

R·S·G·B

BULLETIN

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN

October 1945

The original front cover for this edition was not available.

The original front cover for this edition was not available.

NEW MEMBERS

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

British Isles (Licenced Amateurs)

- G2KM †C. STANTON, Hill Crest, Holmes Lane, Bilton, Hull.
 G2LR †W. E. DUNN, Morton Grange, Swinderby, Nr. Lincoln.
 G2YK H. T. WINTER, 23 Willoughby Park, Tottenham, London, N.17.
 G3DM *E. C. MCLOUGHLIN, 36 Springwell Road, Liverpool 20.
 G3QJ J. S. DUNN, Highlands, Bank Lane, Riddlesden, Keighley, Yorks.
 G3VI F. C. TURNER, 8 New Road, Calne, Wilts.
 G3GJ †R. H. LAWRENCE, 16 Charing Cross, St. Heliers, Jersey, Channel Island.
 G3XI E. G. WILLIAMS, 10 Greenside Road, Shepherds Bush, London, W.12.
 G4HC H. V. WATLING, 15 Lucas Road, Colchester, Essex.
 G4RW †R. A. WILSON, 9 High Beach, Felixstowe, Suffolk.
 G5IK B. L. STEPHENSON, 22 Moss Lane, Bramhall, Cheshire.
 G5KD F. M. SMITH, 2 Westbourne Avenue, Hull, Yorks.
 G5MZ *F. M. MACDOWELL, Morningside, Finaghy Road South, Belfast.
 G5OB *G. H. JOHNS, B.Sc., 11 Radway Road, Southampton.
 G5WL F. M. RHODES, 318 Canterbury Street, Gillingham, Kent.
 G5VY †T. VICKERY, 48 Willow Road, Enfield, Middlesex.
 G5XU †T. N. LORD, Hazelhurst, London Road, Bracebridge Heath, Lincoln.
 G5YU †C. F. SCRUBY, 7 The Grove, North Cray, Sidcup, Kent.
 G6AX †A. L. CLARE, 59 Hamer Lane, Heybrook, Rochdale, Lancs.
 G6QA †T. A. WHITELEY, 82 Molyneux Street, Rochdale, Lancs.
 G6SX V. S. SLIGHT, 9 Chambers Road, Southport, Lancs.
 G6WK W. J. WICKS, 56 Botwell Common Road, Hayes, Mdx.
 G6WQ †A. C. WEBB, 233 Southbourne Grove, Westcliff-on-Sea, Essex.
 G8BD †G. W. HAYWARD, 19 Ailsford Road, Purbrook, Portsmouth.
 G8CL G. PATRICK, Linton House, Cornsay Colliery, Durham.
 G8HW †A. G. COURTENAY, The Old House, Bradford-on-Avon, Wilts.
 G8OQ †W. PRICE, 1 Hamilton Street, Hoole, Cheshire.
 G8QU †A. J. MOURTON, 18 Baalbec Road, Highbury, London, N.5.
 G8SL †H. SMITH, Relay House, High Street, Braintree, Essex.
 G8UB †G. V. MARCHBANK, Four Ways, Llyncllys, Oswestry, Shrops.
 G8WB †G. H. W. SEWELL, 35 Penkett Road, Wallasey, Ches.
 G8WL R. H. WEBB, 26 Waverley Rd., Kenilworth, Warwicks.
 2ABT †N. MOORCROFT, 3 Beaconsfield Street, Deane Road, Bolton, Lancs.
 2AQH J. R. GRIFFITHS, 39 Glenwood Road, Chellaston, Nr. Derby.
 2BOY B. H. YOUNGMAN, 48 The Vale, London, N.W.11.
 2BXZ †K. HINCH, 11 Kingston Villas, Northgate, Cottingham, E. Yorks.
 2CJH A. Q. MORTON, 23 Braidfauld Street, Tollcross, Glasgow, E.2.
 2DPD R. H. WEST, 82 Palewell Park, East Sheen, S.W.14, Surrey.
 2DTB R. GRAHAM, Fernlea, Drumalis, Larne, Co. Antrim, N. Ireland.
 2DZG W. E. CAUGHEY, 218 Duncairn Gardens, Belfast, N. Ireland.
 2FCO A. STEAD, 37 Princess Avenue, St. Helens, Lancs.
 2FFL C. YOUNG, 18 Harley Crescent, Harrow, Middlesex.
 2FHD MRS. S. DYER, 25 Annerley Road, Bournemouth, Hants.
 2FQS R. L. BARRETT, 186 Princes Road, Dartford, Kent.
 2FSD K. C. SATON, 8 Strathmore Road, Wimbledon Park, London, S.W.9.
 2FWD R. E. GALPIN, 67 Thornhill Rd., Llanishen, Cardiff.
 2HAS J. WALKER, 99 Woodfield Avenue, Wollescote, Nr. Stourbridge, Wores.
 2HCJ *R. C. TAYLOR, The Lodge, Higher Walton, Warrington, Lancs.

British Empire (Licenced Amateur)

- ZBIG *P. BONNICI, 21 Sannat Road, Victoria, Gozo, Malta.

Foreign (Licenced Amateurs)

- F3QE F. A. DURIEUX, 128 Rue Richard De Fournival, Amiens, France.
 F8AV J. J. DIEUTEGARD, 13 Rue Christiani, Paris, 18, France.
 F8PV G. L. VUILLEMOT, 45 Rue Paul Avet, Creteil (Seine), France.
 ON4AZ L. C. M. SANDERS, Statiestraat 38, Berchem, Antwerp.
 ON4MS L. BORGHMANS, Moerstraat 8, Wetteren, Belgium.
 ON4UF L. RICHARD, 32 Rue Capitaine Crespel, Brussels, Belgium.

British Receiving Stations (B.R.S.)

- 1675 †C. A. CORBIN, 55 Southwark Park Road, London, S.E.16.
 9963 R. R. MITCHELL, 60 Shieldhall Rd., Glasgow, S.W.1., Scotland.
 9964 G. B. LAMB, 22 Appin Rd., Dennistoun, Glasgow, E.1.
 9965 *V. J. CARTER, 85 Temple Rd., Croydon, Surrey.
 9966 A. TWISS, 23 Manor Way, Petts Wood, Nr. Orpington, Kent.
 9967 B. O. HAMILTON-JACKSON, Fairmeade, Whitton, Ipswich, Suffolk.
 9968 W. OAKLEY, Eversholt, Chesterfield Rd., North Wingfield, Chesterfield, Derbyshire.
 9969 R. W. ALLAN, 60 Westbourne Rd., Luton, Beds.
 9970 *D. K. BLAGBOROUGH, Castle Hotel, Gratton Rd., Bradford, Yorks.
 9971 G. BUXTON, 116 High Lane East, West Hallam, Nr. Derby.
 9972 *J. BUCKLEY, 26 Radclyffe Street, Chadderton, Nr. Oldham, Lancs.
 9973 H. E. PAYTON, Mandalay, 65 Goodrest Avenue, Quinton, Birmingham, 32.
 9974 N. LOGAN, 108 Hatters Lane, High Wycombe, Bucks.
 9975 W. T. QUIBELL, 95 Woodhead Rd., Sheffield 2, Yorks. (Transfer from Associate Grade).
 9976 *D. W. ALLUM, 17 Ashcombe Rd., Wimbledon, London, S.W.19.
 9977 W. A. MARTIN, 31 Boundary Rd., Beeston, Nottingham.
 9978 L. STOKES, 28 Glenroft Rd., Sheldon, Birmingham, 26.
 9979 R. E. NICHOLSON, 36 Ashfield Av., Beeston, Nottingham.
 9980 *J. W. DALE, Wainlode, 8 St. Isan Rd., The Heath, Cardiff.
 9981 G. E. RICHARDSON, 118 Regent Court, Bradford, Sheffield 6.
 9982 *E. R. SCRIVENS, 4 Ingram Road, Canley, Coventry.

A CORDIAL WELCOME IS EXTENDED
 TO THE
502
 NEW MEMBERS
 WHOSE NAMES ARE LISTED

- 9983 R. D. PRYCE, Baildon Royd Flats, Baildon Bridge, Shipley, Yorkshire.
 9984 *F. D. RAWLIFFE, 97 Shenstone Valley Rd., Quinton, Birmingham 32.
 9985 *A. E. TAYLOR, 4 Beeches Rd., Leamore, Walsall, Staffs.
 9986 B. BONNER, The Wireless College, Colwyn Bay, N. Wales.
 9987 *C. W. SMITH, 76 Victoria Park Gardens, Bramley, Leeds, Yorkshire.
 9988 *D. C. SMITH, 37 Courtlands Avenue, Hampton, Mdx.
 9989 *W. A. DUNKLEY, 11 Anceel Rd., Stony Stratford, Bucks.
 9990 C. N. GREEN, 73 Elmes Rd., Moordown, Bournemouth, Hants.
 9991 *W. BURNETT, 54 Fydel Street, Boston, Lincs.
 9992 *D. H. FRANCE, 25 Marlborough Rd., Chiswick, London, W.4.
 9993 *S. A. MABEY, The Homestead, Scotton, Catterick Camp, Yorks.
 9994 *R. W. SHARGOOL, 4 Dunbar Avenue, Norbury, London, S.W.16.
 9995 *K. S. TONKS, 30 Sussex Square, Brighton, Sussex.
 9996 *E. B. HANCOX, 19 Exeter Place, Windmill St., Birmingham 1.
 9997 *M. D. WINN, 25A Hollinshead Street, Chorley, Lancs.
 9998 J. W. SORSBY, Donavoured, 1 Hillside Avenue, Hillfoot, Bearsden, Dumbartonshire, Scotland.
 9999 W. CROSS, 8 Boundary Rd., Rugby, Warwicks.
 10,000 MISS P. R. COUSINS, Beach Farm House, Thorpeness, Nr. Leiston, E. Suffolk.
 10,001 *R. A. WEBB, 67 Wightman Rd., Harringay, London, N.4.
 10,002 *F. MACBETH, Old Manse, Reay, Caithness, Scotland.
 10,003 *G. R. RUSTAGE, 25 Maple Lane, Whitefield, Manchester.
 10,004 A. J. CRUICKSHANK, 36 Coupar Angus Rd., Lochee, Dundee, Scotland.
 10,005 *L. THOMAS, 43 Ryshworth Crescent, Bingley, Yorks.
 10,006 L. G. SIBBICK, 43 Preston Rd., Yeovil, Somerset.
 10,007 *F. ALBINSON, 123 Park Rd., Liverpool 8.
 10,008 *C. G. OLLY, 56 Hampton Rd., Forest Gate, London, E.7.
 10,009 *K. W. HOWE, 15 Newlands Rd., Southend-on-Sea, Essex.
 10,010 *W. J. TITMARSH, 64 Olinda Rd., Stamford Hill London, N.16.
 10,011 *G. L. COYLES, 35 The Gardens, Whitehaven, Cumberland.

* Denotes known to be on Active Service.

† Denotes Re-elected.

- 10,012 *N. E. DOWNS, 24 Hope St. West, Macclesfield, Cheshire.
 10,013 *G. DENISON, Beechville, Stockport Rd., Lr. Bredbury, Stockport, Cheshire.
 10,014 S. E. HOLMES, 89 Worthing Street, Hull, Yorks.
 10,015 W. BURROWS, 41 Bramcote Rd., Beeston, Nottingham.
 10,016 G. W. BARRINGTON, 4 Coxstalls, Wootton Bassett, Swindon, Wilts.
 10,017 *S. PARKS, 21 Golders Gardens, Golders Green, London, N.W.1.
 10,018 P. S. HOSE, Clarecote, East Lane, West Horsley, Surrey.
 10,019 *A. V. KNIBBS, 26 Bankfoot Rd., Bromley, Kent.
 10,020 *A. TURNER, 41 Backhold Drive, Siddal, Halifax, Yorks.
 10,021 *H. MOSS, Moss Side, Tarleton, Nr. Preston, Lancs.
 10,022 *H. STEPHENSON, 18 Verney Crescent, Allerton, Liverpool 19.
 10,023 H. PARTINGTON, 5 Beechwood Street, Great Lever, Bolton.
 10,024 *G. NEAME, Rose Lodge, Rose Mount, Douglas, Isle of Man.
 10,025 W. J. WRIGHT, 152, Eltham Palace Road, Eltham, London, S.E.9.
 10,026 R. T. G. RANCE, 32 Lodge Rd., Rugby, Warwicks.
 10,027 *L. F. FORD, 5 Charnwood Drive, Kirby Muxloe, Nr. Leicester.
 10,028 *F. G. GILBERT, 40 Louise Road, Dorchester, Dorset.
 10,029 D. WEBB, 25 Dundela Crescent, Strandtown, Belfast.
 10,030 *D. LAMMIE, 3 Byron Road, Chesterfield, Derbyshire.
 10,031 W. L. HOWAT, The Bungalow, Blore Heath Farm, Market Drayton, Salop.
 10,032 S. A. THOMPSON, 4 Emerald Street, Holbeck, Leeds 11.
 10,033 *W. C. A. SALTON, 53 Spey St., Poplar, London, E.14.
 10,034 *N. H. WILLIS, 17 Haltemprice Street, Hull, Yorks.
 10,035 *R. W. CULLEN, 13 Glenhouse Rd., Eltham, London, S.E.9
 10,036 J. A. GARWELL, 12 Regent Street, Spalding, Lincs.
 10,037 L. A. FREEMAN, 125 Nelson Road, Gillingham, Kent.
 10,038 *G. E. WILSON, Lincluden, 188 St. Annes Road East, St. Annes-on-Sea, Lancs.
 10,039 W. D. LACEY, Louisville, Causeway Street, Portrush, Co. Antrim, N. Ireland.
 10,040 *T. E. A. FOREMAN, Lynton, 86 Westmeads Rd., Whitstable, Kent.
 10,041 *W. S. V. COOK, 89 Ermin Street, Stratton, St. Margaret, Swindon, Wilts.
 10,042 *E. E. MITCHELL, 64 Lostock Road, Davyhulme, Manchester.
 10,043 A. SMITH, Farinside, 114 Panfield Lane, Braintree, Essex.
 10,044 W. J. MCCOLL, c/o P.O.E.D., The Radio Station, Leafeld, Oxon.
 10,045 *R. T. FOSTER, 10 Westhay Road, Hall Green, Birmingham 28.
 10,046 R. T. LAING, The White Hart Inn, Ashton Keynes, Nr. Swindon.
 10,047 *F. C. REDFERN, West Lodge, West Heath, Congleton, Cheshire.
 10,048 J. A. GARDINER, 10 New Street, Honiton, Devon.
 10,049 *R. C. STANBROOK, 74 Long Lane, Hillingdon, Mdxs.
 10,050 *MISS M. AMOTT, 21 Southwell Road East, Rainworth, Nr. Mansfield, Notts.
 10,051 R. L. WADE, Graycroft, Hibbert Lane, Marple, Cheshire.
 10,052 M. L. R. ELLIOTT, 13 Gillies Street, Troon, Ayrshire, Scotland.
 10,053 T. ELLIOTT, 98 Portland Street, Troon, Ayrshire.
 10,054 *P. R. HELM, 2 Park Grove, Levenshulme, Manchester 19.
 10,055 *R. T. POETON, 1 Carmarthen Rd., Henleaze, Bristol 9.
 10,056 *G. E. DAVIS, 91 Brondesbury Rd., Kilburn, London, N.W.6.
 10,057 A. R. POLLARD, 15 Andover Rd., Winchester, Hants.
 10,058 L. J. HOLMES, 348 Balmoral Dr., Hayes End, Mdxs.
 10,059 E. TIPPING, 71 St. Helens Road, Solihull, Birmingham.
 10,060 *R. SHARPE, 10 Boston Av., Currock, Carlisle, Cumbs.
 10,061 *G. W. KELLEY, 23 Tuke Avenue, Tang Hall Lane, York.
 10,062 J. D. L. BLAIR, 23 St. James Square, Edinburgh 1.
 10,063 *J. E. WHITTLE, 2 Church Terrace, Darwen, Nr. Blackburn, Lancs.
 10,064 E. E. PAUL, 6 Shortland Close, Edmonton, N.18.
 10,065 L. G. CRATCHLEY, 4 Elmwood Avenue, Bath Street, Huddersfield.
 10,066 M. A. RAYMOND, Mon Repos, London Road, Langley, Slough, Bucks.
 10,067 *G. M. ALEXANDER, 13 Howburn Place, Aberdeen, Scotland.
 10,068 P. W. FEESKY, Corner House, 36 Woodside, Harrogate, Yorks.
 10,069 *N. H. GREEN, 59 Park Road, Coalville, Leics.
 10,070 K. H. LISTER, Stonycroft, 26 Turn Lee Road, Glossop, Derbyshire. (Trans. from Associate Grade.)
 10,071 A. L. BLACKMAN, 25 Lyttelton Road, London, N.2. (Trans. from Associate Grade.)
 10,072 *A. QUINLAN-STAFFORD, 32 St. Edward's Rd., Southsea, Hants.
 10,073 P. ROSE, 166 Egerton Road, Whalley Range, Manchester 16.
 10,074 E. I. FISHWICK, 14 Kendal Road, Harlescott, Shrewsbury.
 10,075 E. J. JOHNSON, 9 Gray Street, Northampton.
 10,076 A. O'DONOGHUE, 51A Chapel St., Chorley, Lancs.
 10,077 *A. L. WATT, 3 Forth St., Dunfermline, Fife, Scotland.
 10,078 *D. G. B. KNIGHT, Dugmar, St. Guthlac Street, Hereford.
 10,079 *J. B. BRAMLEY, 39 Woodbine Avenue, Wallsend-on-Tyne, Northumb.
 10,080 *H. J. BREADMORE, 13 Bedford Rd., East Finchley, London, N.2.
 10,081 *D. G. WALTERS, 28 Kedleston Road, Hall Green, Birmingham.
 10,082 *R. C. NEWMAN, 20 Rofant Rd., Northwood, Mdxs.
 10,083 J. F. ANDREWS, Lanuthuse, St. Erth (Hill Top), Hayle, Cornwall.
 10,084 R. H. BROCKMAN, 110 Grosvenor Avenue, Hayes, Mdxs.
 10,085 *P. D. RHODES, 5 Crowthree Lane, Daisy Hill, Bradford, Yorks.
 10,086 W. TURNBULL, 25 Minto Place, Hawick, Roxburghshire.
 10,087 *W. M. GOFFIN, Cherhill Rectory, Calne, Wilts.
 10,088 *R. RICKARD, Lawn Cottage, Speen, Newbury, Berks.
 10,089 *T. J. DEAR, 72 Redcliffe Street, Rodbourne, Swindon, Wilts.
 10,090 *J. K. SHAW, Kingston, Guinness, Scunthorpe, Lincs.
 10,091 *L. R. McMORRAN, Main Street, Castleblaney, Co. Monaghan, Ireland.
 10,092 K. W. LOCKWOOD, 141 Colyer Road, Northfleet, Kent.
 10,093 H. MEL PRICE, Sunnymead, Rowan Cres., Wolverhampton.
 10,094 *W. H. HULLCOOP, 38 Park View Crescent, New Southgate, N.11.
 10,095 *A. G. B. PAICE, 11 Fulham Park Gardens, Fulham, London, S.W.6.
 10,096 A. C. IVES, The Old Rectory, Whitechurch, Salop.
 10,097 D. H. LEBSON, Boscombe, 60 Elmfield Road, Gosforth, Newcastle-on-Tyne.
 10,098 J. R. BEDFORD, c/o Mrs. Bourne, Alexandra Road, Woodhall Spa, Lincs.
 10,099 *A. A. MARR, St. Andrews Manse, 34 Castlehill Road, Ayr, Scotland.
 10,100 *S. PARKER, 32 Dilston Grove, Rotherhithe, London, S.E.16.
 10,101 F. BROOK, Carisbrook, 110 Sandling Lane, Maidstone, Kent.
 10,102 *J. PATERSON, 28 Poplar Street, Greenock, Scotland.
 10,103 *F. P. STURGESS, 76A Mountgrace Rd., Potters Bar, Mdxs.
 10,104 A. W. GILMOUR, 92 Eastwoodmains Rd., Giffnock, Scotland.
 10,105 D. I. CRAWLEY, Windward, Rushmoor Avenue, Hazlemere, Bucks.
 10,106 *F. SEATER, 7 Alison Street, Shaw, Oldham, Lancs.
 10,107 *J. R. WILLS, 7 Mill Rd., Salisbury, Wilts.
 10,108 *V. S. REED, 4 James Street, Blackley, Manchester 9.
 10,109 *G. B. CADDOCK, 11 Jubilee Avenue, Dukinfield, Cheshire.
 10,110 P. G. CANNING, Myrtle Cottage, Gaily Hill Road, Church Crookham, Hants.
 10,111 F. E. POVEY, 22 Mimosa Street, Parsons Green, London, S.W.6.
 10,112 *A. J. HOLMAN, Glencoe House, Barrigger, Camborne, Cornwall.
 10,113 J. W. SUTCLIFFE, 13 Westgate Drive, Swinton, Lancs.
 10,114 M. BONNER, 6 Fairfax Road, Grimsby, Lincs.
 10,115 *A. V. W. BRESLEY, 27 Kenyon Road, North End, Portsmouth, Hants.
 10,116 N. MASON, 5 Moor Cottage, Marybank, Stornoway, Isle of Lewis, Ross-shire.
 10,117 H. THOMAS, Flat 3, Holly Lodge, Victoria Road, Gt. Malvern, Worcestershire.
 10,118 *T. MANNING, 3 St. Alphege Road, London, N.9.
 10,119 *W. C. HANKINS, 4 Higher Fore Street, Redruth, Cornwall.
 10,120 *W. C. GREENWOOD, 34 Beardsmore Grove, Linby, Notts.
 10,121 *S. H. CLAYMORE, 27 Crackley Hill, Kenilworth, Warwicks.
 10,122 *L. R. L. HUDSON, 49 Montague Road, Cambridge.
 10,123 D. G. STABLES, Bon-Accord, Pitmedden, Aberdeenshire.
 10,124 T. HALL, 20 Longton Rd., Blackley, Manchester 9.
 10,125 *A. BARBER, 413 Warbreck Drive, Bispham, Blackpool, Lancs.
 10,126 *B. SHAPCOTT, 5 King Edward's Road, Gloucester.
 10,127 *P. W. ATTERSLEY, 196 Harold Road, Upton Park, London, E.13.
 10,128 *A. C. LEBES, c/o Donald, 25 Gordon Street, Aberdeen.
 10,129 J. T. J. OTTAWAY, 71 Radstock Road, Ithen, Southampton.
 10,130 *D. S. ARMSTRONG, 24 William Street, Taunton, Somerset.
 10,131 *J. M. WESTWOOD, 34 Vicarage Road, Blackheath, Birmingham.
 10,132 *A. G. HUDSON, 129 City Rd., Rotton Pk., Birmingham 16.
 10,133 J. H. FRUIN, 54 Queenswood Avenue, Hounslow, Mdxs.
 10,134 *D. V. HENDERSON, 34 Malmains Rd., Maxton, Dover, Kent.
 10,135 *F. L. SWIFT, Kenmore, 3 Blagreaves Lane, Littleover, Derby.
 10,136 *F. ANDREWS, 106 Great Stone Road, Northfield, Birmingham, 31.
 10,137 *E. J. TICKNER, Clayton Court Cottages, Liss, Hants.
 10,138 *J. M. DOUGLAS, 5 St. Bernards Place, Edinburgh.
 10,139 *D. I. PRICE, 17 Ghanbrydan Avenue, Uplands, Swansea, Glam.
 10,140 G. W. HUSBAND, 1 Penrith Avenue, Gainford Road, Reddish, Ches.
 10,141 *C. T. LEAMAN, 36 Newbridge Road, Bath, Somerset.
 10,142 *A. W. J. CROSSIE, 30 Outram Rd., East Ham, London, E.6.
 10,143 *N. E. PLATTS, 296 The Common, Ecclesfield, Sheffield, Yorks.

- 10,144 D. HUNT, 121 Henslow Road, Ipswich, Suffolk.
 10,145 *B. FIRTH, 22 Beech Avenue, Holgate Road, York.
 10,146 *F. J. WINTER, Cranbourn, Doncaster Road, Sherburn-in-Elmet, Yorks.
 10,147 *D. MORRISON, 161 Culrain Street, Glasgow, E.2.
 10,148 *M. MCKAVNEY, 107 Buller Street, Bury, Lancs.
 10,149 *W. B. MARSTERS, Pleasant Place, Station Road, Manca, Camba.
 10,150 *F. W. DUMBILL, Windyridge, Congleton Road, Talke, Stoke-on-Trent, Staffs.
 10,151 *J. M. HARRISON, 3 Thorpe Cottages, Barmoor, Ryton-on-Tyne, Co. Durham.
 10,152 *F. C. PALMER, 13 Waterloo Terrace, Truro, Cornwall.
 10,153 *A. FROST, 35 Lodge Road, Penkhull, Stoke-on-Trent.
 10,154 *D. J. BRENEY, 90 Mineral Street, Plumstead, London, S.E.18.
 10,155 *W. K. ROOTS, 12 Bridge Gardens, East Molesey, Surrey.
 10,156 *L. J. FOSTER, 1 Hereford Gardens, Whittou, Mdx.
 10,157 *M. ROOLEY, 2 Chellow Terrace, Chellowdean, Bradford, Yorks.
 10,158 *J. C. HOLROYD-DOVETON, P.O. Box 60, Reading, Berks.
 10,159 *R. J. BROOKER, 80 High Road, Chadwell Heath, Essex.
 10,160 *A. CLARKE, 66 Queen Mary Road, Upper Norwood, London, S.E.19.
 10,161 *J. G. EUSTON, 45 Snowdon Road, Eccles, Manchester.
 10,162 H. J. MEYER, 19 Hartwood Road, Stamford Brook, London, W.12. (Transfer from Associate Grade.)
 10,163 R. J. TRIGG, Hypatia, 15 Bath Lane, Fareham, Hants. (Transfer from Associate Grade.)
 10,164 T. H. ATHERTON, Wayside, Swanlow Lane, Winsford, Cheshire.
 10,165 D. T. ARLETTE, 12 Polnear, Par, Cornwall.
 10,166 W. SCOTT, 54 High Street, Great Budworth, Northwich, Cheshire.
 10,167 K. J. CREAMER, Fairlight, Victoria Road, Fleet, Hants.
 10,168 C. R. E. AYLEY, 44 Branber Road, West Kensington, London, W.14.
 10,169 B. J. SHAW, The Green, Staveley, Kendal, Westmorland.
 10,170 J. A. SENIOR, The Lodge, Inwood Park, Hounslow, Mdx.
 10,171 D. MELLARD, Q12, "Cormorant Reclamation," H.M. Dockyard, Gibraltar.
 10,172 F. R. W. ADAMS, 66 Cleveland Road, Sunderland, Co. Durham.
 10,173 A. H. WARNE, 241 Wickham Close, West Wickham, Kent.
 10,174 J. SHRIMPTON, 2 Dig Dag Hill, Longfield Lane, Cheshunt, Herts.
 10,175 J. SCHOFIELD, 34 Ormerod Street, Bury, Lancs.
 10,176 C. J. CAREY, The Red Lodge, South Hill Avenue, Harrow, Mdx.
 10,177 V. C. MORGAN, Galltylan, Penegoes, Machynlleth, Mont.
 10,178 R. L. HARDING, 92 Old Shoreham Road, Hove 4, Sussex.
 10,179 W. L. ROBINSON, Hawthorn Road, Norton, Bromsgrove, Wores.
 10,180 L. P. MORGAN, 16 Baronsmead Road, Barnes, London, S.W.13.
 10,181 D. R. GROSSMAR, 32 Elm Avenue, Angmering-on-Sea, Sussex.
 10,182 H. SUTCLIFFE, 62 Haigh Street, Pellon Lane, Halifax, Yorks.
 10,183 D. C. UNDERWOOD, 11 Newton Street, Haltwhistle, Northumberland.
 10,184 J. B. M. STORRAR, Walkers Builings, Avonbridge, Falkirk.
 10,185 J. P. M. EDWARDS, 19 Turberville Place, Canton, Cardiff, S. Wales.
 10,186 G. P. PRICE, 58 Churchgate Street, Bury St. Edmunds, Suffolk.
 10,187 F. W. HOW, 25 Brunswick Place, Hove, Sussex.
 10,188 D. WETHERALL, Heather-Dene, Lowestoft Road, Carlton-Colville, Lowestoft.
 10,189 J. H. NELSON, 74 Thames Avenue, Perivale, Mdx.
 10,190 H. H. TOOTH, Rindleford, Bridgnorth, Shropshire.
 10,191 F. J. VOGEL, 652 Brighton Road, Purley, Surrey.
 10,192 G. R. THOMPSON, The Aldwych, Trinity Avenue, Llandudno, N. Wales.
 10,193 J. H. WRIGHT, Claremont, 22 Crawley Rd., Witney, Oxon.
 10,194 J. A. REID, 3 Ardenclutha Avenue, Hamilton, W. Lanarkshire.
 10,195 R. BROWN, Carfin House, Crossford, By Carluke, Lanarkshire.
 10,196 T. INMAN, 9 Carrington Avenue, Hounslow, Mdx.
 10,197 A. E. FOSTER, 65 Old Park Lane, Southport, Lancs.
 10,198 J. BELL, 79 High Stars Crescent, Sheffield 11.
 10,199 A. G. NEWBERRY, Melody House, King Edward Road, Axminster, Devon.
 10,200 L. G. F. STACEY, 11 Pendarves Road, Falmouth.
 10,201 W. L. ASKEW, 26 Hoylake Road, Birkenhead, Cheshire.
 10,202 W. R. NICKSON, 30 Cambridge Road, Prenton, Birkenhead, Cheshire.
 10,203 E. RONALDS, 27 Bank Street, Hillhead, Glasgow, W.2.
 10,204 V. R. HUGHES, 5 Freehold Street, Liverpool 7.
 10,205 J. H. FILTNESS, 11 Edward Avenue, South Chingford, London, E.4.
 10,206 N. L. TOMLINSON, 69 Beechwood Road, Margam, Port Talbot, Glam.
 10,207 W. PHILLIPS, 121 Station Rd., Langley Mill, Notts.
 10,208 F. W. ASHBY, 160 Coombe Lane, Wimbledon, London, S.W.20.
 10,209 M. BREWER, 47 Lullington Garth, Woodside Park, Finchley, N.12.
 10,210 C. B. PINNORN, Barnfield, Denbigh Rd., Haslemere, Sy.
 10,211 N. P. THORPE, Great Bradley, Newmarket, Suffolk.
 10,212 W. K. R. PENTICOST, 55 Princess Victoria Street, Clifton, Bristol, 8.
 10,213 W. ROSS, 41 Mildred Avenue, Hayes, Middlesex.
 10,214 R. SIMMERSON, 197 Malton Street, Sheffield, 4, Yorks.
 10,215 H. FREEMAN, 66 Queensborough Terrace, Bayswater, London, W.2.
 10,216 H. BURT, 142 Wincley Rd., Bradford-on-Avon, Wilts.
 10,217 I. D. MCPHEE, 301 Colinton Mains Drive, Edinburgh, 13.
 10,218 W. E. MERRILL, 16 The Drive, Erdington, Birmingham, 23.
 10,219 P. L. BUTLER, Woodside, Walters Ash, High Wycombe, Bucks.
 10,220 J. W. LONSDALE, 594 Bloxwich Road, Leamore, Walsall, Staffs.
 10,221 E. G. KENDALL, Sherston, Pear Tree Lane, Loose, Nr. Maidstone, Kent.
 10,222 D. F. OXFORD, Halwyn House, Roscarrock Hill, Port Isaac, Cornwall.
 10,223 *J. D. ANDREWS, 2 New Street, Mildenhall, Bury St. Edmunds, Suffolk.
 10,224 A. GALE, 6 Newton Terrace, Caton Road, Lancaster.
 10,225 G. G. R. MASON, 13 Thorley Pk. Rd., Bishops Cleeve, Herts.
 10,226 G. W. RILEY, 3 Park Ave., Sutton-in-Craven, Keighley, Yorks.
 10,227 B. M. CLIFF, 138 Bushbury Lane, Bushbury, Wolverhampton.
 10,228 J. E. CUTLER, 37 Nightingale Rd., Clapton, London, E.5.
 10,229 A. M. BECH, 100 Ladybarn Lane, Fallowfield, Manchester.
 10,230 R. F. LYDDON, The Green, Kingston, Taunton, Somerset.
 10,231 A. G. CRAMMER, 21 Ramsey Road, Halstead, Essex.
 10,232 J. A. MASON, 23 Brownlow Rd., Forest Gate, London, E.7.
 10,233 R. L. RAMSAY, Rock Hill, Sydney Rd., Guildford, Surrey.
 10,234 M. J. FROST, 15 Northbourne, Hayes, Bromley, Kent.
 10,235 J. HOWARD, 66 Croston Street, Manchester, 11.
 10,236 G. JONES, 40 Woodhouse Hill, Fartown Green, Huddersfield.
 10,237 F. SMITH, 3 Levitts Fields, Lichfield, Staffs.
 10,238 K. D. LAWRENCE, 9 Berkeley Vale, Falmouth, Cornwall.
 10,239 E. A. R. JEFFERIES, 62 Cuckoo Dene, Hanwell, W.7, Mdx.
 10,240 L. READMAN, 10 Lutwold Avenue, Hounslow, Mdx.
 10,241 R. J. FOX, Belt View, Centre Drive, Newmarket, Suffolk.
 10,242 G. P. PATCHETT, 6 Pickworth Rd., Great Casterton, Nr. Stechford, Lincs.
 10,243 J. W. WHEATLAND, 78 Hill View Rd., Hatch End, Mdx.
 10,244 E. L. BOXCER, 73 Northwood Avenue, Elm Park, Romford, Essex.
 10,245 G. R. RAWSON, 35 Salisbury St., Gainsborough, Lincs.
 10,246 K. M. BUNN, 19 Rawthorpe Crescent, Rawthorpe, Huddersfield.
 10,247 T. M. GALLOWAY, 5 Marlborough Gardens, Carlisle.
 10,248 J. K. TIBBETT, 30 The Vale, Northampton.
 10,249 P. R. HINTON, 8 Brassey Road, Winchester, Hants.
 10,250 J. W. WILKINS, 7A Breakspears Rd., Brockley, London, S.E.4.
 10,251 C. N. C. NICHOLS, 27 Whitethorn Ave., Coulsdon, Sy.
 10,252 C. W. LOKER, 25 Gunner St., Fratton, Portsmouth, Hants.
 10,253 L. O. OATEN, 105 Lambrook Road, Taunton, Somerset.
 10,254 D. H. TAYLOR, 30 Hartley Rd., Leytonstone, London, E.11.
 10,255 J. KEARNS, 77 Hilltown, Dundee, Angus, Scotland.
 10,256 E. KAY, 484 Bridgeman Street, Bolton, Lancs.
 10,257 H. BARON, 25 Lord Street, Oswaldtwistle, Lancs.
 10,258 K. SMART, 481 Armstrong Rd., Scotwood, Newcastle-on-Tyne, 5.
 10,259 E. READ, 34 Oxford Road, Altrincham, Cheshire.
 10,260 L. TRETHERWEY, 6 Rochester Rd., Mutley, Plymouth.
 10,261 C. T. BUHLER, 106 Malmesbury Road, London, E.16.
 10,262 L. SILVERMAN, 22 Rutland Park Mansions, Willesden Green, N.W.2.
 10,263 W. M. WEBSTER, East Burnside, Broxburn, West Lothian, Scotland.
 10,264 R. SEKIAN, 141 Plymouth Grove, Manchester, 13.
 10,265 C. W. JONES, 253 Greenwrythe Lane, Carshalton, Sy.
 10,266 R. E. WAND, 14 Nightingale Close, Chingford Hatch, London, E.4.
 10,267 G. T. CHAPLIN, St. Monica, Caistor Corner, Poringland, Norwich.
 10,268 D. A. CLARK, 39 Cedar Road, Romford, Essex.
 10,269 A. V. HOWLAND, 60 Teynham Crescent, Utting Avenue East, Liverpool, 11.
 10,270 F. LONGWORTH, 106 Moscow Drive, Stoneycroft, Liverpool, 13.
 10,271 R. BUCKLER, 176 Ariel St., Ashington, Northumberland.
 10,272 P. E. HOLDER, 2 Florence Road, Maidstone, Kent.
 10,273 R. SCOTT, Lynthorpe, Irvine Crescent, Bathgate, West Lothian.
 10,274 E. H. CHAUDRI, South Bank, 215A Woodbridge Road, Ipswich, Suffolk.
 10,275 N. MCKECKNIE, 42 Bishopsgate, Cupar, Fife, Scotland.
 10,276 I. A. ROSS, 8 Rosebank Road, Edinburgh, 5, Scotland.
 10,277 L. ROOT, 8 Central St., Countesthorpe, Nr. Leicester.
 10,278 S. G. CAMPBELL, 111 Ladies' Mile Road, Patcham, Brighton, 6, Sussex.
 10,279 G. W. MACKINDER, High St., Burgh, Skegness, Lincs.

- 10,280 E. HALL, 31 Hyde Vale, Greenwich, London, S.E.10.
 10,281 L. L. R. BURCH, 88 Aldborough Rd., Seven Kings, Essex.
 10,282 W. S. TAYLOR, 80 Whitton Avenue, Greenford, Mdx.
 10,283 J. M. BROWN, 52 Wallace Avenue, Stevenston, Ayrshire, Scotland.
 10,284 J. SUMNER, Mapleton, Hornsea, E. Yorks.
 10,285 J. R. BORRILL, 6 Hayton Grove, Gipsyville, Hull, Yorks.
 10,286 G. C. NEWBY, 35 Chaucer Drive, St. Giles, Lincoln.
 10,287 J. A. SMITHIES, 14 Fairfield Avenue, Turves Road, Cheadleholme, Stockport, Cheshire.
 10,288 A. THOMSON, Riverston, Broadway, Duffield, Nr. Derby.
 10,289 T. LONSDALE, 13 Villdale Avenue, Offerton, Stockport, Cheshire.
 10,290 H. A. FULLER, 50 Bletchley Road, Bletchley, Bucks.
 10,291 C. E. DAY, 107 Park Road, Loughborough, Leics.
 10,292 J. H. WALTON, 16 Beachborough Villas, Shorncliffe Road, Folkestone.
 10,293 D. E. RYDER, Templestowe, Poplar Avenue, Townville, Castleford, Yorkshire.
 10,294 V. G. HALPS, 22 Barnsole Road, Gillingham, Kent.
 10,295 A. W. WINKLEY, 125 Beauchamp Road, Billesley, Birmingham, 14.
 10,296 A. W. MORF, 2 N. St. David St., Edinburgh, Scotland.
 10,297 W. HART, 159 Heaton Rd., Heaton, Bradford, Yorks.
 10,298 H. G. BALL, The Bungalow, Bushy Lane, Hollisley, Woodbridge, Suffolk.
 10,299 W. DRUMMOND, 66 Stonegate Farm Road, Meanwood, Leeds, 7.
 10,300 K. H. NIXON, 10 Queen Street, Northwich, Cheshire.
 10,301 D. WATSON, 72 Marlborough Street, Londonderry, N. Ireland.
 10,302 W. E. CASSON, Thirlmere Hse., Frizington, Cumberland.
 10,303 J. E. BROWN, 42 Fairbridge Rd., Upper Holloway, Islington, London, N.19.
 10,304 R. F. BROOKS, 58 Kent Road, Luton, Beds.
 10,305 P. GALE, Swan Hotel, Stalbridge, Dorset.
 10,306 A. L. BOOKER, 14 Ascot Court, Grove End Road, London, N.W.8.
 10,307 N. H. ELLIS-ROBINSON, Danewood Court, New Milton, Hants.
 10,308 B. J. SMITH, 26 St. George Road, Hastings, Sussex.
 10,309 W. F. SHAW, 116 Bath Street, Rugby, Warwickshire.
 10,310 J. W. DAVIES, Gwynfa House, Llangefni, Isle of Anglesey, N. Wales.
 10,311 H. M. KENNEDY, 21 Elms Road, Clapham Common, London, S.W.4.
 10,312 J. CLARK, 18 Mason Street, Workington, Cumbria.
 10,313 A. S. CLARKE, 228 Uppingham Road, Leicester.
 10,314 R. W. FORD, 99 Steele Road, Tottenham, London, N.17. (Transfer from Associate Grade).
 10,315 J. H. C. RICHARDS, 38 Doyle Gardens, London, N.W.10.
 10,316 F. J. BURBRIDGE, 59 Herbert Road, Rainham, Kent.
 10,317 A. W. MANHIRE, 74 Victoria Ave., Maindee, Newport, Mon.
 10,318 G. MCINTOSH, 56 Ormonde Ave., Muirhead, Glasgow, S.4.
 10,319 J. C. READ, 10 Castlegate, Malton, Yorks.
 10,320 J. W. STEVENSTON, 7 Goodwin Avenue, Newcastle-under-Lyme, Staffs.
 10,321 J. E. ROUSE, 380 Mawney Road, Romford, Essex.
 10,322 W. T. COMBER, 316 St. Anns Rd., Tottenham, London, N.17.
 10,323 L. H. COLLINS, 19 Lynton Gardens, Ewell, Surrey.
 10,324 P. J. LYNN, The Nest, Colne Avenue, Garden City, West Drayton, Middlesex.
 10,325 R. S. MILLERSHIP, 41 Cromwell Road, Grimsby, Lincs.
 10,326 G. D. HOWATT, 11 Stowe Road, Milton, Southsea, Hants.
 10,327 A. HANDLEY, Sunny View, Ostlers Lane, Cheddleton, Nr. Leek, Staffs.
 10,328 G. R. JUDGE, 212 High St. N., East Ham, London, E.6.
 10,329 E. G. ALLSOP, 18 Percy Street, Bootle, Liverpool, 20.
 10,330 R. A. MASON, 18 Stanmer, c/o Mr. G. Wilson, Lower Lodge, Falmer, Lewes, Sussex.
 10,331 H. BEWLEY, 24 Eastbourne Street, Lincoln.
 10,332 T. PATTINSON, 11 Tyne Gdns., Washington, Co. Durham.
 10,333 J. L. ROBERTS, Merlyn, Lower Drayton Lane, E. Cosham, Hants.
 10,334 L. R. STOCKER, 1,168 Yardley Wood Road, Warstock, Birmingham, 14.
 10,335 P. J. JOHNSON, Garth Cottage, South Road, Lerwick, Shetland.
 10,336 E. K. WIGGLESWORTH, 1 Hare Pk. Mount, Farnley, Leeds.
 10,337 S. K. RICHARDS, 56 Gowlett Road, Peckham, London, S.E.15.
 10,338 G. H. McDONALD, 15 Rochester Gardens, Gateshead, 11, Co. Durham.
 10,339 J. H. ROPER, 16 Sotheron Street, Goole, Yorks.
 10,340 W. A. HEMMING, 48 Lower House Lane, West Derby, Liverpool, 11.
 10,341 G. N. BOLMEER, 30 Ormerod Road, Setting Dyke Estate, Priory Road, Hull, Yorks.
 10,342 P. E. SEALE, 27 Aubert Park, London, N.3.
 10,343 D. A. LANG, 49 Leyburn Road, Wallasey, Cheshire.
 10,344 J. S. LEES, 33 Curzon Road, Southport, Lancs.
- 10,345 P. J. REEN, 34 Rockingham Road, Bispham, Blackpool, Lancs.
 10,346 L. E. MEDLOCK, 14 Barn Close, Raunds, Nr. Wellingborough, Northants.
 10,347 G. J. PIKE, Clavering, Royston Grove, Hatch End, Mdx.
 10,348 F. YATES, 152 Peelhouse Lane, Widnes, Lancs.
 10,349 F. WILSON, 165 Cross Street, Sale, Cheshire.
 10,350 H. E. CROSLAND, 24/5 Foley Street, Gt. Portland Street, London, W.1.
 10,351 K. J. MATHER, 120 The Headlands, Northampton.
 10,352 G. D. ROGERS, 22 London Road, Gloucester.
 10,353 R. A. GREEN, 184 London Rd., Woodston, Peterborough, Northants.
 10,354 MISS G. M. FEARNES, Heath Bank, Heath Rd., Bebington, Cheshire.
 10,355 F. ROSE, 16 North Bridge St., Sunderland, Co. Durham.
 10,356 A. C. APPELBY, 68A Sutton St., Newcastle-upon-Tyne, 6.
 10,357 D. DIXON, 15 St. Martin's Grove, Bridlington, E. Yorks.

Foreign Receiving Stations (F.R.S.)

- 132 J. BLEUZE, 6 Avenue de Clamart, Vanves (Seine), France.
 133 E. R. THOMAS, 274 Faubourg Street, Antoine, Paris, 12, France.
 134 L. MAYROPOULDS, 55B Tricoupi Street, Nicosia, Cyprus.

Associates

- N. W. ADCOCK, 24 Birley Street, Brookhill, Stapleford, Notts.
 A. ALLAN, 49 Griffith Road, Moorlands Estate, West Bromwich, Birmingham.
 S. ANSELL, 8 Twyford Court, Twyford Avenue, Acton, London, W.3.
 E. CLARKE, 25 Demesne Road, Douglas, I.O.M.
 *A. W. F. COX, 170 Wilmot Road, Dartford, Kent.
 L. DELPES, Polish Forces, P/91.
 C. R. DUCK, Summerford, Angley Road, Cranbrook, Kent.
 S. J. EVANS, Llettycranog, Llangranog, Llandyssul, Cards. Wales.
 R. S. FINLAYSON, Oldhamstocks, Cockburnspath, Berwicks.
 G. GIBBINS, The White House, West End, Herne Bay, Kent.
 M. GREENLAND, 41 Kingsley Avenue, Beechwood, Sowerby, Bridge, Yorks.
 D. G. JONES, 24 Portland Place, Brighton, Sussex.
 CAPT. J. B. LANE, 100th A./T. Regt., R.A. India Command.
 E. L. LOADS, 4 Garden Bungalows, Swafield, Nr. North Walsham, Norfolk.
 J. C. MANSFIELD, The Stubbin, Triangle, Nr. Halifax, Yorks.
 †S. MILLIGAN, 3 Flawn Road, West Derby, Liverpool, 11.
 L. J. NICHOLS, 42 Shakespeare Avenue, Peterborough, Northants.
 F. A. PERKINS, Icart, Chaffers Mead, Ashtead, Surrey.
 P. K. POOLE, 7 Horton Street, Darlston, S. Staffs.
 R. H. PORTCH, 39 Weller Road, Corsham, Wilts.
 G. RAMSELL, 30 Bede Road, Stockingford, Nuneaton, Warwickshire.
 W. H. RIDER, 49 Arbury Avenue, Bedworth, Warwickshire.
 J. ROBINSON, 49 Inglemire Avenue, Beverley High Road, Hull.
 A. F. ROBSON, 522 Denton Road, Newcastle-on-Tyne, 5.
 G. R. SILVA, No. 899 Alutgama, Bentota, Ceylon.
 J. P. TEAGUE, Lybrook, Broadway, Wores.
 T. A. WILSON, Southwood, Stirling, Scotland.
 I. WORTMAN, 92 Upper Richmond Road, East Sheen, London, S.W.14.
 K. E. WRIGHT, 78 Crofts Road, Kenton, Mdx.
 W. YATES, 39 Oxford Road, Fleetwood, Lancs.

Junior Associates

- T. J. BRAMELD, 48 Holmes Road, Twickenham, Mdx.
 R. COLLETTE, 37 Rusper Court, London, S.W.9.
 B. CUMMING, Resraye, Bognor Drive, Herne Bay, Kent.
 B. R. DAVIS, 170 Heath Lane, Dartford, Kent.
 A. L. FINBOW, 33 Mellish Road, Langold, Worksop, Notts.
 J. GREGORY, 28 Church Path, Deal, Kent.
 P. R. HARDWICKE, 11 Station Approach, Ashford, Mdx.
 J. F. HIATT, 62 Drayton Gardens, West Drayton, Mdx.
 I. G. MACWHIRTER, 16 Queens Avenue, Great Meols, Wirral, Cheshire.
 C. H. MOUNTFORD, 40 Undercliffe Road, Lewisham, London, S.E.15.
 A. L. PASK, 15 Horton Street, Monks Road, Lincoln.
 B. MITCHELL, 31 Kings Road, Hazel Grove, Nr. Stockport Cheshire.
 R. R. RIDLEY, 84 Rectory Road, Ipswich, Suffolk.
 J. F. STRATFULL, 52 Radcliffe Road, Harrow Weald, Mdx.
 L. S. THAYER, 29 Chase Side Crescent, Enfield, Mdx.
 N. G. THOMPSON, 30 Scotsdale Road, Lea, London, S.E.12.
 T. G. THORNLEY, 7 Grundy Street, Hazel Grove, Nr. Stockport, Cheshire.
 J. WALKER, 92 St. Georges Road, Barnsley, Yorks.
 G. M. WEST, 257A Bronston Road, Burton-on-Trent, Staffs.

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

AROUND



THE DISTRICTS

Forthcoming Events

- | | | | |
|---------|--|---------|--|
| Oct. 16 | District 15 (Hayes and R.A.F.), 7.30 p.m., at West Drayton R.A.F. Camp. | Oct. 27 | District 7 (Reading), 6.30 p.m., at Palmer Hall, West Street. |
| Oct. 18 | District 4 (Nottingham), 7 p.m., at The Foresters Hall, Peachey Street. | Oct. 27 | District 15, 3 p.m., at the Telephone Exchange, Holloway Street, Hounslow (A.P.C. to Mr. Donaldson (BRS9621), 123 Ellerman Avenue, Twickenham, if attending). |
| Oct. 19 | London Meeting, 6.30 p.m., at The Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. Tea 5.30 p.m. Display of Technical Films, including Radar, by F./Lt. P. Thorogood, G4KD. | Oct. 27 | District 1 (Liverpool), 3 p.m., at the Stork Hotel, Queen's Square. |
| Oct. 20 | District 15, Dinner and Dance, 6 p.m., at The Park Royal Hotel, Western Avenue, Hanger Hill, Ealing, W.5. | Oct. 31 | Scotland "A" District, 7 p.m., in the Institute of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow. |
| Oct. 21 | District 4 (Leicester), 2.30 p.m., at G8CZ, 125 Thorpe Road, Melton Mowbray. (Frequent buses from Southgate Street bus station.) | Nov. 2 | District 15 (Hounslow), 7 p.m., at The Scouts Hall, Sutton Estate, Great West Road, Hounslow West. (Entrance near Vicarage Farm Road. Piccadilly Rly. or bus 91.) |
| Oct. 21 | District 5, 3 p.m., at 17 Colston Avenue, Centre, Bristol. | Nov. 4 | District 12, 2.30 p.m., at the Peahen Hotel, St. Albans. (First floor room via main entrance in London Road. Bus 84 passes the door). |
| Oct. 21 | District 7 (Guildford), 3 p.m., at the Cafe, The Cinema, Woodbridge Road. | Nov. 9 | District 15 (Harrow), 7 p.m., at BRS6527, 153 Belmont Road. |
| Oct. 21 | District 12, 3 p.m., at BRS4249, 9 Falmer Road, West Green Road, Tottenham. (41 bus to Black Boy Lane. Falmer Road is first left, then first right down Black Boy Lane.) | Nov. 10 | District 7 (Reading), 6.30 p.m., at Palmer Hall, West Street. |
| Oct. 21 | District 14 (Chingford), 3 p.m., at Chingford A.T.C. Headquarters, Pretoria Road. Sale of surplus gear. | Nov. 10 | District 15 (Ashford), 6.30 p.m., at G6RS, "Digs-well," 81 The Avenue, Sunbury-on-Thames. (Southern Rly., bus 216, alight White Horse; 237 alight Sunbury War Memorial.) |
| Oct. 21 | Scotland "G" District, 2.30 p.m., in Kings Hotel, Galashiels. | Nov. 16 | London Meeting, 6.30 p.m., at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. Tea 5.30 p.m. Lecture, "Aerial Systems for the Radio Amateur," by F. Charman (G6CJ). |
| Oct. 22 | District 18 (Hull), 7.30 p.m., at the Imperial Hotel, Paragon Street. | Nov. 17 | North Western P.D.M., Stork Hotel, Liverpool. |
| Oct. 24 | District 2 (Sheffield), 8 p.m., at the "Dog and Partridge," Trippett Lane. Sale of surplus gear. | Nov. 19 | District 18 (Hull), 7.30 p.m., at the Imperial Hotel, Paragon Street. |
| Oct. 26 | District 15 (Harrow), 7 p.m., at BRS6527, 153 Belmont Road. | Nov. 20 | District 3, 6.30 p.m., Chamber of Commerce, New Street, Birmingham. |

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

DISTRICT I (North Western)

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

The D.R. thanks all those who have so kindly offered to act as District Scribe and is pleased to report that Mr. Alan B. Wright (G6FW) of 106 Knowsley Road, St. Helens, will in future prepare the notes for publication. Will all T.R.'s please note that henceforth their notes should be sent directly to him.

Arrangements have now been made to hold the P.D.M. in Liverpool and details will be found on page 61 of this issue. In view of the restriction upon numbers tickets will be issued strictly in order of application so "do it now." It is hoped that Saturday will suit members for the meeting, no Sunday catering being available under present circumstances. G6CX.

Ashton.—The meeting of the Ashton and District Radio Society held on Sunday, September 16, was well attended. The Secretary reported that further attempts to obtain suitable accommodation for a Manchester P.D.M. had been unsuccessful and the matter has now been passed to the D.R. for consideration. Several new members were elected. After the business meeting a second lecture on "Measuring Instruments" was given by 4567 and a demonstration by 8145 of his valve voltmeter. Morse classes will be held after each regular meeting if there is sufficient support.

The next meeting has been fixed for Sunday, October 14, at the A.C.S. Educational Rooms, Stamford Street, Ashton. G5PX.

Bolton.—P.O./R.M. Stan Garnett is back in town after a long sojourn abroad, including a spell on Malta. Old-timer 2BDA, who left us in March last year to reside in Wallasey, now finds that his new job in London will entail further house-hunting. Glyn Jones is now working in the laboratory at Exide Works.

Acting on the principle of "third time lucky" after two fruitless attempts to get going, the Bolton Radio Society will hold an opening meeting on Sunday, October 20, at 2.30 p.m., at 32 Bromwich Street, Bolton. All interested members living in the area are invited to attend. The T.R. will communicate the results of this meeting to those members in the services who have so kindly written in pledging their support after "de-mob." 2DVQ.

Darwen.—A good attendance was recorded at the last meeting when post-war activities were discussed and complaint was made that some districts appeared to be favoured more than others with

reports and space in District Notes (each District, due to paper rationing, is limited to 200 words.—Ed.). New members were instructed in the type of gear to buy in readiness for future activities, frequency meters were discussed in particular, also signal shifters and their uses, and whether Great Britain would be as usual last in the field with "tickets." Meetings are held monthly unless otherwise notified. G4JS is expecting to be demobilised soon, after over five years service. Two new members attended from Acredington. G8FL.

Oldham.—A meeting held at G2MQ on September 23 was attended by BRS8616, 2HCX, 2MQ and 3PD. Varied topics were discussed at length including temperature coefficient of materials. The next meeting will be held at 2HCX, 354 Middleton Road, Chadderton, Oldham. Will members please attend this meeting and give support. G3PD.

Whitehaven.—An enjoyable meeting was held on September 21 at G8RZ when those present included 6WR, 8DP, 3SY, 2DWG, 2HHB and 3BW. Many interesting topics cropped up and thanks are expressed to SDP for his efforts; we all hope his 16 valve super will be the real thing. New members are asked to get into touch with the T.R. as a larger attendance at these meetings would be appreciated. G3BW.

DISTRICT 2 (North Eastern)

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

Barnsley.—G5IV is now back in "civvy street" and resumes as T.R. Please give him your support. His journey home brought him through Switzerland which he considers a grand country.

Bingley.—G4GJ is considering a bureau-bookcase arrangement for his new rig. 6HF now has his receiver working satisfactorily.

Bradford.—G3KF is due for demob. next month. 3KB is back in "civvy street." 4CL now has his ribbon mike and mod-amp working. He still seeks information on break in or relay working. News of 8JD would be welcome. 3HA spent VJ evening in Algiers and was surprised at the lack of celebrations.

Doncaster.—G5GJ is on his way home from India to collect his bowler hat. 2AGH obtained several volumes from a German library including QST for 1939.

Halifax.—G8SJ has completed his receiver and frequency meter-monitor. 10020 hopes to be soon on his final leave.

Haworth.—4412 is building a four-band receiver.

Leeds.—2317 hopes to return to Leeds on October 1. 4MG who is now with S.E.A.A.F. is pleased to see so much interest in Amateur Radio.

Sheffield.—We were pleased to welcome 4KC of Coventry at our September meeting when Dr. A. H. B. Cross, G3FN, gave an impromptu talk on "An Interesting Receiver for Amateur Purposes." Will all members support the sale at the next meeting by bringing along all the surplus gear they have for disposal.

Skipton.—8676 was recently on leave. He has just completed a small quality amplifier using an AS4120 into two 41 MP's. 4RX is at present in Heliopolis.

General.—It is rumoured that H. Waddington was recently home on leave. SRF is obtaining excellent support at Catterick. 8UO was recently visited by 8676. Letter budgets 29 and 30 are held up somewhere, get them moving please. G8UO.

DISTRICT 3 (West Midlands)

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

Birmingham.—The annual general meeting of M.A.R.S. was held at the Chamber of Commerce on Tuesday, September 18, 1945, when the following were elected to office:—President, G. Brown, G5BJ; hon. secretary, W. J. Vincent, Jr.; hon. assistant secretary, W. N. Follis; hon. treasurer, B. K. George; committee, H. R. Shaylor, E. Watson, C. H. Young and E. J. Wilson.

After the meeting Messrs. Young and Brown expounded their views on post-war Amateur Radio.

G5BJ has constructed a wizard crystal receiver.

Evesham.—BR84736 who has returned to Italy is constructing a 2-valve HT-less receiver. 2FQP is building gear ready for the word "go." 4144 is also getting ready for the big day. It is presumed that other local members are also active.

C.Q.M.S. Boot announces his engagement and receives our congrats. 2FDR.

DISTRICT 4 (East Midlands)

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

Leicester.—Support for the last meeting was very poor. It is hoped that this is not an example of what to expect in the post-war era. A variety of subjects were discussed including aerial design and matching, the experience gained by operators of Service equipment, Radar and the old local problems 1.7 Mc/s. versus 56 Mc/s.

Congrats to Ft./Lt. Ray Frisby and his wife on the arrival of a junior op.

If you want to see Syd Clark's real "Old Time Shack" do not miss the next meeting to be held October 21. See "Forthcoming Events."

Nottingham.—The fortnightly meetings are now going well. At a recent meeting an audience of 20 heard an excellent talk on "Plastics as applied to Radio Construction" by Mr. B. H. Singleton. The talk was illustrated by samples of the various plastic products which will be available for amateur use. 2A00 has moved to Cricklewood for a few months and looks forward to some personal contacts in London. It was brought up at the last meeting by G3QD that the suggestion to discontinue the QSL service be objected to; this was endorsed by the majority of members present. (See report of Cardiff P.D.M. in this issue.—Ed.) G4BI of Loughborough brought along samples of his racks and panels, etc., for amateur use and these caused great interest. He is to be congratulated on his workmanship. G8DZ.

DISTRICT 5 (Western)

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

Bristol.—Nineteen members were present at the September meeting when the necessity for new accommodation was stressed. The T.R. stated that he would approach "Keen's Cafe" with a view to hiring a room more suitable for meetings. G5KT brought along a battery-operated Signal Generator built from junk box parts fitted into a neat cabinet. A description of its performance was given. We were pleased to welcome 2BSU now back in "civvy street."

A small party consisting of 3YT, 5KT, 6RB, 2BAR, 2CUI and 7961 attended the Cardiff PDM, where they met old friends and made new ones.

Swindon.—G3HS who is still in this country has managed to collect some items of news. He states that 8VP has completed an all-mains receiver ready for the word "go," and 5LO, 3HC and 3JO are fairly active. 3HS would be pleased to contact anyone in the vicinity of his present QRA which is Cpl. Boffin, Teleprinter Section, Air Ministry Unit, 77 Hallam Street, W.1.

Stroud.—BR87595 reports giving details of his activities. As he has been overseas since 1940 he has lost contact with many friends.

Gloucester.—BR85508 believes there are enough members now in the town with sufficient enthusiasm to start things moving. He also mentions that it is hoped to combine the activities of Gloucester and Cheltenham, also possibly Stroud.

9538 of Bristol serving with S.E.A.A.F. reports, but he thinks it will be some time before he is able to join in local activities. G6RB.

DISTRICT 6 (South Western)

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

Torquay.—The T.R. was pleased to meet many old friends during his stay in the Thames Valley, and pleased to know that steps are being taken to revive the T.V.A.R.T.S. He has received visits from G2NN and ZL1GI, the latter to say goodbye on his return home. News has been received from VK2XQ, who has been to KA and Corregidor. He is now a member of the Society. BR81006 has made some excellent recordings. G2GK has built a useful P.A. outfit, which was ready in time to help with local VJ Celebrations.

Several impromptu meetings have been held when members have come home on leave, and it is hoped that we shall soon have enough members available to hold regular meetings.

Penzance.—The last meeting was attended by G3CC, 3IV, 6LV, 6ZT, 8NA, 2BCL, 2FZZ, BR89063 and 10577. BR810577, known to all and sundry as "Hank," is the latest recruit to the Society, and is hereby heartily welcomed. An exhibition was held of the latest British and American radio textbooks, and interesting comparisons were made between the writings of different authors on the same subject. At the next meeting G3CC is to give a lecture on a subject not yet decided. G5SY.

DISTRICT 7 (Southern)

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

Bournemouth.—The next meeting will be held at 45, Parkwood Road, on October 27, at 3 p.m. Two Notting-hams, 5VU and 6CW, have been here recently. 2947 has met 5V1KE in Athens. The latter seeks news of 5SP. 3VY, Sheffield (shortly to be demobbed) sends 73 to Bournemouth friends. 2HNO.

Coulsdon and Croydon.—During the weekend, September 22/23, another receiver Field Day, organised by Districts 7 and 13, took place at Chelsham, Surrey. Those present were G2LW, 2VB, 3ST, 1545, 3003, 4324, 7943, 8417, 8996, 9110, 9563, and Mr. Graves. Further experiments with kite aereals and receivers were carried out. Two stations were logged on 7 Mc/s. much to the satisfaction of newer members, some of whom had not previously heard an amateur signal.

BR83003 enjoyed his holiday in Kent and wishes to thank 3NQ, 5UL, ex-5ZR and 2BBT for their hospitality. BR83003.

Reading.—The attendance at bi-monthly meetings held up well during the holiday period. Progress is being maintained with the equipment for the club room, but gifts of more tools will be welcome. A visit to the telephone exchange took place on September 25. The Lewis Cup competition was held on the 29th and it is hoped to announce the result next month.

Messrs. Hensford and Owen have returned to civilian life. G6CV, writing to the T.R. from Ceylon, wishes to be remembered to his old friends, especially GTP. He would like to hear from Maidenhead members. See "Forthcoming Events" for details of the next meetings. BR84573.

Southampton.—At a recent meeting it was decided that a room in the town be rented for use as a headquarters and workshop for local and visiting members. Will all members resident or stationed in Southampton get in touch with the T.R. at 17 Colmore Gardens, Totton? G8QW.

Portsmouth.—The South Hants Transmitting Society is to be re-formed and a hearty invitation is extended to members both new and old to attend meetings. 6NZ and 2XC are still with the R.A.F., but the locals are looking forward to renewing acquaintance with them shortly. The latter is at present in hospital but is due for early demob. 6YK is still concerned with Radar problems in Scotland. 3LV is with the Merchant Navy and 8WC is still believed to be at his old address. 8JB, 4FA and 5XY have been engaged on Radar development. 5XY is completing the receiver he began in 1939. 8JB has constructed a 16 mm. Talkie outfit the audio side of which is destined for incorporation in the rig. The first full meeting is to be arranged shortly and all previous members of the S.H.R.T.S. will be notified; will others please write G8JB, 7 Second Avenue, Havant. G8JB.

Guildford.—The next meeting will be held in the cafe, The Cinema, Woodbridge Road, Guildford, on Sunday, October 21, at 3 p.m. G5WP.

DISTRICT 8 (Home Counties)

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

Mr. L. W. Jones, G5JO, who has been acting as deputy D.R. for about three years, has asked to be relieved of the work, and any correspondence relating to this District should, for the time being, be addressed to Mr. S. J. Granfield, G5BQ, at 47 Warren Road, Cambridge. Tel. 54644.

Cambridge.—G5JO, 2XV and 2DT are known to be making active preparations ready for the day when licences are restored. Shacks are being "spring-cleaned," new racks constructed, and newly-sprayed chassis are very much in evidence. Out at Swavesey, 50V is casting an eye skywards to where a new "Rhombic" will help him to renew his daily service to the Far East. A most interesting letter has come from Mr. V. H. Thorne, a new Cambridge member, who is on one of H.M. ships in Far Eastern waters, and hopes to get to know the old hands on his return.

St. Ives.—G5RL hopes to be demobbed from the R.A.F. shortly, 6WA is believed to be in India, and 6DX in Norway. We would be glad to know if any news has been received of Pat Fraser, who was missing in Malaya. Mr. Williams, of Swavesey, who used to give a good deal of assistance at Mustill's Mill at N.F.D. time, has written from Italy, where he is operating a portable radio repair workshop, and seems to be thoroughly enjoying life.

March.—G3WW was noticed in Cambridge a short time ago, but he is too busy to think of ham radio at present.

Peterborough.—G2NJ, who is in Royal Signals, was stationed in Cambridge a few weeks ago, and looked up some of the local members. He is eagerly awaiting the next N.F.D.

There has been no news for a long time from the Luton and Bedford areas. Will someone please write?

It is hoped that a Victory Re-union can be announced in next month's issue. G5BQ.

DISTRICT 9 (East Anglia)

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

Norwich.—Will members please note that Mr. Briggs, G4GF, 58 St. Stephen's Road, Norwich, Tel. 25332, will be acting as T.R. for the time being. Mr. Briggs is hoping for an early get-together of returned members all of whom are asked to contact him.

Mr. Fisher, G3VM, of Costersey, recently out of the Navy, is getting ready for the "Great Day."

We wish to record a vote of thanks to G2MN, who has provided all the Norwich news during the difficult days of the war.

Yarmouth.—Mr. A. F. Thompson, 2BXJ, The Hermitage, Stokesby, will be acting as T.R. for the time being and he hopes for an early contact with all the locals, so that meetings can be commenced. 2BXJ would like to hear from Messrs. J. Baker, P. Harrison, Pateman and P. Blackwell. If anyone knows the present addresses of the above members he is asked to pass the "gen" to Mr. Thompson.

Don E. Davy, G3RW, now back in England, is hoping for an early release from the R.A.F. He is looking forward to putting into effect many ideas developed during the past years—but with a little less power than has been the custom in the Services! G2XS.

DISTRICT 10 (South Wales & Monmouthshire)

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

Since the last appearance of these notes, the South Wales P.D.M. (a report of which appears elsewhere in this issue) has passed and it is a pleasant duty to record the support given by the forty members throughout the District as well as those six ardent travellers who came across from Bristol. Many old acquaintances were renewed whilst the newer members present received a welcome initiation into Society affairs.

Cardiff.—Our stalwart host of local meetings, GW8UH, entertained G5KT, GW4CC, 2FVD, 2HIR, 4005 and others after the conclusion of the P.D.M., and it is learned that a good time was had by all.

Twelve members were present at the monthly meeting held on September 16 when the future of amateur radio was again the main topic. 2DOS made a surprise appearance upon his return to "Brighty" and a welcome was given to I0722 who was attending his first meeting.

The next meeting will take place at the home of GW8UH, 29 Ladysmith Road (off Penylan Hill) Roath Park, Cardiff, at 2.30 p.m. on Sunday, October 21, 1945, when new and visiting members may be assured of a cordial welcome.

Swansea.—Arrangements have been completed for a resumption of monthly meetings and their inauguration will have passed by the time these notes appear. GW4CC, whose efforts in this connection are appreciated, advises that meetings will take place on the first Thursday in each month and are to be held at the Y.M.C.A., Swansea, commencing at 7 p.m. The importance of meetings at the present juncture cannot be over emphasised and it is sincerely hoped that the necessary support will be forthcoming to prove this venture an assured success. Full particulars can be obtained from Mr. W. Bowen (GW4CC), Thistle Dhu, Upper Killay.

General.—News has been received from GW3XY, 88C (in B.A.O.R.), 2DHM (in Italy), and 2CAF. Their letters appeared amongst the twenty or so received from others who were unable to attend the P.D.M. GW4KQ.

DISTRICT II (North Wales)

Deputy D.R.: C. Spillaine (BRS1060), 14 Queensway, Prestatyn, North Wales.

Caerwes, Montgomeryshire.—Fl./Lt. Brown (ex VU2AL-YI3CW) reports from an R.A.F. Station in Suffolk to say that his chief interest at present lies in 112 Mc/s. work; he has just built a receiver for this band. (9003 HF-95 Regen. Det-6J7 and 6V6 audio.) He is also interested in wind-driven generators of high wattage.

Rhyl.—BRS5520, who is still in India, recently contacted an ex-Mauritius amateur, who hopes to take up a ZS call soon. 2DAH now stationed in District 15 hopes to remain there until his group (24) is demobbed.

Bangor.—L.A.C. Parry (S.E.A.A.F.) is with BRS4467 of District 10. He recounts many experiences in combined ops. *Prestatyn.*—2731 has moved to a new address. The writer,

during a short stay in Belfast, visited G15QX and the gang at G16YM. He wishes to record his thanks to them all for their kind hospitality.

General.—Whilst compiling a record of members and their post-war activities, the writer would like to list their special interests, so that he can put them in touch with others similarly interested. BRS1060.

DISTRICT 12 (London North and Herts)

Acting D.R.: P. R. Solber (G5FA), 35 Torrington Gardens, New Southgate, N.11. *Enterprise* 4347. *District Scribe:* C. E. Stevens (2DHF), 22 Bramford Court, Southgate, N.14. *Palmer's Green* 0548.

North London.—One of the best attended meetings for some time was held at the home of G. E. Mansell (BRS7285) on September 23, when the subject for discussion was "Looking Ahead." The need for a good S./M. dial at a reasonable price and third-party traffic handling in the U.S.A. were among a variety of topics discussed.

Mr. H. A. M. Clark (G6OT) was besieged with questions on post-war licences, technical and Morse examinations, the playing of gramophone records, harmonic troubles and procedure in general. Thanks are recorded to our host and hostess for their hospitality.

The next meeting will be held at the home of Mr. F. T. Taylor (BRS4249) on October 21st. 2DHF.

St. Albans.—At the September meeting G3YY, 8FJ, 2FWX, 2HAB, 2DHM, 3412, 7238, 9969 and one prospective new member enjoyed the very generous hospitality of G4GT and his lady when our host's partly constructed transmitter and a very useful amplifier with crystal microphone were inspected. It was agreed that the next meeting should take the form of a Victory Celebration on the occasion of the visit of G6OT. The General Secretary, G6CL, also hopes to contribute to the programme. This event is expected to attract a larger gathering than usual and a room at the Peash Hotel has, therefore, been engaged. Members from North London, Barnet, Luton, Watford, Welwyn Garden City and all parts of the District are invited to turn up in force. As tea will be provided, those intending to be present are requested to inform BRS3412, 18 Sandfield Road, St. Albans, as soon as possible in order to assist the catering department. No fixed charge will be made, but a collection will be taken towards expenses. Congratulations are offered to BRS7238 on his recent marriage. The T.R. has been pleased to contact Capt. Thorpe, ZS1AH one of South Africa's most prominent amateurs, who has now settled down locally. BRS3412.

DISTRICT 13 (London South)

Acting D.R.: S. E. Langley (G3ST), 52 Dumbarton Road, S.W.2.

An interesting letter has arrived from G2JK who is stationed at Washington, D.C., U.S.A., to the effect that the W.'s are already on the air on 112 Mc/s.

The September meeting at the Y.M.C.A., Croydon, was attended by 28 members and visitors. The main business of this meeting was to arrange for the second Field Day to be held at Kennel Farm, Upper Warlingham, on September 22-23.

The Field Day was duly held, many members attending with camping equipment, food supplies, pots and pans and lashings of radio gear. A good watch was kept on all the amateur bands. During the Sunday morning watch two stations (SM4CP and ON4B) were heard calling CQ on 7 Mc/s., but they did not appear to make contact. (We suggest these were unlicensed stations.—Ed.) It would appear that the long-suffering British amateur who has tightened his belt and given freely of his services including in many cases the use of expensive radio equipment, will be the last to get back on the air. However, "last but not least," so to speak.

Further tests carried out with the kite proved that a 5-metre dipole and 60-ft. feeders could be lifted up with ease to a very useful point skywards. During some of the tests the kite broke away due to very gusty winds, but it was soon recovered several hundred yards away across the fields.

During Saturday evening when the camp had settled down to business, strange lights were seen across the field; upon investigation it turned out to be the village "local." It was like old times to get together again and discuss our favourite hobby over a glass of good old English ale. G3ST.

DISTRICT 15 (London West, Middlesex and Buckinghamshire)

D.R.: H. V. Wilkins (G6WN), 539 Oldfield Lane, Sudbury Hill, Greenford, Middlesex. *Byron* 3369.

Arrangements for the Dinner and Dance are well in hand and at the time of writing most of the tickets have been disposed of. It is with regret we have to announce that dancing must terminate by 11 p.m.

Meetings have been held in the following areas since our last report was published.

Harrow.—At the first, 6 members attended when G6WN described his past activities, while 2KH interested the 12 who attended the second meeting with a lucid description of direction finding as applied to field days. 6447 also demonstrated his midjet super and desk microphone. Our thanks to Mrs. Mace for providing the tea on each occasion.

Slough.—The first meeting was attended by three locals and one visitor while the D.R. and one BRS member travelled down from London. A general discussion took place. Thanks are due to Mrs. Houchin for the welcome tea.

West London.—Six members took part in a discussion about radio gear "lying around" in Germany opened by 2CQJ who had just returned from Berlin.

Hayes and West Drayton R.A.F.—Twenty-six members listened with interest to Fl./Lt. McDermot, 2689, when he gave a talk on signal-to-noise ratio. Members fully appreciated the work involved in producing the lecture and thanked the speaker for his efforts. After biscuits and tea (kindly provided by the R.A.F. members) S./Ldr. Sharp, VU2ZWF/S, now stationed at Langley gave an interesting talk on his radio experiences while serving in the Middle East.

Ashford.—Only five members were present in spite of the fact that the A.T.R. wrote to five new members. Only one of them turned up.

Hounslow.—Meetings are starting here in November while BR59621 is making arrangements for a visit to a local automatic telephone exchange.

Ruislip.—Fl./Lt. Hardy, 4GB, invites visitors and would welcome meetings in the town.

Dates and venues of all future meetings notified to the D.R. will be found under "Forthcoming Events."

Our old friend 2BCN has written from his new home in Australia where he recently entered wedlock. His cousin 6AC is with the A.I.D. in Toronto, Canada. (Congrats and all the best to you both—D.R.) Reports have been received from the following:—4AR, 6YK, 2ARR, 2BMJ, 2DDV (now demobbed), 2FUX, 7250, 8054 and 8806. G6WN.

DISTRICT 16 (South Eastern)

D.D.R.: W. A. Scarr, M.A. (G2WFS), 8 Beckenham Grove, Shortlands, Bromley, Kent. Scribe: E. H. Truwell (2HKU), 27 Unity Street, Sheerness, Isle of Sheppey, Kent.

BR59021 stationed in Norway, is engaged in dismantling German W./T. and Radar stations and thinks the gear is vastly inferior to ours. 9663 of Dartford has been invalided home from India and is building a six-valve superhet.

Maldstone.—10221 serving in Germany has met ON4KM (Antwerp) who is in the Gendarmerie and ON4SX (Melines) who has a radio shop; both are well. 10221 says that ON4SBL was arrested by the Gestapo in May, 1943, and charged with operating a transmitter for the White Brigade (Belgian Underground Movement). He was sent to Regensburg Concentration Camp, and a fellow prisoner, who escaped, stated that he had typhus and he believes that the S.S. shot him. ON4SBL leaves a wife and two children at Lieve. 10221 has seen ON4MJ and attended a meeting of U.R.B., when there was a film-show of a pre-war "ham picnic" and a sale of surplus gear. Maldstone Amateur Radio Society are holding meetings every fortnight on alternative Tuesdays and Wednesdays and, if support is forthcoming, it is hoped to hold weekly meetings. The clubroom is at 244 Upper Fant Road, and the Secretary is Mr. P. E. Holder, 10272, 2 Florence Road.

Herne Bay.—Mr. W. Baker, 3NQ, has had visits from 3ST and 3003 and sends his 73 to 4BY and 5CI. Anyone interested in forming a local club is asked to contact 3NQ either at his business address, 104 High Street, or at "Woodside," Radfall Hill, Chesterfield.

Sidcup.—2DHV has passed his City and Guilds Exam in Radio Communication (Grade I) with a first-class pass. He is stationed at Norwich.

Tonbridge.—G4FB is planning a new PA stage and has comej visits from 2FZG who is stationed nearby.

Sussex.—The only report for some time from this area comes from 2FTS who is building a Signal Generator. 2HKU.

DISTRICT 17 (Mid East)

D.R.: A. C. Simons (G5BD), Admiralty Road, Mablethorpe. Phone 69.

BR57117, after a spell of service in South Africa, is back home. G5FY, now a civilian, visited G6QN during his "bowler hat" vacation. 8BQ is also getting used to civvies and is resuming work with his old firm. 2BQC has arrived in Australia, travelling most of the way with ZL2GH. Les has been entertained by VK2TI and VK2DI.

BR510428, our first five figure member, is a W./T. op. in the Merchant Navy, hoping for an early demob., a shore job and a transmitter. 8562 is disappointed that he has missed joining the R.A.F.; he will be in Royal Signals on his call up. 5LL still with C.M.F., hopes to be out and home by Xmas. 30S and 8SH met at G5BD's recently. The latter is shortly moving to a new house with interesting possibilities: his radio room will measure 30 ft. by 12 ft. with ample room for almost any type of aerial system. 30S staged an informal meeting at his house on September 24. Those present included G3WB, G4OF and a few Service members. G5BD.

DISTRICT 18 (East Yorkshire)

Distric Scribe: S. Davison (G6SO) 10 Sydney Street, Scarborough.

Hull.—The meeting held on September 17 was attended by 14 members and friends. The usual discussions were held and 4LH gave an excellent impromptu talk on direct disc recording. Frequency modulation also came under discussion. 2QO has now returned to Hull after a year's absence in Sierra Leone. Morse classes have been poorly supported. 2HJZ has been home on leave from Austria, where he is in charge of a high-speed auto transmitter. 4590 is at present stationed at Woolwich. 3PL had a letter from 10357 in Bridlington, a new member.

With the news that W amateurs are already on the air on 112 Mc/s., local members are looking forward to "the" day. There are already rumours that the ether in the vicinity of the ham bands is in for a rough time! G3PL.

Scarborough.—G8KU and 2CP are now back in "civvy street." Both have served with R.N.V.R. 2DDA (R.A.F.) is expected on leave shortly. 6SO received a QSL from VE3AIU, Ontario, on his return to Canada. Thanks and 73, O.M.

Bridlington.—Cpl. P. Lumb, 7871, who has recently returned from overseas and is now stationed in this area would like to meet local members. His address is: Met. Office, R.A.F., Carnaby, Bridlington.

Whitby.—5796 now back in "civvy street" is working for the local entertainments committee. G6SO.

DISTRICT 19 (Northern)

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

No news for two months! What has happened to everybody? G2FO.

Scotland

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

This month "D" and "G" Districts return to the ranks of organised districts and it is hoped that the following months will see the complete District organisation in full swing once again.

"A" District (Glasgow).

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

The September meeting of the Glasgow Amateur Radio Club was attended by 34 enthusiasts, 12 being licensed amateurs. A warm welcome was extended to the many newcomers. Best wishes go to GM4MV who is leaving to take up a new appointment in Australia. A talk was given by 2FZT on receivers and general equipment for the beginner. The subsequent discussion produced the wisecrack from a member that 200 Mc/s. is a low frequency!

The Committee are endeavouring to arrange further talks and would request members to contact the D.O. or Scribe if they cannot reach Alf. Jones at Busby 1700. 2FZJ.

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

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

At the September meeting nine members were present when the subject took the form of a general discussion. Those present wished Mr. R. P. McConway the best of luck in his new post at West Hartlepool. His co-operation to assure interesting discussions at meetings will be missed. GM3LU has received a letter from GM4NR at present in Athens, the latter is fit and well and reports meeting some of the SV gang. We wish him luck and a speedy return home. GM3NH.

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

D.O.: J. Wilson (GM6XT), 52 Macdowell Road, Edinburgh, 9.

Mr. J. Wilson (GM6XI) has accepted an invitation to act as D.O. Accommodation is being sought for meetings and all members in the district are asked to advise Mr. Wilson so that they can be kept posted of developments.

"G" District: (Borders, namely, Peebles-shire, Selkirkshire, Roxburghshire and Berwick).

Mr. J. P. Blair (GM5FT), 35 Market Place, Selkirk, who was the first D.O. of "G" has agreed to act as D.O. until the District is going again. A meeting has been arranged for October 21, at 2.30 p.m. in the King's Hotel, Galashiels. Those who can attend should please notify Mr. Blair at their earliest convenience.

Northern Ireland

D.R.: J. N. Smith (G15QX), 19 Hawthornden Drive, Belmont, Belfast, N.1. Phone 63323.

G13ZX writing from India, says he is fit for anything, after standing up to life out there for some years. He sends 73 to his many friends, and hopes to be able to contact them via Amateur Radio in the not too distant future. G15HU has been pleased to receive a visit from his brother-in-law, C. Page, BR56980, of Sheffield. A round of Ham-shack visits is planned. The D.R. was very shocked to read of the death of John Hunter, G2ZQ. John was one of his first contacts, way back in '31, and he was also a war-time visitor to G15QX. His untimely death will be sadly mourned by all who knew him.

Sympathy is tendered to Mr. J. Johnston, BR57937, and his wife, on the death of Mrs. Johnston's father. G15QX.

Romford and District Amateur Radio Society

The above Society have now resumed regular fortnightly meetings. The next meeting will be held on October 22, 1945, at 8 p.m., in the Y.M.C.A., North Street, Romford, Essex. It is hoped to revert to weekly meetings in the immediate future. Morse classes are being started for the benefit of pre-war A.A. licenees and others.

The Hon. Secretary, Mr. R. C. Beardow, G3FT, 3 Geneva Gardens, Whalebone Lane North, Chadwell Heath, has just been demobilised from the R.N. and will be pleased to welcome old friends.

News from Europe

We understand from G6HF that PA0XL was killed by the German secret police and that PA0XI died in a German prison camp. PA0XN and PA0XQ have returned to their homes after a long imprisonment in Germany.

R.S.G.B. BULLETIN

OFFICIAL JOURNAL OF THE INCORPORATED RADIO SOCIETY OF GREAT BRITAIN

Published on or about the 15th of each month. Issued free to members.

General Editor: JOHN CLARRICOATS.

Advertisement Manager: HORACE FREEMAN

Editorial Office:

NEW RUSKIN HOUSE,

LITTLE RUSSELL STREET, LONDON, W.C.1

Telephone: Holborn 7373.



Advertising Office:

PARRS ADVERTISING LTD.,

121 KINGSWAY, LONDON, W.C.2

Telephone: Holborn 2494

Honorary Editor: ARTHUR O. MILNE.

VOL. XXI

OCTOBER, 1945

No. 4

THE STORY OF RADAR

It is a thousand pities that we are not yet in a position to publish technical details of certain types of Radar equipment, especially as the technical Press of other countries will no doubt have already begun to "spread itself" fully in that direction.

As was so rightly pointed out last month by Mr. Hugh Pocock, Managing Editor of *Wireless World* in a letter to *The Daily Telegraph*, British technical journals are not only being deprived of an opportunity of publishing technical information but the shortage of paper prevents them from giving their readers all but a cursory account of the general principles involved.

It may come as a surprise to some readers to learn that on August 14 last the Ministry of Information (who never seem to be short of paper) released tens of thousands of words dealing in general terms with the development and use of Radar equipment, but not a single word has yet been released concerning the circuits, components and radiating systems employed.

As we are not satisfied that the need for a high level of technical security still exists, we feel it desirable to state our policy for the guidance of those members who have taken part in the development of Radar and who wish to pass on their knowledge to others.

If you have a story to tell you are cordially invited to write to Headquarters giving a fairly complete synopsis in duplicate of the ground it is proposed to cover. If your offer is accepted your synopsis will be submitted to the appropriate Service Department assuming that, in the opinion of the Editorial Committee, such a course is necessary. When sanction has been obtained you will be invited to submit your manuscript.

Until such time as more paper becomes available it will not be possible to publish lengthy articles on recent radio developments but we feel that we owe it to our members to see that the fullest possible publicity is given to those subjects which have a direct bearing on post-war Amateur Radio. For example, most of us want to know the types of Radar valves which can be used by amateurs for communication on centimetre waves. We seek information on the many aspects of "plumbing" that have been vaguely referred to in this and other Journals. Enlightenment is also sought on the design of centimetric receivers and the components they employ.

We are certain that many of our members can furnish this information without jeopardising the future well-being of our country.

For six long years we have lived under the cloak of security and this Journal, in common with the technical and lay Press of Great Britain, has conscientiously accepted the rulings of Officialdom, but now

that World Peace has come it is high time we were allowed to tell the world at large that British radio men and women have done a job second to none. We hope that this view will be shared by our members and by our contemporaries.

We are particularly concerned with giving publicity to recent micro-wave developments, because it is well known in Society circles that a large proportion of those who propose to apply for a radiating licence will wish to devote their time, money and energy to V.H.F. experiments. Possessed of this knowledge the Society is anxious to learn from the British radio industry what plans are being made to cater for this very extensive post-war amateur market. So far, our advertisers—labouring, no doubt, under the security cloak—have been reluctant to describe the special equipment and valves which they have developed, and which will be available for amateur use. May we suggest that the appropriate trade organisations get together now, and tell us what support we can expect to receive from them?

We appreciate fully that there have been numerous other radio developments in addition to Radar, and we look forward to publishing details about them at an early date.

The current issue, still restricted to a meagre 16 pages, contains a brief account of the activities of those members who have served at the Telecommunications Research Establishment. It should be a matter of pride to us as a Society to know that a goodly number of our colleagues were selected to take part in the important work carried out at Great Malvern. Incidentally, before these few simple facts concerning T.R.E. could be published, special permission had to be obtained from the M.A.P.! Surely it is time that the Government awoke to realities and encouraged its officials to do a little "line shooting" before other countries claim *all* the credit for the technical developments of Radar and the many other brilliant achievements which we *know* stand to the credit of our "Boffins."

Post Script

Emphasis to the views expressed in the opening paragraph of this Editorial is provided by the arrival at Headquarters of a copy of *Radar—A Report on Science at War*—a 50 page publication of the U.S. Government Printing Office reprinted by His Majesty's Stationery Office, London.

(Continued on page 55)

A 14 Mc/s THREE ELEMENT ROTARY BEAM AERIAL

By F. W. R. ROBBINS (G4CY)*

It is an undisputed fact that in long distance short-wave radio communication, the aerial demands the utmost consideration, even, if necessary, at the expense of power, and although long distance (DX) contacts have frequently been achieved with the aid of the ordinary long-wire and half-wave doublet systems, the results obtained with a beam show a very marked increase in signal strength over a given area due to its directional properties. For the success of this type of aerial to be assured, it is essential that it be constructed and erected in such a position as to allow rotation through 360 degrees. This will ensure that signals can be radiated and received to the best advantage in any predetermined direction. The aerial and mast described were designed to meet this end.

The Aerial

The aerial is composed of three elements, namely the Radiator, the Reflector and the Director, all of which are constructed of $\frac{3}{8}$ in. diameter copper tube cut to the following lengths:

- Director .. one length, 30 ft.
- Radiator .. two lengths, each 16 ft. 6 in.
- Reflector .. one length, 38 ft.

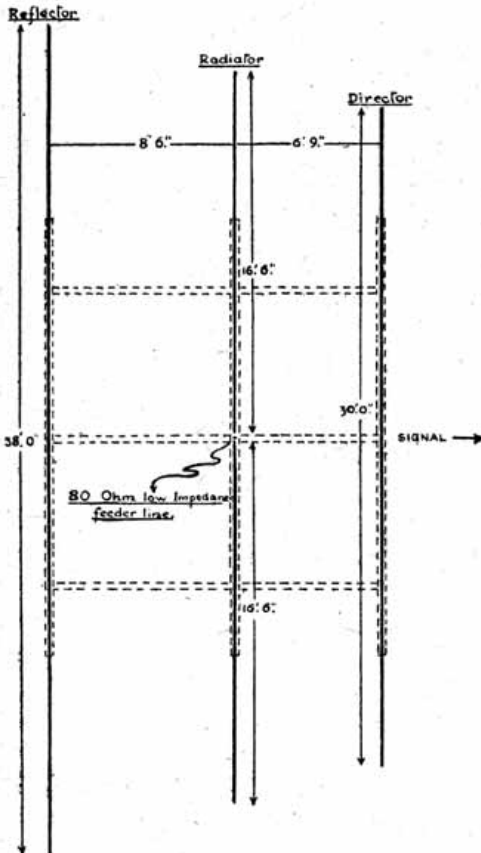


Fig. 1.
Measurements and spacings of aerial elements.

* Kewaray, Belle Vue Road, Henley-on-Thames.

Each element is mounted on stand-off insulators fixed to wood battens $1\frac{1}{2}$ in. \times 1 in. and 20 ft. long. The three battens are tied by three cross-bracings of similar section timber, held together by No. 8 2-in. screws and fixed in a manner indicated by the dotted lines in Fig. 1. The radiator is placed in the centre with the director and reflector on either side, spaced at 6 ft. 9 in. and 8 ft. 6 in. apart respectively. The innermost ends of the two tubes comprising the radiator are spaced $4\frac{1}{2}$ in. apart and at this point the 80 ohms low-impedance feeder line is connected. This array is secured to the top rails of the rotary top by means of six $2\frac{1}{2}$ in. \times $\frac{5}{8}$ in. coach-bolts passed through the three cross bracings.

The Rotary Top

The rotary top is built entirely from 1 in. \times 1 in. tile battens and when completed forms one unit with an overall measurement of 16 ft. \times 3 ft. The practical constructional details are shown in Fig. 2, but a few comments on the method of assembly are necessary. The two sides comprise the main part of this structure, each side being formed of a top and bottom rail, 16 ft. and 8 ft. respectively, which are joined by six uprights. These uprights are half-jointed and screwed into the rails with No. 8 2-in. screws and the bracings are then screwed between the uprights. The risers on the ends of the rails are held by mortise and tenon joints. Having completed the two sides, they are then joined at the extremities of the rails by four 3 ft. \times 1 in. stretchers, two being screwed on the upper side of the top rails and two on the lower side of the bottom rails. In addition to the two stretchers, a length of timber, 3 ft. \times 1 ft. \times 1 in. is screwed across on the underside and in the centre of the bottom rails to form the bearer holding the back plate, into which the end of the tubular propeller shaft is fitted for rotating the top. The back plate referred to is threaded to accommodate the tube and is fixed in the centre of the bearer. Four rollers are fitted equidistant on an imaginary circle, 6 in. radius from the centre of the back plate, to ensure that the top rotates on an even keel. The reason that only two light ties are used to join the ends of the top rails is due to the fact that when the structure carrying the aerial is attached to the top, additional support is afforded by these bracings.

The Mast

The four main uprights of the mast, each 36 ft. in length, are made from $1\frac{1}{2}$ in. \times $1\frac{1}{2}$ in. timber. Deal is quite suitable but ash is much to be preferred. Each upright is comprised of two lengths of timber and joined in the middle by a 6-in. half-joint, held together by three 2 in. \times $\frac{5}{8}$ in. coach bolts. The method of making this joint and the necessary bolting is illustrated in Fig. 3.

Tile battens are used for the stretchers and bracings. In this case they are not jointed into the uprights but screwed directly on to the outer faces by means of No. 10 2 in. counter-sunk screws. Here again, as in the construction of the top, it is more convenient to build up two sides of the structure first and when completed, attach the stretchers and bracings which form the remaining two sides.

In the construction of each of the first two sides, it is necessary to place the two 36 ft. uprights perfectly flat, cut a length of tile batten 1 ft. 3 in. long and fix

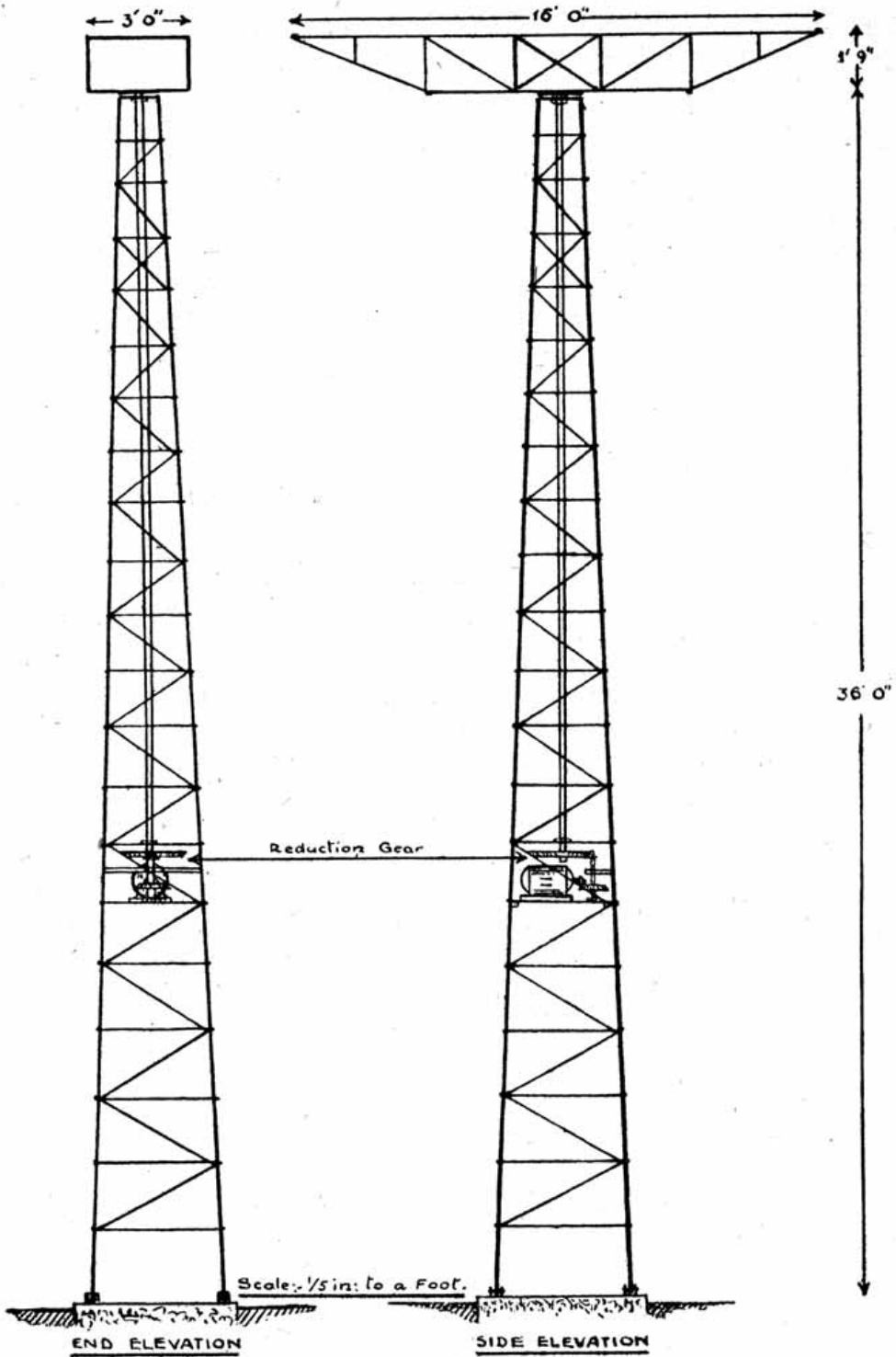


Fig. 2.
Side and end elevations of the lattice mast and top.

it at the extreme ends of the uprights, so that the outer edges are flush with the ends of the battens. This constitutes the top stretcher. Next, open-out the uprights at the opposite end to a distance of 4 ft. between the outer edges and temporarily tack a batten at this point to hold them in position. The bottom stretcher is then screwed across the uprights at a point 2 ft. from this batten. Having done this, proceed to fix the intermediate stretchers with one No. 10 2-in. screw at each end. It is preferable to cut these stretchers a little on the long side and then trim the ends flush with the uprights after fixing. It will be found that the tile battens when purchased in bundles, are all of one length and in the interest of economy a little care is necessary in cutting the stretchers and bracings if waste of this wood is to be avoided.

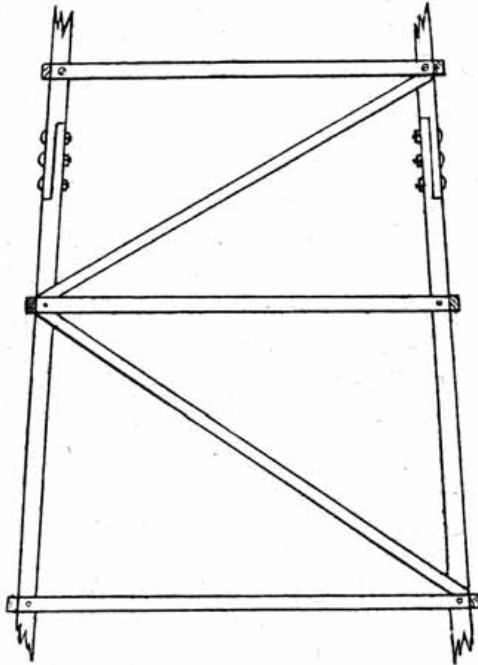


Fig. 3.
Method of jointing and bolting the mast uprights.

When the first two sides are completed, they are turned up on edge in such a position that the stretchers and bracings forming the remaining two sides can be screwed in place. The completed mast should measure 4 ft. square at the base and 1 ft. 3 in. square at the top. The structure thus built, now takes the shape of a tower, at the top of which is fixed a square of wood measuring 1 ft. 3 in. \times 1 ft. 3 in. \times 1 in., the corners of which are cut-away to allow the top ends of the four uprights to be inserted. A plate of sheet iron, identical in size and $\frac{1}{8}$ in. thick is then screwed to the top side of the square of wood with eight No. 6 $\frac{3}{4}$ in. counter-sunk screws. These screws are not screwed right home at this stage as the plate has to be removed for drilling; the screw holes then make locating points when the final fixing is made. Mark off the diagonals across the plate and where the lines cut, make a centre punch mark, deep enough to make an impression on the wood beneath the plate. The plate and wood are then removed for drilling purposes. At the centre punch mark drill a hole through the wood the same size as the external diameter of the

ball race, which is used as the top bearing for the propeller shaft. Through the metal plate, also at the centre punch mark, drill a hole $\frac{1}{8}$ in. larger than the internal diameter of this ball race. A further metal plate is cut, 6 in. square, mark off the diagonals as before and drill a hole of similar size through the centre. This latter plate is then screwed in the centre, on the underside of the wood with four No. 6 $\frac{3}{4}$ in. screws. The ball race is then placed in its position in the hole already drilled in the wood and the top metal plate screwed on. These two metal plates then provide the means of retaining the ball race.

Fig. 4 indicates the details of the assembly of these mast head components, the position of the propeller shaft being shown by the dotted lines. The completed top board is then held in position by three No. 10 3-in. screws, screwed through each of the four top stretchers. Two further bearings for the propeller shaft are required, one at the drive end and another mid-way between this and the top bearing. The method of retaining these bearings is the same as described for the top bearing with the exception of the metal plates. The large plate is replaced by another 6-in. plate and instead of a square of timber being fixed in the mast, a strip 6 in. wide and 1 in. thick is secured diagonally, into the centre of which the ball race is fitted. The metal plate at the top of the tower also provides a bearing surface for the rollers (referred to in the paragraph dealing with the construction of the rotary top) to run on. Tube was chosen for the propeller shaft in order to reduce top weight to a minimum and at the same time it offered a protective duct through which to run the 80 ohm feeder line, thus minimising the twisting effect on this cable.

Sufficient power to rotate the top section is provided by a $\frac{1}{2}$ h.p. electric motor, which is mounted on a wooden platform, 1 in. thick, secured in the mast in the position shown in Fig. 2. It is an advantage to

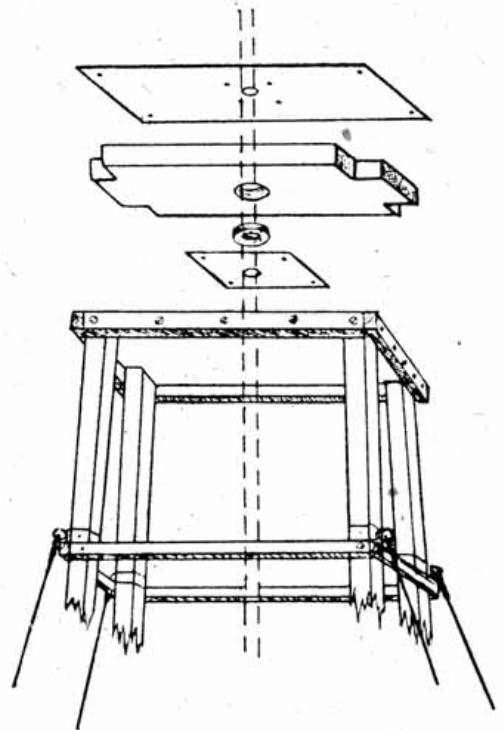


Fig. 4.
Mast head assembly.

have a motor fitted with a magnetic brake to stop any tendency for the top to turn in the wind. Operation of the motor is effected by means of a press-button switch installed in the shack. The wiring consists of a length of 3/0-29 3-core tough rubber sheathed cable. The shaft, gearing, ball races, etc., can be obtained from disused automobile parts which, when coupled to the low speed motor, should be geared to enable the top to rotate at a speed of approximately one to two revolutions per minute. A sheet-iron cover, made in two halves, affords protection of the motor and gearing against the weather. This cover has been purposely omitted from Fig. 2 in order to show the motor and associated gearing. All the woodwork should be given at least one coat of creosote to increase the life of the mast.

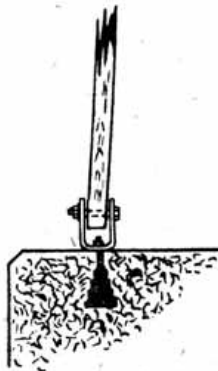


Fig. 5a.
Method of securing the mast to its foundation.

Erection

A foundation for the mast is provided by a concrete block, composed of four parts sand to one part cement, measuring 5 ft. \times 5 ft. \times 1 ft. 6 in. thick, constructed in such a manner that when completed the surface is approximately 3 in. above the level of the ground. Into the top of this concrete plinth, four "U" shaped irons are grouted in such a position as to accommodate the feet of the four uprights of the mast when in the erected position. The "U" irons are made from four pieces of strap iron, each 1 ft. \times 2 in. \times 1/4 in. heated and bent to shape; the internal measurement of the irons being 2 1/2 in. A 3/8-in. clearance hole is drilled in the middle of the base of each of the "U" irons to take the rag-bolt which holds it to the plinth. Two further 3/8-in. holes are drilled through each "U" iron, 1 1/2 in. from the ends of the limbs. Correspondingly, a 3/8-in. hole is drilled in each of the feet of the four uprights of the mast, 2 in. from the bottom.

It follows that, when erecting, two adjacent feet are placed in their respective "U" irons and a 5 in. \times 1 1/8 in. galvanised bolt inserted through each, thus forming a hinge on which the mast can be raised and lowered. The fitting of the rag-bolt, "U" iron and foot can be seen in Fig. 5a. Four stay wires, with egg-type insulators inserted at 10-ft. intervals, are fixed at a point immediately above the second stretcher (this should be approximately 1 ft. from the mast head)—one at each corner. This attachment is made by means of a piece of 1 in. \times 1/8 in. strap iron, bent closely round the upright, with an overlap on each end of 1 in., through which is drilled a 1/4-in. hole. The stay-wire is passed through this hole and made off in the usual way.

Strainers are fitted at a convenient point about

4 ft. above ground to enable even tension to be obtained on each of the four staying points. It should be mentioned at this juncture that, in making-off the wire on the strainers, make sure that the latter are in the extended position, thus allowing for any take-up which may be necessary at a future date. The anchorage for each stay-wire is made by the use of a stay-block, through the centre of which a 1/4-in. hole is drilled for the stay-wire to pass through, the wire is then bound round a short piece of 1-in. strap iron and pulled tightly to the block. Each stay-block should consist of a length of timber approximately 2 ft. \times 6 in. \times 6 in. and should be thoroughly saturated with creosote and buried 3 ft. below ground level. The ground should be well rammed. Fig. 5b illustrates the method of making off the block and strainer. Each anchorage point should be 10 ft. from its respective corner of the mast. In addition to steadying the tower in a wind, these stay-wires are useful when erecting and lowering.

Results Under Test

Under actual test in 1939, this array proved very successful, having a gain of approximately 10 decibels over a half-wave doublet. Two-way contact was established and maintained with Australia (VK4), Malay States (VS2), West Indies (K4), Panama Canal Zone (K5) and a good number of American stations,

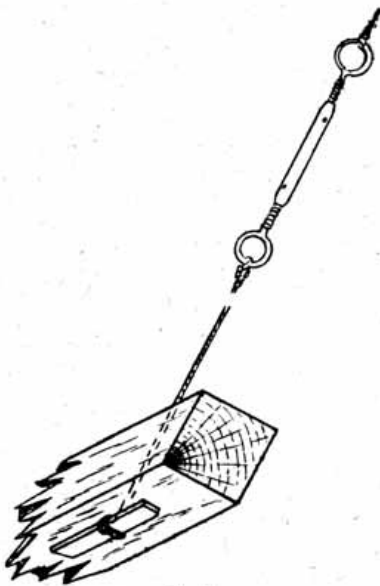


Fig. 5b.
Method of making off stay block and strainer.

in addition to which a listener's report was received from New Zealand (ZL4) and at no time did the input exceed 10 watts.

It will be appreciated that this structure was designed before the war when materials were easily obtained, but with the hope that timber will again be plentiful now that hostilities have ceased, a rotary beam certainly warrants serious consideration, bearing in mind the advantages to be gained due to its directional properties and consequent increase in signal strength.

ANNUAL GENERAL MEETING
SATURDAY, 29th DECEMBER, 1945

Followed by a LECTURE entitled
"RADIO LOCATION" by Dr. R. L. SMITH-ROSE

A FRESHMAN'S GUIDE TO AMATEUR RADIO

By ARTHUR O. MILNE (G2MI)*

PART VI—CALL SIGNS, QSL CARDS AND CERTIFICATES

Call Signs

IN the early days of Amateur Radio, call signs in this country consisted of three letters, just like

Commercial and Government stations, but it soon became desirable that quick differentiation should be possible. As both types of station used similar wavelengths the likelihood of confusion decided the Authorities to withdraw all the old calls in 1920 and to issue new call signs consisting of one figure and two letters. In the middle 1920's when International contacts became common routine, it was found necessary to have some means of identifying not only the particular station, but also the country of origin. For a time the method of calling was 2MI GF 8AB, indicating that British 2MI was being called by French 8AB, but as world-wide contacts became the

countries the figure gives additional information as to the geographical location of the station, the country is divided into a number of zones or districts, each with a distinctive figure. For example: New Zealand is divided into two main islands by geography; each is sub-divided into two districts or call sign zones thus the north and south of the northern island are ZL1 and ZL2 respectively whilst the north and south of the southern island are ZL3 and ZL4.

The United States are divided into nine call sign districts, W1 to W9, South Africa into six, ZS1 to ZS6 and so on. In many countries, however, Great Britain among them, this zoning does not obtain. In this country a G2 and a G8 may live in the same street. Call signs were issued in series and have no geographical significance. The artificial aerial licence



A typical collection of QSL cards from the British Empire.

order of the day, the International Amateur Radio Union, an affiliation of National Radio Societies, suggested a comprehensive system of country prefixes and continent prefixes, A for Asia, E for Europe, O for Oceania, N for North America, etc. EU stood for European Russia, AU for Asiatic Russia. NU was U.S.A., EG Great Britain and EF France, etc. Although the system constituted an unauthorised alteration to the official call sign, an official blind eye was turned to the irregularity until the Madrid Telecommunications Conference drew up and approved the list of prefix codes which still applies to-day. A number of the I.A.R.U. prefixes were incorporated and many new ones brought in, the agreed official prefix becoming part of the station call sign. Thus 2MI of Britain became G2MI. 2MI of Northern Rhodesia became VQ2MI, 2MI of Brazil, PY2MI, etc. The full list of International Amateur prefix letters appears in the *Amateur Radio Handbook*.

In some parts of the world, amateur call signs consist of the prefix, figure and one letter, in others two letters and in some three letters. Further, in many

was not issued with a "G" prefix because, by the terms of his licence he was prohibited from radiating a signal. It seems likely, however, with post-war conditions upon us that three letter radiating call signs will soon be quite common.

To the experienced user of our bands, the call sign was not the only means of identifying a station. Many of the well-known operators could easily be spotted by some slight but characteristic peculiarity of signal or by a little mark of individuality in Morse style.

One unkind critic once said that some Amateurs could even be recognised by their voices! This cut, however, could never be truly applied to the telephonic quality of British Empire amateur stations.

QSL Cards

The QSL card received passing mention in Part III of this series. Some more general information on this thorny problem should be of interest.

In its original form, the QSL card was intended as a written confirmation of a radio contact and was exchanged by the stations concerned through the post. As International contacts became more commonplace, the QSL card was of considerable value as a positive

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

check in cases of doubt. It was indisputable proof of contact, and when first contacts between new areas were taking place, had very real historical importance.

The collection, and exhibition of QSL cards from all parts of the world became an acknowledged means of judging a station's achievements. Displayed on the walls of the owner's radio room they were an object of pride and envy and a never-ending source of interest to the lay visitor.

As the years went by and the numbers of cards grew, postage expenses became a serious problem to many an impoverished Ham. Hence came the QSL Bureau to his aid. Each National Society undertook to distribute its members' cards in bulk to other Societies throughout the world where individual members made arrangements to collect them in bulk. This service was sometimes operated at a small charge, sometimes free. The R.S.G.B. Bureau was always a free service to members.

All would have been well except for a fly in the ointment, a very big fly! The listener's card. Large numbers of non-transmitting enthusiasts took up the collection of QSL cards with as much keenness but with considerably less intelligence than other folk might collect stamps or cigarette cards. The QSL Bureaux were jammed with thousands and thousands of report cards having little or no technical value with the result that the QSL card became the bane of active amateur's life.

It is early days as yet to predict what place the QSL card will hold in post-war radio, but there is little doubt that although most of us would be sorry to see the genuine confirmation card disappear, the return of the listener's card is viewed with considerable misgiving unless it contains information of a far more useful nature than it did in the past.

Few of us in 1939 would have believed that in six short years we would illustrate a typical QSL card in this journal, so that our members would know the "animal" when it was encountered; yet the miracle has happened and so here are typical examples, just to show you!

Certificates

The subject of QSL cards seems naturally to lead into a discussion on certificates, because most of these were awarded on production of the necessary cards, duly authenticating contacts over the air. There is no doubt that the most sought-after Award of Proficiency was the A.R.R.L. DX Century Club Certificate, awarded to any station in any part of the world able to produce confirmation of contact with 100 or more countries. What constituted a country for purposes of the award was laid down in a set of agreed rules and possession of this certificate was to belong to the most exclusive coterie in Amateur Radio.

The premier British certificate in this class was the British Empire Radio Transmission Award made by the R.S.G.B. to anyone able to produce proof of contact with 40 Dominion and Colonial zones.

Another popular and much coveted honour was the American W.A.S. (Worked all States) certificate offered to any station able to prove contact with all of the 48 States of the U.S.A. To amateurs outside the North American Continent, this was probably the most difficult certificate of all for which to qualify.

Other certificates issued by R.S.G.B. were the W.B.E. series for contact with a British Empire zone in each of the five continents. Separate awards being given for telephony and telegraphy and for 28 Mc/s. work. A similar series was offered by I.A.R.U. through the A.R.R.L. and were known as W.A.C. (worked all continents).

(To be continued)

Proposed New Q Code Signals for Use by Radio Amateurs

It is a matter of general knowledge that special Q code signals have been found necessary for use in W./T. communication links belonging to different branches of the Services during the war to express commonly-required phrases specially applicable to the respective branches. In the same way, even before the war, it was found that by the use of special Q signals amateur communications could be much improved and simplified; some of these had a wide circulation—e.g., QHM, "I am listening for answers by tuning from the high-frequency end to the middle of the band," etc.

The Council considers that certain additional semi-official Q signals could be put into use which would be of great help to all amateurs. Two suggested examples have been mentioned in a previous Editorial. These are QHI, "Please move higher in frequency," and QLO, "Please move lower in frequency." The use of these Q signals would be very helpful in "steering" a transmitter using a master-oscillator out of QRM with the least possible delay.

The Council proposes to prepare a list of suggested new signals and to agree this list with the A.R.R.L. Suggestions will be very welcome from the membership as a whole, especially from those who have considerable experience of operating.

The Council asks, therefore, that those who have any ideas should send in to the Chairman, Propaganda Committee, c/o R.S.G.B., to arrive not later than November 30, 1945.

THE STORY OF RADAR—(continued from page 49)

True, no technical details are given but the account of the part played by Radar in winning the war is considerably more comprehensive than that released by the British Ministry of Information, last August. The rather staggering fact is that this book was written some time before the M.O.I. release, i.e. whilst the war with Japan was still in progress.

It would be unfair to criticise any feature of this publication although we have little doubt that those members who helped to develop and operate Radar gear will wish to challenge some of the claims made therein. The U.S. Government have naturally made a strong case for themselves, but in view of the statements which have appeared on this side of the Atlantic, we find it hard to appreciate that "Among the United States military applications of radar which the A.A.F. pioneered in combat with land based aircraft are:—Early warning, low altitude and high altitude bombardment, short-range air navigation, short-range weather-forecasting and the technical co-ordination of air-ground operations." We were under the impression that the original CH stations along our eastern coast-line pioneered "early warning" radar in combat. Perhaps the controlling words in this claim are "Land Based Aircraft."

Whatever the pros and cons, the fact remains that at the end of September 1945, the British public interested in Radar were forced by circumstances beyond their control to read of its development through the eyes of an American journalist.

As a final thought we should like to know how it comes about that H.M.S.O. can reprint large quantities of an American publication, when this and other British technical Journals are still labouring under the burden of paper rationing?

J.C.

FRANKLIN TYPE SIGNAL GENERATOR

By S. M. SUGDEN (BRS7976).*

THE Signal Generator to be described employs the Franklin type oscillator, thereby avoiding the difficulties met with when constructing an instrument employing a set of tapped coils. The R.F. oscillator consists of two triodes, but as provision must be made for modulation, one of the valves is operated as a triode hexode. The hexode section applies modulation to the R.F. signal. As the triode section is internally coupled to one of the hexode grids, no external connection is necessary for the R.F. side.

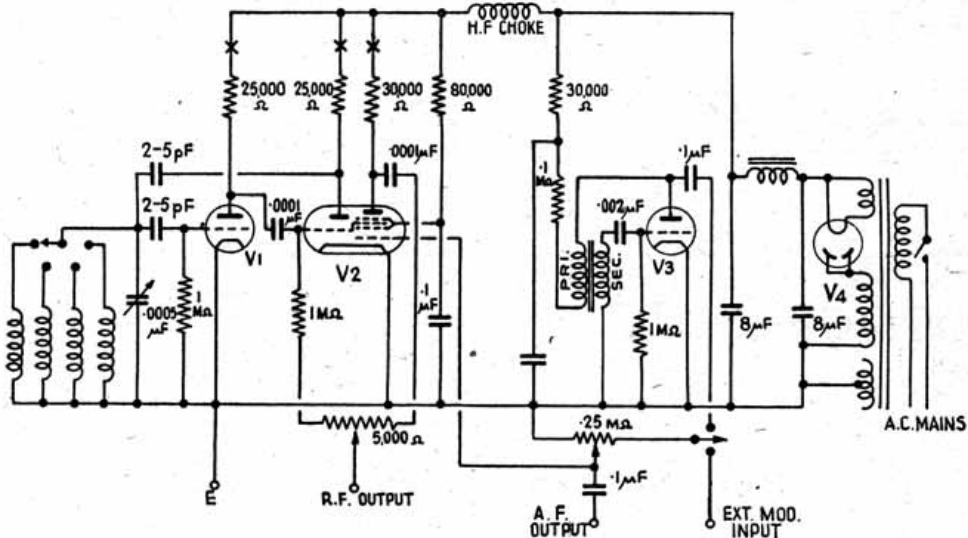
The A.F. signal is applied to the signal grid of the hexode through a $1 \mu\text{F}$ condenser and $25 \text{ m}\Omega$ potentiometer which is used as an A.F. gain control. The A.F. oscillator comprises a triode with the primary of an ordinary A.F. transformer connected in its anode circuit, and the secondary in its grid circuit. Provision is made for the use of external modulation, the selection of internal or external modulation being controlled by means of a single-pole two-way switch.

Power Supplies and Valves

The transformer for the power pack, which was specially wound, takes up very little space. The H.T. secondary was wound for 200v, 20 mA, the heater secondary for 6.3v, 1A and the rectifier secondary for 4v, 1A. The valves in use are V1, 6C5G, V2, X65, V3, 76 and V4 U10.

General

The whole instrument is assembled in a screened case while the R.F. section itself is totally enclosed by a metal casing. Four sockets are provided, for (a) the earth connection, (b) R.F. output, (c) A. F. output, and (d) external modulation input. There is also an R.F. output control, an A.F. gain control, and two switches—one for external or internal modulation and the other for range selection. The $0.0005 \mu\text{F}$ variable condenser is provided with an epicyclic slow-motion drive. The mains on/off switch is on the A.F. gain



Circuit Diagram of the Franklin type Signal Generator.

Frequency Ranges Covered

As the coils for the R.F. oscillator are not tapped in any way the exact ranges required can be found by trial and error. The method used by the writer was to wind on to the former more turns of wire than the estimated correct number, and then by the use of a calibrated receiver remove successive turns until the correct frequency ranges were obtained.

A four way signal pole selector switch is used to cover the following frequency ranges:

- (1) 65-160 kc/s. (using a coil from an old 110 kc/s. transformer).
- (2) 140-370 kc/s.
- (3) 360-900 kc/s.
- (4) 700-1,850 kc/s.

Further ranges could be added by the use of a 5 or 6 way switch, although if very high frequencies are required, small R.F. chokes would probably be required at the points marked X in the diagram.

control which is of the "with switch" type. The two condensers coupling the R.F. oscillator to the tuned circuit are small 10 p F trimmers, and are set at the lowest value which produces steady oscillation.

It may be found when the instrument is used for the first time that the A.F. modulation is absent; a reversal of the leads to the secondary of the A.F. transformer will correct the fault, provided of course that the rest of the A.F. section wiring is correct.

As the Franklin oscillator is very stable, the instrument, when in use, is free from any annoying drift, and the operation of the A.F. gain control does not have any effect on the frequency of the R.F. oscillator.

Exhibition of Modern Instrument Cases

Alfred Imhof, Ltd., of 112-116 New Oxford Street, London, W.C.1, recently held an exhibition of Instrument Cases. The complete process of manufacture as well as the preliminary work of designing was demonstrated. The first designs of a range of handles with infinite applications were also shown. A particular feature of the exhibition was examples of equipment, components and parts made by Imhof's for Radar, Asdic and many other purposes. This year Imhof's celebrate their centenary.

* 36, Gores Lane, Formby, Liverpool.

NECESSITY IS THE MOTHER OF INVENTION

By ERNEST BANKS (2CNC), F.F.C.S., F.B.I.

ONVE-Day, not only was the war in Europe brought to a successful conclusion but something else occurred, an event which brought freedom and happiness to thousands of British subjects, who for five years had been subjected to Nazi oppression. VE-Day meant the liberation of the Channel Islands.

During the early stages of the occupation, the Reich authorities published an order confiscating radio sets, and so the Islanders were to be cut off completely from the Mother Country, at least, so thought the Germans. They had, however, overlooked the capacity of the British to "make-do."

In a letter to the R.S.G.B. just after postal communication had been restored with the mainland, H. Le Dain, G4LI, an old friend of the writers', pointed out that the confiscation order did not deter the enthusiasts from listening to British programmes. One might well ask how this was accomplished since all radios had been turned over to the Germans. Well, the junk box was in most cases the means of building-up a receiver, but not all the Islanders possessed the radio man's treasured asset, and this story refers to one whose junk box contained but three wireless components, one of which was out of action.

Years before the war this enthusiast and the writer conducted simple experiments in radio, and from these he learnt some of the fundamentals, which were to stand him in good stead in the years to come.

When the Nazis ordered the confiscation of radios, his basic knowledge was brought into action. To hear the British news bulletins was his aim. From Psychology we learn that "to have an aim is half the battle won" and to accomplish that aim is the success attributed to concentrated effort.

To achieve this purpose it was resolved to construct a one valve receiver, built around one of his three components, an HL2. 2 volt battery type valve, and so, just as though he was moving across stepping stones to the opposite river bank, he commenced work on a crystal set.

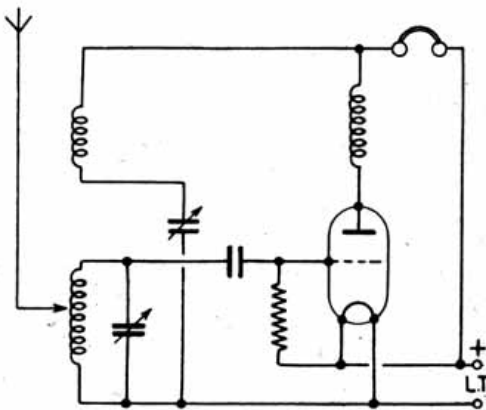
A variable condenser was his first requirement. He had no formula for ascertaining capacity, nor did he possess any Abacs, so that his only "formula" was "trial and error." Both the stator and rotor vanes were cut from cocoa tin lids, holes being punched with a nail and hammer. The first spindle was made from a flattened piece of tin rolled to shape, but this was discarded in time when three metal-thread screws were obtained. Pieces of tin were used for spacing washers, and a door handle made an excellent dial. The completed condenser was mounted on the panel by means of the two screws which held the stator vanes in position.

Next came the coil, and the former used was a cardboard cylinder which at one time had been a receptacle for table salt. The first of his three junk components was brought into use. He had a broken H.F. choke, the wire proving suitable for the winding of the grid coil. Readers will appreciate why it was decided to make the crystal set first, as no reaction coil winding was needed. The idea was that if British stations could be heard, then the grid winding would be correct and the reaction winding could be added later. This proved a far better scheme than winding a grid and reaction coil at one attempt, a point which will be readily understood.

The earpiece was stripped from a telephone receiver, and reassembled in a plywood lined metal tin. The instrument was successful enough for the initial tests. At a later stage a pair of 120 ohms earphones were

obtained from another enthusiast, and by experience it was proved that best overall results were got by using 80 ohms earpieces.

The crystal was the next item to be "discovered." A holder was built up from odd pieces of tin and wood, and various combinations of stones were tried unsuccessfully. Finally two pieces of coal did the trick! An ordinary outdoor aerial could not be erected, since this would immediately raise suspicion, and an indoor one would hardly give the desired results, and so it was decided to use the existing telephone wires. Although telephonic communication had been forbidden, the wires had been left intact.



The One-Valve Wonder that brought news to at least one family in the Channel Islands during the occupation.

The first tests were a failure, but by altering the coil winding, results were finally obtained and the Home and Forces programmes were heard—but very faintly. From this original crystal set, there evolved a one-valver, built around the second component, the H.L.2 valve. A reaction condenser was assembled on the panel in the same manner as the variable tuning condenser, vanes being added or taken away during tests, as the occasion merited. The grid coil had a reaction winding added below it, and this was varied during tests. A grid condenser consisted of pieces of tin and wax paper interlaced, whilst pencil lead served for a grid leak.

Now came the worst snag of all. A 2 volt cell was his third component, and was all he had available in the power line. Not to be deterred, however, the cell was used for two jobs, in supplying both L.T. and H.T.

An H.F. choke was wound on a test tube, and experiments proved that best results came through when the tube was filled with screws, nuts and other metal objects.

The completed circuit was as illustrated.

Telephone wires were again in use as the aerial. Results were excellent, and when the A.E.F. programmes came on the air, signals were even better still.

As far as can be seen, there is a moral in this story, so when you cannot get a particular component dig out your wife's cocoa tins, and salt packets, not forgetting your own razor blades!!

Congrats

● To L.A.C. C. R. H. Broadhurst, **BRS8677**, on his recent marriage to Miss A. E. Smith. They are now living at 64 Bentley, Atherstone, Warwick.

THE SOCIETY'S HONORARY MEMBERS HONOURED

A MEMORABLE event in the long history of the Society took place on September 10, 1945, when the six Honorary Members assembled at a Complimentary Dinner given in their honour by the President and Council at the Connaught Rooms, London, W.C.2.

The Honorary Members, Mr. E. Dawson Ostermeyer G5AR, Mr. H. Bevan Swift G2TI, Mr. Arthur E. Watts, G6UN, Mr. Alfred D. Gay, G6NF, Dr. R. L. Smith-Rose and Mr. Leslie McMichael, G2FG, were accompanied by their wives with the exception of Mrs. McMichael and Mrs. Gay who were unable to be present.

Eulogy to the Honorary Members

The General Secretary, Mr. John Clarricoats, in proposing the toast "Our Honorary Members," said: Mr. President, Ladies and Members of Council.

We are gathered together this evening to pay a tribute to our six Honorary Members, and I regard it as a high privilege that I should have been allowed to eulogise their past achievements.

I should like to recall that in the 32 years that have passed since the Society was formed, Honorary Membership has only been conferred eight times. The first two Honorary Members were Senators Marconi and Sir Oliver Lodge, both of whom have now passed on. Honorary Membership is the highest distinction the Society can confer, and although we have perhaps been conservative in the past, none will disagree with the decisions made by past and present Councils. Honorary Membership is conferred upon those who have "rendered acknowledged eminent service to the Science of Radio Communication." I hope to be able to show that the six gentlemen who have honoured us with their company this evening have, in very truth, rendered acknowledged service to the science of radio communication. Sometimes we are inclined to think of the Society as an organisation devoted primarily to the development of interest in amateur radio, with particular emphasis on amateur transmitting, but the scope of the Society is very much wider, in fact, an examination of the Memorandum of Association, which was drawn up in 1926 with much care and skill, makes it clear that the objects of the Society are all-embracing in the field of radio science.

During the 191 years I have been associated with the Society, it has been my privilege and honour to work with, and later under the direction of, four of those we are honouring this evening. During that time I have had many opportunities of assessing carefully their merits. I can assure you, Ladies and Gentlemen, that the services which they have individually rendered have in no small measure contributed to the very satisfactory progress which has been made by the Society in recent years.

I propose now to refer briefly to each one of our six Honorary Members, and I am sure they will forgive me if I fail to mention some feature of their work in which they have been especially interested.

Mr. E. Dawson Ostermeyer

Our Senior Honorary Member is MR. ERNEST DAWSON OSTERMEYER, known to us all as G5AR. Mr. Ostermeyer first became associated with the Society just after the last war, but he did not take an active interest in our work until 1928 when he joined the Council. One year later he became our Honorary Treasurer, an office he filled with great distinction until he succeeded to the Presidential Chair in 1937. To Mr. Ostermeyer, more than to anyone else, the Society owes a deep debt of gratitude for having steered its finances through the most difficult years of our existence. When he became Treasurer in 1929 our resources were at a low ebb. When he retired at the beginning of 1937 he had seen our assets grow to nearly £1,000. His wisdom and sagacity helped to build up the Society to withstand the shock of war. How well he planned and guided our finances can be gauged from the present Balance Sheet of the Society.

G5AR has always maintained a very efficient station at his home in Woodford, and although no one can accuse him of being a DX fiend, I know from personal experience that his equipment is capable of achieving all that is desired.

Mr. H. Bevan Swift

MR. BEVAN SWIFT, G2TI, was elected an Honorary Member in 1939, after completing an unbroken period in office of nearly 20 years, during which time he had occupied almost every position of responsibility in the Society. I remember him first as the Chairman of the old T. & R. Section. It was whilst occupying this position that he conceived the idea which led up to the birth of the T. & R. BULLETIN in July, 1925. We shall always be grateful to him for that inspiration, because we can date the rapid growth of the Society from the inception of THE BULLETIN. The birth of THE BULLETIN also coincided with that period in our history which has been called the "Dawn of DX." It was largely due to

Mr. Swift's initiative that the keen and enthusiastic members of the T. & R. Section, were persuaded to sink their differences with the parent body and work together under one leader. Mr. Swift was also chiefly responsible for bringing into being our first Convention in 1926, a landmark and turning point in our history. From that time onwards the social side assumed a high place in our work as a National Society.

Mr. Swift became Honorary Secretary in 1927 and two years later took office as Executive Vice-President. In 1931 he became President, a position he filled with great wisdom and dignity for three years. After leaving the Presidential Chair he combined the duties of Immediate Past President with the even more difficult duties of Honorary Editor, thus returning to an active interest in the strapping he, as Chairman of the Editorial Committee, launched upon the world eight years earlier. It was during his period of office as Honorary Editor that THE BULLETIN reached new pinnacles in the field of technical literature. From a mere 12 page pamphlet it had increased in size to an average of 60 pages per issue.

Mr. Swift's association with the Society dates back to the years before the last war, and I have no doubt when he is called upon later he will tell us something about the events of those early days.

Mr. Arthur E. Watts

I wish now to refer to MR. ARTHUR WATTS, G6UN. Mr. Watts has been accorded many "titles" during the time he has been associated with us—incidentally he is, I believe, the only Past President who has held a B.R.S. Number—that was nearly 20 years ago when he became BRS12. His "titles" have ranged from "Pub. Man" when he was our Hon. Publicity Manager—(an office he filled with very great assiduity), to "King Watty of Beru" (a tribute to his remarkable achievements in connection with the development of the British Empire Radio Union). However, I like to think of him as the Society's Ambassador, for it has been upon his shoulders that the responsibility has rested of representing the Society at the last two International Conferences—Madrid in 1932 and Cairo in 1937. His great knowledge of international amateur radio is unequalled in this country, whilst his contacts made at the conferences often enable him to enter where angels fear to tread!

Mr. Watts first joined the Council in 1929 and since then he has remained in the closest touch with every phase of our work. After serving a wonderful apprenticeship under Mr. Swift, he succeeded him as President in 1934. Throughout his first term in office as President, Mr. Watts pursued his efforts to publicise the Society throughout the British Empire. He corresponded with hundreds of overseas amateurs, and as the result of his perseverance the British Empire Radio Union was formed.

The inauguration of B.E.R.U. Contests was largely due to his enthusiasm, as was the institution of the Empire Link Station network which earned much credit for the Society in the years before the war.

It is, however, in connection with his work as G.P.O. Liaison Officer that the name of Arthur Watts will always be remembered among British amateurs. During the recent war Mr. Watts continued to devote many hours each week to Society affairs, and it is upon him, as Chairman of the G.P.O. Liaison Committee, that much responsibility rests at present.

Mr. Watts was elected an Honorary Member in 1941 after he had completed his second term in office as our President. Throughout those years he diligently attended meetings in many parts of the country—no mean achievement for one who suffered the loss of a leg in the Gallipoli Campaign during the last World War. We hope he will long be spared to continue the grand work he has so unselfishly undertaken.

Mr. Alfred Duncan Gay

MR. GAY, G6NF, was elected to Honorary Membership in 1943 to mark the appreciations of the Council for steering the Society so successfully through the first three years of the recent war. Mr. Gay, like his mentor, Mr. Swift, has had a very wide experience of official positions in the Society. Prior to becoming President in 1940, Mr. Gay had undertaken with great efficiency the onerous duties of Calibration Manager. His knowledge of frequency measuring problems is unequalled among the lay ranks of radio amateurs. For some years Mr. Gay served as South London Representative, and it was during that time that he first attracted the attention of the Council, who were appreciative of his high technical ability. Mr. Gay, alone of our Honorary Members, can claim membership of the DX Century Club. His achievements on the air have won for him a high reputation in amateur circles, whilst the efficiency of his station in pre-war days went far to ensure for him the right to hold, for two years in succession, the special trophy awarded to the leading British Isles amateur in the A.R.R.L. DX Contests.

During his Presidency Mr. Gay made many visits to the Provinces and attended practically every P.D.M. organised during the first three years of the recent conflict.

With the early resumption of amateur transmitting facilities the Council will look again to Mr. Gay for guidance in those technical subjects in which he has few equals.

Dr. R. L. Smith-Rose

It is now my pleasant duty to refer to Dr. SMITH-ROSE, who is known to all of you as the Superintendent of the National Physical Laboratory. Perhaps not so well known is the fact that Dr. Smith-Rose can lay claim to a longer association with the Society than most of us here present. Dr. Smith-Rose was a member of the Council just after the last war and his many contributions to the Society's Journal are preserved in our records.

It is, however, of his more recent association with the Society that I would dwell upon for a few moments. My first acquaintance with him dates back to a warm summer's afternoon in the middle 1930's when, in company with Mr. Gay, we paid our annual visit to the N.P.L. We were both very much impressed then with all that we saw, and I can remember saying to Mr. Gay that it would be a real achievement if the Society could induce Dr. Smith-Rose to deliver a lecture to the Society. Not only has that hope been realised but Dr. Smith-Rose has now become one of our Honorary Members. We are indeed grateful to him for having honoured us in that way and we hope that as time goes on he will be able to show us how best the Society can direct its activities, in the experimental sense, to the provision of assistance to the N.P.L., and to the other important organisations with which he is associated.

At the time when Dr. Smith-Rose became an Honorary Member he was Chairman of the I.E.E. Wireless Section, and it was chiefly as a result of his knowledge of our work, that the invitation was extended, by the Council of the Institution, to Society Members to attend meetings of the Wireless Section. Dr. Smith-Rose has attained to a position of eminence in the world of radio science which has earned for him the highest praise. It is, I am sure, the desire of the present Council that I offer him our best wishes for the future, coupled with the hope that the time may not be too far distant before some of us will again have an opportunity of visiting his Laboratory and inspecting the many wonderful devices that have been developed there during the past six years.

If additional proof were needed of his interest in our work it is to be found in the fact that he has kindly agreed to deliver a further lecture to the Society at the forthcoming A.G.M. On that occasion Dr. Smith-Rose will speak to us about that most absorbing subject "Radio Location."

Dr. Smith-Rose has one further claim to distinction which many of us envy. He is, I believe, the only member present tonight who has visited A.R.R.L. Headquarters and the Maxim Memorial Station at West Hartford. Perhaps he will tell us a little about his visit, because the Council will shortly be considering suggestions for an R.S.G.B. station.

Mr. Leslie McMichael

It would require the eloquence of Winston Churchill, and the wisdom of King Solomon to pay full tribute to the last of our Honorary Members it is my privilege to eulogise this evening. Mr. LESLIE McMICHAEL founded the Society in 1913, that surely is a sufficiently good reason for honouring him. Yet there is much more that we owe him. True, it was his idea that led to the birth of the original London Wireless Club from which the Incorporated Radio Society of Great Britain sprang, but we must not forget that it was the wisdom which he brought to the Society in his capacity as Honorary Secretary in the early days, that laid the foundation stone upon which others were able to build. Throughout the whole 32 years that have elapsed since Mr. McMichael launched us on our way he has been intimately associated with the science of radio. If time permits no doubt he will tell us something about the high spots of his career, first as an amateur and later as Managing Director of the world-famous concern that bears his name.

Very shortly our President will make a special presentation to Mr. McMichael which I hope will serve to remind him of an incident in his career as an amateur, which had world-wide repercussions.

Mr. McMichael's interest in radio experiments goes back to the early years of the present century, and it is no exaggeration to say that he is well-deserving of the title "The Doyen of Amateur Radio." As was so ably said by one of my colleagues on a recent

A Tribute to John Hunter

Squadron Leader H. Edge, G6GD, writes: "Like many other members who knew him well I was deeply shocked to learn of the death of Whig Commander John Hunter, G2ZQ, and having been very recently associated with him in the Service, I should like to pay a humble tribute to his memory.

"It was a great day for us in Delhi when John arrived there towards the end of '43, and from that moment there was a change of spirit in the Signals Planning Section. Wherever he went he seemed to be doing something for someone or other, and one never went to him for assistance in vain.

"He seemed to have a 'nose' for hams and it was chiefly due to his initiative that the 'Duration DX'ers' Club' was formed in Delhi with about 40/50 W.'s and some 20 G.'s. It was only natural that he should be unanimously elected its first President; indeed our friends from over the water held him in as great esteem as we did.

"When I left Kandy in May, I knew it was his intention to get the amateurs together in the 'Kandy Keyclicker's Club.'

"Of his work one can say little at this juncture, because he was engaged on very important planning, but I do know the 'powers-that-be' thought very highly of him. When the story can be told,

occasion, Leslie McMichael is to British Amateur Radio, what the late Hiram Maxim was to American Amateur Radio.

We are delighted that he has been able to join us this evening, but I am sure I speak for you all when I say how very sorry we are that Mrs. McMichael could not be with him to share the happiness of this occasion. We also much regret that Mrs. Gay was prevented from attending.

Mr. President, Ladies and Members of Council, I give you a toast to the Honorary Members of the Incorporated Radio Society of Great Britain, may they live long to enjoy the high honour which has been accorded to them. With this toast, I couple the names of Mr. Ernest Dawson Ostermeyer, Mr. Henry Bevan Swift, Mr. Arthur Egerton Watts, Mr. Alfred Duncan Gay, Dr. R. L. Smith-Rose and Mr. Leslie McMichael.

The toast is "Our Honorary Members."

Presentation of Certificates

Following the Secretary's eulogy, the President, Mr. E. L. Gardiner, presented a vellum certificate to each of the Honorary Members signed by the President in office at the time of their respective elections to Honorary Membership.

In their replies, Mr. Ostermeyer and Mr. Swift recalled the successful voyage of the Society, then a relatively fragile craft, through the financial storms of the years 1924-1934.

Mr. Watts recounted some amusing experiences of the widespread influence and appreciation of amateur radio which he had encountered on his journeys to the International Conferences at Madrid and Cairo.

Mr. Gay, who for many years took upon himself the onerous duties of Calibration Manager, spoke of the steps which the Society took towards higher accuracy in Frequency Measurement.

After reviving many very early memories, Dr. Smith-Rose described his war-time visit to the A.R.R.L. Headquarters at West Hartford and went on to speak of the future possibilities that exist for amateurs if their efforts are properly co-ordinated.

Special Presentation to Mr. McMichael

Before Mr. McMichael replied, the President presented to him a copy of the original Petition addressed to the Postmaster General by the Society in 1921 when Mr. McMichael himself was the Honorary Secretary. This was the Petition which was directly responsible for the initiation of British broadcasting.

In his reply, Mr. McMichael, who is one of the co-founders of the Society, recalled the early growth of interest in the new science of radio-communication and the generous accommodation provided by the late Mr. A. W. Gamage.

The Ladies

In proposing the health of The Ladies, the Executive Vice-President, Mr. S. K. Lewer, G6LJ, spoke of their enduring tolerance and moral support on which radio amateurs have always been able to rely throughout the difficulties and discouragements of an art which depends largely for its charm upon its feminine qualities of variability and uncertainty.

During the evening Mr. H. A. M. Clark, G6OT, entertained the company at the piano.

we shall know to how great an extent our success in radio matters in S.E.A.C. was due to him.

"I feel his going as a deep personal loss, for one got to know him so easily and could turn to him for advice and assistance always. There will now be a big gap which will be felt both by radio amateurs and in Service circles for a long time to come."

LONDON MEETING

A cordial invitation is extended to Members and their friends to attend a display of
TECHNICAL FILMS OF TO-DAY
(including Radar)
to be shown by

Fl./Lt. P. A. THOROGOOD, R.A.F.V.R., G4KD,
at the Institution of Electrical Engineers,
Victoria Embankment, London, S.W.1,
Friday, 19th October, 1945, at 6.30 p.m.
Tea will be served free of charge at 5.30 p.m.

RADIO AMATEURS AT T.R.E.*

MEMBERS generally will have been following with great interest the details of Radar recently released by Press and radio. No doubt they will be glad to hear that radio amateurs are well represented on the staff of the Telecommunications Research Establishment, Gt. Malvern, and that they have been doing good work in this important contribution of radio science to the war effort. The 95 names recorded below will provide convincing proof that the amateur experimenter was able to turn his knowledge and ability to good use in this new and, at first, unfamiliar field. A list of all radio amateurs known to have been at T.R.E. follows:—

Pre-War Licenced Amateurs

L. O. Rogers (G2HX), F. T. Wilson (G2XX), F. E. Wingfield (G3CX), M. Ryle (G3CY), C. H. Thorpe (G3LZ), F. Harrison (G3KA), B. Snowden (G3OQ), C. Brown (G3QL), E. Prior (G3SH) Ruth Jebb (G3YL), W. A. Baker (G4KB), E. W. Harris (G5KC), F. J. U. Ritson (G5RI), R. E. Griffin (G5UH), M. V. Wilkes (G5VF), L. E. Pulford (G5XS), (the late R. Neale (G6GZ), D. W. Pugh (G6OP), J. G. Ross

A. W. Marsh (8975), A. H. Shaw (9178), G. R. Clarke (9610), A. T. M. Vaughan (9611), G. Wood.

Overseas Amateurs

A. Armstrong (VE3TK), F. O. W. Smith (VE3VZ), J. K. Hack (VE4AAY, VE4KW), F. O. P. A. Fair (VE4YD), J. A. Stephenson (W1DGC), O. C. Villard (W1DMV), P. C. Jacobs (W1GGD), H. F. Hall (W1ILL), S. B. Colin (W1JPV), I. M. Hollywood (W2AER), E. Miller (W2JMJ), G. N. Rupert (W2NWU), M. Adam (W4EGL), J. Hexen (W6GUW), D. F. Reynolds (W6MRL), P. Robbiano (W6PKM), L. M. Billuille (W7CFX), J. H. Fulton (W7IKF), S. Galian (W8OME), W. H. Jordan (W9YAM), L. A. Hartman (W9ZGF), A. C. Baulton (ZL1HC), F. O. Robertson (ZL1JZ), D. G. Bryce (ZL1PA), F. O. G. L. Barlow (ZL1TY).

The majority of the above are members of the Scientific Staff, comprising as they do all grades from Assistant to Senior Scientific Officer. Readers will note with interest the large number of our American friends, who formed part of small but important groups sent over from the American Universities.



AN R.S.G.B. FILM SHOW AT T.R.E.
(Left to right.) Front row: BR59610, G3IZ, BR55860, 2FRW. 2nd row: BR57914, G3YL, G2HX, 2FJD, BR55832. 3rd row: G8NL, Opr. G6VC, —, 2CZS, 2AZS, G5VF, BR58899. Back row: G8PN, BR54523, BR59178, ZL1JZ, BR56917.

(GM6ZP), L. G. Stoodley (G8DM), V. Russell (G8DW), W. G. Hall (G8JM), C. Turner (G8NL), F./Sgt. C. C. Newton (G8PN), F./Lt. Nield (G8SH), F./O. C. H. Perry (2ACL), D. L. Leete (2AFZ), W. Purser (2AXO), P. J. Baxendall (2AZS), E. H. Cooke-Yarborough (2BCQ), R. G. P. Batt (2BHO), R. M. Wallace (2BQZ), P. S. Rogers (2CBZ), G. S. Garfitt (2CKR), F. W. Cook (2CIT), R. B. Sachs (2CZS), H. L. Carson (2FGR), R. C. Hiscock (2FIK), B. H. Briggs (2FJD), D. J. Allen-Williams (2FJJ), L. H. Metcalfe (2FRW), L.A.C. A. S. Reeve (2HFD), C. Sharpe (2HIF), W. Roberts (2HNM), H. G. Whitby (2HAZ).

B.R.S. Members

J. W. Gough (3299), W. A. P. Young (3551), H. J. Grayson (3620), A. Alexander (4292), F./Sgt. F. J. T. Tuckfield- (4523), O. E. Alexander (4983), W. G. Knight (5116), S. F. Pamplin (5430), C. A. Young (5819), K. E. Machin (5832), J. A. Popple (5860), W. Percival (6075), Miss E. M. Bagshawe (6182), S. T. Richards (6804), T. J. Allport (6917), E. J. Arnies (7628), P. L. Taylor (7914), F. C. G. Featherstone (8239), E. H. Kirk (8536), B. W. Pollard (8899).

* A statement prepared by the Committee of the T.R.E. Amateur Radio Society.

Most of them have now returned to the U.S. Members of the R.A.F. are also represented; they worked at T.R.E. alongside the "boffins."

T.R.E. Amateur Radio Society

The T.R.E. Amateur Radio Society was formed about a year ago, but for security reasons its existence could not be made known outside the establishment. It is hoped that in the future the Society will be able to be more closely associated with the R.S.G.B., and with District 3 activities in particular. The first Chairman of the Society was F./Lt. Nield (G8SH), who left T.R.E. in February, 1945, and was succeeded by Mr. D. F. Reynolds (W6MRL). Unfortunately, Mr. Reynolds had only a short spell of office, as he returned to America a few months later. The present Chairman is Mr. L. O. Rogers (G2HX).

Society Activities

The activities of the Society have so far included a series of visits, lectures and discussions.

A new programme of lectures is being arranged for the winter months, and Mr. F. Harrison (G3KA) is organising Morse classes for the benefit of the many A.A. and B.R.S. members who hope to be able to apply for radiating licences in the near future.

SOUTH WALES ENTERTAINS

ON September 22, Cardiff acted as host town for the first P.D.M. to be held in South Wales since 1937, and an attendance of 46 gathered at the Park Hotel for the occasion. Although by no means a numerical record, the meeting was marked by the vast distances covered by several members who, in their efforts to attend, had had to overcome travelling difficulties peculiar to the terrain of the District.

It had been found impossible to provide a photograph as a memento of the occasion but, on assembly, a roll-call showed that, amongst others, District 10 was represented by: G5FN, GW2OP, 2UH, 3AJ, 3CR, 3GO, 4CC, 4FW, 4NZ, 4KQ, 5BI, 5VX, 5WU, 6JW, 8AM, 8CT, 8NP, 8UH, 8SO, 2AVV, 2DNP, 2DOS, 2DVF, 2FUW, 2FVD, 2HIR, BRS4005, 7071, 7577, 7589, 8021, 8117, 9278, 9785, 10374, 10722.

The District 5 party, headed by Arthur Bartlett, G6RB, included: G3YT, 5KT, 2BAR, 2CUI and BR87961.

The Acting D.R. for District 10, Mr. H. H. Phillips, GW4KQ, opening the meeting introduced the Headquarters representatives, Mr. John Clarricoats, G6CL (General Secretary) and Mr. Arthur Milne, G2MI (Honorary Editor). The apologies of the President, Mr. E. L. Gardiner, G6GR, who was unavoidably detained in London, were conveyed to the meeting, whilst Lt.-Col. K. Morton Evans, GW5KJ, who had also hoped to attend, was prevented from so doing by last minute Service matters. A cordial welcome was extended to the visitors and it was reported that 20 members had conveyed their regrets on their inability to be present.

"Clarry's 80 Minutes."

Mr. Clarricoats then addressed the meeting and, with the aid of the now-famous "little black book," gave members a most lucid picture of Society affairs concerning not only present activities but also those of the more distant future. The latest information regarding the re-issue of licenses, examination proposals for new licenses and the exempted classes in respect of Service trades received prominence.

Provincial representation and the closely allied problem of the widely scattered District membership were reviewed at length being topics upon which the opinions of Council were eagerly sought. Whilst a solution may be found in the revision of District areas or possibly the return to a modified form of the earlier principle of County representation, past experience may tend to prove that an almost insurmountable difficulty is ever present in finding provincial members who are regularly able to attend the monthly Council meetings in London. Although continually under review, little headway could be made with proposals whilst so many of the Society's members were out of touch with Headquarters.

An immediate problem was the re-organisation of District activities which could best be served in any transitional period by the appointment of acting Town Representatives.

The ever-attendant difficulty of storage space in Headquarters for the handling of masses of cards, often the result of indiscriminate QSL'ing, was another major problem with which Council were concerned. On the outbreak of war approximately half a million cards were being handled annually at Headquarters and in post-war years, with the vastly increased membership a resumption upon a comparable scale would prove a superhuman task with the existing accommodation and staff.

Headquarter's Organisation

Mr. Arthur Milne, paying a convincing tribute to the Secretary and Miss Gadsen, referred to the enormous volume of work undertaken so valiantly at Headquarters. If the Society is to continue to give the same service to the increased membership, now nearly 10,000 strong, as it has done in the past, assistance must be made available and he strongly urged that an Assistant Secretary was necessary to relieve the burden now being carried by Headquarters.

A brief report on "the dissemination of good practices" Committee, more humanely called the "Propagation Committee," followed, in which Mr. Milne extolled the necessities of break-in operation and associated practices.

Capt. G. C. Price, GW2OP, a Vice-President, in a short survey before the tea adjournment compared the early days of the Society with those of the immediate future. He also emphasised the requirements of an essential headquarters staff and supported Mr. Milne's views on the additional assistance required at Headquarters.

Members returned refreshed after tea to the period which had been reserved for general discussion and several topics which had been raised earlier were answered by the Secretary and Honorary Editor. A long discourse on break-in operation brought the promise of an article on the "Limiter valve for Receivers" from GW8NP. The problems of post-war marketing of amateur requirements and the disposal of surplus government equipment were also discussed.

The meeting closed at 7.15 p.m. with a vote of thanks to the Secretary and Honorary Editor, and in a short speech the D.R. expressed his thanks to all those who had assured the success of this event.

The picturesque ruggedness of Cae'rphilly mountain and its propensities for National Field Day provided an anti-climax for Headquarters' representatives on Sunday morning. Before entraining for London they were entertained by Mr. D. Low, GW5WU, whose inherent hospitality provided a fitting conclusion to a most successful week-end.

CEEDEE.

Calling the "Early Birds"

When the "Early Birds" returned from the Continent in 1940 many of them expressed the wish that an Annual Reunion should be held in London after the war.

Ft./Lt. R. F. Stevens, 2BVN, among others is anxious that the first reunion should take place next year provided a sufficient number of those eligible to attend are available.

In order to ascertain the probable support, "Early Birds" are invited to send a post card to the General Secretary indicating their wishes in the matter. A Saturday function would appear to be desirable. The estimated cost per head is likely to be in the region of 15s.

NORTH WESTERN VICTORY PROVINCIAL DISTRICT MEETING

to be held on
SATURDAY, NOVEMBER 17th, 1945
at the
Stork Hotel, Queen's Square, Liverpool

PROGRAMME

ASSEMBLE	12.30 p.m.
LUNCH	1.30 p.m.
BUSINESS MEETING	3 p.m.
TEA	4.30 p.m.

INCLUSIVE CHARGE 7/6

Reservations and remittances to Mr. H. W. Stacey (G6CX), "Sandlax," Eddisbury Road, West Kirby, Cheshire, by not later than November 12th, 1945.

N.B.: As the catering arrangements are limited to 50 persons an immediate reservation is advised. Please see District I Notes.

~ ~ Letters to the Editor ~ ~

Amateur v. Pretlo

DEAR SIR,—Mr. Brown's letter in the August issue on the subject of a new name for amateurs raised some most depressing thoughts in my rather conservative bosom. I can imagine one of those awful conditions arising whereby we shall be asked to submit alternative names to that already suggested by Mr. Brown and a very harassed, embarrassed and not very enthusiastic committee having to decide whether we shall be known as "Pretlos," "Lores" (Licenced Operational Radio Experimenters), "Coves" (Code or Voice Experimenters), or "Etar's" (Experimental Transmitting and Receiving stations), etc.

And how awkward it will be when some lady relative or acquaintance asks what we do in our spare time and we answer rather proudly, "Oh, I'm a Pretlo," only to see a faint blush spread over her features as she tries to make up her mind whether a Pretlo is something vaguely obscene or a new political cult! To avoid such a complication we should be forced to explain that a Pretlo is—what?—a radio amateur! Nothing more—everyone knows what that is really.

And there I submit, is the real point—whatever fancy name was adopted, in the end it would have to be explained away by the fundamental statement that we *are* amateurs and, when you think it over, there is no other word than can possibly take its place.

Finally, let us ask ourselves—which of the following phrases really exemplifies the driving power behind us, the bond between the old timer and the fledgling and the link between those who opened up the world wide communication routes and those who are struggling with the fundamentals of radio—could it be—"The Spirit of Pretlo" or is it—"The Spirit of Amateur Radio"?

Yours faithfully,
G. S. WOOLLATT, G3ZI (Sq./LDR.)

"Hamden," Heathway, Effingham, Surrey.

DEAR SIR,—It was with some surprise that I read G6QY's letter in the August issue.

I cannot agree that the term "Amateur" implies anything which savours of dabbling or tinkering (one would hardly accuse W. R. Hammond of dabbling with cricket bat or ball).

As for the word "ham," is this not the key to perhaps the most important side of our work as a Society? Whilst agreeing that we should endeavour at all times to maintain a high technical standard, I think that the Spirit of Amateur Radio (sorry G6QY!) is a great force for advancing good will among men of all nations. It has been my privilege during the war to meet men of almost every Allied nation and despite language difficulties the mere fact of announcing myself as a "ham" has brought me many new friendships.

The same Spirit, too, has been present throughout the Services; how often has that terrible bar of rank been broken off duty by the magic word "ham"?

No, let us please remain "Amateurs" and "hams," but if it will help G6QY, perhaps we can agree that "ham" indicates "Helpful and Matey."

Yours faithfully,
B.L.A. R. W. STANDLEY, G8RW (Fl./Lt.)

More about Impedance Matching

DEAR SIR,—Mr. Charman has ably expanded two points to which I would fain have devoted more space in my article on "Impedance Matching." I may have trodden on a pet corn of his by my scanty treatment of aerial matching, but I must protest mildly at his suggestion that I "do not appreciate" the points he mentions; unfortunately I have only too much familiarity with them in the course of my work to deserve that one!

The problem in writing elementary articles is always to know where to stop, and it seemed advisable not to bring up the different "classes" of valve operation, contenting myself with one or two book references. Class C operation alone could well have a whole article to itself!

In the paragraph on aerials, it ought to have been clear that "matching" the output stage does not necessarily mean making the load equal to the R_a of the valve: the Class C matching load depends as much on the amplitude of positive grid drive as on anything else. I certainly did not mean to imply that the coil and condenser of the tank circuit dissipate half the output power! The dynamic impedance of the tank circuit is given at resonance by L/CR ; and R under load conditions can be regarded as made up of the series "loss resistance" of the coil and condenser plus the equivalent series resistance of valve damping, plus the "reflected resistance" of the aerial circuit. Normally, as G6CJ states, the latter predominates, and almost all the power is transferred to the aerial.

The misunderstanding seems to have arisen from differing use of terms, and from my putting the point badly in the first place. I am grateful to Mr. Charman for elaborating it.

While on the subject, can any member supply a proof of the formula for the position of the tapping point in a single-wire feed? Mine was an approximation based on a formula from Ladner and Stoner, "Short Wave Wireless Communication," of $TC = 0.037 \lambda$. I find that a number of other authors quote experiments by Everitt and Byrne in 1929, indicating TC/λ as approximately 0.07 . I am indebted to Mr. John Garner, 2BGG, for raising the point.

Yours faithfully,
D. M. MACKAY, B.Sc., A.Inst.P.

Break-in

DEAR SIR,—I note with interest your appeal for articles on "Break-in." I, too, consider this a most important matter as its general use would do much to reduce congestion of the bands. C.W. operation must be ultimately followed by speech operated "Break-in" for phone work.

I would like to point out that I do not think you have been quite right in asking for items *a, b, c*, under separate headings (R.S.G.B. BULLETIN, August, 1945, p. 21, "BULLETIN Articles wanted"), since you focus attention on three sections of the same problem, which, are not in my view the most important.

Examining only the C.W. case, the two main problems are:

- (1) Relays of sufficiently quick action to key up to, say, 35 w.p.m. These relays must have at least four active poles so that two aerial feeders, transmitter and receiver, can be all catered for. Such relays are a normal part of much Service equipment. The general adoption of "break-in" will depend upon them becoming available to licence holders.
- (2) Direct keying of the oscillator is almost impossible, a chirpy note is too difficult to avoid. The oscillator should be run all the time and keying carried out in a later stage. This means that some method of suppressing direct radiation from the oscillator must be found. Screening is the answer, but the amount of screening necessary is surprising. I am working on this problem at the moment but I am not yet at the stage when publication of the results is possible.

Controlling the transmitter stages after the key stage, suppression of key clicks and muting the receiver present little trouble compared with these two items.

Speech operated "break-in" has the difficulties mentioned above (except that the relay need not be anything like so fast), with the addition of the apparatus necessary to obtain the initiating action from the signal level in the speech amplifier and not by pressing a key. Steps must be taken to prevent the receiver output initiating the changeover, otherwise a vicious circle will develop. A scheme for doing this has been worked out in block diagram, but no attempt to develop it in detail has yet been made. If anyone feels that they would like to work on this problem I would be glad to forward a block diagram of this scheme.

Yours faithfully,
P. F. CUNDY, A.M.I.E.E. (G2MQ).

10 Moor Street, Shaw,
Near Oldham, Lancs.

Good News from the Far East

We are glad to announce that Mr. George Merriman, VS6AH, and his wife, are safe after their long internment in Fort Stanley, Hong Kong. The good news reaches us *via* George's brother Mr. Harold Merriman, G6GM, of Holsworthy, North Devon. Mr. and Mrs. G. Merriman are now in Sydney, Australia.

* * * * *

News is also to hand that Lt.-Col. Tom Whimster, G8UJ, is safe. He is expected home shortly. Letters can be sent c/o 42 Tolmers Road, Cuffley, Herts.

* * * * *

Jim MacIntosh, VS1AA, writing under date of September 19 from Singapore also reports himself safe, but unfortunately Mrs. MacIntosh, who was taken to Sumatra, suffered great privations. Their many friends will rejoice to learn they are now reunited and that they expect to leave for the U.K. shortly.

2AOU Back from Moscow

Martin Bourke, 2AOU, who has been in Moscow for the past four years is now back in England. He will be pleased to hear from old friends who are asked to note that his address is 23 Park Road, New Donnington, Wellington, Shropshire. During his stay in the U.S.S.R. he made no contacts with Russian amateurs but met several Britishers.

Congrats

● To Mr. and Mrs. R. H. Newland, G3VW, on the birth of a son, Geoffrey Robert, on September 12, 1945.

OUR FRONT COVER

NOTHING much of real experimental worth in radio can be accomplished without accurate measurement. The Model 7 Universal AvoMeter is a 50-range B.S. first-grade combination measuring instrument giving direct readings of A.C. and D.C. Voltage, A.C. and D.C. current, Resistance and Capacity. Audio-frequency power output and Power Level readings are also provided for. It is but one of the comprehensive range of "AVO" high-grade electrical measuring instruments—a range which includes something to meet the needs of every amateur, service engineer and serious experimenter. Fuller particulars obtainable from The Automatic Coil Winder & Electrical Equipment Co., Ltd., Winder House, Douglas Street, S.W.1.

HEADQUARTERS CALLING

COUNCIL 1945

President:

ERNEST LETT GARDINER, B.Sc., G6GR.

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

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

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

Honorary Editor: Arthur O. Milne, G2MI.

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

* * *

Members: F. Charman, G6CJ, D. N. Corfield, D.L.C.(Hons.), G5CD, Lt. Col. K. Morton Evans, O.B.E., GW5KJ, F. Hoare, G2DP, E. H. Laister, BR53386, S. E. Langley, G3ST, W. E. Russell, G5WP.

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

General Secretary: John Clarricoats, G6CL.

August 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, August 27, 1945 at 6 p.m.

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

Apologies for Absence.—The Secretary presented apologies for the absence of Messrs. A. D. Gay, A. J. H. Watson, D. N. Corfield and S. E. Langley.

1. The President announced with deep regret that Wing Commander John Hunter, G2ZQ (a former member of Council) had passed away whilst on active service in Ceylon. The President stated that he would offer to Mrs. Hunter the heartfelt sympathies of the Council.

2. It was unanimously resolved to elect 3 Life Members (Messrs. R. D. Thomas, BERS558, G. A. Peck, BR57687 and E. G. Filby, G4AQ), 272 Corporate Members (235 proposed by Corporate members, 37 supported by references), 31 Associates, 7 Junior Associates and 11 Foreign Corporates. Two Junior Associates were transferred to Corporate Membership.

3. It was unanimously resolved to grant affiliation to the Glasgow Amateur Radio Club.

4. It was recorded that of the 1480 persons elected to membership between February and July, 1945, only 92 (6 per cent.) had failed to follow up their applications.

5. It was unanimously resolved to record that Council is of the opinion that it is the responsibility of local groups to be self-supporting and that Town Representatives should see that their expenses are covered by local subscriptions. It was confirmed that District Representatives are entitled to recover from the Society, postage expenses and such other out-of-pocket expenses as may be approved by the Council.

6. It was agreed to resume monthly meetings at the Institution of Electrical Engineers, London. A programme of lectures was submitted and approved.

7. It was reported that the G.P.O. had agreed to accept applications for full licences from pre-war holders of non-radiating licences, and that such persons may apply for the retention of their pre-war call sign with the addition of the National prefix letter or letters.

8. It was reported that a meeting had been arranged between representatives of the Society, the G.P.O. and the City and Guilds Institute to discuss the arrangements to be made for the introduction of Radio Experimenter's examinations. In this connection it was explained that the G.P.O. are desirous that questions on procedure should be included in the examination papers.

9. It was agreed to write to the Radio Board for information regarding the establishment of post-war Wireless Reserves.

10. It was reported that steps had been taken to ensure the early return of impounded apparatus.

11. It was reported that a further letter had been sent to the G.P.O. regarding the proposal that amateurs should be granted permission to operate in the band 21–21.5 Mc/s.

12. It was announced that a revised list of Radio Service trades which it is hoped may carry exemption from Morse and/or Radio Theory examinations, is in the course of preparation.

13. The Secretary presented a further report dealing with the disposal of surplus Government radio equipment.

14. Mr. Watts presented a statement dealing with Copyright together with a copy of the instructions to Counsel prepared by the Society's Solicitors and Counsel's opinion. After a full discussion it was resolved to instruct Counsel to prepare a Letter of Declaration based on certain recommendations made in Mr. Watts' report. The effect of this resolution will be that in

future the author of every contribution accepted for publication will be asked to sign a Letter of Declaration giving the Society permission to publish the contribution in full or in part in the R.S.G.B. BULLETIN or in any other Society publication. The Copyright, will, as hitherto, remain vested with the author.

15. It was agreed to write to the A.R.R.L. asking for their comments on a suggestion put forward by the Propaganda Committee that additional Q Code Signals be devised for the use of amateurs. It was also agreed to forward to the A.R.R.L. a preliminary list of such signals prepared by the Committee.

16. A letter was read from Professor Sir Edward Appleton (Secretary Department of Industrial and Scientific Research) in which he asked for current information on the "hiss" phenomena.

17. The British Standards Institution wrote agreeing to inform the Society when the Committee appointed to discuss methods of expressing the performance of receivers is again constituted.

18. Mr. J. N. Smith, G15QX, asked for the views of Council regarding the holding of a Society meeting in Belfast. It was agreed to suggest to Mr. Smith that he should arrange a District meeting during the autumn and make plans for the holding of a P.D.M. during 1946.

19. Letters were read from Messrs. Schuler (re BULLETIN format and title), Eyre and Wright (re QSL Section), Wentworth (re the use of the Society's emblem on business note-headings) and Ronalds (re the use of the letters "M.R.S.G.B." on correspondence from Headquarters). The Secretary's replies to Messrs. Schuler, Eyre and Ronalds were approved. It was agreed to inform Mr. Wentworth that whilst no objections would be raised to the letters "M.R.S.G.B." appearing, Council could not authorise the use of the Society's emblem on business note-heading as membership is vested in individuals and not with commercial concerns.

20. It was agreed to discuss at an early date matters relating to:

- The future of the QSL Section.
- The future of the Experimental Section.
- Provincial Representation on Council.
- The re-organisation of Districts.
- T.R. Elections.
- Memorial to members who have been killed or have died on active service.
- Headquarters station.
- Office accommodation and staff.
- Revision of the Articles of Association.
- The future governing of the Society.
- Service subscriptions.
- Convention.

The meeting closed at 10 p.m.

I.E.E. Radio Section

Meetings of the I.E.E. Radio Section, will be held on the following dates:

November 7, 1945.—R. J. Clayton, M.A., and others: "Radio Measurements in the Decimetre and Centimetre Wavebands."

November 21, 1945.—J. R. Brinkley: "A method of increasing the Range of V.H.F. Communication Systems by Multi-Carrier Amplitude Modulation."

December 5, 1945.—F. C. McLean, B.Sc., and F. D. Bolt, B.Sc.: "The design and use of Radio Frequency open-wire Transmission Lines and Switchgear for Broadcasting Systems."

January 16, 1946.—C. F. Booth and F. J. M. Laver: "A Standard of Frequency and its Applications."

Meetings commence at 5.30 p.m. Tea at 5 p.m.

British Society for International Bibliography

The above Society extends a cordial invitation to members to attend forthcoming meetings, all of which will be held in the Council Chamber of the Institution of Electrical Engineers, Savoy Place, London, W.C.2, on Tuesday afternoons at 2.30 p.m.

October 16, 1945.—Presidential Address by Dr. S. C. Bradford: "Fifty Years of International Documentation."

December 4, 1945.—Dr. R. T. W. Reynolds and W. A. Silvester (I.C.I.): "Plastics, and their Nomenclature and Classification."

February 26, 1946.—A. H. Chaplin, B.A.: "The Principles of Alphabetical Arrangement."

W. J. Merrick, M.P.S.: "An Industrial Information Department."

April 2, 1946.—D. Roberts, A.R.I.B.A.: "Applications of the Universal Decimal Classification in the Building Industry."

G. Newman: "The Production of a Peculiar Book."

Full details of the aims and objects of the Society can be obtained from the Hon. Secretary, Mulberry Cottage, 8 Marryat Road, Wimbledon, S.W.19.

Radio Control of Models

During recent years several members have informed Headquarters of their interest in the radio control of model aircraft etc. If this interest can be maintained it may be possible for the Society to sponsor a special section devoted to a study of the subject. Interested members are invited to communicate with the General Secretary, whilst an offer from an experienced member who is prepared to act as section organiser will be appreciated. It is anticipated that the section if organised will function through the exchange of information circulated in letter budgets.

EXCHANGE AND MART SECTION

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

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

ABOUT Reconstruction.—1d. stamp brings you our List with terms of Guarantee on every item. Everything you require. 30 watt Amplifiers £28 10s., Volume controls 3s., 8 in. P.M. Speakers, 21s., 450v S/P Electrolytics, 4s., Tubeholders, 5d., Transformers, Tubes, Coils, etc. Anything from Soldering Tags upwards. We quote for Transformers to specification.—R. F. ARMSTRONG (Electronics) Ltd., Dept. TR10, 69 Eversley Road, Sketty, Swansea.

ABUNDANT supplies available for amateurs. All new goods. Electrolytics, resistors, condensers, coils, I.F.'s, speakers 2 in. to 12 in. Filament, mains, O/P transformers, 1 mA meters, Yaxley switches, Mullard bridges and oscilloscopes, 10,000 English and American tubes, including many hard to get. State your wants. S.A.E., I ship C.O.D.—BR57370, BERNHARDS RADIO CO., 67 High Street, Chatham. Phone 2927.

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

BOX-FRAME Rack with four sliding panel and chassis units, £6 10s., Height 4 ft. 8 in., width 2 ft. Solid 1½ in. angle-iron construction, grey sprayed finish, rubber castors. Send S.A.E. for details. Zeiss-Ikon camera (folding) for sale, 2½ x 3½ plate with film-pack adaptor, £3 10s.—GRIST, 72 Westfield Avenue, Watford.

BRS Amateur.—R.A.F. wireless mechanic demob., 23, seeks an outside position with a Radio or Electrical establishment. Highest references given in confidence to—Box 725, PARRS, 121 Kingsway, London, W.C.2.

COMPONENTS. 4µF Electrolytics 500v, 5s., 16µF 350v, 4s., post 6d. Valves: British and American types. Celestion speakers, with and without cabinets. Gardners range of transformers. Imhof needles, sharpeners, etc. Send your requirements.—WEATHERHEADS, Bletchley, Bucks. G2DU, BR5.4844.

EDDYSTONE Coils, 4-pin, set of four, 7s. 6d. 2½ in. TX with base, set of four, 10s. Transformers, Chokes, Valves, Condensers, etc.—G2YZ, 32 Onslow Drive, Sidecup, Kent.

EDDYSTONE 358 New Model with logging scale, complete with power pack and speaker to match. Complete set of coils. Perfect condition. Offers over £55.—Box 742, PARRS, 121 Kingsway, London, W.C.2.

FOR SALE: limited quantity "Pyrex" 10" Spreaders. 10s. per dozen, plus 2s. packing and carriage.—T. H. COLEBOURN, 61, Victoria Street, Douglas, I.O.M.

FOR SALE.—Model 83a, 74 range Universal Taylormeter with inductance and capacity adaptor, £19; also 500v Record Minor insulation test set, zero-20 megohms, with leather case; £10. All brand new.—BR5. 7840, 129 Murray Road, Rugby.

GARRARD Motor Turntable for sale, 110-250 A.C./D.C., or exchange for small table with cash adjustment.—Box 712, PARRS, 121 Kingsway, London, W.C.2.

G3VG.—Surplus tubes, T20, 12s. 6d., 807, £1, RK20A, £2; 5U4G, 10s. Few L4V, 5s. Phones, lightweight, 16s.—WOOD, 113 Ingleboro Drive, Sprotbroth, Doncaster, Yorks.

G3HS again.—Surplus to requirements: .0005 2-gang variable, 10s. Weston 0.5 amp thermo couple, 35s. Pleasey M.C. speaker, never used, 22s. Tubes: all new. 25A6GT, 15s. 6d. 6Q7G, 6D6, 7s. 6d. AC/HL, 5s. 6d. 12SC7, 7s. 6d., postage extra.—D. BOFFIN, Faringdon, Berks.

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

HALLICRAFTERS SX 16, 550kc to 61Mc, in absolutely perfect condition throughout; £60. G8WL, 26, Waverley Road, Kenilworth.

HALLICRAFTERS, S.11. Super Sky Rider, 11 tubes 545 kc-38 Mc. Crystal gate, 6L6 pp output. 240 A.C. input. Matched speaker. Nearest £45.—ALSO, 16 Bourne End Road, Northwood, Middlesex. Phone: Northwood 230.

MEMBER R.S.G.B. seeks situation as radio draughtsman or like vacancy. Age 27, ex-serviceman, 10 years in the trade, previous employment on Radar gear.—Write Box 711. PARRS, 121, Kingsway, London, W.C.2.

METERS wanted.—0/50, 0/100, 0/25, 0/250 mills, moving coil. State make, condition and price.—GM4AN, 3 McKenzie Street, Kirkcaldy, Fife.

MONOMARK service.—Permanent London address. Letters redirected. Confidential. 5s. p.a. Royal patronage. Key tag 9d.—Write BM/MONO7A, W.C.1.

PRE-WAR components, H.V. condensers, T20's, 866 Juniors, etc., used and unused. S.A.E. List.—Box 737, PARRS, 121 Kingsway, London, W.C.2.

QST wanted, January and March, 1944, in exchange for 1625 transmitting valve or cash.—Write BM/CDB5, W.C.1.

R.S.G.B. Guide, 3rd edition, 1s. 6d. Radio Training Manual, 3s. Short Wave Wireless Comm. Ladner and Stone, 1932, 10s. Power Rectifiers, Rosslyn, 6s. Admiralty Handbook of Wireless Telegraphy, 1931, 5s. Industrial Elect. Measuring Insts. Edgcombe, £1. Bound Q.S.T.'S, Jan.-Dec., 1932, 10s. Q.S.T.'s 1933, Feb.-Sept.-Dec., 1934, Feb.-May, 1944, May, all 1s. each. "Bulls," 1933 Sept., 1934, March, 1935, Sept., 1940, April, all 1s. each. Bug key, 12s. 6d. Rotary Converter, 12 volt to 1200 volt, 80 watt, £1 10s.—F/L BROWNS, No. 1 Carno Road, Caersws, Montgomeryshire.

SALE.—Masteradion Vibration pack, 6 volt input 300 volt 100mA output. Amateur built 15 watt amplifier, 6L6 pp output in wooden case with 8 in. M.C. speaker, sockets for radio, gram, ext-speaker. 1 Thordarson transformer T.2909. Copy Technical Instruction for Wireless Telegraphists, 7th edition. Valves: 1. 9003, 2. 9002, 3. 12A 7GT, 1.10Y, 2.EL35, 1.957.—Box 732, PARRS Advertising, 121 Kingsway, London, W.C.2.

SALE.—Surplus radio components. S.A.E. for details. (new) 1000 ohm 2 amp Droppers, 2 adjustable tappings, each 4s., (cost 5s. 9d. each).—L. A. C. LAWSON, No. 710, Hut 102, 48 MU, R.A.F., Hawarden, Chester.

SALE.—Hohner Piano-Accordion (Student II) complete with carrying case; 12 bass, 26 piano keys; £8 10s. 0d., or would exchange for Universal Avometer, or similar type. 66AL, Height Barn Cottage, Lumb, Rossendale, Lancashire.

SALE.—Modern All-wave superhet (A.C.) 8 valves, including magic eye, 8 watts push-pull output. Pre-war cabinet, first class condition, £25, or near offer. Wanted: Modern cabinet suitable for radiogram.—REED, 15 Leyland Road, Southport.

SALE.—Avo Minor Universal, £8.—G2RM, Quisiana, Inholmes Park Road, Burgess Hill, Sussex.

SALE.—National H.R.O. Senior, complete with speaker, power pack and 7 sets of coils, £85.—Box 726, PARRS, 121, Kingsway, London, W.C.2.

SERVICE sheets and diagrams (over 4,000 American and numerous British). Quotations on receipt of requirements, S.A.E.—ARMSTRONG, 136 Bickenhall Mansions, London, W.1.

TELE-RADIO (1943) LTD. for new components at list prices. Weston meter 0-250 micro amps, centre zero, £3 5s. C.R. tubes. Precision sub-standard condensers. 1% accuracy, .0001µF. 37s. 6d.; .001µF, 18s.; .01µF, 21s.; .1µF, 27s. 9d.; 1µF, 45s. Wirewound precision resistors, etc.—TELE-RADIO (1943) LTD., 177A Edgware Road, London, W.2. Phone: Pad. 6116.

TWIN .0005 condensers with trimmers, slow motion and scale, 10s.—BR58091, 12 Loring Road, Whetstone, London, N20.

UUSED Valves.—954 (2) 954 (1), 25s. each. Mazda A40 (2) 30s. each. X65. 6Q7G. 6F6, 9s. 6d. each. 6H6, 5s.—BR56161, 82 Brunswick Street, Leicester.

WAKE UP Chaps!—The gear I advertised last month is not sold and is quite 30 per cent. below current prices.—G2BB.

WANTED.—Thordarson Transformers T84D59, T 5741, T3020; also pair 866 Junr. rectifiers valves.—W. G. JOHNSON, Pinchbeck Hall, Spalding.

WANTED by SUIWM, McElroy "bug"; Radio Designer's Handbook, by Langford Smith; Zero and Negative coefficient ceramic condensers; RCA or Raytheon 866, 809 or Eimac 35T; 3 element beam kit 14Mc. Details to—W. E. MARSH, 8 Mere Road, Blackpool.

WANTED.—D.C. valves: VDS, DSB, DPT, DH, DC2Pen, DHD, also 47. All must be in good condition.—ARMSTRONG, 136 Bickenhall Mansions, London, W.1.

WANTED.—Cheap communication receiver, state price; also low power amplifier.—R/O MATHREWS, H.M.S. Jaunty, c/o G.P.O., London.

WANTED.—Trophy 6 or 8 or National NC8IX, also American Radio Magazines. Condition and price to—THORNE, P/O Tel. Mess 32, H.M.S. *Ausonia*, c/o B.F.M.

WANTED.—Valve tester, Avo or other good make. Particulars to—G. WILLIAMS, 44, Beechwood Avenue, Neath, Glam.

WANTED Fay electrical recorder, also Eddystone telescopic 5m Aerial, Rotary Converter; also voltage 6v to 110v input D.C. to 230v 200 watts output A.C.—G3RC, Robin Hood, Battle, Sussex (Tel: 145).

WANTED.—Rola G12 speaker, 8 ohms speech coil, 750 ohms field. Must be in perfect condition. Price, etc., to—GARRATT, 10 Albert Avenue, Nuthall, Notts.

WANTED.—Copies of the Berne Call List, Ship and Shore Stations, and The Call Book. Prices to—BR5269, The Drift, Greenhill Park Road, Evesham, Wores.

WANTED.—Communication Receiver, complete; Avometer 7, Avo All-wave Oscillator; full particulars and price.—BR5 6253, 16 Spring Road, Hale, Cheshire.

WHEATSTONE Tape Transmitter, also Wheatstone hand perforator wanted. Good condition essential.—C. MARKE, 79 Allesley Old Road, Coventry.

Q-2000v Moving Coil Voltmeter (By Elliott) 7 in. dia. with 6 in. scale, external resistance box when removed reduces range W 0-200v, £5. Universal Avomator with leads, perfect, £8. 0-80 Milliampmeter 3½ in. face (By Park Royal Eng. Co.), detachable shunt increases 0-160 MA., 30s.—G2XV, 89 Perne Road, Cambridge.

Q0016 Tuning condensers, precision job, ceramic base, long spindle, new, 5s. 6d. each. EF50 locals slightly used, but O.K., 10s. each. S.A.E. for new List "T.R."—CHAS. BRITAIN RADIO, 2 Wilson Street, London, E.C.2.

PATENTS AND TRADE MARKS

KING'S Patent Agency Ltd. (B. T. King, G5TA, Mem.R.S.G.B. Reg. Pat. Agent), 146a Queen Victoria Street, London, E.C.4. Handbook and Advice on Patents and Trade Marks free. Phone: City 6161. 50 years' refs.