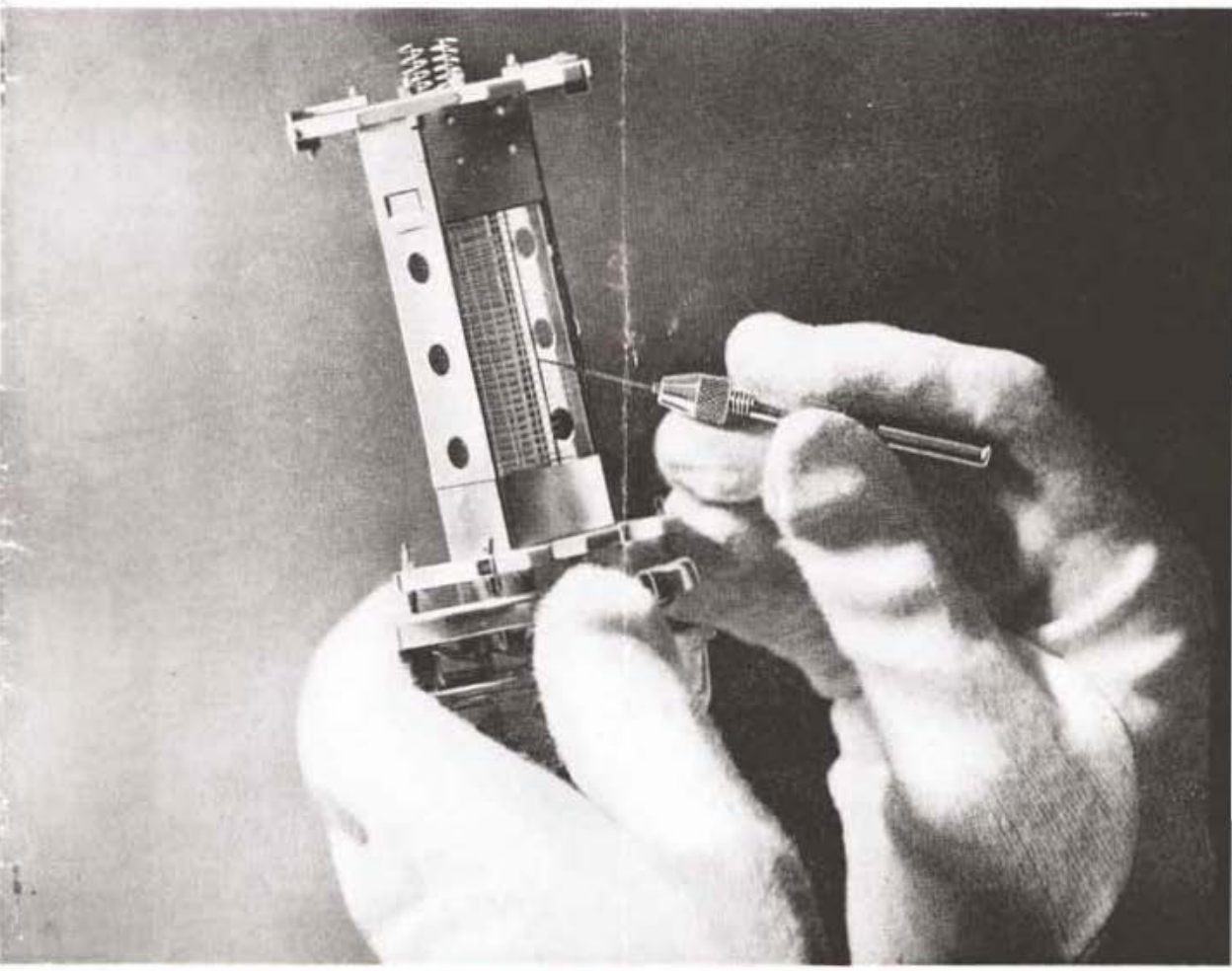
R·S·G·B VOLUME 23 · No. 5 · COPYRIGHT · PRICE 1/6 NOVEMBER, 1947

BULLETIN

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN



- "REVERSIBLE" UNI-DIRECTIONAL AERIAL SYSTEM
- INTRODUCTION TO DX
- B.C. 348 RECEIVER
- ATLANTIC CITY CONFERENCE
- AMATEUR FREQUENCY ALLOCATIONS

REPRESENTATION 1948-9

The following Corporate members have been duly nominated to serve as Regional, County, Town, Area or District Representatives.

Regional Representatives

Region	Name, Call-Sign (or B.R.S.) and Address
1	G. WEBSTER (G5GK), School House, Simonstown, Burnley, Lancs.
2	*C. A. SHARP (G6KU), 56 Moore Avenue, Wibsey, Bradford, Yorks.
3	*D. A. G. EDWARDS (G3DO), 25 Pilkington Avenue, Sutton Coldfield, Warwicks.
4	J. C. CURNOW (G6CW), St. Annes, Bramcote Lane, Wollaton, Nr. Nottingham. L. RIDGWAY (G2RI), 90 Romway Road, Leicester. DR. E. S. G. K. VANCE, M.B. (G8SA), 43 Blackwell Road, Huthwaite, Nr. Mansfield, Notts.
5	*S. J. GRANFIELD (G5BQ), 47 Warren Road, Cambridge. R. L. VARNEY, A.M.I.E.E. (G5RV), 184 Galleywood Road, Chelmsford, Essex.
6	*H. J. SHERRY (G6JK), 17 New Drive, Totteridge, High Wycombe, Bucks.
7	H. T. MCFARLANE (G8SK), 15 Rotherfield Road, Enfield, Middlesex. P. THOROGOOD (G4KD), 35 Gibbs Green, Edgware, Middlesex.
8	F. C. WHITE (G3XP), Chester House Hotel, Chine Crescent, Bournemouth.
9	F. N. BEDWELL (G8DT), Redcroft, Eldon Avenue, Cheltenham, Glos. A. A. UPPINGTON (G2BAR), 6 Stapleton Road, Bristol 5, Glos.
10	*D. A. DYER (GW8UH), 29 Ladysmith Road, Penylan, Cardiff.
11	F. G. SOUTHWORTH (GW2CCU), "Samlesbury," Holywell, Flintshire.
12	No nomination.
13	No nomination.
14	D. A. MACQUEEN (GM4PW), 3 Ayr Road, Prestwick. D. R. MACADIE (GM6MD), 154 Kingsacre Road, Glasgow, S.4.
15	S. N. JOHNSON (GI5SJ), 10 Cyprus Avenue, Belfast. *F. A. ROBB (GI6TK), 60 Victoria Avenue, Sydenham, Belfast.

* *Retiring R.R.*

County Representatives

Region	County	Name, Call-Sign (or B.R.S.) and Address
1	Cheshire ..	*F. A. BOYES (G2HDV), 44 Earle Road, Bramhall.
	Cumberland	J. HUGGAN (G3HJ), 20 Dunmail Drive, Carlisle.
	Lancashire (East)	C. TURNER (G8NL), 4 Moreton Avenue, Whitefield, Manchester.
	Lancashire (West)	No nomination.
	Westmorland	" "
2	Durham ..	*T. ORR (G3IV), 31 Grange Park Avenue, Sunderland.
	Northumberland	I. GORDON SPENCER (G4LX), 31 Harley Terrace, Gosforth, Newcastle-on-Tyne 3.
	Yorkshire (East)	No nomination.
	Yorkshire (North)	*GERALD A. KENYON (G3YK), 32 Emerson Avenue, Middlesbrough.
	Yorkshire (West)	*H. BEADLE (G8UO), 13 Chandos Street, Keighley.
3	Herefordshire	No nomination.
	Shropshire	" "
	Staffordshire	" "
	Warwickshire	*E. G. H. BROWN (G5BJ), 94 Sunnymead Road, Birmingham 26.
	Worcestershire	K. HOPKINSON (G8QX), Malvern House, Abbey Road, Malvern. *J. TIMBRELL, B.Sc., A.R.I.C. (G6OI-G6OJ), Englefield House, Kinver, Nr. Stourbridge.
4	Derbyshire ..	*R. B. WILLIAMSON (G5RW), 18 Burns Street, Ilkeston.
	Leicestershire & Rutland	*L. RIDGWAY (G2RI), 90 Romway Road, Leicester.
	Lincolnshire	*G. HUTSON (G6GH), 11 Wide Bargate, Boston.
	Northamptonshire	T. P. DOUGLAS, M.B.E. (G3BA), 43 New Street, Daventry.
	Nottinghamshire	*A. E. CLIPSTONE (G8DZ), 71 Melton Road, West Bridgford, Nottingham.
5	Cambridgeshire	*F. W. CRABTREE (G3BK), 28 Regent Avenue, March.
	Essex (outside London Region)	*L. J. FULLER (G6LB), Meadow Brook, Vicarage Lane, Great Baddow Chelmsford.
	Huntingdonshire	No nomination.
	Norfolk	" "
	Suffolk ..	*F. W. G. WELLS (G3ATJ), 63 Bury Road, Stowmarket.
6	Bedfordshire	*A. P. G. AMOS (G3AGM), "Ty Gwyn," Mentone Avenue, Aspley Guise, Bletchley.
	Buckinghamshire (outside London Region)	*J. REDRUP (G8VZ), Lyndale, Longwick Road, Princes Risborough.
	Hertfordshire (outside London Region)	No nomination.
	Oxfordshire	*F. A. JEFFERIES (G8PX), 1 Lovelace Road, Oxford.
7	London (North)	S. J. PENDREY (BRS.12530), 157 Tenniswood Road, Enfield, Middx.
	London (South)	No nomination.
	London (East)	*W. H. MATTHEWS (G2CD), 7 Beddington Road, Seven Kings, Essex.
	London (West)	No nomination.
8	Hampshire	K. D. JACKSON (G3KJ), 4 Juniper Road, Southampton. E. J. KENTSBEER (G8JB), 7 Second Avenue, Denvilles, Havant.
	Kent (outside London Region)	*E. H. TROWELL (G2HKU), 27 Unity Street, Sheerness.
	Surrey (outside London Region)	*H. C. SPENCER (G6NA), 1 Shepherd's Hill, Stoughton, Guildford.
	Sussex ..	*G. W. MORTON (BRS.10769) 42 South Farm Road, Worthing.
9	Cornwall ..	*D. J. BEATTIE (G2WW), Suffolk House, Lidden, Penzance.
	Devon	No nomination.
	Dorset	" "
	Gloucestershire	B. M. MORRISSEY (G5YK), 48 City Road, St. Pauls, Bristol 2. R. R. WAITE (G3PZ), 254 Cheltenham Road, Gloucester.
	Somerset	No nomination.
	Wiltshire	" "
10	Brecknockshire	No nomination.
	Carmarthenshire	
	Pembrokeshire	" "
	C'rdig'nshire	
	Glamorganshire	*C. PARSONS (GW8NP), 46 Inglesfield Avenue, Heath, Cardiff.
	Monmouthshire	No nomination.

Region	County	Name, Call-Sign (or B.R.S.) and Address
11	Anglesey and Caernarvonshire	I. JONES (GW3KY), "Brixton Mount," Holyhead, Anglesey.
	Denbigh and Flintshire	*E. G. FOULKES (GW5FU), Katheric, Kinard Drive, Rhyl, Flintshire.
12	Aberdeenshire, Banffshire & Kincardineshire	No nomination.
	Angus and Perthshire	W. ROBERTSON (GM6RI), School House, Tannadice by Forfar, Angus.
	Morayshire, Nairnshire, Invernessshire, Ross-shire, Sutherland, Caithness, Orkney and Shetlands	*A. STUART MCNICOL (GM3UU), Inchstellie House, Alve, Morayshire.
13	Berwick, Peebles, Roxburgh, Selkirk	No nomination.
	East, Mid & West Lothian	*P. H. HARDIE (GM6JH), Crossford, Linlithgow.
	Fifeshire and Kinross	No nomination.
14	Argyll and Dumbarton	No nomination.
	Ayrshire, Bute, Dumfries, Kirkcudbright & Wigtown	T. ELLIOTT (BRS.10053), 98 Portland Street, Troon, Ayrshire.
	Clackmannan & Stirlingshire	*C. M. WINTON (GM6XW), 146 Broomagebank, Larbert.
	City of Glasgow (Postal Districts)	*A. H. MASON (GM6MS), 390 Kings Park Avenue, Rutherglen.
	Lanarkshire	No nomination.
	Renfrewshire	" "
15	Antrim ..	*R. BARR (GI5UR), 4 Dunkeld Gardens, Old Park, Belfast.
	Armagh, Tyrone	J. J. SMYTH (GI3AOB), 3 Alexandra Gardens, Portadown, Co. Armagh.
	Down	N. H. LOWDEN (GI2HLT), 37 Cabinhill Gardens, Belfast.
		J. E. MAXWELL (GI3ML), 6 Sandringham Drive, Bangor.
	Londonderry	D. R. J. ADAIR (GI3BVB), Cosy Lodge, Culmore Road, Londonderry.
	Channel Isles	*A. G. COLE (GC3GS), 6 Greve D'Azette Gardens, St. Clement, Jersey.

Retiring C.R.

Town or Area Representatives

Region	Town or Area	Name, Call-Sign (or B.R.S.) and Address
1	LANCASHIRE—EAST	
	Ashton	J. W. C. Cropper (G3BY), 36 Clive Street.
	Bolton	G. OPENSHAW (G2BTO), 287 Wigan Road.
	Burnley	W. H. DYSON (G8TD), 165 Manchester Road.
	Bury	C. F. BINKS (BRS.14000), 9 Morris Street, off Dumers Lane, Radcliffe, Nr. Manchester.
	Darwen and Blackburn	W. LISHMAN (G2AKK), 10 Pine Street, Darwen.
	Manchester—	
	South-East	J. MACHENT (G3SP), 17 Lincoln Avenue, Levenshulme.
		H. BAILEY (G2UF), 35 Manchester Road, Denton.
	South-West ..	C. WRIGLEY (G5WR), 68 Church Road, Urmston.
	North-East ..	R. DENHAM (G3RP), 19 Hillside Close, Moston.
	North-West ..	A. BROWN (G2WQ), 7 Stanley Road, Broughton Park, Salford 7.
	Rochdale ..	D. STOTT (G2HBJ), 2 Percy Street.
1 *contd.*	LANCASHIRE—WEST	
	Blackpool ..	W. E. MARSH (G5WM), 8 Mere Road.
	Liverpool ..	A. GARNOCK-JONES (G8TJ), Brentwood, Sandfield Park.
	Preston	A. ADAMS (G5AD), 11 Priory Crescent, Penwortham Hill.
	Southport	J. W. NUTTALL (G6SQ), 76 Longacre.
		R. WOODROFFE (G2DQX), 20 Carnarvon Road, Birkdale.
	Stockport ..	W. HERVEY BANKS (2ARX), 170 Wellington Road S.
2	DURHAM	
	Darlington ..	E. C. SUTTON (G8IA), 37 Davison Road.
	South Shields ..	W. DENNELL (G3ATA), 12 South Frederick Street.
	Sunderland ..	J. BATES (BRS.12197), 22 Ewesley Road.
	West Hartlepool	A. R. DONALD (G3TO), 186 Stockton Road.
	YORKSHIRE—EAST	
	York	G. W. KELLEY (G5KC), 123 Kingsway West, Acomb.
	YORKSHIRE—WEST	
	Barnsley	C. T. MALKIN (G5IV), 5 White Hill Terrace.
	Bradford	J. H. MACDONALD (G4GJ), Mayfield, Wagon Lane, Bingley.
	Halifax	S/Ldr. R. A. FOSTER, Rtd. (BRS.7294), 36 Prescott Street.
	Doncaster ..	H. FLINTHAM (BRS.193), 50 Burton Avenue.
3	SHROPSHIRE	
	Oswestry	G. H. BANNER (G3AHX), 6 Coppice Drive.
	WARWICKSHIRE	
	Birmingham—North	C. YOUNG (G2AK), 42 Stanford Avenue, Birmingham 22A.
	South	T. F. HIGGINS (G8JI), 391 Rednal Road, Northfield, Birmingham 31.
	Coventry	J. R. TUCK (G6TD), 121 Grayswood Avenue.
	Rugby	I. T. HAYNES (G3AUT), 257 Bilton Road.
	WORCESTERSHIRE	
	Malvern	L. O. ROGERS (G2HX), Bradford House, Barnards Green.
	Stourbridge ..	W. A. HIGGINS (G8GF), 35 John Street, Brierley Hill.
4	DERBYSHIRE	
	Derby	W. MEAD (G5YY), 135 Clarence Road.
	LEICESTERSHIRE	
	Leicester	H. G. SMITH (G3BU), 15 Abbeymead Road.
	LINCOLNSHIRE	
	Boston	L. COUPLAND (G2BQC), 133 Carlton Road.
	Grimsby and Cleethorpes	J. W. BOOTH (G2AJB), 33 Buller Street.
	NORTHAMPTONSHIRE	
	Northampton ..	R. E. DURRANT (G2AAA), 65 Colwyn Road.
	NOTTINGHAMSHIRE	
	Mansfield ..	DR. E. S. G. K. VANCE (G8SA), 43 Blackwell Road, Huthwaite.
	Nottingham	B. H. SINGLETON (BRS.7362), 13 Tithby Drive, Sherwood.
5	ESSEX	
	Chelmsford ..	N. A. CHAMPNESS (G2AAU), 8 Shrublands Close.
	NORFOLK	
	Great Yarmouth	D. DAVY (G3RW), 59 East Road, Maygrove.
	Kings Lynn ..	A. W. BROOKSON (G3IP), 15 Checker Street.
	SUFFOLK	
	Ipswich	S. G. KEEBLE (G2AN), 139 Sidegate Lane.
	CAMBRIDGESHIRE	
	Cambridge ..	C. H. BABBS (G5IG), 78 Water Street, Chesterton.
6	BEDFORDSHIRE	
	Bedford	R. J. PULLIN (G4OL), Linwood, Stagsden Road, Bromham.
	Luton	F. HALSTEAD (G3ASD), 24 Carlton Close.

Region	Town or Area	Name, Call-Sign (or B.R.S.) and Address
6 *contd.*	BUCKINGHAMSHIRE	
	High Wycombe ..	R. CHADBONE (G8JK), Briarways, Trees Road, Hughenden.
	OXFORDSHIRE	
	Oxford	H. R. WEBB (BRS.14616), 63 Divinity Road.
7	LONDON—NORTH	
	Edgware	H. W. POPE (G3HT), 4 Gainsborough Gardens.
	Enfield	T. VICKERY (G5VY), 48 Willow Road.
	Hoddesden ..	H. JONES (G4HJ), 99 Stanstead Road.
	Welwyn Garden City	J. B. WADHAM (BRS.9857), 124 Parkway.
	LONDON—SOUTH	
	Barnes, Putney and Richmond	R. F. WOOD (BRS.12165), 28 Nassau Road, Barnes, S.W.13.
	Coulsdon and Purley	L. C. B. BLANCHARD (BRS.3003), 122 St. Andrews Road.
	Croydon	R. L. GLAISHER (G6LX), 279 Addiscombe Road.
	Dulwich and New Cross	C. NEWTON (G2FKZ), 105 Underhill Road, Dulwich, S.E.22.
	Norwood	W. D. GILMOUR (G2VB), 35 Grangecliffe Gardens, S.E.25.
	North Kent ..	H. L. OVERTON (G4CW), 6 Lower Station Road, Crayford.
	Weybridge and Woking	R. J. DENNY (G6NK), 32 Waverley Road, Weybridge.
	Wimbledon ..	G. H. HUGHES (G4CG), 57 Kingswood Road, S.W.19.
	LONDON—EAST	
	Dagenham ..	J. E. HOOPER (G6ID), 27 Castle Road.
	East Ham ..	P. WOODHOUSE (G2BQY), 65 Wall End Road, E.6.
	Ilford	J. TYNDALL (G2QI), 8 Abbotsford Road, Goodmayes.
	Romford	R. C. E. BEARDOW (G3FT), 3 Geneva Gardens, Whalebone Lane N., Chadwell Heath.
	Wanstead and Woodford	M. M. D'ARCY (G3AGL), 111 Maybank Road, S. Woodford, E.18.
	LONDON—WEST	
	Harrow	S. G. MACE (BRS.6527), 153 Belmont Road.
	Staines	R. K. SHEARGOLD (G6RS), 81 The Avenue, Sunbury-on-Thames.
8	HAMPSHIRE	
	Portsmouth ..	L. S. K. STEPHENS (G8WC), 65 Ebery Grove, Copnor.
	Bournemouth ..	H. SWIFT (G3ADG), 112 Markham Road.
	Southampton ..	L. M. WORBOYS (G3AFD), Meldreth, Portsmouth Road, Sholing.
	KENT	
	Medway Towns ..	S. A. HOWELL (G5FN), 39 Broadway, Gillingham.
	SURREY	
	Farnham (Surrey) & Farnborough (Hants)	J. St. C. J. RUDDOCK (G8TS), 80 Byworth Estate, Farnham, Surrey.
	SUSSEX	
	Brighton and Hove	G. JOHNSON, A.M.Inst.E. (BRS.5759), 8 Greenfield Crescent, Patcham.
	Eastbourne ..	R. F. NUGENT (G2FTS), 12 St. Anthonys Avenue.
	Shoreham ..	J. T. UPPERTON (BRS.6852), 7 Greenways Crescent.
	Worthing ..	J. ENGLISH (G2DZF), 112 Sea Place.
9	CORNWALL	
	Camborne-Redruth	E. W. JOHNS (G2BJS), 44 Albany Road, Redruth.
	West Cornwall ..	R. V. A. ALLBRIGHT (G2JL), Greenacre, The Lidden, Penzance.
	GLOUCESTERSHIRE	
	Bristol	A. J. COLLEY (G8CC), 4 Carnarvon Road, Redland, Bristol 6.
	Cheltenham ..	N. F. O'BRIEN (G3LP), 3 Ollo Cottages, St. Lukes Road.
	Gloucester ..	E. A. PERKINS (G3MA), 40 Calton Road.
	WILTSHIRE	
	Swindon	J. G. ROOKE (G4AP), 72 Goddard Avenue.
	West Wilts ..	R. A. HISCOCKS (G6LM), 22 Woodstock Gardens, Melksham.
10	GLAMORGANSHIRE	
	Neath and Port Talbot	G. E. EVANS, B.Sc., A.M.I.E.E. (GW2AVV), Flatholm, Royal Buildings, Talbot Road, Port Talbot.
	Cardiff	B. RANDELL (GW3ALE), Holmstower, Dinas Powis, Glam.
11		
12	North Angus ..	D. NIVEN (GM2CHN), 52 Addison Place, Arbroath.
13	Edinburgh ..	R. W. H. BLOXHAM (GM6LS), 15 Corstorphine Hill Road.
14	Ardrossan ..	T. SHARP (BRS.10363), Maryville, Montgomerie Street.
	City of Glasgow (Postal Districts)	A. HERRING (GM3PB), 44 Banner Road, Glasgow, W.3.
	Kilmarnock ..	N. H. R. ARCHER (BRS.12592), 16 Wallace Street.
	Prestwick and Ayr	MISS J. A. C. RAINIE (GM3AKR), 6 Montgomerie Terrace, Ayr.

Closing date for Ballot Forms, Saturday, November 29, 1947.

Ballot

It will be necessary to conduct Ballots in the following Regions, Counties, Towns or Areas :—

Regional Representatives

Region 4	J. C. Curnow (G6CW).
	L. Ridgway (G2RI).
	Dr. E. S. G. K. Vance (G8SA).
Region 5	S. J. Granfield (G5BQ).
	R. L. Varney (G5RV).
Region 7	H. T. McFarlane (G8SK).
	P. Thorogood (G4KD).
Region 9	F. N. Bedwell (G8DT).
	A. A. Uppington (G2BAW).
Region 14	D. A. MacQueen (GM4PR).
	D. R. Macadie (GM6MD).
Region 15	S. N. Johnson (GI5SJ).
	F. A. Robb (GI6TK).

County Representatives

Region 3.	
Worcestershire	K. Hopkinson (G8QX).
	J. Timbrell (G6OI–6OJ).
Region 8.	
Hampshire	K. D. Jackson (G3KJ).
	E. J. Kentsbeer (G8JB).
Region 9.	
Gloucestershire	B. M. Morrissey (G5YK).
	R. R. Waite (G3PZ).
Region 15.	
Co. Down	N. H. Lowden (GI2HLT).
	J. E. Maxwell (GI3ML).

Town Representatives

Region 1.	
Manchester, South-East	J. Machent (G3SP).
	H. Bailey (G2UF).
Southport	J. W. Nuttall (G6SQ).
	R. Woodroffe (G2DQX).

Prescribed Form

Corporate Members resident in the Regions, Counties, Towns or Areas mentioned above are requested to record their vote in favour of one of the nominees put forward by the membership in their Region, County, Town or Area. The vote should be recorded on a *postcard* in the following form and addressed to the General Secretary, Incorporated Radio Society of Great Britain, 28 Little Russell Street, London, W.C.1.

Election of Representatives 1948/9.

I ..... *being a fully paid-up*

Corporate Member of the Society wish to record my vote in favour of

..... *as Representative for the*

Region, County, Town or Area of .....

(*insert whichever is applicable*)

Signed .....

Callsign (*or B.R.S.*) .....

Address .....

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The
Incorporated Radio Society
of Great Britain

NEW RUSKIN HOUSE,
LITTLE RUSSELL STREET,
LONDON, W.C.1.

November 15th, 1947.

DEAR SIR (OR MADAM),

COUNCIL ELECTIONS, 1948.

I have to advise you that the following Corporate Members have been nominated, in accordance with the Articles of Association, as Members of Council for the coming year:—

Mr. A. P. G. Amos	G3AGM
Mr. A. E. Clipstone	G8DZ
Mr. D. A. G. Edwards	G3DO
Mr. F. G. Hoare	G2DP
Mr. H. C. Spencer	G6NA
Mr. P. A. Thorogood	G4KD
Mr. J. N. Walker	G5JU
Mr. A. C. Williams	GW5VX

These names, together with the names of the seven Corporate Members nominated by the 1947 Council, are set out on the Ballot Form attached hereto.

You are requested to place a cross against not more than SEVEN names, and to return the Form, in the special envelope sent herewith, to reach me at the above address not later than 12 noon on Monday, *December 15th*, 1947. Your name and call sign (or B.R.S. number) must be signed in the appropriate space on the front of the envelope, *but not on the form itself.* Forms received in *unsigned, unsealed* or *unstamped* envelopes will not be counted in the Ballot.

On a separate sheet are given brief details of the nominees whose names appear on the Ballot Form.

Yours faithfully,

H. A. M. CLARK,

Honorary Secretary.

BALLOT

COUNCIL ELECTIONS, 1948

1	AMOS	G3AGM	
2	AUCHTERLONIE *	G6OM	
3	BLOOMFIELD *	G2NR	
4	CHARMAN *	G6CJ	
5	CLIPSTONE	G8DZ	
6	CORFIELD *	G5CD	
7	EDWARDS, C. H. L. *	G8TL	
8	EDWARDS, D. A. G.	G3DO	
9	HAMMANS *	G2IG	
10	HOARE	G2DP	
11	MATHEWS *	G6LL	
12	SPENCER	G6NA	
13	THOROGOOD	G4KD	
14	WALKER	G5JU	
15	WILLIAMS	GW5VX	

Place a cross (x) against not more than SEVEN names.

* *Indicates nominated by* 1947 *Council.*

COUNCIL NOMINATIONS, 1948

Below appear brief details of the members who have been nominated to serve on the Council for 1948

Mr. A. P. G. Amos, G3AGM, of Bletchley, Bucks.

Nominated by Messrs. R. M. Baerlein, BRS14639; R. J. Pullin, G4OL; W. Read, BRS14799; L. A. Timbrell, BRS7888; H. R. Jeakings, G5FO; D. Glendening, BRS7519; S. R. Deards, G5PA; W. I. Popay, G8DY; J. W. Elliott, G2AHT; B. F. Skinner, G2BFN.

Member since 1938. Licensed G3AGM 1946. County Representative for Bedfordshire 1947, elect 1948–9. Communications Engineer. Served R.A.F.V.R. 1938–40. V.H.F. development with H.M. Government Communications Centre 1941–47. Mainly interested in V.H.F. equipment. Active mostly on 28 Mc/s. Now in business on own account.

Mr. I. D. Auchterlonie, G6OM, of Manchester, Lancs.

Nominated by retiring Council. Member of Council 1947. Licenced 1924. Acting T.R. Manchester 1946, C.R. East Lancs., 1947. Member Membership Committee 1947. Carried out considerable amount of pioneer work with V.H.F. crystal controlled equipment prior to war. Operated on 112 Mc/s. in 1937. Contributor to Society publications. Served in R.N.V.R. during war as Lt./Commander on Signals and Radar duties. Regular competitor in R.S.G.B. contests. Professionally engaged with Manchester City Police Force on police radio.

Dr. G. F. Bloomfield, Ph.D., F.R.I.C., G2NR, of Welwyn Garden City, Herts.

Nominated by retiring Council. Member since 1930. Full licence (G5MG) 1933–37. Re-licenced, G2NR, 1946. Member of Council 1947. Member of Technical Committee, and co-organiser with G8TL of M.O.S. Surplus Transmitters Scheme. In 1934–5 was Assistant Manager of R.S.G.B. Research and Experimental Section. Profession, Research Chemist, British Rubber Producers' Research Association; specialised knowledge of electrical properties of plastics and rubber. (I.E.E. lecture and BULLETIN article 1939).

Mr. F. Charman, B.E.M., G6CJ, of Stoke Poges, Bucks.

Nominated by retiring Council. Member since 1926. Licenced same year. Served on Council 1938–40, 1943–45. Member of Technical Committee 1936–47. Author of "Aerials" chapter "Amateur Radio Handbook." Frequent contributor to R.S.G.B. BULLETIN. Accomplished lecturer on Aerial systems. Profession, Radio Engineer.

Mr. A. E. Clipstone, A.I.R.E., A.M.I.E.T., G8DZ, of West Bridgford, Nottingham.

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Member since 1935. Licenced 1936. T.R. for Nottingham 1937 onwards. Deputy D.R. District 4 during part of war period. C.R. Nottinghamshire 1947. Interest in radio 29 years. Profession, Radio Engineer.

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Mr. C. H. L. Edwards, A.M.I.E.E., G8TL, of Ilford, Essex.

Nominated by retiring Council. Member since 1937. Member of Council 1946–7. Member Contests, Finance and Staff, Membership and Articles of Association Committees. Hon. Administrator R.S.G.B. Prisoner's of War Fund, 1941–6. Hon. Organiser M.O.S. Surplus Transmitters Scheme 1946–7. Experimental Licence 1920. A.A. licence, 2BOV, 1926. Full licence 1937. Five years with Crompton & Co., Ltd., Electrical Engineers, Chelmsford. Four years with Fuller Electrical Co., London. For the past 18 years on Engineering Staff Ocean Accident & Guarantee Co., Ltd. Passed I.E.E. examination 1928.

Mr. D. A. G. Edwards, G3DO, of Sutton Coldfield, Warwicks.

Nominated by Messrs. F. Robathan, G2CNW; W. N. Follis, G3AY; A. T. Martin, G2LB; F. H. Chambers, G2FYT; J. E. Bazley, G2BOZ; A. B. Watt, G2DRG; J. E. Kirk, G2FIP; W. J. Vincent, G4OI; J. N. Walker, G5JU; and E. J. Wilson, G2FDR.

Member since 1926, BRS427, A.A. Licence, 2ANT, 1930. Full licence 1938. Regional 3 Representative 1947. Holder DX C.C. & W.A.S. post-war certificates, also B.E.R.T.A. Founder Member, Midland Amateur Radio Society and served as Hon. Treasurer for 10 years. Profession, Managing Director of Midland steel concern.

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Nominated by retiring Council. Member since 1929. Member of Council 1946–7. Licenced 1929. Member Technical Committee 1946–7. Founder member Medway Amateur Transmitters' Society. Contributor to Society publications. Specialised subjects communication receivers, frequency stability and measurements, mobile V.H.F. duplex telephony. Profession, B.B.C. Engineer.

Mr. F. G. Hoare, G2DP, of Thornton Heath, Surrey.

Nominated by Messrs. S. E. Janes, G2FWA; L. W. Blanchard, 3003; R. E. Dabbs, G2RD; S. A. Morley, BRS2780; J. H. Hemingway, G8ID; D. J. McGregor, BRS7534; L. Sanderson, G8TN; G. P. Lambourne, G2AXG; D. Hoult, G400; and E. B. Powell, G2BQR.

Interested in radio since 1924. Licenced 1936. Member since 1937. Member of Council 1944–46. T.R. for Croydon 1941–46. D.R. for South London 1947. Profession, Radio Engineer engaged on design and testing.

Mr. J. W. Mathews, G6LL, of Cuffley, Herts.

Nominated by retiring Council. Member since 1926. Member of Council 1946–7, and for many years prior to joining Royal Signals in 1941. Hon. Editor R.S.G.B. BULLETIN 1940–41. Member Technical Committee 1937–41 and 1946–7. Member Codes of Practice Committee 1946–47. Contributor to Society publications. Carried out considerable amount of pioneer work on 28 Mc/s. in 1928–30. Profession, Bank Official.

Mr. H. C. Spencer, G6NA, of Guildford, Surrey.

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Member since 1931. Member Television Society, member First-Class Operator's Club, holder A.R.R.L. Code Proficiency Certificate, pre-war contributor to T. & R. BULLETIN. Profession, Incorporated Radio Engineer.

Mr. P. A. Thorogood, G4KD, of Edgware, Middlesex.

Nominated by Messrs. H. W. Pope, G3HT; S. E. Fryer, BRS11823; A. E. Dempsey, G2FBG; W. A. E. Holl, G2DSV; F. A. George, G5FG; E. R. Radford, G2IM; R. H. Newland, G3VW; G. Joseph, BRS16042; R. P. Morrison, G2CNM; P. Bradley, G8KZ.

Member since 1939. Licenced 1939. Interested in experimental radio since 1922. Chairman N.W. London Association Supervising Electrical Engineers, Organising Secretary of R.S.G.B. Social Committee. Chairman for 10 years of Edgware & District Radio Society. T.R. for Edgware during the war. F./Lt. in R.A.F. Organisation of 60 Group (Radar) Signals at Renscombe Down and Thame. Active on 1·8, 14, 28 and 56 Mc/s. Profession, Electrical Engineer.

Mr. J. N. Walker, G5JU, of Birmingham.

Nominated by Messrs. T. M. Wood, BRS381; W. E. Williams, G3ANN; V. Morse, G8IK; G. Woodburn, G3AYW; A. C. Edwards, G6XJ; E. H. Hopkins, G2XN; A. W. L. Summers, G5SS; H. A. Jerome Laughton, G6SL; W. S. Davison, G5WD; and A. J. Yelland, BRS15944.

Member since 1929. Licenced 1931. District 5 Representative 1938–39. Manager Transmitter Design Section R.E.S., 1937–39. Frequent contributor to Society publications. Co-author V.H.F. chapter "Amateur Radio Handbook." Profession, Radio Engineer.

Mr. A. C. Williams, GW5VX, Port Talbot, Glam.

Nominated by Messrs. G. F. Wilson, GW3BZH; E. F. Sully, GW3CAY; B. Randell, GW3ALE; E. A. Hayward, GW2UH; D. Alan Dyer, GW8UH; E. Naish, GW2FRB; A. J. Glassford, GW3ACF; R. W. Edwards, GW6BI; A. S. Thomas, GW3AX; and S. Waters, GW3GO.

Member from 1934–1937. Licenced 1934, 2BYB. Full licence 1935. Rejoined Society 1945. Chairman, Neath, Port Talbot and District Amateur Radio Club since its inception. Awarded Coronation Medal in 1937 for Radio work in connection with Glamorganshire Constabulary. At present in business as a radio engineer.

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EXCAVATORS OR SHOVELS

A MAN who employed a steam excavator to dig over his cabbage patch would rightly be regarded by the world at large with suspicion and by his immediate neighbours with definite hostility. Yet on the amateur bands to-day a lot of excavators are being used where spades would be more appropriate.

The use of excessive power for local and semi-local contacts on the lower frequency bands is unnecessary. This has recently been demonstrated by the small group of members who entered for the QRP Contest. During that event the transmitters were powered by one standard 120 volt dry battery, yet many dozens of satisfactory contacts were obtained. What can be done in a contest can surely be repeated at other times.

The modern communications type of receiver possesses great sensitivity, but on the low frequency bands at least it is seldom given a chance to demonstrate this quality.

Scarcely a day passes without a complaint reaching Headquarters that G so and so has been heard to say while working on 3.5 or 7 Mc/s. that he is using 813s or some similar high-power valves. It is possible of course, that the valves may be under-run—on the other hand they may not.

The limits to which power competition can be carried were exemplified in a recent description—published in one of our contemporaries—of a British amateur station where the power supply for the final stage is rated at 3,000 volts at 700 mA !

It has long been laid down in the regulations governing the operation of ship stations that transmitters "must be provided with devices readily permitting a material reduction of power." Now we find in the new Atlantic City Convention a stricter warning. When that Convention becomes operative it will be obligatory on the part of *all* users of frequencies between 5 Mc/s. and 30 Mc/s. to see to it that when such frequencies are used for short and medium distance communication the *minimum power* necessary *is* used.

The voluntary adoption now by all amateurs of some scheme which will permit power to be reduced quickly for short and medium distance communication will lead to improved operating conditions and may very well save us from legislation which would have the effect of still further reducing our facilities.

Some form of switched-power reduction should, we suggest, be introduced at every station. An ideal system would provide for the use of at least three widely different powers on the lower frequencies—say 5 watts for local "rag-chews," 25 watts for normal working, and high power for use when propagation conditions are poor. The elucidation of the technical problems involved, particularly in the case of telephony, should prove of interest and permit of considerable ingenuity.

In the past the British amateur has prided himself on his ability to make efficient use of low power rather than to adopt "block buster" techniques. More than ever, in the coming decade—with new licences being issued at the rate of a thousand and more in a year, coupled with the restrictions which the new frequency allocations will place upon us—will it be necessary to check by every orthodox method the "kilocycle hogging" technique which is, at present, being followed by a small but none the less dangerous minority.

YOUTH AND THE EXHIBITION

There are many signs and portents that the Amateur Radio Exhibition due to open on November 19, will be one of the most popular events ever staged in the long history of the Society. The educational value of the Exhibition should not be under estimated. Already we are aware that the London County Council is being approached for a grant to enable pupils from one of the Secondary Schools to attend. Others will, no doubt, be following that example.

The modern youngster is radio-minded, as all who have had teaching experience know to their cost ! The Exhibition will provide these young people with a unique opportunity of seeing certain aspects of radio which will no doubt impress them a great deal more than, shall we say, a display of modern broadcast receivers.

It is our experience, and we know it is shared by others, that the average VIth-Former in a Grammar or Technical school "falls" for Amateur Radio the moment he is made aware of its existence. Twenty or more years ago schoolboys were thrilled at the prospect of being able to communicate over great distances with simple home-built apparatus. Ever since, succeeding generations have discovered that Amateur Radio has lost none of its fascination by the passing of time.

The present generation, steeped in the mysteries of Radar, and a dozen other modern developments, will find much fresh ground to break. They, and all who practice Amateur Radio are on the threshold of the Microwave Age. New bands will shortly become available and new techniques will have to be discovered, all of which will call for the exercise of much ingenuity and resourcefulness—to say nothing of the possibility of confounding the scientists.

The Exhibition may well prove to be the gateway to a new and interesting life for many of the young people who attend. We bid them welcome, and may the glimpse which they catch of our great hobby induce them to follow in the footsteps of the pioneers of the Amateur Radio movement.

J. C.

THE G8PO SPECIAL

A "REVERSIBLE" UNI-DIRECTIONAL AERIAL SYSTEM

By J. E. IRONMONGER (G8PO) LT. CDR. (L) R.N.*

Introduction

THE "reversible" uni-directional aerial system to be described, came into being at the writer's station as the result of a "mistake"—discrepancy in a feeder length, made when erecting a W8JK beam.

The original intention was to try and produce a 14 Mc/s. system which would give high or low angle radiation by the reversal of a pair of feeder connections. The W8JK, *i.e.* two dipoles back to back and spaced ½ wave, fed with two low-impedance lines instead of the conventional single feeder and cross-over section, seemed to fill the bill. It was decided that the connections shown in Figs. 1a and 1b should give high or low angle radiation, *i.e.* Fig. 1a low angle when feeders are connected so as to supply the two dipoles out of phase (W8JK) and Fig. 1b high angle when feeders are connected to supply the dipoles in phase. This system was tried after the "mistake" mentioned earlier had been corrected and showed some promise, although no extensive tests have been carried out to date.

First Experiments

The original aerial was erected so that theoretically the maximum radiation would take place approximately in a N.E.–S.W. direction—the W8JK as is well known, being bi-directional; however, it did not perform as was expected. Instead of getting short ranges in one phasing position and longer ranges in the other, it was found that a beaming effect seemed to be taking place in two directions. The aerial transmitted and received very well in a N.E. direction in one phasing position and appeared directional S.W. in the other, but with not such pronounced gain. This puzzled the writer considerably and it was decided to do some checking up of aerial and feeder lengths, etc. The aerials were found to be identical but the feeders were discovered approximately ⅛ wave different in length! Reference to the *Amateur Radio Handbook*, page 195, Fig. 22 and to the *A.R.R.L. Antenna Book*, page 63, soon showed what was happening.

Due to the spacing between the dipoles and the ⅛ wave delay in one feeder, in the "in phase" connection, dipole A, Fig. 1c acted as a driven reflector and dipole B as a radiator, signals from the two dipoles being 90° out of phase in the horizontal to the left, 45° out of phase directly above the system and fully in phase in the horizontal to the right. With the out-of-phase connections (Fig. 1d) dipole B acted as a driven reflector and A as the radiator. The system was, however, less efficient in the out-of-phase condition, signals from the two dipoles being 180° out of phase in the horizontal to the right, 135° out of phase directly above and 90° out of phase in the horizontal to the left. Further perusal of the *Handbook* showed that an interesting system

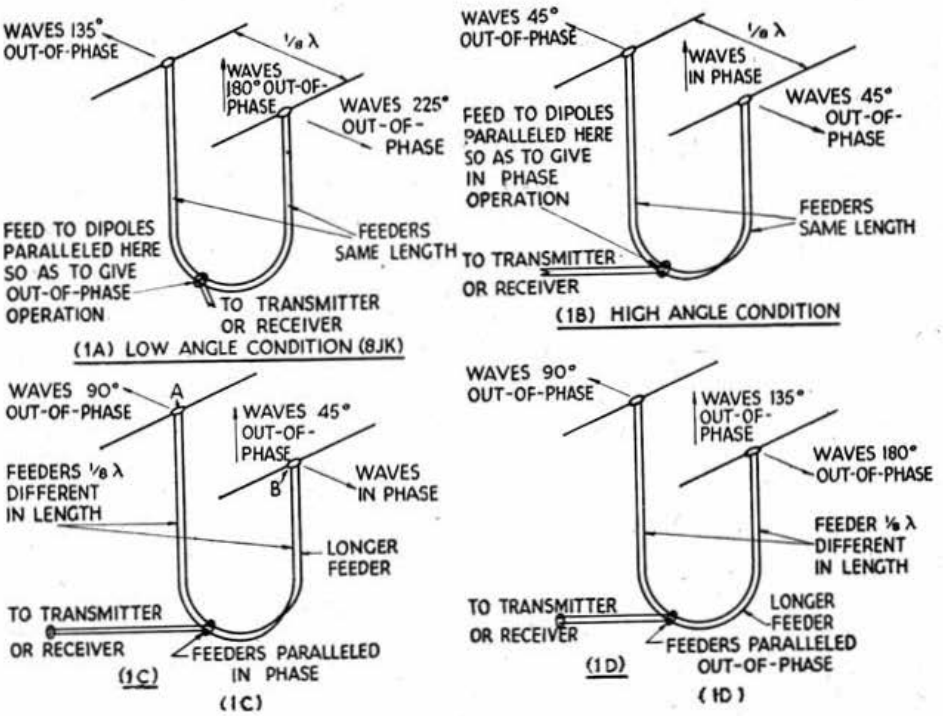

Fig. 1.
The original design is shown in (a) low-angle condition and (b) high angle condition. The finalised version is shown in (c) feeders paralleled in phase and (d) feeders paralleled out of phase.

* C/o Navy Office, Melbourne.

had been "stumbled" across, *i.e.* a "reversible" unidirectional aerial. In other words, a fixed two-element beam had been developed, consisting of radiator and driven reflector which could be made to "fire" in any one of two opposite directions, selectable from the shack, without mechanical rotation of the aerial.

The Final Version

It was decided after further study that in order to reverse the directivity of the beam, a more efficient method than reversing the phase to one dipole by 180° would be to make the $\frac{1}{8}$ wave of additional feeder "switchable", *i.e.* insert it in series with either dipole feeder at will. A simple means of accomplishing this—devised by G6ZI—is shown in Fig. 2. The "U" shaped piece of feeder is continuous in effect from dipole A to B (shown end-on), the base of the "U" extending inside the shack. Coaxial sockets S1 and S2 are parallelled across the feed line at points equi-distant from the respective dipoles and spaced $\frac{1}{8}$ wave apart. Feed line L3 from the P.A. is so terminated that it can be plugged into the appropriate socket—S1 for "firing" to the right, S2 for "firing" to the left.

Theoretical Considerations

Perhaps at this juncture, a short description of what it is "assumed" happens in the finalised beam, would not be out of place. Points A and B in Fig. 2 represent two dipoles spaced $\frac{1}{8}$ wave viewed "end-on" with their respective feed lines parallelled to form a "U" and the $\frac{1}{8}$ wave delay section shown in series with the feed to dipole B. Assume that R.F. has been supplied to the system from the P.A. *via* L3 and that it has arrived at the dipoles A and B. Consider energy leaving dipole A and travelling to dipole B, it would normally arrive there with a phase difference of 45° with respect to energy fed to dipole B. However, as the energy fed to dipole B is delayed 45° by the $\frac{1}{8}$ wave of additional feeder there will be no phase difference between the radiated signals when they are considered travelling in the horizontal to the right; thus radiation in that direction will be additive.

Consider now energy leaving dipole B and travelling to dipole A; it arrives there 90° out of phase with energy leaving A, due to the 45° delay in feeder B and 45° transit delay from B to A. Thus radiation in the horizontal to the left will be reduced, *i.e.* A is acting as a driven reflector. Directly above the dipoles radiation is 45° out of phase, thus energy tends to be concentrated at a low angle in the vertical and in one direction.

Next consider a reversal of the whole system, *i.e.* the $\frac{1}{8}$ wave delay feeder in series with the feed to dipole A. A reverse sequence of events to that described in the previous paragraphs will take place, thus the energy radiated by the dipoles will be fully additive in the horizontal to left, 45° out of phase directly above and 90° out-of-phase in the horizontal to right. Dipole A is now the radiator and B the driven reflector. It is interesting to note that the dipole with the longest feeder, *i.e.* the one which has the $\frac{1}{8}$ wave delay in series with its feeder, is always the radiator and the dipole with the shortest feeder is always the driven reflector.

Constructing the Beam

The two spreaders marked S (Fig. 3) should be approximately 9ft. long, preferably bamboo rods. At the writer's station, however, 1in. dural tubing was used, and this seems to have had little adverse effect on performance. The two dipoles A and B should be cut for the desired frequency (as per the usual formula $\frac{468}{f}$ where f is in Mc/s.) and attached to the spreaders back to back so that the spacing between them is $\frac{1}{8}$ wave (8ft. 6ins. at 14.2 Mc/s.). It is suggested that the ends of the dipoles be well insulated from the spreaders, particularly if the latter are of dural. The array should be erected at a height of not less than $\frac{1}{2}$ wave above ground, and well in the clear.

Low impedance feeders of the 50 to 80 ohm variety (L1 and L2) of identical length and preferably an even number of $\frac{1}{4}$ waves long (to put any standing waves in their proper places), should be connected to the centres of the dipoles. It is realised that a mismatch results between the feed lines and the centre of the dipoles, due to the close spacing of the array and although not included to date at G8PO, it is suggested that suitable $\frac{1}{4}$ wave matching sections be fitted between the lines and the centre of the aerial. Perhaps a more satisfactory method than using $\frac{1}{4}$ wave matching sections would be to use folded dipoles as the radiators thereby raising the centre impedance to allow direct connection of the feed line without serious mismatch. The ends of L1 and L2, should be brought into the shack and parallelled by connecting a $\frac{1}{4}$ wave of low impedance feeder between them as shown in Fig. 3.

It is essential that the dipoles be parallelled in phase, *i.e.* the conductor in the low impedance feeder that connects to the left-hand half of dipole A must, at its other end, be connected to the left-hand half of dipole B. In like manner the feeder connection to the right half dipole A must eventually parallel with the right half of dipole B.

Feed-sockets S1 and S2 should be parallelled across the feeder at either end of the $\frac{1}{8}$ wave section as shown. It is suggested that the $\frac{1}{8}$ wave delay section be made adjustable in length by arranging for additional lengths of low impedance feeder to be plugged in series with it. This will allow the maximum back-to-front ratio to be attained by "cut and try" methods. Feed line L3 from the P.A. (preferably an even multiple of $\frac{1}{4}$ waves long) should be terminated so that it can be plugged into either socket S1 or S2. A one or two turn, $2\frac{1}{2}$ in. diameter coil, parallelled across the input end of L3 should afford a suitable coupling to the P.A. tank circuit.

It is important to note that when calculating feeder lengths, the velocity of propagation in the particular type of cable in use must be taken into consideration.

Checking the Array

In testing out the array, it is essential to check the back-to-front ratio. If the system is working satisfactorily this should be in the order of 20 to 30 db.

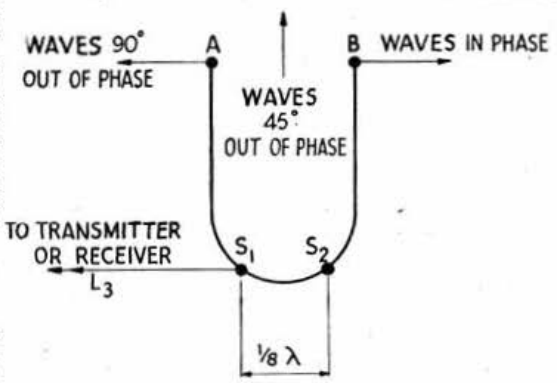

Fig. 2.

Method of switching the $\frac{1}{8}$ wave additional feeders. Feed line L_3 shown connected to socket S_1 so that radiation is maximum away from Dipole B to the right.

on either transmission or reception. Should the ratio be found less than, say, 20 db., an improvement should be possible by adjusting the length of the delay section. Adjustments can perhaps best be carried out on reception; short lengths of feeder, *e.g.* 1 foot at a time, being added in series with the ½ wave delay section until the desired ratio is attained on a signal emanating from a transmitter located in the main "line of fire" of the array. The back-to-front ratio quoted as typical, *e.g.* 20 to 30 db., is admittedly high for a two-element beam, but this is believed to be due to the use of a driven reflector instead of the more widely used parasitic type.

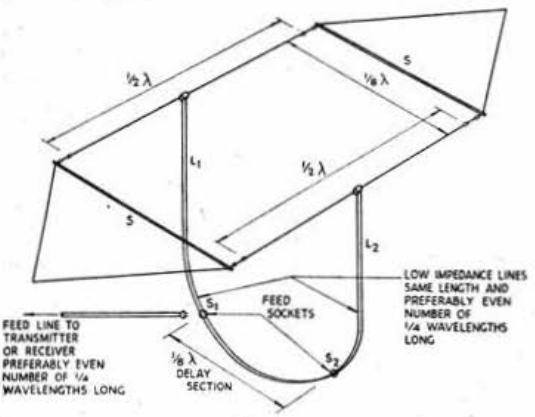

Fig. 3.
Constructional details of the finalised version of the reversible uni-directional beam.

Beam Width

In practice the beam width has been found to approximate to that given in the Handbooks for a two-element array and is in the order of 70°. A typical polar diagram can be found on page 62 of the *A.R.R.L. Antenna Book*.

Suggested Experiments

The following suggestions are offered to those who may like to carry out further experiments with the system.

(*a*) Delay made variable by introduction of some form of tuned circuit, *e.g.* variable condenser in parallel with delay section. This idea has been tried by G8NY and found to be a practical proposition, the condenser being adjusted on a received signal for maximum back-to-front ratio.

(*b*) Both dipoles fed with tuned feeder, the feeder to each dipole having a separate tuned circuit in the shack, the two tuned circuits being fed from a common point. Detuning one circuit with respect to the other should result in a change of the back-to-front ratio.

(*c*) Operated on higher frequencies and the spacing between dipoles increased up to ¼ wave with corresponding increase in length of delay feeder. This may result in higher back-to-front ratio, lower angle of radiation, but slightly less forward gain.

(*d*) Three driven elements used instead of two, necessitating three feed lines of different lengths allowing of leading and lagging feed to the two outer elements with respect to the main centre radiator. The outer feed lines should be switchable in the shack to give reversal of directivity. Using ¼ wave spacing between the driven elements this should be a practical array on 28 Mc/s. and higher.

Results

From the date the system was erected (July 12, 1947), up to August 12, 1947, 105 phone contacts with VK and ZL had been made on 14 Mc/s. reports, ranging from S7 to S9+. Signals have been sent over both paths, *i.e.* across Asia in the evenings, and across S. America in the mornings, the reversibility of the system thereby being proved. During the same period 46 contacts were made on phone with Asiatic stations including VU, XZ, J. C. VS7, etc., reports also being most encouraging.

The system described is not claimed as original, but as it is not widely used in amateur circles, the writer thinks that readers may be interested to learn how it has functioned at his station. He would also like to thank the many amateurs who have co-operated in the numerous tests made from Putney and for giving much useful advice which resulted in the system becoming a workable proposition.

Six Metres

As the result of representations made to them by the Society, the G.P.O. has agreed to permit a very small number of U.K. amateurs to operate on frequencies in the 50–54 Mc/s. band. The conditions governing this special arrangement are set out below:—

(1) Stations within a 50 miles radius of London may operate only during the following hours:—12 noon to 2 p.m. and 10.30 p.m. to 10 a.m. Stations outside this area may operate at any time.

(2) No transmissions may take place within ± 50 kc/s. of the following frequencies:—50.5 Mc/s., 51.2 Mc/s., 51.9 Mc/s., 52.6 Mc/s. and 53.25 Mc/s.

(3) The facilities are available only up to December 31st, 1947.

(4) The granting of these facilities must not be taken as a precedent.

The G.P.O. have been advised of the names, addresses and call signs of some 40 amateurs who, it is believed, will be able to take full advantage of the facilities provided.

It is regretted that permission cannot be obtained for all U.K. amateurs to use 50–54 Mc/s. but the possibilities of interference with other services must be taken into account.

FLASH !

The facilities referred to above became available on November 5. At 1302 GMT on that day Mr. Denis Heightman, G6DH, of Clacton, Essex, established two-way telephonic communication on 6 metres with Mr. E. P. Tilton, W1HDQ, of West Hartford, Conn., U.S.A., signals being reported S9 both ways. Thus, for the first time the North Atlantic had been bridged successfully on a wavelength which up to a few years ago was regarded as suitable only for line-of-sight communication.

It is appropriate that G6DH and W1HDQ should share the honour of this pioneer contact for no two amateurs have done more to solve the mysteries of long distance communication on 5 and 6 metres.

In the days following this first contact a number of other G's and W's linked up on 6 metres. In our next issue we hope to publish a list of early contacts together with a description of the equipment used by G6DH and others.

* * *

At 0855 GMT on November 10 G6DH contacted MD5KW on telephony (S9 both ways). G6LK and G5WP also got over shortly afterwards.

INTRODUCTION TO DX

By J. P. HAWKER (G3VA)*

THE purpose of this article is to give the recently-licensed amateur some hints on DX working and to provide him with a background to present operating conditions on the high frequency bands.

Does Input Power Count ?

First a word about power. Many newcomers think that with 25 watts they have little chance of competing with their 100 watt neighbours. How much truth is there in this belief ? Well the usual calibration of an S meter is fixed so that a 6 decibels increase of signal strength equals one S point. Now it happens that a figure of 6 decibels is precisely the gain to be expected from increasing the input power *four* times. So that if the 100 watt station up the road gets an S7 from ZD6, then your 25 watter should be able—everything else being equal—to bring you an S6 report. Which, after all, is not very much different !

When and Who to Call

But if you are putting an S6 signal into ZD6 why is it that you seldom get an answer to your CQ DX ? Usually because—unless you are fortunate enough to possess a GC or GD call—the DX station is not going to waste his time calling you when he is not at all sure that you will hear him. If he can hear G stations coming through, he knows that he has only to put out a short CQ call and he will get plenty of replies from which to choose a contact. Therefore, with a G call, don't clutter up the bands with CQ calls—the only DX you can hope to raise in this way is W, where, of course, there are even more calls than in England. Listen for the DX station and then call him !

Remember that usually the DX station hears more than one station replying to his CQ and so he can decide whom he will work. Which means that your signal must be *attractive*. This does not necessarily mean *loud* because the experienced DX operator often picks the weakest station in the hope that it will be " rare " or QRP. But to qualify as " attractive," your signals must be steady and free from thumps, clicks, and other unpleasant characteristics. They must also be well keyed.

Good Keying Essential

Good keying has little connection with the speed of sending. There are few things more painful than a QSO with an operator trying to send faster than he is really capable of doing. The right number of dots (bug key users please note), and care as to letter and word spacing are all-important. It is an ironic fact that very often the worst sent part of a transmission is the operator's own call-sign. *He* knows the Morse characters so well that he does not realise when they are being run together. The ZG2ZZ who turns out to be G2ZZZ is certain of exasperating the man at the other end and thus losing possible contacts. This may look far-fetched in print but listen around 14 Mc/s. and you will spot plenty of examples.

Correct Procedure

How often do you sign your own call ? The tendency, all too often, is to call the other station many times before inserting the home call. Reference to the official " *Handbook for Wireless Operators* " shows that not more than three calls should be made without signing. But apart from the legal aspect, the DX station soon gets tired of hearing his own call without any indication as to who is calling him and passes on to a more intelligent operator.

In any case, the present practice of calling near the frequency of the sought-after station makes the sending of long calls unnecessary. If you are not heard within the first 30 seconds or so, then the chances of being heard at all are remote. It is better to call in short bursts with breaks to listen rather than one long drawn-out transmission. Incidentally, those " old-timers " who grumble at this practice should turn up their pre-war " Bulletins " and they will rediscover that in those days there existed the even more pernicious habit of " band edge " (and over the edge) calling which has largely disappeared as a direct result of semi " single channel " technique. But please avoid actual " zero-beat " tuning of the V.F.O.

During the recent Ilford Civic Week a group of local amateurs staged a demonstration of amateur radio equipment. Here is a view of one corner of their exhibit.

The Bad Location

Next on our list comes the " impossible " location. The newcomer with a high hill bang in the way of the desired DX often gives up without really trying. Admittedly even " ham ingenuity " cannot be expected to shift a 1,000 foot hill, but often the worst obstruction can be put to a good use—for the hill generally helps the signals in the opposite direction by lowering the angle of radiation.

As for stations located in the " shadow " thrown on to the aerial radiation pattern, the answer is sometimes surprisingly simple. Work them the " long way " round. If you cannot contact VK in the evenings—when your signals must go approximately North East—then the same hill can hardly cause trouble in the mornings when signals to VK go the " long way," *i.e.* South-West across S. America. Even signals from such districts as W6, KL7 and KH6 sometimes come right round across the Indian Ocean and allow contact to be made when hills to the North-West have prevented direct contact. It is then we experience an echo—or as the old-timers call it—the " bell in the bottle " effect.

Aerial Hints

This is not intended to be a technical article, but as in any discussion on DX, the subject of aerials cannot be entirely excluded. By exercising great restraint mention will be confined to the following

*Assistant to the General Secretary.

three points :—

(i) Make sure your aerial is cut to resonance.

(ii) Study the polar diagrams with reference to a Great Circle Map.

(iii) Don't forget the importance of the height of your radiator above ground in terms of quarter wavelengths. A height of an odd number of quarter-waves tends to direct signals upwards, whereas with an even number of quarter-waves, the upward radiation is partly cancelled out by the ground reflection—a fact of considerable benefit to DX workers since it means that a greater percentage of the signal will be reflected by the ionospheric layer. Thus on 14 Mc/s. a horizontal aerial 30/35 feet high will usually prove better for DX than one which is 47/53 feet high ! It should be remembered that the effective earth may be a couple of feet below the surface of the ground.

FORTHCOMING CONTESTS

Nov.	28–30.	V.E.R.O.N.—All-European DX Contest (Telegraphy). Oct. Bulletin p. 71.
Nov.	29–30.	R.S.G.B.—Second Section of the Top Band Contest. Nov. Bulletin p. 98.
Dec.	6–7.	R.S.G.B.—5 metre Contest. Nov. Bulletin p. 98.
Dec.	12–14.	V.E.R.O.N.—All-European DX Contest (Telephony). Oct. Bulletin p, 71.
Dec.	28.	R.E.F.—"Trophee Pierre Louis" (Telephony).

Please QSL !

Finally a word about QSL cards. Don't expect the well-known DX station to drop everything in order to mail off a card to you direct. He has probably got hundreds of G cards and will be inclined to wait until he sees yours before sending one ; and even then will prefer to send it with a batch of others *via* his Bureau. So expect the cards to take a few months —years on occasion—and try to wait as patiently as possible. Anyway, the amateur who does not possess plenty of patience won't get much enjoyment out of DX. Like a fisherman, he must be prepared to sit around on the bank and try different baits for a time before he is able to " nail 'em to the wall."

Radio Amateurs' Examination

The City and Guilds of London Institute have now issued their report covering the examination held on May 5, 1947. The following table compares the results of this examination with the two examinations held in 1946.

Year	No. of Candidates	No. of Passes	No. of Failures	Percentage of Failures
1947	326	120	206	63
1946 (November)	216	150	66	30.5
1946 (May)	182	145	37	22.2

The report on the November, 1946, examination commented on the falling-off in the percentage of entrants obtaining a pass and suggested that a number of persons had sat for the examination without adequate preparation. The tendency then noted has become accentuated in the 1947 examination, the percentage of passes having fallen to 37, and the majority of the entries were of an extremely low standard.

From the phraseology and vocabulary used, and the general way in which the answers were given, it is apparent that a large number of entrants, unused to sitting for examinations had received little or no coaching for the Radio Amateurs' Examination. The use of abbreviated and corrupt English, such as is commonly used by amateur radio operators, is to be deprecated for examination purposes. Some of the answers were of a flippant nature, and on the whole there appeared to be a tendency to treat the examination as a not very serious matter. Confidential notes to the Examiner, regretting ignorance, do not give a good impression.

A report on the questions follows :—

Question 1 (*calculation*) : Comparatively few candidates attempted this question ; of those who did, less than half did so correctly.

Question 2 (*selectivity*) : } Fairly well done by
Question 3 (" *C.W.*") : } the better candidates.
Question 4 (*modulation*): }

Question 5 (*master oscillators*) : The essential points in the design of a variable frequency oscillator of good frequency stability were not at all well understood.

Question 6 (*the transmitter*) : Many incorrect answers were given concerning the required frequency of the crystal and the methods of multiplication suggested to obtain the required final frequency showed little regard to efficient operation.

Question 7 (*aerials*) : Not well done, in particular the methods of coupling to the transmitter were dismissed very briefly.

Question 8 (*frequency meter*) : Very poorly done by the comparatively few entrants who attempted the question. They seemed to have a hazy idea of what a frequency meter of the piezo-electric type really is, and of how to use it.

Stray

Mr. A. A. Jones, G6TF, co-author of *Service Valve Equivalents*, continues to receive many enquiries concerning ex-enemy components. The majority of these enquiries have, however, been sent to his old address instead of to 18 Cowley View Road, Chapeltown, near Sheffield. To save correspondence Mr. Jones will be glad to give information over the air as his station is active most nights from 11 p.m. on 1·75 and 3·5 Mc/s.

THE B.C. 348 COMMUNICATION RECEIVER

By G. L. BENBOW M.Sc.*

THE B.C.348 receiver is certainly one of the finest communication receivers available to-day. Both mechanically and electrically it is superior to the vast majority of American receivers.

There are several different models, these being indicated by a further letter after the type number. They are alike in many respects, layout of front panel, wave-ranges covered (200–500 kc/s. and 1·5-18 Mc/s. in five bands), connections at the rear and general internal layout, but differ in such respects as valve line up and power supply. For example, some work off 110 v. A.C. mains, while others utilise a built-in rotary transformer and run off a low voltage D.C. supply.

Valve Combinations

Basically the 348 series has two R.F. and three I.F. stages with an intermediate frequency of the order of 900 kc/s., but there are various combinations of valves. The "J" model has 6SK7's in the R.F. stages; 6SA7, mixer and oscillator; 6SK7, 6SK7, 6SJ7 in the I.F. stages; 6SR7, second detector, A.V.C. and B.F.O. and 6K6GT output. The "N" has 6K7's in the R.F. stages; 6J7, mixer; 6C5, oscillator; 6K7, first I.F.; 6F7, second I.F. and B.F.O.; 6B8, third I.F. and second detector plus A.V.C.; 6K6GT, output. The "M" is similar apart from a 41 in the output. The "M" and "N" models also have the oscillator H.T. voltage stabilised by a Type 991 neon lamp.

Modifications for Amateur Use

The B.C.348 makes a very satisfactory amateur receiver, although, of course, not specifically designed for that purpose. Its chief disadvantage is that it does not cover the 28 Mc/s. band, it does however, have an efficient crystal filter. It requires comparatively little modification and it is hoped that the following notes will be of assistance in this direction.

A.C. models can be run off an appropriate auto-transformer and after joining pins 2 and 6 on the back plug, the set is ready for operation. As for the other models, it is necessary to remove the rotary transformer and disconnect all the wiring on the primary side. As the H.T. supply required is 230 v. at 60 mA. a standard 250 v. 60 mA. transformer is suitable. This and a rectifier valve fit snugly into the space occupied by the rotary transformer and it is just possible to find room for a small smoothing choke and condensers beneath the chassis. The power supply output can be connected to the H.T.+ and H.T.— tags off the rotary transformer. It should be noted that H.T.— is not connected to chassis, there being a smoothing choke in the negative lead, the voltage drop across this providing bias for the output valve.

The A.V.C.–off–M.V.C. switch when in its centre position originally switched the L.T. side of the rotary transformer, and this may be connected using the original connections in the H.T.— lead as a send-receive switch, or alternatively it can be used to break the screen supply to the R.F. and I.F. stages as mentioned later.

The heaters are connected in series-parallel with balancing resistors across the 24 v. supply and if the original wiring is traced out can be reconnected in parallel with very little alteration of the original wires. Alternatively the original wires may be snipped out and the heater circuit completely re-wired. At the same time the dial lights may also be wired in parallel with the heaters and the dial lights control removed. It is quite satisfactory to earth one side of each heater.

As sockets to fit the eight-way Jones' type plug at the rear are impossible to obtain, it is suggested that this be removed, thus leaving room for a smoothing choke. The connections are as follows :—

1 and 5	.. High impedance output.
2 ..	.. H.T.+
3 and 4	.. (In parallel) L.T.+
6 ..	.. Screens of second R.F. and I.F. valves.
7 and 8	.. Earth.

Pins 1 and 5 are in parallel with the two 'phone jacks. With the exception of pins 2 and 6, these connections may be ignored. Pins 2 and 6 were originally connected to a relay for breaking the H.T. supply to the screens of the R.F. and I.F. valves during transmission and so muting the set. They must now be joined together, or taken to the A.V.C.–off–M.V.C. switch as mentioned earlier.

Output Circuit

The output transformer has two secondaries, one labelled 4,000 ohms and the other 300 ohms. The latter does not appear to be used in any model. The high impedance winding is taken to the two jacks on the front panel and is suitable for 'phones or a high impedance speaker. A tone control consisting of a ·02μF. condenser and a 100,000 ohms variable resistor in series between the anode of the output valve and chassis is a useful addition. This may be combined with a mains on–off switch, taking the place of the dial lights control.

R.F. and A.F. Gain Controls

As in the R1155, the R.F. and A.F. gain controls are ganged. When the A.V.C. is on, the R.F. gain control is switched out, and in the M.V.C. position the A.F. gain is fixed. This does not appear to possess any great disadvantage, so it is probably not worth the trouble of separating the two controls and fitting a separate A.V.C. on–off switch.

Valve Substitutes

A slight disadvantage of some models is the number of different valves used and in this direction, some variation is possible. For example the 6J7 mixer and the 6B8 may be replaced by a 6K7 or two type WX6 Westectors. There appears to be no reason why the 6F7 and 6B8 should not be replaced by two 6K7's and a double diode triode, the only difficulty would be finding space for the extra valve. The 6F6 (or 6F6GT) is a useful replacement for the 6K6GT in the output stage. The KTW63, KTW61 and EF39 are quite satisfactory replacements of the first I.F. valve. The Z62 may also be used in the R.F. stages. This is the only possible alternative on account of the height available.

Continued on page 96.

* 92 Cannon Lane, Pinner, Middx.

HEADQUARTERS STATION

THE Society's transmitter is not yet in service but members may be interested in an interim report on the work of installation.

Final plans could not be proceeded with until the terms of the Post Office licence were finally agreed, but we are glad to say that this matter has now been settled, although at the time of writing the licence is not yet to hand. The Society will be issued with two licences, the first to authorise the radiation of a standard marker signal, and the second a normal Class B Amateur Station licence.

Under the present conditions of extreme congestion of space at Headquarters it would only be possible to operate the station for communication purposes under a severe handicap. It is however proposed to put the station on the air at the earliest opportunity as a frequency marker. The proposal is to radiate a short automatically transmitted message during the first two minutes of each hour from 06.00 to 24.00 local time. This will take place on a frequency of 3500·250 kc/s. and at a speed of 12 words per minute. The frequency will be controlled by a unit designed by the Post Office Engineering Department and will have a maximum error of a few cycles per second only. When the station is in operation it is hoped that a measured figure of high accuracy will be published.

This frequency has been chosen in order to provide, over as wide an area as possible, a signal which can easily be used to mark the lower edge of the 3·5, 7, 14 and 28 Mc/s. bands. A frequency of 3,500 kc/s. precisely cannot be used as any keying would produce sidebands outside the amateur band, but the proposed frequency is so close to the edge that even on the 28 Mc/s. band it corresponds to a signal only 2 kc/s. inside the band. The provision of such a marker signal will give stations using V.F.O. drives a check at frequent intervals, and there should be no possible excuse for off-frequency operation if the drive is never allowed to go below the standard marker.

The transmitter will be switched on by means of a *Synchronome* clock with an Invar pendulum and the times should be correct within one or two seconds. Thus the service will provide a very accurate standard of frequency, a useful time signal and also a standard of Morse speed at the figure required for the G.P.O. Amateur Licence test.

In addition to the transmitter itself, the master clock and time controlling apparatus have been delivered. An Air Ministry type of autosender is on order, whilst the Frequency Control unit, and the control panel required to operate the various parts of the equipment in the correct sequence from the clock are under construction.

A number of difficulties have had to be overcome with regard to the aerial system. The roof of New Ruskin House is the only possible site, and the erection of masts at the extremities of a building which is some seventy feet above the ground level is not a simple matter. The problem of obtaining suitable timber for the masts has been overcome by a generous gift by *Messrs. Calders, Ltd.*, of Boston, Lincs., but there have been numerous formalities to be complied with in order that the installation will be acceptable to the Holborn Borough Council. The work of erection is now in the hands of the contractors and completion has been promised by the end of November.

The question of operating the station for other purposes must be regretfully left a little longer, until more space is available for setting up the two receivers and the measuring equipment which have also been donated to the Society, and for accommodating the operators to man the station.

H. A. M. C.

Awards to R.S.G.B. Contest Winners

It has been the practice in the past to award suitable trophies to the winners of certain Society Contests. These are retained for a year. In the case of the B.E.R.U. Contests, small replicas of the actual trophies are presented each year and these become the property of the individuals to whom they are awarded.

The Council has agreed, on the recommendation of the Contests Committee, to extend this practice to the other events detailed below. In all cases where miniature cups or replicas of trophies are presented they will become the property of the individual to whom they are awarded.

Top Band Contest.

The Somerset Trophy will be awarded to the winner (the station with the highest combined score in the two sections) together with a replica or miniature, one of which will also be awarded to the leading station in each section of the Contest. Should the winner also be a leading station in either or both of the two sections, he will only be eligible for one such replica or miniature. Those placed second and third in each section will receive certificates of merit.

National Field Day.

The Town, or Area, with the highest combined score will receive the N.F.D. Shield and replica. Replicas will also be presented to the Towns with the leading " A " and leading " B " stations, provided that these Towns are not also eligible for an award for the highest combined score.

Five Metre Contest.

The Mitchell Milling Trophy will be awarded to the winner together with a replica or miniature. Two certificates of merit will be awarded to the runners-up.

D/F. Events.

Miniature cups will be presented to the winners of each event and certificates of merit to those placed second and third in each event.

Five Metre Field Days.

Miniature cups will be awarded to the winners of each event and certificates of merit to those placed second in each event.

Low Power Contest.

The 1930 Committee Trophy will be awarded to the winner, together with a replica or miniature and certificates of merit to those placed second and third.

Other events.

Whenever a new contest or event is held the intended awards will be announced at the time the rules are published.

The Council has the right to withdraw or amend any of these awards should the support be considered insufficient.

Due to supply difficulties it may not be possible to obtain exact miniature replicas of the various Society trophies. In such event miniature cups will be awarded.

ATLANTIC CITY CONFERENCE

THE following is a copy of that portion of Article 5 of the Atlantic City Conference Regulations which relates to amateur frequency allocations. The footnote reference numbers are those which appear in the final text.

* * *

In the table of frequency allocations which follows, the services to which each band is allocated are listed in alphabetical order. The order of listing does not, therefore, indicate relative priority.

(*a*) A footnote reference which appears in any section of a column showing allocations, either "World Wide" or "Regional" applies to the services listed in that section of the column.

(*b*) Any footnote reference placed immediately after a particular service listing applies only to that service.

The three Regions into which the world has been sub-divided for the allocation of frequencies are :—

Region 1.

Region 1 includes the area limited on the East by line A (lines A, B and C are defined below) and on the West by line B, excluding any of the territory of Iran which lies between these limits. It also includes that part of the territory of Turkey and the Union of Soviet Socialist Republics lying outside of these limits, the territory of the Mongolian Peoples' Republic, and the area to the North of the U.S.S.R. which lies between lines A and C.

Region 2.

Region 2 includes the area limited on the East by line B and on the West by line C.

Region 3.

Region 3 includes the area limited on the East by line C and on the West by line A, except the territories of the Mongolian Peoples' Republic, Turkey, the territory of the U.S.S.R. and the area to the North of the U.S.S.R. It also includes that part of the territory of Iran lying outside of those limits.

The lines A, B and C are defined as follows :—

Line A.

Line A extends from the North Pole along meridian 40° East of Greenwich to parallel 40° North ; thence by great circle arc to the intersection of meridian 60° East and the Tropic of Cancer ; thence along the meridian 60° East to the South Pole.

Line B.

Line B extends from the North Pole along meridian 10° West of Greenwich to its intersection with parallel 72° North ; thence by great circle arc to the intersection of meridian 50° West and parallel 40° North ; thence by great circle arc to the intersection of meridian 20° West and parallel 10° South ; thence along meridian 20° West to the South Pole.

Line C.

Line C extends from the North Pole by great circle arc to the intersection of parallel 65° 30′ North with the international boundary in Bering Strait ; thence by great circle arc to the intersection of meridian 165° East of Greenwich and parallel 50° North ; thence by great circle arc to the intersection of meridian 170° West and parallel 10° North ; thence along parallel 10° North to its intersection with meridian 120° West; thence along meridian 120° West to the South Pole.

The "European Area" is bounded on the West by the Western boundary of Region 1, on the East by the meridian 40° East of Greenwich and on the South by the parallel 30° North so as to include the western part of the U.S.S.R. and the territories bordering the Mediterranean, with the exception of the parts of Arabia and Saudi-Arabia included in this sector.

FINAL AMATEUR ALLOCATIONS

ALLOCATION TO SERVICES

World-Wide.	REGIONAL.		
	Region 1.	Region 2.	Region 3.
—	1605–2000 kc/s. (*a*) Fixed. (*b*) Mobile except aeronautical mobile (s1).	1800–2000 kc/s. (*a*) Amateur. (*b*) Fixed. (*c*) Mobile except aeronautical mobile. (*d*) Radionavigation.	1800–2000 kc/s. (*a*) Amateur. (*b*) Fixed. (*c*) Mobile except aeronautical mobile. (*d*) Radionavigation.
—	3500–3800 kc/s. (*a*) Amateur. (*b*) Fixed. (*c*) Mobile except aeronautical mobile.	3500–4000 kc/s. (*a*) Amateur. (*b*) Fixed. (*c*) Mobile except aeronautical mobile.	3500–3900 kc/s. (*a*) Amateur. (*b*) Fixed. (*c*) Mobile.
7000–7100 kc/s. Amateur.	—	—	—
—	7100–7150 kc/s. (*a*) Amateur. (*b*) Broadcasting (s4).	7100–7300 kc/s. Amateur.	7100–7150 kc/s. (*a*) Amateur. (*b*) Broadcasting. (s4)
—	7150–7300 kc/s. Broadcasting.	—	7150–7300 kc/s. Br'dcasting. (s4)
14000–14350 kc/s. Amateur (s1).	—	—	—

World-Wide.	REGIONAL.		
	Region 1.	Region 2.	Region 3.
21000–21450 kc/s. Amateur.	—	—	—
26100–27500 kc/s. (*a*) Fixed. (*b*) Mobile except aeronautical mobile (s7) (s8).	—	—	—
28000–29700 kc/s. Amateur.	—	—	—
—	41–68 Mc/s. Broadcasting (s4).	—	—
—	—	50–54 Mc/s. Amateur.	50–54 Mc/s. Amateur.
—	70–72·8 Mc/s. (*a*) Fixed. (*b*) Mobile except aeronautical mobile (s8).	—	—
144–146 Mc/s. Amateur.	—	—	—

World-Wide.	Regional.		
	Region 1.	Region 2.	Region 3.
—	146–156 Mc/s. Aeronautical mobile.	146–148 Mc/s. Amateur.	146–148 Mc/s. Amateur.
—	216–235 Mc/s. Aeronautical radio-navigation (93).	220–225 Mc/s. Amateur.	200–235 Mc/s. Aeronautical radio-navigation (93).
420–450 Mc/s. (a) Aeronautical radio-navigation. (b) Amateur (96).	—	—	—
—	450–460 Mc/s. (a) Aeronautical radio-navigation. (b) Amateur.	—	450–460 Mc/s. (a) Aeronautical radio-navigation. (b) Amateur.
1215–1300 Mc/s. Amateur (101).	—	—	—

World-Wide.	Regional.		
	Region 1.	Region 2.	Region 3.
2300–2450 Mc/s. Amateur (104).	—	—	—
—	—	3300–3500 Mc/s. Amateur.	3300–3900 Mc/s. (a) Amateur. (b) Fixed. (c) Mobile. (d) Radio-navigation.
5650–5850 Mc/s. Amateur (114).	—	—	—
—	—	5850–5925 Mc/s. Amateur.	—
10000–10500 Mc/s. Amateur.	—	—	—

Note (31).—In the band 1715–2000 kc/s. Austria, Ireland, the Netherlands, Northern Rhodesia, Southern Rhodesia, Switzerland, the Union of South Africa and the United Kingdom may assign up to 200 kc/s. for the amateur service provided that the mean power of any amateur station does not exceed 10 watts and that no harmful interference is caused to the authorised services of other countries.

Note. (44).—In Region 1, the use of the band 7100–7150 kc/s. by the amateur service is authorised provided that no harmful interference is caused to the broadcasting service. However, in the Union of South Africa and the territory under mandate of South-West Africa, the band 7100–7150 kc/s. will be used exclusively for amateur service.

Note (45).—In Australia and the Netherlands East Indies, the band 7100–7150 kc/s. and in China and New Zealand, the band 7100–7300 kc/s. may be allocated for the amateur service. The administrations of the countries mentioned in this note shall take all practicable steps to avoid causing any harmful interference to the broadcasting service and will ensure that amateur stations do not use a peak power exceeding 100 watts. If, however, harmful interference to the broadcasting service is experienced these administrations will consider reducing the use of these bands by the amateur service.

Note (51).—In the U.S.S.R., the band 14250–14350 kc/s. is also allocated for the fixed service.

Note (57).—The frequency 27120 kc/s. is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of plus minus 0·6 per cent. of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

Note (58).—In Region 2, Australia, New Zealand, the Union of South Africa and the territory under mandate of South-West Africa, the amateur service will operate within the band 26960–27230 kc/s.

Note (64).—In the Union of South Africa, the territory under mandate of South-West Africa, Northern Rhodesia and Southern Rhodesia, the band 41–44 Mc/s. is allocated for the aeronautical radio-navigation, fixed and mobile services; the bands 44–50 Mc/s. and 54–68 Mc/s. are allocated for the fixed and mobile services in addition to the broadcasting service, the band 50–54 Mc/s. being used exclusively for the amateur service.

Note (68).—In France and the U.S.S.R., the band 72–72·8 Mc/s. is allocated for the amateur service.

Note (91).—In the Union of South Africa, the territory under mandate of South-West Africa, Northern Rhodesia and Southern Rhodesia, the band 220–225 Mc/s. is allocated for the amateur service.

Note (92).—In China, the band 200–216 Mc/s. is allocated for the broadcasting, fixed and mobile services, and the bands 216–220 Mc/s. and 225–235 Mc/s. for the fixed and mobile services, the band 220–225 Mc/s. being allocated for the amateur service.

Note (96).—In the band 420–460 Mc/s. the aeronautical radio-navigation service has priority. The other services are admitted to this band only on condition that harmful interference is not caused to the aeronautical radio-navigation service.

Note (101).—In the U.S.S.R., the band 1215–1300 Mc/s. is allocated for the fixed service primarily for relaying television.

Note (106).—In Region 2, Australia, New Zealand, Northern Rhodesia, Southern Rhodesia, the Union of South Africa, the territory under mandate of South-West Africa, and the United Kingdom, the frequency 2450 Mc/s. is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of plus minus 50 Mc/s. of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

Note (114).—In Region 2, Australia, New Zealand, Northern Rhodesia, Southern Rhodesia, the Union of South Africa, the territory under mandate of South-West Africa, and the United Kingdom, the frequency 5850 Mc/s. is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of plus minus 75 Mc/s. of that frequency. Radiocommunication service operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

Calibration Service

Messrs. Salford Electrical Instruments, Ltd., Birch Mill, Birch, Near Heywood, Lancs, have agreed to accept crystals *in holders* for re-calibration whether of their own or any other manufacture.

This service should prove of especial value at the present time when so many members are using ex-Service crystals for which they have no calibration certificate.

A nominal charge of 5s. will be made for each crystal submitted. This charge will cover the cost of calibration, re-engraving the holder with the new figure (when necessary) and issuing a certificate stating the exact frequency and accuracy of calibration.

Crystals should be sent by *registered post* to the address given above and the box marked "Crystal Calibration." The name and address of sender should be enclosed.

Correspondence to HQ's

When writing to HQ's members are requested to use their call sign or BRS number. Changes of address should be notified on a separate sheet of paper.

BULLETIN CONTRIBUTIONS

THE BULLETIN invites contributions on a wide variety of technical subjects and will purchase the copyright of all such contributions published at the rate of **Three Guineas per 1,000 words for leading articles, and Two Guineas per 1,000 words for other articles.** *Drawings and photographs will be taken into account when assessing the copyright fee to be paid to a contributor.*

Prospective contributors are requested to submit a precis of their article before proceeding with the preparation of the manuscript.

Manuscripts should, whenever possible, be typed, using double spacing, and all drawings must be submitted on separate sheets with the name of the author and the title of the article written on the back. Hints to Contributors can be obtained upon application to Headquarters.

THE MONTH ON THE AIR

By A. O. MILNE (G2MI)*

GET out your microscopes, chaps, and "have a go." The black smudge which you see on this page really is the good old regular! Don't say anything to the Hon. Editor, but we think we may be able to squeeze in a few more words this way! The observations which we shall make in the reading glass market during the next few weeks, will, we hope, give us some idea as to the degree of popularity of this feature—and now to business.

* * *

The C.W. End

There is a polite fiction in Amateur Radio circles known as "the C.W. end of the band." This used to mean the first hundred kilocycles on 3·5 and 7, the first 150 kc/s. on 14 Mc/s. and the first 200 on 28. Look at it now! Phone all over the place and it is something which we can all do something about. Keep out ourselves and tell the others. 3·5 and 28 are the worst cases where life for the C.W. man—which so often means the newcomer with low power—is made intolerable by thoughtless or selfish 'phone merchants trying to dodge the 'phone QRM. Live and let live; the Amateur is a gentleman, etc.

This Month's Prize

The following post card was recently received from the U.S.A.

"Dear G2MI. I have never heard you on the air, but would be very grateful if you would send me one of your QSL cards so I can complete my collection. Thank you very much."

This must be a world record! A man who has every QSL card in the world and needs only one from G2MI to complete!

Notes and News

The 14 Mc/s. band was very patchy during October with an almost total absence of American signals. Skip was short and conditions for DX mainly poor. 28 Mc/s. on the other hand was wide open, with two peak periods for north-south working and two for east-west. The general daily run being: early morning ZD4 and ZL then J8, J9, VU, ST, followed by W6, W7, VE5, VE7 and then later on the east coast W's, a complete reversal of conditions as they became accepted before the war when the east coast of U.S. came in first followed by the middle west and west in that order. 50 Mc/s. and the 58 Mc/s. band are a story to themselves for which we refer you to G2WS.

ZE2JO points out that ZE1 is no longer the sole prefix for Southern Rhodesia and that there are now almost as many 2's as 1's.

We recently had a card through the Bureau addressed to VS9AN—Eden! MD5AF is active once more, under new management and QSL's 100 per cent. G3BYF is now well established in South Africa as ZS5YF and is eager to work G's—sends his 73's to old friends. G8II has worked OZ4HF on the island of Bornholm. Wants to know if it is a new country. We think not. G6BW recently worked W1HKK on 28 Mc/s. 'phone when the latter was operating from a moving car cruising around the streets of Boston. Input was 60 watts to a "whip" aerial and contact was maintained throughout a 23 minute tour of the city. R5 S6–8.

G5CI has worked YR5Q on 14060. QSL *via* HB9AG. Other offerings from this source are KZ5BA, 14060. P.O. Box 65 Curunda, Canal Zone, Panama. VP4TAA, 14070, VO6X 14005, at Goose Bay, and VP4TAD, 14055. A.P.O. 857, c/o P.M. Miami, Fla. GM3AVA passes along a request from VU2BF in New Delhi who wants to contact stations in the Newcastle area. 28100 and 28220 around 08.00 G.M.T. and from 12·00 onwards. G3AYO tells us that KL7UM gives the QTH of the Anchorage Radio Club as Box 1835 Anchorage, Alaska. VU2LR is on his way home. He needed only two countries for DXCC on 28 Mc/s. 'phone and then had to pack! He says AC3SS is also on his way home. Will he please write the QSL manager when he arrives?

ZB1AI is genuine—E. H. Sloman, C.P.O. (Air), 728 Sqdn., R.N. Air Station, Hal Far, Malta, G.C. ZB1AG and 1AH are also new calls. Many amateurs anxiously await a QSL from ZB1AD. How about it, O.M.? VS1AQ is another DX station now on his way to G-land. BRS11494 says ST2AN is active on the L.F. end of 28 Mc/s., other nice ones are CR9AG, W7IOR/Guam, 28500. W6WCN on Saipan and VP4TK. Dutch New Guinea is now PK7 having been changed from PK6. G2FKN is now active as ST2RL, Box 253, Khartoum. Others recently active are PK2RK, Post Office Solo, Java, VQ3PYE, Box 568, Dar-es-Salaam and VP3HL on 28370. G3DO and G6RH have landed a choice one on 14340 'phone by working VR3A. QTH Ron Garrett, Washington Island, *via* Fanning Is., Central Pacific. G3DO has also worked J5AAJ, J9CRP, KG6AG, W6YOT/C6, W3KTF/KG6, J8AAM and VP3LF—all on 14 Mc/s. 'phone. His card is through from UA0KQA in Zone 19. Also cards from KP6AA, K6ETF/KC6, ZK1AB and FQ3AT. He has just received his DXCC Post-war and wonders if it is the first in Britain.

* 29 Kechill Gardens, Hayes, Bromley, Kent.

G6RH has collected KW6AC, VP5EM, YN1HB, YN1LB and C1CH all on 28 Mc/s. Also VP8AM, 14030, VS9ET (Oman) 14105 and ZM6AF on 14090. He kindly passed VP5EM on to G2MI on October 25 and the card arrived air mail first post on the 29th!

BRS14237 says VP5AS is an American in Jamaica and that OX3MC is the old OX1Z, APO858. G5MR has been going to town in a big way, to quote an old Elizabethan phrase, with VE8BJ, 14122, Whitehouse, Yukon. VP2AT, 14116, VP4TW, 14075, J9AGT (S9 'phone both ways). W0MCF/C1, UH8AF, 14032, UQ8AF, 14110, C7TK, 14047, Box 52, Peiping and W5KWY/KS4. He recently worked D4AND/6 who is radio operator on a U.S. General's private train whilst the latter was on the move.

VU2RS Flt..Lt. Scott is now G3CPQ but apparently the call is now being used by someone else. Cards for contacts prior to August 30, 1947, should go to G3CPQ. PX1C and OY7NL are both pirates. Don't waste your precious QSL's on them—neither is where he claims to be.

From G3DAH we hear that HH2MF is on 28500 looking for G's between 20.00 and 22.00 B.S.T. QTH, Box 153, Port au Prince, Haiti. He does not answer calls made on his own frequency. ZB1M is back in England and has QSL'd 100 per cent. MD7RH and MD7EL are QRT. Both are now in Egypt as MD5CH and MD5EL, respectively, and will shortly be going to ST. W7FTE in Wyoming wants G contacts. Look for him on 29130. He QSL's 100 per cent. KH6IJ is ex-K6CGK. He always QSL's *via* R.S.G.B., but please be patient.

7 Mc/s. DX

There is plenty of DX for the early riser on this band. Eric Trebilcock in Tasmania still hears your local 'phone chatter. What about a little less 'phone and a bit more listening on 7? Remember 7 Mc/s. is a DX band and don't let anyone persuade you to the contrary.

High Power and Edge of the Band

Apropos our remarks last month, we recently overheard a station saying his crystal was N.P.L. checked on 7,000 kc/s. dead. He also described his rig! We wonder where his sidebands were? The man on 3·5 Mc/s. who recently said he was using two 813's modulated by two 803's must spend a lot of money on heater current! Like the other "150 watter," who modulates his two 81's with two 805's.

G8PP complains that an edge of the band pirate is using his call-sign and has caused him considerable trouble. The usual formula is "My real QTH is in London, but I am on holiday at present here," then follows a varying QTH. G8PP, however, is almost 100 per cent. C.W. This "clever" pirate has even adopted 8PP's Christian name, but has overlooked one thing which proves that he is a pirate. We don't propose to make him a present of the information, but friends of G8PP will chuckle with him and know what we mean.

VR6AA

Many stations who worked or would like to work VR6AA will be interested in the following story and may feel inclined to prove their interest in a practical manner.

Some time ago Nelson Dyett, the operator of this station explained to G2MI that he was in a bit of a fix, inasmuch as his station was run from an oil engine. Every drop of oil had to be imported and he was finding the financial strain a bit of a burden. Could we or the A.R.R.L. assist in any way? He would be glad to spend several hours a day giving contacts to the boys and would be sure to QSL, but could they help him out with the oil position? In the past it has been the Americans who have always generously come to the aid of Pitcairn Island and the writer felt that if something could be done for one of our own Colonial outposts by we British, that the DX gang would rally round and help. Through the good offices of G2MI's brother, a prominent Civil Engineer in Australia, and his contacts with the Vacuum Oil Co., of Auckland, N.Z., 528 gallons of Diesel oil left Auckland on October 15, bound for Pitcairn Island and arrived on the 28th.

The actual shipment was made by arrangement with the New Zealand Shipping Co., who generously made no charge and N.Z.A.R.T. in ZL1 have seen the thing through. The approximate cost is £30 of which £10 has already been subscribed at the Belfast and Blackpool O.R.M.'s and by one or two of the writer's personal friends. Anyone who cares to associate themselves with the gift is invited to send his donation to G2MI. Any surplus will be forwarded to N.Z.A.R.T. with a request to supplement the supply if the opportunity offers itself. It is desired to send VR6AA a full list of the actual subscribers. In addition to 1,000 QSL cards sent by W1FH, a further 500 have been sent by "yours truly" and more will be sent when required; VR6AA is now well supplied with fuel and cards so "pin back yer lug oles."

Nelson Dyett leaves Pitcairn at the end of December. His place is being taken by another ZL amateur so VR6 will remain on the map. The oil supply will be handed over to him when Nelson leaves.

The only snag remaining is that poor old Nelson has to manhandle each one of those twelve 44-gallon drums up a 900 foot hill from the shore to his shack. There are no motor trucks on Pitcairn Island. We hope to publish a story from Pitcairn in an early issue, in the meantime what about it, DX gang?

Worked all States

The W.A.S. certificate is issued by the A.R.R.L. to any licensed amateur who submits proof of two-way communication with each of the 48 Continental United States as set out below. Claims must be submitted to the A.R.R.L., 38 La Salle Road, West Hartford 7, Conn., U.S.A. The prefix K in addition to W is now assigned to U.S. amateur stations.

State	*Postal Abbreviation*	*Call Area*
Alabama	ALA	4
Arizona	ARIZ	7
Arkansas	ARK	5
California	CAL	6
Colorado	COLO	0
Connecticut	CONN	1
Delaware	DEL	3
Florida	FLA	4
Georgia	GA	4
Idaho	—	7
Illinois	ILL	9
Indiana	IND	9
Iowa	IA	0
Kansas	KAN	0
Kentucky	KY	4
Louisiana	LA	5
Maine	ME	1
Maryland	MD	3
Massachusetts	MASS	1
Michigan	MICH	8
Minnesota	MINN	0
Mississippi	MISS	5
Missouri	MO	0
Montana	MONT	7
Nebraska	NEBR	0
Nevada	NEV	7
New Hampshire	N. H.	1
New Jersey	N. J.	2
New Mexico	N. MEX	5
New York	N. Y.	2
North Carolina	N. C.	4
North Dakota	N. DAK	0
Ohio	—	8
Oklahoma	OKLA	5
Oregon	OREG	7
Pennsylvania	PA	3
Rhode Island	R. I.	1
South Carolina	S. C.	4
South Dakota	S. DAK	0
Tennessee	TENN	4
Texas	TEX	5
Utah	—	7
Vermont	VT	1
Virginia	VA	4
Washington	WASH	7
West Virginia	W. VA	8
Wisconsin	WIS	9
Wyoming	WYO	7

Note.—The District of Columbia (D.C. 3) counts as part of Maryland for the Worked All States Certificate.

The Russian Prefixes

The following list of post-war prefixes allocated to amateur and club stations in the Union of Soviet Socialist Republics should enable members to compute their DXCC scores. The U.S.S.R. comprises 16 Republics, but because the R.S.F.S.R. (the central federation of autonomous republics and provinces) lies partly in Europe and partly in Asia, the maximum possible DXCC score is 17.

EUROPE

	Republic	*Capital*	*Prefix*
1	R.S.F.S.R.	Moscow	UA 1-4-6
2	Belorussia (White Russia)	Minsk	UC2
3	Ukraine	Kiev	UB5
4	Armenia (Hyaston)	Erivan	UG6
5	Azerbaijan	Baku	UD6
6	Georgia (Sakartvélo)	Tbilisi	UF6
7	Karelo-Finnish S.S.R.	Petrozavodsk	UN1
8	Moldavia	Kishinev	UO5
9	Lithuania	Vilnius	UP2
10	Latvia	Riga	UQ2
11	Estonia	Tallinn	UR2

ASIA

12	R.S.F.S.R. (Yakutsk, Buriat-Mongel, Siberia, etc.)		UA 9-0
13	Kazakhstan	Alma Ata	UL7
14	Turkmenistan	Ashkhabad	UH8
15	Uzbekistan	Tashkent	UI8
16	Kirgizhstan	Frunze	UM8
17	Tajikstan	Stalinabad	UJ8

The Fisk Solariscope

An interesting and extremely useful radio accessory—the Fisk Solariscope, invention of Sir Ernest Fisk, Managing Director of Electric and Musical Industries, Limited—is being shown at the Amateur Radio Exhibition.

The instrument is designed to show clearly and easily the areas of daylight and darkness over the earth at all hours in each month of the year.

As an aid to the short wave enthusiast, it can make all the difference between complete success and indifferent results. The varying conditions of short wave reception are due primarily to solar influences and by using the Fisk Solariscope hours of unnecessary searching on unsuitable frequencies at a given time and for any particular country it is desired to work or hear, can be avoided.

The Solariscope is also useful for teaching solar and geographical relationship throughout the year and it gives at a glance the relative times, or hourly time differences between any two places on earth. It can also be used to ascertain distance.

The instrument consists essentially of a double Mercator projection map, on which the land boundaries are repeated, wound in cylindrical form round a rigid former. Over this is fitted one of a series of four transparent shadow charts—depending upon the month of the year—supplied with the instrument. The three not in use may be kept inside the instrument, which is fitted with cream bakelite caps one of which is removable. By rotating the transparent shadowgraph until the appropriate time-line is over the receiver location, the areas of daylight and darkness may be instantly ascertained, together with the relative Mean Time of places throughout the world.

The Fisk Solariscope is supplied with a comprehensive instruction book which includes a gazetteer of the principal short wave broadcasting stations in the world and a table of frequency allocations with notes as to suitability for different times of day.

The price is one guinea post free from the *Amateur Radio Division, E.M.I. Sales and Service Ltd.*, Hayes, Middlesex, or through local dealers.

The President, Council and Headquarters' Staff send Christmas and New Year Greetings to all members resident abroad.

Book Review

WIRELESS DIRECTION FINDING (Fourth Edition). By R. Keen M.B.E., B.Eng. Demy 8vo. xii plus 1,059 pages. 630 diagrams and illustrations. Published for *Wireless World* by Iliffe & Sons, Ltd. Price, 45/- net.

The radio field has become very crowded with devices and techniques since the third edition of this well-known book appeared in 1938; but the necessity of being able to locate a source of signals is still with us, and probably always shall be.

A very considerable amount of new material has been added to the book, and there has been a lot of re-writing to include recent work and methods. In particular, readers will welcome the new chapter on wireless navigational systems, which includes Gee, Loran, Decca and Consol.

There are new sections on high-frequency radiogoniometers, on transmission line theory as applied to Adcock aerial systems, and on the resonance errors in Adcock aerials and feeders. The section on short-wave direction finding has been doubled in size, and largely rewritten. Recent developments in the U.S. radio range beacon, and the statistical treatment of high-frequency bearing classification, are new additions in their respective sections.

Aircraft approach and landing systems are more extensively treated, and the system approved for use in Great Britain and Commonwealth countries is described.

The author emphasises that the book is intended to be a manual rather than a complete textbook, but the bibliography is comprehensive and covers 36 pages.

After being out of print for four years, this new edition of an old friend is indeed welcome. The treatment is as ever; useful, concise and lucid. The illustrations deserve a special word of praise; they are more than adequate—they are attractive, and in previous editions have been a source of pleasure to many readers.

There is no doubt that radio engineers and students will find the new edition even more valuable than its predecessors, and despite the appreciably increased cost will consider it very good value. It is a most useful book, most pleasantly presented.

T. P. A.

B.C. 348 RECEIVER—(*continued from page 91.*)

Tuning Control

There is no band spread, but this is hardly necessary in view of the excellent slow-motion dial fitted and the narrow coverage of each range. For logging purposes a scale covering 0–100 over 360° rotation may be fitted to the tuning knob, or alternatively to the panel behind the knob. Conversion of the 200–500 kc/s. range to cover the 28 Mc/s. band is possible, but is not recommended as it would entail dismantling the coil compartments and the oscillator box; however this range is useful as it enables a 100 kc/s. crystal to be checked against Droitwich on 200 kc/s.

It is hoped that the above information, which has been collected from many sources, will be of some value to amateurs who possess, or contemplate possessing, a B.C. 348.

The Month on Five

By W. A. SCARR, M.A. (G2WS).

AS anticipated, the M.U.F. (Maximum Usable Frequency) has shown higher and higher peaks at optimum times during the month and conditions for F-layer reflection have already made DX contacts possible on six metres on North–South routes. The question of the hour is whether the M.U.F. will, during the coming months, rise sufficiently at any time to give us the chance of super-DX on our own licensed channel of 58·5–60 Mc/s.

Many British stations equipped for listening on 50 Mc/s. are already keeping watch around this frequency and their efforts are likely to be rewarded before these notes are published. Needless to say, a dipole aerial or beam specially built to resonate on 50 Mc/s. will give a much greater chance of success.

Five Metre Field Day Station G3CQ, Essex.

We are indebted to G2MI and G6XS for relaying reports of 6-metre DX recently achieved. MD5KW has been in the middle of the picture so far. He has been heard twice by G5BY (Devon) and has worked ZS1P on "six" after QSY from 28 Mc/s. He has also worked VQ2PL at least four times by straight QSO on 50 Mc/s. and has recently been heard by PA0UN, ZS6DO and ZS6JB. MD5KW is on the air daily, using an automatic transmitter and is sending a different identification letter each day for check purposes.

A list of active ZS stations and frequencies is as follows :—

ZS6BT	..	..	..	50,003 kc/s.
ZS6DO	..	..	..	50,008 kc/s.
ZS6GV	..	..	..	(Unknown).
ZS6JB	..	..	..	50,003 kc/s.

ZS6DO reports that he is also working on the 5 metre band and is active daily between 10.00 and 18.00 hours local time. Any reception of the above or other DX stations should be sent to Headquarters immediately in order that other G stations may be advised.

Reports of local activity have reached a very low ebb this month—probably due to the excellence of conditions on lower-frequency bands. G8NV and G2CBS announce that they have started 5 metre activity in Cornwall. They are anxious that Easterly stations shall keep a look-out for them. G3COJ (Hull) made a flying start on five within a few days of getting his licence by working G3APY (Kirkby-in-Ashfield), G3BXE (Cambridgeshire) and G2ADZ (Oswestry). Although only about 10 feet above sea-level, 3COJ is obviously getting the best out of his indoor 4-element rotary beam. Stations he has heard but not worked include G2CIW, 2MV, 2FKZ, 3BLP, 5MA, 5PY, 6LK and 8QM/A.

Revista Telegrafica-Electronica of Buenos Aires reports a 50 Mc/s. telephony contact on August 27 between the Argentine station LU6DO and XE1KE of Mexico. LU6DO was using 50 watts to a 4-element beam. The distance covered is about 4,000 miles.

STOP PRESS.—PA0UN worked W1HDQ on 50 Mc/s. on October 28 (report received via G6DH).

* * *

Greek Amateurs Active

Mr. J. T. Liverios, SV1AH, reports from Athens that Greek amateurs are still waiting for an agreement to be reached with their Government in regard to the restoration of licences. Meanwhile the Hellenic Radio Amateurs League has been formed, the members of which are engaged on experimental work.

Letter to the Editor

Local Meetings

DEAR SIR,—As an Area Representative I find it very difficult to maintain the necessary interest to keep up the attendance at our local meetings.

This is mainly due to the lack of members who have the ability to lecture, and I find it necessary to call upon the same persons repeatedly to come forward and give talks on various subjects.

To me this seems unfair and I feel that quite a number of T.R.'s and A.R.'s find themselves faced with the same problems that I do.

It is to improve this position that I put forward the suggestion that Headquarters investigate the possibility of forming a pool of those who are willing to give their services in this direction.

My scheme would put certain obligations on to the T.R.'s and A.R.'s to guarantee a good attendance and also to pay all reasonable out-of-pocket expenses of the visiting member.

If a list is compiled, a copy could be in the hands of each T.R. and A.R. and the booking arrangements carried out *via* Headquarters.

It will be appreciated that I put forward this Scheme for the Greater London Area, but it could no doubt be adopted in the vicinity of other cities if the geographical conditions permit.

I shall appreciate if you will publish this letter to ascertain the interest in the scheme.

Yours faithfully,
H. L. OVERTON (G4CW),
Area Representative for North Kent,
6, Lower Station Road, Crayford, Kent.

[*Headquarters will be glad to hear from members interested in this suggestion and who are willing to deliver lectures within a reasonable distance of their home.*—ED.]

Model Control Competitions

Two model control competitive rallies sponsored by the "Réseau des Emetteurs Français" in conjunction with the "Modèle Yacht-Club de Paris" and the "Aéro Club de France," will take place in Paris during May, 1948.

The first will be for radio controlled boats and the second for aircraft. In each case the models will have to perform a series of evolutions for which points will be awarded. The final score will depend upon the weight of the model and the power of the transmitter. Entries are restricted to members of the organising societies.

Strays

Sub-Lieut. I. J. Wood, G3CHP (ex-VQ9IW), of H.M.S. "Jamaica," points out that the call sign VS1BF—CTPG should have read VS1BPF—C1PQ, in the caption which appeared under the photograph on page 68 of our last issue.

* * *

Mr. David Mitchell, GW6AA, requests that all cards and communications for him should be sent c/o BM/GAA, London, W.C.1, as he will shortly be leaving for New Zealand. In the meantime he has no fixed address.

Congrats

● To Mr. Mapleston, BRS14417, and his wife, of Boston, Lincs., on the birth of a son, Patrick Francis John.

● To Mr. Douglas Harrower, GM6NX, and his wife on the arrival of a son on September 23.

● To Mr. A. Hart, BRS14181, and his wife, of Ilkeston, Derbyshire, on the safe arrival of a son, David.

Army Wireless Sets No. 17 and 21

Members requiring information on the above sets, should write to Mr. J. McRay, 58 Underwood Road, Paisley, Renfrewshire, enclosing a stamped addressed envelope.

OUR FRONT COVER

OUR front cover illustrates an operator "shadowing" the grids during the assembly of a Mullard beam power tetrode, type QY2-100. The two grids having the same winding pitch are so aligned that the grid 2 wires are shielded by the grid 1 wires when the assembly is viewed at right angles to the grids. Such alignment reduces the screen grid current by about 80 per cent., thereby reducing the screen dissipation and increasing the overall valve efficiency.

Great care is taken with each valve during this stage of its assembly, and the alignment is accurately maintained by the exceptionally strong construction of the valve.

TOP BAND CONTEST 1947

SECOND SECTION

THE first section of this Contest was held during the week-end March 1–2, 1947, and the results were published in the May issue of the BULLETIN.

The Rules for the second section appear below. There are two main amendments for this event. The twelve-hour operating period now commences at 9 p.m. instead of 10 p.m. On the Committee's recommendation, the Council have agreed to the additional awards mentioned below, which, it is felt, will be welcomed by entrants.

Rules

1. The Contest is open to all fully paid-up members of the Society resident within the British Isles (prefix zones G, GC, GD, GM, GI and GW) and the British Occupied Zone of Germany (D2).
2. The Contest will commence at 9 p.m. on Saturday, November 29, and will conclude at 9 a.m. on Sunday, November 30, 1947.
3. Entries will be accepted only if submitted on foolscap or quarto paper and in the form set out below :—

TOP BAND CONTEST, 1947—Second Section.
29th–30th November, 1947.

Name ..... *Call Sign* .....
Address .....
Transmitter .....
Aerial System .....
Receiver .....

Contact Number.	Time.	Call Sign of Station Worked.	REPORT.	
			Sent RST	Received RST

DECLARATION.—*I declare that my station was operated strictly in accordance with the rules and spirit of the Contest and I agree that the ruling of the Council of the R.S.G.B. shall be final in all cases of dispute.*

Signed .....

4. Details at the top of the entry form must be completely filled in and the declaration signed, otherwise the entry will be disqualified.
5. Entries must be addressed to the Hon. Secretary, R.S.G.B. Contests Committee, New Ruskin House, Little Russell Street, London, W.C.1. No entry will be accepted bearing a post-mark later than *Monday, December* 8, 1947.
6. Contest operation during local hours of restrictions in the use of electricity for wireless which have been publicly announced is prohibited.
7. Proof of contact may be required.
8. Contacts with, or calls from ships or unlicensed stations will not be permitted to count for points.
9. The Contest is confined to two-way telegraphy contacts only.
10. Only one person will be permitted to operate a specified station during the Contest.
11. An exchange of RST reports will be required before points for a contact can be claimed.
12. Only one contact with a specific station will be permitted to count for points during the Contest.
13. One point will be scored for each contact.
14. The input power to the final stage of the transmitter must not exceed 10 watts, nor may this figure be exceeded on any previous stage.
15. Any competitor receiving consistent tone reports lower than T8 will automatically be disqualified.
16. The Somerset Trophy will be awarded to the entrant with the highest combined score in both sections of this Contest. A miniature cup will be awarded to the leading station in each section. Certificates of merit will be awarded to the stations placed second and third in each section.
17. The Council reserve the right to amend or alter these rules at any time prior to the commencement of the Contest and their decision will be final in all cases of dispute.

SUGGESTIONS.

To avoid confusion, logs submitted for checking purposes only should be clearly marked "Check Log."

Before calling another station, make sure that the station just worked has acknowledged receipt of the report sent.

Keep a running log in a legible fashion in order that, in transferring to the Entry Form, errors are not made in the reports or call signs.

In order to avoid unnecessary waste of time in duplicated contacts, keep an index of stations worked for quick reference.

Lastly, have another look at Rules 4 and 5 before sending in your form!

ANOTHER FIVE METRE CONTEST

IN view of the uncertainty as to how long five metres will be held, it has been decided to organise another Contest while we still have the band. The Rules for this event are as follows :—

1. The Contest is open to all fully paid-up members of the R.S.G.B. resident within the British Isles (G, GC, GD, GM, GI, GW).
2. The Contest will extend from 12 noon, Saturday, December 6, to 12 midnight, Sunday, December 7, 1947.
3. Only one person will be permitted to operate a specific station for the duration of the Contest.
4. Entries will be accepted only if typed, or submitted on lined foolscap or quarto paper in the form set out below :—

SECOND FIVE METRE CONTEST 1947.
6th–7th December, 1947.

Name ..... *Call Sign* .....
Address .....
Transmitter .....
Aerial System .....
Receiver .....

Time	Station Worked	REPORT		Estimated Distance	Points	Bonus Points
		Sent	Received			
				Totals	(*a*)	(*b*)
				Total		(*a*)+(*b*)

DECLARATION.—*I declare that my station was operated strictly in accordance with the rules and spirit of the Contest and I agree that the decisions of the Council of the R.S.G.B. shall be final in all cases of dispute.*

Signed .....

5. Details at the head of the entry form must be completely filled in and the declaration signed, otherwise the entry will be disqualified.
6. Completed entry forms must be sent to the Hon. Secretary, R.S.G.B. Contests Committee, R.S.G.B., New Ruskin House, Little Russell Street, London, W.C.1, and bear a post-mark not later than Monday, December 15, 1947.
7. The input power to the final amplifier, or any preceding stage must not exceed 25 watts.
8. Points will be scored for two-way telegraphy or telephony contacts in accordance with the following scale :—

Distance in miles from Station Worked.	Points	Bonus Points
Up to 10	1	10 points will be awarded for the first contact with each County outside that in which the entrant is situated.
Over 10 and up to 30 ..	2	
,, 30 ,, ,, ,, 50 ..	3	
,, 50 ,, ,, ,, 100 ..	5	
,, 100 ,, ,, ,, 150 ..	7	
,, 150	12	

9. An exchange of RST or RS reports and location will be required before points for a contact can be claimed.
10. Only one contact with an individual station will be permitted to count for points.
11. Proof of contact may be required.
12. Entrants receiving consistent tone reports lower than T8 will be disqualified.
13. Contest operation during local hours of restrictions in the use of electricity for wireless which have been publicly announced is prohibited.
14. Council have the right to amend or alter these rules at any time prior to the commencement of the Contest, and their decision will be final in all cases of dispute.

NEWS FROM HEADQUARTERS

COUNCIL, 1947

President :
STANLEY K. LEWER, B.Sc., G6LJ.

Executive Vice-President : V. M. Desmond, G5VM.
Hon. Secretary : H. A. M. Clark, B.Sc.(*Eng.*), G6OT.
Hon. Treasurer : A. J. H. Watson, F.S.A.A., G2YD.
Hon. Editor : Arthur O. Milne, G2MI.
Immediate Past President : E. L. Gardiner, B.Sc., G6GR.

Members : I. D. Auchterlonie, G6OM, G. F. Bloomfield, Ph.D., A.R.I.C., G2NR, C. H. L. Edwards, A.M.I.E.E., G8TL, K. Morton Evans, O.B.E., G5KJ, R. H. Hammans, G2IG, J. W. Mathews, G6LL, W. A. Scarr, M.A., G2WS.

G.P.O. Liaison Officer: Arthur E. Watts, G6UN.
General Secretary : John Clarricoats, G6CL.

September Council Meeting

Resume of the Minutes of a Meeting of the Council of the Incorporated Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.1, on September 8, 1947, at 6 p.m.

Present.—The President (Mr. S. K. Lewer in the Chair), Messrs. Bloomfield, Edwards, Hammans (from 8.25 p.m.), Mathews, Milne, Scarr, Watson, Watts and John Clarricoats (General Secretary).

Apologies.—Apologies for absence were presented on behalf of Messrs. Auchterlonie, Clark and Desmond.

Mr. Freeman (Advertisement Manager) was present during the discussion on Exhibition matters.

Amateur Radio Exhibition.

It was reported that Col. Sir Stanley Angwin, K.B.E., D.S.O., T.D., had accepted the invitation of the Council to open the Exhibition. Approval was given to the plan submitted by Mr. Freeman, which covered the provision of 24 stands. The anticipated revenue from the sale of stand space was considered to be satisfactory.

Resolved that in order to save the expense of printing tickets, admission would be by catalogue.

Contests.

Resolved to inform the Contest Committee that it will not be possible to use the Headquarters station (when installed) for the purpose of disseminating last minute information concerning Contests.

Resolved to accept the recommendation of the Committee to award miniature cups and replicas to the winners of certain Society contests. The Council recognised that due to prevailing circumstances it may not be possible at present to provide replicas.

Council Nominations.

Nominations for the 1948 Council were approved.

The President intimated, that due to pressure of private business he did not wish to be nominated for the Presidency.

Mr. Clark also intimated that he did not wish to be nominated.

The Council resolved to record its warm appreciations to Mr. H. A. M. Clark for his valuable services to that body which have extended over a period of more than ten years.

London Lecture Programme.

The programme was approved for publication in card form.

Atlantic City Conference.

The Secretary reported the latest decisions reached at the Conference. (Details of these decisions have already been published in the BULLETIN.—ED.)

Radio Amateurs' Examination.

Resolved to discuss with the City and Guilds of London Institute the allegation that the standard set at the last examination was too high.

Region 1 Representation.

The Council accepted with regret Mr. Stacey's resignation from the office of No. 1 Regional Representative.

Resolved to thank Mr. Stacey for his past services to the Society.

Resolved further to make no new appointment in view of the pending elections.

Affiliations.

Resolved to grant affiliation to the Cheltenham and District Radio Society and the Aylesbury and District Radio Society.

Resolved further to renew the affiliation of the Ilford and District Radio Society and the Marlborough College Radio Society.

Membership.

Resolved to elect

215 Corporate Members.
34 Associates.
16 Junior Associates.

Eight Junior Associates applied for and were granted Corporate Membership.

H.Q. Station.

It was reported that the Air Ministry is prepared to sell to the Society a Wheatstone transmitter for use in connection with Headquarters station. The offer was accepted.

M.O.S. Scheme.

Mr. Edwards reported that the M.O.S. hoped to be able to make arrangements for a third issue of surplus transmitters and that details would be available shortly, (The details have now appeared.—ED.)

Petrol Rationing.

Mr. R. V. Allbright, G2JL (T.R. for Penzance) wrote to enquire whether the Society would protest vigorously to the appropriate Ministry in regard to petrol rationing. Mr. Allbright pointed out that the new restrictions would prevent him and the C.R. from attending meetings in other parts of the County.

Resolved to inform Mr. Allbright that, whilst the Council views with concern the re-introduction of the new petrol restrictions, it feels that no useful purpose would be served by lodging a formal protest in view of the fact that protests made by the motor industry have been unsuccessful.

Newcastle O.R.M.

Letters criticising the arrangements made by the Council for the recent Newcastle O.R.M. were received from the North East Amateur Transmitting Society and the South Shields and District Radio Club.

Resolved to pass the correspondence to the Regional Representative concerned with a request that he should deal with the points raised therein emphasising that the Council does not recognise the right of Affiliated Societies to protest against the arrangements made for O.R.M.'s sponsored by the R.S.G.B.

The Council recorded its regret that Mr. Scarr had been embarrassed when he learnt upon arrival in Newcastle that Mr. Gardiner would not be present to deliver the chief speech.

Norman Keith Adams Prize

The Council have awarded the Norman Keith Adams Prize for 1947 jointly to Messrs. D. Heightman, G6DH, and E. J. Williams, B.Sc., G2XC, for their paper entitled "Five Metre Propagation Characteristics" published in the January, 1947 issue of the R.S.G.B. BULLETIN.

Manchester Representation.

The Hon. Secretary of the Manchester and District Radio Society wrote proposing that four Area Representatives instead of one Town Representative be appointed in Manchester.

Resolved to inform the Manchester and District Radio Society that the Council cannot recognise the rights of an affiliated body to put forward proposals which affect the internal organisation of the Society and to point out that all such proposals should be made by R.S.G.B. members through their appropriate County Representative.

The meeting closed at 10.10 p.m.

Honoraria

The Council has been pleased to award Honoraria, totalling £32 11s. 0d. to 14 contributors to the first six issues of Volume XXII of the R.S.G.B. BULLETIN. Contributors to subsequent issues in that volume have already received payment in accordance with the scale announced earlier in the year.

* * *

Honoraria have also been awarded to Messrs. D. N. Corfield, G3CD, and A. A. Jones, G6TF, co-authors of the booklet "Service Valve Equivalents."

Conserving Space

As from the current issue all Contest rules and reports, "The Month on the Air" and "The Month on Five" will be set in 6pt. type.

The Council appreciates that the use of this smaller type will not be popular in many quarters, but in view of paper restrictions it is the only method available at the present time if more pages are to be set aside for technical articles.

Regional Notes

The Council has decided, after very careful consideration, not to revive the publication of Regional Notes. The question will again receive consideration when the paper position improves.

Instructional Films

Headquarters is desirous of producing a list of instructional films which may be obtained from commercial or official sources for display to R.S.G.B. groups.

Members who have knowledge of such films are invited to write to the General Secretary giving details of size, length (if known), subject and source of supply.

Returned Bulletins

Every month large numbers of BULLETINS are returned to Headquarters marked "gone away." May we again appeal to members to co-operate by notifying changes of address promptly to H.Q.?

Bedford O.R.M.

There was an attendance of 80 at the Region 6 meeting held at the Dujon Restaurant, Bedford, on October 26. The Council was represented by the Immediate Past President, Mr. E. L. Gardiner, B.Sc., G6GR, and Mr. J. W. Mathews, G6LL, and Headquarters by Mr. J. P. Hawker, G3VA, newly-appointed Assistant to the General Secretary.

Following lunch a toast to Region 6 was proposed, most appropriately, by Mr. Stan Granfield, G5BQ (Region 5 Representative), who, until 1947, was D.R. for part of the territory covered by the present Home Counties Region. Other speakers included the Council representatives and Mr. Austin Forsyth, O.B.E., G6FO. A draw for apparatus donated by members then took place, as the result of which several lucky winners received gear worth many times the cost of their ticket.

During the business meeting, presided over by the R.R. (Mr. H. J. Sherry, G6JK), Mr. Mathews, ably supported by Mr. Gardiner, gave a resume of current Society affairs, referring in particular to the Atlantic City Conference decisions, band planning, regional notes and Headquarters station. The two speakers were later plied with questions on a wide variety of topics and in the subsequent discussion several differences of opinion were expressed on important issues. These exchanges of viewpoint helped G6LL and G6GR to judge local feeling and will have enabled them to report thereon to the Council.

At the conclusion of the business meeting Dr. C. G. Lemon, G2GL, fascinated the audience by showing them what can be done with 10 kilowatts of R.F. on 9·5 cms. Each experiment was followed with keen interest and in breathless silence. A barrage of questions at the end showed how closely the lecture had been followed. A subsequent vote of thanks to Dr. Lemon was carried with loud and enthusiastic applause. An excellent high tea was followed by the usual " rag chew " after which the meeting broke up.

In concluding this brief account of a most successful event the writer wishes to record his personal thanks to Dr. Lemon for the lecture, to Peter Amos, G3AGM, for making all the arrangements, to the donors of prizes and to the staff of the Dujon Restaurant for the excellent meals and service provided.

G6JK.

Glasgow O.R.M.

Fresh ground was broken at the West of Scotland O.R.M. held in Glasgow on October 18, 1947, when, for the first time the social portion of the programme took the form of a dinner. The business meeting took place in the Christian Institute, Glasgow, Mr. Jas. Hunter, GM6ZV (R.R. No. 14), presided and welcomed the official visitors: Messrs. H. A. M. Clark, B.Sc., A.M.I.E.E., G6OT (Hon. Secretary), A. H. J. Watson, F.S.A.A., G2YD (Hon. Treasurer), and Ian Auchterlonie, G6OM.

Mr. Clark then delivered an extremely lucid account of the work of the Society. He pointed out that probably but for the presence of the Society's representatives in Atlantic City the " top band " would have been lost. In many other ways the presence in Atlantic City of G6LJ and G6CL has fully been repaid. BULLETIN production difficulties were discussed and Mr. Clark appealed to the members present for technical contributions stressing that the Society pays for all articles accepted. The question of regional notes was considered and a quick vote resulted in an almost unanimous request for resumption.

Mr. Watson spoke on the financial state of the Society and Mr. Auchterlonie dealt with representation and M.O.S. surplus scheme.

Following the business meeting members proceeded to the " Grosvenor " where some 90 sat down to enjoy an excellent dinner. Through the generosity of *Messrs. Clydesdale Supply Co., Ltd., Stratton & Co., Ltd.*, and *Radiographic, Ltd.*, it was possible to stage the ever popular " swindle," the prizes were substantial, consisting of a receiver, a loudspeaker and an 829 valve. After dinner members inspected displays of gear, etc., staged by *Messrs. Clydesdale Supply Co., Ltd.*, and *Stratton & Co., Ltd.*, to whom our thanks are expressed.

GM6ZV.

London O.R.M.

The London O.R.M. held on October 4 at the Royal Hotel was notable for one of the smallest attendances—in proportion to the Regional Membership—that has been seen. As the majority of Council Members were present, this was particularly unfortunate. An interesting display of " Q-Max " gear did not get the attention it well merited.

The President (Mr. S. K. Lewer, G6LJ) was introduced by the R.R. (Mr. S. Howard, G8TY), who was followed by G6CL who spoke briefly on band-planning, BULLETIN problems and the Exhibition. Subsequently, G6OM, G8TL, G6OT and G2MI addressed the meeting in a series of " micro-speeches." Tea was taken as a side line to rag-chewing. A " Q-Max " dial fell to G3BMP, as a result of the raffle.

Bournemouth O.R.M.

Mr. F. G. Hoare, G2DP, 6 Dunheved Close, Thornton Heath, Surrey will be glad to supply prints of the Bournemouth O.R.M. group photograph at 1/6 each. The photograph is not quite sharp enough for reproduction.

Catterick Amateur Radio Club

The Club, which originated in R.S.G.B. meetings in the local Y.M.C.A., is now quite a flourishing organisation with a membership of over 100. Members intend to nominate a T.R. and are keen to participate in any future distribution of M.O.S. surplus.

BRS14526.

Coventry Amateur Radio Society

The A.G.M. was held on September 29, when the President (Councillor W. H. Malcolm, J.P.) presided over a large attendance.

The Secretary's Annual Report described the past year as the most successful in the Society's history. The membership now exceeds eighty, and many new activities have been introduced, entailing a move shortly into larger premises. There are now over 40 transmitting amateurs in the city.

The officers for the ensuing year are: *Chairman*, Mr. L. W. Gardner, G5GR; *Hon. Secretary*, Mr. J. W. Swinnerton, G2YS; *Hon. Treasurer*, Mr. H. J. Chater, G2LU; *Committee*, Messrs. Palmer, G5PP, Tuck, G6TD, Taylor, G2ZT, Keill, Barrs and Brown.

Romford and District Amateur Radio Society

The Society has now resumed weekly meetings at the Y.M.C.A., Western Road, Romford, on Tuesday evenings at 8 p.m. The meeting on the second Tuesday in each month is devoted to local R.S.G.B. activities.

Radio Society of Eritrea

The Society is now in full swing and thanks to the co-operation of Major Don Farmer it is hoped to have a Club transmitter in operation before long. A Club room has been allocated at Camp Bottego and Morse practice classes and technical lectures will be starting soon.

Mr. G. R. Chiffey, G3ZJ, 33 Via Efrem Reatto, Asmara, has been elected President, and other officers of the Society include M./Sgt. D. Morehouse, W6VKV (Vice-President), and Major J. H. Calder (Secretary and Treasurer).

Essex Gathering Revived

Brilliant weather was enjoyed on Sunday, October 5, when that popular pre-war feature—G6UT's Summer Party—was revived. Deferred until after the holiday season, the event attracted a gathering 35 strong, notable among those present being the R.R., Mr. Stan Granfield, G5BQ, who brought with him a contingent from Cambridge. Other stalwarts utilised precious petrol to attend from such outlying districts as Burnham-on-Crouch, and Chingford; while Margaret Mills, G3ACC,—the only YL operator present—made the long trip by train from Dulwich. Chelmsford was also well represented. One very pleasant feature was the number of ladies who took advantage of 'UT's generous hospitality. Following an excellent tea, the C.R., Mr. L. J. Fuller, proposed a vote of thanks to " mine host " and his numerous helpers, and the R.R. made an able seconder. Thanks a lot, G6UT. We hope to be with you next year—basic permitting.

G6LB.

Stourbridge & District Amateur Radio Society

Twenty-eight members and two visitors were present at a meeting of the society held on October 7, at King Edward School, Stourbridge.

In view of petrol restrictions it was decided to commence future meetings at 7.45 p.m. and finish earlier. Sub-committees were formed to deal with a Society Station and Field Days.

Television Society

Continuing the present series of monthly meetings of the Television Society, a paper, " Impressions of American Television," will be read by Mr. T. M. C. Lance at the I.E.E., Savoy Place, W.C.2, at 6 p.m. on Friday, November 28. Tickets of admission for non-members can be obtained on application to the Hon. Sec., Mr. G. Parr, 68 Compton Road, Winchmore Hill, London, N.21.

Thames Valley Amateur Radio Transmitters' Society

At the October meeting of the Society held at the Carnarvon Castle Hotel, Hampton Court, Mr. M. Kasia ex-SP1HH spoke on " The design and construction of receivers and transmitters for frequencies between 30 and 150 Mc/s."

The T.V.A.R.T.S. annual dinner will be held on December 6, at the Carnarvon Castle Hotel. Members requiring tickets should write to Mr. L. Cooper, G5LC, 3 Summer Avenue, Molesey.

Silent Keys

We record, with deep regret, the death of the following members:—

Mr. E. L. Ratsey, Associate, of Twickenham, Middlesex.

Mr. Peter Reddock, BRS3355, of Worsley, near Manchester—as the result of an accident whilst at work.

Miss Florence E. Ruth, Associate, of Ilford, Essex, daughter of Mr. F. F. Ruth, G2BRH.

Mr. L. Welsh, BRS209, of Kinross, Scotland, as the result of an accident at Kinross station.

Can You Help ?

Mr. Eu Khuan Kew, VS2BS, 8 Peraklane, Penang, Malaya, requires details of the Wavemeter, type W1117 10A/10222.

Mr. W. G. Johnson, G4MS, Pinchbeck Hall, Spalding, would appreciate information on the R.A.F. Type 1264 transmitter, and also details of the exciter unit No. 146.

Pte. Todd, 6 Coy., R.A.S.C., A.A. C.(M.)T., Workshops, Platoon, Du Cane Road, Shepherds Bush, London, W.12, asks for details of the mains transformers in the R.A.F., Waveform Generator Design I.

Mr. R. S. Watson, BRS15412, No. 4 Cottage, Bletchley, Bucks., seeks information on the German Empfanger R. Wellenbereich 40–95M.

Mr. R. Eldridge, G3AGQ, 10 Westridge Road, Southampton, seeks data on the Modulator Unit Type 76. He can supply a circuit diagram of the German HF aircraft transmitter " SIOK."

Mr. P. R. A. Dolphin, BRS11741, Wood Farm, Godalming, Surrey, requires details of the Japanese transmitting valve UZ510 and Cathode Ray tube BG75A.

Mr. R. W. Britton, G2AVW, 6, Bothal Terrace, Stakeford, Choppington, Northumberland, enquires what is the I.F. of the AR 88 LF and data on the CRT 1810 PL.

Mr. N. Caws, G3BVG, 53 Corfton Road, Ealing, W.5, wishes to borrow or purchase an instruction manual for the AR 88 LF.

Mr. H. G. Newland, G5ND, 133A Penrose Avenue, Blackpool, requires assembly instructions, technical data, etc., of the Aerial System type 2B Rotary Beam 112 ME.

Mr. A. M. Alcock, BRS11945, Holtspur Cottage, Holtspur End South, Beaconsfield, Bucks., seeks information on the CV73—believed to be a small transmitting valve.

Mr. G. F. Kirk, Associate, 116 Stamford Road, Kettering, requires the circuit of the R1124A receiver.

Mr. J. Gorrie, 41 Restalrig Avenue, Edinburgh, 7, needs circuit diagrams and details of the R1224A receiver.

Mr. P. W. Jones, 3, Lichfield Street, Bilston, Staffs., seeks information on the Admiralty communications receiver B50 and the Army set 21.

* * *

Mr. H. Harris, BRS12959, Strouds, Pangbourne, Berks., offers to supply members with data on the U.S. Army B.C. 610 (the Hallicrafters H.T.4) or any of the associated equipment making up the S.C.R.299 unit, including the BC312 and 342 receivers and PE95 power unit. A stamped addressed envelope should accompany all enquiries. Circuit diagrams cannot be supplied.

Type 145 Oscillators

G8TL and G2BRH have made arrangements privately with the M.O.S. to purchase 40 of the above type oscillators. In order to ensure fair distribution of so small a quantity, it has been decided by the purchasers to allocate 10 to London, 10 to Manchester and district, 10 to Portsmouth, Bournemouth and district, and 10 to the North of England.

The cost, including carriage, etc., to Ilford, is around 25/– each. Additional carriage charges must, of course, be added to those going to the provinces.

The London allocation will be drawn for at the East London District Monthly Meeting to be held at the Ilford Town Hall on Sunday, November 16th, 1947, on a cash and carry basis. No oscillators will be dispatched as no boxes or containers are available for them.

It is to be hoped that the same method of distribution will be employed in the Provinces. Should any more become available in the future these will be offered to areas not yet served.

G8TL.

Coils for the B2 Transmitter-Receiver

Apropos the announcement published in the September issue, Mr. C. H. L. Edwards, G8TL, submits the following Statement of Account :—

	£	s.	d.
1,500 *coils purchased at 3d. each*	18	15	0
Carriage on coils	1	0	0
Packing, Envelopes, Postages, Receipts, etc.	6	19	6
Total Expenses ..	26	14	6
Sale of coils at 2s. 6d. per set of 4	46	17	6
Expenses	26	14	6
Credited to East London District Fund ..	20	3	0

Mr. Edwards points out that had all orders been received to time, the cost of coils would have been 1s. 6d. per set of 4 instead of 2s. 6d. as charged.

M.O.S. Surplus Transmitters

Members who have purchased surplus M.O.S. transmitters through the R.S.G.B. are reminded that they must not be offered for resale.

Food Parcels

The W.I.A. Queensland Division have forwarded food parcels direct to the following British amateurs :—G2PN, 2VD, 2YY, 3PZ, 3TK, 5LK, 5OQ, 5VM, 6BQ, 8HH, 8KP, 8QZ, 8TT, G3AAG and GW3ZV.

During the past few weeks a number of parcels received from the W.I.A. Victoria Division have been forwarded by Headquarters to members whose names were selected by ballot.

Major W. Mitchell has asked us to point out that although he is the organiser of the W.I.A. Victoria Division Fund the thanks of the fortunate recipients of parcels should be directed to the Division as a *whole* and not personally to himself.

" Radio Handbook "

The price of the 11th Edition of the " Radio Handbook," due to appear next month, has been fixed at 21/–. Orders can now be placed through Headquarters for early delivery after publication date.

An Antenna Manual is in course of production but as the price has not yet been fixed orders cannot at present be accepted.

Radio Control of Models Group

Mr. C. Terry, BRS.12402, The Hermitage, Silver Street, Cambridge, Leader of the Radio Control of Models Group, apologises to the members of his Group for the absence of letter budgets and for his slowness in answering correspondence. This has been due to illness and lack of typing facilities. Mr. Terry hopes shortly to publish one large budget, a copy of which will be circulated to each Group Member.

Marconi Mariner

Under this title the Journal of the *Marconi International Marine Communication Co., Ltd.*, Marconi House, Chelmsford, makes its bow. The subscription rate is 6s. 6d. post paid for six issues.

Side-Slip

In the *Stratton & Co., Ltd.*, advertisement published in our last issue the testimonial regarding the 640 Receiver from 216N should have read " an outstanding feature being the very *high* signal/noise ratio."

DX Round a Table

At Radiolympia, a gathering took place of ex-Far Eastern amateurs who have returned to this country. Among those present were VU2AB, AD, AR, AT, JD, and VS1AE. During lunch it was decided to hold further meetings to consider the possibility of arranging QSOs on the air. Ex-Far Eastern amateurs who may be interested in this project are requested to contact VU2JD (G3CPL), c/o John Draper, " Ivybank," Fawkham, Kent.

Around the Trade

International Electronic Corporation, Ltd., Electron House, 655, Fulham Road, London, S.W.6, are now producing a range of transmitting and audio equipment of interest to amateurs. Of special note is a volume compression unit for use in conjunction with any A.C. amplifier or modulator. It is claimed that this unit cuts over-modulation peaks and permits an increase of up to 15 per cent. average R.F. output of a telephony transmitter. For gramophone reproduction work, it may be employed to give contrast expansion.

A display of transmitters, modulators with volume compression, several oscillographs working on audio and R.F. subjects, and communication receivers may be inspected at Electron House. A technical manual is available to members price 6d., post free.

VU2PB

S./Ldr. H. Pain, XZ2HP, Officers' Mess, R.A.F., Mingaladon, Burma, wishes to contact the operator of the former station VU2PB, who operated at Port Blair, Andaman Islands, as he has about 40 QSL's for that station which he wishes to forward.

THE STATION BEHIND THE CALL

THE BULLETIN intends to publish, from time to time, photographs and descriptions of members' stations. Not only elaborate installations, but rigs that show ingenuity and a fresh approach to operating techniques will be featured. So please send a clearly defined photo and a few hundred word write-up of YOUR shack.

All material published will be paid for at the rate of £2 2s. 0d. per article.

Contributions should be addressed to, The Editor, R.S.G.B. Bulletin, New Ruskin House, Little Russell Street, London, W.C.1.

FORTHCOMING EVENTS

REGION 2.

Nov. 28, Dec. 12. **Barnsley**, King George Hotel, Peel Street.
Nov. 25, Dec. 9, 23. **Bradford** (Amateur Radio Society), 7.30 p.m., Cambridge House, 66 Little Horton Lane.
Nov. 24, Dec. 1, 8, 15. **Bradford** (Short Wave Club), 7 p.m., Temperance Rooms, Harewood Street.
Nov. 25, Dec. 2, 9, 16. **Catterick**, 7 p.m., S.T.C., H.Q. Block, Vimy Lines.
Nov. 26, Dec. 3, 10, 17. **Doncaster**, 7.30 p.m., 73 Hexthorpe Road.
Dec. 1, Dec. 15. **Halifax**, 7.30 p.m., Toc H Rooms, 32 Clare Road.
Dec. 3, Dec. 17. **Huddersfield**, 7.30 p.m., Plough Hotel, Westgate.
Nov. 26. **Hull**, 7.30 p.m., Imperial Hotel, Paragon Street.
Nov. 21, 28, Dec. 5, 12, 19. **Leeds**, 7 p.m., Swathmore Settlement, Woodhouse Square.
Dec. 15. **Middlesbrough**, 7.30 p.m., Cleveland Scientific and Technical Institute, Corporation Road.
Nov. 24 (N.E.A.T.S.), Nov. 26, Dec. 10. **Sunderland**, 7.30 p.m., 16 North Bridge Street.
Nov. 26, Dec. 17. **Sheffield**, 8 p.m., Dog and Partridge, Trippet Lane.
Dec. 10. **Sheffield**, 8 p.m., Albreda Works, Lydgate Lane.
Nov. 21, 28, Dec. 5, 12, 19. **South Shields**, 7 p.m., St. Paul's School, Westoe.
Nov. 26, Dec. 3, 10, 17. **York**, 8 p.m., 29 Victor Street.

REGION 5.

Dec. 2. **Chelmsford**, 7.30 p.m., 184 Moulsham Street.

REGION 6.

Nov. 23. **High Wycombe**, Hamfest, 2.30 p.m., in the canteen of Ernest Turner Electrical Instruments Ltd., Chiltern Works, Totteridge Avenue. Lecture by F. Charman, G6CJ. Dance during evening.

REGION 7.

Nov. 15, Dec. 13. **Barnet**, 7.30 p.m., Millicent Cafe, Lytton Road, New Barnet.
Nov. 25. **Brentwood**, 7 p.m., 23 Tower Hill (off High Street).

REGION 7 (Continued.)

Dec. 9. **Croydon** (Surrey R.C.C.), 7.30 p.m., Blacksmiths Arms, South End.
Nov. 19, Nov. 26, Dec. 3, 10, 17. **Edgware and District R.S.**, 8 p.m., Orchard Cafe, Broadway, Mill Hill.
Nov. 16, Dec. 21. **Enfield**, 3 p.m., A & B Cafe, Southbury Road (junction with Ladysmith Road).
Nov. 21. **Hampstead and District**, 8 p.m., G2RX, 14b Belsize Lane, N.W.3 (Belsize Park—Northern Line).
Nov. 16, Dec. 14. **Ilford**, 2.30 p.m., Town Hall (Lambourne Room).
Nov. 20, 27, Dec. 4, 11, 18. **Ruislip**, 7.30 p.m., Oddfellows Hall, Waxwell Lane, Pinner.
Nov. 18. **St. Albans**, 8 p.m., "The Beehive," London Road.
Nov. 20, Dec. 18, Jan. 15. **Slough**, 7.30 p.m., Congregational Church Hall, Church Street.
Dec. 5. **Southgate**, 7.30 p.m., Merryhills Hotel (near Oakwood Station).
Dec. 2. **Welwyn Garden City**, 8 p.m., Council Offices. Recording Demonstration.
Dec. 12. **West Norwood**, 7.30 p.m., Brotherhood Hall.
Dec. 19. **London**, Annual General Meeting, 6.30 p.m., Institution of Electrical Engineers, Savoy Place, W.C.2.

REGION 8.

Dec. 5. **Eastbourne**, 7.30 p.m., Friends' Meeting House, Wish Road.
Nov. 23. **Guildford**, 3 p.m., The Cinema Cafe, Woodbridge Road. (P.C. to H. C. Spencer, 1 Shepherd's Hill, Stoughton, if attending or if tea required).
Dec. 4. **Worthing**, 7.30 p.m., Olivers Cafe, Southfarm Road.
Dec. 6. **Southampton**, 7.30 p.m., 22, Anglesea Road, Shirley, Southampton.

REGION 10.

Dec. 8. **Cardiff**, 7 p.m., Park Hotel.

REGION 14.

Nov. 26. **Glasgow**, 7 p.m., Institute of Engineers and Shipbuilders, 39 Elmbank Crescent.
Dec. 11. **Stirling** (including Falkirk, Alloa and Larbert), 7.30 p.m., Plough Hotel, Stenhousemuir, Larbert.

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P.O. R. M. Scott, BRS9651, points out that, as the majority of decoupling condensers in the H.T. line of the BC624A and BC625A Naval equipments are rated at only 300 volts, care should be exercised to see that this voltage is not exceeded.

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