trust that steps will soon be taken to form a National Amateur Radio Society in British India, to safeguard the interests of all amateurs resident or serving in India at the present time.

Acknowledgments

Apologies are offered to our good friends *The Wireless World*, for our failure to acknowledge with grateful thanks their kindness in loaning the blocks used to illustrate the article on Radiolocation by Dr. R. L. Smith Rose, published in our last issue.

Silent Keys

We record with deep regret, the passing of:

A.C.I. D. E. Blow, R.A.F., G3TL, of Stevenage, Herts., who died on active service on February 14, 1942, in Singapore.

Mr. R. E. Friend, G4NV, of Enfield, Middlesex, late R.A.F.

Mr. J. H. Kendrick, BR57813, of Bolton, Lancs.

Leading Tel. Harry Langford, R.N.V.(W.)R., 2ARY, of

Chester, who was killed during the invasion of Normandy

in June, 1944.

Mr. C. E. Phillimore, Associate of Hayes, Middx.

Mr. W. T. Sperring, 2DQF, of Reading, Berks., brother

of Ft./Lt. Francis E. Sperring, G8NS.

L.A.C. Harry Sidney Sharpe, R.A.F., BR56776, of Faver-

sham, Kent.

Mr. Alfred Taylor, G8TZ, of Barnsley, Yorkshire.

NEW MEMBERS

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

British Isles (Licenced Amateurs)

- G2BG *G. SILVERTHORNE, Preswylfa, Springfield Road, Abergavenny, Mon.
 G2CZ C. T. ATKINSON, 15 Greenland Avenue, Humberstone, Leicester.
 GM2MP J. J. HENNEY, 48 St. Mary's Street, Kirkeudbright, Scotland.
 G2OW *E. F. WARREN, 7 Huron Road, Balham, London, S.W.17.
 GI2OY *D. MEHAREY, Shadowlawn, Fortwilliam Park, Belfast, N. Ireland.
 G2RP E. DUNN, 76 Parkside, Heage, Derbyshire.
 G2SB *J. BAKER, Normanston, Castle Drive, Heswall, Cheshire.
 G2UQ *C. SMITH, 45 New Road, Whittlesey, Nr. Peterborough, Northants.
 G2UT *C. THAYNE, c/o Coniston, Melton Road, Stanton-on-the-Wolds, Notts.
 G2WI B. A. HERBERT, 18 Leamington Close, Bromley, Kent.
 G2YY *S. B. YOUNG, Berwick Hill, Berwick-on-Tweed.
 GW2XZ L. W. HANCOCK, 10 Woodland Place, Penarth, Glam., S. Wales.
 G2ZO *H. BUCKMASTER, Friary Cottage, Old Windsor, Berks.
 G3BK F. CRABTREE, 28 Regent Ave., March, Cambs.
 GM3CV W. MCMAHON, 54 Lynwood Cres., Hawick, Scotland.
 G3JD *W. H. BAKER, 2 Courtney Terrace, Starcross, Nr. Exeter, Devon.
 G3MB *J. FOX, 53 Market Place, Thirsk, Yorks.
 G3OO } D. T. BENNETT, 1 Manor Drive, London, N.14.
 G3OP }
 G3NU J. W. HAMMERTON, 2 Upper Bank Street, Highgate, Dewsbury, Yorks.
 G3QF *REV. E. GEDDES, St. Thomas Vicarage, Norwich.
 GM3SF J. HOLDEN, 10 Duthie Place, Mannofield, Aberdeen.
 G3UP A. LERSE, Legbourne Grange, Louth, Lincs.
 G3XH J. H. WHITE, 20 Chalvey Rd. East, Slough, Bucks.
 G3YB *M. SMITH, 61 Orchard Road, Northenden, Manchester, Lancs.
 G3ZU *F. ATKINS, 50 Victoria Rd., Guernsey, Channel Is.
 G4AG *C. F. TURNER, 56 Westwood Ave., Brentwood, Essex.
 G4AX I. HOPE, The Gables, Mossley, Congleton, Cheshire.
 G4BL *F. TOWELL, 21 Shirley Grove, Edmonton, London, N.9.
 G4BG *A. DUCKWORTH, 114 Balmoral Road, Morecambe, Lancs.
 G4BS C. W. FRAMPTON, 17 Walpole Road, Strawberry Hill, Twickenham, Mdx.
 G4FA *G. W. PARKS, Troon, Burrill Ave., Cosham, Hants.
 G4GA J. J. HOLLINGTON, 1 Templeton Avenue, South Chingford, London, E.4.
 G4GZ J. T. ANGLIN, 233 Welholme Rd., Grimsby, Lincs.
 G4IY S. HAWKINS, Vale House, Maldencombe, Newton Abbot, Devon.
 G4LM *L. A. BRADSHAW, 79 Wootton Road, Gaywood, King's Lynn, Norfolk.
 G4MP *A. LANGTON, 54 Brook Street, London, W.1.
 G4NS *J. HUDSON, 45 Frazer Street, Worthington, Cumbria.
 G4OC C. COPPING, 101 High St., Stotfold, Arlesey, Beds.
 G4OD F. BELL, 71 Wilson St., W. Hartlepool, Co. Durham.
 GM4ON W. ROBERTSON, 5 Millburn Terrace, Anderson Street, Leven, Fife.
 G4OU F. MAYNARD, c/o 160 Invicta Rd., Sheerness, Kent.
 G4PR S. H. AVERY, 81 Bromfield Rd., Redditch, Wores.
 G4QH P. J. BEST, 5 Woodland Grove, Penwortham, Preston, Lancs.
 G5BK W. H. BROWN, 200 Prestbury Rd., Cheltenham, Glos.
 G5CV *P. D. WALTERS, Greenfield Cottage, The Drive, Godalming, Surrey.
 G5HB *H. BILTCLIFFE, 1 Peel Place, Denby Dale Road, Thornes, Wakefield, Yorks.
 G5KX *R. MOFFITT, 1 Balmoral Drive, Southport, Lancs.
 G5LP *L. F. PARKER, 22 Second Avenue, Wellingborough, Northants.
 G5MQ E. MENZIES, 38 Linkstor Road, Woolton, Liverpool, Lancs.
 G5PQ D. H. ALLERSTON, 161 Cranbrook Avenue, Cottingham Road, Hull, Yorks.
 G5SG N. EDWARDS, 18 Henderson Row, Edinburgh 3, Scotland.
 G5SP *W. SPINK, c/o Rediffusion Ltd., 217 Dalton Road, Barrow.
 G5XA H. RANSOM, 77 Ryefield Ave., Hillingdon, Mdx.
 GM6CM J. McCAMMONT, 22 Brandon Place, Bothwell Haugh, Glasgow, Scotland.
 G6DX *F/Lt P. CRISP, D.F.M., Hill Farm, St. Ives, Hunts.
 G6GF *F. TYLER, Inglemells, Stoughton Rd. Leicester.
 G6GK *G. H. KITLEY, 53 Ridgebrook Road, Kidbrooke, London, S.E.3.

- G6HA *J. HAIGH, 2 Greenock Terrace, Leeds, 12.
 G6JB *J. PAYNE, St. Leonard's, Salcombe, Devon.
 G6KC W. CLEMENSON, 5 High Street, Kidlington, Oxford.
 G6MU *W. J. MUNT, 62 Seely Road, Tooting, London, S.W.17.
 G6NG *A. N. HARRIS, 4a Leasington Ave., Romford, Essex.
 G6OI } *J. TIMBRELL, King Edward VI School, Stourbridge, Wores.
 G6OJ }
 G6PB G. BALL, 320 Stanhone Road, South Shields.
 G6PL F. POPPLEWELL, 40 Hollin Bank Terrace, Dale Lane, Heckmondwike, Yorks.
 G6RW *L. WILKINS, 81 Studland Rd., Hanwell, London, W.7.
 G6SH S. HOBSON, c/o Clifton Hotel, Hall Cross, Doncaster, Yorks.
 G6SM *S. G. MORGAN, Beggars Roost, Glebe Hyrst, Sanderstead, Surrey.
 G6UC *T. KENNEDY, 92 Middle St., Spittal, Berwick-on-Tweed.
 G6YP *W. HACKNEY, 61 Grove Park, Camberwell, London, S.E.5.
 G6ZH *W. WINCHCOMBE, 4 Eastcourt St., Devizes, Wilts.
 G8BV B. CLEMENTS, 5 Sewardstone Road South, South Chingford, London, E.45.
 G8DN *G. E. DAKIN, 39 Witham Rd., Anerley, London, S.E.20.
 G8DU *C. A. PLANT, 23 Broadwater Ave., Letchworth, Herts.
 G8FV *N. A. PAYNE, 22 St. Margaret's Road, Twickenham, Middlesex.
 G8GB *J. F. SALISBURY, Windy Ridge, Bleadon Hill, Weston-super-Mare, Som.
 G8GI *C. B. RAITHBY, c/o The Rectory, Leasingham, Seaforth, Lincs.
 G8HF *A. G. LAWS, 1 Furzehill Villas, Plymstock, Plymouth, Devon.

A CORDIAL WELCOME IS EXTENDED
 TO THE
520
 NEW MEMBERS
 WHOSE NAMES ARE LISTED

- G8JC *E. J. MORRIS-CASEY, 9 Moston Avenue, Fernhill Heath, Worcester.
 G8KK *D. DUNLEAVY, 21a Cheniston Gardens, Kensington, London, W.8.
 G8OL *J. K. FISH, 10 Victoria Ave., Sleaford, Lincs.
 G8OM *H. W. RANNSIER, The Red House, Pamber Heath, Basingstoke.
 G8PC G. G. HARRIS, 105 Whipps Cross Road, Leytonstone, London, E.11.
 G8PK W. H. WILSON, 19 Graham Avenue, Upton, Nr. Pontefract, Yorks.
 G8RC *J. DRISCOLL, Newton Ctge., Selsted, Nr. Dover, Kent.
 G8RH *J. JAGGER, Basking Ridge, Chapel-le-Frith, Derbyshire.
 G8RZ *H. R. FOX, 3 Low Asby, Lamplugh, Workington, Cumbria.
 G8TK *A. L. BROWNING, 4 Cell Barnes Cottages, Tyttenhanger Lane, St. Albans, Herts.
 G8UQ *J. C. ALDRED, 36 Marylebone High St., London, W.1.
 G8VP A. WHEELER, 2 Ferndale Street, Faringdon, Berks.
 2AHC R. BISHOP, 9 Cranbourne Rd., Northwood Hills, Mdx.
 2APD *F. H. LAWLEY, Bridge View, Eaton Ford, St. Neots, Hunts.
 2AUU E. H. MOORS, 17 Brian Avenue, Stockton Heath, Warrington, Lancs.
 2AVI *L. K. GREGORY, 18 Upper Park Rd., Bromley, Kent.
 2AZU H. V. UPTON, 8 Falcon Terrace, Whitby, Yorks.
 2BCJ E. WYATT, 2 Mindy Street, Heanor, Nottingham.
 2BDQ O. DOCHERTY, 1a Meadowfield Avenue, Fawdon, Newcastle-on-Tyne.
 2BFJ H. ROYLE, 113 Shaw Lane, Barnsley, Yorks.
 2BHB F. WINN, Clevelys, Canada Cres., Rawdon, Leeds, Yorks.
 2BNF W. S. PASTER, 23 Cecilia Road, Feniscleffe, Blackburn, Lancs.
 2BMO S. FISHER, Croft Farm, Norwood Green, Nr. Halifax, Yorks.
 2BNH *F. HILTON, Flat 2, 366 Gillott Road, Edghaston, Birmingham 16.
 2BSV D. R. CHICK, R.R.D.E., M. of S., Malvern Link, Wores.
 2RXS H. SIMPSON, 2 Amelia St., Saltair, Nr. Shipley, Yorks.
 2BYA R. G. LANE, Dagley Lodge, Shalford Road, Shalford, Surrey.

- 2BYG A. N. LAWS 19a Station Rd., Forest Hill, Newcastle-on-Tyne.
- 2BZN *N. BRANNON, Shrublands, Brans Lane, Stratton St. Michael, Norfolk.
- 2CAH *G. MORRIS, 42 St. Michael's Road, Stoke, Coventry, Warwickshire.
- 2CGF S. G. GRIFFITHS, 11 Marsh Street, Llanelly, S. Wales, S.E.4.
- 2CHW L. O. SPARKS, 9 Phoebe Rd., Brockley, London, S.E.4.
- 2CTR R. BRANSHAW, 4 Saltburn Rd., Wallasey, Cheshire.
- 2CKN R. J. JACKSON, Ringfield House, Hurworth-on-Tees, Nr. Darlington.
- 2CLP *H. BOUTLE, 3 Hall Gdns., Chingford, London, E.4.
- 2CRF L. H. MCEWAN, Bottom Falt, 24 Deganwy Avenue, Llandudno, N. Wales.
- 2CUO F. BENNETT, 52 Constable Ave., Burnley, Lancs.
- 2CNO G. MILES, 138 Neasden Lane, London, N.W.10.
- 2DFC B. HUNTER, 114 Keys Avenue, Bristol 7, Glos.
- 2DFB J. BUTTERTON, 107 Penn Rd., Wolverhampton, Staffs.
- 2DGG W. R. JONES, 54 Alma Ave., Dawley, Shropshire.
- 2DKH O. OVERTON, 50 King Tee, Stanley, Co. Durham.
- 2DMK CAPT. A. L. BURLEY, H.Q. Forces Signals, British and Indian Troops, Japan, India Command.
- 2DRG A. B. WATT, 37a Nursery Rd., Lzells, Birmingham.
- 2DVH J. STEWART, 57 Bridge St., Lisburn, N. Ireland.
- 2DVV *T. PATON, Glenlea, Foulford Road, Cowdenbeath, Fife, Scotland.
- 2FDL J. WALLACE, 13 Belle Vue, Bangor, Co. Down.
- 2FNN F. LEWIN, 4 Pychley Rd., Kettering, Northants.
- 2FNI W. BLOCKIDGE, 134 Rake Lane, Wallasey, Cheshire.
- 2FLK T. L. DELVIN, Greyhound Hotel, Chadwell Heath, Romford, Essex.
- 2FSP J. E. FORDE, 56 Broad-Riding, Appley Bridge, Nr. Wigan, Lancs.
- 2FPO S. G. OAKLEY, 1 South Worle Avenue, Mortlake, London, S.W.14.
- 2FTY G. E. DUFFIN, 15 Maripit Lane, Redditch, Worcs.
- 2FUP S. W. BRANSHY, 96 Woodmere Ave., Shirley, Surrey.
- 2FVW A. BRYSON, 37 Chapel St., Selkirkshire, Scotland.
- 2FXX T. L. BOUTTE, 10 Fairview Tee, Flixton Rd., Urmston, Lancs.
- 2FYG E. J. DEVANEY, 12 Colville Street, Derby.
- 2FYY M. ARTHUR, 6 Burman St., Swansea, Glam.
- 2FZF H. CAUNCE, 25 Rotherwick Ave., Chorley, Lancs.
- 2FZO C. J. HINE, 4 Fairview Tee, Moreton-in-Marsh, Glos.
- 2FZZ R. J. MORCOM, 64 South St., St. Austell, Cornwall.
- 2HAR *R. T. YOUNES, 104 Baldwin Lane, Croxley Green, Herts.
- 2HCG B. SYKES, 150 Cedar Road, East, Northampton.
- 2HDX *R. F. ARMSTRONG, 22 Park Wern Road, Sketty, Swansea, Glam.
- 2HFC N. LOWE, 7 Bellingham Avenue, Wigan, Lancs.
- 2HIN W. F. CHEW, Bryn Cottage, Pentrepiod, Pontypool, Mon.
- 2HIO A. WALMSLEY, 65 Grange Street, Clayton-le-Moors, Nr. Accrington.
- 2HIZ W. PORTER, Taylors Mill, Stotfold, Arlesey, Beds.
- 2HJH *I. G. PATON, 100 Southbrae Drive, Jordanhill, Glasgow.
- 2HNU D. M. BYRNE, via 50 Ashby Road, Burton-on-Trent.
- 2NLA B. ALLERTON, 42 Rowlands Ave., Waterlooville, Hants.
- British Empire (Licenced Amateurs)**
- VE30J S/LDR. E. POOLE, 84 Group Disarmament Staff, BAFO, R.A.F. c/o B.A.O.R.
- VP2AT T. THIRTS, 27 St. Mary's Crescent, St. John's, Antigua, B.W.I.
- VP3X S. A. RANCE, 1 Newton Terrace, Elburton, Plymouth, Devon.
- VS6BE *A. WHATMAN, Sherwood, Brockenhurst, Hants.
- XZ2TM *P. LEICESTER, c/o Anglo-Saxon Petroleum Co., St. Helen's Court, Leadenhall St., London, E.C.3.
- EI2J N. MADDOCK, Udam, Twyford Abbey Road, London, N.W.10.
- EI6F T. D. O'FARRELL, 40 Wellington Rd., Dublin, Eire.
- British Receiving Stations (B.R.S.)**
- 350 *G. W. DUMMER, Abbotsleigh, Albert Road North, Gt. Malvern, Worcs.
- 2845 *J. TURNBULL, 106 Scott Street, Galashie's, Scotland.
- 3170 *C. NEWTON-WADE, 10 Wellfield Road, Cardiff, Glam.
- 3210 *R. ROBERTSON, c/o The National Bank of Scotland, 2 Clarksdon Road, Cathcart, Glasgow.
- 3247 *R. HOPPER, 130 High Street, March, Cambs.
- 3640 *W. M. AITKEN, Craiglea, Pitlochry, Perthshire.
- 3837 R. F. GOUGH, 17 Fairfield Avenue, Beeston, Notts.
- 5810 B. FREYNE, 32 Woodsworth Rd., Radford, Nottingham.
- 7815 *A. G. HUGH, Westham, Brentwood Road, Blackmore, Nr. Ingatestone East, Essex.
- 11,135 J. E. CRABTREE, 149 Queens Park Rd., Brighton, Sussex.
- 11,136 E. ATKINS, 132 Bold Street, Accrington, Lancs.
- 11,137 T. J. KELLY, 5 Mount Zion, Tunbridge Wells, Kent.
- 11,138 J. W. CAIRNS, 11 St. Colme Street, Edinburgh, Scotland.
- 11,139 G. W. APPLEY, Town End Farm, Hamstead-Kidware, Rutley, Staffs.
- 11,140 K. C. SMITH, 165 Sumatra Rd., W. Hampstead, London, N.W.6.
- 11,141 A. W. CHAPPELL, 19 Harding Rd., Gosport, Hants.
- 11,142 M. JONES, 57 Linden Rd., Gillingham, Kent.
- 11,143 W. C. WOOLVEN, 22 Gladstone Rd., Maidstone, Kent.
- 11,144 C. BLENDLE, 11 Storkmead Rd., Burnt Oak, Edgware, Middlesex.
- 11,145 K. D. NORVALL, 16 Petherton Rd., Highbury, London, N.5.
- 11,146 M. FISHER, 232 Commercial Rd., London, E.1.
- 11,147 W. J. COOPER, 27 Heather Drive, Maidstone, Kent.
- 11,148 I. F. TOMBS, 4 Eastcott Hill, Swindon, Wilts.
- 11,149 A. N. SILL, 4 Bewley Grove, Acklam, Middlesbrough, Yorks.
- 11,150 J. H. TAYLOR, 25 Castle Terrace, Berwick-on-Tweed.
- 11,151 W. J. MYLES, 55 Glastone Street, Botton, Saltburn-by-the-Sea, Yorks.
- 11,152 J. D. MOSES, 12 Southfield Crescent, Norton, Stockton-on-Tees.
- 11,153 A. ROBINSON, 11 Harwoods Rd., Watford, Herts.
- 11,154 L. E. MANDERS, Braeville, French Street, Sunbury-on-Thames, Middlesex.
- 11,155 J. C. POTTER, 23 Mitford Rd., Armley, Leeds, 12.
- 11,156 A. WEBSTER, 53 Somerville St., Burntisland, Fife.
- 11,157 W. F. BALL, 27 Lind Rd., Sutton, Surrey. (Transfer from Associate Grade.)
- 11,158 M. A. TAYLOR, 4 Grosvenor Avenue, Chatham, Kent.
- 11,159 P. THOMSON, 43 Nethergate, Dundee, Scotland.
- 11,160 W. J. AMPHLETT, 8 Dinham, Ludlow, Shropshire.
- 11,161 R. LELAND, 31 Woodfield Gardens, Leigh-on-Sea, Essex.
- 11,162 H. STEEN, 3 Bells Hill, Bishops Cleeve, Herts.
- 11,163 A. H. CHERRY, Flat 1, 120 Bedford Hill, Balham, London, S.W.12.
- 11,164 A. SIMMONS, 231 Charlton Rd., Old Charlton, London, S.E.7.
- 11,165 H. J. ROBINSON, 2 Balmoral Terrace, Trinity Hill, Jersey, Channel Islands. (Transfer from Associate Grade.)
- 11,166 P. WARD, The Village Farm, Upton Warren, Nr. Bromsgrove, Worcestershire.
- 11,167 D. LAX, Manor Farm, Old Blechley, Bucks.
- 11,168 MISS F. M. KENTON, 103 Rathcoole Gardens, Hornsey, London, N.8.
- 11,169 T. D. ARMSTRONG, 68 Wellowgate, Grimsby, Lincs.
- 11,170 H. C. TUCK, 11 Arkwright Rd., Sanderstead, Surrey.
- 11,171 H. PORTER, 221 Park Lane, Fallings Park, Wolverhampton, Staffs.
- 11,172 C. GOSLING, Sea Mere, Hingham, Norfolk.
- 11,173 H. OAKLEY, 5 Gatewick Terrace, Steyning, Sussex.
- 11,174 W. J. ROWLEY, 11 Warwick Gardens, Kensington, London, W.14.
- 11,175 W. GLUCKMAN, 30 Dollis Park, Finchley, London, N.3.
- 11,176 F. W. DENNIS, 10 Lansdowne Rd., Croydon, Surrey.
- 11,177 W. H. BAYHAM, Digby, Barfield Rd., West Mersea, Mersea Island, Essex.
- 11,178 D. WORTH, 165 Royston Rd., Ashford Rd., Maidstone, Kent.
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- 11,180 G. CURRIE, 138 Queensferry Rd., Blackhall, Edinburgh, 4.
- 11,181 W. H. LONGHURST, 82 Gower Rd., Sketty, Swansea.
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- 11,183 E. A. SAWKINS, 1 Ramsey Rd., South Tollgate, Dovercourt, Essex.
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(Transfer from Associate Grade.)
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- 11,341 A. J. HAWLEY, 18 Farlington Avenue, Farlington, Portsmouth.
- 11,342 D. MITCHELL, 46 Morley Road, Leyton, London, E.10.
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- 11,345 D. C. TOMPSETT, 33 Southdown Avenue, Lower Willingdon, Eastbourne.
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- 11,348 S. N. MILLER, 15 Chiswick Village, London, W.4.
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 11,357 R. F. GAITSKELL, 20 Elgin Road, Parkstone, Dorset.
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THE DISPOSAL OF SURPLUS GOVERNMENT RADIO EQUIPMENT

RECENT National Press disclosures, coupled with the appearance in the technical press of advertisements offering for sale certain types of ex-Government surplus radio equipment, prompts us to give members an account of the negotiations which have taken place between the Society, the Ministry of Aircraft Production and the Radio Industry Council.

For the purposes of record we would remind members that as long ago as August, 1942, we published a leading article in this Journal dealing with the disposal of surplus Government radio stores. In that article we asked:

"What steps can be taken to prevent members of the Society and other amateurs being called upon to pay fancy prices after the war for Government surplus radio equipment, acquired at disposal prices, by concerns whose only 'scientific' interest will lie in making money easily."

We referred to the ramp that followed the 1914-18 war and suggested that a solution to the problem could be found if the Government were to adopt a system of price control, setting maximum prices for all items offered for resale.

We further suggested that the British Valve Manufacturers Association, in collaboration with the Society and other interested bodies, should fix maximum prices for valves which on test conform to pre-determined limits.

Frequently during the next two years the Council gave consideration to the whole question of disposals, and in August, 1944, the Secretary addressed the following letter to the President of the Board of Trade:-

"I have been instructed by the President and Council of this Society to enquire what steps have been taken by your Ministry in regard to the disposal of surplus Government radio equipment, components and valves."

"As a high proportion of surplus equipment is likely to be in first class condition when it becomes available, there is little doubt that many of our members who are keen and enthusiastic radio experimenters, would be grateful for an opportunity of making direct purchases rather than through the medium of a dealer who may have no interest, other than commercial, in the material he is offering for sale."

"The Incorporated Radio Society of Great Britain has a membership of 7,500 and of this number approximately 3,000 were holders of a Government

transmitting licence prior to the war. At present some 4,500 members are serving in a radio capacity in H.M. Forces. Upon their return to civilian life these members, in addition to those who have been engaged on other forms of war work, will wish to instal new radio equipment based on recent technical developments. Much of the surplus equipment which has been used by the Navy, Army and Air Force, would prove invaluable to our members, as well as to other experimenters."

"We should welcome any information you may have to offer in regard to the availability of surplus equipment, whilst we should also appreciate an opportunity to discuss in detail, other matters relating to the subject of this inquiry."

MORE GOOD NEWS!

THE G.P.O. have authorised us to announce that the following additional frequencies may now be used by British Isles amateurs:

1800 kc/s.	... to ...	2000 kc/s.
29000 kc/s.	... to ...	30000 kc/s.

The use of the 1,800 kc/s.—2,000 kc/s. band is subject to withdrawal at short notice should there be serious interference with other services. Navigation aids are operating around 1,850 kc/s. and 1,950 kc/s. Input power is limited to 10 watts on this band.

In September, 1944, the Surplus Stores Branch of the Board of Trade wrote stating:-

"I am to refer to your letter of the 30th August addressed to the President of the Board of Trade and am to say in reply that your suggestion that facilities should be afforded to members of your Society to acquire surplus radio equipment for experimental purposes has been noted and will be borne in mind when the disposal of surpluses is discussed with the industry."

"I am to add that a copy of your letter is being forwarded to the Ministry of Aircraft Production who will be responsible for the disposal of certain classes of surplus radio equipment."

From that time onwards the Society has made repeated attempts to obtain more specific information from the M.A.P. and latterly the Radio Industry Council.

On October 13, 1944, a meeting took place with the Ministry, during which the General Secretary gave a resumé of the Society's activities and its aims and objects. He referred to the state of affairs which existed after the last war and asked for an assurance

that dealers would not be allowed to purchase bulk quantities of equipment for resale at high profits. The Ministry representatives stated that it was the intention of the Government to avoid the condition referred to and steps had already been taken to discuss with the Radio Industry Council and other trade organisations problems affecting disposals.

The Secretary outlined to the Ministry the classes of equipment which he considered would interest members, as opposed to the general public, and agreed to furnish a detailed list of type numbers. He also explained that the Society could not engage in radio trading although he considered that an arrangement could be made for selected members to act as distributing agents.

On November 14, 1944, a comprehensive list of equipments which the Council considered would find a ready sale among members was sent to the Ministry. The list which was quite extensive, included the following items of equipment :-

R.A.F. T1154	Transmitter
R.A.F. R1155	Receiver
Army S27	Receiver

together with the code numbers of more than 100 different types of transmitting and receiving valves.

The list was acknowledged with the comment that it "will be most useful in our discussions with the Radio Industry."

In January, 1945, the Secretary sent a further letter to M.A.P. asking "what steps have been taken to determine the types of radio equipment which will be available for disposal to our members."

The Director of Contracts replied stating that "inquiries are still being made to determine what types of radio equipment will be available for disposal." He further stated that the Society's offer to appoint representatives to serve on any disposal committee the department may decide to set up would be borne in mind.

Weeks passed. Numerous letters were written and telephone calls made in an attempt to extract from the Ministry a declaration of policy.

Finally, a strongly worded letter was sent to the Ministry asking for a further meeting. This took place in June with the Superintendent of Radio Recovery (Radio Production Executive), present.

During this meeting the Secretary recapitulated the steps taken to date by the Society. The Ministry officials suggested that the Society should form a small Company which would handle the distribution of surplus equipment to bona fide experimenters, but it had to be explained once again that the Society is unable, in accordance with its Articles of Association, to engage in trading. Moreover, it would not be the Society's policy to do this in competition with established traders. A full report of the meeting was circulated to the Council who endorsed the views put forward by the Secretary.

It was agreed to arrange a further meeting with the Contracts Branch, M.A.P. This duly took place in July, 1945, after which the following memo was issued by the Secretary to the Council :-

"As requested I have discussed with Mr. T. R. Cowley (Directorate of Contracts, Disposals Branch, M.A.P.), the suggestions considered at the last Council meeting and have to report as follows :-

(1) A central clearing depot for surplus Government radio equipment is to be set up at the White City. Representatives of the Society will be permitted to visit the depot and examine the equipment offered for sale.

(2) It is anticipated that items of equipment will be separately priced, the previous suggestion that surplus material should be sold in bulk appears to have been rejected.

(3) The suggestion that Society representatives (e.g. District or Town Representatives) should be authorised to make bulk purchases was well received, but no decision can be made until the Contracts Branch has discussed the suggestion with the Radio Industry Council.

(4) The R.I.C. appears to be "going slow" on all matters relating to the disposal of surplus radio equipment. This is probably due to pressure from manufacturers who are reluctant to allow the sale of such equipment to jeopardise their post-war trade.

(5) The Contracts Branch are most anxious to prevent surplus radio equipment being sold to dealers. Their view is that all such equipment should be disposed of in one of three ways :

(a) By returning it to the original manufacturer.

(b) By disposing of it to organisations such as the R.S.G.B.

(c) By breaking it up if the demand for a particular item is small.

The Contracts Branch promise to keep the Society informed of progress."

By this time the war in Europe had ended and numerous members were becoming agitated at the apparent lack of activity on the part of the Society in the matter of disposals.

On October 1, 1945, the M.A.P. were advised by the Society that Central Radio Stores, Lisle Street, London, were offering R.A.F. R1155 receivers for sale (the full story of how this equipment was obtained has recently been referred to in *The Daily Express*).

Further letters were written but no satisfaction was obtained. Then on December 14, 1945, a meeting took place with Mr. Jenkins, Director of Contracts, M.A.P. At this meeting the Secretary asked whether any decisions had yet been reached. The Director explained that the Ministry had discussed the matter of disposals with the R.I.C. who were not entirely in sympathy with the proposal that amateurs should be given preferential treatment. The Secretary pointed out that most of the equipment which would be of interest to amateurs had no normal civilian application. In view of that fact he enquired whether the M.A.P. would support the Society if they could obtain the agreement of R.I.C. to the suggestion, previously put forward, that selected members (such as D.R.'s) should be authorised to purchase bulk quantities of radio equipment for resale without profit to local groups of members. The Director agreed that the suggestion was practicable and recommended the Society to discuss the matter with the R.I.C. No hope was held out that Society members would be allowed to purchase components and valves, other than through normal trade channels, due to the fear of industry that their post-war plans may be prejudiced.

The Secretary made an inquiry regarding the disposal of test equipment but the Director could give no information at that time as the needs of the Services were not known. The Secretary also asked whether members could be given preferential treatment in regard to meters. He pointed out that many members had, at the request of the Government, donated meters to the country during the war. The Director quoted a reply given in the House of Commons in answer to a question regarding the disposal of binoculars. From this reply he assumed that the Government would be unwilling to allow donors to purchase surplus stores—whether it be meters or binoculars—at preferential rates.

On December 10, 1945, the Secretary met Mr. R. P. Browne, Secretary of the Radio Industry Council, and solicited the support of his organisation for the suggestion that certain types of surplus specialised

radio equipment should be sold in bulk to members via the Society's nominees.

Mr. Browne stated that originally M.A.P. had accepted an R.I.C. plan whereby all surplus radio equipments would be repurchased by the trade and then resold to the public. Subsequently M.A.P. had modified this arrangement and were now inviting tenders from all and sundry. In view of the changed circumstances Mr. Browne expressed the view that his Council would probably support the R.S.G.B. proposals, provided that the Society produced a list of the equipments which they consider members would be likely to purchase. Mr. Browne also suggested that the R.S.G.B. should furnish a rough estimate of the quantities likely to be purchased by members and the prices they would pay. The Secretary agreed to discuss matters further with M.A.P. and ask for facilities to be provided for him to inspect the full range of equipment being offered for sale.

Four days later (on December 14) the Secretary forwarded to the R.I.C. a list of the equipments which he had inspected at M.A.P. on the previous day. The hope was again expressed that the R.I.C. would support the R.S.G.B. in its endeavours to provide Society members with an opportunity of purchasing surplus equipment direct from M.A.P., and a copy of the letter was sent to the Director of Contracts (Disposals), M.A.P.

The list referred to above contained the following information :-

Code No. of Equipment	Suggested price for complete equipments in reasonable condition	Quantities likely to be absorbed by R.S.G.B. Members
R.A.F. T1154	£ s. d. 5 0 0	500-1000
" R1155	5 0 0	500-1000
" R1082	1 0 0	100
" T1083	1 0 0	100
" TR1133	3 0 0	250
" T1333	1 10 0	250
Army W/S No. 3	1 0 0	100
" " 9	2 0 0	100
" " 11	2 0 0	100
" " 18	1 10 0	100
" " 19	2 0 0	250
" " 22	2 0 0	250
" " 38	1 10 0	100

Throughout the month of January, 1946, efforts were made to obtain a reply from the R.I.C. but without success.

On February 4, 1946, the Secretary wrote to Mr. Browne as follows :-

"It is now seven weeks since I sent you my letter outlining our views regarding the disposal of surplus Government radio equipments; to date no reply has come to hand. We are being inundated with letters from members criticising the Society for (apparently) taking no steps to obtain surplus equipments for them at reasonable prices. We are in a quandary because if we publish the full facts of the position it will show that the Society has not been responsible for the delays which have occurred."

On February 5 Mr. Browne replied as follows :-

"Whilst I can appreciate and sympathise with your anxiety to bring this matter to a conclusion in the interest of your members, I know you, on your side, will understand something of the difficulty which the surplus problem presents to us in the industry."

After stating that his Surplus Committee would meet on February 12, Mr. Browne added a postscript to the effect that the meeting had been "*postponed for some days.*"

The above facts were reported to the Council on February 11 with the result that the Secretary was requested to prepare a statement outlining the position to date.

Up to the time of writing (February 26), no further word has come from R.I.C. or M.A.P., but in the meantime *The Daily Express* has drawn attention to the state of affairs recorded above.

In putting these facts before our members we feel confident that they will agree that the Society has done everything possible to ensure that surplus Government radio equipment is made available to them at reasonable prices. We are confident also that those who have laid complaints at the doors of the Society on this score will henceforth deem it more equitable to direct their complaints against the Authorities with whom the power ultimately lies, and who seem to be unable to come to any decision even after many months of argument and representation.

Questions in the House

On February 25, 1946, Mr. HOY (Member for Leith) asked the Minister of Supply and Aircraft Production, why he has granted a monopoly to the Central Radio Stores, London, for the retail of surplus R.A.F. wireless equipment; how many Bomber Command transmitters have recently been purchased by this store; at what price per transmitter; and why he refused the offer of Mr. John Clarricoats, Secretary of the Radio Society of Great Britain, to purchase these transmitters at £5 each.

MR. WILMOT: No sales have been made by my Department to the Central Radio Stores and no offer from Mr. Clarricoats to purchase surplus wireless equipment has been refused, but I understand that he is in touch with the Radio Industries Council with a view to sets being distributed to his members through the trade.

MR. HOY: Is the Minister aware that reports of a different character have appeared in the Press, and that it has been stated that the Ministry has refused to sell to Mr. Clarricoats and has sold to this store. If the position is otherwise, will the Minister consider issuing a statement to that effect?

MR. WILMOT: I have seen a report in the *Daily Express* but it is quite inaccurate.

We leave members to form their own opinions.

G.P.O. Morse Test

For the information of those who contemplate taking the Morse test the following is the official schedule in current use at local G.P.O. examination centres:

Morse Test 12 w.p.m.

Type	Length of Test	Duration of Test	Sending		Receiving
			Max. No. of Erasures	Max. No. of Un-corrected Errors	Max. No. of Errors
Plain Language	36 words	3 minutes	4	Nil	4
Figures	10 groups of 5	1½ minutes	2	Nil	2

In the Receiving test each letter incorrectly received counts as one error.

It is anticipated that those who fail to pass the Morse Test will be permitted to take the test again a month later.

AN ELECTRICAL KEYING DEVICE

By F. DEARLOVE (G2QO)*

HAVING read Mr. Craig's excellent article in the September, 1945, issue, the writer feels impelled to describe a device which was developed at his station after the publication of Beecher's original article in May, 1940. Agreeing with the Editor of *QST*'s comment that it had arrived in complex form, work was started to effect simplification. The original thyatron was replaced by ordinary triodes in a modified sweep oscillator circuit, but no article was published as it was still thought to be far too complicated for practical use. Eventually the device which is the subject of this article was completed in 1943, and it had been intended to describe it for *THE BULLETIN* at that time, but owing to the writer having to leave for Sierra Leone, this was not possible.

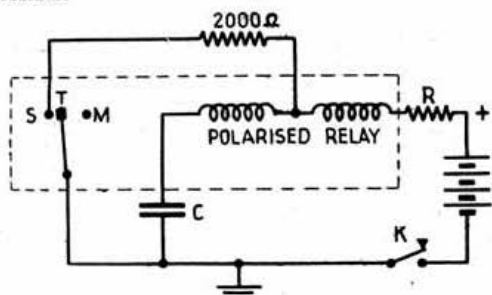


Fig. 1.
Basic circuit explaining character formation.

At first sight there would appear to be very little difference between this circuit and Mr. Craig's as both depend for their operation on the charge and discharge of a condenser for the timing of the Morse characters. In the device to be described, however, the difficulty which was encountered owing to the first character of a train being longer than the rest does not arise, as the voltage is not removed during the formation of each character, and for another reason which will be made clear later. The characters are formed during the charging period, the discharge forming the space as was the case with Beecher's original model. As no valve is used, the term "Electronic Key" has been dispensed with, the title "Electric Bug" being more appropriate.

Components Required

A G.P.O. Type "B" polarised relay is the heart of the device. In addition, two $2\mu\text{F}$ and one $1\mu\text{F}$ condensers, one L.F. choke, one 30,000 ohms wire wound variable, two 2,000 ohms, one 1,000 ohms and one 500 ohms fixed resistors (all one watt) and a modified side swipper key are required. The modification to the last mentioned item consists in the provision of two extra pairs of contacts, both of which are only opened when the key is pressed to the right or "dot" side. It is not necessary to separate the two main contacts.

The power supply may conveniently be that of the receiver, since only a very small current is required. Only one control, apart from that on the relay itself, is necessary, this being the overall speed control. This makes operation very simple and overcomes the problem of "fiddling" with adjustments to alter dot and dash lengths with every change in speed,

as was the case with all other models constructed. Speed is easily controlled from about 15 w.p.m. to over 50 w.p.m., although it must be admitted that a great deal of practice is required before perfection can be attained. However the final result, with its perfect character-formation, is well worth while. The operator of such a device quickly becomes aware of the errors he is accustomed to make, notably the lengthening of certain dashes, particularly in the letters "C" and "L." The electric bug quickly corrects this tendency. The saving in effort, using a key of this type, will be clear from the following figures: Using a straight key (and counting two movements of the hand or wrist, in forming "E" or "T") to send the Alphabet and ten numerals, 264 movements are required. With a side swipper this is reduced to 168. The ordinary bug results in only four less, (164) but the electric bug, and the electronic key show the greatest saving of all, requiring only 109 movements. It was actually the onset of telegraphists' cramp which caused the writer to persevere with the simplification of Mr. Beecher's original model.

Operation

In order to understand the operation of the device, consider Fig. 1. This is the basic circuit for character formation. The relay, which as mentioned before, is of the polarised type, has its windings connected in series giving a total resistance of 200 ohms. The adjusting screw is set so that the tongue of the relay, is resting lightly on the space contact. (The letters S, T and M, refer to the Space contact, the Tongue of the relay, and the Marking contact). When H.T. is applied, by closing the key "K," a current of a few milliamperes has two paths to follow, one through the whole relay winding into the condenser, and the other, through only half the relay winding, the 2,000 ohms resistor and the space contact to earth. This results in the tongue of the relay being drawn smartly across to the marking contact where it remains until condenser C is fully charged, thus forming a character, whose length is dependent on the charging time. As soon as no further current can flow into C, T falls back gently to S. However lightly it touches, C now discharges through half the relay coil; the 2,000 ohm resistor thus determining the length of the space. The current thus flowing in the opposite direction for a shorter period of time

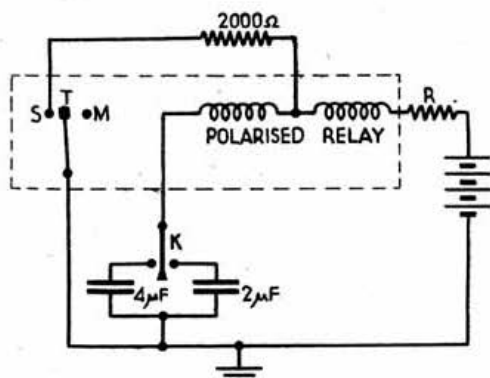


Fig. 2.
Basic circuit for both dots and dashes but impracticable for reasons given in text.

than the charging current, is much heavier than that flowing from the source of supply also through the space contact, so the fact that the H.T. is still applied does not interfere with the space in any way. The cycle of operations is repeated as long as "K" is kept closed.

At this stage it would appear at first view that if a condenser of double the capacity were connected as shown in Fig. 2, then by simply switching the condensers, the job will be finished: but this is not so, for with "K" in its rest position, although no characters are made, the relay buzzes continuously

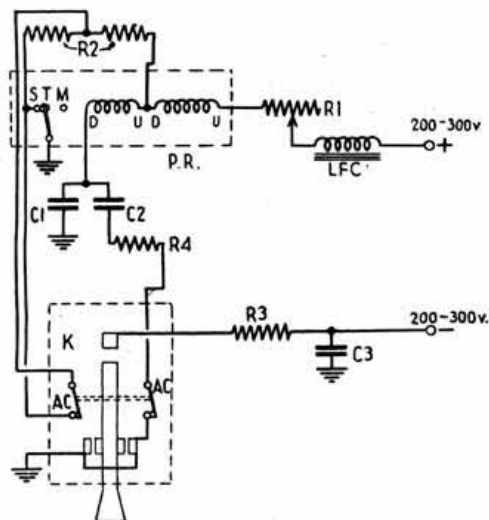


Fig. 3.

Final circuit for electric keying.

- R.1 30,000 ohms wire wound variable.
- R.2 2-2,000 ohms one watt in series.
- R.3 1,000 ohms one watt.
- R.4 500 ohms one watt.
- C.1, 2 2 μ F 350 v. working paper.
- C.3 .1 μ F paper.
- L.F.C. Primary of Ferranti A.F. 5 transformer.
- P.R. G.P.O. polarised relay type "B."
- K Modified sideswiper key.
- S.T.M. Space, tongue and marking contacts on relay.
- U.D. Markings of coil terminals (meaning positive and negative respectively).
- A.C. Auxiliary contacts on key operated by insulated push rod shown dotted through main bar.

owing to the current flowing through the space contact. What is worse, however, is that, should a character be incomplete, due to the key being opened too soon, the next character will be affected owing to some charge being left in the condenser. Moreover, the spaces between dashes will be longer than those between dots. It will be clear therefore that not only should the supply be disconnected when the key is at rest, but both condensers should be discharged to a value (which is not quite zero) determined by the tension on the relay, where the tongue transfers from one side to the other. This will ensure that each character, and in particular the first of a train, is of equal length. Further the discharger resistor must be reduced in value, so that on dashes, where the larger capacity is used, the discharge period forming a space is equal for both dots and dashes. We thus arrive at the final circuit, which accomplishes all these things.

Final Circuit

It will be noticed that the only difference between Figs. 2 and 3 is in the modification of the side-swiper key. This consists of the provision of two pairs of

auxiliary contacts, both of which are required to open on the right or "dot" side, and to remain closed, both whilst the key is at rest and on the left or "dash" side. The left hand pair reduce the value of the space resistor on dashes, whilst the right hand pair at the same time connect the second 2 μ F condenser in parallel with the first on dashes and whilst the key is at rest, and disconnect it on "dots." The 500 ohms resistor in series with the right hand pair of contacts effectively prevents sparking, and has no further function. It does not affect character formation in any way. The addition of C₃ R₃ in the negative lead prevents any tendency to sparking at the main contacts. It will be noticed that with "K" at rest the two condensers equalise in voltage to the necessary near-zero value previously mentioned.

The external circuit is connected to the marking contact and the tongue of the relay, which it will be noted is earthed, in other words it is connected to the chassis in common with all other points marked as at earth potential. It is not advisable to break any appreciable current, but the device is eminently suited to bias keying. The reason for the inclusion of the L.F. choke may not be quite clear. In practice, however, it produces the necessary delay in charging, when the resistance is varied to alter the speed, and is an improvement over a further resistance used in its place. As with Mr. Craig's version, which shows many points of similarity of operation, the overall speed is dependent on the voltage. The lower the voltage the higher the speed, which is not what would be expected at first sight. All contacts should be adjusted with the smallest possible spacing. If care is taken results will be all that could be desired, an opinion that can be verified by all who have seen the device at work during the past year or two.

Finally, it is not claimed that this keying device is better than Mr. Craig's excellent effort, although it has fewer controls and owing to the lighter weight of the relay contacts is capable of very high speed operation. It is also absolutely noiseless in operation. It will be interesting to see if anyone takes up his challenge to produce an electric bug without a relay! Certainly few would have thought that the original electronic key could have been simplified, without sacrificing operating efficiency, to the extent that has been accomplished.

Licence News

Rumours have reached Headquarters from the U.S.A. that part of the 3.5 Mc/s Band is to be released to amateurs on March 31st next. We are informed by the G.P.O. that they cannot contemplate the release of this band at present owing to its necessarily extensive use by the British Military Authorities.

The position in regard to the 14 Mc/s band is again being reviewed by the Authorities with the object of giving a target date for its release.

A new Summary of Conditions governing the issue of Amateur Wireless Transmitting Licences is being printed. It is hoped to publish the summary in our next issue together with a copy of the Application Form for a licence.

Members who were not licenced before the war and who have made application for a licence in accordance with the announcement published in our January issue will receive a copy of the Summary of Conditions and an Application Form from the G.P.O. immediately stocks become available. Those who wish to claim exemption on the grounds of a Radio Service Trade qualification should study the list of trades published elsewhere in this issue.

STATION DESIGN AND PLANNING

By W. H. ALLEN, M.B.E. (G2UJ).

PART IV—THE AMATEUR BANDS RECEIVER

It was stated in an earlier part that the features most desirable in a receiver, whether straight or superhet., were a good signal-to-noise ratio and adequate sensitivity and selectivity. To these may be added stability (i.e. the ability to stay tuned to a signal without need of constant readjustment), ease of control, and good resetting accuracy. This last quality is highly desirable for an amateur receiver, as it means that schedules may be kept with some reliability, if it is known that the relationship between dial-setting and frequency is not a variable quantity. The way to accomplish this is by rigid construction of the receiver and coils, a good tuning condenser, and a dial which can be read accurately and on which the frequency band to be covered is well spread over the available dial readings.

The Tuning System

A tuning system is something that all receivers, of whatever type, have in common, so this will be dealt with first.

For a circuit to tune to a given frequency it is necessary to have a combination of inductance and capacity. The actual values concerned may take the form of a large coil and a small condenser or *vice versa*, provided that the combination will tune to the desired frequency.

To cover a band of frequencies either the inductance (L) or the capacity (C) must be variable, but it is customary to arrange for the latter to be so.

The highest ratio of L to C results in the greatest R.F. voltage being produced across the circuit, and other considerations being disregarded, the gain to be expected would be greatest under these conditions but the selectivity least. The opposite state of affairs would apply with a smaller inductance and a larger capacity.

It will be seen that as the circuit is tuned over a band the L to C ratio will alter, and with it the performance of the receiver, and it is better, therefore, to restrict the frequency range to be covered with any given inductance so that the ratio of L to C may remain as constant as possible, even at the expense of having to provide a greater number of coils.

In a practical design it is best not to accomplish this by the expedient of using a very small capacity tuning condenser, because with so small a "tank" capacity, variation of the inevitable stray capacities across the circuit will lead to serious frequency drift. Variation in stray capacities is chiefly due to the inter-electrode capacities of the associated valves, altering with heating or with variable supply voltages. It is better,

therefore, to arrange for a certain value of fixed capacity to be in circuit in parallel with the tuning condenser so that slight variations in the values of the "strays" will have less effect upon the tuning of the whole circuit. This forms the basis of what is known as "band-spreading," and a practical method of achieving it is shown in Fig. 8.

In Fig. 8 (a) the variable condenser is shown connected across the whole coil and will then have the maximum tuning effect. At (b) it is tapped across only part of the coil and changing its capacity will have less and less influence as the point X approaches the point Y.

Using this method it is possible to employ a condenser of such a value that its capacity variation will be sufficient to cover the required range on the lowest frequency band required by utilising connection (a), while for the higher bands its influence can be reduced as required by employing arrangement (b).

Unless a large number of coils be provided there will, however, be gaps between the various ranges covered, but this can be overcome by arrangement (c), using a simple switch or link to connect the variable condenser across either part of the coil (for band-spread and an open scale) or across the whole coil for general coverage with, naturally, a less open scale.

The fixed capacity may consist of either an air-spaced "trimmer" (which is preferable from the low-loss standpoint, and which may be varied by screwdriver adjustment to "set" the band to be covered) or of a good-quality fixed capacity with a small air-dielectric trimmer in parallel.

The use of mica-dielectric compression trimmers, such as are used at broadcast frequencies, can be unsatisfactory in a receiver covering the higher frequency amateur bands. The average trimmer of this type depends upon a springy top plate held in compression by the adjusting screw. "Tiring" of this spring causes the capacity to change, and it is also susceptible to vibration.

These trimmers, being cheap and compact, have their uses in an experimental set-up, but are best replaced by a more stable component in a permanent receiver.

Tuning Dials

Before leaving tuned circuits, something should be said about the tuning dials and scales themselves.

A receiver in which the wanted band occupies only a small fraction of the frequency range available on the dial is an absolute abomination when searching for

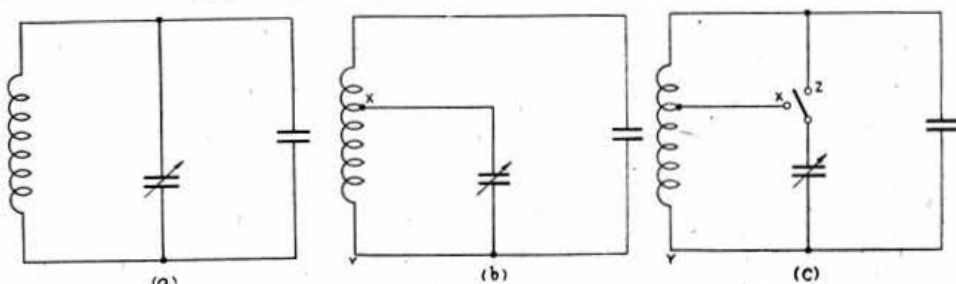


Fig. 8.
Practical methods of achieving "band-spreading."

weak signals on a crowded band, and no matter how good the dial, resetting it to a given frequency is well-nigh impossible. The hints given in a previous paragraph on band-spreading will, however, enable a much more "open" scale to be arranged with any condenser and dial.

The tuning mechanism should be of solid construction, capable of smooth movement with a minimum of backlash, and should have a large and conveniently placed knob for comfortable operation.

A type of dial which is quite common on commercial communication receivers employs a free-running gear-chain with means provided for taking up backlash in the gearing, associated with a heavy flywheel attached to the shaft on which the operating knob is secured.

Such a dial will, with one spin of the knob, turn the tuning condenser over a large portion of its travel, and eliminates the inconvenience of low-g geared drives in tuning quickly from one end of the tuning range to the other.

This form of dial mechanism lends itself admirably to the fitting of a logging scale in addition to frequency markings. This may consist of a number of equally-spaced divisions marked round the circumference of the dial, so spaced that an auxiliary dial on the knob shaft or on some intermediate shaft in the gear chain, will rotate once between one division and the next. The auxiliary or logging dial may then be marked with a number of equal divisions, and a figure based upon the reading of both dials may then be employed to record the setting for any particular frequency.

Suppose, for instance, that the main dial carries 20 divisions and the auxiliary dial 100. Twenty turns of the auxiliary dial would, therefore, be required to cover all the divisions of the main dial, and the resetting accuracy of the system, presupposing a good gear-chain free of backlash, would be at least one part in 2,000; adequate to allow the operator to return to any dial setting.

The prospective constructor of a receiver is strongly advised to spend time and thought on his tuning scale and drive. Many an otherwise fine receiver has been rendered virtually unusable owing to a poor tuning dial, with no pretence to resetting accuracy, while a receiver of mediocre performance but with a good easily read dial, will make up for many of its failings by this feature alone.

The Straight versus the Superheterodyne Receiver

The writer realises only too well that this question has resulted in considerable controversy among amateurs for many years on the merits and demerits of the two systems. Adapting Dr. Joad's famous phrase we might say: "It all depends upon what you mean by a superhet," so let us make it clear that we are comparing the two *systems*, and therefore must use for comparison, examples equally good in their respective classes.

There is no doubt that on the score of expense and lack of constructional complexity the straight wins on both counts over its protagonist. When ease of operation is taken into account, however, and when it is desired to incorporate certain refinements, then there is little doubt but that the superhet, is definitely superior.

Much also depends upon whether the operator is more interested in C.W. or in telephony reception.

With the detector in a state of oscillation for the reception of the former type of signal, the straight receiver is in its most sensitive and selective condition, and various things to be mentioned later may be done to increase its effectiveness still further. When receiving weak telephony, however, the detector must be very nearly, but not quite oscillating to obtain the

maximum sensitivity, and a certain amount of skilful juggling with reaction, tuning and R.F. gain settings, all inter-reacting upon one another to a certain extent, will have to be accomplished to keep such a signal "on the nose."

With the superhet, the greater inherent stability and amplification, and the ability of altering the R.F. gain, and selectivity without upsetting tuning adjustments, helps this type of receiver to score heavily in telephony reception.

It should not be overlooked, also, that in the superhet, a really efficient form of automatic gain control can be incorporated which will assist to a great extent in overcoming the effects of fading. In addition, the sensitivity of the superhet, remains the same whichever type of signal is being received.

The criticism is often made that the superhet receiver is noisy in operation. This, more often than not, is due to it being handled incorrectly. It has been brought home to the writer during long experience in the Services that the majority of inexperienced operators when searching for signals tend to turn all gain controls to maximum, thereby producing an appalling amount of noise which in itself overloads the headphones to say nothing of the operator's ears.

Now the ear has remarkable A.V.C. action, and tends to adjust itself to high noise levels by reducing its sensitivity. Under the conditions described, therefore, the operator is in the worst possible position to appreciate any slight increase in the general noise due to the arrival of a weak signal.

It should be realised that whatever type of receiver is being used, it is impossible to receive anything which is lower in strength than the prevailing noise level. Provided, therefore, that this level is just audible, there is no likelihood of missing any signal, no matter how weak, that may be produced by the receiver. Furthermore, the ear will be in its most sensitive condition for the appreciation of such signals when not overloaded by excessive "input."

Receiver Noises

Background noise in a receiver is made up of a number of factors. Static discharges and man-made interference will account for a certain proportion, and will be, of course, a variable quantity. Their contribution can be assessed by removing the aerial and noting the difference. Another cause is what is known as "thermal agitation," and is produced by electron movements in the components of the various circuits in a receiver. Under practical conditions this will only be appreciable in the input circuit of a receiver possessing considerable gain, and is one of the factors which sets a limit to the permissible amplification.

The emission of electrons from the cathode or the filament of a valve does not take place in a continuous stream, but varies slightly from moment to moment, resulting in a contribution to receiver noise known as "shot effect." This again is of such small value that it is only important in the first stage of the receiver, and together with thermal agitation sets a limit to the overall gain.

It will be appreciated that the constructor can do much to improve the signal-to-noise ratio of his receiver by using only the best components, particularly in the input stage, making sure that he employs those valves which produce the minimum "shot effect," pays careful attention to all R.F. contacts, and above all provides an aerial which delivers the maximum signal to over-ride as far as possible these two sources of disturbance.

In passing it should be noted that frequency changers in superhets, and detectors in straight receivers have more inherent noise than other valve stages, and it is good practice, therefore, to incorporate an R.F.

valve in advance of these stages in order that the signal arriving at their grids may be as large as possible in comparison with the noise they generate.

It will be understood from the foregoing that a superhet. tends to be noisy due to its having an inherently greater gain than a straight receiver, but as it is not always necessary to operate it flat out, it is possible by intelligent handling of the controls to keep the noise level at the output at a value which is not unpleasantly high, with the knowledge that any signal which is above that level will be heard.

For reception on headphones, and this is still the best for weak signals, very little L.F. amplification is required, and it should not be necessary to have more than one resistance/capacity-coupled stage following the detector.

In the case of the straight receiver the overall R.F. gain is not sufficient to produce serious trouble from valve and circuit noise, and it is, therefore, permissible to incorporate rather more L.F. gain than in the case of the super., but the point made in an earlier paragraph regarding the impossibility of reading a signal lower in strength than the background still holds good.

Practical Receiver Construction

It is not proposed to give in this article anything in the nature of a practical receiver design, as this has been covered on many occasions in both this and other journals, as well as in the various handbooks and textbooks. What is hoped, however, is that the newcomer will not always follow published designs blindly, but will use them as a guide in evolving his own circuits. For this he must have experience, and an appreciation of what is good and what is bad practice in circuit design, and we hope that the following practical hints will be of some assistance in this direction.

Radio Frequency Amplification

For reasons previously mentioned, there are very real advantages to be gained by the incorporation of at least one R.F. stage before the detector or the frequency changer in straight and superhet. receivers respectively. Naturally, the highest possible gain consistent with stability will be aimed at, but it should be remembered that a valve with the greatest mutual conductance is preferable to one with an extremely high amplification factor, as the latter is usually associated with a high internal impedance.

A valve with the latter characteristic requires an anode circuit of correspondingly high impedance in order that this amplification may be realised, and particularly on the higher frequencies this is almost impossible of attainment.

Great care must be taken in the screening arrangements not only to prevent undesirable inter-reaction between stages, but to ensure that the signal may only reach circuits later in the receiver *via* the paths provided. An excellent example of this came to the writer's notice on one occasion when asked to advise on what was wrong with a straight receiver to which an R.F. stage had been added. The R.F. stage was well screened and appeared to be in good shape, but contributed practically no gain whatsoever. Screening the detector against signal pickup on coil and wiring completely cured the trouble, however, and it was concluded that sufficient signal was reaching the detector grid direct from the aerial partially to offset the amplified signal delivered by the R.F. stage, which would in this case be in anti-phase.

Means should be provided to vary the gain of the R.F. valve to prevent blocking the detector in a straight receiver, and also so that just sufficient gain may be employed to deal with the signal being received, thereby improving the selectivity.

Selectivity

A compromise between maximum transference of signal and selectivity will have to be made in the coupling between the R.F. valve's anode circuit and the grid of the detector in a straight receiver. Coupling may be effected by a winding inductively feeding into the low-potential end of the detector grid coil, or by a small condenser between the anode of the R.F. valve and the grid end of the detector coil. If this condenser is made variable, coupling, and hence selectivity, can be controlled, but this will introduce a varying capacity across the detector grid circuit which makes calibration almost impossible. A possible method would be that shown in Fig. 9, making use of a low-capacity differential condenser C_1 , which could form part of the fixed capacity across the coil as suggested in Fig. 8, C_2 contributing the remainder. C_3 is the detector tuning condenser, and C_4 and R the grid condenser and leak respectively.

The action of this circuit is that the moving vane of C_1 , when coupled to the top fixed plate in the figure, would give maximum transference of signal between the two stages, while rotation of the condenser would cause this coupling to lessen, while keeping the total capacity of C_1 unchanged; a capacity potentiometer in fact.

The superhet. relies for its selectivity upon that obtainable in the I.F. amplifier, and this latter being fixed in frequency, it is possible to introduce variable selectivity by varying the coupling between the various tuned circuits or by the addition of a crystal filter resonant to the I.F. in use. These refinements cannot be enjoyed in a straight receiver.

Reaction

The application of reaction to the detector stage in a straight receiver provides the bulk of the gain and selectivity in this type of circuit, as well as making possible the reception of C.W. signals. It is most important, therefore, that reaction control should be at the same time smooth and have a negligible effect upon tuning. In modern designs it is customary to employ a screen-grid or R.F. pentode-type of valve as detector, and to control regeneration by varying the screen voltage. The latter should be considerably lower than that recommended when the valve is operated as an R.F. amplifier, and a value of 25 to

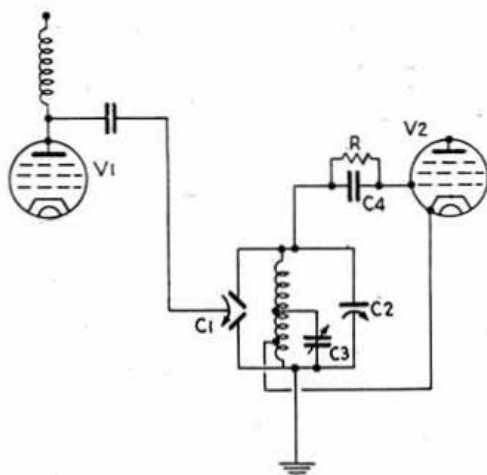


Fig. 9.

One method of coupling the anode circuit of an R.F. stage to the grid of the detector stage. See text for suggested component values.

40 volts, depending on the valve used, will be found about correct.

Some experiment with different voltages, the number of turns in the reaction coil and in the value of the grid leak, with a view to obtaining the smoothest possible reaction control consistent with the least effect upon tuning, is time well spent. A suitable value of grid condenser for normal amateur frequencies has been found to be 50 pf., while a grid leak of 1 or 2 megohms is a good starting point.

A potentiometer reaction control circuit successfully used by the author is shown in Fig. 10.

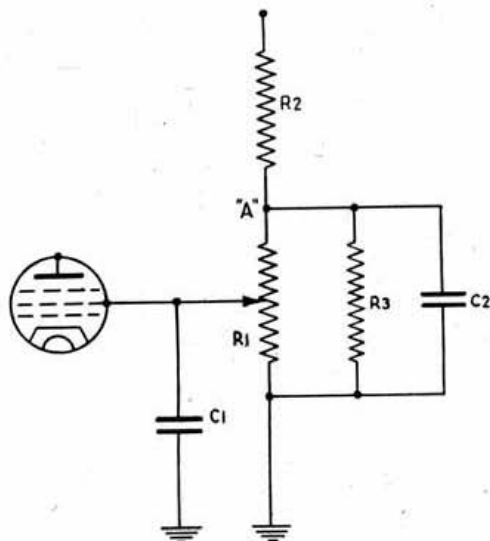


Fig. 10.

A recommended potentiometer reaction-control circuit. See text for suggested component values.

In Fig. 10 R_1 is a potentiometer of 100,000 to 150,000 ohms, while R_2 and R_3 are of such values as to produce a voltage between point "A" and earth a little greater than is required for regeneration while passing a current several times greater than the S.G. feed. This last condition is necessary to ensure that the latter is a small proportion of the total current through R_2 , R_3 , so providing improved voltage regulation. The object of having a high-resistance potentiometer with a lower resistance (R_3) in parallel is twofold. Firstly, the comparatively heavy "bleeder" current is diverted from the regeneration control which results in silence in operation, and secondly a very open scale is obtained on R_1 . Of the two condensers shown, C_1 is the normal S.G. bypass, say, .01 μ F, and of non-inductive construction, and should be connected directly between the S.G. tag on the valve holder and the earth point for the detector stage. On the 28 and 56 Mc/s. bands it is advisable to connect a good mica condenser of 100 to 300 pf. in parallel to improve the R.F. by-passing. C_2 is of 1 or 2 μ F capacity, and may or may not be necessary. Its function is to remove the last traces of noise when R_1 is operated. On no account should it be connected, as is sometimes shown for this purpose, between the sliding contact on R_1 and earth, as this has proved more noisy than leaving it out altogether.

(To be continued)

THE I.E.E. RADIOLOCATION CONVENTION

Tuesday, March 26

- 4.30 Reception and Tea.
5.30 Opening Meeting. Lecture to be delivered by Sir Robert Watson Watt, C.B., F.R.S., on "The Evolution of Radiolocation."

Wednesday, March 27

- 9.30-12.30 *Aerials and Waveguides.* Integrating Papers: "Aerials," by J. A. Ratcliffe, M.A.; "Waveguides," by M. H. L. Pryce, M.A., Ph.D.
Followed by lecturettes by specialists.
2.30-5.30 **Propagation.* Integrating Papers: "Elements of Radio Meteorology," by H. H. Booker, Ph.D.; "Experimental Studies of the Propagation of Very Short Waves," by E. C. S. Megaw, M.B.E., B.Sc., followed by lecturettes by specialists.
**Cathode Ray Tubes.* Integrating Papers: "Survey of Cathode Ray Tubes Problems in Service Applications with special reference to Radiolocation," by G. Bradfield, B.Sc., D. Stewart Watson, B.Sc., and others.
"Survey of Progress in Cathode Ray Tube Development for Service Applications," by H. Moss, Ph.D., B.Sc., (Eng.), L. F. Broadway, B.Sc., Ph.D., and L. C. Jesty, B.Sc. Followed by lecturettes by specialists.
5.30 Tea.
6.15 Lecture to be delivered by W. A. S. Butement, B.Sc., on "Precision Radar."
*These Sessions to be held simultaneously.

Thursday, March 28

- 9.30-12.30 *Valves.* Integrating Paper: "The Development of Radio Valves," by J. H. E. Griffiths, D.Ph. Followed by lecturettes by specialists.
2.30-5.30 *Radio Measurements and Test Gear.* Integrating Paper: "Radio Measurements and Test Gear," by G. W. Oatley. Followed by lecturettes by specialists.
5.30 Tea.
6.15 Lecture to be delivered by A. W. Ross, M.A., on "Problems in Shipborne Equipment for Radiolocation."

Friday, March 29

- 9.30-12.30 *Transmitters and Receivers.* Integrating Papers: "Transmitters," by O. L. Ratsey, M.A.; "Receivers," by W. B. Lewis, F.R.S. Followed by lecturettes by specialists.
2.30-5.30 *Circuit Techniques for Radiolocation.* Integrating Paper: "An Introduction to Circuit Techniques for Radiolocation," by F. C. Williams, O.B.E., D.Sc., D.Phil. Followed by lecturettes by specialists.
5.30 Tea.
6.15 Lecture to be delivered by R. A. Smith, M.A., Ph.D., on "Radiolocation in Navigation."

TECHNICAL ARTICLES URGENTLY WANTED

RADIO SERVICE TRADES

List of Exemptions from Technical or Morse Examinations.

FURTHER to the announcement published in the May, 1945, issue of this Journal, we now have pleasure in presenting a comprehensive list of Radio Service Trades which will enable those who wish to obtain an Amateur Wireless Transmitting Licence to claim exemption from the Morse and/or Technical examinations.

The list is considerably more extensive than the one previously published, but it is appreciated that even now a few trades may have been omitted. Any member who has served in a Radio Service Trade not listed should furnish the requisite details when submitting his or her application to the G.P.O.

Wireless Telegraphy Board and the Society, is given herewith.

The Society can feel justly proud that, as the result of negotiations which have gone on for the past four years, official approval has now been given to the suggestion first put forward editorially in July, 1941, that men and women who have served in recognised Radio Service trades should be granted exemption from Technical and Morse examinations.

The original suggestion was immediately accepted by the Council who requested the G.P.O. Liaison Committee to begin negotiations. The list now pub-

ROYAL NAVY

Officer, R.N. (C)	Technical and Morse
" R.N.V.R. (C)	" " "
" " (Ce.)	" " "
" " H./F. D./F.	" " "
" R.N.V.(W)R.	" " "
" R.N.V.R. ex R.N.V.(W)R. (with call sign before war)	" " "
Air Radio Officer (F.A.A.)	Technical only "
Air Signal	Morse only
Observer	" " "
Radar	Technical only
Officer promoted from Telegraphist Branch	Technical and Morse
Officer promoted from Signaller Branch	Morse only
Warrant Officer, R.N.V.(W)R.	Technical and Morse
Telegraphist	Morse only
" (S.)	" " "
" (S.O.)	" " "
" W./T. 1, 2 & 3 (H.S.) and above	Technical and Morse
" R.N.V.(W)R. (with call sign before war)	" " "
Leading Telegraphist and above	" " "
Naval Airman T.A.G. 3	Morse only
" T.A.G. 1 & 2	Technical and Morse
Petty Officer Observer (F.A.A.)	Morse only
Signalman (Trained Operator)	" " "
Leading Signalman and above	" " "
Leading Radio Mech. W./T. and above	Technical and Morse
" " W.	" " "
" " W.R.	" " "
" " S.	" " "
" " A.W.	" " "
" " R.	Technical only "
" " A.R.	" " "
Radar Br. Ratings B.C. 1 and R.P. 1	" " "

ARMY

Telecommunications Officer	Technical only
Wireless Maintenance Officer	" " "
Radio	" " "
Officer, R.A. (I.F.C.)	Technical and Morse
" Regtl. Signalling Instructor	" " "
" E.M.E. (Tels.)	Technical only "
" (passed Advanced Wireless Course)	" " "
" (Telecom Eng. Course)	" " "
" Regtl. Signalling Instructor (Course)	Technical and Morse
N.C.O. Regtl. Signalling Instructor	" " "
" (passed Advanced Wireless Course)	Technical only "
" (Regtl. Signalling Instructor Course)	Technical and Morse

Technician (I.F.C.)	Technical and Morse
Operator Special (R. Sigs.)	Morse only
" Wireless & Keyboard (R. Sigs.)	" " "
" Wireless & Line	" " "
" Keyboard & Line	" " "
Foreman of Signals	Technical and Morse
" " (Telecom.)	Technical only
" " (Tech. Mtee.)	" " "
Electrician Signals	" " "
Instrument mechanic (R. Sigs.)	" " "
Radio	" " "
Telegraph	" " "
Radio mechanic (R.E.M.E.)	" " "
Wireless	" " "
Telecom.	" " "
Armament artificer (Wireless)	" " "
" (Radio)	" " "
Telecom. Mechanic	(Field) Classes 1 & 2
" " (Heavy A.A.) Classes 1 & 2	" " "
" " (Light A.A.) Class 1	" " "
" " (Searchlight)	" " "
" " (Coastal Art.)	" " "
" " (Lines of Comm'n.)	" " "
" " Class 1	" " "

ROYAL AIR FORCE

Signals Officer	Technical and Morse
" " (Radar Ground)	Technical only
" " (Radar Air)	" " "
Officer Gunner (S.)	Technical and Morse
" Wireless Operator	" " "
" Signals Leader	" " "
" Radar	Technical only
" Navigator Wireless	Technical and Morse
" Radar	Technical only
High Speed Telegraphist	Technical and Morse
Telegraphist II.	" " "
R/T Operator	Technical only
Wireless Operator	Technical and Morse
" " (Air)	" " "
" " Mechanic I	" " "
" " (Air)	" " "
" " D.F.	" " "
Navigator (W.)	" " "
Wireless Mechanic I	Technical only
Wireless and Electrical Mechanic I	Technical and Morse
Radio Mechanic (Air) I.	Technical only
" (Ground) I.	" " "
Radar	" " "
" (Air) I.	" " "
" (Ground) I.	" " "
W./T. (Slip Reader) Operator	Morse only
" " II.	Technical and Morse

It is understood that Officers will be required to forward a letter from their last Commanding Officer testifying to their Service qualifications. Alternatively the G.P.O. would no doubt accept the evidence of a Navy, Army or Air Force List reference. Other ranks will be required to submit their Discharge Leave Certificate or similar official document bearing evidence that they have served in a Radio Service Trade.

The official list as agreed between the G.P.O., the

lished represents the outcome of their deliberations with the authorities concerned.

LICENCE QUERIES

The General Secretary is being inundated with enquiries regarding the issue of Amateur Licences. All such enquiries should in future be addressed to : Engineer-in-Chief, Radio Branch W5/5, G.P.O. London, E.C.4.

THE MONTH ON THE AIR

By A. O. MILNE (G2MI).*

Pirates

HAS anyone listened on 7 Mc's recently? If not, it is worth a visit! On any Sunday this band is as full of signals as at any time before the war. Telephony stations, many of them with very English voices, elbow one another about the band, completely swamping the pirate broadcaster. We don't envy anyone concerned with trying to get military traffic through it all!

It seems to us that when at last this band (7-7.3 Mc's by the way) finally returns to its rightful users, it will be so full of well established, high power pirates that confusion will just be worse confounded.

There is no doubt that many of these stations are in this country to say nothing of the Europeans, including the Italians. Now that R.A.F. 1154 transmitters can be purchased by anyone with £10 to spare and a mind to do a bit of pirating without much fear of being caught, things come to a pretty pass. In fact it's a damnable mess.

The present position is so unsatisfactory that the whole basis of Amateur Radio is being undermined. Unfortunately, many people regard the pirate as a bit of a lad, instead of a menace. Unless the authorities take note of the ridiculous situation which they themselves have done most to create, the whole business will be beyond control.

There is only one sane answer to the muddle. Give the amateurs back their bands and let us deal with the pirates NOW.

High Power

Here's another grouse. Judging by statements made over the air; some licensed stations possess equipment capable of handling powers grossly in excess of the 100 watts for which they are licensed. We heard someone recently describe his transmitter containing two 813's in push pull, "Input 100 watts." Figures of anode voltage and current given in a roundabout way during the QSO, however, disclosed the fact that the input was approximately 550 watts!

The Society has done a fine job in getting the extra licensed power which most of us now enjoy. Amateur Radio is always something of a competition and unless these high power bugs are told in no uncertain manner that they are not playing fair, there will be a race for higher and higher power. Human nature being what it is, people will not be content to stand by whilst the clandestine half kW. man pinches all the contacts. Therefore let us for our own preservation, show these individuals that their ways are not the "done thing."

Licence Notes

Norway. Our old friend Capt. Lars. Heyerdahl, LA6A, informs us that 130 Norwegian amateurs have been relicenced and have the whole of 28-30 Mc's. Applicants had to produce a detailed statement regarding their activities during the Nazi occupation.

Switzerland. HB9T gives us the Swiss bands which are as follows:—3500-3635, 3685-3950, 7-7.2, 14-14.4, 28-30, 58.5-60, 112-120, 224-230. Call-signs are in the series HB9A-Z, 9AA-DZ, 9EA-EZ, 9FA-F. All others are pirates, outside HB.

B.A.O.R. Ted Fowler, VE5VO-D2VO, writing from B.A.O.R. gives the gen. on hams in the British Zone in Germany.

The British Signals Communication Board has

issued licences identical in terms with ours. Ted is doing the clerical work and all applications go to him at H.Q. 84 Group (Disarm) B.A.F.O., B.A.O.R. A full list of calls so far issued will be published next month, space permitting.

South America. Calls heard lists seem to confirm that most, if not all, the South and Central American Republics have reissued licences for 14 Mc's.

France. All pre-war amateurs in France are being relicenced immediately. The bands are as follows:—28-30 and 58.5-60 (100 watts).

Notes and News

SV1EC, better known as Eric Cole, SU1EC, is operating in Athens. XACD, ex G6WD is also in Athens and puts in a fine signal on 28460 kc/s. between 11.00 and 13.00 GMT. F8ZF of Boulogne reports F8AA, 8NW and 3NE as safe, although some of the local hams narrowly escaped being shot by the Germans. Capt. J. D. Chisholm, G2CX reports the following amateurs as being stationed in Singapore, 2BC, 2CX, 2HLT, 3WH, 5ID, 6GL 8HV and VU2AA. G5YK is in Ceylon.

G6CU ZC2 on Cocos Is., has had a supply of cards sent to him. He packs a terrific signal into G around 10.30-13.00 GMT. Please keep your perishes' ECO's off him! In an urgent message received just before closing for press F. Sgt. Evans asks that all cards should in future be sent to his home address, 5 St. Luke's Road, Maidenhead, Berks.

Some VK's have been worked on 28 Mc's. G6GO made one of the first contacts at 09.25 on February 7, with VK2GU.

J. A. Hunt, VS5JH has been closed down by the authorities in Labuan, but possibly may make a new start on 28 Mc's. 2BTO at Thurso, Caithness, says 28 Mc's remains dead in that northerly outpost. Only one signal has been identified, W2IXY. Violent displays of the Aurora put paid to conditions. ZC4C, who says he is in Cyprus is active on 28 Mc/s. Any details please?

G6CJ has worked a nice one—W2KMZ EL in Liberia. 'CJ says just before heavy bursts of noise on the band, conditions open up for the whole of Britain and stations have been heard and worked in northern and western districts.

South Africa

ZS2Y sends a copy of the Port Elizabeth Radio Association Bulletin, edited by ZS2X who puts in such a consistent signal on 28050. The Bulletin records increasing activity in S.A. and quotes quite a lot from M.O.T.A.

Calls Heard

Due to severe limitations of space this month it is not possible to do justice to the many reports so kindly sent in. General observation shows that the band has been good for South Africa and the East, but not so good for U.S.A. Here are a few to look for:—VK3KX (0930, 28050); KAILM (11.30, 28200). Most of the South Africans are between 28050 and 28150. FA8NF (19.00, 28850); VO2N (16.00, 28400); ZC4C (14.00, 28100); YR5C (14.00, 28150); W4YA Burma, (28200); PB2AC (28650).

Thanks to all who kindly wrote in; please quote times and frequencies, but no "bread and butter" stuff please, W123489, etc.!

"People who live in glass houses," by BRS1151. Dear Ham: Do you grouse about car QRM? Have you got a car yourself? Is it suppressed? I thought so!!

SOLILOQUIES FROM THE SHACK

By UNCLE TOM.

SUPPOSE this has been the most eventful month in the history of the 28 Mc/s. band. It was kind of the sunspots to fling the band wide open just as the licences arrived. But it is galling to your poor old Unc. to know that hundreds of G's are on, perhaps—who knows?—doing the most frightful things on the air, and he cannot hear them.

So far, though, the operating seems to be at a high level—but do you all like this “handle” business very much? Seems to me it may have been a good joke when the first ham thought of calling his name a “handle”—but is it not just a little bit worn out by now? Oh, heck, I do not know! But it seems a bit childish to me.

Full marks for originality go to the nephew heard calling “CQ W6 or bust” a few evenings ago. I am afraid he bust. That brings me to “CQ.” I suggested to the Editor last month, but he passed it back to me, together with the same idea from a nephew, that we should now keep “Test” for its special purpose. In other words, if it is a contact you are after, use “CQ”; if you want to try something out, use “Test.”

If we set an example in this, we might find it accepted on a world-wide (or should I say global?) basis. What do you all think?

To turn to less pleasant subjects, there seem to be some lousy receivers about still. Several hams have been heard lamenting about the “dead band” with locals while the band has been full of interesting DX. I had an otherwise good contact with G6CU/ZC2 mauled about by two such folks weeping on each other's shoulders about the lack of signals. I will have to go into production with ear-syringes again.

Following up my tirade last month on bad phone operation, one of the nephews suggests the formation of a Lousy Operators' Club, complete with an issue from Headquarters of L.O.C. Certificates. Let us hope it will not be necessary—but I assure you there will be no shortage of rudeness in this direction when the lids are about. (Note for Tiny Tots: “Lid” is the old term for a lousy operator.)

Everyone seems to be working phone on 28 Mc/s. I hope that does not mean that the art of CW is going to die out. The man whose chief thrill is picking out the odd bits of obscure DX will certainly lose something if he sticks to phone, though admittedly all the more credit is due to him if he gets there.

Tail-piece: Has anyone heard a U.S.A. station that is not using a three-element (or four element) rotary beam?

Constructional Articles Wanted

The Editor will be pleased to receive offers of constructional articles dealing with the design of transmitters and receivers suitable for operation on 7, 14, 28 and 56 Mc/s. Articles describing the design and operation of aerial systems are also required. To avoid duplication offers should be made in writing prior to the preparation of the manuscript.

Radio Remote Control of Models

The G.P.O. are prepared to permit those interested in the radio control of models to employ a frequency of 460.5 Mc/s. for the purpose of emitting control pulses. The output from the transmitter must be limited to 5 watts.

Stray

●W./C. Dick Bangay, G3DW, is now at Air Headquarters, R.A.F., Ceylon, and is anxious to contact local members—Service and civilian. Dick hopes soon to be operating as V87DW.

DISTRICT MEETINGS, 1946

APPENDED below is a list of the District Meetings which have been arranged for the current year, together with the names of the Council Representatives who hope to attend.

It is regretted that no information has yet been received from Districts 1, 7, 18 and 19. Due to catering difficulties it will not be possible to hold a meeting in District 8, whilst District 13 (South London) will combine with neighbouring Districts.

Week-end	Venue	Chief Speaker	Supported by
MARCH 24	Birmingham	J. Clarricoats	The President and Members of Council
30-31	—	—	—
APRIL 14	Bristol ..	J. Clarricoats	K. Morton Evans, P. C. Bradley and C. H. Edwards
28	W. London	J. Clarricoats	A. J. H. Watson and H. A. M. Clark
28	Leeds ..	E. L. Gardiner	A. O. Milne and C. H. Edwards
MAY 4-5	Norwich ..	S. K. Lewer ..	J. W. Mathews, P. C. Bradley and C. H. Edwards
12	St. Albans ..	J. Clarricoats	J. W. Mathews and H. A. M. Clark
18-19	Belfast ..	J. Clarricoats	R. H. Hammans, A. O. Milne, S. K. Lewer, P. C. Bradley
26	Torquay ..	E. L. Gardiner	K. Morton Evans, J. W. Mathews and P. C. Bradley
JUNE 2	Leicester ..	A. O. Milne ..	F. G. Hoare and P. C. Bradley
15	Edinburgh	J. Clarricoats	A. O. Milne, A. J. H. Watson, E. L. Gardiner, S. K. Lewer, H. A. M. Clark and P. C. Bradley
16	Glasgow ..	J. Clarricoats	—
JULY 7	Mablethorpe	H. A. M. Clark	F. G. Hoare, S. E. Langley and C. H. Edwards
13-14	—	—	—
21	Southend ..	A. O. Milne ..	F. G. Hoare, R. H. Hammans, S. E. Langley and C. H. Edwards
27-28	—	—	—
SEPT. 1	Tunbridge Wells ..	A. O. Milne ..	R. H. Hammans, F. G. Hoare, and S. E. Langley
7-8	Prestatyn ..	J. Clarricoats	S. K. Lewer and C. H. Edwards
14-15	Swansea ..	E. L. Gardiner	F. G. Hoare, K. Morton Evans and P. C. Bradley

Licence News

We understand from the G.P.O. that up to February 21 a total of 1,600 licences had been reissued to pre-war full licence holders.

* * * * *

During the latter part of February letters were sent to all pre-war holders of A.A. licences (who had made prior application to the G.P.O.) offering a full licence, subject to the Morse Code qualification.

The British Institution of Radio Engineers

The following London Section meetings have been arranged:—
 20th Feb. .. “Aircraft Radio.” Ft./Lt. C. Boville.
 20th Mar. .. “The Effects of Solar Eclipses on the Ionosphere.” Dr. R. L. Smith-Rose.
 17th April .. “The Electron Gun of the Cathode Ray Tube.” Part II. H. Moss.
 20th May .. “Sound Reproduction.” S. W. Amos, B.Sc.
 All meetings will be held in the Lecture Theatre of the Institution of Structural Engineers, 11 Upper Belgrave Street, London, S.W.1., commencing at 6.15 p.m. Nearest stations:—Hyde Park and Victoria.

FORTHCOMING EVENTS

- Mar. 15 London Meeting, 6.30 p.m. at the Institution of Electrical Engineers.
- Mar. 15 District 14 (Chelmsford), 7 p.m. at 184 Moulsham Street.
- Mar. 16 District 6 (Torquay), 6.30 p.m. at the Y.M.C.A. Castle Road. Technical Sound Films.
- Mar. 17 District 12 (Enfield), 3 p.m. at G8SK, 15 Rotherfield Road, Enfield Wash (turning out of Ordinance Road).
- Mar. 17 District 4, 2.30 p.m. at 27 Belvoir Street, Leicester.
- Mar. 18 District 3 (Malvern), 8.15 p.m. at the Piers Plowman Club, Holyrood Terrace, Worcester Road. Lecture by Dr. F. E. Jones, T.R.E., on "Radio Noises from the Sun and the Milky Way" and "Radar Detection of the Moon."
- Mar. 18 District 18 (Hull), 7.30 p.m. at the Imperial Hotel, Paragon Street.
- Mar. 19 District 14 (Chingford), 7 p.m. at G4GA, 1 Templeton Avenue. Two minutes walk from Prince Albert.
- Mar. 19 District 14 (Southend), 7.30 p.m. at G2S0, "Chalet," Woodside, Bellfairs, Leigh-on-Sea.
- Mar. 21 District 15 (Slough), 7 p.m. at 38 Alpha Street.
- Mar. 21 District 4, 7 p.m. at Foresters Hall, Peachy Street, Nottingham.
- Mar. 22 District 5 (Bristol), 7 p.m. at Keen's Cafe, Park Row.
- Mar. 23 District 15 (Twickenham), 6.30 p.m. at 23 Warfield Road, Hampton.
- Mar. 24 Provincial District Meeting, Imperial Hotel, Birmingham.
- Mar. 24 District 4, 2.30 p.m. at Unity Hall, Normanton Road, Derby.
- Mar. 25 District 1 (Stockport), 7.45 p.m. at the Textile Hall, Chestergate. General Meeting and election of officers.
- Mar. 26 District 15, 7 p.m. at The Scouts Hall, Sutton Estate, Great West Road (30 yards East of Vicarage Farm Road).
- Mar. 27 District 2 (Sheffield), 8 p.m. at the "Dog and Partridge," Trippett Lane.
- Mar. 27 District 10 (Swansea), 7 p.m. at Hotel Metropole, Wind Street.
- Mar. 27 Scotland "A" Area, 7 p.m. in the Institute of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow.
- Mar. 28 Scotland "D" Area, 7.30 p.m. in the Chamber of Commerce Rooms, 25 Charlotte Square, Edinburgh. Lecture by Inspector N. Bruce, on "Edinburgh City Police Radio."
- Mar. 29 District 8 (Cambridge), 7 p.m. at "The Jolly Waterman," Chesterton Road. Junk Sale.
- Mar. 30 District 1 (Liverpool), 2.30 p.m. at Stork Hotel. "Lazy Man's Keying," by F/O. J. Davies, G20A. Demonstration of Receiver Alignment by Oscillograph.
- Mar. 30 District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.
- Mar. 31 District 7 (Weybridge), 3 p.m. at York House Cafe, Hangar Hill.
- Mar. 31 District 12 (St. Albans), 3 p.m. at BR83412, 18 Sandfield Road (turning off main Hatfield Road, near Cemetery bus stop).
- April 4 District 4, 7 p.m. at Foresters Hall, Peachy Street, Nottingham.
- April 5 District 12 (North London), 7.30 p.m. at Merryhills Hotel, Bramley Road, Enfield West (near Enfield West Tube Station, 107 bus passes door).
- April 7 Districts 7 and 13, 3 p.m. at Y.M.C.A., North End, Croydon.
- April 7 District 16 (Gillingham), 2.30 p.m. at the Beacon Court Hall, Canterbury Street.
- April 8 District 10 (Cardiff), 7 p.m. at Park Hotel, Park Place, Talk on "The Heavyside Layer."
- April 10 District 1 (Liverpool), 7 p.m. at the Stork Hotel. Series of Short Papers, followed by discussions.
- April 10 District 10 (Swansea), 7 p.m. at Hotel Metropole, Wind Street.
- April 12 London Meeting, 6.30 p.m. at the Institution of Electrical Engineers.
- April 13 District 6 (Torquay), 6.30 p.m. at the Y.M.C.A., Castle Road.
- April 13 District 15 (Ashford), 7 p.m. at 9 St. Hilda's Avenue.
- April 13 District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.
- April 14 District 7 (Croydon), 3 p.m. at 72 Kimberley Rd., West Croydon.
- April 15 District 18 (Hull), 7.30 p.m. at the Imperial Hotel, Paragon Street.
- April 16 District 3 (Birmingham), 6.30 p.m. at Chamber of Commerce, New Street.
- April 17 District 10 (Swansea), 7 p.m. at Hotel Metropole, Wind Street.
- April 18 District 4, 7 p.m. at Foresters Hall, Peachy Street, Nottingham.
- April 25 Scotland "D" Area, 7.30 p.m. in Chamber of Commerce Rooms, 25 Charlotte Square, Edinburgh. "Centimetre Wave Technique," by R. Bloxham, GM6LS.

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

WESTERN PROVINCIAL DISTRICT MEETING

to be held on

SATURDAY, APRIL 13th, 1946

at

THE GRAND HOTEL, BRISTOL

PROGRAMME

Assemble ...	1 p.m.	Business Meeting 2.45 p.m.
Lunch ...	1.30 p.m.	Tea ... 4.30 p.m.
Photographs ...	2.30 p.m.	Station Visits 5.30 p.m.

Inclusive charge: 10/-.

Reservations to Mr. R. A. Lartlett, G6RB, 31 Kings Drive, Bishopston, Bristol, by not later than April 6, 1946

NORTH EASTERN PROVINCIAL DISTRICT MEETING

to be held on

SUNDAY, APRIL 28th, 1946

at the

G.N. STATION HOTEL, LEEDS

PROGRAMME

Assemble ...	1.30 p.m.
Business Meeting ...	2.30 p.m.
Tea and Biscuits ...	4.30 p.m.
Informal Discussions ...	5.30 p.m.

Inclusive Charge, 2/6

Reservations to Mr. C. A. Sharp, G6KU, 56 Moore Avenue, Wisbey, Bradford, not later than April 21st, 1946.

News from Egypt

To celebrate the re-opening of the ten metre band, a meeting was held on November 24, 1945, at the laboratory and workshops of the Middle East Forces Broadcasting station. No less than 37 amateurs attended, including G4RY, 8HW, 2DFL and FRS48. Using the 50 watt station of Major Ken Ellis, SUIKE contacts were established with the U.S.A., Newfoundland, Brazil, Belgium, Kenya, etc.

After a display of technical films had been enjoyed, the party visited the Mir Studios which house the station of Mr. M. Waly, SUI1MW, from where further 10 metre contacts were made.

Cairo Radio Club.—At the home of SUIKE 5KW on January 6, members of the Cairo Radio Club welcomed Mr. R. E. A. Distèche, SUIRD, who, as Vice-President of the Experimental Radio Society of Egypt, has been acting as President since Mr. W. E. Marsh, SUI1WM returned to England. SUIRD informed the

meeting that a new Council of the E.R.S.E. had been elected consisting of:—Mr. M. Waly, SUI1MW (President); Major K. Ellis, SUIKE (Vice President); Mr. G. Moens, SUIRO (Hon. Treasurer); Mr. R. Buckland, SUIDB (Hon. Secretary); Mr. R. Distèche, SUIRD (representing Alexandria Club Members); Mr. H. Bourne, SUIHB (representing Cairo Club Members); Mr. B. A. Bassiouni (representing Receiving Members); Mr. M. S. Reda (Assistant Hon. Secretary).

The retiring Alexandria Council in wishing success to the new Cairo Council were aware of the fact that several of the Cairo members were already in touch with the civil and military authorities on the subject of the re-issue of licences, the early restoration of equipment and revised licence conditions.

(It is regretted that space limitations prevent us from publishing a photograph of the new E.R.S.E. Council to whom we in R.S.G.B. extend greetings and best wishes.—Ed.)

Letters to the Editor

The Future of the Society

DEAR SIR,—During the next few weeks the Council, the D.R.S., and some others are to consider matters relating to the organisation of the R.S.G.B. The future of the Society may be very much affected by the decisions reached and by revisions of the methods of administration which may be made as a consequence. Yet the membership as a whole has not so far shown itself interested in such matters. For example, only about 15 per cent. voted at the last Council election.

As members are scattered all over the country and generally speaking have great difficulty in leaving their homes and jobs even for short periods, large scale exchanges of personal views have been impossible and, indeed, are not likely to be possible in the immediate future. Many members therefore have never met or heard of those for whom they are asked to vote; they may even have considerable difficulty in getting to know their own District Representative. For the same reason it is difficult for Provincial members to serve on Council when they are elected. However, members in the London area belong to a large and geographically compact group and find it easier to know each other. This stimulates general interest within this group and creates a voting capacity which heavily weights the Council with London-area choices.

It is easy, therefore, to understand why many members feel that there is little point or interest in voting at Council elections. For somewhat similar reasons there is usually a very poor response to requests in THE BULLETIN for the opinion of members. Only 0.07 per cent. of the membership made suggestions about post-war operating and procedure in reply to an Editorial asking for views. Yet I am convinced that amongst the membership there exist most valuable opinions based on practical experience in many different branches of the art. I am also convinced that there are many capable and experienced members who could and would contribute to the well-being of all British amateurs if the right conditions could be obtained.

Now is the time, when 10,000 members are entering on what will undoubtedly be a more active period than ever before—to destroy the idea that the R.S.G.B. is only the publisher of the BULLETIN, the provider of a QSL Bureau and the organiser of an occasional bun-fight, and to realise that increased support of the Society will in no small way and in no long time lead to improved conditions for all interested in this hobby.

It is my belief that each individual can help. Has each member spent a little time finding out what the Society is trying to do, and then making his approval or disapproval known? Does his T.R. or D.R. know his views? Has he sent in his opinion (if he has one) on subjects raised in THE BULLETIN? And is there any reason why these matters should not be discussed on the air on local and short-skip bands?

In view of the subject matter, I wonder how many will have read this letter to the end!

Yours truly,

K. MORTON EVANS (G5KJ).

Ionospheric Data

DEAR SIR,—I beg to place before you suggestions for two services which the Radio Society of Great Britain could with advantage provide in future for the benefit of members of the Society. The suggested services are:—

- (a) The printing in THE BULLETIN of monthly ionospheric prediction data. This should be published in time to be of value to members in all parts of the world.
- (b) The broadcasting in Morse once weekly of a message, giving the predicted behaviour of the ionosphere for the seven following days.

My reason for suggesting the provision of these services is that Amateur Radio depends to a large extent on the behaviour of the ionosphere. Although this is so, amateurs as a whole have not in the past had a great deal of current information on this subject placed at their disposal. In my experience, both in the Army and elsewhere, this has frequently resulted in amateurs being at a loss to know what frequencies to use when wishing to establish a new radio circuit at times of the day other than those at which they have been in the habit of operating. The provision of this data would be of the greatest value to members wishing to fix schedules which necessitate skywave transmission, and would accustom members to the use of the prediction charts, which are apt to cause trouble when they are studied initially. It might also have the further beneficial effect of stopping a lot of useless calling to countries which are not in range at a particular time on a given frequency.

It is likely that the necessary information can be obtained from the Postmaster-General. It is, however, available in full to the Signals Directorate at the War Office, who would probably be pleased to supply it to the Society, now that it is presumably of no security value.

Yours faithfully,

H. E. F. TAYLOR (VU-2FS), Ex. Lt.-Col. R. Signals, Warkworth, Onslow Crescent, Woking.

(The Council have considered the suggestion regarding the publication of Ionospheric data charts, but cannot see any way of carrying it into effect until the paper position improves.—ED.)

A Fine Tribute to the British Artisan

DEAR SIR,—In the July, 1945, issue of the BULLETIN appeared a notice under the heading "The Post-War Amateur Market" (page 13) to the effect that G4BI would be glad to hear from members with ideas regarding types of chassis, etc.

I wrote to G4BI giving him some ideas of my own (which may or may not have been useful), but to cut the story short, I have had a number of jobs done by him. Some of these jobs could not have been too easy as the drawings were somewhat intricate and detailed, especially for cabinets to accommodate gear built up during the war period. I would like to say how extremely well the work was carried out. All instructions have been followed exactly and the finish of the work has been really first class. The prices, too, have been very reasonable.

The point of writing this letter is that I feel we have here a member, an amateur himself, who is prepared to cater for the diverse requirements of amateurs and to execute the work precisely, promptly and at reasonable prices. I have had such satisfaction that I feel that I must thank you for the insertion of the notice in the BULLETIN. The efforts of G4BI, if known would, I am certain, meet with the appreciation of other members as they meet a need. It is somewhat difficult, particularly in the provinces, to get satisfactory work of this nature done.

Yours sincerely,

E. A. HAYWARD (GW2UH).

(Editorial Note.—It gives us much pleasure to publish this letter which confirms our frequently-expressed view that the British Radio Amateur need not go abroad for components or equipment.)

Fairness to the B.R.S.

SIR,—Now that many of us who are fortunate enough to possess licences, are back on the air again, I wonder how many are giving any thought to their brothers in the Society, the B.R.S. men, who at the present time, probably outnumber the "2-letter" men by at least ten-to-one.

The B.R.S. derives most of his pleasure from logging and listening, to the amateurs who can be heard on the air and the first duty of the latter is to give the listener the chance of identifying the station to whom he is listening. Yet already, one notices on the new bands, an almost complete disregard for both licence requirements and the needs of B.R.S. members in this respect. After long discourses often of negligible value, the sender mutters his call-sign hurriedly, and only once before changing-over, and often starts his reply in the same way. The same procedure often accompanies C.W. transmitters, the most prevalent fault here being a sudden increase in speed when the call-sign is sent. Consideration demands that the call-sign should be repeated slowly several times whenever sent, for most B.R.S. members are learning the code. Speed represents efficiency only when the time factor is of importance.

Much more could be said on the subject, but two points will perhaps suffice.

In telephony transmissions, the recognised phonetic word-code for identifying call-letters should always be included* (e.g. Washington Santiago for WS).

In making C.W. calls, particularly on the 58 Mc/s band, the wavelength of the transmission (e.g. "five"), should be included in order that the calls may be distinguished from harmonics.

I am sure that attention to the above points—a small contribution from those who are lucky enough to be on the air—would greatly increase the pleasure to be derived from Amateur Radio by those who are not yet privileged to transmit.

Yours faithfully,

W. A. SCARR (G2WS).

(*Editorial Note.—Licence condition 10 states: "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 capable of undesirable misinterpretation.")

OUR FRONT COVER

THE MULLARD BEAT FREQUENCY OSCILLATOR, Type E.810, provides a convenient power source for studying the characteristics of amplifiers, transformers, telephone transmission lines and similar equipment at audio frequencies. It may also be used to provide modulation for radio frequency signal generators and "time marking" calibration for electrical time-bases. SPECIFICATION: Frequency range, 15 c/s.—20 k/c/s. Frequency stability, after two hours running frequency drift less than 2 cycles per hour. Percentage total harmonic distortion (max. output) 1%. Max. power output, 4 watts. Percentage hum level (max. output) 0.1%. Output is constant within 1 dB over the entire frequency range. Output impedances are 2,500, 600 and 15 ohms.

HEADQUARTERS CALLING

COUNCIL 1946

President:

ERNEST LETT GARDINER, B.Sc., G6GR.

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

Honorary Secretary: H. A. M. Clark, B.Sc. (Eng.), 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: P. C. G. Bradley, G8KZ; C. H. L. Edwards, G8TL, R. H. Hammans, G2IG, F. G. Hoare, G2DP, S. E. Langley, G3ST, Capt. J. W. Mathews, G6LL, K. Morton Evans, O.B.E., GW5KJ.

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

General Secretary: John Clarricoats, G6CL.

January Council Meeting

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, January 14, 1946, at 5.30 p.m.

Present.—The President (Mr. E. L. Gardiner, in the chair), Messrs. S. K. Lewer, A. D. Gay, H. A. M. Clark, A. O. Milne, A. E. Watts, P. C. Bradley, C. H. L. Edwards, K. Morton Evans, R. H. Hammans, J. W. Mathews and John Clarricoats (General Secretary).

Apologies.—The General Secretary presented apologies for the absence of Messrs. F. G. Hoare, S. E. Langley and A. J. H. Watson.

1. The President extended a warm welcome to the new members of the Council.

2. It was resolved to elect 237 Corporate members, 23 Associates, 5 Junior Associates, and 2 Junior Associates to Corporate Membership.

Messrs. G. H. Gratton, LU9EV, A. Eaton, BERS553, F. W. Adderley, BRS9710 and P. W. Feeley, BRS10,068, were elected to Life Membership.

3. It was reported that the total membership of the Society as at 31st December, 1945, was 10,209, representing an increase of 7,000 since September, 1939.

4. Messrs. Sir Joseph Causton & Sons, Ltd., wrote informing the Society, that due to a new wage increase which had been approved by the British Federation of Master Printers, it would be necessary to again increase the printing charges for the R.S.G.B. BULLETIN. This, together with those previously notified, represented a total increase of 55 per cent. since September, 1939. Council agreed reluctantly to accept the demand.

5. It was agreed to consider at a later meeting a suggestion that the R.S.G.B. Calibration Service be revived.

6. A member wrote to suggest that the Society should seek to obtain copies of Ionospheric Prediction Charts, with a view to publication of same in THE BULLETIN. It was agreed to institute enquiries.

7. It was reported that the Radio Industry Council had not yet replied to the Secretary's letter dated December 14, 1945, in which he had solicited their support for a proposal that certain items of surplus government radio equipment should be made available to the membership through the good offices of District and Town Representatives.

8. A firm of BULLETIN advertisers wrote offering cash prizes in connection with a competition they proposed arranging to obtain designs for short wave communication type receivers. The competition would be confined to R.S.G.B. members, and the Council would be invited to provide judges. After a full discussion it was agreed that the Secretary, in consultation with the President, should address a letter to the firm concerned thanking them for their offer, at the same time pointing out that the Society cannot officially support the proposals put forward. It was further agreed to suggest to the sponsors that publicity to the competition be given through the medium of the advertising pages in THE BULLETIN, and that the competition be open to all licensed amateurs not engaged professionally in the Radio Industry.

9. It was reported that seven members who had served during the war as Observers in the Royal Observer Corps, had been awarded the British Empire Medal.

10. Several matters relating to the re-issue of licences and to the opening up of the lower frequency bands, were discussed at length.

It was agreed to draw the attention of the G.P.O. to the continued operation in the 7 Mc/s. band of station JCKW, Cairo, and other British controlled broadcast stations.

11. It was reported that a revised and amended list of radio service trades, which it is expected will carry exemption from

Morse and/or Radio Theory tests, was in course of preparation and would be published in an early issue of the R.S.G.B. Bulletin.

12. The Secretary tabled the first post-war I.A.R.U. Calendar and drew attention to several matters referred to therein regarding post-war licence arrangements.

13. It was reported that orders totalling 3,000 Handbooks and 1,660 Supplements were awaiting execution. No publishing date for the new printings of the Handbook and Supplement could yet be given by Caustons.

14. A lengthy discussion took place (with Mr. W. A. Scarr present), regarding the Radio Amateur's Examination. It was agreed to publish the syllabus together with specimen questions and model answers in the February issue of THE BULLETIN.

15. The following members were re-appointed District Representatives for the year 1946: Messrs H. W. Stacey, G6CX; C. A. Sharp, G6KU; V. M. Desmond, G5VM; R. A. Bartlett, G6RB; W. B. Sydenham, G5SY; W. E. Russell, G5WP; S. J. Granfield, G5BQ; H. W. Sadler, G2XS; S. Buckingham, G5QF; H. V. Wilkins, G6WN; A. C. Simons, G5BD; R. J. Bradley, G2FO; J. N. Smith, G15QX; James Hunter, G6ZV.

The following members, having returned to civilian life and having expressed their willingness to resume their duties, were re-appointed D.R.s for the year 1946: Messrs. L. Ridgway, G2RI (No. 4) and W. H. Allen, G2UJ (No. 16).

The following members, having served as Acting D.R.s during the war period, were appointed D.R.s for the year 1946: Messrs. H. H. Phillips, GW4KQ (No. 10), and S. E. Langley, G3ST (No. 13).

The Secretary reported that it was not yet possible for him to make recommendations in regard to representation in Districts 11, 14 and 18. Council agreed to record its thanks to those members who, during the war period, acted as deputy D.R.s.

16. A detailed agenda for the D.R.'s Conference was submitted and approved.

The meeting closed at 9.15 p.m.

New District Representatives

The Council has been pleased to appoint Mr. J. Starkey, GW6KY, "Endon," Grontat Road, Prestatyn, N. Wales, to the office of Representative for District 11 (North Wales) and Mr. L. Fuller, G6LB, Meadow Brook, Vicarage Lane, Gt. Baddow, Chelmsford, Essex, to the office of Representative for District 14 (Eastern).

The new D.R.s are well-known in their districts and will, we feel sure, receive the full support of all local members.

The thanks of the Council have been conveyed to Mr. C. Spillane, BRS1060, who has carried out the duties of Deputy D.R. for North Wales during recent years and to Capt. L. Varney, G5RV who was their Representative in District 14 prior to joining R.Signals.

Southend and District Radio and Scientific Society

Regular fortnightly meetings of the above Society have now been resumed. Alternate meetings will be devoted to informal discussions and lectures by eminent men in the radio and scientific field.

The summer programme of field days is now being prepared. Other Societies and members interested should write to Mr. J. M. S. WATSON, G6CT, 23 Eastwood Boulevard, Westcliffe-on-Sea.

Service Valve Equivalents

The Editor will be pleased to consider for publication a comprehensive list of Service valve types and their commercial equivalents. For convenience of reference the list should quote Service types first, followed by their equivalents.

Can you Help?

Mr. R. J. Bradley (G2FO), 36 Baby Road, Stockton-on-Tees would be pleased to hear from anyone able to supply details of the characteristics of the following continental valves: UCH21 UBL21 and UY1N.

Congrats

● To C.P.O. Stanley Garnett, G4AW, who was recently awarded the British Empire Medal.

STAFF VACANCIES

at

R.S.G.B. HEADQUARTERS

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

EXCHANGE AND MART SECTION

IMPORTANT NOTICE.

IT IS WITH MUCH REGRET THAT DUE TO PRESSURE ON OUR VERY LIMITED SPACE NO EXCHANGE & MART ADVERTISEMENTS WILL BE ACCEPTED UNTIL FURTHER NOTICE.

Apologies are offered to those readers whose announcements have unavoidably been held over from this issue.

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

ALUMINIUM Sheets, 18 in. x 16½ in. x 1/16 in., 2s. 6d. each, postage 6d. Black crackle finished aluminium chassis 16½ in. x 9 in. x 2½ in., end pieces rivetted, 7s. 6d. each, postage 9d. Other size panels and chassis.—S.A.E. Lists, AMATEUR RADIO SERVICE, G6HP.

AMATEUR Surplus Gear.—2½ in. moving coil meter, 0-100mA, 30s. Hot wire R.F. ammeter 0-5 amps, 10s. Brown type "F" phones, 12s. 6d. Power pack, 400v. 120mA, 6 3v 3A, 5v 3A, 63s. S.A.E. for list of further bargains. Tx tubes, crystals, condensers, etc.—G8UA, 469 Higher Brunshaw, Burnley, Lancs.

AMATEUR Band Receiver wanted; medium price; also 100/1000 Kc/s. crystal. Henney's Handbook.—BM/GRID, London, W.C.1.

AMATEUR Radio Products.—Now available, four waveband coil unit for 2-valve S.W. battery receiver, 9-8 to 206 metres. For other products see adv't. in Feb. issue.—AMATEUR RADIO PRODUCTS, 50 Glasslyn Road, Crouch End, London, N.8.

AMATEUR Surplus.—Very little used and in excellent condition. Prices each. Bracketted figure indicates quantity available. Valves 57 (2), 58 (2), 3s. MH41 (1), ACZHL (1), 3s. 6d. 6H6 (2), EF39 (1), 6K7 (2), 6SK7 (2), UX210 (2), 5s. 6d. 6K6G (2), 1613 (2), 6s. 6d. 6L6G (3) 523 (1), 7s. 6d. 4033A (2), 9s. 955 (2), 9002 (1), 11s. 956 (2), 9003 (2), 16s. TZ 05/20 (1), GU50 (2), 10s. 6d. KTS (2), 807 (2), 12s. TZ40 (2), 17s. 6d. PT15 (2), £1. 813 (1), £3. 2s. 6d. Please first reserve by postcard. If no reply within 14 days, assume already sold.—Box E/49, PARRS, 121 Kingsway, London, W.C.2.

AMPLIFIER, 5 stage, 12 watts push-pull output, pick-up microphone inputs, energised speaker, electric turntable, in portable cases; £30 or near offer.—37 West Ella Road, London N.W.10.

AVOMINOR Universal AC/DC brand new, unused, perfect, £7 15s. cash. Heavy leather case for same 10s. extra.—KING, 38 Sycamore Grove, New Malden, Surrey.

AVOMINOR, £3. "Radio Service Test Gear." Pitman, 5s. "Short Wave Radio." Reyner, 8s. 6d.; mint condition.—STACEY, 11 Pen darves Road, Falmouth, Cornwall.

BRAND New Valves.—EI2, PM24M, EBC3, EK2, 25L6GT, 6J5, 57, 12SF5, 6K8, 42, £3 15s. the lot. 13 second-hand U.S.A. valves guaranteed, £3 10s. Accept £6 10s. the lot.—BR87579, 17 The Terrace, Bray-on-Thames, Berks.

BRITISH and Colonial stamps wanted. Anyone who has any to dispose of or has a good collection for sale is asked to write to BR81579, 26 Mornington Road, Bolton, Lancs.

BR84775 will supply your gear. Condensers, electrolytics, high voltage paper, variables, etc. Resistors, potentiometers, valves, transformers, chokes, chassis to your measurements, test equipment, Avos, etc. Send for List or send list of your needs; all first class goods. Send 1d. stamp, please.—BARTON, Oxlynch, Stonehouse, Glos.

CLOSING Down Sale of transmitting and receiving components. All best makes in good condition. Very varied selection. Any evening.—21 Offham Slope, Woodside Park, London, N.12.

CO-AXIAL Cables 45 ohms, 35 ft. lengths, 7s. 6d. Panels and trays standard 19in., 18 gauge steel, complete, 8s. 6d. Few light TX racks, 35s. each. All post paid. All Raymet and Hamrad equipment stocked.—DRURY and BEARDOW, 45 Wangey Road Chadwell Heath, Essex.

COIL Winder for sale.—Suitable for small transformers and wave wound coils. Hand driven. Price £12 12s.—Box E/51, PARRS, 121 Kingsway, London, W.C.2.

COMMUNICATION Receiver for sale, RME 69, £45, also commercially-built transmitter, RK25, RK20 output, complete in cabinet with modulating equipment, power supplies, valves, coils and crystal. Offers! Can deliver above personally London or South. McElroy De Luxe bug Key, 35s. McElroy practice audio oscillator, 30s. R.C.A. 805 Triode, £4. Many back numbers Q.S.T. 1s. BULLETIN 6d., 1938-40—G2TR, J. SCHOFIELD, Boundaries, Four Marks, Alton, Hants. Tel: Medstead 2153.

COMPLETE Super Amateur Station.—Latest model "Super Skydriver," SX28 receiver. Tempeco T.100 (U.S.A.) 100/150 watts phone or c.w. Transmitter with built-in oscilloscope "Sure" Crystal Mike. "Amplex" (mains driven) rotating beam head. "Dural" 10 metre three-element beam array, 150 ft. Co-axial cable. Enclosed key. 10-20. 40 and 80 metre crystals.

G.B. frequency meter 3-4 Mc to 61Mc/s. Speakers. New transmitting and receiving valves. Home-made Transmitters, spares, etc., over £300 worth of modern and new equipment. What offers for the lot?—S.A.E., MORTIMER, "Dore," Sheffield. Phone: 70210.

DEMOBBED R.A.F. Technical Signals Officer and licensed amateur Levenshulme district, Manchester, wishes to meet keen practical R.S.B.G. Member willing to assist him in his amateur radio hobby. Workshop and test equipment available.—Box E/50, PARRS, 121 Kingsway, London, W.C.2.

ENTHUSIASTIC Radio Amateur wanted for Amateur Radio Retail shop in Birmingham. Excellent prospects.—Write Box E/C, PARRS, 121 Kingsway, London, W.C.2.

EVERYTHING for Amateur Radio at prices to suit Ham pockets. Condensers, volume controls, resistors, transmitting and receiving valves. Send your enquiries, S.A.E. to F. J. POPPLEWELL (G6PL), Hollin Bank, Heckmondwike, Yorks.

EVERYTHING for the Amateur!—If you are building a transmitter, communications receiver, high fidelity audio equipment or test apparatus, come along and see us. We can help you. Send 2½d. stamp for List "R"—TELE-RADIO (1943) Ltd., 177 Edgware Road, London, W.2.

EXCHANGE Collaro Crystal p.u. head, new condition for split-stator maximum .00004 each section.—G6KR, "Ardul," Wenlock Road, Shrewsbury.

FOR Sale.—Portable Oscilloscope 4½ in. Tube, £8, or offer.—BR8.8072, 109 Fortress Road, Tuffnell Park, London, N.W.5.

FOR Sale.—Taylor Meter, new. Hunts capacity analyser, little used. Photo enlarger, new. P.A. speakers, microphone.—GRAHAM NEWBURY, Melody House, Axminster.

FOR Sale or Exchange.—Complete Station for sale. TX. Phone/CW. 2 crystals. Valves, Power packs. Modulator. Also Hammarlund RX. Phones. IS and all gear. S.A.E. for lists, or £35 lot or offers; seen by appointment.—2BDG, 36 Wellhouse Road, Leeds, 8.

G2JS requires the following:—One to Ten metre receiver; Eddystone or similar. Communication receiver suitable for A.C. and battery operation. Good price paid for F.B. gear.—Particulars to BAYES, 58 Cresswell Street, King's Lynn.

G8FJ for Hamrad components, Partridge transformers, Brown's Headphones type "A", 57s. 6d. Type D1, 32s. 6d. Type "F" 23s., post free.—Stamp for list, H. S. NORRIS, Grad.I.E.E., 7 Kingshill Crescent, St. Albans.

GRANTA AC4 Kit parts less valves, £5. A.M. valves, 6s. each. 8µF electrolytics, 3s. 6d. S.A.E. your requirements.—JARVIS, 190 Harrowby Road, Grantham.

GUARANTEED "Ham" supplies. Full range FB "Sifam" MC meters in stock. Leading SW agents. Lists.—STUCK'S RADIO, North Street, Sudbury, Suffolk.

HALLICRAFTERS, 1940 Sky Champion (8.20.R.) in good condition. Best offer secures.—JOHNSON, Drove House, Ditchingham, Norfolk.

HAMMARLUND Comet Pro, 4 sets coils 13-200 metres, £32.—2HDV, 44 Earle Road, Bramhall, Stockport. Would consider exchange National-One-Ten.

HEAVY Duty 6 foot rack in 3 in. channel, £5. Weston 0-2mA flush mounting, 30s. Rola G12. 1000 ohm field with PP. PX25 trans, £5.—2CY, 13 Elm Drive, St. Albans.

H.M.V. Cabinet Radio for sale. Perfect condition; also all kinds of components and spares. Sold as lot.—T. BURNIE, 114 Church Street, Staines, Middlesex.

H.M.V. Radiogram; superb, good condition (recently overhauled) late model. What offers?—Apply, V. C. HARDY, 2 Clorane Gardens, Hampstead, London, N.W.3., or 'phone Museum 3366.

HRO Coils Wanted.—480-960kc/s, 180400kc/s, 100-200kc/s, 50-100kc/s; good condition essential.—79, Allesley Old Road.

H.R.O. Coils, 3-5 to 7.3Mc/s; 14 to 30Mc/s; 9 to 205kc/s. Good price paid.—Box E/P, PARRS, 121 Kingsway, London, W.C.2.

HT Motor Generator, 230v DC input 600v. 100mA and 6v LT output. Direct coupled on cast iron bedplate; £7 10s. "Ever-shed" HT Mag. Generator 1000 volts, 40mA, £3 10s. Two super-regenerative battery receivers for 58Mc with valves, £4 each. One battery type S.W. converter 58Mc with valve, £3 10s. All above in aluminium boxes. Eddystone components. S.A.E. for details.—Box E/34, PARRS, 121 Kingsway, London, W.C.2.

INSURE your Radio Equipment. Special terms to cover Fire, Burglary, Damage and Legal Liability of Members of Radio Society of Great Britain are quoted by the Edinburgh Assurance Company Limited.—Apply for particulars to: 1-2 Royal Exchange Buildings, London, E.C.3.

LEKDS and district please note.—You can obtain your transmitter components from Grand Arcade Radio. All Hams and short wave enthusiasts welcomed personally by G8OG. We are "Ham" radio exclusively, not dabblers. GRAND ARCADE RADIO, 6 Grand Arcade, Leeds. (Top of Brigazette).

MEMBER can find positions for three keen amateurs with a good sound knowledge of fixed P.A. sound repeating equipment associated mics, lines and speakers.—Box E/75, PARRS, 121 Kingsway, London, W.C.2.

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

NATIONAL NC 100 communication receiver with speaker. Perfect condition, £40.—G5VU, 8 Eton Grove, Wollaton Park, Nottingham.

NEW business appointment puts Ham QRT. All gear for sale. Trophy 8, preselector and speaker, coverage 7/550 metres, recently realigned, perfect; what offers?—S.A.E. for lists, Box E/69, PARRS, 121 Kingsway, London, W.C.2.