

**R·S·G·B**

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# BULLETIN

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN



*Regd. Trade Mark*

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# The Incorporated Radio Society of Great Britain

## REPORT OF THE HONORARY TREASURER

HEREWITH are copies of the Society's Audited Accounts for the year ended 30th September, 1946. It is hoped that the following comments may be of some assistance to Members when they read through the Accounts.

### Income and Expenditure Account.

This Account may be said to summarise the Society's financial operations for the year, and compare them with those for the preceding year.

### Expenditure.

The total expenditure for the year, excluding Taxation and Depreciation, when compared with that of the preceding year shows an increase of nearly £2,900. The following table shows how the total increase is made up:—

Rent, etc.	..	..	..	£	32
Salaries, etc.	..	..	..	£	157
Telephone	..	..	..	£	8
Printing and Stationery	..	..	..	£	160
Postages	..	..	..	£	111
Travelling, etc.	..	..	..	£	532
Hire of Accommodation	..	..	..	£	92
QSL Bureau	..	..	..	£	36
Bulletin	..	..	..	£	1644
Legal Expenses	..	..	..	£	18
Repairs	..	..	..	£	70
Sundry Expenses	..	..	..	£	63
				£	2923

Less Reductions in Expenditure:—					
Membership Certificates	..	..	..	£	39
Air Raid Precautions	..	..	..	£	16
				£	55
				£	2868

- (1) *Rent*.—The increase in the charge for Rent has arisen because the Society has leased an additional room at Headquarters.
- (2) *Salaries*.—The increase in the charge for Salaries, etc., represents both increases in the strength of the Secretarial Staff, and in their salaries.
- (3) *Telephone, Printing, Stationery, Postages*.—The increase in telephone charges, printing, stationery, postages and R.S.G.B. BULLETIN arises as the result of the rapidly growing membership.
- (4) *R.S.G.B. Bulletin*.—With regard to the BULLETIN, although a part of the increased charge arises owing to the growing membership, the cost of printing is nevertheless a very important factor and Council finds itself faced quite regularly with additions to the Contract price arising as the result of higher labour costs.
- (5) *Travelling, Entertainment and Meetings*.—This charge reflects the cost of the District Representatives Conference held at Birmingham last March, and of the several Meetings, which have been held in different parts of the Country during the past twelve months.

- (6) *Hire of Accommodation*.—During the preceding year only one Meeting was held at the Institution of Electrical Engineers, whereas a full programme has been carried out during the past twelve months.

- (7) *QSL Bureau*.—This is a new debit, the Bureau only having commenced in June.

- (8) *Repairs*.—The following items are included in the charge for Repairs:—

Fluorescent Lighting equipment	..	£	47
Typist's Chair	..	£	4
Cupboard	..	£	10
Redecorations and sundry maintenance	..	£	19
		£	80

- (9) The charge for Sundry Expenses includes a donation of £26 5s. 0d. to the National Institution for the Blind, and the cost of a gift to Mr. J. Ockleshaw, the Society's Auditor for many years up to the 30th September, 1944.

### Taxation.

During the year under review, owing to lack of supplies, the income from sale of publications shows a decrease, and in consequence, the amount of profit taxable under this heading falls short of the Standard Profits for Excess Profits Tax purposes. This gives rise to a refund of Excess Profits Tax, and the Society has now been repaid all Excess Profits Tax previously paid.

### Income.

The Income of the Society for the year shows an increase of £1,554, which is made up as follows:—

From Subscriptions	..	£	2145
Sundry Publications	..	£	155
Interest on Investments	..	£	95
Profit on Sale of Investment	..	£	21
		£	2416
Less decrease in Net Income from Sale of Handbooks and Supplements	..	£	862
		£	1554

### General.

After making provision for Taxation and placing £1,000 to the General Development Reserve Fund (as against £2,000 in the preceding year) the Net Income for the year exceeds the Expenditure for the year by £996, as against £929 for the preceding year.

### Balance Sheet.

This may be likened to an instantaneous photograph taken at the close of business at the 30th September, 1946, showing what Assets the Society possessed and what debts it owed at that date.

(continued on page 4)

# Incorporated Radio Society of Great Britain, New F

(COMPANY LIMITED)

## BALANCE SHEET as at 30th SEPTEMBER, 1946

1945	LIABILITIES	£	£	£	1945	ASSETS	£	£	£
£	<b>CURRENT LIABILITIES :—</b>				£	<b>CURRENT ASSETS :—</b>			
	<b>Sundry Creditors—</b>					<b>Cash in Hand and at Bank</b>		1481	
492	For American Publications ...	530			5279	<b>Sundry Debtors—</b>			
247	„ Printing Bulletin ...	7			699	For Sale of Publications ...	1084		
172	„ Current Expenditure accrued and owing ...	178			95	„ Advertising ...	559		
911			715		422	<b>Stock (Publications, &amp;c., at Cost)...</b>	1643		
							2557		
					6495			5681	
	<b>Reserves—</b>					<b>FIXED ASSETS :—</b>			
3892	For Subscriptions paid in Advance	5133				<b>Investments (at Cost)—</b>			
	„ Taxation ...	724				£5,000 3% Savings Bonds ...	5219		
655	Less Tax Reserve		74	5207		£4,000 London Electric Transport Finance Corp'n. Ltd. 2½% Guaranteed Debenture Stock ...	4055		
	Certificates held ...	650				£2,000 3% Defence Bonds ...	2000		
4547						£2,000 1½% Exchequer Bonds ...	2000		
	<b>GENERAL DEVELOPMENT RESERVE FUND :—</b>					£2,500 2½% National War Bonds ...		13274	
8000	Balance of Reserve Funds at 1st October, 1945 ...	10000			1000	(Middle Market value at 30th September, 1946 £13525.)			
	Add Transfer.				2000	<b>Loan—</b>			
2000	Income and Expenditure Account...	1000	11000		2500	To H.M. Treasury, free of Interest and repayable on Demand ...			
10000						<b>Furniture and Fixtures—</b>			
	<b>INCOME AND EXPENDITURE ACCOUNT :—</b>				4500	(at Cost less Depreciation) ...	1	13275	
109	Balance of Accumulated Fund at 1st October, 1945 ...	1038			1				
	Add Excess of Income over Expenditure for the year as shown by annexed account ...	996	2034	13034	10001				
929									
1038									
16496			18956	16496					18956

E. L. GARDINER, *President.*  
S. K. LEWER, *Vice-President.*

A. J. H. WATSON, F.S.A.A., *Hon. Treasurer.*  
JOHN CLARRICOATS, *General Secretary.*

### AUDITORS' REPORT TO THE MEMBERS

We have audited the above Balance Sheet and have obtained all the information and explanations we have required. In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Society's affairs, as at 30th September, 1946, according to the best of our information and the explanations given to us and as shown by the books of the Society.

Thames House,  
Queen Street Place, London, E.C.4.  
14th November, 1946.

EDWARD MOORE AND SONS,  
*Chartered Accountants*

## PRISONERS OF WAR FUND RECEIPTS AND PAYMENTS ACCOUNT for the Year ended 30th SEPTEMBER, 1946

RECEIPTS			PAYMENTS		
	Far East £	General £		Far East £	General £
To Balance at Bank 1st October, 1945	355	345	By Cost of Gifts for presentation to Ex-Prisoners-of-War ...	293	60
			„ Balance at Bank 30th September, 1946 ...	62	285
	355	345		355	345

E. L. GARDINER, *President.*  
S. K. LEWER, *Vice-President.*

A. J. H. WATSON, F.S.A.A., *Hon. Treasurer.*  
JOHN CLARRICOATS, *General Secretary.*

### AUDITORS' REPORT

We have audited the Receipts and Payments Account as set forth above and have obtained all the information and explanations we have required. We have received certificates from Bankers confirming the balances stated above and in our opinion the above statement presents a true and correct record of the transactions of the Prisoners of War Fund for the Year ended 30th September, 1946, according to the best of the information and explanations given to us and as shown by the books.

Thames House,  
Queen Street Place, London, E.C.4.  
14th November, 1946.

EDWARD MOORE AND SONS,  
*Chartered Accountants.*



# Buskin House, Little Russell Street, London, W.C.1.

D BY GUARANTEE)

## INCOME AND EXPENDITURE ACCOUNT for the Year ended 30th SEPTEMBER, 1946

1944-45	EXPENDITURE	£	£	1944-45	INCOME	£	£
	To Rent, Rates, Light, Heat, Water and			5961	By Subscriptions ... ..		8106
417	Cleaning ... ..	449			Income from Sales:—		
	Salaries, Staff Pensions and National			597	Sundry Publications ... ..	752	
1193	Insurance ... ..	1350			Amateur Radio Handbook, Supple-		
15	Telephone Charges ... ..	23			ment and Transmitting Licence		
271	Printing and Stationery ... ..	431		1687	Booklet ... ..	825	
197	Postages ... ..	308		—	2284		1577
205	Travelling, Entertainment and Meetings	737			Interest Received:—		
9	I.E.E. Meetings ... ..	101		30	3% Defence Bonds ... ..	43	
—	QSL Bureau Expenses ... ..	36		31	2½% National War Bonds ... ..	18	
2808	R.S.G.B. Bulletin:—			4	1½% Exchequer Bonds ... ..	18	
481	Printing Charges, &c., ... ..	4573		—	3% Savings Bonds ... ..	41	
—	Less Revenue from Advertising ... ..	602			London Electric Transport Finance		
2327			3971		Corp. Ltd. 2½% Guaranteed		
78	Membership Certificates and Badges ... ..	39		—	Debenture Stock ... ..	28	
63	Audit and Accountancy ... ..	63		7	Tax Reserve Certificates ... ..	5	
—	Legal Expenses ... ..	18		—	Bank Deposit Account ... ..	14	
16	Air Raid Precautions ... ..	—		72			167
10	Repairs and Replacements ... ..	90		—	Profit on Sale of Investments ... ..		21
28	Sundry Expenses ... ..	91		—	Reserves not required, now written		
4829		7697		98	back—		
—	Depreciation—Amount written off—			50	Provincial District Meetings Fund		
54	representing outlay on Equipment for		108	—	Past Presidents' Photographs ... ..		
—	the Year to date ... ..			148			
653	Reserve for Income Tax on this Year's						
—	Income ... ..	338					
—	Less Excess Profits Tax repayable ... ..	268					
653			70				
2000	Transfer to General Development						
—	Reserve Fund ... ..	1000					
7536		8875					
—	Balance, being excess of Income over						
929	Expenditure for the Year, carried to		996				
—	Balance Sheet ... ..						
8465		9871		8465			9871

## THE PILOT OFFICER NORMAN KEITH ADAMS PRIZE TRUST FUND BALANCE SHEET as at 30th SEPTEMBER, 1946

LIABILITIES				ASSETS			
Trust Fund	...	...	£ s. d.	Investment £150 3% Defence Bonds	...	...	£ s. d.
			154 10 0	Cash at Bank	...	...	4 10 0
			154 10 0				154 10 0

E. L. GARDINER, *President.*  
S. K. LEWER, *Vice-President.*

A. J. H. WATSON, F.S.A.A., *Hon. Treasurer.*  
JOHN CLARRICOATS, *General Secretary.*

### AUDITORS' REPORT

We have audited the Balance Sheet as set forth above and have obtained all the information and explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Prize Trust Fund as at 30th September, 1946, according to the best of the information and explanations given to us and as shown by the books.

Thames House,  
Queen Street Place, London, E.C.4.  
14th November, 1946.

EDWARD MOORE AND SONS,  
*Chartered Accountants.*

## INCOME AND EXPENDITURE ACCOUNT for the Year ended 30th SEPTEMBER, 1946

	£	s.	d.		£	s.	d.
To Prize Award ... ..				By Interest on Investment ... ..	4	10	0
" Transfer to Trust Fund ... ..	4	10	0				
(Note.—Under a Council Minute dated 19th July, 1946, it was resolved that no contribution to the R.S.G.B. Bulletin during the current year qualified for a Prize.)							
	4	10	0				4 10 0

## **REPORT OF HON. TREASURER—continued.**

The total Assets of the Society at the end of its financial year amounted to nearly £19,000 of which almost £15,000 was in the form of cash and investments.

Liabilities to outside Creditors and for Taxation amounted to approximately £800.

The Reserve for Subscriptions in advance represents the estimated amount of subscriptions paid for periods extending after the 30th September, 1946, and may be regarded as a General Reserve.

### **General Development Reserve Fund.**

The old Post-War Development Reserve Fund has, now that the War is over, been re-named. The Fund stood at £10,000 at the commencement of the Society's financial year, and has been increased by a further £1,000 during the year under review.

### **Income and Expenditure Account.**

The balance on this Account represents the accumulated excess of Income over Expenditure during past years less the amounts which have been placed to the credit of the General Development Reserve Fund.

### **Investments.**

At the beginning of the Society's financial year a substantial part of the Society's Investments represented Loans to the Government, free of interest. With the cessation of hostilities, the Society asked for and obtained repayment of the Loans which, together with other cash available, have been invested in the various securities listed on the Balance Sheet, in order to earn the maximum amount of interest available from Trustee Securities, and thus increase the net income of the Society.

The market value of the Investments purchased exceeded, at the close of the financial year, the cost price by approximately £250.

### **The Future.**

Although the financial position of the Society is undoubtedly a very strong one, it is hard to say quite what sort of results will be shown by the Society's Accounts for the year ended 30th September, 1947.

As I have already indicated, although the Society's Income during the past year showed an increase of £1,500, expenditure showed a substantial increase of nearly £3,000, and there is no doubt that during the current financial year a still further substantial increase of expenditure will take place. Additional Secretarial Staff has been engaged. It is proposed to engage a Technical Manager. The cost of the BULLETIN is still increasing. It is very difficult to estimate the cost of the new scheme of representation which comes into force on the 1st January, 1947.

However, it is not the function of the Society to run at a profit, and so long as the Society's expenditure does not exceed its Income, I trust that Members will be satisfied. If however a deficit is shown it may be necessary to increase the subscriptions. If the Society's Expenditure exceeds its Income to any appreciable extent, or for too long, such deficit can only be met by the realisation of assets at present held by the Society and this would in turn reduce the amount of interest received by the Society thus increasing the deficits still further—obviously a course to be avoided.

In addition if capital is realised to meet Revenue deficiencies, such Capital will obviously not be available in future years for Capital charges, such as, for example, the acquisition of Headquarters.

### **Prisoners of War Fund.**

No donations were collected during the year ended 30th September, 1946. Gifts are being presented to ex-Prisoners of War, and there is a balance left in the Bank of £347, in respect of which plans have been made for its disposal.

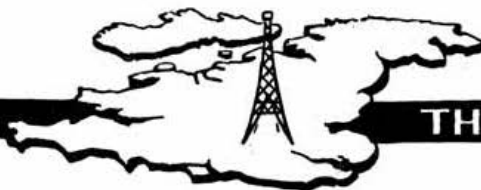
### **The Pilot Officer Norman Keith Adams Prize Trust Fund.**

As will be noted by reference to the account no prize was awarded during the year, and in consequence the net income available has been carried forward.

A. J. H. WATSON, F.S.A.A.,  
*Hon. Treasurer.*

## AROUND

## THE DISTRICTS



### DISTRICT 1 (North Western)

**D.R.:** H. W. Stacey, B.E.M. (G6CX), "Rose Acre," Meols Drive, West Kirby, Cheshire. Hoyle 337. **Scribe:** A. B. Wright (G6FW), 106 Knowlesley Road, St. Helena.

**Altrincham.**—Forty members attended the first meeting of the Altrincham and District Radio Society held in the Stamford Hall, on October 23. The following officers were elected: **Chairman** G6GD, **Secretary** G3AOS, **Treasurer** BR512,670. Club premises have been promised shortly and a full programme of lectures, displays, films, Morse classes is being arranged. All local members are asked to lend their support by contacting G3AOS, 4 Victoria Road, Hale, Cheshire, Alt. 4464. **G3AOS.**

**Blackpool.**—A recent junk sale provided several members with useful equipment. Activity on 14 is high, although a number of members are still in the throes of constructing "super" equipment. Meetings 1st and 3rd Tuesday each month, "Bellevue Hotel," Whitegate Drive, at 7.30 p.m. **G8GG.**

**Burnley.**—At a preliminary meeting held on November 6, the following were present: G2RB, 2BFH, 2CXW, 2FFO, 31Y, 3XK, 3WU, 5GK, 5XC, 5ZN, 8TD. G5ZN was nominated to carry on as T.R. It was agreed to hold monthly meetings, but owing to unforeseen circumstances our meeting place at the Imperial Cinema is not now available, but the T.R. hopes to arrange a meeting for January 8. Contact G5ZN for particulars later by phone. Business hours Burnley 3845, evenings Nelson 517. **G5ZN.**

Recent events include a lecture and demonstration on the C.R.O. by Mr. Bateman, G6BX; a visit to Moorside Edge B.B.C.; and a sale of surplus gear.

**York.**—The York and District Short Wave Club has been formed with nine members, three of whom have full calls. Meetings are held every Wednesday at 8 p.m. at BR511,543, 14 Bewlay Street. 2BLS is active on 7 and 14. 2ADR is having BCL trouble. 5KC has built a Jones Exciter and is very pleased with its performance.

**Halifax.**—The T.R. would like all new members to get in touch with him. It was decided by the H.E.R.S. to hold Morse classes and to introduce a service for members whereby technical information will be available. Meetings are held at Toe H, Clare Road.

**Huddersfield.**—The next meeting will be held on December 17 at 7.30 White Hart Hotel. Will those willing to attend a pie supper contact 5VD.

**General.**—The D.R. and Scribe send Seasons Greetings to all District 2 members. **GSUO.**

### DISTRICT 3 (West Midlands)

**D.R.:** V. M. Desmond (G5VM), 92 Worcester Street, Birmingham, 5. **Scribe:** E. J. Wilson (G2FDR), 48 Westbourne Road, Otton, Birmingham.

**Birmingham.**—At the meeting of M.A.R.S. held on November 19, a lecture on Frequency Modulation was given by Mr. A.

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

**Bury.**—A welcome visitor to the meeting held on November 7 was Bill Fitzgerald, D2CA, who gave a very interesting talk on Amateur Radio in the British Zone of Germany. Mr. Archie Brown, G2WQ, also gave a much appreciated talk on V.F.O.'s which was followed by a demonstration of his E.C.O. and Franklin units. A "Hamfest" has been arranged for January 11, and it is hoped that the T.R.'s and other members in the S.E. Lancs. area will attend. **G8NL.**

**Carlisle.**—The meeting on November 1 attracted a record attendance of 18, who heard 3ART give a talk on Radio Fundamentals. This was followed on November 15 by another talk by 3ART, the remainder of the meeting being taken up with Morse practice and general discussion. 2ARW is now contributing to 14 QRM, and 2DYV has been doing good work on 28 with his 8JK. At the next meeting on December 20, 2DYV will describe some of his experiences in a most interesting branch of service radio. Meetings are held first and third Fridays of each month in the Y.M.C.A., Fisher Street, at 7 p.m.

**Liverpool and Merseyside.**—The present season must not be allowed to pass without wishing all members a happy "D-Xmas." Once again we ask for proposals for papers and demonstrations of interest to others. The V.H.F. demonstration by Mr. A. Bell was an unqualified success. It is hoped to present Part 2 shortly. Several members are trying to stimulate more interest in 5 metre working. **G8AZ.**

**Rochdale.**—The meeting held at the home of G6QA on Sunday, November 17, was attended by eight members including G3ATL, who recently received his licence. Further meetings will be held at 82 Molyneux Street, Rochdale, on the Sunday nearest the 20th of each month. Attempts are being made to acquire a meeting room. **BR57083.**

**West Cumberland.**—Eleven members were present at the November meeting held in Workington on the 16th when various interesting topics were discussed. We extend sympathies to G8DP, our host, on his recent sad bereavement. Please note, next meeting, third Saturday in December at the Golden Lion, Harrington, which is to be a farewell meeting to the ever popular G8EZ, who is shortly leaving for VU. Let's give him a grand send off OM's. **G3BW.**

### DISTRICT 2 (North Eastern)

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

**Bradford.**—The Bradford Amateur Radio Society continues to flourish and the meetings at Cambridge House are well attended.

Rhodes, 79 members and visitors were present. The membership of M.A.R.S. is now nearly 100.

**Cannock.**—Membership of C.C.R.S. is increasing rapidly. Details of meetings can be obtained from the T.R., G2FZG. Congrats to Mr. C. J. Morris, G3ABG, on the arrival of a Junior Op.

**Rugby.**—G8RL has contacted 70 countries and W.A.C. in 5 hours on 28. G3IS is active on 60 together with G8VN. Local members should contact Mr. R. C. Fishlock, G3DI, 122 Hillmorton Road, Rugby, the new T.R.

**Stoke-on-Trent.**—The membership of the local society which still meets each week is steadily increasing. Those interested should contact Mr. D. Poole, 3AQW, 13 Oldfield Avenue, Norton-le-Moors, Stoke-on-Trent. A new society has been formed at Cheadle. The Secretary is Mr. V. E. Hughes, G3AVG.

**Stourbridge.**—At the November meeting of Stourbridge and District Radio Society a lecture was given by Mr. G. F. Peirson, A.M.I.E.E., Chief Engineer, Midland Electric Co., on the problems of Power Generation and Distribution. The membership is now 45. Those interested should contact Mr. D. Rock, G8PR, Flat 1, Block 1, Worcester Road, Summerfield, Nr. Kidderminster. The Society meets on the first Tuesday of each month at 8 p.m., in King Edward's Grammar School (Science Block), Stourbridge.

**West Bromwich.**—The new Society meets regularly at The Gough Arms Hotel, Jowett's Lane, West Bromwich. Further particulars are available from Mr. B. G. Cousens, BR58897, of 38 Collins Road, Wednesbury.

**Wolverhampton.**—At a meeting of the W.A.R.S. Mr. A. Devey lectured on Radio Interference Suppression. The temporary headquarters are at the canteen of Messrs. Baynell's, Merridale Street, Wolverhampton.

**Coventry.**—Activity is still on the increase. G5PP reports a personal contact with his niece in VK. Recent C.A.R.S. activities include a visit to Rugby Radio and a "junk" sale.

**SPECIAL NOTE.**—All future correspondence and notes should be addressed to Mr. A.T. Martin, G2LB, 2 Gladys Road, Yardley, Birmingham. **G2FDR.**

### DISTRICT 4 (East Midlands)

**D.R.:** L. Ridgeway (G2RI), 90, Romway Road, Leicester. Phone 24295.

**Derby.**—Congrats to G2AQH on getting his full call, and the best of luck to the new T.R., BR59577, who is taking over from SBN. Meetings will be held on January 12 and 26.

**Mansfield.**—Thirty-two members attended the November meeting including visitors from Nottingham. 4LY and 8DZ

officiated at a very successful junk sale. 11,647 has returned from Singapore, 2777 is now 3AAY, 1446 is 3AUH. Most stations are active and 8UZ, 5XA, 4DS and 3AAY are working hard on 58.

**Nottingham.**—Meetings continue to be well attended but there are still a number of BRS members who have not made their first appearance; a special welcome awaits them. Set listening periods on all bands are providing interesting data. Star performer this month is 3DG who made a schedule on 28 with W2CUU (operated by W2TBD, who was once stationed near Notts.), got 8DZ and his wife to the microphone for a 90 per cent. QSO extending over three hours. W2TBD sends his 73 to old friends in District 4 and the T.R. offers Compliments of the Season to all members.

**Northampton.**—An interesting meeting was held on November 19 at which the D.R. (2RI) was present. A welcome is extended to 3AWT, newly licensed and already active on 7. More than a dozen local BRS members have not yet attended a meeting. They are asked to contact the T.R., 63 Colwyn Road, Northampton, as soon as possible.

**Kettering.**—Activity is on the upgrade and meetings are held fortnightly. The Kettering Radio Society have renewed their pre-war call G5KN and arranged a very busy building programme. 4KS is perhaps the most active and getting good results on 7 with an 803 P.A. 2BOB is also active but suffers from lack of room.

**Wellington.**—Twenty-five members from all over the county attended the first meeting to be held in Wellington. 5LP opened the meeting with a talk on general amateur matters, following which a committee was appointed to organise future activity with particular reference to field days. 5LP is using a centre-fed zepp on 7 with his usual success, 6BF, 4IN, 2HKF and 3ABC are active on 14.

**Leicester.**—There was a very good meeting on November 17 at the Secular Hall which will now be "permanent" H.Q. for Leicester. 2RI outlined future plans for the county and after discussion certain officers were appointed to handle local business. The last consignment of Naval Junk was disposed of and a large amount of surplus gear came under the auctioneer's hammer. Next meeting will be a special affair at The Wigston Magna Cinema, 2 p.m., December 15. Dave Dryden will give a full scale television demonstration and lecture on "Man-made QRM to Television." It is suggested that members attend well on time. Having "organised" receiving and freq. measurement equipment from 1.7 to 140 Mc/s 2RI is building for 58 and hopes to have been heard by the time these notes are printed. G2RI.

### DISTRICT 5 (Western)

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

**Bristol.**—Among the 48 members who attended the November meeting, we were pleased to welcome a small contingent from Weston-super-Mare. Four local members sat for the Radio Amateurs' examination on November 15.

G5KFT reported that only 3 members had consistently attended his Morse practice classes. 5KFT hopes to resume his "at home" each Tuesday following the local meeting commencing in the new year. 11333 thanked 5KT and 3RQ for their interest in BRS members. The Electronic scrap scheme came in for a good deal of discussion after the D.R. had read a letter from the General Secretary. The general feeling of the meeting was disappointment. 3AUV, whom we were pleased to welcome, criticised some of the small adverts in the BULLETIN from a number of people who apparently were trying to get rich quick. 3YT and 2BAR brought along some new gear to demonstrate. 9032 expects to be demobbed in February. D2AF is now back in Bristol and hopes to be on the air shortly.

**Gloucester.**—Since the last report two meetings have been held, at the first 6890 read a very interesting paper on "Interference and its Suppression." The possibility of a D.F. Field Day was discussed and provided enough receivers can be produced it is hoped to hold one shortly. At the October 17 meeting a much appreciated lecture on remote control equipment was given by 5508. On October 21 a number of members attended a lecture on Television given by BBC Television Chief, Mr. Shaw, at Cheltenham. 3MA is rebuilding again as he is not happy with his TX on 28. 3PZ has been heard operating a bug in nice style. 5508 is busy on a D.F. set. G6RB.

### DISTRICT 6 (South Western)

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

**West Cornwall.**—At the last Falmouth meeting, those present included G2DDE, 2FQD, 2FL, 3AGA, 4IV, BRS10,498, 13,014, 13,106, 13,412. At another meeting in Penzance G2DDR, 2FQD, 2FL, 2NT, 2WW, 3ADB, 3AGA, 3AQJ, 4IV, 4OA, VSIHH, BRS13,106, 13,412, 13,741, and Mr. Rampton were in attendance. At this meeting arrangements were made to relay a rifle match between Penzance and Helston, the G.P.O. having consented. A local knock-out contest is to be held on the DX bands and this is causing keen and friendly rivalry. Good prizes have been donated by several members.

A pirate station in Falmouth is using the call signs of local members. As many of them have had considerable Service experience, it is anticipated that this "menace" will soon be discovered.

**Plymouth.**—At the meeting held on November 16, with an attendance of 14, 2FKO gave a demonstration of lining up an 1155 receiver with his 100/1000 kc/s. multi-vibrator. G5ZT is active on 5 metres and would appreciate reports. 3547 and 9728

expect to get their calls soon, while G6RF hopes to work more than W5 now that he has an outdoor aerial!

**Torquay.**—At the meeting at the Y.M.C.A. on Saturday, November 23, there was an attendance of 15. The D.R. presented apologies on behalf of the T.R., who was ill. All members joined in wishing him a speedy recovery. G4JO came to the rescue by giving a talk on improving the performance of transmitter, receiver, and aerial. G2DYM followed this by exhibiting an Eddystone 504 receiver.

**Taunton.**—At the meeting held on November 14 with 13 members assembled, the acting T.R. announced that he would be unable to carry on, consequently upon his promotion to Stoke-on-Trent. The appointment of a successor was left over for the next meeting. G6LY was unavoidably absent, the first time since regular meetings were held. A welcome was extended to three visitors and to ex-D2BM, now living at Chard. Future meetings will be held on the second Thursday of each month.

(Congratulations on your promotion 2DRW, and thanks for all you have done for amateur radio in the S.W. We are all very sorry to lose you, but hope you will come back and see us sometimes.—D.R.)

The D.R. wishes all members of Council and of the Executive, as well as all members of District 6, a very Happy Xmas, and a most Happy and Prosperous New Year. G5SY.

### DISTRICT 7 (Southern)

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

Shortly after these "notes" are published, District 7 as such, will be no more and will be split between three of the new Regions. It is with regret the writer sees its demise but he is confident that this necessary step in the progress and expansion of the Society will not entail the loss of that sense of camaraderie which we have enjoyed throughout the years. We cannot write Finis to our District without paying tribute to the work of Ernie Dedman, G2NH, who was D.R. until his resignation in 1939 and of the T.R.s who, through the difficult war years, kept the Society alive locally with meetings and copy for this column. May I conclude with a personal note? Thanks chaps and 73.—Rusty.

**Cheam.**—The attendance of 34 at the November meeting were busily engaged in the sale or exchange of surplus gear, followed by a Transceiver demonstration by G3AIS. G4LV has arrived in Miho, Japan, and hopes to be on the air next January.

**Coulston.**—We are sorry to hear that BRS1545 is to undergo a serious operation: best of luck Jock and a speedy recovery. G5NN has returned to the air after some few years absence. BRS179 continues with his 58 Mc/s work but laments the falling off in activity. The November meeting of S.R.C.C. was well attended to hear Mr. Castle talk on Centimetre Waves. See "Forthcoming Events" for the next meeting. BRS3003.

**Maidenhead.**—A television demonstration and lecture on the Emitron has been promised for the December meeting by G8MS. The subject chosen by G6CU for the meeting on January 14 is Record Reproduction and Pick-up Technique. New members will be welcome. The Hon. Sec. may be reached at "Oaklands," College Road, Maidenhead.

**Bournemouth.**—The B.A.R.C. has purchased a hut for its HQ and located a desirable site. G2DBF, 3ADG, 3A1W, 3BM, and 3TH are all active on 14 and 28 Mc/s. G2DBF.

**Oxford.**—Among the officers elected at the inaugural meeting of the Oxford and District A.R.S. were G8PX, President, and BRS7186, Secretary. The latter will welcome enquiries from prospective members at 99, Stanway Road, Headington.

BRS7186.  
G5WP.

### DISTRICT 8 (Home Counties)

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

A District meeting was held at Cambridge on November 15 when the attendance was below normal owing to the very bad weather. 2XV gave a most instructive and enjoyable talk on his experiences in constructing a rotary aerial, which is due to become a beam when the neighbours have grown used to the present structure.

It is hoped that every member will make an effort to attend the last meeting to be held under the old District arrangements, which is due to take place on December 20. On this occasion there will be a Grand Xmas Swindle in which all can participate. Prizes have kindly been donated by *Mearns, Labgear, Bailey, Grundy & Barrett Ltd.*, *Babbs* (51G), *Edwards*, and others. All members will be circulated with full details of this meeting.

**Cambridge.**—Frank Nunn (2DT) is now out of hospital and well on the road to recovery. A welcome is extended to 6PH who is a new member, but a very old-timer. A newcomer to the town is G2CNT (ex-XZ4AR/XZ2AR) who hopes to be on the air early next year. 51G and 6PH are active on 58, while 8SV, 8PB, 2PU, 2XV, 5JO and 5BQ are on 28. Most locals are also on 14 when conditions are favourable.

**Bedford.**—We understand that a "Ham-fest" was held at the Swan Hotel on November 15. 8SV went from Cambridge.

**St. Ives.**—2AKU now released from the R.A.F. is active on 3.5, 7 and 14 and is building a Franklin V.F.O. 6WA is on 14 with phone and C.W., using 80 watts to an RK28. 4AZ is active on 14.



50V is building a "super-super" receiver. 5RL is getting out splendidly with 8JK beams on 14 and 28 and is adding a noise-limiter to his H.R.O.

**Newmarket.**—Will 8QM, who is believed to be in this town, please report activities to the D.R.?

**Ramsay.**—2FQP is working DX on low power, including V.K. Fred Jones, now in the R.N. is enjoying a Radar and W.T. course. His home is at Bluntisham.

**Peterborough.**—It is whispered that 2NJ/A is one of three hams who have obtained small balloons for the purpose of aerial experiments. It will be recalled that 2NJ/A used to transmit with an aerial attached to a box-kite before the war from his coastal QRA and that he got out extremely well on 160 metres.

**Wisbech.**—BRS7780, nominated T.R. for this town, reports growing activity. New members should contact him at 11 St. Peter's Road.

**Whittlesey.**—2UQ is active on 3.5, has erected a very fine 132 ft. aerial for use on this band.

Compliments of the Season to all District Members, and many thanks for co-operation and kindnesses received during a lengthy term of office.

G5BQ.

### DISTRICT 9 (East Anglia)

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

**King's Lynn.**—Until further notice meetings will be held at the Duke's Head, on the first Sunday in each month, at 7.30 p.m.

**Norwich.**—Reports should in future be sent to Mr. F. W. Fisher, 3VM, "Keppel", Dereham Road, Costessey, Norwich, who is the new T.R. 2MN, 4GF, 8QR, 8FL, 3VM, 8AX and 3ASQ are on the air. The Amateur Radio Exam course at the Norwich Technical College is now an accomplished fact thanks to the efforts of 4GF. New students will be welcomed at the College on Wednesday evenings.

**Great Yarmouth.**—An informal gathering took place at the home of BRS2099 in November. Watch the local press for the date of next meeting to be held at BRS3468. The venue for the January meeting has not yet been fixed and an offer from a member to hold it at his QRA will be very acceptable.

G2BXJ.

**Ipswich.**—The new T.R. 2AN is hoping to be able to arrange monthly meetings commencing about the time this is in print. Will members around Ipswich who have not heard from Mr. Keeble please get in touch with him?

G2SX.

### DISTRICT 10 (South Wales & Monmouthshire)

**Deputy D.R.:** D. Alan Dyer (GW8UH), 29 Ladysmith Road, Penylan, Cardiff. Tel.: Cardiff 2691.

**Cardiff.**—Thirty members attended the November meeting at the Park Hotel and learned with regret that the D.R., 4KQ, had had to return to hospital for further treatment. A welcome was extended to a visitor from VU. Amongst matters discussed was the recent withdrawal of Admiralty scrap and it was resolved to send a letter to Council setting out the views of the members present. After a break for refreshments a very successful junk sale was held, the proceeds from which considerably increased the local funds. Future meetings have been arranged for 1947 and will be held on the second Monday of each month at the Park Hotel, Cardiff, at 7 p.m.

**Neath.**—The local club continues to flourish and at the meeting on November 5 a very able demonstration was given by Mr. Davies of Skewen on the principles and practice of alignment of receivers with the aid of the Cathode Ray Oscilloscope. 2AVV has a rotary beam on 60 and is looking for contacts. 5VX, 6BI and 6JW are making the most of good conditions on 28.

GW6JW.

### DISTRICT 11 (North Wales)

**D.R.:** F. J. E. Starkey (GW6KY), "Endon," Gronant Road, Prestatyn, North Wales. Scribe: C. Spillane (BRS1060), 14 Queensway, Prestatyn.

The November meeting held at GW5FU brought together GW5FU, GW3KY, GW3YR, GW4CK, GW4CN, GW6KY, GW2DAH, 1060, 2731, 3245, 4137, 11062, 12728 and 13213. Interesting points were raised on the policy of future meetings in the District. Many members present from outside the Rhyl-Prestatyn area bemoaned the fact that there are no organised meetings in their own area. Until something can be arranged we intend to continue to cater for the District from the Rhyl-Prestatyn area, and are again arranging the December meeting to take place at the "Crown Hotel," High Street, Rhyl, by kind permission of GW5FU. The date will be December 22 and the time 3 p.m. At this meeting a member has volunteered to lecture on Navigational Aids, so it is hoped that all will make an effort to attend. Other volunteers are wanted.

**Colwyn Bay.**—BRS3245 has offered to hold meetings at his home address. If others in this area would like to support a meeting will they please write to BRS1060 so that arrangements can be made.

**Anglesey.**—GW3AMA in response to our appeal for news, has sent in a very interesting report of his activities. He is employed at the B.B.C. station Penmon, and is working with Ron

Ashton, GW5YB. GW3AMA regrets not being able to attend meetings owing to time and distance. (We are hoping to bring the meetings nearer to you soon, OM). Can anyone in the Bangor area arrange a meeting for some future date? We can guarantee good support if same can be arranged.

Finally, don't forget December 22, "Crown Hotel," High Street, Rhyl, 3 p.m., and bring a load of junk to sell.

Merry Xmas and Happy New Year to all members.

BRS1060.

### DISTRICT 12 (London North & Herts)

**Deputy D.R.:** S. A. Howard (G8TY), 92 Arlington Road, Southgate, N.14. (Enterprise 3219). Scribe: E. H. Laister (BRS3386), 22 Church Hill, N.21.

**Southgate.**—An Amateur Radio "Brains Trust" was enjoyed by about 50 members at the last meeting. G8TY, the D.D.R., acted as question master, and an interesting and instructive hour and a half was spent on about a dozen questions.

**Brian Lagden (G3GX), 9, Pollards Road, Whetstone, N.20,** offers to give Morse instruction to any member who is interested.

**St. Albans.**—The last two meetings produced attendances of 19 and 15 respectively, and at the last of these we were pleased to welcome G6LL, who was able to give us full information on the BULLETIN paper situation and other Society matters. Local members were disappointed at being too late for the Admiralty Scrap scheme.

G8TK is sorry pressure of work has prevented his sending slow Morse as promised, but if he can start in the near future, an announcement will be made by G5UM.

Congratulations to G3BFR (ex-4477) on being the ninth full call member in St. Albans. The meeting on December 19 will be a Christmas guest night, to which ladies are specially invited. Reservations to 3412, 18, Sandfield Road. The T.R. takes the opportunity of sending Christmas Greetings to all members especially 4502, 7910, 9135, 11508, 11732, who are still in either the Army or R.A.F.

**Welwyn Garden City.**—An extremely interesting lecture on the history, development and fundamentals of Television Receivers, was given at the last group meeting by Mr. H. A. Fairhurst who is in charge of Murphy Radio Television Laboratory.

Members expressed their sorrow at hearing that "Buck's" key will not be heard again, and hope that the District will organise something to commemorate his association with Amateur Radio, to which as a group we can contribute.

**Enfield.**—Mr. H. T. Macfarlane, G8SK, gave a very instructive lecture on U.H.F. converters, fully explaining their construction, snags to be avoided, and suggestions as to trend in design, at yet another crowded meeting. It was well received, and aroused much discussion.

Owing to the rapid growth of the group, it was decided to appoint BRS12530 as Hon. Treasurer.

**Hitchin.**—Mr. Parker, BRS9494, 11, Purwell Lane, Walsworth, Hitchin, would like to arrange meetings; all interested please contact him.

**Watford.**—The Watford and District Radio and Television Society (affiliated to R.S.G.B.) will hold future meetings on the first and third Tuesdays of each month, the first Tuesday being devoted to junk sales and ragchew, and the third to lectures, demonstrations, etc. G6GR, G8CK and G3ABR have offered to lecture. Address: The Carlton Tea Rooms, 77A, Queens Road, Watford, Herts. Time: 7.30 p.m.

### DISTRICT 13 (London South)

**Deputy D.R.:** P. W. Winsford (G4DC), 63 Erlanger Road, New Cross, S.E.14. Scribe: J. L. Monk (G3AHU), 14 Angell Road, Brixton, S.W.9.

At the November combined District 7 and 13 meeting a well supported "junk" sale took place.

**South-Eastern Area.**—The 25 present at the last meeting held at G4DC, enjoyed a "rag-chew."

**Plumstead and Woolwich.**—Six members were present at the meeting at St. Marks Hall, Plumstead Common, on Monday, November 18. A general discussion ensued and some interesting information given on various valves.

G3AWD is to be congratulated on obtaining his ticket. The next meeting will be held on December 16 at 8 p.m., when a good attendance is hoped for.

BRS7589.

**South-Western Area.**—It was nice to see 15 members at the November meeting, keep it up "chaps."

**Woolwich and Plumstead.**—There was a good attendance at the second meeting. G4DC (D.D.R.) and G2VB (Scribe) were present.

**General.**—G2VB was at Croydon Airport to say farewell to G2RS, but due to fog the contact was very short, so with his XYL, 2RS went to another airport.

By the time these notes are in print it is anticipated that our Scribe, Mr. Gilmour (G2VB) will be serving overseas. We are very sorry to lose such a willing and tireless worker and we take the opportunity to record our deep appreciation of his valuable services, both to the District and the D.R. We wish him every success in his new sphere and hope that the District will not be deprived too long of his energetic efforts.

G2VB intends to apply for a D2 call and would appreciate the co-operation of members in the District. By a strange coincidence Mr. Jack Monk (G3AHU), who succeeds our wandering Scribe, recently held the call D2JM.

G4DC.

## DISTRICT 14 (Eastern)

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

**Chelmsford.**—Morse classes are proceeding, and several new licences are expected therefrom. G2AAU works W's by the hatful. G2SA is doing the same on 28, and even G6LB is now on 14, with W's and a VK3 at 8 p.m.

**Chingford.**—Some reorganising is taking place, with a view to a permanent meeting place. Advance details are available from G2XG or G4GA.

**Southend.**—In order to revive more interest in this nest of ham activity a permanent meeting place is being sought. G5UK is still in Italy. G6CH, Elm Cottage, Underhill Road, South Benfleet, has been nominated T.R. assisted by G2CMW as Scribe. All members please report their QTH's to the latter at 49, Dawlish Drive, Leigh-on-Sea. BRS925 will keep the local, crystal register.

**Grays.**—At the well attended November meeting, G2YH was unable to give his talk on C.R. Oscilloscopes due to business intervening. A letter was read from H.Q.'s explaining what was meant by "serious unruly conduct on the air". The meeting fully endorsed the official opinion. In future the Brains Trust will take all questions (written) at one meeting, giving their views at the next. It is hoped to run a Ladies' Night in the New Year, and also to push ahead with the Gray's Club Magazine. Articles, please.

**Brentwood.**—But for the visit of G8TL, G2CD and BRH, the meeting at G3LA's would have been a fiasco, and it was a poor return for Mrs. LA's trouble in providing refreshments. (Come on, Brentwood—hoist your hosiery!—D.R.). As G2CD says, "why do people belong to the R.S.G.B. if they have no apparent interest in its functions?" He quotes one BRS man in this district who does not even possess a receiver!

**Ilford.**—At the November Meeting, G8AL gave a most interesting talk on F.M. Mod. from the transmitting angle. G2HPF (Chelmsford), brought along OZ8GN/OZ9ROS, who is in that town on a radio course, and whom the D.R. has met on several occasions. Skeds with Mrs. GN/ROS are being arranged via G6LB. Mr. Niro's gave the Ilford meeting a very illuminating talk in excellent English, which language he tells the D.R. he has learned entirely through working G hams. The meeting was sorry to learn from the Social Committee, through G2QI, that they were finding it heavy going, in trying to make arrangements for the dinner and dance on January 3rd, and had resigned *en bloc*. They are no doubt justified, as the District does not appear to be ready for social activities. The January 3rd date is therefore right off. Any loss will be made known later. (Some time ago the D.R. was rapped over the knuckles for not trying to run a dinner and dance, but he feels sure that members will now appreciate why he was reluctant so to do.—G6LB).

Woodford and Chingford had another "clash" but it is felt that this does not interest the District generally.

Please note December 15th, 7 for 7.30 p.m., and a full house, please, for Mr. Reg. Hanumans (G8IG), on "Supers."

February 16th will be a Red Letter Day, bringing to Ilford Town Hall "The Dud Charman Show" with his "Working Model" aerial demonstration. A bumper attendance please—7 for 7.30 p.m. (This show is worth walking a hundred miles to see.—G6LB). Chingford will be hosts for the March Meeting. Announcement later.

**Late Flash.**—As it has not been possible to arrange for a Sunday afternoon meeting in Romford, the January meeting, due to be held there, will be at Ilford Town Hall. Speaker, G2CD, subject—Frequency Measurements, with demonstration. See Forthcoming Events. G6LB.

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

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

**Ruislip.**—The October Junk Sale was a great success, G6BR, 6WN, SKZ attending. Peter carried out the auction in his usual style and was able to persuade a certain member to increase his bid of 24d. many times.

**Ealing.**—The Ealing group have had eight meetings during the past month and all were well attended. Good progress is being made by all the Morse class regulars. "Scotty" has now received his full ticket (G3ASU) and will be heard from very shortly.

**West London.**—Everyone is asked to bring some junk to the District Meeting on December 19—should be O.K. for Xmas presents for others!

**Ashford.**—The meeting on November 9 was well attended and the usual ragchew was much enjoyed. Perhaps it is something to be said in favour of this area that there does not appear to be anything like the dissatisfaction here that one encounters elsewhere. Owing to accommodation difficulties in this area future meetings will be held at G2AIW, Twickenham.

**High Wycombe.**—Great activity and rivalry appears to be prevalent in this area. The indefatigable "Freddie" (G2CDI) continues to knock off the DX in competition with G3FJ, but they were beaten by the T.R. who got up very early one morning and worked VR2AB in Fiji.

**Twickenham.**—As usual the last meeting was attended mainly by members from outside the area. Those present were fortunate to participate in the distribution of some very useful Admiralty scrap for which thanks are due to G8SM for making it available. Thanks are also due to the members attending this meeting for subscribing £1 2s. 0d. towards District funds.

**Harrow.**—Due to a breakdown in transport there was unfortunately no distribution of electronic scrap so the members took their money home again. The meeting, however, was much buoyed up by the presence of G8KZ and G6WN. Altogether 14 members attended and talked their heads off.

**Hounslow.**—Owing to lack of accommodation no R.S.G.B. meeting was held during November. The Hounslow and District Radio Society, however, held a very enjoyable meeting on November 13, when many members brought along their own sets, complete and incomplete, for criticism and advice.

**General.**—The Editor of "The Rag" much regrets the very late issue of the November issue due to the breakdown of the printer's duplicator and the great difficulty in obtaining the necessary spare part for repairs. G6WN.

## DISTRICT 16 (South Eastern)

**D.R.:** W. H. Allen, M.B.E. (G2UJ), 32, Earls Road, Tunbridge Wells, Kent. Scribe: E. H. Trowell (G2HKU), 27, Unity Street, Sheerness, Isle of Sheppey, Kent.

**North Kent Group.**—G6XO (ex-EI8M) recently gave a talk on transmission and reception problems. 2YZ and 2HDU are on 1.8 and 28 and would like to contact those interested in indoor aerials for 28 Mc/s. transmission. Welcome to newcomer 6NX who, with 2CDD, is active on 1.8 and 14. 6658 has completed a power unit with controlled output from 0-250 volts. Most BRS are active and preparing to take the G.P.O. exam. The T.R. would like to contact members in the area who have not yet attended meetings.

**Maidstone.**—At recent meetings of M.A.R.S., BRS10,917 demonstrated his new receiver which uses EF50's in all stages, and G2CBA gave a talk on transmitters and demonstrated his new rig. On November 13 the Club enjoyed a lantern lecture on valve manufacture, given by Mr. P. Nicholson of Messrs. Edison Swan. G4HG has rebuilt for 1.7 and 3.5. Congrats. to Mr. and Mrs. Carr, 8UC, on the arrival of a YL junior op. 200 and 2BMP are on 1.7, 3ABZ on 14, 3AGV, ALF and 5B8 on 3.5. 11,147 has finished his battery superhet which functions well, 10,997 is learning Morse for the G.P.O. exam. 3AGV and 4HG are building frequency measuring gear. The latter is using a 100 kc/s. oscillator which will be coupled to his two receivers, and the former a 100 kc/s. oscillator and multivibrator, with interpolating V.F.O. Attendances at weekly Wednesday meetings are still good but there are still some BRS members who have not yet appeared. They would be welcome at any meeting. For information please phone G3AGV after 6 p.m. (Bearsford 6118).

**Sheppey.**—G3GW is building a large oscilloscope, 4OU is active, 2DCG is rebuilding, 2HKU is trying aerial tuning units and a counterpoise on 1.8.

**Chatham.**—The "top band" is well used locally and 5FN has been putting in some good work on the key. 5MM, after some modulator trouble, is back again. M.A.T.S. meetings are well attended and the evening of November 18 was devoted to a social gathering at which YLs and friends were invited. 6NU was the popular M.C. and all present enjoyed themselves. We were pleased to have 6QC with us again.

**Canterbury.**—G2JN is on 1.8 and 3.5 with QRP. 2BBT is active on the latter band.

**Brighton and Hove.**—The local Club held their first junk sale at the meeting on November 11. Some cash was raised for club funds, but results could have been better.

**Tunbridge Wells.**—We are sorry to lose G6OB, who has left the town. We wish him every success in his new appointment at Swanley and offer him hearty congratulations on his well deserved promotion to the rank of Police Sergeant.

**West Grinstead.**—12,366, having installed a "Blue Diamond" P.E. set, offers to pass on his experiences with the machine to other members who have no mains.

**Personal.**—As these are the last notes that I shall send in as District 16 representative, I should like to take this opportunity of wishing all members in Kent and Sussex the very best of luck in the future. I was appointed D.R. several years before the war but from September, 1939, until January, 1946, whilst I was serving with the R.A.F. Mr. W. Scarr, M.A., G2WS, kindly acted as my deputy. From January 1, 1947, a new era will commence. Who my successor will be in the new scheme of things I do not know, but I extend to him in advance my best wishes for his success. May he receive the same support from members in his region as I have had from those in District 16. Goodbye and a Happy Christmas to you all. G2UJ.

## DISTRICT 17 (Mid East)

**D.R.:** A. C. Simons (G5BD), "The Elms," Church Road, Mablethorpe. Phone 2699.

**Grimsby.**—G8PV using an AR77E. G2AJB on 3.5, 7 and 28, using a new 504 Receiver. 8VI on 7 and 14 with an improved E.C.O. 3YQ concentrating on building a communications receiver. 3TZ completing a new PP PT155 final, whilst doing local phone monitoring. 4GZ active on 7 and 14 but with no special reports, SKH also active on 7 and 3.5 telephony.

**Sleaford.**—BRS4315 is leaving the district for a further spell of Army life. 8RW is on civil aviation in London and will be active only at week-ends.

**Boston.**—6GH, 6LH, 8BQ and 2BQC are all active. 2FT is now on 60 using an 815. He is shortly to transfer to Surrey. 5BD and 5LL have little "Five" activity to report, both working only in the 28 band. G5BD.

### DISTRICT 18 (East Yorkshire)

**D.R.:** A. G. Dunn (G3PL), 79, Hayton Grove, Hull.

**Hull.**—The club transmitter is now in operation on 1841 kc/s although the aerial has given trouble due to its nearness to telephone wires on to which it is liable to be blown in a strong wind. Individual reports are lacking but 2FZX and 2BIP have both been off work due to illness; we wish them speedy recovery. 5GX and 60S are using superhet receivers on 5 metres. 2KM is still working DX. The 1947 committee was elected at the November meeting, which 18 members attended. Station visits were arranged for new members who were too diffident to ask. Those new members who have not met the locals are cordially invited to do so. Suggestions for the 1947 programme are badly needed.

**Pocklington.**—Mr. O. C. Walden (BRS9915) writes offering to help members interested in designing receivers and test gear; his own activities are limited at present due to his "paraffin power supply." We congratulate him on the safe arrival of his second "junior op."

No reports from other parts of the District.

G3PL.

### DISTRICT 19 (Northern)

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

**General.**—For the third month running no news of district activities has reached the D.R. Please make a special effort for the first issue in 1947.

The P.D.M. photograph was not quite up to expectations as the members who were at the extremes of each row were cut off! However they are available for those who require them at 1/6 post free, from the T.R. for West Hartlepool, Mr. A. R. Donald, 186, Stockton Road.

The D.R. takes this opportunity of wishing all members a Merry Xmas and a Happy New Year.

G2FO.

### Scotland

**Scottish Records Officer:** J. Hunter (GM6ZF), 51, Camphill Avenue, Langside, Glasgow, S.1. Langside 237.

**"A" Area (Glasgow and surrounding counties).**

**A.R.:** D. R. Macaulie (GM6MD), 154, Kingsacre Road, Glasgow, S.4. Langside 5207.

The A.R. expects to be on the telephone by the time these notes appear. The October meeting was well attended, when GM3AKK outlined the City and Guilds Radio Amateur Examination. Later GM4HX described his station, and GM3PB an unusual type of modulator. A presentation of photograph and QSL was made by 6MD to 8MJ from 2DI to confirm contact on 58 Mc/s—a DX QSO! New calls are Mr. McKay 3AVO, Mr. Wannop 2CSW, and Mr. McHale 3APR. Congrats to BRS3150 and his wife on the birth of a son. Visitors to the meeting were GM6RV and 8OI.

The December meeting will be held on the 18th. GM6MD.

**"B" Area (Aberdeen and North of Scotland).**

**A.R.:** A. G. Anderson, B.Sc. (BRS5857), 87, Braemar Place, Aberdeen. Aberdeen 2676.

The Aberdeen Amateur Radio Society formed mainly by R.S.G.B. members has elected the following office bearers: **President,** Mr. W. W. Inder (GM5IP); **Vice-President,** Mr. A. G. Anderson; **Secretary,** Mr. A. D. J. Westland; **Treasurer,** Mr. L. R. Harper (GM5JK); **Committee,** Mr. H. R. Taggart (ex GM5TA), and Mr. L. Hardie (GM2FHH). Permanent premises have been acquired and should be in use soon. BRS5857.

**"D" Area (Edinburgh and Midlothian, etc.).**

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

The November meeting was devoted to the formation of the new Lothians Amateur Radio Society. Mr. T. H. Nisbet was unanimously elected President and Mr. Geo. Millar (GM3UM) Secretary. A fully representative committee has been nominated and an era of still greater progress can be anticipated. Five metre activity is growing. Please contact GM6SR if interested.

GM6XI.

**"E" Area (Ayrshire and South West Scotland).**

**A.R.:** D. A. MacQueen (GM4PW), 3, Ayr Road, Prestwick. Prestwick 78375.

**Scribe:** Miss J. A. C. Rainie (GM3AKR), 6, Montgomery Terrace, Ayr. Ayr 2375.

Thirty-eight members were present at the November meeting when a most interesting talk was given by BRS10053 on insulators and insulating materials. 3OL reports that the newly formed Dumfries Society is doing well with a roll numbering 30. Morse classes have been started by 2BMJ. 2AHD gave an exceptionally interesting talk on Wave Guides. The Morse class held by

BRS6140, at Troon, is still going strong. BRS12592 hopes to start a class in Kilmarnock. Members in Bute are asked to contact the Scribe. Congrats to BRS7270, now GM3BEL, and to BRS-10099, now GM3AYR. This call sign must be unique as it is also the name of his home town! GM3AKR.

**"F" Area (Stirlingshire, etc.).**

**A.R.:** C. M. Winton (GM6XW), 146, Broomagebank, Larbert. Larbert 315.

**Scribe:** B. B. Fulton (GM4JQ), Kerton, Burnbrae Road, Falkirk.

The attendance of 15 at the November meeting, included 12 with calls. Proposals were discussed for promoting a livelier interest in the area. Future meetings will be held on the 2nd Thursday of every month at the Plough Hotel, Stenhousemuir at 7.30 p.m. Congrats to 6NX on his recent marriage. Bill Peat (ex VU2WP) is now demobbed and on the air with the call GM3AVA. 4JQ and 5PV are active. GM6XW.

**"G" Area (Borders)**

**A.R.:** J. P. Blair (GM5FT), 35, Market Place, Selkirk.

At the meeting held at the Victoria Hotel, Hawick, on 17th November, Mr. W. Vinnicombe (GMSRV) was nominated T.R. GM5FT.

**"H" Area (Fife and Kinross-shire).**

**A.R.:** W. N. Craig (GM6JJ), 2, Aberdour Road, Burntisland, Fife. Burntisland 2302.

BRS4484 is now GM3AXO. GM4AN and 4FK are still doing well on 28 Mc/s, the former is erecting a rotary. GM2NQ, 4GK and 6JJ are continuing their QRP tests on 3.5 and 1.7 Mc/s. 6JJ celebrated the complete restoration of 7 Mc/s by working VESNW (Bafin Island) on that band. GM4AN transmits slow Morse on 3.5 Mc/s twice weekly. Will members making use of these transmissions please notify 4AN or the A.R.? An Area Get-together is held on 1.7 Mc/s phone every Sunday evening beginning at 10 p.m. So far, GM2NQ, 3ND, 4AN, 4GK and 6JJ have taken part, and it was good to welcome some of our friends from the other side of the Forth. Reports on these transmissions from listening members in "G" would be greatly appreciated and will be acknowledged. GM6JJ.

### New Radio Clubs

A radio society has been formed to incorporate all the amateurs in the North-West-Kent area. At the inaugural meeting held on October 25, the following officers were elected:—**Chairman,** G. Deakin, G8DN; **Vice-Chairman,** A. O. Milne, G2MI; **Hon. Secretary and Treasurer,** L. Gregory, G2AVI (18 Upper Park Road, Bromley, Phone RAV. 2071).

Although the Society is at present composed solely of R.S.G.B. members, it is not proposed to make this a condition of membership. Meetings will be held on the last Friday in each month at Aylesbury Road School, Bromley.

At the inaugural meeting of the Oxford and District Amateur Radio Society held on October 30, the following officers were elected:—**President and Treasurer,** G8PX; **Chairman,** G3WH (ex-V81BA); **Hon. Secretary,** BRS7186. G3AEW, G4QK, 5RP, BRS12238 and 12320, form the Committee. Meetings will be held twice a month, full details of which can be obtained from Mr. R. H. Farmery, BRS7186, 99 Stanway Road, Headington, Oxford.

### The Thames Valley Amateur Radio Transmitters' Society

The second meeting of the T.V.A.R.T.S. was held on the 6th November, at the Carnarvon Castle Hotel, Hampton Court, when a lively discussion took place on future programme policy. Future meetings will be held at the same address on the first Wednesday of each month.

The Society is open to all keen Amateur Radio enthusiasts and those who are interested are asked to contact the Hon. Secretary, Mr. D. R. Spearing, G3JG, "Thurston," Orchard Way, Esher, Surrey. (Esher 3369).

### Northern Radio Club

Mr. J. Anderson, 6, Glendale Avenue, King's Road Estate, Wallsend-on-Tyne, has been elected to the office of Hon. Secretary of the Northern Radio Club in place of Mr. A. Robson who has been posted overseas. All R.S.G.B. members living in and around Newcastle-on-Tyne are invited to attend meetings of the Club which are held on Wednesday evenings at 16, Stratford Road.

### Edgware & District Radio Society

The above Society is running two experimental sections, one covering receivers and the other measuring equipment. Mr. Kettleton, BRS10772, 32 Westmere Drive, Mill Hill, N.W.7, will be pleased to hear from other Societies with a view to an exchange of information.

### Can You Help?

Mr. E. L. Boxer, G3AUG, 73, Northwood Avenue, Elm Park, Romford, Essex, having purchased a Type 58 Walkie Talkie is anxious to discover how other members have used this set. He wonders whether it can be used as a V.F.O.



## FORTHCOMING EVENTS

1946

- Dec. 15 District 12 (Enfield), 3 p.m. at the A. & B. Cafe, Southbury Road.
- .. 15 District 14 (East London), 7 p.m. at Ilford Town Hall.
- .. 16 Watford & District Radio Society, 7.30 p.m. at the Carlton Tea Rooms, 77A Queens Road.
- .. 17 District 14 (Brentwood), 7.30 p.m. at Montazah, St. Charles Road.
- .. 18 Scotland ("A" Area), 7 p.m. in the Institute of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow.
- .. 19 District 6 (Falmouth), at Ashfield House, Penhard, Nr. Penryn.
- .. 19 District 12 (St. Albans), 7 p.m. at Jack's Cafe, Verulam Road.
- .. 19 District 15 Meeting, 7 p.m. at The A.E.U. Rooms, 66 High Road, Chiswick, W.4.
- .. 20 ANNUAL GENERAL MEETING, at I.E.E. 6 p.m.
- .. 20 District 5 (Bristol), 7 p.m. at Keen's Cafe, Park Row.
- .. 20 District 8 (Cambridge), 7.30 p.m. at Jolly Waterman.
- .. 20 District 13 (Woolwich & Plumstead), 8 p.m. at St. Marks Hall, Plumstead Common.
- .. 20 District 14 (Grays), 7.30 p.m. at Bairds Cafe, Orsett Road.
- .. 21 District 6 (Torquay), 6.30 p.m. at Y.M.C.A., Torquay.
- .. 21 District 6 (Plymouth), at 84 Embankment Road.
- .. 21 District 1 (West Cumberland), 6.30 p.m. at Golden Lion, Harrington.
- .. 22 District 11 (Rhyll & Prestatyn), 3 p.m. at Crown Hotel, High Street. Lecture on Navigational Aids.
- .. 22 District 15 (Twickenham), 6 p.m. at G2VV, 5 Gloucester Road, Hampton.
- .. 23 District 18 (Hull), 7.30 p.m. at 30 Princes Avenue.
- .. 28 District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.
- .. 30 District 14 (Southend), 7.30 p.m. at 16 Kent Avenue, Leigh.
- .. 31 District 7 (Bournemouth), 7.30 p.m. at Lodge Room, Branksome Arms Hotel, Commercial Road.

1947

- Jan. 2 District 7 (Portsmouth), 7.30 p.m. at Cosham Civic Centre.
- .. 2 District 6 (Penzance) at Council Chambers, Town Hall, Penzance.
- .. 3 District 14 (Grays), 7.30 p.m. at Bairds Cafe, Orsett Road.
- .. 4 District 1 (Liverpool), 2.30 p.m. at Lecture Room, 14 Colquitt Street.
- .. 4 District 12 (N. London), 7.30 p.m. at Merryhills Hotel, Oakwood.
- .. 7 District 7 (Cheam), 7.30 p.m. at Ye Olde Red Lion.
- .. 7 District 12 (Welwyn Garden City), 8 p.m. at the Council Offices.
- .. 7 District 14 (Chelmsford), 7.30 p.m. at 184 Moulsham Street.
- .. 9 District 6 (Taunton), 7 p.m. at Y.M.C.A.
- .. 9 District 15 (Ruislip), 7.30 p.m. at The Scouts' Hall, Poplar Close.
- .. 11 District 15 (Ashford), 6.30 p.m. at G3BQ, The Den, Church Island, Staines.
- .. 12 District 15 (Ruislip), Visit to Brookmans' Park for limited number. Apply to T.R.
- .. 14 District 7 (Bournemouth), 7.30 p.m. at Lodge Room, Branksome Arms Hotel, Commercial Rd.
- .. 14 Surrey Radio Contact Club, 7.30 p.m. at Blacksmiths Arms Hotel, South End, Croydon.
- .. 15 District 1 (Liverpool), 7 p.m. at Lecture Room, 14 Colquitt Street.
- .. 15 District 7 (Reading), 6.30 p.m. at Palmer Hall, West Street.
- .. 16 District 6 (Falmouth), at Ashfield House, Penhard, Nr. Penryn.
- .. 16 District 14 (Brentwood), 7.30 p.m. at G4AG, 56 Westwood Avenue.
- .. 17 Presidential Address at I.E.E., 6.30 p.m.
- .. 17 District 14 (Grays), 7.30 p.m. at Bairds Cafe, Orsett Road.
- .. 19 District 14 (East London), 3 p.m. at Ilford Town Hall.
- .. 21 District 3 (Birmingham), M.A.R.S., 6.30 p.m. at the Imperial Hotel.
- .. 21 District 18 (Hull), 7.30 p.m. at 30 Princes Avenue.
- .. 31 District 14 (Grays), 7.30 p.m. at Bairds Cafe, Orsett Road.

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

## Current Literature

A complete range of valves suitable for modern low power transmitters is described in a new publication *Mullard Valves for Amateur Communications*.

Basic data, prices, and diagrammatic illustrations of dimensions and base connections, are included.

Copies may be obtained from Publications Dept., The Mullard Wireless Service Co., Ltd., Century House, Shaftesbury Avenue, London, W.C.2.

*Radio Receiver Specifications, 1945-46*. Published by The Trader Publishing Co., Ltd. (distributed by Iliffe & Sons, Ltd.), price 9d.

In this booklet are presented for quick reference, condensed technical specifications of radio receivers released since the war and marketed by leading manufacturers. The details are correct up to October 29, 1946.

The booklet contains in condensed form: Descriptions of Sets—Model Numbers—Styles of Cabinets—Valves Employed—Intermediate Frequencies—Wavebands Covered—Power Outputs—Power Supplies—and Retail Prices of 138 Sets by 55 makers.

*Handbook of the Scientific Instrument Manufacturers' Association of Great Britain Ltd.*

Private and confidential publication issued to members of the Association.

*Mullard Valve and Service Guide*.

Published by Mullard Wireless Service Co., Ltd., for use by the trade only. Divided into four sections: (1) Illustrations of valve bases, (2) Characteristics and operating data, (3) Equivalent tables, (4) Replacement and substitution types.

*City and Guilds of London Institute.*

Report on the work of the Department of Technology for the year 1945. (Price 1s.)

*Demonstrations of Radio Aids to Civil Aviation.*

Technical descriptions of radio aids demonstrated in the United Kingdom on behalf of P.I.C.A.O. (Provisional International Civil Aviation Organisation) during September, 1946. H.M.S.O. (Price 5s.)

## Redifon.

Descriptive brochure of aviation radio and audio equipment issued for the S.B.A.C. Exhibition and P.I.C.A.O. Conference by Redifon Ltd., Broomhill Road, London, S.W.18.

*G.E.C. Telecommunications*.—Published three times yearly by The General Electric Co., Ltd., Coventry. A technical publication printed on art paper and fully illustrated. The current issue contains articles on Short Range Communication by V.H.F. Radio and New Carrier Telephone Equipment.

## Mr. CQ!

G3AP recently visited a fellow ham and upon arrival the mother of his friend enquired if he was "that mysterious station CQ whom everybody always seems to be calling." G3AP says "she was being perfectly serious, so I realised once more that to the uninitiated we do all appear to be quite mad!"

## Solar Activity

Mr. P. Sutcliffe, BR8912, Stewton House, Louth, Lincs. wishes to contact members interested in solar radio emissions.

## DISTRICT NOTES FOR THE JANUARY ISSUE

AS it will not be possible to begin the publication of Regional Notes until the February issue, Town Representatives should forward their notes for January to their District Representative or Scribe as hitherto.

As from the February issue, Regional Notes will supercede District Notes. The names and addresses of the Regional Representatives and Scribes will appear in the January issue. Under the new scheme of representation Town Representatives will send notes to their Regional Representative or his Scribe.



## NEWS FROM HEADQUARTERS

## COUNCIL 1946

## President:

ERNEST LETT GARDINER, B.Sc., G6GR.

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

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

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

Honorary Editor: Arthur O. Milne, G2MI.

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

Members: P. C. G. Bradley, G8KZ, C. H. L. Edwards, G8TL, R. H. Hammans, G2IG, F. G. Hoare, G2DP, S. E. Langley, G3ST, Capt. J. W. Mathews, G6LL, K. Morton Evans, O.B.E., GW5KJ.

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

General Secretary: John Clarricoats, G6CL.

## October Council Meeting

*Resume of the Minutes of a Meeting of the Council of the Inc. Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.1, on Monday, October 21st, 1946, at 6 p.m.*  
 Present:—The President (Mr. E. L. Gardiner, in the Chair), Messrs. Bradley, Clark, Edwards, Hammans, Hoare, Lawar, Mathews, Milne, Watson, Watts and John Clarricoats (General Secretary).

*Apology:*—An apology was presented for the absence of Mr. K. Morton Evans.

## Membership.

Resolved to elect 241 Corporate Members, 42 Associates and 10 Junior Associates. Eight Associates applied for, and were granted, Corporate Membership. Mr. B. C. Partridge, BRSS611 applied for, and was granted, Life Membership.

## Affiliation.

Resolved to renew the affiliation of the Thames Valley Amateur Radio Society.

## Affiliated Societies.

Resolved that in future the Secretary shall write to the appropriate R.R. or D.R. for information regarding the status of every Society or Club applying for affiliation. Resolved further that annually the Secretary shall write to every Affiliated Society or Club requesting to be supplied with a copy of the Society's rules, if the same have been changed since the affiliation was granted.

## Technical Booklets.

Resolved to award honoraria to those members who, in response to the editorial published in the November 1946 BULLETIN, contribute technical material and/or photographs to the new series of Technical booklets; provided such material is used.

## The late Mr. Seymour Buckingham.

Warm tributes were paid to the memory of the late Mr. Seymour Buckingham, G5QF.

Resolved to record that the Council mourns the loss of Mr. Buckingham whose work as District 12 Representative since 1932 has been greatly appreciated. Resolved further that the President offers to Mrs. Buckingham the heartfelt condolences of the Council in her great loss.

## Representation.

Resolved to accept late T.R. nominations but to defer until the Regional Representatives are appointed, offers received for C.R. positions.

## Calibration Services.

Resolved to publish the names of those members who had volunteered to give frequency checks over the air.

## Electronic Scrap.

It was reported that a Fleet Order had been issued cancelling the arrangements whereby members could purchase electronic scrap at 50/- per cwt.

## Proposed European DX Contest.

Resolved to inform the I.A.R.U. that the Society would be willing to support an Annual European DX Contest organised by V.E.R.O.N. (Netherlands).

## District 15 (High Wycombe).

Resolved to inform Mr. Wilkins that the General Secretary is prepared to attend a meeting of High Wycombe members to explain why it is not possible at the present time to increase the size of the BULLETIN. Further resolved to ask Mr. Wilkins to inform the High Wycombe members that any proposals they wish to make in regard to local representation will receive the careful consideration of the Council.

## New Periodical.

The Council considered a suggestion that the Society should publish a new periodical, but after receiving a report from the

Secretary explaining the very small size which such a publication could reach, it was resolved to take no action. (This matter was referred to in the November issue.—Ed.)

## Letter to Affiliated Societies.

The Coventry Amateur Radio Society and the West Cornwall Radio Society wrote to dissociate themselves from a circular letter issued by the Romford & District Amateur Radio Society, wherein they had solicited the votes of members of affiliated Societies for a nominee of their Society to serve on the 1947 R.S.G.B. Council.

## Society Laboratory.

The Council considered a suggestion from Mr. Allbright (Secretary of the West Cornwall Radio Society) that the R.S.G.B. should set up a Laboratory. Resolved to inform Mr. Allbright that his suggestion will be borne in mind when the full post-war technical programme is under consideration by the Council.

## P.O.W. Reunion.

Resolved to request the Social Committee to arrange a dinner in London, at a cost not exceeding 20/- a head, exclusively for ex-P.O.W. members, members of the Council and others who were closely associated with the R.S.G.B. P.O.W. Fund. Resolved further that the Society shall pay for the cost of the dinner in the case of the ex-P.O.W. members and invited guests.

## Disposal of Surplus Government Receivers.

Resolved in view of the very unsatisfactory progress so far made, to take no further action in regard to a proposal, made earlier by the Admiralty, that the Society should negotiate for the sale of a small number of surplus Government receivers.

## Unruly Conduct on the Air.

A letter signed by 14 members of the Maidstone Amateur Radio Society, was read, in which a protest was lodged against the decision of the Council to report cases of serious unruly conduct on the air to the G.P.O. Resolved to write to the President of the M.A.R.S. explaining what was implied by "serious unruly conduct" as it was felt that the phrase had been misconstrued by members.

## Contests Committee.

The Report of the Contests Committee, which met on October 16 was presented and approved. Arising from a Recommendation made therein the Council resolved to approve for publication a statement to the effect that the Society does not propose to offer prizes or cash vouchers for radio equipment to the winners and runners-up of Society Contests and other events, on the ground that such inducements may lead to an undesirable form of competition.

## National Field Day, 1947.

The Council adopted the following guiding principles around which the rules for N.F.D., 1947, will be framed:—

(a) The event will be based on the Society's Town (or Area) organisation, and each town will compete against every other town. Only properly constituted Town (or Area) groups will be permitted to compete.

(b) Each Town (or Area) will be permitted to instal two stations. Station "A" may operate on 1.8 and 3.5 Mc/s and Station "B" on 7 and 14 Mc/s.

(c) "A" Stations will use an input power not exceeding 10 watts; "B" Stations will use an input power not exceeding 25 watts.

(d) No gear may be installed before 12 noon on Saturday, June 7, 1947, and the event will run for 24 hours from 5 p.m. on that day.

The meeting terminated at 9.25 p.m.

## A.R.R.L. Publications

The following rates now apply for A.R.R.L. publications handled by the Society:—

Subscription to QST . . . . . Per annum £1 1s. 6d.

Radio Amateurs' Handbook (1947 edition) . . . . . 11s. 6d.

These changes have been brought about as the result of a decision by the A.R.R.L. to increase the overseas selling price of their publications.

## OUR FRONT COVER

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

## EXCHANGE AND MART SECTION

Due to paper restrictions advertisements are only accepted "for insertion when space is available." No advertisement must exceed 50 words. **RATES: Members Private Advertisements 2d. per word, minimum charge 3/-.** Trade, 6d. per word, minimum charge 9/-. Use of Box number 1/6 extra. Send copy and payment to **PARRS Advertising Ltd., 121 Kingsway, London, W.C.2.**

**A.C. Semi-Midget 4 valve M/L Receiver, 10 guineas, 1000 kc/s. 7039 kc/s, crystals, £1 each. 110 kc/s. I.F.s, 10s. 6d. pair.—Box E/45, PARRS, 121 Kingsway, London, W.C.2.**

**ALUMINIUM sheet, panels, chassis, cabinets, racks, plain or cracked. Complete equipment; components, metal valves, etc.—S.A.E. lists.—AMATEUR RADIO SERVICE, 66HP, Canning Street, Burnley.**

**ALL components, complete equipment, test gear and technical books for transmitting amateurs, short wave listeners and experimenters now obtainable from 56 College Road, Harrow. Prompt repair and re-alignment of communication receivers personally supervised by G4HV. Postal enquiries receive immediate attention. Open 9 to 6.30 daily including Saturdays.—ODEON RADIO, Harrow.**

**AS BRS9909 is moving, less space, so 50 surplus valves, TX and RX (mostly American types), many brand new. Please send for free list.—26 Blythwood Road, Pinner, Middx.**

**BARGAINS in Short Wave components, ex-Air Ministry: write for list.—THE STAMFORD RADIO CO., 199 Stamford Street, Ashton-u-Lyne.**

**BUILD Your Own 3-Wave B.C.L. Superhet. A.C., A.C./D.C. and 1.4 v. All Dry Battery. Layouts, circuits, wiring diagrams, etc., 5s. each.—WELDONA RADIO ACCESSORIES LTD., Swanage.**

**CQ. FELLOWS.—Introducing again R.V. Transmitting Inductances.—The rigid Air Spaced Tank Coils giving low loss at low cost. Made by Hams for Hams. Stamp for leadset.—R. V. TRANSMITTING INDUCTANCES, GM3OM, 12 Drip Road, Stirling.**

**CALLING CQ! Write for Britain's first QSL Catalogue (see September BULLETIN).—G3DI, SANDERLEY, The Studio, Castle Street, Rugby.**

**CHESHIRE Ham Specialists, G3AOS, J. G. Barnes & Co., Eddystone, Raymart, Hamrad, etc. May we dispatch your copy of Eddystone Short Wave Manual 5, 2s. 7d. R.S.G.B. Publications and all types of construction work undertaken. Transmitters, Receivers, Modulators, etc.—J. G. BARNES & Co., 4-Victoria Road, Hale, Altrincham, Cheshire.**

**CLEARING.—Mostly new. Transformer 1,250 v., 250 mA, £4. Filament transformers, chokes, etc. Unused TZ40's £2 5s. each. Many others, including rectifiers. Ward Lennox Aerial relay £1 10s. Weston Meters, Brookings, C.C.C. Crystals, Cydon condensers, lots more, cheap.—Write GSDC, 469 Higher Brunshaw, Burnley, Lancs.**

**COMMUNICATION Receiver. 10 valves, crystal, BFO, optional A.V.C. 1500-20,000 kc. 230v. £30; worth double. Avo 40, £12. "Walkie-Talkie" Mark 58, complete, £10 or offers. Also meters, resistances, condensers, etc. Cheap. Power Pack, amplifier Pen 45 p.p. Short wave chassis.—BRS6323, 3 Hungerford Avenue, Slough, Bucks.**

**COMMUNICATION Receiver. R.103.MK1. (Canadian) all electric 7-valve 1-16 Mc/s hardly used, as new, £34.—20, Church Avenue, West Seckburn, Choppington, Northumberland.**

**CRYSTALS.—Billey 3510, 3580, 21s. each. For regrounding—small type in holders 3 Mc/s.—10 Mc/s. (no Ham band) 6s. each. Various in holders 7s. 6d. less holders 2s. 6d. Eddystone All-World Two with coils, phones, etc., £5 10s. 3S4, 1R5, etc., 10s. 6d. Unused 6L6's, 11s. 6d.—Box E/63, PARRS, 121 Kingsway, London, W.C.2.**

**DESIGNER of Communications receivers, transmitters, etc., wanted for small lab. Must be able to work right through on own initiative. Applicants must give full details of practical experience, state age and salary required. Good prospects.—Box F/16, PARRS, 121 Kingsway, London, W.C.2.**

**EDDYSTONE E.C.R. receiver with speaker, recently realigned throughout, 1.6 to 33 Mc/s. nearest to £40; also brand new Westinghouse 0-10 amp. thermal meter.—G6XL, Ashburn, Calverley, Leeds.**

**EXCHANGE two as new 35L6/GT's for two 25A6's.—BUTTERWORTH, BRS10983, Carlton House, High Grove Road, Cheadle, Cheshire.**

**GUARANTEED brand new and tested, Hytron TZ40's—£2. Eimac 35T's, £2 10s. M/C meters 2 1/2 x 2 1/2 Ferranti 0-20v., 20s.; 0-3.5A (HF), 25s.—Box F/9, PARRS, 121 Kingsway, London, W.C.2.**

**G8IU, Greenford, Middx., offers services in design, manufacture and repair of radio and electronic gear. Stocks of general radio supplies. Agent for Eddystone components.—W. H. WENTWORTH, Assoc. Brit. I.R.E., 1338 Greenford Road, Greenfield, Middx.**

**MARCONI CR100, communication receiver, perfect condition. R.C.A. type AVT.15 Transmitter contains vibrapak, thermocouple 0-1 metal 6L6's. 25 watt CO.PA. transmitter and power pack. Offers for lot or separate. S.A.E. for other gear too numerous to list.—G3AMT, 6 Laburnum Grove, Portsmouth.**

**MODULATION Transformer UTC VM2 60 watts Audio 42s. 6d. Premier "Matchmaker" Output Transformer 60 watts. Audio, 60s. Valves 807 (2) 17s. 6d. each. PT15 (3), 15s. E40G3 CRT 3in., 50s. All unused.—G3PO, 54 Granshaw Close, Birmingham 30.**

**M.L. Motor Generator, Input 12 volts. D.C., output 400 volts at 150 mA, complete with smoothing, £5 10s. carriage paid. Wanted: Instruction book or circuit diagram for a 1938 Sky Buddy, your price.—BRS9558, 75 Wessgate, Peterborough.**

**MUST sell, going abroad, ex-V.H.F. equipment. 9001's, 6AG5's, 6AK5's, 6C4's, 6J6's and one 7193, 10s. each. 955's, 9004's, Acorns, 15s. each and two unused TZ20's, £1 each, also 2 unused Phillips photo-electric cells 3533 and 3541, £1 each.—S. F. HINKS JR., Hopedale, Camelon, Falkirk, Stirlingshire.**

**NATIONAL 1-10, receiver, coils, power pack: in good order, £25.—G5LJ, 32 Pilkington Avenue, Sutton Coldfield.**

**NEW Valves surplus to requirements, several of each. 807, 25s.; pair DA41 (TZ40), £5 10s.; 5U4G, 9s.; neon voltage stabilisers, 2s. 6d.; VR53, 116, 92, 55, 101, 56, Y63, CV1065, 6C4, 6J6, 68G7 all at 5s. 6d. Components, etc., exchange-what have you?—G5ZT, 84 Embankment Road, Plymouth.**

**PERSPEX supplied to your individual requirements. Cut, drilled, bent as ordered. Sheets 5/32in. @ 1d. per square inch. Post paid over 10s. Quotations: MIDLAND HAMGEAR CO., 3 Shrubbery Street, Kidderminster, Wores.**

**QSL's and log books (P.M.G. approved). Samples free: state whether G or BRS.—ATKINSON BROS., Printers, Elland.**

**Q.S.T.'s, January, 1932 to January, 1940. Radio October, 1936 to July, 1937.—Offers to G6BS, 52 Manton Drive, Luton.**

**R.C.A. Communications receiver, Model A.C.R.175, 500-60,000 kc/s., 11 tubes, crystal-gate, B.F.O., etc., with separate speaker, phones, servicing manual. Would consider exchanging above for good lathe, and accessories.—Particulars to WARNER, G3BB, 29 Grove Street, Relford, Notts.**

**RCA—Volt Ohmyst Junior—New! Valve voltmeter 0-1,000v D.C. and A.C. 0-1,000mΩ direct reading—complete with spare set matched valves and instructions.—Offers: The Lodge, St. Catherine's Court, The Avenue, London, W.4.**

**RECEIVER A.C. 4 valve, Special Eddystone bandspread from 10 metres, Eddystone coils, choke output, complete speaker and phones, new valves, reliable RX for £9 10s.—E. LEE, 20 Thornton Road, Burnley, Lancs.**

**SALE.—Sky Champion perfect condition just overhauled and calibrated by xtal calibrator. Best offer over £25. Buyer must collect. Callers evenings after 6.—G5ZQ, 25 Old Barn Way, Southwick, Sussex.**

**SALE.—Eddystone All-World Two receiver. Complete, new, with coils, £5. SWRX Battery, SGHF, SGDET, Pent. Output. Bandsread, complete with coils as new £10. 5 Eddystone SW valve holders (under baseboard wiring), Marconi Junior transformer, new. 1 twin condenser, new. 1 small aluminium screen. Lot 25s.—TURNBULL, 106 Scott Street, Galashiels (BRS2845).**

**SALE.—Unused valves: 813's, £2 10s.; 805's £2 10s.; KTSC-807's, 15s.; 954's, 15s.; 6U4G's, 10s.; 6J5GT/G's, 5s. 0-2.5 mA Turner meter, 25s. 0-1.5kV Turner Electrostatic meter, 25s. S.A.E.—BRS12,126, 56 Bury Street, Ruislip, Middx.**

**SELLING up.—All types of used and unused radio parts. Coils, I.F.'s, Chokes, valves, etc., etc. Going cheap. Send your enquiries to BOX E/46, PARRS, 121 Kingsway, London, W.C.2.**

**SELL or swap—1,000-0-1,000 volt 400 mA transformer, £4 10s. Rotary transformer 12v. to 300-115 mA, 15s. New 808 and 805 valves, 45s.; RK48, 45s.; TZ40's, 80s. 35s. Peto Scott 2 stage preselector, £8 (7-550 metres). Eimac 35T, 30s.† RK23, 18s.; Eimac 304T1, £4 10s.—W. B. STIRLING, 137 Glasgow Street, Ardrossan, Ayrshire.**

**SHROPSHIRE Hams! Call and see us. We have a very good stock of Ham gear. Eddystone, Raymart, Hamrad, Labgear, etc.—POWERS RADIO (G3ASC), Albion Hill, Oswestry.**

**SILVER plated wire coils suitable for V.F.O. and frequency meter work. 10-20 Mc/s., 3s. 6d.; 4-7-10 Mc/s., 4s. 6d. Postage extra.—M.O.S., 24 New Road, London, E.1.**

**SURPLUS gear for sale. S.A.E. for list. Wireless World's 1942 to date; also BULL from 1934 to date. What offers?—BRS6940, The Chantry, Pilgrims Way, Kensing, Kent.**

**VALVES.—Price each: R.C.A. 813 (2), 70s. 803 (2), 90s. 830B (4), 30s. 834 (4), 40s. 866/866A (4), 30s. 954/955/956 (6), 20s. Taylor, T40 (2), 40s. T55 (1), 50s. Eimac, 35T (6), 60s. All new and unused. H.R.O. Coils (2), 480-960 kc/s.—Offers, BOX E/52, PARRS, 121 Kingsway, London, W.C.2.**

**V55R Communications Receiver and Radiovision expander covers the 3.5 to 60 Mc/s. amateur bands.—Illustrated literature from RADIOVISION (LEICESTER) LTD., 58/60 Rutland Street, Leicester.**

**WANTED.—Instruction Manual for AR8SD. Buy, loan or exchange for other 8/Sheets.—78 South Street, Hyde Park, Doncaster.**

**WANTED.—H.R.O. Senior or SX28A Receiver in good condition. Particulars, price. To W. K. CALDERWOOD, Augher, Co. Tyrone.**

**WANTED.—H.R.O. coils covering frequency of 200 kc/s.—GM6RG, The Hollies, Galashiels, Selkirkshire.**

**WANTED.—Bandsread type coils for HRO. 7-14 Mc/s. and 14-30 Mc/s. only. Will buy or exchange general coverage coils for same.—G2AAN, 136 Andover Road, Newbury, Berks.**

**WANTED.—P.W.O. type dial drive.—State price, condition and type to G4CI, 30 Bodley Road, New Malden, Surrey.**

**WANTED.—Circuit ex-R.A.F. R1116A receiver.—BRS1759, 11 The Highway, Sutton, Surrey.**

**32 WATT Radiotron quality amplifier, ABI 6L6's bass and treble controls, used 3 weeks £15. Sound Sales AW quality s'het feeder listed 15 gns., £10. AW Sig. gen., A.C., new, £7. VTVM 3 ranges 0-100v. to 10 Mc/s., £4.—PARLETT, 341 High Street, Lincoln.**

# R.S.G.B. BULLETIN

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## REPRESENTATION

AS from the beginning of 1947 a broader system of representation will come into force throughout the United Kingdom. Whether or not the system fully succeeds in its purpose depends very largely upon the membership in general and their representatives in particular. That it will encounter teething troubles seems certain, but provided a spirit of co-operation prevails there is little doubt that it will lead to greater efficiency and a closer liaison between Headquarters and the membership.

For some time after the publication of an announcement in the July BULLETIN, explaining how the new scheme would operate, the Council was disturbed at the apparent lack of interest on the part of members, but as time passed T.R. and C.R. nominations began to flow in with the result that the list, as printed in the October issue, made a very fair showing. Since then several other groups have submitted T.R. nominations so that now the total has reached 106 Town (or Area) Representatives, and 32 County Representatives. All of these representatives have been constitutionally elected by the membership, and it is not too much to ask that all members in the towns or counties concerned will give their full support to the chosen representative.

The blanks in the list of County Representatives will be filled as soon as possible during the new year, but as no nominations were received from the membership the Council will themselves be compelled to make the appointments. It is because of the danger of apathy that the Council, after consulting the D.R.s, decided that for the coming year the Regional Representatives should be appointed. The decision as to whether, in future, the R.R.s shall be elected by the membership will be taken at the next Delegates' Conference, when the Council will meet not only the R.R.s, but a number of County Representatives.

In order that the whole membership may know what is expected of the new representatives the Council has approved a list of their duties.

The duties of a Regional Representative will be :—

- To act as the Council's representative in the Region he represents and to provide a liaison between the Council and the members in his Region.
- To submit to the Council resolutions, recommendations and suggestions put forward by his County Representatives.

- To organise, in collaboration with his C.R.s, all Official Regional Meetings held in his Region.
- To arrange periodic meetings with his C.R.s to discuss matters of mutual interest.
- To submit to Headquarters a monthly Regional report for publication.

In order to expedite the preparation of the Regional reports each R.R. will be invited to appoint a Regional Scribe who will be responsible for editing the notes received from the T.R.s in the Region. For the time being Regional Reports will be limited to 500 words per month.

The duties of a County Representative will be :—

- To co-ordinate the work of his Town or Area Representatives and in particular to arrange periodic meetings between them to discuss matters of mutual interest.
- To visit each properly constituted town or area group in his county at least once during his year of office.
- To keep his R.R. informed of any matter which he considers should be brought to the attention of Council.
- To forward to his R.R. a brief monthly report of county activities. (This report will not be for publication).

The duties of a Town Representative will be :—

- To organise all local meetings and activities.
- To collect items of news for Regional Reports and to submit same to the Regional Scribe.
- To give advice to new members and invite them to participate in local affairs.

In order that the representatives may function as efficiently as possible the Council has agreed that certain out-of-pocket expenses shall be recoverable. It is not possible at this stage to estimate the total cost to the Society of these expenses, but they may reach such a figure that an increase in all subscriptions payable by members may have to be made. The Regional, County and Town Representatives are being informed provisionally of the expenses for which they may make claims and how such claims are to be presented to Headquarters. The claims will, in general, be submitted quarterly and after the Council has had the benefit of, say, six months experience of these claims, it is hoped that their scope can be more clearly defined and the policy for dealing with them finally determined.

J. C.



# REPORT OF THE COUNCIL

## OF THE INCORPORATED RADIO SOCIETY OF GREAT BRITAIN

### for the Year ended 30th September, 1946

THE year covered by this report was in many respects the most outstanding in the history of the Society. In October, 1945, the European war had been over for barely five months whilst the war in the Far East had only just ended. At that time it appeared that a long delay would occur before the security position permitted a relaxation of the controls that had put an end to active Amateur Radio six years earlier. However, as the result of prolonged negotiations between the Society and the Government departments concerned, permission was granted for the resumption of amateur transmission during the month of January, 1946. Of even greater importance was the fact that the G.P.O. accepted the many recommendations put forward by the Society for improved operating conditions.

#### Re-issue of Licences

For the purposes of record it seems desirable to set out briefly the more important concessions which have been granted to holders of post-war amateur wireless licences. These are as follows:—

- (1) Licences are now granted on an amateur, instead of an experimental, basis.
- (2) In general, only two types of licence are issued, which for the sake of convenience are described by the Society as Class A (25 watts) and Class B (150 watts).
- (3) Pre-war full licence holders are permitted to use an input power of 150 watts on all licenced bands except 1.7, 60 and 2300 Mc/s.
- (4) Pre-war artificial-aerial licence holders are issued with a 25 watt licence upon satisfying the G.P.O. of their Morse Code proficiency, and may apply for a Class B licence after 12 months.
- (5) Those serving, or who have served, in specific radio service trades are granted exemption from the Morse and/or radio theory examination.

The Society has been successful in obtaining the agreement of the G.P.O. and Service Departments concerned to the release of all pre-war frequency bands. As at September 30, 1946, the following frequencies had been released:—

1,715–2,000 kc/s.	Maximum Input power	10 watts.
3,500–3,635 "	" "	150 "
3,685–3,800 "	" "	150 "
7,150–7,300 "	" "	150 "
14,100–14,300 "	" "	150 "
28,000–30,000 "	" "	150 "
58,500–60,000 "	" "	25 "

[The 2300–2450 Mc/s. band was released in October, and the remainder of the 7 and 14 Mc/s. bands on November 6.—J. C.]

The Society has endeavoured to obtain permission for the use of sample bands of frequency between 60 and 500 Mc/s., but due to the pressing demands of other Services no success has yet attended its efforts. The Council appreciates fully that many members are anxious to conduct experiments on frequencies higher than 60 Mc/s. and an assurance is given that further representations will be made to the authorities concerned.

Following upon discussions with the G.P.O. permission has been granted for the resumption of portable operation, such stations being identified by the suffix /P.

The G.P.O. has also agreed to the suggestion put forward by the Society that an amateur station may be

operated from an alternate address, such stations being identified by the suffix /A.

Permission was sought, and granted, for amateurs in the Channel Islands to use the prefix GC, whilst a general clarification of amateur prefixes in use throughout the British Isles has recently been obtained from the G.P.O.

Several important operating concessions have been obtained. These include the elimination of the pre-war guard bands (or tolerances), permission to use "CQ," and the removal of restrictions on the length and height of aerials except at localities near to aerodromes.

#### Representation

During the war the Councils then in office gave consideration to the question of broadening Representation, it having been realised that due to the increase in membership the existing system was outgrowing its effectiveness. At that time it was not possible to progress beyond the discussion stage, but certain resolutions for the guidance of post-war Councils were recorded.

With the return to peace the present Council took steps to implement the resolutions moved earlier with the result that steps were taken to organise a Conference to which would be invited all appointed District Representatives, together with certain other senior members. The Conference duly took place in Birmingham in March, when the most careful consideration was given to the many aspects of representation.

As the result of decisions reached at the Conference, a new system of Regional Representation is to be introduced as from January 1, 1947. From the same date County and Town Representatives, elected by the membership, will take office. It is anticipated that eventually the Regional Representatives will also be elected by the membership, but the Council is not prepared to agree to this change until it is fully assured that members are willing to play their part in the election of Town and County Representatives. It is regretted that notwithstanding the widespread publicity given to the new scheme of representation, many groups of members failed to nominate Town and County Representatives.

The Council hopes that it will be possible during the coming year to arrange a meeting with the Regional Representatives to consider and report upon the working of the new scheme.

The Council records its warm thanks to the retiring District and Town Representatives and extends greetings to those who have agreed to continue in office either as Regional or County Representatives.

#### Membership

The growth of the Society during the past year far exceeded all expectations. It had been anticipated that the steep upward trend recorded during recent years would be retarded with a return to peace-time conditions. Instead, a new record has been achieved. During the year the membership increased by 2,924, compared with 1,900 last year. This growth is all the more remarkable when it is realised that the Society, like many other similar organisations, is at present unable to offer full services to those who join. Although a small section of the membership seems to be ready at short notice to level criticism at the administration of the Society, the vast majority of members appear



to be fully appreciative of the efforts being made by the Council.

The comparative figures for membership during recent years are set out below:—

	1943-4	1944-5	1945-6
Corporate Members—			
Home .. ..	7,191	8,876	11,446
Overseas .. ..	359	330	380
Associates and Junior			
Associates .. ..	167	396	675
Life Members ..	22	38	62
Honorary Members ..	5	6	7
Totals ..	7,744	9,646	12,570

## R.S.G.B. Bulletin

The increased circulation of the Society's Journal is the chief factor which has prevented the Council passing on to the membership in the form of a larger BULLETIN the small increases in the paper ration that have been authorised in recent months. The Council is fully aware that the BULLETIN is below the standard of pre-war issues; on the other hand they consider it desirable to place on record that every possible step has been taken to offer members the maximum amount of reading material.

With only 16 pages available each month it is quite impossible to cater for all shades of interest. Criticism has been directed against the Council for not publishing more constructional articles, but the membership should appreciate that many of the theoretical articles which have been the subject of criticism were papers read at the London meetings by distinguished radio engineers and scientists. It is the policy of the Council to publish these papers so that the large body of members who were unable to attend the lectures may not be altogether deprived of the benefit gained by the more fortunate minority.

It must also be borne in mind that due to the paper restrictions it frequently happens that articles are held up for many months after they have been accepted. Several of the articles which have been the subject of criticism were contributed during the war, but have had to take their turn in the waiting list for publication.

Groups of members, without full knowledge of the paper position, have failed to understand why other Journals are able to produce large issues. The answer is, of course, that a commercial periodical can, and does, limit its circulation. If the Society still had a pre-war membership there would be no difficulties in the way of producing a very much larger BULLETIN. As long as the paper ration is related solely to pre-war consumption figures and takes no recognition of an enforced increase in circulation due to an increasing membership it will be impossible to raise the BULLETIN to its pre-war size.

In order to present as much technical material as possible the Council has authorised the publication of District Notes and New Members' lists as supplements. This is regarded as an unsatisfactory arrangement, but is the only one open to the Society at present.

There are some signs of a slight easing of the paper position, although it is extremely doubtful whether any real improvement will take place for at least two years.

The Council has considered the possibility of publishing a new monthly or quarterly Journal, but after taking advice it has reluctantly come to the conclusion that, on account of the existing paper restrictions, a new supplementary periodical would be impracticable.

This opportunity is taken of thanking all members who have contributed to recent issues of the BULLETIN, and in particular to those who forwarded for publication copies of papers read at London meetings. The Council also thanks those firms who have continued to support the BULLETIN by taking advertising space. It is a matter of regret that insufficient paper is available to meet all orders received by the Advertising Manager.

## Technical Publications

As has recently been recorded in the BULLETIN the Council has requested the Technical Publications Committee to commence work on a series of technical booklets each dealing with a specific aspect of Amateur Radio. It is hoped that several of the booklets will be published during 1947. Sales of the *Amateur Radio Handbook* and its companion volume, the *Handbook Supplement*, have continued to be satisfactory, although, as was to be expected, there has been a falling off in orders from those centres where large numbers of radio personnel were in training during the war.

The Council is most anxious to publish a new edition of the *Handbook*, but for a variety of reasons it seems unlikely that this ambition will be realised during the coming year. A new booklet entitled *The Transmitting Licence* has been published and there seems little doubt that it is fulfilling a useful purpose. The second booklet, *Service Valve Equivalents*, is now in production and is due to appear early in 1947. It should be appreciated that the supply of paper for publications is obtained from a special paper reserve and that such supplies are not subject to the rationing conditions which are applied to periodicals.

## Committees

The following Committees were constituted by the Council:—

*Technical Publications*: Chairman, Mr. H. A. M. Clark, B.Sc.(Eng.) (G6OT).

*Codes of Practice*: Chairman, Mr. K. Morton Evans, O.B.E. (G5KJ).

*Social*: Chairman, Mr. S. A. Howard (G8TY).

*Contests*: Chairman, Mr. W. H. Matthews (G2CD).

*QSL*: Chairman, Mr. A. O. Milne (G2MI).

*Staff*: Chairman, The President (Mr. E. L. Gardiner, B.Sc.) (G6GR).

In addition to the work referred to earlier in the report, individual members of the Technical Publications Committee have rendered valuable assistance to the Editorial staff, by giving advice on matters relating to technical contributions submitted for publication.

The Codes of Practice Committee has considered numerous matters relating to operating procedure, and are at present preparing a booklet on the subject.

The Social Committee has arranged a London Members' Ladies Night, and are planning additional social activities. For the reasons mentioned earlier the Committee cannot yet make plans for the holding of a London Convention.

The Contests Committee has arranged a series of contests and other events to take place during the coming year.

## QSL Bureau

The Council desires to record its warm thanks to Mr. A. O. Milne (G2MI), and to the several other members who have voluntarily accepted the responsibility of operating the R.S.G.B. QSL Bureau. By introducing a new system of handling incoming cards, the load has been divided, but the Council realises that eventually it will become necessary to transfer the initial sorting of such cards to Headquarters.

For the time being this task is being undertaken by Mr. Milne in his own home.

The method employed for distributing cards to home members is working satisfactorily, and many letters of appreciation have been received. Although the method has only been adopted by the Society since the war, it is interesting to note that a similar method has been in force in the U.S.A. for many years past.

Whilst the Bureau is operated on present lines the Council does not intend to make a charge for this service.

### Provincial District Meetings

Members resident in or near to London are fully aware of the problems attendant upon the organisation of large gatherings in the Metropolis, but certain Provincial members may not be so fully conversant with the difficulties. Realising the impossibility of attempting to arrange a Convention in London during 1946, the Council decided that steps should be taken to hold meetings in all English Districts, as well as in Scotland, Wales and Northern Ireland. Their decision was warmly received by the provincial membership who welcomed the opportunity of meeting members of the Council and Headquarters staff in their own District. The following is a list of the venues selected for official meetings during the current year together with the names of those who attended :—

Mar. 24	Birmingham (District 3)	The President and Council.*
April 14	Bristol (District 5)	Messrs. Bradley, Edwards and Morton Evans.*
" 28	West London (District 15)	Messrs. Bradley and Watson.*
" 28	Leeds (District 2)	The President, Messrs. Hammans and Milne.
May 5	Norwich (District 9)	Messrs. Bradley, Edwards, Lewer and Mathews.
" 18	Belfast (N. Ireland)	The President, Messrs. Hammans, Lewer and Milne.*
" 26	Torquay (District 6)	The President, Messrs. Bradley and Edwards.
June 2	Leicester (District 4)	Messrs. Bradley, Hoare and Milne.
" 15	Edinburgh Glasgow (Scotland)	The President, Messrs. Bradley, Lewer, Milne and Watson.*
" 30	East London (District 14)	The President, Messrs. Bradley, Clark, Edwards, Hoare and Mathews.*
July 7	Mablethorpe (District 17)	Messrs. Clark, Edwards, Hoare and Langley.
" 13	Southsea (District 7)	Messrs. Bradley, Edwards and Hoare.*
" 21	Southend (District 14)	Messrs. Edwards, Hammans, Hoare, Langley, Mathews and Milne.
Sept. 1	Tunbridge Wells (District 16)	Messrs. Bradley, Hammans, Hoare, Langley and Milne.
" 8	Prestatyn (District 11)	Messrs. Bradley, Edwards and Lewer.
" 14	Swansea (District 10)	The President, Messrs. Bradley, Hoare and Morton Evans.

In addition to the above, meetings were held in Manchester (District 1), on October 13; and in West Hartlepool (District 19) two weeks later. Thus no less than 19 centres were visited by Council representatives. Attendances varied considerably, but it is estimated

\* Also attended by the General Secretary.

that at least 1,500 members were present at these official meetings.

Unfortunately it was not found possible to hold meetings in Districts 8, 12, 13 and 18, although members from these Districts were present at neighbouring meetings.

### London Meetings

Exceptionally good support was given to the programme of lectures arranged at the Institution of Electrical Engineers at which a wide variety of topics was discussed.

The following meetings were held during the year :—

1945

October 19: F./Lt. P. A. Thorogood, R.A.F.V.R. (G4KD). Display of technical films (including radio-location).

November 16: F. Charman (G6CJ). "Aerial Systems for the Radio Amateur."

December 29: R. L. Smith-Rose, D.Sc., Ph.D., A.M.I.E.E., D.I.C., A.R.C.S. "Radio-location."

1946

January 18: Superintendent G. Brown (G5BJ). "The Birmingham Police Radio System."

February 15: Arthur O. Milne (G2MI). "The Amateur Bands, Past, Present and Future."

March 15: L. Essen, B.Sc., Ph.D., A.M.I.E.E. "Recent Advances in Frequency Measurement."

April 12: Captain R. L. Varney, A.M.I.E.E. (G5RV). "Amateur Transmitter Design."

May 31: H. A. M. Clark, B.Sc. (G6OT). "Centimetric Radar for Precision Gun-laying."

It is regretted that arrangements cannot be made with the I.E.E. authorities for Society meetings to commence and finish later. The Council hopes to announce shortly that a series of informal evening meetings has been arranged to take place in Central London.

### Experimenters' Contact Bureau

The Council, acting on the advice of the pre-war Experimental Section Manager and his Group Managers, has approved the introduction of an Experimenters' Contact Bureau, full details of which were announced in the October, 1946, issue of the BULLETIN.

### Affiliated Societies

During the year the Council has been pleased to grant affiliation to a number of local radio societies, many of whom are led by prominent members of the R.S.G.B.

The Council desires to make it known that the nominal affiliation fee of 5s. per annum does not permit the Society to render any specific service to Affiliated Societies, moreover, it is not possible, as a rule, for the Society to provide lecturers at meetings of Affiliated Societies. The purpose of affiliation is to give status to a local society and to enable its members to attend, by invitation, local R.S.G.B. meetings. Members of Affiliated Societies have no voting powers in regard to R.S.G.B. affairs unless they are Corporate Members of the parent Society.

### Naval Electronic Scrap

The Society was asked by the Admiralty to co-operate in a scheme whereby members could purchase naval electronic scrap at a price of 50s. per cwt. Whilst appreciating the desire of the Admiralty to help members, the Council realised from the outset, that the scheme would throw a considerable burden upon the District Representatives. The Council much regrets that it has been found necessary to recommend

to the Admiralty that the scheme be closed down due to an abuse of the conditions on which the equipment was supplied. At the same time it wishes to thank the D.R.s for the very excellent way in which they handled an extremely difficult, and at times delicate, task.

### Staff

Although the membership has increased four-fold since 1939, the staff at Headquarters as at September 30 was actually smaller than before the war. The additional work has thrown considerable strain upon the General Secretary and Miss A. M. Gadsden, but the Council wish to make it clear that every effort has been and is being made to provide additional assistance.

The Council has appointed a Staff Committee to consider all staff problems, and first steps have already been taken to engage a Technical Manager and a male assistant to the General Secretary.

Due to the heavy burden which has been thrown upon the Secretary it has not always been possible for him to devote time to the many members who call casually at Headquarters. The Council is aware that this matter has given rise to some disappointment, but it is hoped that with the appointment of additional male staff, the difficulties will be overcome.

### Greetings

The Council extends fraternal greetings to all members who have been on active service and are now back in their own homes.

### Conclusion

It is not possible in this report to enumerate the many other matters dealt with during the year, but a careful perusal of the Resumes of Council Minutes will show that they have been both varied in character and far reaching in their application.

The Council records its warm thanks to the General Secretary and to his staff for the conscientious manner in which they have carried out the decisions and instructions of Council together with routine business at a time of social unrest and frustration due to the aftermath of war.

With the wholehearted and loyal support of members the Council is confident that the good progress of the Society will continue.

### Council Meeting Attendances

The following is a list of attendances at Council meetings for the year ended September 30, 1946:—

Name	Maximum Possible Attendances	Actual Attendances
E. L. Gardiner ..	13	13
S. K. Lewer ..	13	12
H. A. M. Clark ..	13	12
A. E. Watts ..	13	12
K. M. Evans ..	13	12
F. G. Hoare ..	13	12
A. J. H. Watson ..	13	11
A. O. Milne ..	13	11
S. E. Langley ..	13	9
*P. C. G. Bradley ..	9	9
*C. L. Edwards ..	9	9
*R. H. Hammons ..	9	9
*J. W. Mathews ..	9	9
A. D. Gay ..	13	6
†E. H. Laister ..	4	4
†W. E. Russell ..	4	4
†D. N. Corfield ..	4	3
†F. Charman ..	4	3

\* Elected January, 1946.  
† Retired December, 1945.

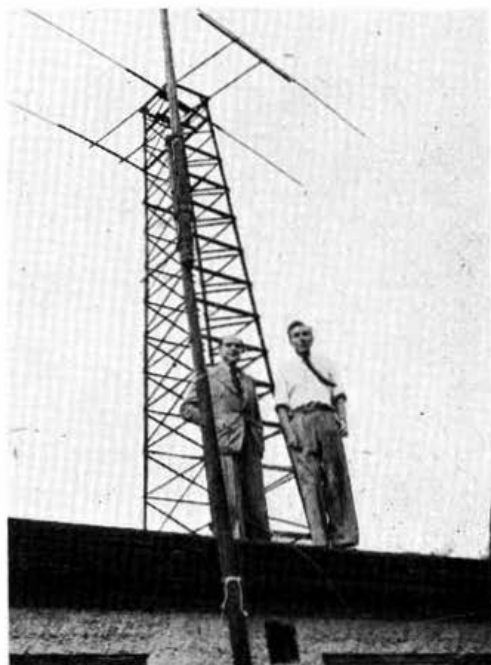
## G6DH and W1HDQ MAKE HISTORY

**H**ISTORY was made on Sunday, November 24th, 1946, when Denis Heightman, G6DH, of Clacton, Essex, received 50 Mc/s. signals from station W1HDQ located at West Hartford, Conn., U.S.A., and operated by Edward Tilton, V.H.F. Editor of QST. It was fit and proper that the honour should fall to Heightman and Tilton, for no two amateurs have devoted more time or given greater thought to the propagation vagaries of V.H.F. signals.

In another page Denis Heightman and W. A. Scarr tell the story, but to make our own record complete, the following are the salient details. At approximately 16.17 G.M.T., G6DH began to receive telegraphy signals on 50 Mc/s. from W1HDQ. At 16.20 G.M.T. G6DH, using a frequency around 28 Mc/s., established two-way contact with W1HDQ. Code words were exchanged, and later in the afternoon both stations went over to telephony, W1HDQ being logged at R5, S7/8 by G6DH.

### Congrats

- To E. Banks, GC2CNC, Jersey, C.I., on the birth of a junior op. on November 20.
- To J. Bradford, BR55842, of Bradford, on the safe arrival of a son.



G6DH (Right) under the shadow of his 60 M/cs. rotary beam.

# A COMPACT FOUR BAND FREQUENCY DOUBLING UNIT

By J. W. MATHEWS (G6LL).\*

FOR some time past it has been apparent that one of the parts of a transmitter to be least experimented with are the frequency doubling stages. This does not mean to say that this all-important section does not hold any interest for the experimenter as there is considerable scope for numerous tests with various types of circuits, often resulting in greatly improved efficiency. But the object of this article is to put forward some ideas for the construction of a permanent frequency doubling unit that can be built and incorporated into any transmitter it is decided to use, without modification or attention.

The unit, illustrated in the photographs, is the outcome of this and has been designed so that it can be accommodated on a standard 19 in. panel for mounting on a standard rack. Obviously, if standard racks are not in use it could quite as easily be arranged to fit in with the dimensional scheme of any individual station. For simplicity and independence it employs cathode bias and this system, although possibly not as definite as the normal fixed, or static, bias supplied from a D.C. voltage source, has been found to work perfectly well and smoothly. It has the advantage of keeping a load on the power supply when keying is being employed and thereby keeping the H.T. voltage from changing excessively due to the load going on and off. This, of course, refers to any method of keying which interrupts the R.F. drive to the unit. Further independence can be obtained by the use of a

small, separate, power pack, which, as the voltages required are fairly low, is not an expensive or difficult item to obtain.

## Considerations in Design

The first consideration is obviously the source from which the unit is to be driven. This may be either crystal or V.F.O., and in the case of this unit it was arranged to be driven from the Franklin Oscillator described by the author in the September, 1945, issue of THE BULLETIN.

If crystal excitation is to be used, obviously minor modifications to the input circuit would be advisable although there is no reason why a separate panel, with the crystal oscillator on it, and a selector switch to bring into use any one of a number of crystals, should not be built. In this case no modification of the input arrangements would be necessary and the unit could be built as described and driven in exactly the same manner as if it were from a V.F.O. Furthermore, any change to V.F.O. drive would be merely a matter of plugging in the fresh source of R.F. power.

Since simplicity in design and operation was decided on, a certain amount of efficiency must be sacrificed, but this is minimised by the use of a fairly flat-tuned grid circuit and high efficiency valves which do not require a large amount of R.F. driving power. The inter-stage switching for the transfer of the R.F. output, either to the next F.D. stage or to the Power Amplifier, is made in low impedance circuits with correspondingly lower losses.

\* 90 Tolmers Road, Cuffley, Herts.

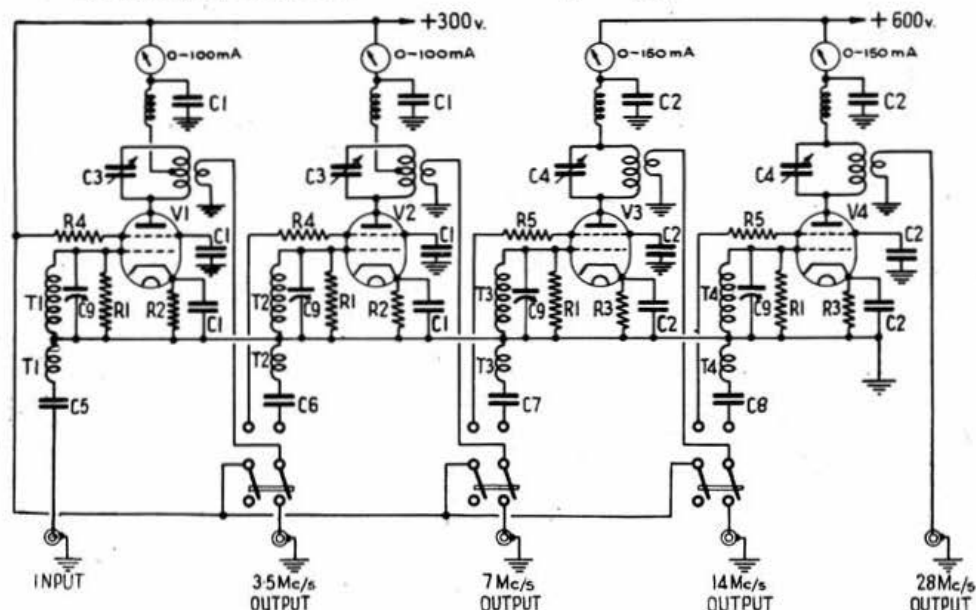


Fig. 1.

Circuit Diagram of Four Band Frequency Doubling Unit.

C1	0.01μF.	C6	125μμF.	R1	10,000 ohms ½ watt
C2	0.005μF.	C7	100μμF.	R2	300 ohms 3 watt
C3	100μμF Variable	C8	70μμF.	R3	600 ohms 10 watt
C4	50μμF Variable.	C9	3-30μμF Trimmer.	R4	5,000 ohms ½ watt
C5	225μμF.			R5	5,700 ohms 2 watt
		T1, T2, T3, T4	See Coil Table.		



Sufficient output on any band is obtained and is adequate for driving a P.A. stage up to 50-70 watts or more, depending on the type of valve or valves used. So that the unit, once built, can be used to drive any P.A. it may be decided to try, even if a buffer amplifier has to be inserted before the final stage in order to obtain even greater drive should that be necessary.

No spurious oscillation or unwanted inter-stage reaction takes place, providing care is taken with the layout, and the 807 valves, as an additional precaution have parasitic suppressor chokes and resistors in their anode circuits. Even the first stage which acts as a buffer amplifier on 3.5 Mc/s. does not need any neutralising if care is taken. When the unit was constructed, allowance was made for neutralising this stage but was found to be quite unnecessary. If, however, any difficulty is found a small amount of fixed capacity, say 1.5 to 2  $\mu\text{F}$  will be sufficient to stabilise the stage over the whole band.

It will be seen that the first two stages use 6L6 valves and the last two 807's. It was found that adequate output on the lower frequencies of 3.5 and 7 Mc/s. was obtained from 6L6s and this effected a small economy in valves. A flat-tuned grid transformer in each stage facilitates the coupling and is necessary for the use of the low impedance cable previously mentioned. This tuned transformer is sufficiently flat to permit adequate drive over the band of frequencies it is intended to cover, whilst the input winding is arranged to match approximately the 100 ohms concentric cable used for connecting to, and from, the switches.

These transformers, winding details of which are given in the Table, are wound on short lengths of 1 in. Polystyrene tube, and are mounted in suitable positions below the chassis. This ensures short grid leads and reasonable screening. The trimmers are of the concentric air-spaced type and are mounted on the formers by short lengths of 16 SWG wire. The

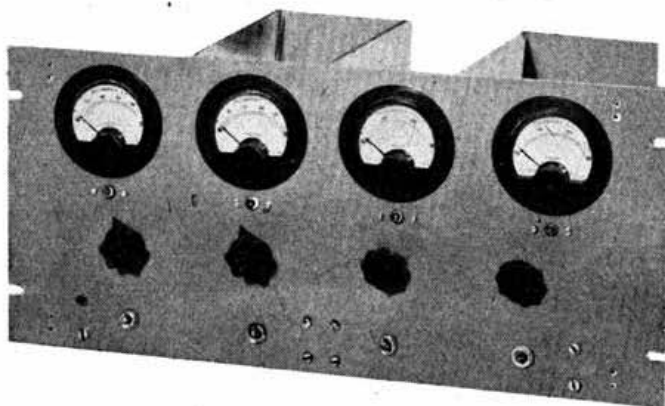


Fig. 2.

Front view of the Four Band Frequency Doubling Unit showing its general appearance. The respective tuning controls can be seen above the toggle switches controlling the number of stages in use. The small telephone exchange type of indicator lights are below the meters.

In a well-designed station a separate P.A. stage for each band is desirable. This enables the maximum efficiency to be obtained in each P.A. having consideration for the frequency band upon which it is intended to work. Therefore, a unit such as this is excellent for use in such a station as each P.A. can be brought into operation by merely moving a few switches, thereby facilitating and speeding up band changing.

### Layout and Construction

It is realised, of course, that the question of components enters into such a comparatively elaborate scheme, but if a not too ambitious start is made it will not be found unduly expensive. Considerable use can usually be made of items already in possession of the intending constructor, and the final layout will obviously depend upon these and any additional ones obtained. For this reason no definite layout plan can be laid down, but from the photographs the general scheme can be seen, and only minor changes to this will normally be necessary to allow for components of different dimensions.

If R.F. drive on the 3.5 Mc/s. band is used at the input, an output on either 3.5, 7, 14 or 28 Mc/s. can be obtained. Each stage is screened and the layout is such that all R.F. leads are kept to a minimum length. The stages are coupled to one another through short lengths of low impedance cable, and the switching for the outputs on the various bands is inserted in this cable, thus reducing any losses to a minimum.

From an inspection of the circuit diagram in Fig. 1,

chassis is of 16-gauge mild steel, cadmium-plated, but any suitable metal would naturally serve. From the photographs, it will be seen that two separate chassis each  $7\frac{1}{2}$  in.  $\times$   $8\frac{1}{2}$  in. are used. This is merely because such articles were already in the writer's possession, and a single chassis 17 in.  $\times$  10 in. would probably be better.

The position of the grid transformers and associated trimmers can be seen in one of the photographs. The bias resistors and their by-pass condensers are readily identified in the same photograph. The screen resistors and by-pass condensers, together with the grid resistors are mounted round the valve-holder in the most convenient manner having regard to their physical dimensions. The Belling Lee output sockets can be seen mounted on the back edge of the chassis. A similar socket is, of course, used for the input R.F.

The grid transformers are tuned by adjusting the trimmers so that the circuit resonates at approximately the mid-frequency point of the band covered by the transformer.

The small red indicator lamps visible on the front panel below the meters are lit by R.F. obtained by a single turn loop, loosely coupled to the plate coil of the stage it is intended to indicate. This serves the double purpose of instantly indicating which stages are on and that they are all delivering R.F. power. The meters, of which there is one in each anode circuit, serve their usual function. It is desirable, but not essential, to have a separate meter for each stage. A single 0-150 milliammeter could be used and switched from one stage to another in the normal manner for such an arrangement.

The inter-stage switches which govern the frequency band of the output are ordinary *Bulgin* double-pole, double-throw toggle switches. One pole is used for the centre conductor of the concentric cable and the other is in the H.T. supply to the screen circuit of the following stage, so that when that stage is not in use its screen circuit is opened. The outer conductor of the concentric cable, being, of course, "earthy," may be connected at each switch.

If desired, this switching arrangement could be modified slightly so that instead of interrupting the screen supply to the following stage, a resistor is inserted in order to lower the screen volts to such a value that the anode current would fall to, say, about half its normal value. The advantage of this would be apparent if the power supply had a poor regulation since the load on it would be more constant.

The H.T. supply is 300 volts, which supplies the anodes of the 6L6's and the screens of the 807 valves and 600 volts, for the anodes of the 807's. The screen voltage for the 6L6 stages is obtained by means of a dropping resistor from the 300 volts anode supply.

### Performance

Under test the unit was driven from the Franklin Oscillator unit previously mentioned, and as stated earlier, although the first 6L6 stage is running as a buffer amplifier on 3.5 Mc/s. it has not been found necessary to neutralise it. This is due to the careful layout and suitable screening between input and output circuits.

The output from this stage is estimated at about 5-8 watts and is sufficient to drive a P.A. stage to about 50 watts input, using an average transmitting

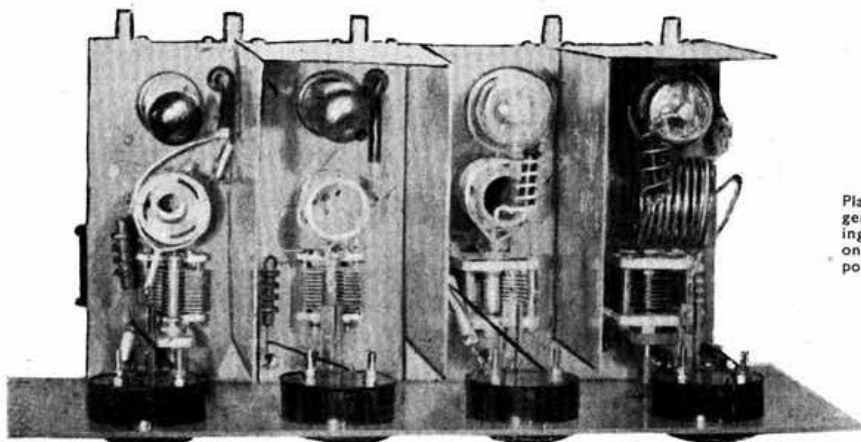


Fig. 3.

Plan view of the unit showing general layout and simple screening employed. The input stage is on the left and the various components can be easily identified.

The output from each stage is terminated in a *Belling Lee* concentric socket, type L373. This, in conjunction with the type L373 plug and a length of concentric cable, makes a very convenient and low-loss means of connecting the unit to the P.A. stages, which need not necessarily be in juxtaposition to the F.D. unit.

The various voltage supplies are fed into the unit by means of a *Bulgin* 6-pin plug and socket, again a very neat and convenient method of terminating

triode valve. If a beam tetrode or pentode P.A. valve is used the amount of drive can be decreased to the required value quite easily by loosening the coupling between the buffer stage and the P.A.

A similar output is obtainable on 7 Mc/s. and the same remarks concerning P.A. stages apply, as indeed they do for the other two frequency bands. On 14 Mc/s. and 28 Mc/s. the output is approximately 10-12 watts.

If it is found that a stage is delivering too much

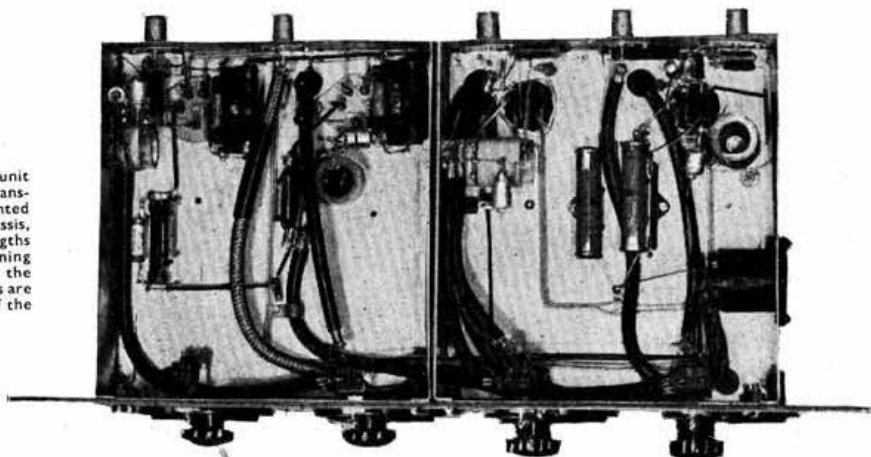


Fig. 4.

View of the underside of the unit showing layout. The grid transformers can be seen mounted towards the rear of the chassis, with the interconnecting lengths of concentric cable running towards the switches on the panel. The concentric sockets are mounted on the rear edge of the chassis.

drive for the following section, a reduction in the size of the series condenser in the input circuit of this section will effect a reduction of drive. A suitable value can easily be found by experiment. The grid current of each stage should be of the order of 2-3 milliamperes.

The whole unit functions quite stably and it will be found that changes in input frequency up to at least  $\pm 40$  kc/s. can be made without the necessity for re-tuning.

Perhaps the suggestions put forward in this article will assist a few amateurs to clarify their own ideas and with the incorporation of any modifications to suit their own special circumstances, help to produce

a useful and permanent portion of an experimenter's station.

Band Mc/s.	Sec. Turns.	Pri. Turns.	Series Capacity.	Wire.
3.5	44	9	225 or 125 $\mu$ F	26 S.W.G. enam.
7	22	5	100 $\mu$ F	24 S.W.G. enam.
14	10	3	70 $\mu$ F	24 S.W.G. enam.

#### Coil Data.

All windings on 1 in. diameter Polystyrene tube, close spaced.

#### Rifle Shooting by Amateur Radio

THE West Cornwall Radio Club recently carried out an experiment which might well make Amateur Radio history. With the special permission of the Post Office, a station was installed at rifle ranges in Penzance and Helston respectively, and the results of the shooting matches between Penzance 0.22 Rifle Club and the Helston Rifle Club were relayed between the ranges.

Preliminary tests gave promise of greater success than was achieved, as on the night of the tests, local noise level at Helston was extremely high due to previously undisclosed electrical apparatus, and the 160 metre band was full of trawlers and coastal steamers sheltering nearby from a storm.

Nevertheless with the aid of G2WW as a relay station the results were got through and it is hoped that permission may be granted to carry out a more ambitious experiment in the near future.

Local members of the Rifle Club at their homes heard the results of the shooting and the remarks of their friends, whose voices could be identified, with exceptional clarity.

Station G3AGA at Helston was manned by G3AGA, G2FQD and G2DDR. BRS13106 and 13741 had previously erected the aerial. An 1154 and 1155 transmitter and receiver were used, on low power. An Eddystone 358X was also in operation.

At Penzance G2JL was manned by G2JL and G3AUN assisted by BRS13412 and 13741. A Franklin transmitter with 6 watts input was used with a half-wave aerial. The receiver was an AR88.

The members of the Press present enjoyed the demonstration which impressed them and considerable publicity was given. It is hoped that permission will be granted for the further test. G2JL

[Editorial Note. We understand that the special facilities referred to above were granted in error by the G.P.O.]

#### Telephony Permits

For some reason which has not been made clear to the Society, the G.P.O. has issued a larger number of telephony permits to new licencees than was anticipated. When the terms and conditions were negotiated earlier in the year, the G.P.O. stated that in general new licencees would be required to operate for 12 months on telegraphy only. It would seem that the Licence Issuing Department has given a much wider interpretation to the word "general" than was expected.

From information recently received it would appear that the granting of telephony permits to new licencees has now ceased.

#### Top Band Contest

The Contests Committee, in response to requests from members, agreed at short notice, to permit D2 stations located in the British Zone of Germany, to take part as competitors in the recent "Top Band Contest."

#### West Hartlepool Stages Last P.D.M. of Season

THE first P.D.M. ever to be held in West Hartlepool and the last of the season, proved a great success with no less than 62 members signing the roll. After the ragchew during which time many pre-war contacts were renewed and photographs taken, high tea was served. The meeting was then opened by the D.R., G2FO, who introduced Mr. John Claricoats, G6CL, the General Secretary, and Mr. R. H. Hammons, G2IG, a member of the Council.

"Clarry," in a speech lasting eighty minutes, spoke of the past, present and future activities of the Society and outlined some of the difficulties occasioned by the enormous increase in membership since 1939. He told of proposed changes in policy and in representation to meet the changed conditions. He also compared the privileges and advantages of the post-war licence with those of the less favourable pre-war licence, and forecast the return of those parts of the spectrum which were at that time denied to us. (His forecasts proved correct.—H.T.) The City and Guilds examinations were discussed at some length as were such subjects as off-band working, the "Bull," commercials in the ham bands and electronic scrap. All were pulled out and given an airing, after which questions were asked and answered and suggestions considered. A very happy meeting was closed with votes of thanks for their attendance to G6CL and G2IG and to the T.R., Bob Donald, G3TO, for the good work he had put into the organising of the meeting.

In the exhibition of ham gear, cabinets and chassis were displayed by Mr. E. J. Philpot, G4BI, a V55R communications receiver by Messrs. Radiovision (Leicester), Ltd., a 504 receiver by Messrs. Stratton and Co., Ltd., and high-grade components by Mr. Carter, BRS12537. G6ZT.

#### The Amateur Radio Society of Palestine

We are informed by Mr. H. B. Davis, FR5160, that an amateur radio society has been formed in Palestine and that meetings are held weekly at 4 Nachlat-Benjamin Street, Tel-Aviv. Members resident in or passing through Palestine are cordially invited to write to Mr. Davis, who is the Secretary of the Society. We have no information regarding the other officials.

#### Silent Key

Col. F. E. Wenger, O.B.E., M.C., T.D., D.L. (G2VG)

It is with deep regret we record the death on October 29 last of Col. Wenger, one of the earliest British amateurs, and a leading industrialist in North Staffordshire. He held a licence long before the 1914-18 war and in later years was a keen V.H.F. enthusiast.

Col. Wenger had a distinguished military career serving for 24 years with the 5th Battn. North Staffs Regt. During the first World War he was awarded the M.C. and two bars.

Our sympathies are extended to his family and friends.

# A LOW VOLTAGE CATHODE RAY OSCILLOSCOPE

By F. J. FORBES (2BFC).

## PART I.—THE CATHODE RAY TUBE UNIT

*This is the first of a series of three articles dealing with the construction of a low voltage Cathode Ray Oscilloscope. The C.R. Tube unit is described in the following article. Future articles in the series will describe the Time-Base Generator Unit and the Amplifier Unit.*

AS so much has been written about the theory and application of cathode ray tubes these articles are presented rather in the form of notes dealing with the construction of a specific piece of test gear, namely a low voltage cathode ray oscilloscope.

When conditions return to normal, it is hoped that all amateurs will be able to build a C.R.O. at a reasonable cost. This will be made easier if three separate units can be constructed over a period of time. The first would be a self contained C.R. Tube Unit, next a Time-Base Generator and then an Amplifier Unit.

The C.R. Tube when used alone has its limitations, nevertheless it is an extremely useful piece of apparatus which can be used while parts for the time-base, etc., are being collected and assembled. The unit method of construction enables one to replace or change the time-base for the job in hand—a very important point—or to construct later an improved version giving a better wave-shape and frequency range.

Some of the precautions taken by the author—such as screened leads and transformer windings—are to ensure a clean trace, more so since the units are, in his case, mains supplied by means of a rotary converter. If the "hook up" is first constructed it will be an

easy matter to decide which of these precautions can be omitted from the final design. Some of the constructional methods used were brought about by wartime shortages, and no doubt many improvements can be obtained by the changing of some component values.

### Oscilloscope Tube Unit

The tube is a G.E.C. type 4081, with a 2½ in. screen of medium persistence having a green fluorescence. As the tube operates with a comparatively low H.T. supply (400–800 volts) an ordinary receiver-type mains transformer is used, which gives approximately 500 volts across the potential divider supplying the tube.

It is important to note that the H.T. positive is the "earthy" end of the supply. This arrangement is necessary as the deflector plates must be returned to the final anode yet still be free for external connection.

All the fixed resistors are of the 1 watt composition type while the X and Y shift controls are of the ordinary "volume control" type. The 50,000 ohms focus and the 10,000 ohms brilliance controls should however be of the wire wound variety. The circuit is shown in Fig. 1.

Provision has also been made for modulating the grid and final anode—a useful arrangement in timing or stroboscopic tests. The grid input is through a 0.1μF condenser whilst filtering is effected by a 0.3 megohm resistor and 0.1μF condenser connected between the grid and brilliance control. For anode modulation, the modulation voltage is injected in series with the final anode and earth; a strap is normally used to join these two when not in use.

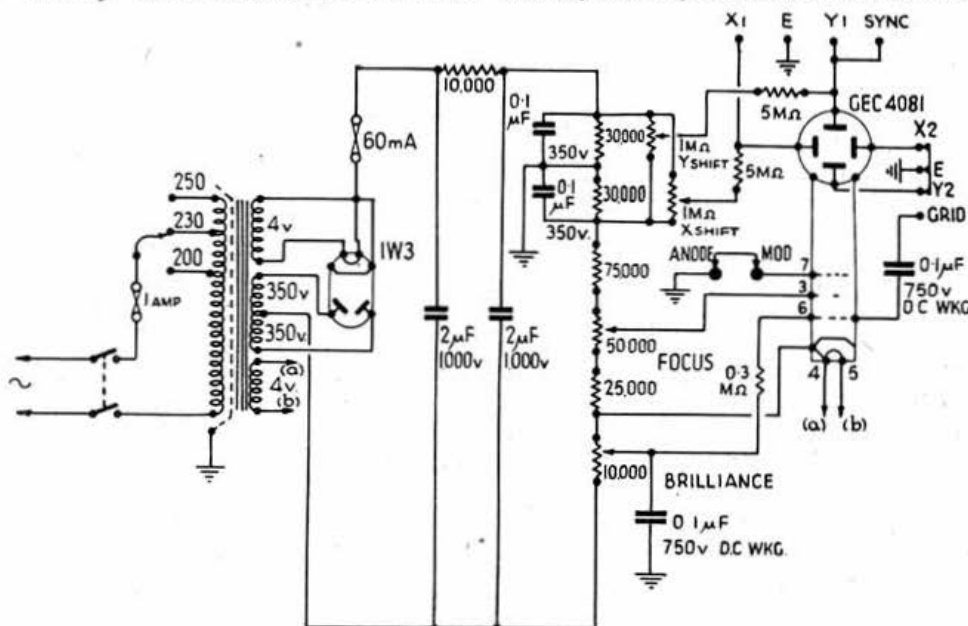


Fig. 1.

Circuit diagram of Cathode Ray Tube Unit.



The deflection sensitivity of the Y plates is approximately 0.5mm per volt. This factor for either pair of plates in this tube is given by:—

$$\frac{150}{V} \text{ mm/volt,}$$

where  $V$  is the voltage on anode No. 2. Deflection sensitivity can also be calibrated with the aid of a battery, potentiometer, and voltmeter by supplying a known voltage direct to the plates and measuring the deflection with a rule marked in millimetres or inches.

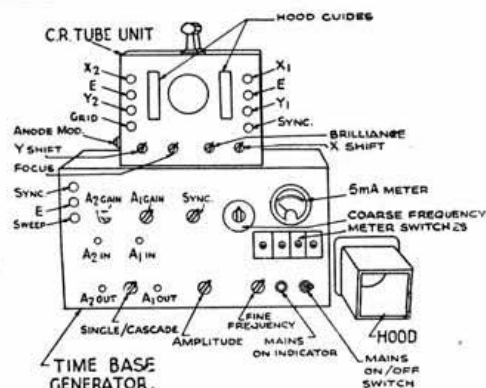


Fig. 2.

View of the Complete Equipment with C.R. Tube Unit at the top and Time-Base Generator at bottom. The Hood is at the right.

Except for anode modulation, all connections are brought out to the front panel as shown in Fig. 2. The anode modulation terminals are brought out on one side owing to lack of space at the front.  $Y_2$  and  $X_2$  should normally be connected to earth, but are

available for push-pull scanning, etc. The terminal marked "Grid" is the input for grid modulation of the tube, the other markings are self explanatory.

The hood guides enable a hood to be slid into the front slide and a graticule placed in behind. A small hood is quite useful but one about 8 in. long is to be preferred. A hood gives the operator a sharp picture with the brilliance turned down, whereas even a weak light falling on the tube screen will weaken the trace although the brilliance is increased; the latter is not good for the tube.

The front of the tube is supported in soft rubber, which is fixed by a plywood clamp to the front panel, the end being held in the horizontal plane by a metal clamp; this grips the neck of the tube with a thick, soft sponge rubber insert. A firm support is thus obtained which cannot damage the tube.

The clamp is fixed to the chassis by 2BA studding passing through it and bolted. When the clamp is slack the tube can be rotated so that the sweep trace is horizontal when looked at from the front; furthermore, by means of adjusting nuts, the tube itself can be adjusted in the horizontal plane.

The chassis which is made of 16 S.W.G. mild steel sheet measures 16 in.  $\times$  9 in.  $\times$  2 in. The power supply is placed at one end and the axis of the mains transformer core should be directly in line, and behind the tube base. This arrangement is necessary in order to prevent interference of the trace by magnetic fields. No further screening of the tube (i.e. the use of a mumetal screen) has been found necessary, although it could be added as a refinement.

A heat screen is fitted round the rectifier in order to deflect heat away from the mains transformer and nearby condenser whilst the case of the unit should be well ventilated, particularly around the tube, rectifier and mains transformer.

(To be continued)

### London Region Meeting

The attendance at the November meeting was somewhat disappointing, less than 100 members being present to hear Dr. A. F. Pearce of the Research Department, Electric and Musical Industries Ltd., deliver his paper on "Velocity Modulation Tubes for Centrimetric Wave Communications."

The following were among those who contributed to the discussion, Messrs. D. N. Corfield, G5CD, Clark, G6OT, Scarr, G2WS, Chapple, G6SC, and Lewer, G6LJ. Thanks to Dr. Pearce were expressed by Mr. J. W. Mathews, G6LL. Mr. E. L. Gardiner, G6GR, was in the chair.

At the conclusion of the lecture the following members offered their services, and were duly appointed as Council Ballot scrutineers: Messrs. Hubbard, G5OX, Allen, 2UJ, Chapple, 6SC, Cullen, 5KH, Hicks-Arnold, 6MB, Smith, 2BPW, Forbes, ex 2BFC, Thompson, BRS3425, Barnard, 4FB, J. Tyndall, 2QI.

### B.E.R.U. CONTESTS Amendments to Rules

Competitors please note:—

Two-way telegraphy contacts only will count for points. Any competitor receiving consistent reports of less than T8 will automatically be disqualified.

### E.M.I. Presentation to the Society

IN recognition of the pioneering work of radio amateurs in the establishment of world-wide communication and of their invaluable contribution to the war effort, the Society was presented with equipment for its new Headquarters station at a formal ceremony on December 4 by Sir Ernest Fisk, Managing Director of *Electric & Musical Industries, Limited*.

The ceremony, held in the E.M.I. Studios at St. John's Wood, London, was attended by many well-known personalities connected with radio communication, including a number of the early pioneers, representatives of the Signals Branches of the Services, the Post Office and the B.B.C.

Sir Ernest Fisk, in making the presentation to the President, spoke of his desire to boost Amateur Radio and to add to British prestige. He looked forward to the time when the Society might be able to establish a 24-hour Empire chain of contacts by amateur repeater stations on British territory in various parts of the world.

In reply, Mr. E. L. Gardiner thanked Sir Ernest for the generous and sincere spirit which prompted the presentation and referred to the growing appreciation of the value of Amateur Radio, especially as an outcome of the part which it played during the war, and as typified by the prompt re-issuing of transmitting licences.

Mr. G. R. Scott Farnie, G5FI, was responsible for the very excellent arrangements made for the presentation.

S. K. L.

[A full technical description of the equipment will appear next month.—ED.]

# IDLE FREQUENCIES

## PART II

By B. W. F. MAINPRISE, B.Sc. (Eng.); A.M.I.E.E. (G5MP)

**I**N Part I of this article we examined frequencies between 10 and 3,500 kc/s, and noted especially the sparsely occupied region between 2 and 3.5 Mc/s. Before passing to other ranges the writer would like once more to stress the very narrow bands in which some of the world's essential services are compressed.

Thus, our 14 Mc/s band is, in itself, but a tiny proportion of the frequencies of that order, yet its width is more than one third of the medium-wave broadcast band. The case of the long-wave broadcast band is even more striking. Though at the moment out of favour, it was once the home of such giants as Daventry (5XX), Radio Paris, Hilversum, Eiffel Tower, together with the corresponding transmitters of Germany, Sweden, Denmark, Luxembourg, Turkey and Russia—all in the space of a band no wider than the U.S.A. phone allocation in our 14 Mc/s band! Such matters are often overlooked, but they provide a useful reminder of how "habitable" a band becomes, given a spread over five or six inches of tuning scale and selectivity of only reasonable order.

### 3.5-6 Mc/s.

Bearing then such matters in mind, let us continue upwards in frequency. We find the range from 3.5 to 6 Mc/s is occupied almost exclusively by Service tenants. For communication over distances of 250 miles in daylight, and considerably further afield in darkness, these frequencies are excellent, and are accordingly the ones chosen by Army outposts, Naval flotillas and the medium-range aircraft of the Air Forces. The region is well occupied and we can make no real charge of idleness. We might, however, note in passing that telephony hereabouts is now even rarer than before the war; in fact, war has shown but few opportunities for the voice in handling traffic, and reserves the spoken word almost exclusively for the passing of instructions over short distances for immediate action. Examples are the deployment of patrols, the control of fire, or the marshalling of aircraft about to take-off or land. For all such applications, however, the V.H.F.'s offer much better facilities and the removal of such transmissions to the V.H.F.'s was consequently largely completed by the end of the war.

### 6-23 Mc/s.

From 6 to about 23 Mc/s we find the long distance frequencies. Fixed stations handling Government, Press or private traffic over oceanic or trans-continental routes. The short-wave shipping bands, with their counterparts, the aircraft bands. The short-wave broadcast bands, and, of course, our 7 and 14 Mc/s bands.

One's initial impression is that activity is considerable on all but the two amateur bands, where it is at times phenomenal, but we must remember what a wide range of channels is covered. For example—considering telegraphy stations only—a 5 kc/s separation is more than sufficient for those in fixed service, where the receiver may occupy the whole length of a wall, and be designed for one spot frequency only. Such separation would allow 200 stations per megacycle, but how often can we find 200 stations between say, 7.5 and 8.5 Mc/s, or between 12 and 13 Mc/s? For corresponding occupancy of our bands we would have 60 stations on 7 Mc/s and 80 stations on 14 Mc/s, both of which figures

are commonly approached and even exceeded, showing we need have few pangs of the conscience in holding on to our present band widths!

These frequencies between 6 and 23 Mc/s cannot be called idle, but before passing to others which are as idle as can possibly be imagined, let us see if their occupancy is likely to increase. As regards the shipping and aircraft bands—with their associated fixed stations—occupancy will almost certainly increase. But there is one class of station—the high power fixed transmitters, handling Government, Press or private traffic—which in the writer's opinion will not increase in numbers, and may even decrease. This may appear rather a surprising suggestion to put forward, but there would seem good grounds for it, if we try to draw analogies from the growth of other systems of communication.

We can consider the railways as one example. There was an initial period of rapid growth between about 1830-50, but after that we find that any increase of traffic was handled by duplicating the track, and not by building new routes. This would correspond to increasing the numbers of channels impressed on each carrier, and not the generation of new carriers. Also additional railway traffic was handled by running more trains per hour, and this would correspond to increasing the rate of signalling at a transmitter. With present technique of handling signals lasting only microseconds it would seem that signalling rates of under about 100 w.p.m. are luxuries which we can hardly afford.

To take another example—shipping. We find the tendency is to avoid the smaller ships and to concentrate traffic in larger units, and fewer harbours. The larger ships are able to maintain a schedule affected only by abnormally severe weather disturbances; the high power transmitters are affected only by exceptionally severe ionosphere disturbances. The reduction in the number of harbours can be compared with the limitation of suitable sites (though requirements of sub-soil, cooling water supply, etc.) in the case of high power transmitters.

### 23-40 Mc/s.

In the range just discussed, the writer put the upper frequency limit at about 23 Mc/s. The next range is then 23 Mc/s to about 40 Mc/s. Here indeed is a region worthy of the charge of idle frequencies, for even war has been unable to find an application for them. Commercial concerns will not employ frequencies much above 23 Mc/s for long distance working owing to their unreliability, their uselessness over large period of the 24 hours, and the varying effect of seasons and the sun-spot cycle. Broadcasters will not use them, as the ground-wave coverage is so small. The higher frequencies, from 30 to 40 Mc/s, seemed prior to the outbreak of war to offer possibilities for aircraft beacons and controlled approach systems, but with the rapid development of the V.H.F.'s they have in effect been left high and dry, for the compactness of V.H.F. aerial arrays enables sharp-cut radiation patterns to be obtained to an extent quite impossible on 30-40 Mc/s. There seems no use for these frequencies in communication work, and unless they can be shown to possess unrivalled properties for heat treatment in medical or industrial applications there seems no future for them.

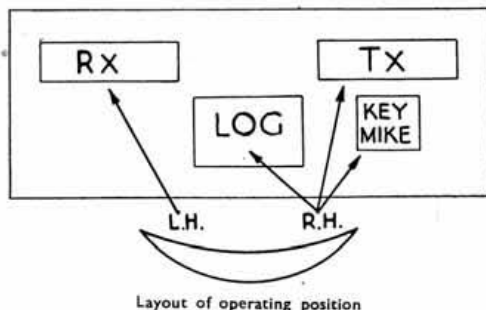
The best solution might be to throw open wide slices for our use; certainly the writer can see no alternative future for them.

# RECEIVER OPERATABILITY

By GEORGE PROCTOR (GM8SQ)\*

THESE are the days of coined words and to Mr. McNichol's extremely comprehensive article in the November, 1945, issue may I add another item to be considered in choosing a receiver, namely, "operatability"? However high may be the performance of a receiver, the question in the mind of the prospective owner must surely be—"How is this 'receiver of receivers,' with the ideal performance figures, going to fit into place on my operating desk? When the man with whom I have been in contact vanishes into the welter of QRM, am I to lose him because of awkward controls on my receiver, or will the flick of a finger bring him back into my 'phones?"

Consider the layout of an operating position. Have your receiver on the left-hand side, transmitter (if a low power job) or E.C.O. unit, or at least transmitter switches, on the right-hand. The key or microphone must come to the right hand, as also the log, and the controlling of the receiver must develop into a job for the left hand alone.



What do the makers of communication receivers do to accommodate this left-hand position? The controls are all there *somewhere* on the front panel, but when we come to do some quick-fire operating in QRM, the weaknesses in the placing of the various knobs and switches show up.

The main tuning dial and bandspread must be at a height to allow the operator to lean his forearm comfortably on the desk or table—a height of around 4in. above desk level seems to be correct. The bandspread, in particular, must be silky smooth in operation. How often have we tried that receiver with just a shade of stiffness in the dial movement and jumped helplessly back and forward over the required signal?

On our one-handed receiver, high-speed adjustment requires that the crystal switch and phasing and R.F. gain should all be grouped near the bandspread control. Suppose we tune in a signal and wish to switch in the crystal, all that should be necessary is to flick the switch over with the forefinger, the hand remaining on the bandspread control. Other adjustments to crystal phasing and R.F. gain should be made by a movement of the hand which does not necessitate shifting the forearm on the operating desk. It is not proposed to criticise the various models of communication receivers, but the reader should consider for himself some of the well-known makes. Some first-class receivers prove very tiring to operate for long periods of listening.

Finally combine receiver "operatability" with good operating ability and we can hold our own even if the performance figures of the receiver

are not so "hot" as we would like. By all means when we choose that new receiver, or build—let us go all out for receiver performance, but, at the same time, give a very serious thought to the "operatability" factor as well. Do not forget that slick operating will be the order of the day now that licences are reissued, and to achieve that, we must turn receiver handling into a smooth, effortless operation.

## Interpretation of German Valve Engineering Terms

By E. G. BULLEY (BRS8161)†

THE occupation of Germany has brought many radio amateurs into contact for the first time with German valve data. The main difficulty arises when one attempts to analyse the various terms by means of a dictionary, only to discover that they are not included.

This short article has been compiled to help English speaking amateurs to understand some of the terms used in the German valve industry.

For convenience and ease of reference, various terms are tabulated below giving the English meaning.

Daten.	Daten.
Kathode .. ..	Cathode-filament
Anode .. ..	Anode
Gitter .. ..	Grid
Wolfram .. ..	Tungsten
Direkt-Geheizt ..	Directly heated
Heizspannung, $U_h$ ..	Filament Volts, $E_f$
Max Heizstrom, $I_h$ ..	Max filament current, $I_f$
Emission, $I_e$ .. ..	Emission
Verstärkungsfaktor, $\mu$ ..	Amplification factor, $\mu$
Stellheit, $S$ .. ..	Slope or mutual conductance, $g$
Kapazitäten .. ..	Capacities (interelectrode)
Gitter/Anode, $C_{ga}$ ..	Grid-Anode
Gitter/Kathode, $C_{gk}$ ..	Grid-Cathode
Anode/Kathode, $C_{ak}$ ..	Anode-Cathode
Max Anodenbetriebsspannung, $U_a$ ..	Max Anode Volts
Maximale Anodenverlustleistung, $Q_a$ ..	Max Anode dissipation
Anodenstrom, $I_a$ ..	Anode Current
Gitterstrom, $I_g$ ..	Grid Current
Gittervorspannung, $U_g$ ..	Grid Volts
Außenwiderstand, $R_a$ ..	Impedance (Internal Resistance)
Durchgriff, $D$ .. ..	Used quite a lot in British technical literature—it represents the reciprocal of the amplification factor of the grid outer screen.
Rückgriff, $R$ .. ..	Reciprocal of the amplification factor of the grid inner screen.
Inselbildung .. ..	The non-uniformity of an electric field in vicinity of cathode surface.

## Standard Racks and Panels

Sound Sales Ltd., West Street, Farnham, Surrey, are now in a position to deliver from stock, standard racks and panels. Panels are slotted on a multiple of 1.75 in. to match 1.75 in. drilling centres on the racks. All panels are flat, machine slotted for accuracy and guaranteed square within fine limits. Complete interchangeability is possible using stock panels, thus providing for a wide range of equipment. The racks are given a standard B.B.C. grey finish. Sizes: Height overall, 6 ft.; width overall, 1 ft. 9½ in.; total space available for panels, 5 ft. 7½ in. Every effort will be made to deliver standard rack equipment in 24 hours and panel drilling and cutting within 48 hours.

The Type D.S. rack with double sided support, occupying a floor space of 21½ in. by 21½ in., is priced at £3. Standard panels vary in price from 12s. to 6s. 6d.

\*The Bungalow, Linlithgowbridge, Linlithgow, Scotland.

†8 Beverly Court, Farm Road, Southgate, N.14.

# A 500 kc/s OSCILLATOR UNIT

By A. J. WARD (G3WD)

THE oscillator described has a tuning range from 430 to 510 kc/s. and is useful for lining up I.F. stages, at the same time giving 500 kc/s. points for calibration. In use its stability has been found quite good, and after an initial warming-up period of 15 minutes it will beat with WWV on 15 Mc/s. every time the H.T. is switched on.

The circuit Fig. 1 is self explanatory, and the only component requiring comment is the inductance, a standard medium-wave aerial coil. To adapt it the following procedure is suggested:—

1. Remove aerial coupling coil.
2. Remove 25 per cent. of turns from one end, make cathode tap, rewind turns back on to former.

Component values should be as specified but they are not highly critical. (C1 may be increased for stronger output.)

Care should be taken in construction to ensure rigidity of every wire and component, also make sure that the trimmer (C5) is of a type that will "stay put" after adjustment.

## Method of Adjustment

After warming-up for a few minutes, switch-in the H.T. (SW1) and check for oscillation on the medium wave band. Once this point has been found adjust C5 until the second harmonic of the oscillator is on 300 metres (1,000 kc/s.) with the oscillator tuning dial (C6) at 160°, i.e. with the tuning condenser nearly at minimum capacity.

Next, tune in WWV on 5, 10 or 15 Mc/s. and make final adjustment on tuning dial—this point will be exactly 500 kc/s.

As a double check try the other frequencies of WWV, and if the right setting has been found "zero beat" should be obtained on them all.

Working with WWV on 10 Mc/s. check points should be obtained as follows:—

500 kc/s.	..	..	20th harmonic.
476.18 kc/s.	..	..	21st ..
454.54 kc/s.	..	..	22nd ..
434.81 kc/s.	..	..	23rd ..
416.66 kc/s.	..	..	24th ..

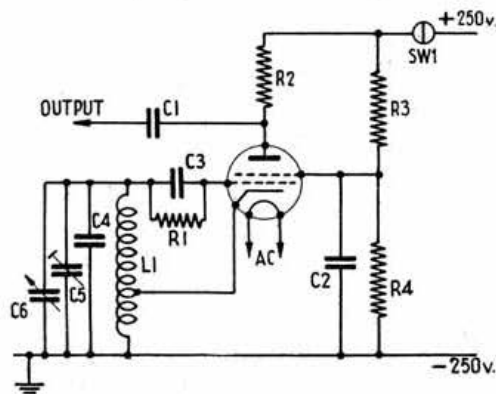


Fig. 1.

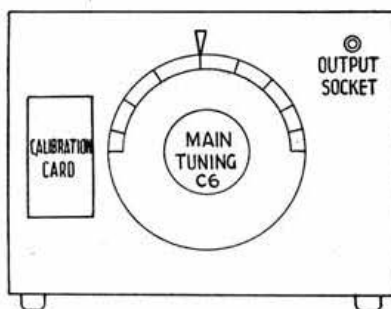
Circuit of 500 kc/s. Oscillator Unit.

R1, 3, 4	50,000 ohms.	C5	.00025 $\mu$ F trimmer
R2	10,000 ohms.	C6	.0001 $\mu$ F tuning.
C1	15 $\mu$ F mica.	SW1	Toggle switch.
C2	.1 $\mu$ F tubular.	V	6C6 (or similar)
C3	.0001 $\mu$ F mica.		ceramic valve base.
C4	.0003 $\mu$ F mica.	L1	See text.

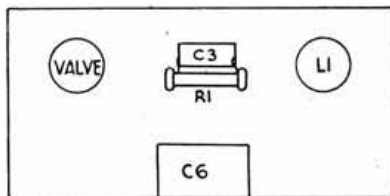
Irrespective of the type of valve used the suppressor grid must be connected to cathode.

Other points can be found by using the 5 and 15 Mc/s. frequencies of WWV in a similar manner.

Strong harmonics are available down to 50 Mc/s. although on these frequencies the 500 kc/s. points are naturally quite close together and great care must be exercised not to lose count of the harmonics: an error of 500 kc/s. will result if this happens.



FRONT ELEVATION



CHASSIS TOP (NOT TO SCALE)

Fig. 2.

Front and top views of oscillator unit, showing position of main components.

It is desirable to enclose the unit in a metal case to give proper screening; a box 8 in. long  $\times$  4 in. deep  $\times$  6 in. high will give ample room.

A nice appearance will be obtained if the layout as shown in Fig. 2 is followed. This ensures that the coil is placed away from any heat which may come from the valve. When building the cabinet remember to provide adequate ventilation.

In the original model an ordinary 180° dial was used and marked for 500, 465 and 456 kc/s. An improvement would be obtained by fitting a more accurate dial, and the meter could then be calibrated to an accuracy greater than .1 of a kc/s (using a 100° dial with vernier to read 1/10th of a division).

## AMATEUR FREQUENCIES

The following Frequency Bands have been released by the G.P.O.:—

kc/s.	kc/s.	Max. Input Power (Watts).
1,715 to 2,000		10
3,500 to 3,635		150
3,685 to 3,800		150
7,000 to 7,300		150
14,000 to 14,400		150
28,000 to 30,000		150
58,500 to 60,000		25
Me/s.	Me/s.	Max. Input Power (Watts)
2,300 to 2,450		25

Permission to use an Input Power of 150 watts is normally granted only to those who have been licenced for a period of 12 months.



# THE MONTH ON THE AIR

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

## Transatlantic on 50 Mc/s.

THE outstanding event of the month has been the bridging of the Atlantic on the U.S. 50 Mc/s. band on November 24th when W1HDQ worked G6DH for more than an hour. The British station replied on 28 Mc/s. Apparently 58.5 to 60 was just beyond the upper limit. It is a great pity that we cannot persuade the powers-that-be to give us the same band as the Americans. Apart from the advantage of being able to collaborate more closely with them, it is likely that most of our present troubles over interference with television would also disappear.

## Notes and News.

G4AJ tells us that XE1GE is on 28320 kc/s. looking for G contacts. XE1FE is another Mexican station also active on 28300 kc/s.

ZD4AE is G2BLP with 25 watts. QTH Major B. A. Lane, Police, Accra, Gold Coast.

ZD2K is O.K. and QSL's. S.G. Kitchen, Box 570, Lagos, Nigeria.

VQ5JTW is on 14 Mc/s. QRA c/o. Govt. Radio Station, Entebbe, Uganda. VQ5ELD is on 28 Mc/s. 'phone.

VU2WP is now back in this country and will soon be active as GM3AVA.

GM3UU says YR5R is a genuine under-cover Rumanian.

G4DR gives VQ8AD on 14100 as Box 155, Port Louis, Mauritius. He also gives EK1AR as 35, Garibaldi St., Tangier, on 14165 kc/s. VU2AB on 14115 is in Riga.

G2LC says ET1JJ is at Giren, Ethiopia. OP2C is in Southern Europe, QSL via G2WW. OY3IGO is at Thorshavn in the Faeroes. UA0KAA is "Arktic Dickson" Dickson Bay, Spitsbergen.

VP4TX corrects the address given for VP4TR last month and points out that he is R. Tibbits, brother of VP2AT, 5 Chancery Lane, Port of Spain, Trinidad. Apologies O.M!

G5WP suggests that you brush up your French if you want to work TR1P as he speaks no English. Other good ones from the WP bag are HR1MB, 28400. ZP2AC, 28450, VP2MY (Montserrat) 14390. HH5PA, 28350. YN3DG, 28120. TA1P is on 14220.

G2AHP has worked HV1C who claims to be in Vatican City and will QSL! Again that joke?

G6RH has worked ST2AM who is G5AM at Khartoum. VP9L told 'RH that the station using his call-sign on 14 Mc/s. C.W. is a phoney. The genuine VP9L is on 28200 'phone. NY4CM is in Havana, Cuba, 14040. KZ5AG, 14120. VS6HM, 14060. VP3LF, 14320.

GM2UU gives EK1MD as c/o. Radio International Broadcasting Station, Tangier, and OX1AS as 135 A.C.S. Sqdn., A.P.O. 858, New York also W8SIR/VP9 as A.P.O. 856, New York.

G5CI mentions TF3A, 14070 and KP4AC, 14110 as of interest.

G6CL gives W3JAK/MM/28090 as ship off coast of Tunisia. Home QTH:—4680 Chester Ave. Phila. 43. Pa. 6CL has also worked CR9AG.

G3VA says ZB1AB is O.K., Port Radar Centre, H.M. Dockyard, Malta. XABU is in Rhodes and QSL's. He is using 25 watts to an 8 metre vertical, 100 ft. above ground. VO6K is at Battle Harbour, Labrador, with 500 watts.

G6KP who still raises the DX with his usual skill,

tells us that YI6C is Ft./Sgt. Worthington, No. 1 Sgts. Mess, R.A.F. Shaibah, Iraq. VP5HN is c/o. British Army H.Q.'s, Kingston, Jamaica. He is active on 14120. The operator is G3HN. G6KP has had a contact with OE1FY who gave his full QRA as Josef Huber, Schocke-bei-Graz, Stuberberghaus, Austria. Frequency 3570 kc/s.

PA1's are P.T.T. employees, otherwise genuine amateurs.

## DX on 3.5 Mc/s.

Quite a number of Canadian, U.S. and Newfoundland stations are being contacted on 3.5 Mc/s. after 2300 G.M.T. G6CL, G5JO and G6BY in particular have been getting over consistently. We hope the A.R.R.L. will include the 3.5 Mc/s. band in next year's DX contest.

G2PU worked W1CPI at 0119 GMT on November 12th on 'phone and wonders if this is the first post-war G-W 'phone QSO on 3.5 Mc/s.

## Japan and Burma.

Jack Drudge-Coates says Europe is very difficult to contact. J4AAB is running 900 watts to a Jap transmitter with an aerial beamed on New Zealand on 14106. J4AAF is using 75 watts to an 807 on 14125. The J4's are on daily from 0800 to 1200 G.M.T. We feel that this is not the best time for 14 Mc/s. 1400 to 1800 G.M.T. would be much more likely to produce results.

BRS10132 supplies a few QTH's from Burmas XZ2AA on 28170 is Burma Command Signal, Transmitting Area, Rangoon, S.E.A.A.C. XZ2DA, 28100 and 28700. Rangoon Signals Centre, S.E.A.A.F. XZ2YT, 28490 ditto. XZ2AB, 28245 is Air H.Q. Burma, R.A.F., S.E.A.A.F.

XZ2DN is Signals Section R.A.F., Mingaladon, S.E.A.A.F. XZ2AF, 28600 same as XZ2AB.

Other DX of interest is VR2AB, 28400. Box 338, Suva, Fiji, and W4FHX in the Marshall Is. CASU34 c/o. Fleet P.O., San Francisco.

## Isle of Man.

G3ABB is active and has worked OX3WJ who gave his position as 60° 54' N. 46° 00' W. He will QSL when he returns to Copenhagen. Anyone wanting to work the Isle of Man should look for G3ABB on 14 Mc/s. between 1700 and 1900 G.M.T. or at other times on 3.5 Mc/s.

## WAC and WBE.

Two interesting recent performances are brought to our notice by G5RF and G2IG. The former, using 25 watts made a 28 Mc/s. W.A.C. in 3 hours 37 mins. including a 2½ hour break. Contacts were 1013 G.M.T., VK5MO; 1028, LU4BC; 1100, FA8DX; 1328, W8YEW; 1350, VU2AJ. He does not mention his European!

G2IG made WAC and WBE in 2 hours 48 mins. on November 17th as follows:—0925, ZS6EB; 0945, VK2ADC; 1020, PY1AEB; 1050, VU2AQ; 1115, G6KM; 1143, W1IUV; 1210, VE1PX, all on 'phone.

## Wanted.

W1CPI wants to contact G6BY and G6BW. He is active on 3.5 Mc/s. between 2430 and 0130 G.M.T.

W9VKF wants to get into touch with the holder of the pre-war call VS6AF. His name was Cotton.

\* 29 Kechill Gardens, Bromley, Kent.

# THE MONTH ON FIVE

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

THE Atlantic crossed on "six"! This is the great news of the month and perhaps the greatest accomplishment of post-war Amateur Radio. The achievement was the outcome of special tests made by Denis Heightman, G6DH, of Clacton, and Edward Tilton W1HDQ. The "six-ten" crossband QSO effected by these two on November 24 has certainly made radio history. This was no chance contact but a carefully planned experiment. Here is the story.

Early in November, daily skeds were arranged on 10 metres between G6DH and W1HDQ for the exchange of V.H.F. information and in particular for the comparison of M.U.F.'s (maximum usable frequencies). Sun-spot data were studied and it was realised that peak conditions were to be expected about November 22. This good spell did occur and on Sunday, November 24, W1HDQ and G6DH kept in touch on 28 Mc/s. throughout the day. During the afternoon, 6DH recorded Easterly commercial signals as high as 47 Mc/s. and at 16.00 told W1HDQ to transmit on 50 Mc/s. every 15 minutes. At 16.17 G.M.T., 6DH heard a station calling him on C.W. on 50 Mc/s.—this station signed W1HDQ! 6DH was able to reply on 28 Mc/s. and next time over, the American station came on phone and peaked at R5 S7/8! By 16.30 he was peaking at S9 and contact was maintained until 17.00. After this, the American station had a similar contact with G5BY which continued until 17.15.

Commenting on the results, 6DH says that apparently the M.U.F. was just about 50 Mc/s. at the time of the QSO and there was therefore no possibility of getting across on 58.5 Mc/s. to make it a 5/6 metre contact. W1HDQ uses a high-gain rotary beam and 250 watts input and is in a favourable location. 6DH was using a 98 foot inverted "L" receiving aerial, and a pre-war superhet receiver.

Readers will remember that some months ago 6DH gave his opinion that the Atlantic would first be crossed on these frequencies via the F-layer and great credit is due to him for this outstanding achievement as well as to W1HDQ for "getting over."

Since November 24 various reports of reception of American 6-metre stations have come in. G2MV (Coulson) has logged W1AW, W1HDQ and W4GJO, between 50 and 52 Mc/s. It is hoped to publish a full list next month and reports will be welcomed.

Meanwhile, the 5-metre enthusiasts will be keeping close watch on conditions and there is sure to be a big increase in 6-metre working in the States whenever things seem promising, as well as a constant look-out for our signals on five. It's been done on six—who will be the first across on five?

During the month, G5TX (Isle of Wight) returned to his shack on the Downs, "wearing two pairs of socks" and apparently for the purpose of testing out a new receiver. Judging by the contacts he made whilst there, the receiver was giving very satisfactory results.

G2XC (Portsmouth) reports the continuance of skeds with G6DH, though generally poor conditions have made contacts impossible on some occasions. G2XC's daily sked with G6YU (Coventry), at 07.00 G.M.T. has been successful on most days. DX worked during the month includes 2AK (Birmingham), 40S (Chester), and 5BY (Devon).

A message from G6VS, of Cheshire, gives details

of 57 Mc/s. transmissions from the Czech station OK1VW, near Prague. This station is now calling on Sundays from 13.00 to 14.00 and from 16.00 to 18.00 G.M.T., with an aerial beamed on England and is very anxious that G stations shall keep watch for him at these times.

G3BW (Whitehaven) reports a QSO with GM3OL (Dumfries) on 59 Mc/s., at 7 p.m. on November 18. Is this the first post-war G-GM QSO on 5 metres? G3BW, using 'phone, was given Q5 S7, and GM3OL, RST 559.

## Election of County and Town Representatives 1947

The results of the Ballots conducted for the election of Representatives in those counties and towns where more than one member had been nominated are given below:—

### County Representatives.

Region.		Votes.
4 Nottingham .. ..	*Mr. Clipstone, G8DZ ..	70
	Mr. Singleton, 7362 ..	24
7 Greater London (East)	*Mr. Matthews, G2CD ..	74
	Mr. D'Arcy, G3AGL ..	42
8 Hampshire and I.O.W.	*Mr. White, G3XP ..	11
	Mr. Kentsbeer, G8JB ..	7
8 Kent .. ..	*Mr. Trowell, G2HKU ..	9
	Mr. Barker, G3NQ ..	3

Note.—Seven votes were received for Mr. Barker and one for Mr. Trowell from members resident in the London Region.

### Town Representatives.

Bolton .. ..	*Mr. Openshaw, G2BTO ..	13
	Mr. Hardman, G3AC ..	3
Bradford .. ..	*Mr. Macdonald, G4GJ ..	78
	Mr. Sower, G2BYC ..	8
Oswestry .. ..	*Mr. Banner, 12640 ..	19
	Mr. Read, G6US ..	3
St. Albans .. ..	*Mr. Hum, G5UM ..	5
	Mr. Adams, 3412 ..	4

\* Denotes Elected.

Further to the list published in the November issue we give below the names and addresses of additional members who have been nominated to serve as Town Representatives for 1947.

Town or Area.	Name, Call Sign (or B.R.S.) and Address.
Barnes and Putney (S.W.13, 14 and 15).	R. F. Wood (12165), 28 Nassau Road, Barnes, S.W.13.
Brighton and Hove	Lt.-Com. R. D. Sainsbury (G8HV), 80 Lansdowne Place, Hove.
Burnley .. ..	P. Nicol (G5ZN), 35 Reedley Road.
Oldham .. ..	F. Lees (G3PO), 26 Bargap Road.
Oxford .. ..	F. A. Jefferies (G8PX), 1 Lovelace Road.
Plymouth .. ..	J. Eddy (G3TX), 55 Greenbank Avenue, Lipson.
Swindon .. ..	D. T. Boffin (G3HS), Lindsey House, Faringdon, Berks.
Newcastle-on-Tyne	W. Tweddle (11542), 17 Langley Road, East Denton, Newcastle-on-Tyne, 5.
Watford .. ..	R. T. Youens (G2HAR), 104 Baldwin Lane, Croxley Green, Herts.
Worthing .. ..	J. Bowers (G4NY), Alpine, Durrington Lane.
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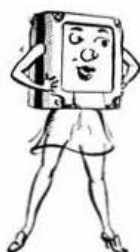
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