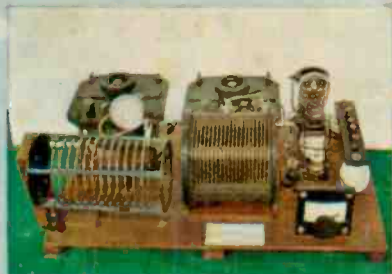


WORLD AT THEIR FINGERTIPS

JOHN CLARRICOATS G6CL



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WORLD AT THEIR FINGERTIPS

WORLD AT THEIR FINGERTIPS

*The Story of Amateur Radio in the United
Kingdom and a History of the Radio Society
of Great Britain*

by

JOHN CLARRICOATS, O.B.E., G6CL

Secretary of the Society 1930 - 1963

Honorary Member

Secretary IARU Region I Division

RADIO SOCIETY OF GREAT BRITAIN
28 LITTLE RUSSELL STREET, LONDON, W.C.1

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Contents

Foreword	ix
1. The Challenge of the Unknown	1
2. Legislation	5
3. From Encouragement to Restriction	10
4. The London Wireless Club	17
5. From Club to Society	24
6. Memorable Meeting	31
7. Suspended Animation	35
8. The Great Awakening	40
9. The Spoken Word	52
10. Transatlantic Challenge	62
11. Great Names	73
12. Growing Pains	84
13. Atlantic Conquest	90
14. International Amateur Radio	98
15. Birth of the <i>Bulletin</i>	108
16. First Convention	117
17. Fusion and Beyond	123
18. Empire Broadcasting	130
19. Emphasis on Empire	133
20. Metres to Megacycles	138
21. Into the Thirties	145
22. The Bevan Swift Era	151
23. From Peace to Tension	162
24. The Second World War	176
25. The Post-War Years	198
26. Atlantic City 1947	209

27. Pastures New	214
28. Ebb and Flow	223
29. The Mobile Age Arrives	251
30. The Way Ahead	268
31. The Geneva Conference	281
Past Presidents of the Society	291
Honorary Members of the Society	292
Vice-Presidents of the Society	293

Illustrations

between pages

- Founders of the London Wireless Club, 1913.
The Gamage Lease, 1913.
Four Past Presidents of the Society.
W. E. F. Corsham, 2UV—July 1922. 36 and 37
Transatlantic Tests 1922—equipment at 5WS.
Equipment used by Jack Partridge, 2KF—December 1923.
Equipment used by Ernest Simmonds, 2OD, for first U.K.—
Canada two-way contact on short-waves—December 1923.
Equipment used by Ernest Simmonds, G2OD—May 1925.
Hugh Ryan, G5BV—December 1923.
Gerald Marcuse, G2NM—January 1924. 68 and 69
Radio Coach, 6ZZ—Scottish Express—July 1924.
Annual Dinner of the Wireless Society of London, March 4,
1925.
Formation of the International Amateur Radio Union, Paris—
April 1925.
Silver Jubilee Meeting of the IARU, Paris—May 1950.
Formation of IARU Region I Division.
Gerald Marcuse, G2NM, with equipment used for his broad-
casts to the British Empire, September 1927.
Artistes and others associated with the first concert broadcast
on short-waves to the British Empire from the station of
Gerald Marcuse, G2NM—September 1, 1927.
The 28 Mc/s transmitter used by Ernest Simmonds, G2OD,
in February 1929. 100 and 101
Frederick Miles, G5ML, with the equipment he used to win
the Senior British Empire Radio Union Transmitting
Contest in 1932.
Douglas Walters, G5CV, and George Jessop, G6JP, with
equipment used to establish the first two-way communica-
tion on short-waves between aircraft—June 18, 1933.
Equipment used by J. S. Owner, G6XQ, in 1934.
Battery operated equipment used by the Oxford University
Arctic Expedition 1933. Manufactured by Loomes' Radio.
Alfred Gay, G6NF, with equipment he used while acting as
Calibration Manager of the Society (1935–1939). 132 and 133

- between pages*
- George Brown, G5BJ, adjusting an experimental transmitter, 1935. 58 Mc/s
- J. W. Mathews, G6LL, tuning-up the transmitter he used during the period 1937-1939.
- Equipment used by 5ML during the late 1920s.
- The equipment used by Eric Cole, SU1EC, in 1935.
- The R.A.F. section of the first Wireless Intelligence Screen Unit at Metz, Spring 1940. 164 and 165
- W. F. Holdaway, BRS15028, winner of the first post-war Direction Finding contest organised by the RSGB.
- The special QSL card issued to confirm reception of frequency marker signals from the Society's station GBIRS.
- The control station of the Radio Amateur Emergency Network set up at Chelmsford Police Headquarters.
- Typical post-war National Field Day installations established by the Norwood and Edgware Groups of the RSGB.
- The beam aerials at the, then, headquarters of the R.A.F. Amateur Radio Society, Cranwell—1950. 196 and 197
- Early equipment featured at the RSGB Exhibition 1951.
- Sir Ian (later Lord) Fraser (of Lonsdale) at the RSGB Amateur Radio Exhibition—November 1952.
- The Council and members of the staff of the Society—September 1951.
- Rene Klein (then G8NK)—1953.
- The President's Chain of Office donated to the Society in 1954 by Wilfred Butler, G5LJ, of Sutton Coldfield. 228 and 229
- The Amateur Radio station at the International Boy Scout Jamboree—Sutton Coldfield, Summer 1957.
- G. M. C. Stone, G3FZL, explaining International Geophysical Year Data to Air Marshal Sir Raymund Hart at the RSGB Amateur Radio Exhibition—November 1958.
- Mobile equipment.
- The RSGB were hosts when IARU Region I Division held its fourth triennial conference at the Grand Hotel, Folkestone—June 1960.
- Horace Freeman, who organised the First All-British Wireless Exhibition in October 1922. 260 and 261

Foreword

by Dr. R. L. Smith-Rose, C.B.E.

THE conception of the transmission of electromagnetic waves from one point to another, with no material connection between them, is just over a century old. While many of the scientists conducting early research on the properties of these waves may be regarded as amateurs, the real conception of this class of experimenters was in contrast with those engineers and others who, from the last decade of the nineteenth century, set to work to develop radio as a practical means of communication.

This volume tells the story of the pursuit of one of the most fascinating hobbies—Amateur Radio—in which this country has played a pioneer role. It describes some historic meetings on the formation of the London Wireless Club in 1913; and of its conversion soon afterwards to the Wireless Society of London. Following a suspension of activities during World War I, it was revived in 1919, and later became the Radio Society of Great Britain.

The difficulties and triumphs of the next few years are described in some detail; but throughout the next forty years or more, the story is pursued of increased and effective collaboration between persons all over the world engaged in this absorbing hobby. During the Second World War, the Society demonstrated two—perhaps unexpected—justifications for its existence, if indeed these were necessary. First, it had made available to the armed forces a large number of potential recruits already knowledgeable and trained in radio communication techniques. Secondly, it had readily available a much needed technical publication, *The Amateur Radio Handbook*. Originally produced for members of the Society, in two printings numbering 8000 copies, twelve successive printings of the second edition resulted in a total distribution of 181,500 copies among military and civilian service personnel.

From the cessation of hostilities in 1945, the Society has continued very effectively to represent the interests of the radio amateur at both national and international meetings; and in particular, at those

high-level international conferences where the professional users of radio for all purposes strive for the right to operate in various bands of the radio frequency spectrum.

And so we have here a story that spreads over a period of more than fifty years. Some of the original members of the Wireless Society of London are still living; and in one way or another have maintained their interest in this hobby, which at present attracts large numbers of amateurs in many countries of the world. This volume will commend itself to all who are interested in the history of radio; and particularly to those who wish to gain a direct appreciation of the part which the British amateur has played in the development of this absorbing hobby.

September, 1967

Introduction

by Pat Hawker, G3VA

HISTORY—and “World at their Fingertips” *is* history—is not always a topic that appeals strongly to radio enthusiasts. Tomorrow’s circuits and today’s contacts too often take precedence over last year’s events.

This is perhaps a natural reaction to a time when technical developments follow endlessly; and certainly this outlook has long existed—which may be why this is the first full-length account ever published of the British Amateur Radio movement.

Why stop to find out who were the first British amateurs? Or who decided that it was time a society was formed to look after their interests?—and exactly what, in the early days, were those interests?

One more long distance contact; one last tune around the v.h.f. bands. No time to ponder on the incredible fact that in an era of “professional” scientific and engineering research, the very first people in the world ever to know the thrill of working across the oceans with low-power, short-wave radio were the amateurs.

But some of us believe that a knowledge of the past, quite extraordinary happenings in which amateurs have been concerned is important, increasingly important.

Not so many years ago the whole story of Amateur Radio in Britain was within the active lifetime of many of its adherents. In any local group of amateurs, there was usually at least one who could personally recall the era of three-letter-only call-signs of the pre-1914 era, or the unique contribution made by amateurs to the development of h.f. radio in the ’twenties, or when the QSL Bureau came into existence, or could recall that Amateur Radio skills proved valuable to Britain in two World Wars.

Now, the passage of time means that there are few “first generation” amateurs among those whose call-signs fill the bands. No longer can we be sure that all newcomers to the hobby will hear first-hand reminiscences of the pioneers. More and more vital has it become for the written records to be assembled into one continuous,

coherent story—by someone who, since the 'twenties, has been close to the centre of British Amateur Radio activities.

But if it is important that this account be written—far more important that it should be read, and lessons drawn from it. In my own reading of the past, it has always seemed that the basic problems and practices of Amateur Radio have remained remarkably consistent—whether the transmitters be spark, valve or transistor.

Those who know how, in the past, problems arose, and how they were met, are far better placed to overcome similar difficulties which will surely arise again in the future.

For, as this book shows clearly, Amateur Radio is not just a question of technical matters, of circuits and aerials. Regulations have to be hammered out with the licensing authorities; support has to be won in the constant battle to retain frequency allocations; committees have to be formed, nourished and sometimes opposed.

No one book can hope to be complete, to give other than the author's personal interpretation of events, or to balance exactly the relative importance of individuals and policies. This should be remembered in any reading of history.

Nevertheless, this present account will surely help immensely towards a better understanding of Amateur Radio; while for those whose memories already stretch back over the years, it will help to fill many gaps, and bring back many a smile over former occasions, and a vivid recollection of old-time friends.

John Clarricoats deserves our thanks, and our support, in undertaking the enormous work involved in such an ambitious account of almost three-quarters of a century of Amateur Radio activity.

The Challenge of the Unknown

THE beginnings of Amateur Radio, as of radio itself, lie deep in the past, indeed one could begin thousands of years ago with those persons whose curiosity was aroused by the attraction of small particles by amber beads that had been rubbed. This was not really investigated until Gilbert's experiments in electricity, during the reign of Queen Elizabeth I, followed by the discoveries of Ampere, Volta, Faraday, Maxwell, Kelvin and Cavendish, which prepared the world for what was to be one of the great revelations of all time—the means of communication by wireless telegraphy.

Michael Faraday was the first to suggest that a relationship existed between light and the new "electro-magnetism". From his experiments he was able to formulate "laws of induction", used later by Clerk Maxwell, whose discoveries led him to postulate the theory that electro-magnetic induction was produced by waves carried in space by the vehicle of an invisible, weightless and all-permeating medium which he called "the ether".

In a paper read to the Radio Society of Great Britain on April 25, 1923,* the scholar and physicist George G. Blake, M.I.E.E., A.INST.P., traced the historical development of radio telegraphy and radio telephony. The paper not only provided the future historian with a wealth of valuable material but it showed also how closely some of the early presidents of the society had themselves been associated with these great days of early discovery and development.

By several methods, usually involving the use of metallic plates, Steinheil in Germany, Morse in the United States, Lindsay, Cook and Wheatstone in Britain succeeded during the middle years of the nineteenth century in signalling over short distances without the aid of wires.

Oliver Lodge† and William Preece in England, Professor Trowbridge, Graham Bell and Thomas Edison in America, had also attempted communication by electro-magnetic induction but the distances covered were small and the results not very satisfactory.

* *The Wireless World and Radio Review*, Vol. xii, 8 and 9.

† Sir Oliver Lodge was President of the RSGB in 1925.

It was Heinrich Hertz in Germany who finally established by experiments the principle of radiation as opposed to induction, thereby paving the way in due course for Marconi* to evolve a practical system of Hertzian wave wireless communication.

Blake drew special attention in his paper to the pioneer work of Professor D. E. Hughes of London who, in 1879, showed to a group of distinguished scientists that it was possible to transmit signals, without the use of a connecting wire, over distances of several hundred yards using an induction coil and a microphonic joint as a receiver with a telephone earpiece. Hughes rightly surmised that the oscillations were propagated through the insulating medium between the two instruments and that they penetrated through solid walls but, discouraged by the scepticism of several well-known people, he did not continue this work beyond the purely experimental stage. At the time Blake read his paper a more detailed account of the work done by Hughes had recently appeared in the *Journal of the Institution of Electrical Engineers*, the author of which was A. A. Campbell Swinton, President of the Wireless Society of London from 1913 to 1920. Hughes' experiments were first conducted within his own home, where distances up to sixty feet were covered but on several later occasions he walked up and down Great Portland Street, in the Regent's Park area of London, with the telephone to his ear and was able to hear signals from a transmitter almost 500 yards away. He also noticed that the waves were reflected by some of the buildings. *The Globe* newspaper of May 12, 1899, recorded that "Hughes' experiments of 1879 were virtually a discovery of Hertzian waves before Hertz, of the coherer before Branley and of wireless telegraphy before Marconi and others". Because of the foresight shown by Campbell Swinton, the Science Museum, London, now possesses much of the early apparatus used by Professor Hughes who must assuredly be regarded as Britain's first radio amateur.

In 1884 Professor Onesti showed that if iron filings were placed in a tube between two copper electrodes and inserted in series with a battery and galvanometer or telephone, the application of a fairly high voltage across the filings caused them to stick together, or *cohere*, sufficiently to allow a current to pass through them. Revolving the tube *decohered* them. Oliver Lodge, in 1889, demonstrated this phenomenon of cohesion between two metal spheres and later made a coherer consisting of a microphonic contact between a watch spring and a plate of aluminium. Two years later Professor Branley verified previous findings and also demonstrated the important

* Senatore Marconi was one of the first two Honorary Members of the Society.

further fact that filings could be made to cohere by electric discharge taking place in the vicinity of the experiment but without direct connection to the coherer. One of the first to recognise the importance of Branley's coherer was Lodge, who himself devised a mechanical tapper to bring the filings automatically to their normal non-conductive condition once again after coherence. Lodge demonstrated his device before the British Association in 1894 and received signals across a distance of 150 yards but he did not realise at that time that he had at his command an instrument which might be turned to practical use for long-distance wireless communication.

In 1895 the Russian scientist Popov applied the Hertzian principles to the study of atmospheric electricity and in the same year devised a receiver for the reception of Hertzian waves, which worked well over short distances. It was at this point in the discovery of "wireless" that Marconi, in 1895, produced the first really reliable detector, using a greatly improved coherer of his own invention. At first, metallic reflectors were placed between his transmitter and receiver and the waves focused so that they travelled in parallel beams between two points of communication but this method was soon rejected and aerials, suspended by kites, were used instead. Marconi's first trials took place at Bologna, Italy. When these proved successful he came to London (in 1896) to be introduced by Campbell Swinton to Sir William Preece, then Chief Engineer of the Post Office. Preece himself had been interested in wireless communication for many years but most of his experiments had centred around inductive methods.

At about this time Professor Ernest Rutherford in Cambridge and Capt. H. B. Jackson,* a Royal Navy Signals Officer, had transmitted signals over short distances. Rutherford used a large horizontal Hertzian-type radiator with the transmitter and a magnetic detector of his own design. Jackson's work was carried out in secret and details of his apparatus have never been published but it is known that he was able to establish ship-to-shore wireless communication in 1895.

Marconi's first wireless system (patented in 1896) was based directly on the experiments conducted by Hertz some eight years earlier. In 1897 he succeeded in transmitting signals across a distance of $8\frac{3}{4}$ miles. A year later communication was established between Dover Town Hall and Wimereux in France and this was followed by direct communication between Wimereux and the then recently opened Marconi factory at Chelmsford (eighty-five miles).

* Admiral Sir Henry Jackson was President of the RSGB in 1922.

Between 1899 and 1900 Dr. W. H. Eccles,* while engaged in development work at the Marconi Chelmsford factory, devised the first bench method of testing coherers, thereby avoiding the necessity of connecting them to an aerial. He also prepared and drew the first detector characteristic curves and these were published in *The Electrician* for September 1901. In December of that year the world was startled by the news that Marconi at St. John's, Newfoundland, had received the Morse letter "S" transmitted by Ambrose Fleming from the Marconi station set up at Poldhu, Cornwall.

And so, as the twentieth century began to take shape, hundreds of people—old and young—possessed of a scientific bent and thrilled by the news that transatlantic wireless communication had indeed taken place, accepted the challenge of the unknown laid down for them by their illustrious forbears and without realising it, became the world's first radio amateurs.

* Dr. Eccles was President of the RSGB in 1923-24.

Legislation

THE Postmaster General (Lord Stanley, later Lord Derby) in his Report to Parliament for the year 1903–04 recalled that he had recently introduced, in the House of Commons, a Bill for the purpose of requiring all wireless stations to be licensed. He gave as a reason the Government's desire to secure an adequate control of all wireless telegraphy installations. How far the Government's decision to introduce legislation had been affected by official or unofficial discussions at the International Telegraph Conference held in London from May 26 to July 10, 1903, no one now knows, but there can be little doubt that confidential reports, written by the Post Office delegates who attended the preliminary International Conference on Wireless Telegraphy in Berlin during August 1903, materially influenced the decision.

The Wireless Telegraphy Act 1904 became law on August 15 of that year and was the first piece of legislation of its kind in history. It remained in force until July 31, 1906, after which date it was extended on a year-to-year basis under the Expiring Laws Continuance Act until replaced by the Wireless Telegraphy Act of 1924.

The Postmaster General, in his Report to Parliament for 1904–05, referred to "the strategic importance of Wireless Telegraphy and to the fact that some form of centralised control is necessary if the public are to receive the fullest advantage from this new means of communication". Later in his Report Lord Stanley said "I have received numerous applications for licences under the terms of the Act, *the majority being from persons who desire to use wireless telegraphy for experimental purposes*, and I have made every effort to apply the provisions of the Act as liberally as possible, whilst keeping in view the objects with which it was passed."

Earlier that month the Postmaster General had shown his desire to encourage the wireless experimenter when, in moving the Second Reading of the Bill on August 10, he said "The class with whom I have the greatest sympathy are those who wish to go in for experiments in this science. I have been able to frame a clause which will give them absolute freedom in that direction, merely requiring

registration on the part of those who wish to engage in experiments. In a matter of this description the House will doubtless desire that the Act should be administered as liberally as possible and I shall certainly do my best in that direction. For what it is worth I will give an undertaking that no request for a licence for experiments shall be refused unless the refusal has been approved by me personally."

Quoting this speech by Lord Stanley, at the opening of the Fourth RSGB Amateur Radio Exhibition on November 22, 1950, Mr. Hugh S. Pocock, M.I.E.E. (then Editor of *Wireless World* and a past Member of the Council of the RSGB), suggested that if it had not

[EXPERIMENTAL FORM 1.]

Dated _____ 1905.

POST OFFICE TELEGRAPHS.

HIS MAJESTY'S POSTMASTER GENERAL

AND

LICENSE to use Wireless Telegraphy for Experimental Purposes.

This Indenture made the _____ day of _____ One thousand nine hundred and five **BETWEEN THE RIGHT HONOURABLE EDWARD GEORGE VILLIERS STANLEY C.B.** commonly called Lord Stanley His Majesty's Postmaster General (who and whose successors in the office of His Majesty's Postmaster General for the time being are intended to be hereinafter included in the term "the Postmaster General") on behalf of His Majesty of the one part and

(hereinafter called "the Licensee") of the other part.

Whereas the Licensee is desirous of establishing installing working and using a system of wireless telegraphy as defined in section 1 (7) of the Wireless Telegraphy Act 1904 with the sole object of conducting experiments in such telegraphy;

And whereas by reason of the provisions of the ^{Act} to 1904 it is unlawful to establish any wireless work any apparatus for wireless accordance with

been for this sympathetic attitude to the amateurs on the part of the then Postmaster General it was conceivable that private experimental licences would never have been granted.

Although Lord Stanley had indicated that those who wished to experiment would merely be required to *register*, Section 2(1) of the Act stated that "where the applicant for a *licence* proves to the satisfaction of the Postmaster General that the sole object of obtaining the licence is to enable him to conduct experiments in wireless telegraphy, a licence for that purpose shall be granted, subject to such special terms, conditions and restrictions as the Postmaster General may think proper, but shall not be subject to any rent or royalty".

WIRELESS TELEGRAPHY.

RETURN to an Order of the Honourable The House of Commons,
dated 29 May 1906;—*for*,

RETURN "of Applications for Licenses under the Wireless Telegraphy Act, 1904, showing how each Application has been dealt with, and of Statistics of MESSAGES to and from SHIPS at Sea exchanged between the POST OFFICE and the MARCONI COMPANY during each quarter from January 1905 to March 1906, inclusive."

General Post Office,)
13 June 1906. (

Until recently it had always been assumed that the first printed experimental licences were issued sometime between 1910 and 1911 but it has now been established that a printed "Licence to use Wireless Telegraphy for Experimental Purposes" was, in fact, issued in 1905. An extract from the first page of Experimental Form 1 (printed in June 1905) is reproduced on page 6 by permission of the Postmaster General. There were in fact three types of licence (Experimental Forms 1, 2 and 3) but the differences between them were very slight.

On May 29, 1906, the then Postmaster General (Sydney Buxton, M.P.) was ordered by the House of Commons to render a Return "of

applications for Licences under the Wireless Telegraphy Act 1904, showing how each Application has been dealt with". This Return, dated June 13, 1906, is of interest because it gives the names and addresses of sixty-eight persons to whom an Experimental Licence had been issued—the first such list ever published.

In the list appears the name of Dr. J. A. Fleming of University College, London. Dr. Fleming—later to become Professor Sir Ambrose Fleming, F.R.S., and a Vice-President of the Wireless Society of London—invented the thermionic valve whilst carrying out experiments at the college. As a background to that invention it has been recorded that much of the technical work required for Marconi's first attempt to transmit a wireless signal across the Atlantic had been done by Fleming in the Electrical Engineering Department of the college. In the course of that work he had discovered that weak high-frequency signals presented a difficult problem because the only instruments then available for their detection

5

EXPERIMENTAL—continued.

(2) Other cases—continued.

Name of Applicant.	Proposed position of Installation.	Radius of Action.	Remarks.
Barbury, H. H. T. -	Crigglistone (Wakefield) and Barnsley.	10 to 15 miles	License granted.
Child, H. W. R. -	Penywen Road, S.W. -	About 10 miles	License granted.
Clarke, E. R. - -	35, Leinster Gardens, W.	20 miles -	License in preparation.
Clarke, G. W. - -	Waterloo, Liverpool -	5 miles -	Under consideration.
Clutterbuck, B. V. -	Liskeard - - -	About 1 mile	License granted.
Cox, H. W., Ltd. -	Rosebery Avenue, E.C. -	50 miles -	License granted.
Cox, W. J. - - -	Notherton, Ware - - -	Not specified -	Application abandoned.
De Forest Wireless Telegraph Syndicate.	Oxford and Cambridge -	100 miles	License granted. See also under Commercial (2) and Experimental (1).
Demuth, C. H. -	St. Briavels, Glos. -	Not specified -	Under consideration.
Drake, W. J. - - -	Westerham (Kent) and Tuttsfield (Surrey)	Do. -	Application abandoned.
Draper, V. W. -	Almoudbury, Huddersfield	5 miles -	License granted.
Ellis, H. T. - - -	Scally, Yorks - - -	40 miles -	License granted.
Evans, Capt. - - -	Gray's Inn Road, W.C. -	About 10 miles	License granted.
Fleming, J. A., Dr. -	University College, W.C., and Hampstead.	5 miles -	License granted.
Foot, C. M. - - -	Bow, E. - - -	Not specified -	Application - ²
Gard, W. - - -	Canterbury - - -	About 10	
Gillet, J. A. - - -	Banbury -		
Gladwell, T. -			

were the unreliable coherer and the magnetic detector, both insensitive devices. Fleming, who had been interested in Edison's discovery of the unidirectional conductivity that develops between two electrodes in a vacuum tube when one of them is heated, constructed lamps to demonstrate this one-way effect. In October 1904 the idea occurred to him that such a lamp might be capable of detecting on a galvanometer the high-frequency waves used in wireless transmission.* Working in his laboratory at the college he verified the truth of his idea and on November 16, 1904, he took out a patent to protect his interest in what he named the "thermionic valve". With Fleming's invention of the diode valve there began the astonishing developments which have led to telecommunications and other applications of modern electronics.

Another famous name included in the Parliamentary Return was that of Professor Sylvanus Thompson of the City and Guilds of London College, London. He, too, was later to become a Vice-President of the Wireless Society of London. Others in the list were H. H. T. Burbury and A. W. Sharman, both of whom figured prominently in the Wireless Society of London during the nineteen twenties. Because of its historic importance part of the Parliamentary Return is reproduced in this book.

It is interesting to note that the United States Government did not begin to issue licences for experimental purposes until December 1912.

* The underlying reason for these experiments was Fleming's increasing deafness.

From Encouragement to Restriction

GROPING its way through the English Channel in dense fog during the late evening of April 28, 1899, the steamship *R. F. Mathews* of London had the misfortune to ram the East Goodwin Lightship anchored off the coast of Kent. The lightship, recently equipped with Marconi equipment, sent a wireless message for help to the South Foreland Lighthouse about twelve miles away and in so doing made history; it was the first distress call of its kind ever made.

The East Goodwin incident aroused much interest among that small section of the community whose hobby was "things electrical". They were the young men who built small electric motors and Wimshurst machines, laid telegraph wires to the homes of their friends across the street, experimented with telephones and made up electric batteries. They had been fascinated by Marconi's successes, both in his native Italy and in England. They read all they could about his work, talked about the results and, in their own way, tried to repeat his experiments in their own homes. They were, in fact, the first amateur wireless experimenters.

Years later, in the January 1954 issue of the *RSGB Bulletin*, Albert Megson, then G2HA, of Buxton, Derbyshire, wrote reminiscently about the days when he first became interested in wireless. Attracted by an article which appeared in the *Strand Magazine* during 1899, Megson began to construct simple pieces of electrical apparatus and by the autumn of that year had successfully completed his first "receiver", consisting of a coherer, a battery and an electric bell. The coherer used a $\frac{1}{2}$ inch diameter glass tube, 1 inch long, filled with iron filings. Corks were pressed into the ends of the tube and copper wires were passed through into the iron filings so that they did not quite meet. A Wimshurst machine, consisting of two glass plates, 16 inches in diameter, and two Leyden jars were used for the "transmitter". A home-made spark gap completed the "station". With the Wimshurst machine placed a few feet from the "receiver" Megson revolved the plates to charge the Leyden jars, which then discharged through the spark gap. After making various adjustments

he was able, eventually, to cause the bell to ring over short distances. Later a simple, but sensitive, relay was constructed and brought into circuit. Nickel filings in the coherer helped to improve the overall sensitivity. Using this apparatus, and with the help of his brother, Megson eventually succeeded in operating the bell over a distance of more than a mile. An account of this early experimental work appeared in *The English Mechanic and World of Science*, a weekly journal of the day which did much to encourage and foster interest in electrical science.

Throughout the fifty and more years that Megson maintained interest in wireless he constructed almost the whole of his equipment. A contemporary of Megson, a young Army officer, Lt. M. J. C. Dennis, had set up an experimental station at Woolwich Arsenal, East London. Many years later Colonel Dennis, C.M.G., as he had then become, described in the *RSGB Bulletin* some of his early apparatus and the results he obtained, claiming at the same time that his was the first non-professional wireless experimental station to be established in the world—a claim that was never challenged. The year was 1898. Two well-known amateurs who called upon the colonel at his home in Baltinglass, County Wicklow, to offer him their congratulations on his seventy-third birthday in 1937, were privileged to examine examples of his early work and to admire the skill and ingenuity of this great amateur pioneer. Colonel Dennis, EI2B, was elected a Vice-President of the Radio Society of Great Britain in 1936 when he retired, after very many years' service, as RSGB Representative for the Irish Free State.

Leslie McMichael, a name later to be associated with the London Wireless Club and the wireless industry, began experimenting with wireless apparatus in 1902 using an 8 in. spark coil. With this he succeeded in ringing a single-stroke "railway bell" over a distance of 200 yards, using nickel and silver filings in the glass tube of his coherer, and then, for some reason, he lost interest until 1912, in which year he constructed his first crystal receiver. In July 1913 he helped to form the London Wireless Club. Gilbert Tonkin, then G5RQ, recalled in the October 1955 issue of the *RSGB Bulletin* that, although he began to experiment as early as 1909, the first licence issued in the West Country went to Charles H. Tilsley of Bristol in 1905. Using a 4 in. spark coil and a Branley-type coherer Tilsley successfully transmitted signals a distance of more than a mile across Bristol, but as he did not know the Morse Code his experiments were limited. Tonkin began his wireless experiments in Bristol using a $\frac{1}{4}$ in. spark coil powered by a 6-volt battery and Branley-type coherer. Shortly after being licensed as TBX in 1910, he and a few of

his friends were given the opportunity of operating a pair of commercially made transmitters and receivers of a type then being advertised by the well-known Holborn firm of A. W. Gamage Ltd. The transmitters and receivers were set up at a bazaar in Bristol and messages were sent and received over a distance of about 300 feet at sixpence a time! At that period Gamage's was one of the very few concerns in Britain catering for the wireless experimenter.

During the early years of the present century, W. J. Shaw, TWX, of Twickenham, Middlesex, and B. S. T. Wallace of Wandsworth Common, South London, made regular contributions on wireless topics to *The English Mechanic*. It was in this periodical that an article appeared in 1909 written by a Northamptonshire village schoolmaster in which he described the success he had had in teaching wireless principles to the pupils of his school. Wallace, writing in 1961 from his home in Rustington, Sussex, recalled that his first successful aerial contained 700 feet of bronze wire and had a natural wavelength of 205 metres. He was a pioneer in the reception of long-distance spark stations.

Many wireless experimenters of the period up to August 1914 owed a great deal to *The Model Engineer* and to its enterprising editor Arthur W. Marshall, who frequently published descriptions of transmitting and receiving apparatus. Many of the pioneers of wireless had originally been ardent model makers, which explains why much of the early apparatus was precision made. One such enthusiast was J. E. Nickless of Wanstead, London. "Nic", as he came to be known "over the air", first developed a flair for wireless after reading an article by H. Hillesdey, HHX, of Hither Green, London, in a 1910 issue of *The Model Engineer*. "Nic's" first receiver consisted of a loose-coupled tuner and an electrolytic detector made from a small glass jar, a platinum spear point sealed into a glass tube, and an adjustable silver bottom plate, these being immersed in a weak solution of sulphuric acid; a small voltage was applied by means of a potentiometer. He must have been a patient man, because during one spell of listening, extending over a period of eight hours, all he heard was a time signal from the Eiffel Tower Station (FL) in Paris.

Nickless was one of the first to control an electrically driven motor-boat by means of wireless signals. Control was achieved by a system of relays operated through a coherer circuit energised by Hertzian waves transmitted from a rod aerial mounted at the side of the pond. A spark ignition coil was used as h.f. generator. Nickless obtained his first licence (NXC) on October 7, 1913, and was relicensed in 1920 as 2KT. For several years he was a member of the Council of the Radio Society of Great Britain.

In 1913, George Robertson Marsh of Twyford, near Winchester, Hampshire, a schoolmaster, was issued with a licence (NXT) to use Wireless Telegraphy for Experimental Purposes by The Right Honourable Herbert Louis Samuel, M.P., His Majesty's Postmaster General, who in the gracious ways of the period sent him greetings. What is particularly interesting about this licence is that the original Schedule limited Marsh's activities to "wavelengths not exceeding 100 metres". The licence was amended or engrossed (to use the formal language of the Post Office) on March 5, 1914, to permit operation on "wavelengths not exceeding 200 metres". The licence, like others of that era, was signed, sealed and delivered by Edmund Waterton Farnall, C.B., on behalf of the Postmaster General and written in copper-plate style, rather different from the duplicated licence issued fifty years later.

It was not until fifty years later that Arthur F. Carter, of Aylesbury, Bucks, told the story of the events which led to him receiving his first transmitting licence (IRX) on August 1, 1912. He, together with four other enthusiasts living in Birmingham, began to build receivers in 1911 and transmitters a year later. His own first transmitter consisted of an old motor car trembler ignition coil, a pair of brass door knobs as spark gap, a copper helix as tuning inductance, and condensers made of old photographic plates and "tin foil". The wavelength was reputed to be about 200 metres. Contacts were frequently established between the five stations in the group up to distances of seven miles. Carter's early coherer receiver was replaced a year later by a simple crystal receiver using silicon, zincite-bornite or carborundum, as fashions changed. In 1913 a Marconi magnetic detector was constructed which worked exceptionally well. The little group to which Carter belonged was one of the first in the Midlands; another was in Derby and another in Bristol. Soon there would be groups in almost every large and many small towns: soon those groups would be forming themselves into local societies.

Meanwhile the Postmaster General was reporting with unflinching regularity that the number of applications for experimental wireless licences was increasing year by year. In his report to Parliament for 1905-06 he said "I have continued to receive numerous applications for licences under the 1904 Wireless Telegraphy Act which have been dealt with as liberally as was consistent with the objects for which the measure was passed. It is my wish to promote experimental investigations in this promising field. The total applications received is 130, of which 104 have been granted." During the following year thirty-six applications for experimental licences were received and all were granted.

And so it went on until, in April 1913, the Postmaster General announced that the number of licences for experimental purposes had increased from 258 on March 31, 1912, to 942 on March 31, 1913. It was then that certain people in high places began to show concern because, in April 1914, when the number of licences had risen to 1963, Parliament was informed that "in view of the rapid increase in the number of applications, new conditions were introduced during the year with a view to ensure, as far as possible, that licences to conduct experiments should only be issued to persons having the necessary scientific qualifications. An Inter-Departmental Committee has now been appointed to consider the conditions which should be applied to such licences in future." Only a few years earlier Lord Stanley, when Postmaster General, had given an assurance that experimenters would be required to do no more than register. Now powerful influences at the Post Office, the Admiralty and the War Office had commenced to lay down a policy which, in the opinion of many, was contrary to the intention of those who drafted and sponsored the 1904 Act. It was with the knowledge that new conditions were to be introduced that wireless enthusiasts up and down the country began to realise the urgent necessity for taking collective action. Against that background the London Wireless Club was formed.

In May 1910 the Postmaster General informed all holders of experimental licences that he had "found it desirable to lay down a general rule that stations should have a distinctive call-signal and that each station, when signalling, should begin each transmission with the call-sign of the station with which it desires to communicate and end it with its own call-signal". Howard Littley, who was first licensed without a call in October 1909, was notified on May 27, 1910, that "The Postmaster General proposes, if you have no objection, to allot to your stations the following call-signals, 13 Lodge Road (West Bromwich) LBX, Swan Village (West Bromwich) LSX, and he will be glad to have an assurance that you will employ the appropriate signal in future in the manner indicated above." In 1967 Howard Littley, G2NV, then living in the Isle of Wight, was one of the most active stations on the 80-metre band.

During the autumn of 1913 A. W. Gamage Ltd. published *A Directory of Experimental Wireless Stations in the United Kingdom licensed by the Postmaster General*. The cover illustration was not identified but it was almost certainly a picture of the 250-watt station of Claude Willcox, WUX, of 21 George Street, Warminster, Wilts.—a most ambitious array of equipment. The names, addresses and call-signs of 405 licensed transmitting stations were listed in the directory

as well as the names and addresses of 360 receiving stations. Names well known in later years included G. G. Blake, BOX, Col. J. M. C. Dennis, DNX (EI2B), Philip R. Coursey, GYX (G5AT), Col. B. Hippersley, HLX (G2CW), Noel H. Hamilton, IXY, Howard Littley, LBX, LSX (G2NV), John Scott Taggart, LUX (G2LR), A. T. Lee, LYX (G2DJ), Leslie McMichael, MXA (G2FG), J. E. Nickless, NXC (G2KT), G. R. Marsh, NXT (G2IW), H. W. Pope, PZX (G3HT), Rene Klein, RKX (G2HT), Gilbert W. Tonkin, TBX (G5RQ), W. J. Shaw, TWX, W. Kenneth Alford, TXK (G2DX), A. L. Megson, UAX (G2HA), H. S. Walker, WBX (G2OM).

Derby Wireless Club (QIX), Barrow and District Amateur Wireless Association (RXY) and Birmingham Wireless Association (TXS) were the first local clubs to possess a transmitting licence. The important influence of the Derby Wireless Club is evident in the directory by the fact that Derby School (FEX), Wilkinson Memorial School, Derby (TCX) and Repton School, Derbyshire (OXQ) all held experimental transmitting licences.

Mrs. C. E. Ingram (IXI) was probably the first lady to hold a transmitting licence but her interests were more commercial than amateur because she was associated with Ingram's Commercial and Wireless School, Ilford, Essex.

From the earliest days wireless experimenters had looked, mainly, to *The English Mechanic and World of Science*, *The Model Engineer*, and to a lesser extent to *Work*, for information on wireless topics. Occasional articles in the monthly magazines and in *Boy's Own Paper* made up the popular literature of the time. Then in April 1911 *The Marconigraph* made its appearance. As its name implied it was the house magazine of the Marconi Company but copies could be obtained through newsagents and booksellers. *The Marconigraph* was the first periodical devoted exclusively to wireless subjects but its life was short, for in April 1913 it was replaced by *Wireless World*.

The debt which the Amateur Radio movement in the United Kingdom owes to *Wireless World* and in particular to Hugh Pocock, H. F. Smith and H. B. Dent, all of whom occupied the editorial chair with great distinction, cannot be assessed; suffice to say that this book could not have been written if there had been no *Wireless World* to which to turn for historic fact.

Of the wireless text-books available at this time very few made any reference to the amateur. An exception was *Wireless Telegraphy for Amateurs*, by R. P. Howgrave-Graham, which first appeared late in 1907 or early in 1908. This was really the first of all the books that have since been written for wireless amateurs. It gave a full

account of two amateur stations established at Hampstead Heath and Tufnell Park in North London which used, mainly, the Lodge-Muirhead type of disc coherer, an example of which can be seen in a receiver at the Science Museum, London. A revised edition of the book, published in 1912, included information on spark transmitters and receivers contributed by Maurice Child—a well-known pioneer. There was also a reference in that edition to Maurice Child's series of articles, "Small Power Wireless Installations", which had appeared in *Model Engineering* during 1911 and 1912.

Several books in the "How to Make" series appeared around this time, including *Hints on Wireless Telegraph Design for Amateurs* by "Alfric" (*The Electrician* 1913) and *Wireless Telegraphy (Work)*. This manual was entirely rewritten by E. Redpath, G2DS, in 1922.

In July 1914, just before World War I, two books appeared almost simultaneously; both had very large sales and both became famous. *Text Book on Wireless Telegraphy* by Rupert Stanley contained descriptions of amateur receivers. *Elementary Principles of Wireless Telegraphy* by R. D. Bangay was written originally for students, amateurs, and members of the Boys' Brigade, Church Lads' Brigade, and Boy Scouts' Association, but within a year Part II appeared and the enlarged volume became a widely used text-book for wireless operator training. It ran to many editions.

The London Wireless Club

THE issue of *English Mechanic* for June 6, 1913, contained a great many Letters to the Editor on wireless subjects but none produced such far-reaching effects as the one from Rene H. Klein, of 18 Crediton Road, West Hampstead, London, N.W.

Klein wrote:

“When erecting my small wireless station some months ago and seeking for guidance in the making of instruments, etc., I was rather surprised to find that no amateur wireless club existed in London. It seems to me that the creation of such a club would prove a great boon to the many amateurs of London, just as the creation of the Derby and Liverpool clubs have been appreciated by their members. The advantages to be gained are somewhat obvious, both to the beginners and to the more advanced adepts of the new science.

“The greatest difficulty we would have to contend with would, no doubt, be finding suitable rooms sufficiently central to suit all members, and give the possibility of erecting a good aerial. I shall be glad, however, if prospective members would care to write to me, giving me their views on the subject, and if the response will appear to warrant a certain measure of success, a preliminary meeting would be held to discuss the broad lines on which the club should be run.”

In this way, and by similar letters to *The Model Engineer* and *Work*, the first steps were taken to establish a wireless club in London.

One of the first to respond to Klein's invitation was Leslie McMichael (MXA), who at the time was managing a laundry in South London. Klein himself was associated with the firm of Bloch and Klein, a City firm of egg merchants. He had obtained his licence (RKX) earlier that year. On June 30, 1913, Klein wrote to the few people who had responded to his letter, inviting them to attend a meeting at his home on Saturday, July 5. Present on that occasion were Rene Klein, Leslie McMichael, L. Francis Fogarty and

A. P. Morgan. Fogarty at the time was with the Isenthal Company: he later founded the Zenith Electrical Co.

It was recorded in the August 1913 issue of *Wireless World* that:

“London has hitherto been without a wireless club, but at a meeting held on July 5 an association was formed under the title of ‘The London Wireless Club’ having for its object ‘the bringing together of all amateurs interested in wireless telegraphy and telephony’. At that meeting, Mr. R. H. Klein, of 18 Crediton Road, West Hampstead, N.W., was elected Hon. Secretary *pro tem*. The next meeting will be held in September, and in the meantime amateurs intending to join the club should communicate with Mr. Klein. We are glad to learn that already sufficient support has been given and promised to ensure the success of the club.”

Some of the reasons why Rene Klein considered the time had come to form a club in London were given in his first letter to the technical press, but undoubtedly one of his main objects was to bring into being an organisation that would be able to negotiate with the Post Office on licence matters.

Earlier in 1913 the Postmaster General had informed the House of Commons that he had decided to introduce new licence conditions “with a view to ensure, as far as possible, that licences to conduct experiments should only be issued to persons having the necessary scientific qualifications”. What he did not tell Parliament was that he had also decided to introduce a charge for all new licences—receiving as well as transmitting. It is safe to assume it was the decision of the Post Office to impose a licence charge of £1 1s. that influenced Klein to write his letter to the press in June of that year. This assumption is warranted when it is remembered that on July 10, 1913—only *five days* after the London Wireless Club was formed, with a membership of five people—Klein wrote to the Secretary of the Post Office in the following terms:

“I shall be glad to hear when it will be convenient for you to receive three members of our Committee.

“One of the chief objects of the London Wireless Club is the regulation, among amateurs, of experiments in transmission, the checking of abuses by the use of untuned aerials, excess of power and, generally, the elimination of all causes which render serious work very often an impossibility.

“A number of experimenters in Wireless Telegraphy wish also to be fixed [*sic*] as to the exact scope of the new regulations now in force for the issue of licences.

"I shall be glad to hear from you when such an interview can be arranged."

As he had received no reply within seven days he wrote again.

On July 22, 1913, the Secretary of the Post Office (Sir Alexander King, K.C.B.) replied and invited Klein and his colleagues to call and see him later that week. Klein, McMichael and Fogarty duly arrived at the General Post Office during the morning of Saturday, July 26, where they presented their case to the Secretary. The main bone of contention was the decision of the P.M.G. to charge one guinea for every new licence issued—be it transmitting or receiving. Sir Alexander King agreed to place the views of the London Wireless Club before the Postmaster General. The meeting was of historic importance because it was the first occasion on which the Post Office had received a deputation representing the interests of wireless experimenters.

Ten weeks later, on September 16, 1913, Sir Alexander King informed Rene Klein in a letter that "The Postmaster General's decision to make a charge of one guinea for all new licences was due to the amount of clerical work involved in preparing the actual documents and was also intended to cover the cost of inspecting installations. For these reasons the Postmaster General regrets that he does not see his way to make any reduction in the charge." Sir Alexander also informed Klein that "The Postmaster General is glad to learn the London Wireless Club favours restricting the issue of licences as far as possible to those who wish to use wireless for *bona fide* experimental purposes. The Club's offer to make arrangements for certifying the qualifications of applicants for licences is accepted, provided those submitting the testimonials possess an expert knowledge of wireless telegraphy and are qualified to give such testimonials."

A leading article in the August 1913 issue of *Wireless World* supported the decision of the Postmaster General to charge one guinea for all new licences on the ground that it would "encourage the genuine experimenter and discourage the irresponsible 'amateur' who takes only a passing interest in wireless telegraphy". In the same issue *Wireless World* welcomed the increase in the number of amateur wireless clubs in the country. "The club movement has not been in existence long but already there are about half a dozen clubs either formed or proposed. We are probably only at the beginning of what will undoubtedly become a very large and useful movement, with associations of amateur experimenters in every important centre co-operating for the common benefit of their members."

Unquestionably Derby Wireless Club was the first wireless club to be formed in Great Britain, although its date of formation seems to be in some doubt. In 1961 the Derby and District Radio Society celebrated the *Golden Jubilee* of its distinguished predecessor by various functions and the publication of a Golden Jubilee booklet in which it was claimed that the club was formed in 1911. However, in the issue of *English Mechanic* dated April 11, 1913, it is recorded that "The *first* annual meeting of the Derby Wireless Club was held on April 3, 1913, when it was decided to convert the club from a 'proprietary' one into a 'members' club. Rules were adopted subject to provision being made to secure immunity from rates, it being understood that under an ancient statute a scientific society was not mulcted for rates." There is no reference in the Derby Golden Jubilee Year booklet to this important meeting although there is a reference under the year "1913" to an article published on February 6 of that year in the *Daily Sketch*. In that article the Derby Wireless Club was referred to as the first of its kind in England and the hope expressed that "ere long hundreds of others may follow".

Even if the precise date of the first meeting of Derby Wireless Club is in some doubt—it would appear to have taken place during the spring of 1912—the pages of *Wireless World* and *English Mechanic* pin-point the dates on which a number of other clubs and associations came into existence. Liverpool and District Amateur Wireless Association, next in seniority to Derby Wireless Club, was established on March 13, 1913, at a meeting held in the Creamery Café, 56 Whitechapel, Liverpool. The Honorary Secretary was S. Frith of Great Crosby. Birmingham Amateur Wireless Association was formed on April 1, 1913, at Queen's College with J. B. Tucker as Honorary Secretary and Howard Littley, LBX/LSX (G2NV fifty years later) on the committee. Northampton Wireless Club arrived on June 4, 1913, but its name was changed almost at once to Northants and District Wireless Club. The President was the headmaster of Bugbrooke School to whom an earlier reference has been made. Dublin Wireless Club began its activities on June 25, 1913, followed by Barrow-in-Furness Wireless Club on June 26, 1913, and Newcastle-on-Tyne Wireless Club on July 1, 1913, the Honorary Secretary of the latter club was Mark Denny who, in 1967, was still active as G6DN. Credit in full measure is due to the wireless enthusiasts of Derby, Liverpool, Birmingham, London and elsewhere who had the vision to appreciate that in wireless matters as in most others unity is strength. Clubs, associations and societies continued to be formed from the summer of 1913 until the outbreak of World War I in August 1914, but it was not until after the end of that conflict

that the club movement really established itself in the United Kingdom.

A close link between the Derby, Birmingham and London Wireless clubs was established by the publication of a letter in the issue of *English Mechanic* dated July 25, 1913, and signed by A. Trevelyn Lee, J. B. Tucker and R. H. Klein, the honorary secretaries of the respective societies. The letter referred to the recent decision of the Post Office to make a charge for licences. The secretaries considered that the fee of £1 1s. was rather too heavy for many amateurs and especially those who wished to carry out extensive experiments involving them in future expense. A fee of 5s. or 7s. 6d. was suggested. "We should be willing", wrote Lee, Tucker and Klein, "to do anything we could to petition the P.M.G. to reduce the fee of £1 1s. on amateur wireless licences to a more reasonable figure. It is obviously necessary that transmitting stations should be subject to some regulations and the clerical expense entailed in the issue of licences should be borne by the applicant and not by the general public." Other wireless clubs willing to support joint action were invited to write to Trevelyn Lee of the Derby Wireless Club. The fact that Klein allowed his name to be associated with the letter is interesting because on the morning after it was published he, together with McMichael and Fogarty, had the meeting with the Secretary of the Post Office when the question of the licence fee was formally discussed.

The speed with which Klein and his colleagues worked during the first few weeks of the club's existence was quite remarkable. Less than a month after the inaugural meeting on July 5, 1913, a letter giving details of the aims and objects of the club and also an impressive-looking membership application form had been printed.

A sixteen-year-old junior clerk, Bill Lloyd, of Cophthall Gardens, Twickenham, Middlesex, should have been a founder of the London Wireless Club but he got scared at the last minute. According to information received nearly forty years later from Colonel W. H. Lloyd, G5TV (the junior clerk of 1913), he arrived outside the Klein residence on the afternoon of July 5, 1913, but was awed by the arrival of McMichael, Fogarty and Morgan. Instead of knocking at the door he went for a walk across Hampstead Heath and thus missed the chance of becoming a founder. However, Colonel Lloyd has preserved for posterity copies of the first documents to be published by the club. As the total number of members at that time (July–August 1913) must have been quite small the aims and objects of the club were ambitious to say the least.

Shortly afterwards Lloyd decided to write again to Klein and in

due course an impressive-looking document, printed in blue ink, of which the following is a copy, was received:

“Sir,

In answer to your request, I beg to give you some particulars of the objects of the LONDON WIRELESS CLUB.

The Club has been formed in the first place to enable experimenters in Wireless Telegraphy and Telephony to meet, to exchange experiences, to read papers, and thereby further their knowledge in these branches of Science.

It is intended as soon as possible to erect a model wireless station for the purpose of demonstrating new apparatus and inventions.

Arrangements have been made whereby members can visit modern and efficient wireless stations already erected and obtain much useful information.

In the near future the Club intends acquiring a set of standard measuring and testing instruments, such as Wavemeters, Standard Inductances and Capacities, which will be available for members' use.

On presentation of their Membership cards, members will secure considerable reductions on the price of scientific instruments and materials for making their own apparatus.

Candidates for admission shall be persons who are interested in Wireless Telegraphy and Telephony, and shall, if approved by the Committee, be elected by general vote at an Ordinary Meeting of the Club.

SUBSCRIPTION

The Subscription has been fixed at 10s. 6d. per annum, which will include entrance fee for all members joining before the 8th of September, 1913.

Members elected after that date will pay an entrance fee of 2s. 6d.

I enclose herewith an Application Form for Membership, and shall be pleased to receive same duly completed.

Yours faithfully,

R. H. Klein, Hon. Sec.”

Colonel Lloyd recalls that the day he received the application form from Rene Klein was his seventeenth birthday.

It may be safely assumed that a considerable number of wireless enthusiasts in the London area responded to the invitation to apply for membership of the club, otherwise the three Committee members

would not have risked everything by calling a general meeting for the evening of Tuesday, September 23, 1913, at Westminster City School, London.

Although not appreciated fully at the time the decisions reached that evening were to have a vital influence on the future of Amateur Radio not only in the United Kingdom but throughout the world. At that meeting the Wireless Society of London came into existence.

From Club to Society

FROM the earliest years of the twentieth century the Holborn firm of A. W. Gamage Ltd. had catered for the needs of the model maker. It was not surprising, therefore, that the same firm should later on cater for the needs of the wireless enthusiast. And this they did in full measure. The Gamage *Directory of Wireless Experimental Transmitting and Receiving Licence Holders*, first published in 1913, was an example of the enterprise of this famous firm.

When Rene Klein wrote his first letter to the press in June 1913, suggesting the formation of a wireless club in London, he referred to the problem of finding suitable accommodation both for the establishment of a club station and as a meeting place for members. There can be no doubt this problem was discussed at the meeting on July 5, because only six days later—on July 11—Leslie McMichael wrote an exploratory letter to Gamage's requesting, in the first place, permission to erect a small notice in their wireless department drawing attention to the aims and objects of the club. Permission to exhibit the notice was granted. After further correspondence and some informal discussions on the question of accommodation, Mr. A. W. Gamage (who was then the managing director) wrote, personally, to McMichael in the following generous terms:

"In reply to your letter of the 18th inst., you are aware of our sympathetic interest in your Club, and we have already expressed our willingness to help it all we can. If the rooms which you require are not too large, we will try to let you have two rooms instead of one.

"I would suggest that in the interests of all parties, a small rent should be paid for these, as it would define the position between the parties. I would suggest that you pay us £10 a year.

"I need hardly tell you that the rent of the rooms which we should offer you would be usually from £50 to £70 per annum, so we are making a great sacrifice in the hope that we shall get a return through helping the encouragement of the Wireless Club."

Gamage's generous gesture was typical of the encouragement given

to those who, only a few weeks earlier, had taken the initial steps to bring into existence the first organisation of wireless enthusiasts in London.

The offer made by the Managing Director on behalf of his firm was, of course, gratefully accepted by the committee of the London Wireless Club but before the actual lease could be signed the lessees had become the Wireless Society of London.

A reproduction of the first page of this historic document is one of the illustrations in this book.

Within a stone's throw of the Houses of Parliament and adjacent to Westminster Abbey stands a group of buildings that constitute the City of Westminster School. It was here during the evening of September 23, 1913, that the first general meeting of the newly formed London Wireless Club was held.

In the short period of ten weeks that had elapsed since the club was formed by Klein, McMichael, Fogarty and Morgan, the response to join had been impressive if not spectacular. According to *English Mechanic* (October 3, 1913) sixty members attended the meeting and another forty were "on the books". At the general meeting the chair was taken by Frank Hope-Jones whose election to that office was confirmed later in the proceedings. Hope-Jones, who first appeared on the scene at the third meeting of the club held at Rene Klein's house on September 13, 1913, was a prominent member of the British Horological Institute and managing director of the Synchronome Company. He had recently come into some prominence in horological circles by the firmness of his correspondence with the Secretary of the Post Office regarding what he described as "the preposterous proposal of the Postmaster General to levy a tax or royalty on those who desire to listen to the International Service of Time Signals of the World from the Eiffel Tower in Paris and Norddeich in Germany".* In his address to the general meeting, Hope-Jones reiterated the statements previously made by Klein and others that the first object of the club was to safeguard the interests of all *bona fide* experimenters by seeking the grant of licences, ensuring their permanency and their free renewal. Hope-Jones explained that applications for licences had increased so greatly during the previous six months that there was a distinct fear lest the Post Office, backed by other Government departments, should take drastic steps to repress the (irresponsible) amateur. Hope-Jones referred to the meeting at the Post Office on July 25 and to a letter received the previous week from Sir Alexander King alleging that interference

* Early in 1914 the Postmaster General informed Hope-Jones that he had abandoned this "egregious proposition".

with commercial and Government stations by the use of excessive power and untuned aerials had led to difficulties. The club would extract from all its members an undertaking that they would keep within the limits of their licences.

Later in the meeting it was decided to change the name from London Wireless Club to Wireless Society of London, a decision well in line with the intention of the founders to establish an organisation which would attract the support of the most eminent men of science of the day. Alan A. Campbell Swinton, a member of the Institutions of Civil, Mechanical and Electrical Engineers and one of the best-known engineers of the day, accepted the office of President. In addition to the Chairman (Frank Hope-Jones), the following were elected to the Committee: H. F. Brand, M.A., B.Sc. (EMX), Leslie McMichael (MXA), W. J. Shaw (TWX), V. W. Delves-Broughton (BAX), W. J. Fry (FXD), E. W. Kitchen (KYX), L. F. Fogarty (FFX), A. G. Hansard, B.A., M.I.E.E. (HXZ), Dr. F. C. Knight (KXM) and, of course, Rene Klein (KXJ) who continued as Honorary Secretary.

Wireless World in its November 1913 issue congratulated the new society "upon its excellent choice of title and upon the good taste of the Committee in dropping the word 'Club' which is apt to convey a misleading impression concerning the body it designates". Reporting on the outcome of the first general meeting the same journal agreed "there is ample scope before the Society, which can be extremely beneficial to the community, but to achieve any substantial measure of success it must co-operate with the provincial societies already in existence, whose influence in organising the operations of amateurs has tended to instil in them a due sense of responsibility in the handling of apparatus".

The newly constituted committee's first task was to follow up the preliminary negotiations which Leslie McMichael had started with A. W. Gamage Ltd. and to obtain a lease of club rooms at 107 Hatton Garden. The lease was signed on October 23, 1913, and fourteen days later Rene Klein applied to the Post Office for a club licence. The application was approved, subject to the Society sending particulars of the apparatus it proposed to use. This was done and the licence fee paid on November 19, 1913. On January 15, 1914, an experimental licence authorising operation on a wavelength of 850 metres was offered, but the Lords Commissioners of the Admiralty stipulated that before the licence could be issued a trial must be carried out "using the full power of 500 watts in order to ascertain whether interference is caused with the reception of signals at the Admiralty station in Whitehall".* For some reason that test was

* Hatton Garden is about one mile in a direct line to the Admiralty.

never carried out, with the result that on September 4, 1914 (a month after the outbreak of World War I), the Postmaster General wrote to express regret that, in view of the national emergency, "he is unable to proceed with the application on behalf of the Wireless Society of London to conduct experiments in wireless telegraphy". A warrant for one guinea in repayment of the licence fee paid in November 1913 was enclosed with the letter.

Among the many tasks laid down for the new committee to undertake none was more important than that of drawing up a constitution. At the second general meeting of the Society held on November 25, 1913, in the City of Westminster School with the President (Alan A. Campbell Swinton) in the chair, the Chairman of the committee (Frank Hope-Jones) submitted a draft constitution. There is no record of any discussion on the motion to adopt so it must be assumed the committee's work was accepted without demur. Certain it is that the first draft constitution framed in 1913 stood the test of time, because traces of that same constitution could be found in the language of the constitution of the Radio Society of Great Britain forty years later. The first constitution was, itself, based on the constitutions of other learned societies, and in particular on that of the Institution of Electrical Engineers, with which body the Society was to be closely associated for the next fifty years.

The constitution contained forty-four paragraphs of which the following are of special interest or historic importance:

1. The Society shall be called **THE WIRELESS SOCIETY OF LONDON**.
2. The objects of the Society shall be the furtherance of all matters and studies connected with Wireless Telegraphy and allied subjects, and the promotion of intercourse and exchange of ideas between experimenters in Wireless Telegraphy.
3. The Society shall consist of Full Members, Associate Members and Honorary Members.
4. Honorary Members shall be persons who have rendered acknowledged eminent service to the science of Wireless Telegraphy, and shall be elected by the Committee.
5. Candidates, to be eligible for Full Membership, must have attained the age of twenty-one years, and must fulfil the following conditions:
 - (a) Have been engaged in research or experimental work in Wireless Telegraphy for at least two years.
 - (b) And/or satisfy the Committee that they possess the necessary qualifications or training.

6. Candidates who do not fulfil the foregoing conditions but who are interested in the science of Wireless Telegraphy, are eligible for Associate Membership.

7. Every candidate for election as a Member of the Society other than an Honorary Member shall be proposed by a member and seconded by another member both having personal knowledge of him.

8. The name of every candidate, together with a statement of his qualifications upon which he founds his claim to eligibility, shall be submitted to the Committee, who shall decide upon the sufficiency of his qualifications.

9. Every candidate whose qualifications have been approved by the Committee shall be balloted for at an ordinary meeting of the Society. To constitute an effective ballot for any candidate, not less than fifteen members shall record their votes in his case; on an effective ballot, one blackball in ten shall exclude. Where any ballot shall have been ineffective, the candidate shall, subject to his own consent, be balloted for a second time at the next meeting at which fifteen are present. A candidate who is excluded, shall not come up again for election within twelve months.

13. All elected members shall be duly notified of their election and shall subscribe to the Rules of the Society. They will be expected to adhere to the terms of the G.P.O. licence which they hold or may hold at any future time, and will assist the Committee in seeing that any abuses in connection with Wireless Telegraphy are prevented.

The membership of any person shall date from the date of his election.

16. The subscription is fixed at £1 1s. per annum for Members and Associate Members, and 10s. 6d. per annum for Country and Foreign Members.

17. Country Members are those residing outside a 25-mile radius from Charing Cross.

18. All new members shall pay an entrance fee of 10s. 6d.

19. Annual subscriptions shall be payable on October 1 in advance for the ensuing year, persons elected after April 1 shall pay only half the annual subscription.

32. The officers of the Society shall be a President, two Acting Vice-Presidents, a Chairman, two Vice-Chairmen, Honorary Secretary and Honorary Treasurer.

33. The management of the Society shall be vested in a Committee consisting of the Officers and six Elective Members. Five shall form a quorum.

38. The Committee shall have power to make from time to time

such bye-laws, not being inconsistent with these rules, as they may deem to be for the well-being of the Society.

39. The Committee shall have power to elect suitable persons to be Honorary Members of the Society.

40. The Committee shall have power to appoint sub-committees for the management of the club rooms, the issue of certificates to members applying for licences, the establishment of a library, the purchase of instruments, and for other purposes.

It was at this meeting, in November 1913, that Dr. W. H. Eccles, who was later to become President of the Society, described the research work being done by the Radio Telegraphic Committee of the British Association of which he was the Honorary Secretary. This recognition of the Society by one of the leading scientific organisations of the country was responsible for the great progress made during the early years of its existence. The enterprise of the Society was demonstrated by the decision of the Committee in November 1913 to publish the constitution of the Society and a list of members. Sir William Crookes, O.M., the eminent scientist and then President of the Royal Society, was elected an Honorary Member, as was Sir Oliver Lodge, F.R.S., while an impressive list of "Great Names" agreed to become vice-presidents. The list included:

The Hon. Stuart P. Bouverie
 Sir Charles Bright, F.R.S.E., M.INST.C.E., M.I.E.E.
 Sidney George Brown, M.I.E.E.
 E. Russell Clarke
 William Duddell, F.R.S., M.I.E.E.
 Dr. W. H. Eccles, F.R.S., A.R.C.S.
 Dr. J. Erskine-Murray, F.R.S.E., M.I.E.E.
 Le Commandant Ferrié
 Dr. John Ambrose Fleming, F.R.S., M.I.E.E.
 Lt. Colonel Bayntun Hippisley, T.D.
 Prof. G. W. Osborn Howe, M.Sc., M.I.E.E.
 Commander F. G. Loring, R.N., M.I.E.E.
 Sir John Macpherson-Grant, Bart.
 Dr. E. W. Marchant, M.I.E.E.
 Sir Henry Norman, M.P.
 Sir David Salomons, Bart., M.I.E.E.
 Dr. Silvanus Phillips Thompson, F.R.S., M.I.E.E.
 Professor Ernest Wilson, M.INST.C.E., M.I.E.E.

By November 1, 1913, there were 151 Full Members and eleven Associates; seventy of the Full Members held a transmitting licence.

At the formal election of officers and committee for 1914 Campbell Swinton was re-elected President. Russell Clarke and Erskine-Murray became Acting Vice-Presidents. Hope-Jones was re-elected Chairman, with Brand and McMichael as Vice-Chairmen. Klein and Fogarty remained Secretary and Treasurer respectively, with Broughton, Fry, Hansard, Kitchen, Knight and Shaw making up the Committee.

An early account book of the Society reveals that in the period between July 5 and September 25, 1913, the Secretary's expenses amounted to no more than £3 4s. 4d., made up as follows:

Postages for particulars of London Wireless Club	17s. 6d.
Correspondence and circulars	£1 12s. 4d.
Letters covering first meeting (September 25)	14s. 6d.

The same account book shows that £19 10s. 6d. was paid to the firm of Uriah Beaton in December 1913 for two Sullivan Galvanometers (£5 10s.), a Wheatstone Bridge and Galvanometer (£6 10s.), a Morse Inker (£3), Lamp Stands and Scales with cable (£2), two Shunt Boxes (£2) and three 6-way switches (10s. 6d.). This equipment was set up at 107 Hatton Garden and was in use up to August 1914.

Memorable Meeting

AT the foot of Savoy Hill and barely two hundred yards from the Strand in London, stands the Institution of Electrical Engineers. Since 1871 the Institution has been one of the main centres for discussion and debate on electrical and associated subjects.

As we have noted earlier, it was in September 1913 that the Wireless Society of London came into existence with Alan A. Campbell Swinton as President and Frank Hope-Jones as Chairman. Both were prominent members of the Institution of Electrical Engineers, as were several of their colleagues on the committee of the Society and many of the eminent men of science who had agreed to become vice-presidents. It was hardly surprising, therefore, that the inaugural meeting of the Society should be held there on January 21, 1914. At that meeting Campbell Swinton delivered a Presidential Address, thereby establishing a tradition which would be followed by every President for the next forty-eight years. The tradition was not broken until 1963 when an informal social evening replaced the Presidential Address.

Wireless World (March 1914) reported fully upon the events of that "never-to-be-forgotten evening" to quote the words often used, years later, by a future distinguished President—Henry Bevan Swift, A.M.I.E.E., G2TI—who was in the audience. "Never have we seen the large lecture theatre of the Institution so crowded by a gathering which followed the proceedings with the closest interest and manifested, by its applause, its sense of appreciation of the successful demonstration of the ways by which wireless signals could be made visible and audible."

The climax of the evening was the reception of a special message from the Eiffel Tower station on 2600 metres in Paris,* the sender of

* An English translation of the message follows:

Commandant Ferrié sends to the worthy President and to his esteemed fellow members of the Wireless Society of London his heartiest greetings and the assurance of his cordial goodwill. Long live England and long live the *Entente Cordiale*.

the message, Commandant Ferrié* having recently been elected a Vice-President of the Society.

Campbell Swinton, who was a keen experimenter, described during the course of his address "various methods for securing permanent records of wireless messages that could be taken down and read at leisure". It was this same man of vision who in 1908 in a letter to *Nature* had predicted the use of the cathode ray tube as a medium for the satisfactory reception of what in later years was to be called "high definition television". A greatly enlarged version of that letter was a feature of the Communications Section in the Dome of Discovery at the South Bank during the Festival of Britain Exhibition in 1951.

The message from Paris was received on a syphon recorder and the movements of the pen, marking the strip, were displayed on a screen by the use of a Leitz Universal Projector. Three microphone relays designed by the Vice-President, S. G. Brown, were used for working the recorder. The first, an "A" type, was connected to the oscillation transformer. This fed a "G" type relay to which a telephone was connected and this was coupled to a "W" type relay so adjusted that contact was broken by the very small, quick movements of its rocker. The movements were too quick for the recorder to follow but the duration of each group was recorded.

Campbell Swinton concluded his address with some further prophetic observations. "Wireless seemed by its nature to be suited for the unusual distribution of intelligence, weather reports, time signals or speeches. Indeed with a little imagination one could picture in the not-too-distant future wireless receiving stations specially set-up in connection with halls, resembling picture palaces† where people would be able to go and hear *viva voce* all the prominent speakers of the day, although they might be speaking hundreds of miles away. One thing seemed pretty certain, if we were ever to have transatlantic telephony it would be by wireless as the difficulties of capacities and self-induction which apply to long-distance submarine cables would disappear."

Thirty years after that meeting it was still talked about by those

The following reply was sent:

The President, Committee and Members of the Wireless Society of London thank Commandant Ferrié very sincerely for his expression of goodwill to the Society and reciprocate it most heartily. Long live France and the *Entente Cordiale*.

* Commandant Ferrié, was a great French wireless pioneer whose name is perpetuated by a plaque placed on the Eiffel Tower.

† The forerunner of the cinema.

who had been present as the most important event in the early history of the Society. The quality of the Presidential Address, the success of the demonstration and the brilliance of the audience certainly helped still further to bring the Society into greater prominence.

Throughout this period the number of licences continued to increase at a high rate. In his Report to Parliament for the year ended March 31, 1914, the Postmaster General stated that 326 new experimental licences had been issued during the first three months of that year. At the meeting of the Society held on March 3, 1914, when it was announced that the membership had risen to 225, Russell Clarke, a prominent member of the legal profession and a leading experimenter, opened a discussion on the design of receiving apparatus. Meetings of the Society continued to be held monthly at the Institution of Electrical Engineers. On March 31, 1914, H. J. Lucas of West Malling, Kent, described the results of experiments he had carried out with telephone receivers. During the discussion—which according to *Wireless World* was very animated—Dr. Erskine-Murray drew the distinction between “telephones used for wireless and those used for articulate sound”. Alan Campbell Swinton pointed to the importance of a strong magnetic field in the telephone receiver which the Hon. Charles Parsons, of turbine fame, had drawn attention to twenty years earlier.

Dr. Erskine-Murray in a lecture to the Society on April 28, 1914, described methods of making radio telegraphic measurements. He claimed that the simplest and only way of measuring the actual radiation efficiency of a station was the method he had devised in 1911 and used that year for the measurement of the efficiency, earth resistance and other constants of the Post Office station at Hunstanton. The use of the direct-current arc for wireless telegraphy and telephony formed the subject of a lecture to the Society on May 26, 1914, by G. G. Blake to whom earlier reference has been made. Blake described the use of the arc as a generator of high frequency alternating current and demonstrated four methods of using it for the reproduction of the human voice or as a loud speaking telephone. The final lecture prior to the outbreak of World War I was given by Basil Binyon, B.A., on June 30, 1914, when he described how continuous waves can be produced by the use of high frequency dynamos. All the papers read to the Society were published; some in full, in which case a reprint from *The Electrician* was forwarded to members.

It is interesting to record that reports of Society meetings during the era before the 1914 war were published in no less than ten technical journals: *Nature*, *Wireless World*, *English Mechanic and World*

of Science, Model Engineer, Electricity, Electrical Times, Electrical Review, Electrical Engineering, Electrical Industries and of course The Electrician.

And then the war clouds rolled up bringing in their train a telegram to all licence holders that was destined to put an end to amateur wireless experiments for a very long while.

TELEGRAM FORM	
TO:	AUGUST 1, 1914
In accordance with your wireless	
licence Postmaster General requires	
you to remove at once your aerial	
wires and dismantle your apparatus.	
One of his officers will shortly call	
upon you.	
King, Secretary, Post Office	

Suspended Animation

NO one now knows who coined the term "suspended animation" but long after World War I had ended, early amateurs used it when they spoke of that period when the Society was dormant during the war years. Although experimental work was banned and the possession of wireless apparatus, without authority, became a penal offence, the Society did, in fact, hold lecture meetings during the early months of the war. The first took place on November 13, 1914, when John Ambrose Fleming, inventor of the diode valve, discussed the "bending" of wireless waves in long-distance communication to conform to the curvature of the earth's surface. In the course of his lecture he speculated on a possible cause of "bending" as being due to the ionisation of the upper air—a possibility first suggested by Dr. Eccles.

A month later, on December 18, 1914, the first Annual General Meeting of the Society was held with Alan Campbell Swinton in the chair. The report of the Committee, presented by Frank Hope-Jones, recorded that the club rooms at 107 Hatton Garden were open daily from 7 p.m. to 11 p.m.; the leading electrical journals had placed the Society on their "free list"; a library had been started, thanks to the generosity of book publishers, and good progress had been made with the instrument room up to the outbreak of war, since when everything of importance had been impounded by the Post Office. Several firms had agreed to reduce the price of apparatus on presentation of a membership card. A Charter of Freedom for the amateur—the aim of Hope-Jones and his colleagues in September 1913—had been largely achieved. Abuses of licence power and operating practices had been cleaned-up and members protected in the legitimate exercise of the powers given to them under the terms of their Post Office licence. At the end of the period covered by the report (September 30, 1914) the Society had a credit balance of £44 13s. 10d. and £101 5s. 11d. had been spent on equipping the club rooms. Membership had increased to 246 including thirty-one Associates. Following the Annual General Meeting, Professor G. W. O. Howe lectured on the high frequency resistance of wires

and coils, a lecture which *Wireless World* later described as being of an "advanced mathematical character".

On January 26, 1915, Campbell Swinton inaugurated his second term of office as President of the Society by demonstrating some electrical phenomena. Debarred by the Defence of the Realm Act from dealing with wireless subjects, he described a number of electromagnetic experiments, including one which showed how an electromagnet will hold a ring of aluminium suspended in the air; how a metal ball, or egg, filled with iron filings, can be made to spin and how the direction of spin can be reversed by reversing the alternating current. During the course of his address, Campbell Swinton referred to wireless spying and to the fact that a number of individuals had suffered severely for not strictly obeying the law. He had been able in some cases, he said, where the offence had been technical, to obtain an alleviation of the rather excessive penalties that had been incurred. He mentioned that his own wireless apparatus had been impounded by the G.P.O. and he hoped every member would have followed that example. Wireless spying had been the subject of Parliamentary discussion and much national concern.

For one reason or another the telegram from the Secretary of the Post Office, despatched on August 1, 1914, was sent only to those who were licensed to use power in excess of fifty watts. Undoubtedly the majority of people who were in possession of transmitting and receiving equipment removed their aerials and dismantled their apparatus at once but some did not do so, with the result that the police began to receive reports from the public that spies were in their midst.

Post Office records reveal some interesting correspondence concerning suspected spy stations and in particular the suspected use of intensive cultivation plant for wireless purposes. The plant was made by the Agricultural Electric Discharge Co. Ltd. who were sole licensees for the agricultural application of a high-tension discharge patent taken out long before the war by Sir Oliver Lodge. A progressive farmer in Scotland, who had installed this plant, came under suspicion of being in possession of transmitting equipment and it took him many weeks to convince the authorities that he was not a German spy.

On July 15, 1915, H.M. Office of Works asked for restrictions to be placed on the operation of portable wireless equipment in Royal Parks, because a few days earlier that prolific inventor (Professor) A. M. Low* (who had been authorised by the Post Office to conduct

* Later licensed as 2WF and 6SA.



The London Wireless Club was founded on July 5, 1913, by Rene Klein (seated) at a meeting in his home at West Hampstead, London. Others present were L. F. Fogarty (left) and Leslie McMichael (centre). Frank Hope-Jones (right) became Chairman of the Club at a meeting held two months later when its name was changed to Wireless Society of London.

This Indenture made the *twenty third*
day of *October* 1913 BETWEEN A. W. GAMAGE
LIMITED whose registered office is at 107 Hatton Garden in the
County of London (who and whose successors and assigns are hereinafter
wherever the context admits included in the term "Lessors") of
the one part and

The Wireless Society of London

are hereinafter wherever the context admits included in the term
"Lessees") of the other part WITNESSETH that in consideration of
the rent hereinafter reserved and of the covenants by the Lessees hereinafter
contained the Lessors do hereby demise unto the Lessees ALL
THAT *Second floor of two rooms, facing*
107 Hatton Garden, situate and
being *107 Hatton Garden* in the County of
London TO HOLD the same until the Lessees for the term of
one years from the *20th* day of
December 1913 subject to determination as hereinafter
mentioned YIELDING AND PAYING unto the Lessors the yearly
rent of *£ 10. 0. 0 Ten Pounds*
by equal quarterly
payments on the usual quarter days the first payment to be made on
the *twenty fifth* day of *March*
1913 and to be the sum of *£ 2. 10. 0* and the last quarterly
payment to be made in advance one calendar month before the expiration
of the term whether by effluxion of time or otherwise AND
YIELDING AND PAYING in the event of and immediately
upon the said term being determined by re-entry under the provis.

A lease between A. W. Gamage Ltd and the Wireless Society of London dated October 23, 1913, provided the Society with accommodation at 107 Hatton Garden, London, for the setting-up of a workshop and experimental equipment.



A. A. Campbell Swinton (1913-20).



W. H. Eccles (1923-24).

Past Presidents of the Society



Ian Fraser, G5SU (1928).



H. Bevan Swift, G2TI (1931-33).



W. E. F. Corsham, 2UV, operating the equipment he used for experimental transmissions between his station in North West London and the station of R. D. Spence, 2JZ, in Huntly, Aberdeenshire in July 1922. The wavelength used was 180 metres.

experiments within five miles of Richmond, Surrey) had innocently gone into Richmond Park with some apparatus to get away from the public and in so doing had aroused the suspicions of the local park constable and the hostility of the Office of Works.

Although Campbell Swinton gave the impression, when he spoke on January 26, 1915, that he had surrendered his wireless apparatus without demur, official records show that he did not consider the General Order made under the Defence of the Realm Act should apply to him. He declined to allow Post Office engineers to remove his apparatus when they called early in December 1914 but despite a personal letter to the Secretary to the Post Office on December 24, 1914, the authorities decided "to remove rather than seal" (as Campbell Swinton had suggested) those portions of his apparatus which were considered to be wireless instruments.

Six months later, in July 1915, the Postmaster General announced that "in order to simplify the control of wireless apparatus and to avoid the necessity of visits of inspection to private premises, all wireless apparatus (whether licensed or not) which is not required for public purposes shall be removed into Post Office custody for the period of the War, under the authority contained in the Defence of the Realm Regulations".

Immediately the war commenced courts-martial were set up to try persons charged with having wireless apparatus in their possession without permission. One such court-martial was held at Hull on December 6, 1914, when the defendant was Archibald George Cocks of Filey, Yorkshire. Cocks, a keen pre-war member of the Birmingham Wireless Association, was sentenced to six months' imprisonment, four months of which were remitted because he had been in custody for seven weeks. J. B. Tucker, at the time Honorary Secretary of the Birmingham Wireless Association, felt so strongly about the severity of the sentence that he wrote a letter of protest to the editor of *Wireless World*. Tucker pointed out that the Defence of the Realm Act was passed on October 16, 1914; Cocks' house in Filey, Yorks., was visited by the military on October 18; he was arrested on the 21st but particulars of the Act were not posted in Filey until the 23rd. His offence was that of being in possession of a small portable transmitter capable (according to an expert G.P.O. witness) of transmitting not more than a mile. In court it had been stated the Postmaster General had no desire to press the case. Cocks had held a licence for wireless telegraphy for several years. Tucker contended that the "present position is full of danger for every amateur throughout the country especially where the Post Office authorities have left behind such things as detectors, variable

condensers—in fact enough apparatus to make a portable set. The Postmaster General's letter (to the President of the Court) was evidently totally ignored and unless something definite can be done with regard to this matter then, in justice to Cocks, surely by now most amateurs in this country ought to be in prison."

A proposal to allow selected amateurs to reopen their receiving stations to assist in the detection of illicit wireless stations was rejected by the Admiralty on the ground that greater success could be expected from a small and select body of official observers than from "a very large number who had not the necessary knowledge of the circumstances". In an interview with the press on this decision Campbell Swinton expressed himself as being "satisfied that the authorities are taking every possible step for preventing telegraphy without wires being employed for the national detriment". His suggestion that licensed amateurs might assist the police in helping to identify instruments used in wireless was apparently not followed up.

During 1915 two further lecture meetings arranged by the Society took place at the Institution of Electrical Engineers. At the first, on March 9, Dr. J. Erskine-Murray, F.R.S.E., discoursed on "Radio Waves" and at the second, on April 20, Prof. E. W. Marchant, D.Sc., described methods of measuring the strength of wireless signals. Both lectures were fully reported upon at the time in the technical press. Six months later, with the war now in its second year, the Committee of the Society decided (on October 7, 1915) to discontinue the lecture programme in view of the restrictions imposed upon private wireless telegraphy in war-time and because of the absence of so many members on active service. At the second Annual General Meeting held on December 20, 1915, it was agreed to suspend all Society activities until the end of the war and the removal of Government restrictions.

As the war progressed the need for telegraphists, signallers and operators became increasingly urgent. Society members filled many important posts in the wireless sections of all three services and it was to them that the Royal Navy, the Army and the Royal Flying Corps looked for instructors and technicians. The Royal Flying Corps, in particular, attracted many young men, with a flair for wireless, into its ranks. In 1967—fifty years later—120 of those same R.F.C. wireless operators met at their annual reunion in London to revive the "comradeship of the trenches".

The Mark III tuner used by the R.F.C. for artillery observations became, in post-war years, one of the most attractive war-surplus bargains, in fact, examples of this very reliable crystal receiver were still being offered for sale more than ten years after World War I

ended. The Sterling set was the best known of the aircraft spark transmitters and many amateurs did their early work with this type of equipment.*

Ambrose Fleming had been granted a patent for his diode valve as far back as 1904 and Lee de Forest had added a grid to produce the first triode in 1906 but neither the diode nor the triode came into commercial use until much later. Philip Coursey, in a paper read to the Students' Section of the Institution of Electrical Engineers on February 2, 1916, described long-distance telephony tests which had taken place a few months earlier between Arlington, Virginia, and the Eiffel Tower in Paris using between 300 and 500 audion valves in parallel.†

Although valve transmitters and valve receivers were not in general use until the last year or so of the war, the usefulness of this new "tool" had not been lost sight of by those who had been interested in wireless as a hobby prior to the war nor by those who were anxious to become wireless experimenters when peace returned to the world.

The issues of *Wireless World* which cover the period from August 1914 to November 1918 contain a wealth of material for historians in many fields. Restricted by the D.O.R.A.‡ and censorship the editorial staff nevertheless succeeded in preserving for posterity much valuable information which otherwise would never have been recorded.

* Examples of the Mark III tuner and the Sterling transmitter are in the Science Museum, London.

† At that time the audion was capable of handling only very small powers.

‡ Defence of the Realm Act, 1914.

The Great Awakening

SHORTLY after the first General Meeting of the Society took place during the autumn of 1913 an Advisory Committee, comprising the President (Alan Campbell Swinton), Dr. W. H. Eccles, Professor G. W. O. Howe and Professor Ernest Wilson, was set up to give technical advice to members and to put forward to the Post Office the views of the Society on various aspects of licensing. An additional responsibility of the Committee was to furnish testimonials for members in support of their application for transmitting licences. Had it been possible for the Advisory Committee to meet during the war, if for no other purpose than to keep in touch with the Post Office, post-war progress might have been more rapid. As it was, the Wireless Society of London suspended its activities during the latter part of 1915 and no effort was made to keep even a skeleton organisation in being.

It is now known that an Inter-Departmental Committee was set up either just before the war ended or shortly afterwards "to consider and report on the present system of granting licences for experimental wireless telegraph stations and on any changes in the system, whether of a legislative or administrative matter which they may regard as desirable". The Post Office, the Admiralty, the War Office, the Air Ministry and the Home Office were represented on the ten-man Committee which was led by the Assistant Secretary of the Post Office, Frank J. Brown, C.B.

When the 1904 Act was passed it was envisaged that wireless experiments would only be conducted by scientific investigators with a definite object in view, but in the two years just before the war applications for licences were received in large numbers from persons whose claims to be regarded as experimenters were not as contemplated when the Act was passed. The Post Office had attempted, by imposing conditions, to weed out the less satisfactory applications but the difficulties arising from the *obligation* imposed by the 1904 Act to grant licences became serious. Bearing this in mind the Committee decided to recommend to the Postmaster General that this obligation should be removed from the Act and permissive

power substituted for it. Thus the first step was taken to introduce a fundamental change to the licence regulations which would seriously affect experimental wireless work for years to come. Looking back, no one can say the recommendation was unreasonable but, without question, it led the way to the introduction of other restrictions, some of which were quite unjustified.

In presenting their Report to the Postmaster General at the end of April 1919 the Committee drew attention to the fact that the number of experimental licences in force in August 1914 was about 2150 (covering nearly 2600 stations) and that of this number just over 1600 were experimental transmitting stations. Up to the end of 1912 the number of licences issued had been insignificant. The increase had occurred with marked suddenness during 1913 and 1914.

The Committee noted that pre-war transmitting licensees were not, as a general rule, permitted to communicate with more than five other stations and that a fee of £1 1s. had been charged for office expenses and inspections. Recognising that it would not be possible to prevent the installation of effective receiving stations by anyone possessing the necessary knowledge, the Committee decided that it would be desirable to deprive the general public of any inducement to erect a station without authority by issuing a Receiving Licence to anyone who produced evidence of British nationality and a satisfactory reference. The P.M.G. would reserve the right to approve each station and to demand payment of a small annual fee to cover expenses. Licence holders would be required to observe secrecy of correspondence.

As regards transmitting stations the Report commented "The case is quite different and we are of the opinion that the number of such stations existing in July 1914 was excessive from the point of view of Government control in case of emergency and the necessity of preventing interference with Government and commercial working; further there was no justification for it from the point of view of the encouragement of research or the development of industry." With the Defence of the Realm Act still unrevoked the Committee recommended that the "number of transmitting stations should be so limited that any Order for their closing-down in case of (future) emergency can be easily and speedily controlled". The Report dealt with ways and means of achieving a degree of limitation without withholding any reasonable facilities from the genuine experimenter or small inventor. A proposal to increase, substantially, the annual licensing fee was rejected.

Summing up, the Committee recommended to the Postmaster

General that every applicant for a transmitting licence should be of British nationality, must produce evidence that he had some definite object in view other than mere amusement and evidence that he was an efficient operator. To meet the case of a person of recognised scientific attainments but small operating ability the Committee recommended that in such cases a licensee should be given the alternative of employing a qualified operator to work the apparatus. The Committee considered that the expenses incurred in licensing, controlling and inspecting private stations should not be a charge on public funds. The licensing fee of £1 1s. charged since May 1913 was considered insufficient. The total expenses for the year ended December 31, 1913, were estimated at over £2000 while receipts for this period amounted to under £1400.

The scale of fees and charges recommended by the Committee was as follows:

	<i>Licensing Fee</i>	<i>Annual Charge</i>
Toy set sold for amusement and instruction	—	—
Receiving station	—	10s.
Transmitting stations		
10 watts	10s.	£1
50 watts	£1	£2
250 watts	£2	£3
above 250 watts	£2	£5

It was recommended that the total length of wire, including lead-in, should not exceed 100 feet for a single wire aerial or 140 feet where two or more wires were used. It was pointed out in the Report that the waves formerly allotted to experimenters were those not exceeding 600 metres except by special arrangement with the Admiralty and War Office but because of the uncertainty then prevailing it was not practical at that time to suggest any definite reservations. The hope was expressed that it would later be possible to allocate a *series* of waves for the use of experimental stations.*

The Report referred to the fact that in various parts of the country local wireless societies and clubs had offered to assist the Post Office in the control of experimental stations and in the certification of applicants for licences. The Committee recommended that "the testimonials of these bodies in respect of the technical qualification of applicants be accepted but it does not seem that any further recognition can usefully be given to amateur societies though they should

* This is the first known reference to experimental stations being allocated wave bands in a series or in harmonic relationships.

be encouraged to assist in maintaining proper order among their members”.

As regards legislation it was recommended that a new Bill should be introduced to cover:

1. Removal of the obligation to grant experimental licences.
2. Power to make charges of reasonable amounts.
3. Recognition of the power to refuse licences to foreigners.
4. Power to seize unlicensed apparatus in time of emergency and to cause the arrest of a person who has not complied with a Notice given to dismantle such apparatus.
5. Provision of penalties for breaches of the International Regulations.
6. Protection of wireless communication against interference caused by electric-wave generating apparatus.

A somewhat ironic situation arose shortly after the Report was presented to the Postmaster General when it was discovered that all pre-war licences were still legally in force. The matter was rectified on July 5, 1919, when the Secretary of the Post Office (Sir Andrew Ogilvie) issued a Notice determining all pre-war experimental licences. The Notice explained that the determination procedure was part of a general measure which had become necessary in view of a revision of the conditions under which authority for private experiments could be given. All existing experimental licences were being cancelled but licence holders would be able to apply for fresh licences under the new conditions. Apparatus taken into Post Office custody would be returned when the prohibition of the possession of wireless apparatus without express permission had been removed.

While the Inter-Departmental Committee had been pursuing its task quietly and, one must assume, secretly, agitation was growing in amateur circles for a more forward-looking attitude on the part of the Post Office. The pages of *Wireless World* throughout the period from January until December 1919 are alive with references to The Amateur Position. A leading article in the March issue began with a quotation attributed to Senatore Marconi:

I consider that the existence of a body of independent and often enthusiastic amateurs constitutes a valuable asset towards the further development of wireless telegraphy.

The Editor lamented that “more than three months have now passed since the signing of the Armistice* and still no word comes

* The Armistice was signed on November 11, 1918.

from the Government of their intention in regard to the wireless amateur". In support of the plea for the early resumption of experimental activities, Marconi, Dr. J. Ambrose Fleming and Professor W. H. Eccles contributed lengthy Letters to the Editor.

Marconi had this to say:

"In my opinion it would be a mistaken policy to introduce legislation to prevent amateurs experimenting with wireless telegraphy. Had it not been for amateurs, wireless telegraphy as a great world-fact might not have existed at all. A great deal of the development and progress of wireless telegraphy is due to the efforts of amateurs."

Fleming wrote:

"It is a matter of common knowledge that a large part of the important inventions in connection with wireless telegraphy have been the work of amateurs and private research and not the outcome of official brains or the handiwork of military or naval men. In fact we may say that wireless telegraphy itself in its inception was an amateur product. Numerous important inventions such as the crystal detector, the oscillation valve, the three-electrode valve—have been due to private or amateur work. If full opportunities for such non-official and research work are not soon restored the progress of the art of radio telegraphy and radio telephony will be greatly hindered."

Eccles wrote:

"Improvements and invention must be stimulated to the utmost. It is not impossible to devise laws to impose restrictions upon the emission of waves as will preclude interference with the public radio service of the future and yet allow liberal opportunity for the experimental study of wireless telegraphy."

The issue of *Wireless World* that carried the letters from Marconi, Fleming and Eccles also gave the news that clubs up and down the country were beginning to bestir themselves from their war-time inactivity. The first to show life was the North Middlesex Wireless Club, whose ex-secretary (E. M. Savage) invited former and prospective members to contact him at his home in Winchmore Hill, North London. Other clubs quick off the mark were the Wireless and Experimental Association (Peckham), the Three Towns Wireless Club (Plymouth), the Leicestershire Radio Society and the Sheffield and District Wireless Society.

In the months that followed, the correspondence columns of

Wireless World became a platform from which salvo after salvo was fired at the Government for its alleged slowness in removing the restrictions imposed by the Defence of the Realm Act. In preparation for the time when licences would again be granted a series of articles entitled "The Construction of Amateur Wireless Apparatus" began in the April 1919 issue.

The first signs of a relaxation in the Defence Regulations came during that month when the Post Office notified manufacturers of electrical apparatus that restrictions on the sale of buzzers had been removed. Buzzers could now be sold without enquiry as to the use to which the purchaser proposed to put them. The restrictions on the sale of valves remained but spark coils and headphones could now be purchased on condition that the buyer gave a written undertaking that the apparatus in which they were to be used would not be used for the sending or receiving of messages by wireless telegraphy, except with the written permission of the Postmaster General. In May 1919 licences were issued for the reception of time signals by clockmakers in connection with their business.

At club meetings members expressed apprehension that the misuse of valves might lead to more serious "jamming" than would occur with a spark transmitter. Many serious workers considered there was a need to draw a distinction between those highly skilled in the use of valves and those "to whom the valve is simply a new toy which can be made to whistle and shout the Paris time signals all over the room".

In support of its contention that the Government should take early steps to permit the resumption of wireless experimental work, *Wireless World* in its issue of September 1919 pointed out that when the Airship R34 made its historic transatlantic flights in July 1919 the wireless operator was Lt. R. F. Durrant, R.A.F.,* who had been a pre-war member of the North Middlesex Wireless Society.

It seems an odd thing that whilst pressure was building up against the Post Office to ease the Defence Regulations and at least half a dozen local clubs had recommenced their activities, the Wireless Society of London, to whom the other clubs were entitled to look for a lead, made no obvious move to get started again until July 24, 1919. On that day Alan Campbell Swinton presided at a meeting of members of the Committee elected at the A.G.M. in 1915 but it was not until October 1919 that readers of *Wireless World* learned that the Society had resumed its activities. It was then recorded that Leslie McMichael had succeeded Rene Klein as Honorary Secretary,

* Durrant was to become even better known a few years later when he established many first ever contacts on short-waves from Basrah.

the Committee had been in communication with the Post Office on the subject of transmitting licences and that the Society's offer of the services of the Advisory Committee had been accepted by the Postmaster General.

The first important relaxation of the war-time restrictions occurred on October 21, 1919, when the Post Office announced that informal authority could now be granted for the use of receiving apparatus. The terms and conditions were almost precisely those recommended by the Inter-Departmental Committee six months earlier. The use of thermionic valves was forbidden without the special authority of the Postmaster General. A fee of 10s. was to be paid and it was expected that this would become an annual charge. Applicants were required to submit a description of the apparatus they proposed to install and if authority to use valves was sought a diagram was to be included showing the circuits in which they would be employed. To enable an applicant to purchase apparatus "for use under the prescribed conditions" he was required to give full particulars of the apparatus and the name and address of the firm from which it would be obtained.

It had been intended to hold the first post-war Annual General Meeting of the Wireless Society of London early in October 1919 but a railway strike led to its postponement until the 28th of that month. The first business of the meeting, held at the Institution of Civil Engineers, Westminster, was to pass a resolution confirming the action of the 1915 Committee in reviving the Society. The period of office of the Committee was subsequently extended to the end of 1920. Campbell Swinton, who presided, informed the 200 members present of the negotiations with the Post Office and of the efforts being made by the Committee to obtain a relaxation of the restrictions on transmitting activities.

It was at this meeting that the Chairman (Frank Hope-Jones) initiated the move that eventually led many local societies to seek affiliation to the Wireless Society of London. Hope-Jones foresaw that if affiliation could be carried into effect on a nation-wide scale it would enable the Society to represent, effectively, the views of a large body of amateurs in matters concerning the issue of licences. Numbered among the audience that evening were amateurs from Bristol, Derby, Peterborough, Plymouth and Winchester who provided evidence of the national interest being shown in the post-war revival of the London society. This particular meeting (fully reported in the December 1919 issue of the *Wireless World*) was also important for another reason; it gave members an opportunity—the first—of examining at close quarters recent examples of service and commercial equipment. Squadron Leader Dr.

Erskine-Murray (soon to become the second President of the Society) described a wireless telephony set used by the R.A.F. comprising a two-valve transmitter and three-valve receiver with a nominal operating wavelength of 450 metres. John Scott-Taggart (whose name was to become a household word a few years later) described fifteen types of valves made by the Edison Swan Electric Company and several special valves of his own invention. An extensive exhibit showed details of the construction of an "R" valve (based on the design of the "French" valve) shortly to be a "starter" at many amateur stations. The Marconi Company displayed a 500-watt 3-electrode transmitting valve for wireless telephony and a seven-valve amplifier. An example of this receiver (Type No. 55) is in the Science Museum, London. The B.T.H. exhibits included a 300-watt transmitting valve, constructed by the G.E.C. of America for use with a plate (anode) voltage of 2500, and a small high-vacuum "French" valve producing 30 watts of r.f. energy with 1500 volts on the plate. Campbell Swinton rounded off the evening by describing and exhibiting some receiving equipment constructed in his own laboratory, including a seven-valve amplifier for use with a Frame Aerial. Using "French" type valves the receiver had picked up signals from stations all over Europe. This was unquestionably the first wireless exhibition held in Great Britain. Late in November 1919 the Post Office announced that a new Wireless Telegraphy Bill would shortly be introduced into Parliament. When passed, transmitting licences would be reissued. Conditions in respect of British nationality, secrecy of correspondence and approval by the Postmaster General of the installation would be as for a receiving licence. Additional conditions would require that applicants should satisfy the Post Office they had "in view some definite object of scientific value or general public utility". If scientific research was intended the applicant "should be certified as a competent investigator by a Government Department or some recognised scientific body". Applicants would be required "to have knowledge of the adjustment and operation of the apparatus as well as knowledge of the regulations of the International Convention insofar as they relate to interference". A Morse operating speed of at least twelve words a minute sending and receiving would also be required. Communication would be restricted to specified stations not exceeding five in number. Aerials would be required to conform to the dimensions laid down for receiving stations. The summary of conditions made no reference to power at fixed stations but portable stations would normally be limited to 10 watts input and operation confined to within ten miles of a fixed point.

It is of historic interest that on October 1, 1919, all operating restrictions on United States amateurs and amateur stations were removed, but before an applicant could install transmitting equipment he had to take an examination and secure an operator's licence. Formal application would then have to be made for a station licence.

Whilst waiting for the go-ahead signal in the United Kingdom, *Wireless World* continued to publish much useful technical information for the benefit of those anxious to take an active interest in wireless experimental work. In addition well-known amateurs of pre-war days described their early experiences and the equipment they had used for transmitting and receiving purposes. A particularly interesting article was contributed to the January 1920 issue by W. J. Fry who had been a pre-war Committee member of the Wireless Society of London. That same issue also contained a full-length technical description of the R.F.C./R.A.F. Mark III Tuner then currently available on the surplus market.

When members met at the Institution of Civil Engineers, London, on January 29, 1920, the Chairman (Frank Hope-Jones) was able to report that all local societies and clubs known to be in existence at that time had been invited to become affiliated to the Wireless Society of London. Societies in affiliation would pay an initial fee of £1 1s. and an annual subscription of £1 1s. Each Society would receive twelve free reprints of all papers read to the Wireless Society of London. Members of affiliated societies would be able to attend meetings of the London society on presentation of a letter of introduction from their local secretary. An annual Conference, or Convention, would be held in London to which all members of affiliated societies would be invited. The response to the invitation had been so good that plans were in hand for holding a Conference of Affiliated Societies during the afternoon of February 27, 1920—the day on which the President would deliver his Address.

Remembering that during the Golden Jubilee Year of the Society (1963), the Annual General Meeting was held at the Royal Society of Arts, London, it is interesting to recall the reasons which the President (Alan Campbell Swinton) gave for holding the meeting of February 27, 1920, in the same building.

"It had been intended," he said, "to hold the meeting in the Institution of Civil Engineers but I thought you would like to have some experiments shown you, especially the reception of wireless signals from a distance without any aerial—simply on a coil. Unfortunately the Institution of Civil Engineers building is very unsuitable for this purpose. It is entirely framed in iron girders, and

experiment has shown that it is very difficult to get the signals on an inside aerial. The Society of Arts building was built by the brothers Adam about 1740 before iron girders were known so I think we are fairly safe in going there."

By the time the Conference took place, many local societies were beginning to use the words "Affiliated to the Wireless Society of London" in their public announcements and on correspondence. Among the first to make that claim were Burton-on-Trent Wireless Club, Wireless and Experimental Association, Peckham, North Middlesex Wireless Society, Derby Wireless Club, Manchester Wireless Club, Three Towns (Plymouth) Wireless Club, Southport Wireless Experimental Society, Glasgow and District Radio Club.

The Conference duly took place in the Library of the Royal Society of Arts, John Street, Adelphi, London, W.C., on February 27, 1920. Sir Charles Bright, F.R.S.E., M.I.E.E., M.INST.C.E., officiated as Chairman, being supported by Admiral Sir Henry Jackson, G.C.B., K.C.V.O., F.R.S., Frank Hope-Jones, M.I.E.E., Basil Binyon, O.B.E., Captain F. G. Loring, R.N.,* and Leslie McMichael. Fifteen affiliated societies were represented.

Speaker after speaker referred to the restrictions which at that time were seriously hampering experimental work. One delegate (H. E. Yerbury, M.I.C.E., M.I.E.E., M.I.M.E., President of the Sheffield and District Wireless Society) commented, "No transmitting licence has yet been granted to any member of our Society. We desire to uphold any proper regulations which are imposed on us and we think it far better that they should be done in a proper and regular way. Some members will have to admit that we have done those things we ought not to have done but there is still health in us, so what we desire is that restrictions should be waived, if possible, early." He had not long to wait because half an hour later Captain Loring, representing the Post Office, announced that 10-watt transmitting licences would be issued to approved applicants "wherever this can be done without interference with Government installations". Applicants would be required to satisfy the Post Office that "their qualifications, apparatus, knowledge of the subject and objects are sufficiently good to justify the grant". Licences would not be issued for mere intercommunication purposes and power in excess of 10 watts would only be authorised "where the applicant has in view some definite object of scientific research of general public utility". Captain Loring explained that the issue of transmitting

* Captain Loring was not only a Vice-President of the Society but also the inspector in charge of all wireless telegraphy licensing at the G.P.O.—a most useful friend to have at court.

licences did not rest entirely with the Post Office but would be subject to the scrutiny of other Government Departments interested in wireless telegraphy. That statement was made on February 27, 1920—fifteen months after the Armistice was signed on November 11, 1918—but many weeks were to elapse before the first transmitting licence was issued.

On April 7, 1920, the Society was granted authority to use apparatus (including valves) and an aerial, for the reception of wireless signals at the Institution of Civil Engineers in connection with lectures. A week later, the Post Office informed Leslie McMichael that “the production of a Post Office permit to use wireless apparatus should be regarded as sufficient authority to dealers to supply such apparatus as comes within the terms of the permit” and this news was given wide publicity in the technical press.

On January 26, 1920, Leslie McMichael wrote to the Post Office for permission to recommence his own transmitting experiments. There is no record of the precise terms of his request but four months later—on May 29, 1920—the Post Office informed him that “the Postmaster General is unable to grant permission for the use of the power and waves which you specify but he is prepared to authorise you to use wireless sending and receiving apparatus at 32 Quex Road, West Hampstead, N.W.6, with power and waves for transmission not exceeding 10 watts and 180 metres respectively”. Transmission would be restricted to two hours a day and communication limited to work with three specified stations (those of Messrs. Kitchen, Knight and Klein).

The first list of post-war call-signs appeared in the issue of *Wireless World* dated October 16, 1920* but it is probable that most of these calls were issued up to three months earlier.

The following calls, names and addresses appeared in the first list:

2AZ	William Le Queux, Guildford†
2DF	H. Heather, Peckham, London
2DG	W. Barnet, Sheffield
2DH	} W. Barnet (portable calls)
2DI	
2DT	Barrow and District Wireless Association
2FG	H. L. McMichael, Hampstead, London
2FZ	Manchester Wireless Society
2GP	W. Gatland, Highbury, London

* *Wireless World* had now become a fortnightly publication.

† William Le Queux was a well-known novelist who had been interested in wireless experimental work prior to World War I.

2GU	Halifax Wireless Club
2GZ	A. L. Megson, Bowden, Cheshire
2HA	A. L. Megson (portable)

Although the call 2AZ was the first to appear in print it can be assumed that all the early calls were issued in alphabetical sequence. If that assumption is correct—and it cannot now be checked—then the first post-war call (2AA) was issued to the Radio Communications Company at Slough, Bucks. Capt. H. de A. Donisthorpe became the holder of the call 2AB and the first private person to be issued with a transmitting licence after World War I. Soon afterwards “Donny” (to all his friends) became a Council member of the Society and he retained a lively interest in its activities until his death, which occurred shortly after he had retired from the General Electric Co. Ltd. in 1960.

Throughout 1920 regular meetings of the Society took place in London when papers covering a wide range of subjects were presented to the steadily increasing membership. Every paper was printed in full in *Wireless World*, which had now become the Official Journal of the Society. In January R. C. Clinker, 2ML, described a portable valve set* and discussed some properties of c.w. circuits. In March, L. A. T. Broadwood discoursed on harmonics in c.w. transmissions, followed a month later by Major Basil Binyon, O.B.E., who described an automatic wireless call device. In May, Philip Coursey considered some of the problems of atmospheric elimination in wireless reception and in June, G. G. Blake, 2JM, described a simple wireless telephony transmitter. Maurice Child, 2DC, opened the new session in September by describing his experiences when constructing and operating a six-valve resistance coupled h.f. amplifier and this was followed a month later by a timely paper by Philip Coursey in which he described methods of receiving short-wave signals, both c.w. and spark. Timely, because M. B. Sleeper, Radio Editor of the New York magazine *Everyday Engineering*, a few days earlier had announced his intention of organising a series of short-wave reception tests for the benefit of U.S. and European amateurs. The story of those tests—the first of the transatlantics—is told in another chapter.

For the majority of British amateurs the winter of 1920–21 was spent in making improvements to their stations so that they could begin to enjoy the thrills and pleasures of conversing with their friends by wireless telephony. The era of the spoken word was near at hand.

* Now in the Science Museum, London.

The Spoken Word

IN 1913 the Marconi Company began to develop low-power wireless telephony transmitters using valves. A year later sets giving a range of forty miles had been commercially produced. In 1915 speech was transmitted from Washington, D.C., to the Eiffel Tower in Paris and during 1916 the first broadcast station in the world began to transmit from a New York suburb. In Europe—under war-time conditions—low-power telephony sets of improved design were being produced for the three Services, examples of which were to be displayed at the exhibition arranged by the Wireless Society of London in October 1919.

It is a fact that when World War I ended in November 1918 very few people, outside official circles, had heard speech or music transmitted by means of wireless. Those who did have the opportunity were able to foresee the excitement which later would accompany the introduction of broadcasting.

From February 23 to March 6, 1920, wireless enthusiasts in the United Kingdom were given one of their first opportunities of listening to speech and music, when a new Marconi 15 kW transmitter began to make transmissions from Chelmsford, Essex. During this period the later editions of the London evening newspapers for March 4, 1920, announced that the first commercial aircraft—a Handley Page—fitted with a wireless telephone installation had successfully completed its maiden flight to Paris. A week or two later a demonstration of wireless telephony was a feature of the Royal Society *Conversazione* at Burlington House, London, when a programme of gramophone records transmitted from Chelmsford was received in London on a small frame aerial and amplified.

In the late spring of 1920 a Dutch station, PCGG, began to delight British and other European amateurs with twice-weekly concerts. The station, situated at The Hague and owned by *Nederlandsche Radio-Industrie*, operated initially on a wavelength between 800 and 1000 metres but this was later changed to 1150 metres. Then on June 15, 1920, came the Melba concert from Chelmsford. Dame Nellie Melba, the famous Australian *prima donna*, was the

guest artist at a concert arranged by the Marconi Company. "The first we heard of Melba," wrote a *Wireless World* reporter, "was a wonderful trill which she gave as a preliminary. Telephones were clamped together tighter and the condensers swung round for tuning. Then came the old favourite 'Home Sweet Home' followed by 'Nymphes et Sylvains' in French and the 'Addio' from *La Boheme* in Italian. The signals were excellent and the songs could be heard with the telephones on the table." Although the Melba concert was transmitted on the long wavelength of 2800 metres it attracted a wide audience of amateurs, all of whom had been accustomed to listening on the slightly shorter wavelength of 2600 metres for time signals and weather reports from the Eiffel Tower.

The Dutch and Melba concerts did much to focus the attention of both press and public on the possibilities of using wireless telephony as a means of bringing entertainment into the home. Amateurs too, had begun to appreciate the fascination of the spoken word and as more and more licences were issued more and more telephony transmissions began to appear on 1000 metres or on 180 metres. But it was not until the Second Annual Conference of Affiliated Societies took place in London on March 21, 1921 (with Dr. Erskine-Murray officiating as President of the Wireless Society of London) that the full extent of the interest being shown by amateurs in wireless telephony came to light. Included on the Conference agenda was an item which enquired "the possibility of regular telephony transmissions from a high power station to include all matters of interest to amateurs and to be on different definite wavelengths for calibration purposes".

After much discussion, Capt. Loring, who attended the Conference as the representative of the Post Office, hinted that a proposal coming from the Wireless Society of London for regular telephony transmissions would be looked upon favourably, whereas a similar proposal coming from the Marconi Company might lead to difficulties because the Post Office could not give that company preferential treatment over any other firm. Captain Loring commented, "If they (the Marconi Company) asked for permission to send out for half-an-hour every week, half a dozen other companies could come along and we should have to give them similar permission, whereas if the Wireless Society of London were to apply it would make it much easier for us".

Loring explained that the question of finding a suitable wavelength for this new service would present the G.P.O. with many problems. "It is very difficult" he said "to find a wavelength which can be put to a certain definite purpose without interference. With regard to the short wavelengths (180 metres) which amateurs are now using,

we must remember that there is a distinct tendency for making a much greater use commercially of these very short waves and that is another thing we have to guard against and watch in the future”.

During the months that followed, individual amateurs continued to make test transmissions on telephony for the benefit of other amateurs and also for interested members of the public. On May 2, 1921, Philip R. Coursey read to the Wireless Society of London a paper bearing the title “Telephony without Wires”. In this Coursey described various methods of modulation and gave practical information on the construction of an amateur transmitting station employing either “choke” or “shunt control” circuits. This paper and its subsequent publication in *Wireless World* did much to stimulate further interest in wireless telephony among amateurs, especially those in the London area—so much so that a real problem had arisen.

On July 7, 1921, a meeting of London transmitting licence holders, convened by the Wireless Society of London, took place at 66 Victoria Street, S.W.1—the offices of the Immediate Past President (A. A. Campbell Swinton). Present were Messrs Blake (2JM), Bligh (2IF), Burnham (2FQ), Child (2DC), Clapp (2KZ), Coursey (2JK), Crampton (2KV), Davies (2BZ), Donisthorpe (2AB), Hambling (2MK), Haynes (2DY/2DZ), Klein (2HT), Mayer (2LZ), McMichael (2FG), Partridge (2KF), Sherwood (2NH), Swinton (2HK), Taylor (2AF), Tingey (2LV) and Walker (2OM). Frank Hope-Jones presided and Hugh Pocock represented the *Wireless World*. Hope-Jones (who was one of the two non-transmitting licence holders present) explained that the purpose of the meeting was “to explore all possible methods of so organising and arranging transmissions during the busy hours of the evening as to minimise jamming and interference”.

Four possible alternatives were discussed:

1. Allocation of a definite day and precise time for weekly transmissions by each station. The time table would provide for twenty-eight stations, with four transmitting each evening.
2. Reserve thirty minutes every evening between 8 p.m. and 8.30 p.m. for regular transmissions in the form of a concert.
3. Appointment of seven specially competent operators with good equipment each to control all traffic one evening a week.
4. Voluntary limitation of transmissions to fifteen minutes by each station between the hours of 8 p.m. and 10 p.m.

The fourth alternative was unanimously adopted and peace once more prevailed around London—for the time being at any rate.

Although the meeting was convened by the Wireless Society of London and the Chairman of the Society presided, it was not an official meeting of the Society, neither was it confined to members, as Leslie McMichael, in his capacity as Honorary Secretary, pointed out in the issue of *Wireless World* that followed publication of the full report.*

Very soon, new organisations, formed to look after the special interests of the transmitting amateur, would come into existence. The meeting on July 7, 1921, no doubt, paved the way for the formation of at least one of those organisations.

The issue of *Wireless World* dated August 20, 1921, contained the first comprehensive Directory of Experimental Wireless Stations of the United Kingdom published since the Gamage Directory of 1914. Of the 127 stations listed, the majority were equipped for—and were presumably using—telephony. Most of them were shown as being licensed for 1000 and 180 metres but some were restricted either by licence or choice to 180 metres. One station (2AW) was authorised to work on 3000 metres and another (2AB) on 700 metres. Power was, in general, limited to 10 watts but 2AW and 2FL were authorised to use 100 watts. Up to that time all calls had been issued in alphabetical sequence beginning with 2AA but omitting all E calls. The exception came when V. Watson of Newcastle-on-Tyne applied for, and received, the call 2VW, at a time when the sequence had not gone beyond 2NZ. This was the first occasion the Post Office issued a call-sign bearing the initials of the licensee.

Twelve months after the issue of the first post-war transmitting licence the number of licences had increased to about 250—an excellent achievement on the part of the Post Office bearing in mind the earlier difficulties that had arisen—but it was not until September 1, 1921, that the war-time restrictions on the manufacture, sale and possession of wireless apparatus ceased, insofar as the United Kingdom was concerned although the restrictions still remained in force in Ireland. The official announcement drew attention to the 1904 Wireless Telegraphy Act and to the fact that a licence was necessary before any wireless telegraphy could be installed or worked. The exception was the “toy set” with a range of up to 50 yards but this exception did not please some amateurs who visualised youngsters causing bedlam during the Christmas holidays.

At a meeting of the Society held on October 26, 1921, the President (Dr Erskine-Murray) reported that Air Ministry officials had

* Notwithstanding McMichael's letter to the press the archives of the Society show that McMichael invited Loring to attend the meeting, which he described as an *official meeting of London members*.

written to complain that amateurs in and around London were causing severe interference to air traffic control and communications at Croydon Aerodrome. Excessive power was suspected in some cases.* Erskine-Murray commented "It is not easy to measure your power and not very easy to 'get there' on the low power you have to use but unless we keep strictly to the power which is allowed there will be trouble". He also stressed that more attention should be paid to "listening in". "You cannot go blazing away for half-an-hour at a time without listening-in to see whether you are jamming someone else who has more right than you have!"

Arising from an appeal, published in *Wireless World* from W. W. Burnham, 2FQ, of Burndept, for funds to help towards the upkeep of the Dutch station responsible for the twice weekly concerts, several well-known amateurs wrote deploring the fact that no British station, such as Chelmsford, was allowed, even once a week, to transmit a short concert or brief news bulletin. Attention was drawn to the headway being made in the United States where "a great scheme for the dissemination of news by wireless telephony" was under way. On the face of it the Wireless Society of London appeared to have taken no heed of the suggestion made by Capt. Loring when he addressed the Annual Conference of Affiliated Societies earlier that year but, in fact, much had been happening behind the scenes. The first public announcement of the action taken by the Society to follow up Loring's suggestion came at the Annual General Meeting held at the Institution of Electrical Engineers on December 28, 1921. After some preliminaries, the Chairman (Frank Hope-Jones) announced that a Petition, signed by the officers of the Wireless Society of London and by the officers of sixty-five affiliated societies, representing upwards of 3300 radio telegraphists, was to be presented on the following day to the Postmaster General. Hope-Jones explained that affiliated societies, generally, had felt very dissatisfied with the slow progress made by the Wireless Society of London in the matter of obtaining the necessary permission from the Post Office for regular wireless telephony transmissions. They had looked to the London society to carry on the negotiations on the basis of the request originated at the Annual Conference in February 1921. Hope-Jones then revealed that for the past nine months the London society had been prosecuting these negotiations with the Post Office with a view to establishing weekly programmes of transmissions of high power calibration waves, wireless telegraphy and particularly wireless telephony.

* At that time amateurs were officially licensed to operate on 1000 metres and aircraft on 900 metres but there was considerable "elasticity" all round.

Hope-Jones then read the Petition:

“To the Rt. Hon. F. G. Kellaway, M.P.
Postmaster-General.

Sir,

“We, the undersigned, on behalf of the Wireless Society of London, and of most of the other wireless societies of the country, representing in the aggregate a large number of citizens interested in wireless telegraphy, ask you to be good enough to give consideration to our views as follows:

“We wish to express our thanks for the courtesy and consideration which the authorities have always shown to the amateur radio-telegraphists of this country, and to state that we fully realise the difficulties that are inherent to the carrying on of wireless operations in a small and crowded country such as our own where stringent regulations are obviously necessary to prevent undue interference.

“We also wish to express our satisfaction at the permission recently given to the Marconi Company to send special calibration signals from Chelmsford for the benefit of our members for a period of half an hour every week.

“We desire, however, to express our regret that wireless telephony has not been included in this arrangement and to say that we hope that this restriction may be reconsidered, either with reduced power, or perhaps on a short wavelength of 200 or 300 metres, so as not to cause interference. We would point out that it is telephony in which the majority of our members are chiefly interested at the present time, this being the most recent achievement in wireless, and that in which, for moderate distances at all events, improvements such as avoidance of distortion and the production of really articulate loud speakers and such like, are most required. It is, therefore, primarily to serve the scientific purpose of improving the receiving arrangements that we desire to have telephony included. We would, however, call attention to the following general consideration, which in our opinion, should not be overlooked by the authorities in dealing with the question.

“It should be remembered that wireless telegraphy was, in the first instance, originated and has since been largely developed, by men who, at any rate to begin with, were not even electrical engineers or electricians, and still less qualified telegraphists. Many of these, when they began experimenting, were in this particular line pure amateurs, though no doubt some of them gradually attained to professional proficiency. New inventions and important

improvements are still being made by this class of person and the more numerous they are the more chance there is for good and useful work to be done. In this connection it is noteworthy that it is entirely due to amateurs that all records have quite recently been broken by the successful transmission and reception of signals across the Atlantic on 200 metre waves. To attract such workers in the first instance and to keep them interested, it is necessary to make the occupation interesting and even entertaining; hence the need for wireless telephonic speech and even music. Furthermore the requirements of the large number of such amateur users have led to the establishment of numerous factories for the manufacture of wireless instruments and apparatus, where skilled designers and workmen are employed and many experiments are carried out and where quite important improvements in instruments and methods are constantly being effected. Were it not for the demands of numerous amateurs, such manufacturing concerns would not exist and advance in the art would be checked. There is also the advantage, in the case of any future wars, of the existence of a number of persons skilled in wireless.

"The educational value of wireless should not be overlooked. Just as the advent of the motor car has undoubtedly done more to disseminate a knowledge of mechanics throughout the population than all the millions of money spent annually on technical education, so also the practice of wireless is teaching to thousands the principles of electrical science and of physics, and this without any expense to the State.

"That the French authorities recognise the force of these considerations is evidenced by the transmissions of speech and music that have already commenced under Government auspices from the Eiffel Tower. It is understood that it is intended to make these a regular feature like the time signals and meteorological report and it will be somewhat lamentable if England, where Wireless Telegraphy originated and whose Greenwich time is the time of the world, but who sends out no wireless time signals, should again fall behind other countries by reason of failure to move with events.

We are,

Your obedient servants"

The names of the Affiliated Societies and Clubs who signed the Petition are given in an Appendix on page 295 and a reproduction of part of this document appears on pages 59 and 60.

Those who had signed the Petition did not have to wait long for action to be taken. At the Third Annual Conference of Affiliated

Petition

TO

THE RT. HON. F. G. KELLAWAY MP.

POSTMASTER-GENERAL

FROM THE

Amateur Radiotelegraphists

OF

GREAT BRITAIN.

Societies held in London on January 25, 1922 (less than a month after the Petition was presented), it was announced that the Postmaster General had authorised the transmission of calibration waves and telephony programmes for half an hour each week. At the request of the Wireless Society of London the Marconi Company undertook to provide this service from an experimental station (2MT) at Writtle, near Chelmsford, Essex.

Although it was in operation for only eleven months—from February 14, 1922 until January 17, 1923—no station could have given greater pleasure or so many thrills to the amateur fraternity than did "Two Emma Toc"—Writtle. For this, much credit was due to Peter Pendleton Eckersley.* As a schoolboy he was initiated into some of the mysteries of wireless communication by his elder

* P. P. Eckersley later became Chief Engineer of the British Broadcasting Company (afterwards Corporation).

of electrical science and of physics, and this without any expense to the State.

That the French authorities recognise the force of these considerations is evidenced by the transmission of speech and music that have already commenced under Government auspices from the Eiffel Tower. It is understood that it is intended to make these a regular feature like the time signals and meteorological reports, and it will be somewhat lamentable if England, where Wireless Telegraphy originated and whose Greenwich time is the time of the world, but who sends out no wireless time signals, should again fall behind other countries be reason of failure to move with events.

We are,

Your obedient servants,

For & on behalf of the Wireless Society of London

J. Erskine-Murray, President.

A. A. P. Swinton, Past President

H. B. Swinton, Sec. Elect.

T. H. P. Jones, Chairman.

Leslie McMichael, Hon. Sec.

Representing a membership of

395

brother Tom (T. L. Eckersley, F.R.S., a brilliant physicist and mathematician). In 1915 "P.P.E." joined the Royal Flying Corps as a Wireless Equipment Officer in which service he left his mark. After the war he went to the Aircraft Department of the Marconi Company and became head of the Experimental Section. When that Company, in conjunction with the Wireless Society of London, obtained permission to design, build and operate an experimental wireless station, the task was given to Eckersley and his group of "back-room boys". In this manner was "Two Emma Toc" created but it was largely as the result of Eckersley's own buoyant personality and especially his piquant comments on current affairs that the Tuesday evening programmes from Writtle became the chief talking point in amateur circles.

B. N. Maclarty, writing as Engineer-in-Chief of Marconi's

Wireless Telegraph Co. Ltd., contributed much interesting information about "Two Emma Toc" in a letter published in the January 1963 issue of *Wireless World*. The transmitter used a standard Marconi radio telephony circuit, precisely similar to one designed by Eckersley for use as the ground station at Croydon Aerodrome in 1920, and this was operated on a wavelength of 700 metres with an approximate power to the aerial of 200 watts. The aerial was a 4-wire inverted "L" 140 ft. long supported by two 110 ft. portable masts. Marconi M.T.4 valves were first used but these were replaced later by more efficient types developed by Noel Ashbridge* and H. L. Kirke. Initially the quality of the transmissions was poor but as time went on the circuitry was improved and three of the newly-developed valves were used. A major limitation was the Peel Connor carbon microphone used for all the transmissions from 2MT and in fact no other type became available until the Round/Sykes microphone was produced in 1923. On May 22, 1922, "Two Emma Toc" changed its wavelength to 400 metres after complaints of jamming by commercial stations and in particular by GBL. As from that date the calibration signals, which had hitherto preceded the telephony programme, were abandoned.

By the time the final transmission was made, on January 17, 1923, broadcasting had arrived; the British Broadcasting Company had been formed and 2LO was a going concern. That of course is another story but it is certain that the Petition signed on behalf of the members of the Wireless Society of London and of the societies affiliated to it, paved the way for the introduction of a nation-wide broadcasting service much sooner than might otherwise have been the case.

* Noel Ashbridge later became Chief Engineer of the BBC in succession to Eckersley and was knighted in 1935.

Transatlantic Challenge

WHEN members of the Wireless Society of London met at the Institution of Civil Engineers on Thursday, September 30, 1920, to hear Maurice Child describe his six-valve resistance coupled high-frequency amplifier it is doubtful whether many of them paid very much attention to some remarks made at the end of the meeting by Philip R. Coursey, B.Sc., whose election to the Committee of the Society had been announced earlier that evening by the President (Alan A. Campbell Swinton). Coursey reminded his audience that rumours had been current for some time that United States transmitting amateurs were trying to make two-way contact with amateur stations in Europe, using short wavelengths. *Wireless World* had recently reported that the editor of the New York periodical *Everyday Engineering* (M. B. Sleeper) had suggested a series of Transatlantic tests in which British operators of receiving equipment would listen for signals transmitted by U.S. amateurs. Whilst British stations were permitted to use no more than 10 watts input, U.S. stations had been given permission to operate with an input power of 1000 watts. The tests would probably take place in February 1921 and most of the stations would operate on a wavelength of about 200 metres. A pre-arranged schedule with code words would be adopted to avoid confusion and false claims. Coursey commented "We shall not only be engaged in some work very interesting to ourselves but more probably we may gain some scientific knowledge as to the capabilities of short waves of travelling long distances. At first sight it might seem a bit too hopeful to try to receive amateur signals over a distance of 3000 miles but as telephony has been heard from a 500 watt amateur station at a distance of 2000 miles it is just possible that a 1000 watt telegraphy station may have some chance of being heard in Europe". Coursey called for a full measure of co-operation from British amateurs and asked those who had permission to operate on 180 metres, to refrain from doing so during the test periods. As the result of Coursey's appeal, especially to members of societies affiliated to the Wireless Society of London, about 200 names were entered

and, to encourage entrants to put their best efforts into the tests, a number of well-known firms, including Burnham & Co., Dubilier Condenser Co. Ltd., H. P. R. Wireless Ltd., Halliwell & Good Ltd., and the Marconi Scientific Instrument Co. Ltd., offered prizes.

Eventually 25 U.S. amateur stations participated in the tests which took place during the early hours of February 2, 4 and 6, 1921. It must have been a great disappointment to Coursey, as well as to Sleeper and others associated with him in the venture, that not one British entrant received a single word which could be attributed to an American amateur station. It was a further disappointment that only thirty logs were submitted, instead of the promised 200. As a consequence of the failure of the tests no entrant qualified for the prize offered for the reception of American signals but a three-valve amplifier, offered by Burnham and Co. for the best description of receiving apparatus used for the tests, was awarded to W. R. Wade, M.I.MECH.E., A.M.INST C.E., of Clifton, Bristol. The valve line-up used was Mullard F (detector), Marconi V24 (oscillator), four Mullard K (amplifiers), Marconi-Osram R.B.4 (rectifier). Although described by Wade as a crudely-built set the photograph, reproduced with the description published in *Wireless World* dated April 2, 1921, shows that it was, in fact, beautifully made.

It was perhaps understandable that American amateurs should put the blame for the failure of the February 1921 tests on the inexperience of British amateurs because, up to that time, no one outside the United States had succeeded in receiving signals on 200 metres at a distance of more than a hundred or so miles. "Such reception" wrote Kenneth B. Warner, Editor of *QST* "is a new field for British experimenters and they hardly can be expected to show the same performance as an American dyed-in-the wool ham who has learned how to get amateur DX* only after years of patient struggle. We have tested most of the circuits used by the Britishers and find them one and all decidedly inferior to our standard American regenerative circuit using variometer tuning in secondary and tertiary circuits. We would bet our new spring hat that if a good U.S. amateur with such a set and an Armstrong superhet, could be sent to England, reception of U.S. amateurs would straightaway become commonplace. We do not mean to deprecate the loyal co-operation shown by our English-speaking confreres, however. For the admirably complete way in which they go into a problem we have the greatest respect and we are most sincerely grateful for their interest and

* "DX" is an abbreviation used by amateur operators to indicate long distance communication.

enthusiastic co-operation in this, our first, attempt to get overseas on schedule. We will hope for better luck next time."

During the ARRL Convention held in Chicago that year (August 31-September 3, 1921) it was announced "to a wildly enthusiastic audience" that a second series of Transatlantic tests would take place in December and that a well-known American amateur (Paul Godley, 2ZE) would be going to Europe to take part in them. When the news of Godley's impending visit reached England the Wireless Society of London accepted the challenge, as did many individual amateurs throughout the United Kingdom, who had no intention of standing aside whilst an American amateur tried to show them how it should be done. The tests would commence on December 8 and finish on December 17, 1921, and, as before, a number of valuable prizes would be offered to the most successful taking part.

Godley duly arrived at Southampton on November 22, 1921, and after a hectic experience with British Customs officials he left for London where he was met by Philip Coursey (who had agreed to look after the British end of the tests) and Frank Phillips (Chief Engineer of Burnham and Co). On the following day a meeting of the Wireless Society of London was held at the Institution of Electrical Engineers with Frank Hope-Jones in the Chair. Godley was invited to attend this meeting where he received a warm welcome from those present. In the course of a short address Godley commented on the enthusiasm being shown in the United States for Amateur Radio, the support the movement was receiving from the United States Government, the value of Amateur Radio as an aid to education and as a means of drawing people closer together, the growth of broadcasting in his country and the interest being shown by the U.S. Government in that form of entertainment. His visit to the U.K. had been sponsored, financially, by the ARRL which had more than 15,000 transmitting members. The League had encouraged the relaying of messages across the United States—Pacific coast stations frequently communicating directly with Atlantic coast stations. In preliminary trials for the next series of Transatlantic Tests a station in Georgia using three valves had been heard at a distance of 2450 miles. Another in New Mexico had been heard in New York. Godley commented, "Several radio men whom I have met since reaching England have rather been inclined to smile at our optimism in hoping to be able to hear signals over here but in view of the results I have quoted I feel justified in being optimistic". Godley was critical of what he called the "deplorable attitude of the G.P.O." and he hoped that the time would come soon when Amateur Radio "is viewed in Europe in the same light as it is viewed in America". He

concluded by stressing the importance of using short waves (around 200 metres) rather than long waves (around 1000 metres) for long distance work and made a plea for higher aerial efficiencies.

During the few hours Paul Godley was in London he met, amongst others, Senatore Marconi, Admiral of the Fleet Sir Henry Jackson, Alan A. Campbell Swinton, and many other distinguished members of the Wireless Society of London. After his visit to the Institution of Electrical Engineers he was escorted to the Royal Society of Arts, John Adam Street, London (about 400 yards distant) where he listened to a lecture by Professor (later Sir) Ambrose Fleming, a Vice President of the Wireless Society of London. Still later that evening he was guest at a dinner given in his honour by members of the Committee of the Wireless Society of London. Godley's account, in the February 1922 issue of *QST*, of the two buffet teas, the two erudite lectures and the dinner in his honour—all of which he enjoyed during one evening in London—makes interesting and amusing reading.

Godley first set up his receiving equipment—consisting of a Paragon regenerative receiver and an Armstrong superhet—in the home of Frank Phillips* at Wembley Park, Middlesex, on November 24, 1921, but he decided after listening for two days that atmospheric noise and harmonics from single circuit valve transmitters and Poulsen arcs would make it very difficult for him to hear weak signals from across the Atlantic. Accordingly he decided to move to Scotland. After certain local and licence difficulties had been overcome he finally established a listening post in a field, heavily coated with seaweed, just outside Ardrrossan, not far from Glasgow. The task of erecting a long-wire aerial under such conditions can be imagined. Assisted by D. E. Pearson, an Inspector with the Marconi International Marine Communication Co. Ltd. a line was laid out, just under 1300 feet in length, and ten poles, equally spaced, erected, each about 12 ft. above ground. A phosphor-bronze wire was then run the entire length of the line and earthed through a non-inductive resistance, the earth plates taking the form of several short lengths of iron piping buried about 4 ft. in the ground. The resultant aerial was the first Beverage array erected in the United Kingdom. The length was later reduced to about 850 ft.

At 0133 GMT on December 8, 1921, Godley heard a 60 cycle synchronous spark signal on 270 metres which he logged as 1AEP but atmospheric noise made positive identification uncertain. Nine minutes later the signal was heard again and positively identified as 1AAW. It was discovered later that no station with that call had

* Phillips was the designer of a range of Burndept receivers, including the Burndept III.

entered for the tests. If the signal was of American origin the location of the station was never established. At 0050 GMT on December 9, 1921, Godley identified signals from 1BCG, a station set up on his own recommendation at Greenwich, Connecticut, by six members of the Radio Club of America, including E. H. Armstrong, inventor of the supersonic heterodyne receiver. It was from this station two days later that the first complete message from the United States was received in Europe on "short waves". The message read:

"No. 1 de 1BCG. Words 12, New York, December 11, 1921.

To Paul Godley, Ardrossan, Scotland.

Hearty Congratulations. Burghard, Inman, Grinan, Armstrong, Amy, Cronkhite".

The message was transmitted on a wavelength of 230 metres and was logged correctly by Godley at 0252 GMT, December 12, 1921. A stone marker commemorating 1BCG now stands in Greenwich, Conn. on a spot about 200 ft. east of the original station site. The marker was erected by the Radio Club of America and dedicated in 1950.

The success achieved by Godley was well merited but the American challenge had been strongly taken up by British amateurs, in fact, when the final results were analysed it was found that eight of them had received signals from the United States. Of the eight, by far the most successful was W. F. Burne, 2KW, of Sale, Cheshire, who logged 2FP, 2BML, 2ZL, 1BCG, 1UN, 1XM, and 1ZE. Burne collected ten prizes to a total value of about £200. H. H. Whitfield, 2LG, of Hall Green, Birmingham, was placed second, joint third place being shared by W. E. Corsham, 2UV, of Willesden, London, and R. D. Spence, 2JZ, of Huntly, Aberdeenshire. Five or six-valve receivers were used by the prize winners, except Corsham who succeeded with a simple three-valve circuit.

Philip Coursey in his report to the Society on the second Transatlantic Tests made the point that the aerials used by all the successful British entrants were within the stringent limits imposed by the Post Office and were very much smaller than the huge Beverage array used by Godley. Burne used a twin-wire inverted L 45 ft. long, about 50 ft. high with a 50 ft. down lead. Whereas Godley was using commercially-built receivers, including a 10 valve superhet, Burne used a six-valve home-constructed set made up almost entirely from war-surplus material. Whitfield used a five-valve home-made receiver and an aerial similar to the one used by Burne. Corsham relied on a 100 ft. single wire inverted-L while Spence used a single wire T about 45 ft. high and 80 ft. long. When all the reports were analysed it was

discovered that Burne, 2KW, made the first positive identification of an American amateur signal during the early hours of December 8, 1921, which was a day before Godley heard 1BCG for the first time. Godley's detailed report, published in the February 1922 issue of *QST*, showed that he had identified 27 U.S.A. and one Canadian station but he made no claim in respect of "1AAW"—the signal he heard on December 7.

And so the second Transatlantic Tests ended with the amateurs of the United States and Britain equally pleased with the results that had been achieved. The tests had shown clearly the advantages of c.w. transmitters over spark. Godley's log recorded the reception of only six spark stations compared with twenty-one using c.w.

Writing in the July 1938 issue of *The T & R Bulletin*, W. E. Corsham, G2UV, had some interesting things to say about this series of tests.

"As usual many doubts had been cast upon the chances of the success of the tests, because the first tests had not borne fruit. Certainly if it had not been for the insistence of the American Radio Relay League and the earnest co-operation of Mr. Philip Coursey, backed by the ever-useful propaganda of the *Wireless World* under the editorship of Mr. Hugh Pocock, little interest would have been taken in the tests themselves and progress would have stood still for a few more years, until chance itself would probably have intervened to provide a signpost to the undiscovered paths that were only awaiting the arrival of research to throw open to commerce. The proof of the pudding is always in the eating and the miracle came off."

There was an amusing echo of the second series of Transatlantic Tests. Warner's bet of a new spring hat was taken up by W. W. Burnham, 2FQ, and when success rewarded the efforts of "the good U.S. amateur" (Paul Godley) the bet still stood, although the laurels were shared with British amateurs. The hat, purchased by Burnham, was a light grey topper bearing on one side the Stars and Stripes and on the other the Union Jack. The front bore the inscription "In commemoration of the success of the Anglo-American Wireless organised by the ARRL 1921". A photograph of the hat was reproduced in the issue of *Wireless World* dated April 20, 1922. A later issue reproduced a picture of Warner wearing his new spring hat.

Still full of the enthusiasm engendered by their success in the Transatlantics, Corsham and Spence began a series of tests which led to the first England-Scotland contact taking place on April 9, 1922.

Shortly afterwards these two linked up with the other two Transatlantic test prize winners, Burne and Whitfield.

At about this time 2DF, 2DX, 2FQ, 2KF, 2LI, 2NH, 2NM, 2OD, 2OM, 2ON, 2PX, 2QQ, 2SH, 2SX, 2TA, 2TI, 2UV, 2VJ, 2VN, 2VW, and others in the London area were transmitting speech and music daily and sometimes nightly on 440 metres for the benefit of listening amateurs. But when the news became known that 2KW, 2LG, 2UV and 2JZ had been able to receive amateur signals from the U.S., attention began to turn seriously to the next challenge—two-way working between England and the United States on short waves.

During the summer of 1922 the first French amateur licences were issued. Early in October that year Leon Deloy, 8AB, President of the Radio Club de la Cote d'Azur, Nice, reported to *Wireless World* that he had heard signals from British 2AW, 2CV, 2DM, 2FP, 2FQ, 2JZ, 2KF, 2KV, 2LG, 2NM, 2OD, 2OM, 2ON, using a one-valve receiver and an aerial 160 metres long, 20 metres high. It was due to Deloy's enterprise that French amateurs joined their British colleagues in plans then being made for the third series of Transatlantic tests in December 1922. In preparation for these tests Philip Coursey and Hugh Pocock teamed up in a highly commendable effort to provide British amateurs with the latest technical information. Coursey's description, for example, of a heterodyne oscillator for use on 200 metres, was one of many excellent contributions aimed at keeping the British amateur abreast of developments.

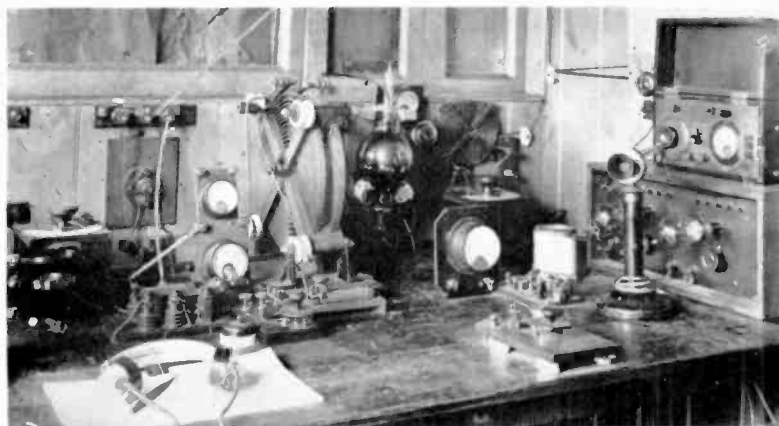
It was mutually agreed by the organisers on both sides of the Atlantic that the third series of tests should fall into two sections. From December 12 to December 21 United States and Canadian amateurs would transmit in accordance with a time schedule from 0001 GMT to 0600 GMT daily. From December 22 to December 31, British and French amateurs would transmit for a similar period daily, also on a time schedule. There would be "free-for-all" periods during each section of the tests.

In preparation for the third Transatlantics, six prominent members of the Radio Society of Great Britain* Major Noel Hamilton D.S.O., Captain Norman Lea, Maurice Child, Philip Coursey, Commander Frank Phillips and G. G. Blake, were appointed to deal with the detailed arrangements. Most important of the many tasks entrusted to them was that of bringing into existence a special transmitting station so that the Society could, itself, take part officially in the tests. The station, to which was assigned the call 5WS, was established in the South-West London suburb of Wandsworth, some

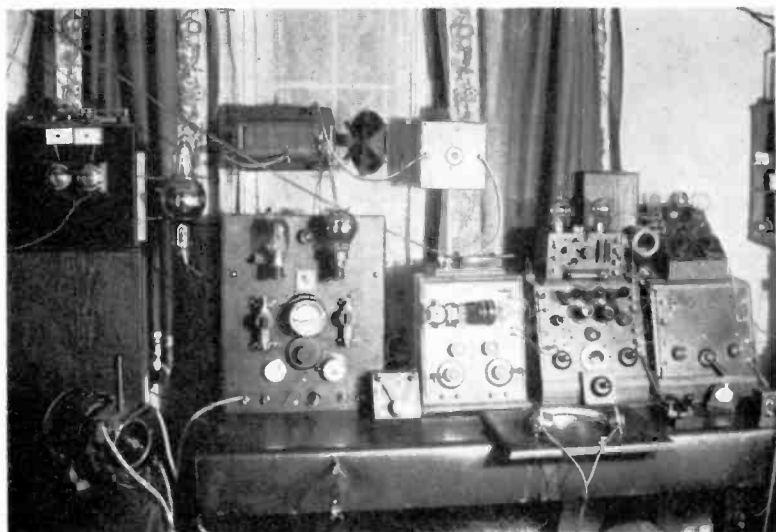
* The Society changed its name on November 22, 1922.



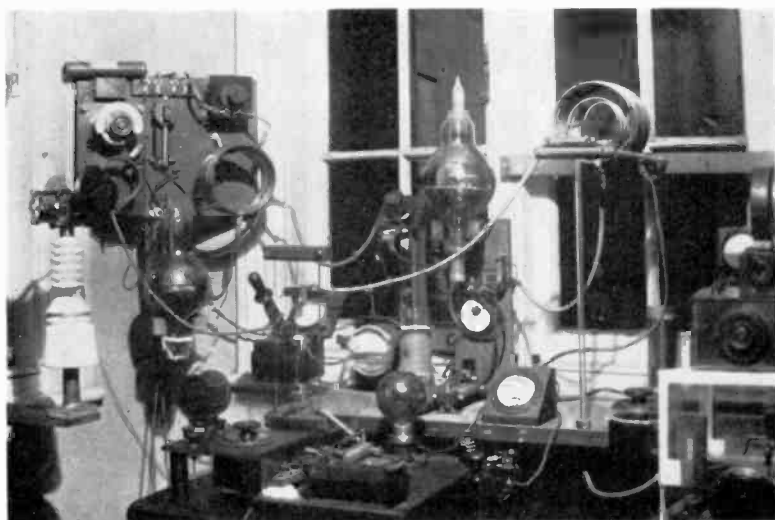
For the 1922 Transatlantic Tests the RSGB built a special station having a power of one kilowatt which operated under the call-sign 5WS. This was the first United Kingdom amateur station ever heard in the United States.



Jack Partridge, 2KF, of Merton, London, made the first two-way contact on short waves between the United Kingdom and the United States on December 8, 1923.



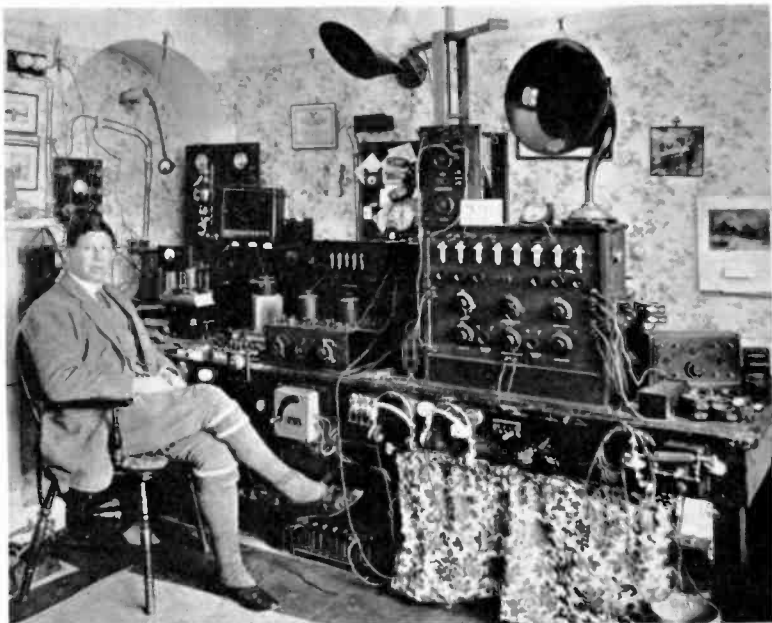
Apparatus used by Ernest Simmonds, 2OD, of Gerrards Cross, Bucks, for the first two-way contact on short waves between the United Kingdom and Canada (1BQ) December 16, 1923. Superheterodyne receiver on the right. The transmitter wavelength was 116 metres, and a synchronous rectifier was used to provide h.t. supply.



The master oscillator (left) and power amplifier (right) used by E. D. Simmonds, G2OD, on May 4, 1925, to effect the first daylight two-way telegraphy contact on 23 metres between the United Kingdom and Australia (A2CM). The same equipment was also used to transmit telephony for the first time to Australia, the Australian station (A2CM) replying on 44 metres (March 10, 1926).



Hugh Ryan, 5BV, with the 100 metre transmitter he used during December 1923 when signals from his station were among the first to be heard in the United States. In terms of contact, as distinct from two-way working, he was probably first across from the United Kingdom as he exchanged call signs with American 8AJW on December 2, 1923, on 200 metres.



The equipment used by Gerald Marcuse, G2NM, at Caterham, Surrey, during January 1924. From this station he made the first two-way contact on short waves with the west coast of the United States and maintained contact for some weeks with the Rice-Hamilton Expedition to South America.

two miles from the City centre, where a large birdcage aerial was attached to the chimney stack of the County of London Electric Supply Company's generating plant. The transmitting equipment was installed in a nearby building belonging to the Metropolitan Water Board and consisted of a loosely coupled Hartley circuit with two valves in parallel and operating at an input which could be up to 1000 watts.

For the period of the tests the Post Office issued high power permits to a few prominent members of the Society, an arrangement which led to a good deal of dissatisfaction on the part of the younger generation of amateurs who were even more keenly interested than their elders on long distance communication. These youngsters had to be content with their normal 100 watt licence while the favoured few were allowed to use a solid kilowatt.

In a paper read to the Society on February 28, 1923, Philip Coursey described in great detail the equipment used at 5WS but the most important piece of information was dismissed in a few modest words. He said

"It will perhaps be worthwhile mentioning where the set was heard. We transmitted for ten nights at a different time-period each night and our signals were heard on four nights out of the ten by eight different American stations."

History had, indeed, been made on those four nights during December 1922 because, as Coursey's paper disclosed, 5WS was the *first British amateur station ever heard in the United States and no other British station had been heard during the tests*. In fact, 5WS was heard by 1ANA, 1BFG, 1BQD, 1MO, 1OR, 1RU, 2BBB and 3OEC, and in each case code words had been verified. The only other European station heard in the United States was French 8AB (Nice), whose signals were logged once by American 8FQ of Pittsburgh, Pa. Mention must, however, be made of 5MS the station established by the Manchester Wireless Society, a description of which appeared in the March 3, 1923, issue of *Wireless World and Radio Review*. The description contained a reproduction of a letter addressed to Fred Schnell of A.R.R.L. from J. B. Westervelt of station WX, Petersburg, Pa., who stated that one of the operators of that station (John Leighmer, 8ALF) had heard "Broken d.c. signals giving the effect of rectified 25 cycle a.c." from a station using the call 5MS on a wavelength of 270 metres between 0511 and 0514 GMT on December 10, 1922. The Manchester Wireless Society did not confirm that 5MS was active at the time and the description gave no information about the wavelength used for transmission but as

5MS apparently operated only at weekends it seems unlikely that the report was accurate because December 10, 1922, fell on a Wednesday.

Coursey's report revealed that during the period from December 12 to December 21, 1922 no less than 2297 interceptions were logged by forty-seven British and two Dutch listeners. Unfortunately, because U.S. amateurs failed to observe "quiet periods" during the time British and French stations were transmitting (December 22 to December 31), U.S. reception reports were most disappointing. If "quiet periods" had been observed there is little doubt that many stations besides 5WS would have been heard in the U.S. and perhaps in Canada. As Coursey made no reference to receiving equipment in the paper he read to the Society on February 23, 1923, or in the articles he contributed to *Wireless World*, it seems to be clear that the 5WS team made no plans to establish two-way communication.* Why this was so is by no means obvious from Society records. True the arrangements for the tests did not allow for official attempts at two-way working but once 5WS had been heard in the United States it is difficult to explain why the operators of the stations concerned did not cable to the Society to arrange schedules. Possibly none of the operators at 5WS had had experience of listening for weak DX. If that was, in fact, the case it seems a pity the Society did not invite one or two of the "dyed-in-the-wool" amateurs who had successfully logged U.S. signals a year earlier, to join the team at Wandsworth, bringing with them their own receiving equipment. Had that course been followed there is little doubt that 5WS would have made *real* history during Christmas 1922. Instead of which the golden opportunity of effecting the first two-way Transatlantic contact was missed and, when the feat was finally achieved a year later, credit went to Leon Deloy in Nice and Fred Schnell in West Hartford, Connecticut. The fact that the Society's station "missed the boat" in December 1922 may have been one of the reasons why many of the younger generation of amateurs felt that the time had come for the transmitting movement to establish itself.

The British Wireless Relay League, the Amateur Radio Research Association, the Radio Transmitters' Society and finally the Transmitter and Relay Section of the Radio Society of Great Britain came into being because of a certain dissatisfaction which was being felt

* This is borne out by the fact that Coursey stated in the paper he read to the RSGB that no attempt was made during the tests to reply to the various messages of greeting sent "blind" by U.S. stations but messages were sent back to America from 5WS during the second half of the tests. Several of these messages were correctly received by U.S. amateurs. Coursey contended that "to a limited extent two-way communication had been established" but as there was a period of days between the two tests his contention was not very well founded.

TABLE I

<i>United States Inspection District</i>	<i>Number of Stations</i>			<i>Total number of different stations heard</i>
	<i>Heard with verified individual transmissions at correct times</i>	<i>Heard during "free for all" period at correct times</i>	<i>Heard working DX, sending messages, etc.</i>	
1st	20	44	97	134
2nd	24	44	126	154
3rd	15	26	45	59
4th	5	6	9	14
5th	2	3	20	24
6th	1	0	1	2
7th	0	0	5	5
8th	21	13	63	82
9th	5	1	28	31
Canada	1	1	2	2
Totals	94	138	396	507

During the third series of Transatlantic tests (December 1922) reception reports were received from 47 British and two Netherland stations. Total interceptions of U.S. and Canadian stations was 2297. Table I gives a summary of the number of stations heard from each U.S. Inspection district. Eastern Districts 1, 2, 3, 4 and 8, Middle-East Districts 5 and 9, Western Districts 6 and 7.

at the time with the activities of the senior body. It was the pioneering efforts of the members of those organisations that led to the development of the short waves for long distance communication and brought the Amateur Radio movement to that point in time which has been referred to as The Dawn of International DX. But before that story is told some of the other important events of the period must first be recorded—the period of the Great Names in the history of the Society.

Great Names

AT the Annual General Meeting of the Society held at the Royal Society of Arts, London, on December 21, 1920, Major John Erskine-Murray, D.Sc., F.R.S.E., succeeded Alan A. Campbell Swinton, F.R.S., as President in the office he had held since September 1913. Erskine-Murray had been a pupil of Lord Kelvin* and a close associate of Marconi. He had joined the Society in 1913 and was one of its most advanced experimenters. Author of many papers on radio subjects he had also been responsible for a number of standard text books. During the war he had seen active service with the Royal Flying Corps and the Royal Air Force and since the war had served on various Government Committees.

On January 27, 1921, at a meeting of the Society held in the Royal Society of Arts, Erskine-Murray presented an illuminated address to Campbell Swinton to mark the occasion of his retirement from the office of President. A photographic reproduction of the illuminated address and a full record of the speeches made at the presentation ceremony appeared in the issue of *Wireless World* dated February 19, 1921.

Erskine-Murray's first public duty as President was to preside at the second Annual Conference of Affiliated Societies held at the Royal Society of Arts during the afternoon of March 1, 1921. His Presidential Address, delivered later that day in the same building, dealt in the main with what he called "the greatest problem in radio today". The problem—how to prevent unwanted signals from rendering wanted signals unreadable.† At the Conference and throughout his year of office Erskine-Murray gathered around him many leading radio and scientific personalities. It came as no surprise, therefore, to those closely associated with the Society to learn at the Annual General Meeting in December 1921 that one of the great names in naval radio circles Admiral of the Fleet, Sir Henry Jackson,

* Lord Kelvin made important discoveries in transcontinental communication and refrigeration. He was President of the Institution of Electrical Engineers in 1874, 1889, and 1907. He died in 1907 and was buried in Westminster Abbey.

† "The Greatest Problem in Radio." *Wireless World*, April 2, 1921.

G.C.B., K.C.V.O., F.R.S., D.Sc., LL.D., M.I.E.E., had accepted an invitation to become President for the year 1922. Sir Henry's interest in wireless dated back many years, in fact he conducted experiments on behalf of the Admiralty before Marconi demonstrated his apparatus to the Post Office. If he had been permitted to publish an account of his pioneer work he would have become even better known internationally. As it was he had been mainly responsible for wireless progress in the Royal Navy during and after the first World War. His acceptance of the office of President added another illustrious name to the list of those who had led the Society to a position of eminence.

Like his predecessor, Sir Henry Jackson's first important duty as President was to officiate at the Annual Conference of Affiliated Societies. It was at this Conference—the third—held on January 22, 1922, at the Institution of Electrical Engineers, members heard for the first time that Marconi's Wireless Telegraph Company had been authorised to include a programme of speech and music in their weekly transmissions from Writtle, near Chelmsford, Essex, for the benefit of amateurs. Thus, barely three weeks after the Society had presented its Petition to the Postmaster General success had been achieved. When Sir Henry Jackson delivered his Presidential Address later the same day he discussed directional effects with frame aerials, but he also had some interesting things to say of a more general nature. For example:

"I have no particular qualifications for the post of President except the great interest I have always taken in the development of wireless telegraphy and an unshaken belief that its proper use will increase the power of closer communication between the people on this earth and thus benefit humanity and, I hope, help to make goodwill take the place of the existing state of unrest and mutual suspicion that at present seems to be a dominant feeling amongst the nations." Those words were spoken ten months before broadcasting began in the United Kingdom.

In a reference to the recent Transatlantic Tests Sir Henry Jackson commented on the bond of friendship growing up between the amateurs of the United Kingdom and those of the United States and of the enthusiasm being shown by those anxious to bridge the Atlantic on short waves. "I have always been an advocate" he said "for giving non-professional workers all possible facilities to improve their knowledge in any hobby, such as wireless, in which they take a personal interest. For one reason alone it brings out the latent inventive genius."

Further proof of Sir Henry Jackson's interest in the communication side of the Society's work was shown on February 28, 1922,

when at a crowded meeting held at the Institution of Electrical Engineers, he presented to W. R. Burne, 2KW, the many prizes he had won as the leading British entrant in the December 1921 Transatlantic tests.* In making the presentation Sir Henry Jackson recalled that it was Burne who received amateur signals from the United States at least twenty-four hours earlier than the American expert Paul Godley.

In a year marked by many outstanding technical lecture meetings the one that attracted the greatest attention, nationally, and the largest audience was an Address given by Sir Oliver Lodge, F.R.S. After paying tribute to the work of Clerk Maxwell and Heinrich Hertz, Sir Oliver described his own early experimental work in the production of electric-magnetic waves in space.† The year 1922 was important for several other reasons. For example, in July it was announced that the Society proposed to hold the first all-British Wireless Exhibition and Convention at the Horticultural Hall, Westminster, London, from September 30 to October 7. Up to that time public interest in wireless had not been sufficient to justify the holding of an all-wireless exhibition on any large scale but with national broadcasting not far away the Society decided the time had come to enlist the support of manufacturers in staging a comprehensive public exhibition of wireless apparatus, components and valves. Managers of the Exhibition were Bertram Day and Co., of Charing Cross, London, but the man in charge was Horace Freeman, who, in later years, organised the annual RSGB Amateur Radio Exhibition at the Royal Hotel, Woburn Place, London, with singular success. Freeman was also, for thirty years, the Advertisement Manager of the Society and when he retired in 1960, he was elected an Honorary Vice-President in recognition of his outstanding services to the Society.

When the Rt. Hon. Sir Henry Norman, Bart., P.C., M.P., opened the Exhibition on September 30, 1922 he congratulated the Society on its enterprise in providing the general public with the first opportunity of examining a wide range of wireless apparatus much of which was capable of home construction. Sir Henry Norman was no stranger to the Society as he had been a Vice-President since 1920. Throughout the period of the Exhibition concerts were broadcast from 2LO (the Marconi House station in The Strand) especially for the benefit of visitors to the Horticultural Hall. It was from this

* A detailed account of the presentation ceremony appeared in the issue of *Wireless World* dated April 1, 1922.

† The paper was printed in full in the issue of *Wireless World* dated July 1, 1922.

station on November 14, 1922, that the British Broadcasting Company began its activities. Among the archives of the Society is a copy of the printed programme—possibly the only one in existence—of concerts broadcast during the Exhibition period and portions of this are reproduced below. The accompanist was Stanton Jefferies, A.R.C.M., and the first broadcast took place at 3 p.m. on September 30. The baritone soloist on the morning of October 3 was Clemence Bradley who sang "Sea Fever" and "Sparkling Eyes". "Pim" Bradley became G2AX in 1926 and remained an active amateur until his death whilst on holiday in Italy thirty-six years later. Bradley was Social Manager of the RSGB for a number of years and a member of Council from 1928 to 1931.

A highlight of the Exhibition was the first broadcast by a member of the Royal Family. During the evening of October 7, 1922, His Royal Highness, The Prince of Wales, in his capacity as Chief Scout for Wales gave a broadcast address to the Boy Scouts of Great Britain. Four days after this historic broadcast took place, a letter

Programmes of Wireless Concerts

TO BE TRANSMITTED TO THE FIRST ALL-BRITISH

WIRELESS EXHIBITION AND CONVENTION

Horticultural Hall, Westminster, S.W. 1, 30th September to October 7th, 1922

Accompanist: Mr. L. STANTON JEFFERIES, A.R.C.M.

SATURDAY, SEPTEMBER 30th, 1922

3.0-3.30 p.m.

1. MR. RODNEY BENNETT—BARITONE.
 - (a) "In Summer-time on Bredon" ... *Peel*
 - (b) "Hope, the Horn-blower" ... *John Ireland*
2. MR. CHARLES CORY—ENTERTAINER.

Selected
3. MISS OLIVER

6.0-6.30 p.m.

1. MR. WALTER GLYNN—TENOR.
 - (a) "Passing By"
 - (b) " "

TUESDAY, OCTOBER 3rd, 1922

11.0-11.30 a.m.

1. MR. CLEMENCE BRADLEY—BARITONE.
 - (a) "Sea Fever" *John Ireland*
 - (b) "Sparkling Eyes" *Sullivan*
2. MISS DOROTHY PENN.

"The Nightingale" *Arthur A. Penn*
3. MISS JOAN VINCENT—SOPRANO.
 - (a) "Ah, lo so" *Mozart*
 - (b) "Where my Caravan has rested" ... *Lahr*
4. MR. THOMAS WHITLEY—CHOR.

"Oriental" *Hamilton Harty*

6.0-6.30 p.m.

1. MR. KENNETH ELLIS—BARITONE.
 - (a) "In Old Piccadilly" } *Thos. J. Hewitt*
 - "London River" } *Thos. J. Hewitt*
 - (b) "Sanctuary" *Thos. J. Hewitt*
2. MR. WILFRID LIDDYATT—HUMORIST.

Selected
3. MISS OLIVE STURGES—SOPRANO.

Selected
4. MISS EDITH PENVILLE—SOLO FLUTE.
 - (a) "I Suite for Flute" *Roland Revell*
 - (b) "III Suite for Flute" *Roland Revell*

3.0-3.30 p.m.

1. MR. LIONEL BISHOP—TENOR.
 - (a) "Fill a glass with Golden Wine" ...
 - (b) "As you Pass by" ...
2. MR.

reached the President which had the effect of raising, still higher, the prestige of the Society. The letter is reproduced below:

St. James's Palace, S.W.
11th October, 1922

My dear Sir Henry,

I have placed your letter before the Prince of Wales, who desires me to say that he will be very pleased to become Patron of the Wireless Society of London which I note will in the near future change its title to the Radio Society of Great Britain.

Believe me,

Yours very sincerely
Lionel Halsey

Admiral of the Fleet
Sir Henry Jackson
G.C.B., K.C.V.O., F.R.S. etc.

There is no doubt that Sir Henry Jackson was chiefly responsible for this Royal recognition of the work of the Society.

For some time prior to this date the Committee had been considering a number of changes to the existing rules, including one to change the name of the Society. The reference to "London" in the title tended to restrict its scope and the word "Wireless" was considered to be out of date.

On November 22, 1922, at the 52nd General Meeting, Sir Charles Bright (one of the Vice-Presidents) proposed and E. H. Shaughnessy (another Vice-President) seconded a motion that the name of the Society be changed to "Radio Society of Great Britain". Sir Charles explained that the word "Radio" had been substituted for "Wireless" because the former word had been brought into official use. Shaughnessy recognised that it would take some time to "kill" the word "Wireless" but he agreed that "Radio" was more appropriate. By substituting "Great Britain" for "London" the scope of the Society's work would be officially extended. Affiliated bodies were urged to call themselves "societies" rather than "clubs". The motion was adopted unanimously, after which a member (Ian Davidson) suggested that "the Society should award a medal each year to be called the 'Radio Medal'—for inventive genius so as to keep this country at the top of the tree".

In addition to the proposal to change the name of the Society

various other amendments were approved and the new Constitution was published in the Year Book of the Society for 1922.

At the conclusion of this historic meeting M. B. Sleeper, who had been closely associated with the original Transatlantic tests spoke about the development of broadcasting in the United States. His address could scarcely have come at a more opportune moment as only eight days earlier the British Broadcasting Company had started a National broadcasting service from 2LO.

Although memories of World War I were fading slowly there were many thousands still suffering from its effects. One such was a young Army officer, Ian Fraser who had been blinded while serving in France. As a schoolboy at Marlborough College, Fraser had developed a flair for wireless and since his return from war service his interest had been maintained. He had already set up an experimental station at St. John's Lodge, Regent's Park, London, and was active as 5SU, but much of his time and energies were being devoted to the work of St. Dunstan's, a hostel for men and women blinded in war service. Appreciating the pleasure that wireless had already brought to him, as a sightless person, Fraser decided to ask members of the Wireless Society of London to help other blind people to build wireless apparatus. His letter to the Society was read to those present on October 25, 1922, immediately after the President had announced that The Prince of Wales was to become Patron. Sir Henry Jackson was able to tell the meeting "His Royal Highness wishes to associate himself as his first act as Patron of this Society with this appeal from St. Dunstan's".

Captain Ian Fraser joined the Society in December 1922 and in January 1928 he became President. In between those dates he played a leading role in stabilising the transmitting movement, albeit that for some time he was Chairman of the Radio Transmitters' Society—a body virtually in opposition to the RSGB. Fraser entered Parliament in 1928. Honours followed as the years went by: Honorary Colonel, Companion of Honour, Commander of the Order of the British Empire, a Knighthood. And then, in 1958, his name appeared in the first list of Life Peers created by Her Majesty, Queen Elizabeth II. Still retaining his interest in Amateur Radio, Lord Fraser of Lonsdale—as he had then become—was guest of honour at the Sixth Annual Reunion of the Radio Amateur Old Timers' Association on May 8, 1964, when he was elected an Honorary Member of the Association.

On January 1, 1923, William Henry Eccles, A.R.C.S., D.Sc., F.R.S., M.I.E.E., became President of the Society, having been a Vice President since 1913. At that time he was Professor of Electrical

Engineering and Applied Physics at the City and Guilds of London College, and Vice-Chairman of the Government-appointed Imperial Wireless Committee. He had recently been Chairman of the Wireless Section of the Institution of Electrical Engineers and was later to become President of that body. Eccles became President by chance as up to the end of November 1922, it had been anticipated that the Rt. Hon. Sir Henry Norman, Bart, P.C., M.P. (who had opened the Exhibition two months earlier) would succeed Sir Henry Jackson, but pressure of political and private business forced him to withdraw. Dr. Eccles accepted the Council's invitation at short notice.

January 24, 1923, was a busy day for those then closely associated with the Society. During the afternoon Admiral Sir Henry Jackson, and later Frank Hope-Jones, presided, in the absence of Dr. Eccles, at the Fourth Annual Conference of Affiliated Societies. At 5 o'clock Dr. Eccles delivered his Presidential Address. At 8 o'clock the Annual Dinner was held at the Waldorf Hotel, London.

The Conference was notable for a discussion on the British Wireless Relay League which had been formed a few months earlier by members of the Manchester Wireless Society. The Conference also discussed broadcasting and its effects on members of affiliated societies from the point of view of those holding transmitting and receiving licences. Attention was drawn to the difficulties under which experimental work, and especially transmitting, was being conducted as the result of the Government's decision to authorise broadcasting over a wide band of wavelengths, while restricting amateurs to a fixed wavelength of 440 metres and a band of wavelengths between 150 and 200 metres. The General Manager of the recently-formed British Broadcasting Company (John W. C. Reith—later Lord Reith) addressed the Conference on the Company's two main revenue sources—Post Office licences and royalties. Reith acknowledged that thousands of people were in possession of equipment without a licence. He spoke of the debt which the B.B.C. owed to the amateur and enquired "What are the public going to say if we suddenly shut down to give the amateur a chance?" He explained that the B.B.C. was "under an obligation to broadcast to the public throughout the stipulated time". Conference delegates had been critical of the decision of the Post Office to make a charge for all types of reception—amateur as well as broadcasting. The action of the B.B.C., in transmitting from 5 p.m. to 11 p.m. daily had also been criticised, as it prevented amateurs from using the fixed wavelength of 440 metres.

In winding up the Conference, Hope-Jones referred to the request

of the 1921 Conference for a regular series of programmes for amateurs. "We boldly asked and, greatly daring, defended the request by claiming that the amateur experimenter was such an asset that he should be encouraged by popularising the science. After losing nine months in patient negotiation we presented a Petition which produced the desired result within a fortnight. There is a saying that we English muddle through but that ultimately we do it very well. I think the Broadcasting Company are doing it very well and their organisation is of the kind which is not here today and gone tomorrow. It is perfectly true we were there first.* It is also true we were not consulted on the vexed question of wavelength, but don't let us forget that the object is the greatest good to the greatest number. We are going to see that the law is obeyed. The Radio Society of Great Britain and its 152 affiliated societies are on the side of law and order."

In the preamble to his Presidential Address delivered after the Conference ended, Dr. Eccles said "In this Society there are all types of lovers of wireless; there is the professional man, the scientific man, the commercial man, the experimentalist and the person who merely uses wireless as a recreation. There are also those who are not interested in wireless itself but in what it can give them—the 'broadcasters'. All these members are welcomed." The Presidential Address, as those which had gone before, was on a high technical plane. In the main it dealt with the problem of atmospherics and offered some suggestions for experimental investigation.

The first serious attempt to interest members in purely scientific projects resulted from a meeting held in Brussels during July 1922 when representatives of the International Scientific Radio Union (URSI) and similar bodies discussed current scientific problems. Eccles had been present when it was suggested that amateurs should be invited to co-operate with URSI in the study of atmospherics and fading.

At the Annual Dinner of the Society, held after the Presidential Address, Admiral Sir Henry Jackson presented a clock to Philip Coursey and his wife in appreciation of the work they had done in connection with the successful Transatlantic tests of December 1921. Sir Henry announced during the evening that the Committee had accepted the proposal made by Ian Davidson at a recent meeting, that a Radio Medal should be awarded annually by the Society.†

In the autumn of 1923 Dr. Eccles addressed the Society on "The Amateurs' Part in Wireless Development". The idea of an Autumn

* A reference to 440 metres.

† For some reason the proposal was never followed up.

Session Presidential Address was something new; that it was appreciated was obvious by the large attendance and interest shown in the subject. "Many of the great advances in wireless" Dr. Eccles said, "have been initiated by the amateur, and most of the early steps were taken under the stimulus and guidance of men who were neither telegraphists nor engineers but merely lovers of the infant subject. Perhaps it is in the nature of a platitude to state that before wireless became commercial all the workers in it were amateurs." Referring to broadcasting, which at that time was confined to London and a few provincial cities, Dr. Eccles commented "The idea that every large city and town may have its own broadcasting station some day is not as fantastic as would have been the suggestion in Caxton's day that some time or other every large city would have one printing press in it."

The advent of broadcasting had an immediate effect on the activities of both the Society and the affiliated societies. Those holding transmitting licences found their times of working curtailed; self-imposed rules and restrictions were introduced and negotiations were opened with the Post Office in an attempt to solve the wavelength problem. In April 1923 the Post Office suggested that amateurs should operate on 730 metres instead of 440 metres but the idea did not find favour in any quarter.

Because of various other difficulties the Postmaster General set up, early in 1923, a special Committee to consider the broadcasting situation. The President of the RSGB (Dr. Eccles) was one of the ten members of the Committee and Past President Alan Campbell Swinton appeared before the Committee as an expert witness. The Report of the Committee* made no specific reference to the problem created by amateurs transmitting on 440 metres but the time was fast approaching for the amateur to be pushed down to the "useless short waves."

Broadcasting brought into the Society an entirely new body of enthusiasts eager to begin the study of radio. To provide for this interest, the Associate Grade was reactivated during 1923 and lectures of an elementary nature were given at monthly intervals by experts such as Maurice Child, G. G. Blake, Leslie McMichael, L. F. Fogarty, Percy W. Harris and J. H. Reeves. Committee members and others lectured to the members of twenty different affiliated societies during the autumn of 1923. By the end of that year 180 societies were in affiliation.

During September 1923 the Transmitter and Relay Section of the RSGB was formed, chiefly as the result of a request made two months

* The Broadcasting Committee Report 1923. H.M.S.O.

earlier by the British Wireless Relay League to take over the management of its affairs. Later the story is told of how the transmitting movement sought to establish itself at this time.

At the Annual General Meeting that year a new Constitution was approved in principle. This provided for a measure of collective self-government by the affiliated societies, the admission of sections (such as the T and R Section), the registration of the Society under the Board of Trade and the setting up of a Council of Management on lines similar to those of the senior professional bodies. Percy Harris 2MQ—a well-known radio journalist—protested at the meeting against the peremptory manner in which members were being asked to agree in principle to the proposed changes. He pointed out that a draft of the proposed Memorandum and Articles of Association was not available to members until just before the meeting commenced. The attitude of the President, who suggested that the notice was not short as the matter “had been in the press and most of the wireless papers for the past four months”, must have been resented by far more than the four members who registered their disapproval by voting against the motion.

An innovation of the period was the formation of a Schools Radio Society (later a section of the RSGB), which owed its inception to schoolmaster and radio enthusiast John R. Hibberd 2QL.* The idea was to bring together elementary, secondary and public schools interested in radio work. The Society attracted good support initially but its life was rather short-lived. Hibberd served on the Council of the RSGB for several years to which body he made many useful contributions. By the end of 1923 the membership of the RSGB had increased to 723 and there was £483 in hand.

Dr. Eccles continued in office during 1924 but his team was somewhat different. Leslie McMichael, Honorary Secretary since 1920, decided the time had come to hand over his onerous duties to another. Philip Coursey, whose work in connection with the Transatlantic Tests had already been warmly praised, was elected in his place. Francis Fogarty, Honorary Treasurer since 1913, found pressure of business too great to continue in that office. His successor was Professor Ernest Wilson, at that time on the academic staff of London University. Among the members of the new Council were Hugh Pocock, Editor of *Wireless World and Radio Review* and a young scientist, Reginald L. Smith-Rose. Hugh Pocock had already done much to bring the Society into prominence by devoting space in *Wireless World* to Society affairs. Smith-Rose had been a member

* At the time he was Headmaster of Grayswood School, near Haslemere, Surrey.

since 1913 and had recently made his mark by lecturing to the Society on his then pet subject, radio direction finding.*

The year 1924 was marked by a series of important events which will be narrated elsewhere—sufficient for the moment to record that the era of Great Names in the history of the Society extended at least into 1925 when one of the best known scientists of all time, Sir Oliver Lodge, F.R.S.—accepted the office of President.

* Dr. R. L. Smith-Rose, C.B.E., was elected an Honorary Member of the Society in 1952 and President in 1959. At that time he was Director of Radio Research in the Department of Scientific and Industrial Research.

Growing Pains

THE early twenties form a vital chapter in the development of organised Amateur Radio and of the Radio Society of Great Britain, but the story is by no means a smooth one. Several of the storms which blew up during this period threatened to submerge the Society. These rough passages were inevitable in the changing circumstances of the period. When the Society was formed in 1913 it was concerned with the experimental aspects of a science and not an industry. The coming of broadcast entertainment radically changed the situation. Some members were still concerned with pure science and wished to create a learned society for the exchange of views; others were by now engaged in industrial development and saw in the Society the embryo of a professional body; then there were those who thought there would be a need for a society to look after the non-technical body of radio listeners; finally there were those who held to the original concept of the Society as being primarily for the advancement of Amateur Radio—transmission and reception.

Immediately after World War I, the Society's activities covered almost all phases of radio, other than commercial, marine and similar well-established communication applications. In 1922 the authorities and the Society became concerned at the interference caused by amateurs to the Croydon air traffic control station on 900 metres. The Committee drew up a list of recommendations and these were largely accepted by the authorities. Most important was the withdrawal of the 1000 metre amateur band and the substitution of a 440 metre band on which spark would be prohibited. Activity would be limited to two hours in any twenty-four but the limitation on working only five stations would be withdrawn. Although these proposals were eminently reasonable they were not popular with some of those using 1000 metres and spark. Thoughtful amateurs realised that the Society was being drawn into a difficult position; not only was it becoming identified with unpopular, if necessary, decisions which should have been made by the authorities, but it was also leaving itself open to the charge that interests, other than those

of the transmitting amateur, weighed heavily on some members of the Committee of the Society.

In October 1922 the decision was made to change the name of the Society to Radio Society of Great Britain. This greater emphasis on national rather than London interests came none too soon because two months earlier *Wireless World and Radio Review* in its issue dated August 26, 1922, had announced that Y. W. P. Evans of the Manchester Wireless Society had obtained permission from the Postmaster-General to form the British Wireless Relay League. The purpose of the League was to encourage interest in amateur transmitting and especially to provide an organisation for a further series of Transatlantic Tests. The League received the support of many leading transmitting amateurs, so much so that at a meeting held in Manchester on January 11, 1923, it was decided to ask the RSGB to arrange for the matter of the League to be included in the agenda for the Annual Conference of Affiliated Societies to be held on January 24, 1923.

The League had been greatly encouraged by the success of Burne, 2KW, and others in the December 1921 Transatlantic tests, and its officers were anxious to see that the enthusiasm was maintained. It was a scoop for them to be able to announce that Hugh Pocock, Editor of *Wireless World and Radio Review* had agreed to become Honorary Secretary. The President was Harold Green, Y. W. P. Evans became Traffic Manager and W. H. Lamb, Honorary Treasurer. The formation of the BWRL was duly discussed at the Annual Conference and met with considerable support from the delegates. The Committee of the RSGB also intimated its desire to be associated with the development of the League but several speakers pointed out that, whereas in the United States the American Radio Relay League existed for the purpose of relaying messages from point to point, work of that nature would be more restricted in Great Britain. A full account of the BWRL discussion appeared in the Report of the Annual Conference published in *The Journal of the Radio Society of Great Britain* Vol. IV, Part I (January–July 1923). Preserved in the archives of the Society are a Certificate of Membership issued on September 20, 1922, to William Edward Frederick Corsham (W. E. F. Corsham, 2UV) signed by the President and the Honorary Secretary of the BWRL and a copy of the Provisional Rules of the League.

On July 21, 1923, the League formally asked the RSGB to "take over management of its affairs by the appointment of a Committee to be selected by holders of transmitting licences". This request was considered by the RSGB who appointed Corsham 2UV, Coursey 2JK, Child 2DC and Winkler 2TF to work out the details. Their

recommendation led directly to the formation of the Transmitter and Relay Section of the RSGB.

On September 21, 1923, the President (Dr. W. H. Eccles), in a personal letter to all members, wrote:

“The British Wireless Relay League in July last became absorbed into the Radio Society of Great Britain under conditions which will ensure the continuance of its activities and give it the advantage of the financial and administrative support of the larger body. The Committee of the Society have now decided to make preparations for the organisation of an attractive programme of relay work for the winter and for this purpose have arranged to establish a special section of the Society called the ‘Transmitter and Relay Section’. The work of this Section will be guided by a Committee democratically elected from within the section and will have several grades of membership.”

After describing the various grades and subscription rates, Dr. Eccles explained that the RSGB would be liable for any excess of expenditure over income which might arise in operating the Section.

He went on to say,

“The present epoch is critical in the history of the amateur movement in this country. The advent of broadcasting and the possibility of the rapid growth in the number of broadcasting stations, each of which will require a special band in the already crowded spectrum of wavelengths, calls for a united and definite statement by the amateurs of their own claim to an adequate waveband. There is some danger at the moment that the needs of the amateur will be overlooked unless, by union, they bring to bear upon the Department of State concerned an influence equal to that of any other interest. It will be realised that if, through lack of cohesion, British experimenters are ultimately barred from the use of transmitting apparatus, the process of wireless discovery and invention in this country will be crippled and many of the honours of pioneer work in the still unexplored regions of our wonderful subject will be left to other nations.”

The objects of the T and R Section were to promote inter-communication between experimenters and assist them to improve their apparatus; to co-operate with similar organisations overseas; to investigate the quality of transmissions in various directions at different hours; to establish a collection of wavemeters and other

useful apparatus for loan within the Section. The Section and the Society would protect the principle of "Freedom for Experiment".

A first list of members of the T and R Section showed ninety-seven names, including Corsham and Whitfield—two of the four who had been successful in the 1921 Transatlantic tests. But there were notable omissions including Partridge, 2KF, Marcuse, 2NM and Simmonds, 2OD, to mention only three who were shortly to become prominent in amateur circles. The explanation was quite simple—many of the leading transmitting amateurs in the London area had decided to set up a new organisation—called the Radio Transmitters' Society—to safeguard their special interests. At the first meeting, held on July 20, 1923, at King's College in The Strand, Capt. Ian Fraser, 5SU, was elected Chairman of a Formation Committee. At the second, also held at King's College, a constitution was approved and officers elected. It was agreed that the objects of the Society should be "to secure the greatest freedom for experimental transmissions; to promote meetings and discussions; to arrange intercommunication between groups of members in the U.K. and in other countries; to assist members to obtain reasonable concessions from the Post Office; and to co-operate with other organisations having similar objects". Captain P. P. Eckersley, the man who had been behind the microphone at "Two Emma Toc", Writtle, was elected President, Ian Fraser was re-elected Chairman, Gerald Marcuse, 2NM, became Honorary Secretary and Harold Walker, 2OM, Honorary Treasurer. Committee members were Kenneth Alford, 2DX, Fred Hogg, 2SH, J. E. Nickless, 2KT, Jack Partridge, 2KF, E. J. Simmonds, 2OD, and D. Kilburn, 5VR.

At the third meeting held at the London School of Economics on October 10, 1923, Ian Fraser opened the proceedings by saying:

"At the inaugural meeting last July there was a very sharp division of opinion as to what should be the attitude of our Society with regard to the Radio Society of Great Britain. Some held that we should form no new Society at all but rather allow the RSGB to develop a Transmitters' Section; others held that we should have nothing to do with the Radio Society. Finally it was agreed that the matter should be left to the Committee and that we should start by forming an independent Society with a Committee consisting of transmitting amateurs. We have now formed this Society and, in spite of the division of feeling among our members, I suggested at one of our Committee meetings that we should have a Conference with the Committee of the RSGB. I arranged a meeting which was attended by myself, the Secretary and the Treasurer."

Captain Fraser explained that although the members of the RTS

were anxious to bring about a peaceful solution to the difficulties that had arisen, the Committee of the RSGB had decided, in view of the similarity between the objects of the RTS and the objects of the newly-formed Transmitters' Section (T and R Section), that the RSGB "did not see their way to discuss further the question of affiliation or any other means of co-operation".

The seventy-nine amateurs from the London area who attended the meeting were among the best-known in the country and they required little persuasion to vote unanimously in favour of a resolution to send a letter to the Postmaster General on matters then near to their hearts. The letter stated in clear terms that "although the RSGB has for some time represented to the Post Office views, opinions and claims of amateurs throughout the country, a number of transmitting amateurs now wish to have a Society which will represent their special interests". The hope was expressed that the Postmaster General would provide representatives of the Radio Transmitters' Society with an opportunity of discussing the position of the transmitting amateur in general and of seeing what steps could be taken to ensure the maximum of freedom for experimental work.

The first, and probably the only, printed publication of the Radio Transmitters' Society (an eight page booklet dated October 1923) contained a letter (signed by Eckersley and Fraser) to members and prospective members; a full report of the meeting held on October 10 and an account of a lecture given after that meeting by Captain H. J. Round M.C., of the Research Department, Marconi's Wireless Telegraph Company.* Round's election to Vice-President was also announced. History does not record what happened after that letter was sent to the Postmaster General but at about the time the Radio Transmitters' Society was establishing itself in London another organisation, known as the Amateur Radio Research Association, was beginning a brief existence with objects very similar to those of the RTS. The ARRA came into being as the result of a series of tests inaugurated by a group of Northern amateurs, but Jack Partridge, 2KF, of London (already associated with the RTS) became Chairman. C. G. Williams, 2JF, of Liverpool was the Traffic Manager and A. C. Davies, 2PC of Timperley, Cheshire, acted as Honorary Secretary. One positive action taken by the Association is worthy of record. Early in September 1923, Partridge† and Burne,

* Captain Round had earlier developed the "Q" valve. He died in 1966 aged 85.

† On December 8, 1923, Partridge was at the UK end of the first two-way UK-US short-wave amateur contact.

2KW (winner of earlier Transatlantic Tests) attended an interview with representatives of the Post Office and obtained their support for high power permits for the next series of Transatlantic tests. As an outcome of the interview, 100 watt permits were issued to Cash, 2GW, Williams, 2JF, Partridge, 2KF, Mayer, 2LZ, Frost, 2NA, Davies, 2PC, Hogg, 2SH, Corsham, 2UV, and Wood, 5RZ. The permits restricted transmissions to *15 minutes a night* and the fee to be charged was £3 10s. No wonder Traffic Manager Williams wrote a strong letter of protest to Wissenden of the Post Office.

The fate of the ARRA is not known but Society archives show that on October 29, 1923, it had but twenty-one members including Marcuse, 2NM (who was at the time Honorary Secretary of the Radio Transmitters' Society) and Corsham, 2UV (who was closely associated with both the T and R Section of the RSGB and the RTS).

It may have been the straight-forward comments on the dangers of rivalry and the need for unity, written by Hugh Pocock and published in *Wireless World**; it may have been the epoch-making events of November-December 1923, it may have been just plain commonsense. Whatever the reason, it is a fact that a merger took place in February 1924 between the T and R Section of the RSGB and the RTS and unity was achieved as the result of a meeting between the two organisations at which Ian Fraser presided. Marcuse (of the RTS) became the Honorary Secretary; Corsham and Alford were appointed Traffic Managers. From that time onwards the amalgamated body took the title T and R Section of the RSGB. Presumably the ARRA died a natural death because the majority of its twenty-one members soon began to make their presence felt as members of the T and R Section.

Without question the rivalry, to which Pocock had drawn attention earlier, could have led to a serious rift, but fortunately good sense prevailed immediately the greatest feat of all had been achieved. The story of how the Atlantic was first bridged by radio amateurs is a story in itself.

* August 1, 1923.

Atlantic Conquest

FROM the earliest times it has been the ambition of men of adventure to challenge and conquer the Atlantic Ocean. To Columbus it represented a challenge of seamanship and endurance; to Marconi a test of scientific and engineering skill. Radio amateurs of the New World and the Old, once they had discovered that great distances could be covered on "short waves", using home-made equipment and modest aerial systems, saw in the bridging of the Atlantic another challenge that had to be met and conquered. The Transatlantic Tests of 1921 and 1922 were stepping stones towards the ultimate goal. In December 1921 signals from United States amateur stations were heard in England and Scotland for the first time. A year later two European stations (5WS in London, 8AB in Nice) were heard at various places along the eastern seaboard of the United States, but two-way communication was still as elusive as ever. In the late summer of 1923, Kenneth B. Warner, Editor of *QST*, sent letters to Hugh Pocock, Editor of *Wireless World and Radio Review* and Philip Coursey, Honorary Secretary of the RSGB. "Our sole interest in life" he wrote "is the furtherance of the idea of two-way short-wave amateur telegraphic communication, and now that we have almost completely mastered any distance within the United States it is but natural that the thoughts of our amateurs turn to the other great English-speaking country. We confidently await the day when your amateurs and ours may communicate with each other with at least the ease and frequency with which we now work over the distance from the East Coast to the Mississippi River. It would please us to see an expanding interest in 200 metre telegraphic transmission in your country, with the use of power having a decent chance of getting over in good weather. Winter will find you with more transmitters than before, and if only your men are on the air at the same time ours are, some communication is almost inevitable. Our fellows seem to be desirous of having another go at listening for European amateurs some time late this year and our Traffic Manager (Fred Schnell) is now evolving some ideas in his mind."

Hugh Pocock followed up that letter by stressing, in an editorial,

the urgent need for British amateurs to prepare themselves to meet the challenge. "Many amateurs" he wrote "have been concentrating on improving transmission on 200 metres and it would certainly be a great score if we were successful in getting across on this wavelength."

Within a month of Warner's letter reaching England the T and R Section of the RSGB announced the first of a series of calibration test transmissions on 200 metres from G5AT, the Headquarters station of the Society; Anglo-French tests on that wavelength were announced in September 1923.

On the British side, Pocock, Marcuse and Coursey co-operated closely with Schnell, Reinartz and Warner on the American side in the preparatory work necessary for a fourth series of Transatlantic tests. Scheduled to commence on December 22, 1923, it was arranged that US amateurs would listen on ten evenings for signals from British and French stations who would transmit on alternate evenings. For the next ten days British and French amateurs would listen for signals from the United States. On January 11, 1924, two-way tests would commence.

As it so happened those carefully laid plans were virtually destroyed by the enterprise of one man—Leon Deloy, F8AB, of Nice. During the late summer of 1923 Deloy made a trip to the United States, in the course of which he attended the Annual Convention of the ARRL held, that year, in Chicago. While there he met ARRL Traffic Manager Fred Schnell (U1MO) and the experienced experimenter John Reinartz (UIQP-U1XAM). Both had played leading parts in the previous Transatlantic Tests and both were co-operating with Coursey and Pocock in England. From his talks with Reinartz and Schnell, Deloy picked up much valuable advice and before returning home he acquired a Grebe receiver as well as details of a "trick" circuit which, he was told, would "go down to about 100 metres". Up to that time all plans for achieving two-way Transatlantic communication had centred on the use of wavelengths around 200 metres. The idea of using a wavelength as low as 100 metres had certainly not been considered by European amateurs and there was no Government authority on either side of the Atlantic for the use by amateurs of wavelengths below 150 metres. Returning home to France in the early autumn of 1923, Deloy quickly applied the knowledge he had acquired in the United States by completing a new station using the "trick" circuit. Almost at once he began a series of tests with his friend E. J. Simmonds, G2OD, of Gerrards Cross, Bucks, but there is no record of the wavelength he was then using.*

* There is reason to believe that Simmonds had, at this time, obtained permission from the GPO to operate on wavelengths well below 150 metres.

It has been said of Deloy that "he lived, thought, acted and worked with one objective in mind—to work across the Atlantic".* If that was true of Deloy it was also true of Schnell and Reinartz in America and of a steadily increasing number of amateurs in Great Britain. Deloy, having satisfied himself that his equipment was in good order, cabled Schnell that he would transmit on 100 metres between 0200 and 0300 GMT November 26, 1923, but Schnell was not ready to transmit back. Unlike Deloy, who presumably did not think it necessary to obtain permission to operate on such a low wavelength,† Schnell had to seek the necessary authority from the Supervisor of Radio at Boston.

It is significant that signals from Deloy's station F8AB were heard by Schnell and Reinartz almost from the first dot he transmitted on November 26. He transmitted again the following night, having been advised by cable that he had been heard on his initial transmission. Again he was heard consistently. On November 27 Schnell obtained special permits from Boston on behalf of himself and Reinartz. Late that night (early the next morning in Europe), they were both on the air. For an hour Deloy called the United States and then sent two messages. At 0330 GMT he signed off asking for an acknowledgement. Long calls followed from IMO and IXAM and then came the eagerly awaited moment—Deloy had heard both stations clearly, Reinartz was asked to stand-by as Deloy transmitted the all important message to Schnell—"R R QRK UR SIGS QSA VY ONE FOOT FROM PHONES ON GREBE—FB OM—HEARTY CONGRATULATIONS—THIS IS FINE DAY—PSE QSL."

The Old World and the New had, at last, been brought together by means of *short-wave* Amateur Radio. News of the success provided head-lines in the National and Technical Press but when some of the experts heard that the feat had been accomplished on a wavelength of about 100 metres many eyebrows were raised and speculation was rife. How could such a contact have been accomplished on the "useless" short waves? Remember that even in advanced Amateur Radio circles, only a few weeks earlier Kenneth Warner had been thinking in terms of 150–200 metres as the best band for Transatlantic two-way communication.

The amateur fraternity, generally, was agog with excitement but in some quarters there was a feeling that Deloy—albeit with the co-operation of Schnell and Reinartz—had stolen a march on his

* Clinton B. DeSoto "Two Hundred Meters and Down".

† Some time early in 1924 it was announced that French amateurs could operate on wavelengths down to 90 metres after midnight but the date when this authority was first given did not appear in the announcement.

colleagues in Britain and France by pressing ahead with two-way tests in advance of the scheduled date (January 11, 1924). Be that as it may, the fact remains that it was Leon Deloy who made it possible for Jack Partridge, G2KF, of Merton, London, during the early morning of December 8, 1923, to effect the first UK-USA contact on short waves when he worked UIMO operated by Ken Warner at West Hartford. In his published account of this historic contact Partridge paid tribute to Deloy for bringing it about. Earlier in the evening Deloy had been in communication with Warner; Partridge who had been listening in, called Deloy and asked him to invite Warner to listen for signals from G2KF. Warner did so and contact was established for about 2½ hours. Subsequently Partridge and Warner maintained regular schedules on 100 metres for many weeks and on one or two occasions Partridge used telephony with some success.

To mark the first contacts between the United States and Great Britain a number of formal messages of greeting were handled by Warner and Schnell at UIMO and by Partridge at G2KF.

On the morning of December 11, 1923, Hiram Percy Maxim (President of the American Radio Relay League) addressed the following message (as UIMO's Number 3 to G2KF) to Senatore Marconi in London.

“American Radio Relay League presents its respects and this evidence of Dawn of International Amateur Radio.”

Six days later Marconi replied by commercial radio—

“Please accept my thanks and appreciation which I offer you and all concerned for your cordial message transmitted and received by amateur stations.”

Also on December 11 Maxim addressed the following message via UIMO and G2KF to Admiral Sir Henry Jackson in the belief that he was still the President of the RSGB.

“ARRL has great pleasure in sending RSGB greetings by direct amateur contact across Atlantic. Expect visit you in London February.”

Dr. Eccles replied on December 15 via G2KF and UIMO:

“The President and Past President of RSGB have received your greetings and join with you in tendering felicitations to the amateurs of America and of Britain now united by this triumph.”

How different this message from Marconi's cablegram which

offered no word of congratulation to the amateurs who had successfully bridged the Atlantic Ocean and who had opened up the short-waves for international communication.

Partridge recorded the story of his first contact with Warner in articles he contributed to *The Wireless World and Radio Review* dated December 27, 1923, and to *QST* dated February 1924. His transmitter was of the reversed feed-back type using a Mullard 0-150 valve. High tension was obtained from a 1500 volt Mackie generator driven by a $\frac{1}{2}$ h.p. d.c. motor. In *QST* he quoted his wavelength as having been in the vicinity of 100 metres. Recalling the moment at which two-way contact was established, Partridge wrote "At 0545 GMT on December 8 (1923) A1MO* first received G2KF and gave me the OK signal, wishing me good morning. He then opened up by saying "Some more Amateur Radio history in the making—this is the first two-way working with Great Britain. Here Warner of *QST*. QRA?" Contact was maintained until 0827 GMT when Partridge heard Warner say "Going now o.m. Very QRZ. This is the end of a wonderful night. Goodbye".

The receivers used at both ends of this historic contact were almost identical—one detector and one low frequency stage. Partridge's query about multi-valve superhet receivers was met by Warner's comment "Keep the supers". U1MO was using 400 watts input. All G2KF would say was that his "aerial current was only 1.8 amps compared with Warner's 2.5 amps".

Deloy's transmitter, also described in the February 1924 issue of *QST*, used a Hartley circuit with variable series condensers in both the aerial and counterpoise leads. Two French S.I.F. 250 watt valves were used in parallel as oscillators with high voltage 25 cycle a.c. applied to their plates. No wonder Schnell, Reinartz and Warner spoke about Deloy's "25 cycle gurgle".

On December 12, 1923, Fred Hogg, G2SH of Highgate, London, also worked U1MO to bring about the second UK-US contact on short waves. Four days later E. J. Simmonds, G2OD, of Gerrards Cross, Bucks (who had co-operated with Deloy in his earlier tests) established communication with A. W. Greig, C1BQ, of Halifax, Canada. Referring to this contact in *Two Hundred Metres and Down*, DeSoto recalled it was the first time in the world's history that "one of Britain's subjects, remote in the far-flung Empire, had spoken directly to another in the Homeland, both using only the products of their own hands and ingenuity without paying toll to the Government". Out of that first amateur contact between Great Britain and

* Partridge recorded Warner's call as A (meaning America) 1MO. Deloy recorded it as U (United States) 1MO.

Canada was to grow up the British Empire Radio Union, the BERU Contests, the Loyal Relay and Empire Broadcasting. For at least two decades members of the British Empire had acquired a new method of achieving solidarity and cementing the bonds of Empire.

Hugh Ryan, G5BV, of Wimbledon, London, was the fourth British amateur to work "across the Pond" during 1923, which he did on December 28, when he made contact with C1BQ. On the following day he worked U1XW. In terms of bare "contact", as distinct from real "working", G5BV might even have been first, because as early as December 2, 1923, he exchanged call-signs with U8AJW while transmitting on 200 metres but the two stations lost contact with one another almost at once although they confirmed reception immediately by post. During the fourth series of Transatlantic tests (December 22, 1923-January 10, 1924) signals from G5BV were heard in the United States (with code signals correct) on both 200 and 100 metres. It is interesting to note that Ryan was, without doubt, the first European to write a regular monthly article on DX work. The feature appeared in *Experimental Wireless* from November 1923 to January 1927.

Deloy's enterprise, and the quick follow-up by Partridge, Hogg, Simmonds and Ryan, largely nullified the importance of the scheduled tests but in spite of the anticlimax these went ahead according to plan. Philip Coursey's published account of the tests was full of statistics but lacked many important facts. The report showed that nineteen British,* fourteen French and three Dutch stations had been heard by 100 United States and Canadian stations but there was no reference to the wavelengths used by the British operators although it must be assumed that some of the work was done on wavelengths around 200 metres and some on wavelengths around 100 metres. The report contained a brief reference to messages which had been received "via G2KF and other British stations using shorter wavelengths in the neighbourhood of 100 metres" but there was no comment about the special short-wave permits which had been issued by the Post Office or to the power used by the British stations heard on the American continent.

It must have required a good deal of imagination on the part of the Committee to claim, as they did in their Annual Report for 1924, that "In December 1923 during the Transatlantic tests organised by

* The call signs of the British stations heard in the USA or Canada during the tests were G2FN, 2FQ, 2FW, 2IN, 2KF, 2KL, 2KO, 2LO (using code), 2NM, 2OD, 2SH, 2SZ, 5AT, 5OV, 5LC, 5PU, 6NI, 6XX, 6YA. None of these call signs is now held by a participant in the tests, but Hugh Ryan was still licensed as G5BV in 1967.

the T and R Section a large percentage of the membership were successful in transmitting across the Atlantic Ocean on a wavelength of 200 metres and also of establishing two-way communication with American and Canadian amateurs on 100 metres". Certainly no evidence exists to show that *any* British amateur station made two-way contact with the United States or Canada on 200 metres during the December 1923 tests or that "a large percentage of the membership" (presumably of the T and R Section) made contact with the United States or Canada on any band at any time. In fact up to the end of January 1924 only thirteen European amateurs, all told, had worked across the Atlantic.

Under pressure from Partridge and possibly others, the British Post Office eventually agreed to grant special permits for the Transatlantic tests but as these were hedged in with so many restrictions it is doubtful whether more than a handful were issued. Power was limited to 250 watts and operation confined to the band 150-200 metres. Transmission was permitted only between the hours of 0100 and 0700 GMT and then for not more than fifteen minutes any night. For these "privileges" the Post Office demanded a fee of £3 10s. to cover the period from December 1, 1923, to April 30, 1924. No wonder men of independent spirit—Maurice Child was an example—resisted such an imposition. No wonder too that many others did not even bother to apply for the permits.* There is evidence that some of the Transatlantic permits were amended to authorise operation between *200 and 90 metres*. As an example the permit issued to Gerald Marcuse, G2NM, on December 21, 1923 (two weeks after Partridge got across for the first time) was endorsed in manuscript—the figure "90" being initialled by J. W. Wissenden of the G.P.O.

By a strange quirk, while all this was happening Frank J. Brown, C.B. (Assistant Secretary of the Post Office) wrote a letter, dated "December 1923", to the Chairman of the Radio Transmitters' Society (Ian Fraser), putting forward new proposals for the normal amateur licence. Up to that time spark, i.c.w., c.w., and telephony had been permitted in the band 150-200 metres, c.w. and telephony on 1000 metres. Brown proposed that the use of spark by amateurs be prohibited on all wavelengths on the ground that it caused the maximum amount of interference; that the use of 440 metres be allowed at any time except between 5 p.m. and 11 p.m. on weekdays and during broadcasting hours on Sundays; that transmission on a new band between 200 and 230 metres be allowed between 6 p.m. and

* Maurice Child was offered a 500 watt permit on payment of £4 10s. but operation was confined to 150-200 metres. He declined the offer.

midnight on the understanding that its use would be discontinued during military manoeuvres and that the use of *wavelengths between 20 and 40 metres* (i.c.w., c.w. and telephony) be allowed for genuine research work. Permission to use 1600 metres (c.w. only) would be given only in very exceptional cases. Brown concluded his letter by asking Ian Fraser to let him have the views of the Radio Transmitters' Society as soon as possible. If a similar enquiry was sent to the RSGB at that particular time no reference was made to it either at the first meeting in 1924 or in the Annual Report of that year. What reply was sent to Brown no one now knows but it is a fact that less than a month after the letter was received by Fraser the GPO began to determine existing transmitting permits and to issue new ones. Transmission was now permitted between 150 and 200 metres as well as on 440 metres, the latter wavelength having been substituted for 1000 metres to avoid interference with aircraft communications. Spark was prohibited and a warning given that the use of the 440 metre wavelength would probably have to be restricted to avoid interference with broadcasting. The previous irksome restrictions which limited the number of communicating stations to five and the times of sending were relaxed.

The proposal made by Frank Brown that the use of the fixed wavelength of 1600 metres should be allowed in very exceptional cases was, in fact, carried into effect, because on January 3, 1924, E. A. Hanley was informed that "the Postmaster General is prepared to authorise you and your son* to use for a period of six months from this date a fixed wave of 1600 metres (pure c.w.)". Similar authority was given to R. H. Kidd, G2GG, who was collaborating with the Hanley's.

The year that followed was one of the most exciting in the history of Amateur Radio. New countries were worked with unflinching regularity but, for the British amateur, yet another restriction had been introduced. The new permits—which removed certain restrictions—only authorised inter-United Kingdom working except by special permission of the Postmaster General and then only with stations in Western Europe which were co-operating in tests. Those restrictions were eventually removed but not until after a tough fight with officialdom. If that fight had failed there would have been no International Amateur Radio and no International Amateur Radio Union.

* D. A. Hanley, G2RY.

International Amateur Radio

WHEN the President of the American Radio Relay League—Hiram Percy Maxim—sent greetings to his counterpart in the Radio Society of Great Britain on December 11, 1923, by “direct amateur contact across the Atlantic” he concluded his message with the words “Expect visit you in London February”. Before Maxim left for Europe he was asked by his colleagues on the Board of Directors to represent the League in any efforts he might make to encourage international Amateur Radio relations. The Board believed there was need for a body in which the League, representing American and Canadian amateurs, could join with other National Amateur Radio societies “in a common effort to promote and co-ordinate communication between amateurs the world over, to represent their interests at international communication conferences and to encourage international fraternisation”.

In the United Kingdom the stage was set for Maxim’s visit to Europe by Hugh Pocock who wrote in the issue of *Wireless World and Radio Review* dated February 27, 1924:

“During the past year, and especially during the last few months, amateurs almost all over the world have been in communication over very long distances. International communication between amateurs, almost unheard of a year ago, is now an everyday event.”

Pocock thought it fitting that the ARRL should take the first steps towards promoting some form of machinery which would help to develop international Amateur Radio work. He therefore welcomed the opportunity provided by Maxim’s visit.

Although Warner and Marcuse had been in regular communication by radio and by correspondence it was to Paris and not to London that Maxim turned his steps on arrival in Europe and it was with a group of French amateurs and scientists that arrangements were made for the convening of a meeting to discuss the ideas Maxim and the ARRL had in mind. Maxim went to Europe on business but it is a little difficult at this stage to explain why (as he came to London later) he did not ask the RSGB to make arrangements for the Conference. Possibly Paris was regarded as a better centre. Whatever the

reason, the fact remains that Maxim or Warner contacted Dr. Pierre C rret, Chairman of the French Inter-Societies Committee, an organisation composed of delegates from three French societies, "Les Amis de la T.S.F.", "Le Radio Club de France" and "Soci t  Franais d'Etudes de T.S.F.", who extended an invitation to all then known national Amateur Radio societies. The national societies or groups represented at the meetings in Paris, were those of Belgium, France, Italy, Luxembourg, Spain, Switzerland, the United Kingdom and the United States. The Danish Society sent a message expressing interest. The RSGB was represented by Gerald Marcuse, G2NM, who, at that time, was Honorary Secretary of the T and R Section.

Maxim was formally welcomed at a dinner given in his honour on March 12, 1924, at the Hotel Lutetia, Paris. In an after-dinner speech he reiterated the views of the ARRL Board of Directors and expressed the hope that during his visit to Paris some form of international organisation would be formed. It was, however, left to the Comte du Waru to propose that action be taken immediately rather than putting it off until an indefinite time in the future. The proposal was accepted and a Provisional Committee appointed to make arrangements for the setting-up of a permanent organisation. Two days later, on March 14, 1924, at a formal meeting of delegates held at the Hotel du Louvre, Maxim was elected President and C rret, Secretary. It was there and then decided to call the new organisation "The International Amateur Radio Union" and to ask the Provisional Committee to arrange a Congress in Paris during Easter 1925. In the meantime the ARRL would submit a draft Constitution to the members of the Committee.

Hiram Maxim came to London on Monday, March 17, 1924 when he was the guest of the Council of the RSGB at a complimentary dinner in the Mayflower Room of the Hotel Victoria, London. Those who signed one menu card,* in addition to Maxim, were Dr. W. H. Eccles (President of the RSGB), Brigadier-General Sir Capel Holden, Commander B. Hippisley, Commander F. G. Loring, L. F. Fogarty, (all Vice-Presidents), Gerald Marcuse, G2NM, Fred Hogg, G2SH, E. J. Simmonds, G2OD, Ralph Royle, G2WJ (all members of the T and R Section), Philip Coursey (Honorary Secretary), J. F. Stanley, J. H. Reeves and Hugh Pocock (Council or Committee Members).

Maxim's visit to Europe poses several interesting questions. Why did he not carry out his initial negotiations for the creation of an international Amateur Radio organisation with his English speaking colleagues in the RSGB instead of with a group of French scientists

* That of E. T. Manley, G2FU.

whose names were not known in either the British or American Amateur Radio press? Why was the Silver Jubilee of the IARU celebrated in Paris during May 1950—twenty-six years after it was formed on March 14, 1924? Why was no reference made to Gerald Marcuse in the Annual Report of the RSGB Council for 1924 who, at his own expense represented the Society at the Paris meeting on March 12, 1924?

It was purely coincidental, but during the week Maxim was in London, *Wireless World and Radio Review* published a lengthy article contributed by Philip Coursey (Honorary Secretary of the RSGB) on the subject of International Amateur Radio Call-Signs. Prior to the 1923-24 Transatlantic achievements various proposals to bring about the revision of call signs had been circulated, including one by Leon Deloy, who suggested that amateurs should prefix their calls by a letter indicating the country of origin. Coursey's article was, in effect, an announcement that the Post Office had approved a list of prefixes on the lines of the Deloy proposal. An extract from this list is given in Table II.

TABLE II

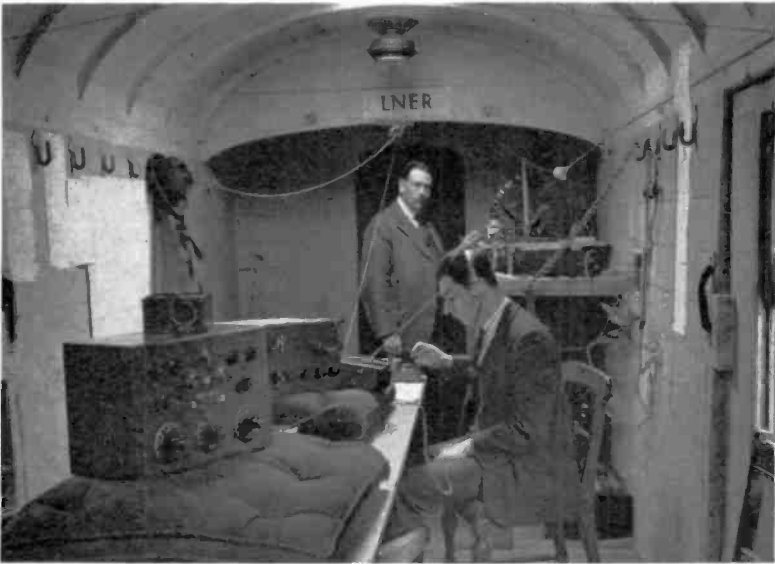
<i>Prefix Letters</i>	<i>Country</i>
EA	Spain
F	France
G	Great Britain
HB	Switzerland
I	Italy
KB	Germany
LA	Norway
N	U.S.A.
ON	Belgium
OU	Denmark
PA	The Netherlands
SA	Sweden

Unfortunately the ARRL had adopted a different system which led, at the time, to great confusion. In the League's system prefixes took the place of the separation sign "de" (from) e.g.

2KF GU 1MO

In the British system each call was prefaced appropriately and the "de" sign used to separate the call-signs, e.g.

G2KF de N1MO



Radio coach 6ZZ left King's Cross station on July 5, 1924, attached to the 7.38 p.m. Scottish express of the (then) London and North Eastern Railway. The occasion was an experiment carried out by members of the Radio Society of Great Britain to test the practicability of maintaining radio communication between a train travelling at high speed and fixed stations along the route using amateur equipment. In this picture Maurice Child is at the key and Leslie McMichael is adjusting the transmitter which operated on 182.5 metres. Two-way contact was established with 2WD (Bedford), 5DR (Sheffield), 2DR (Shipley) and 5MO (Newcastle-on-Tyne).



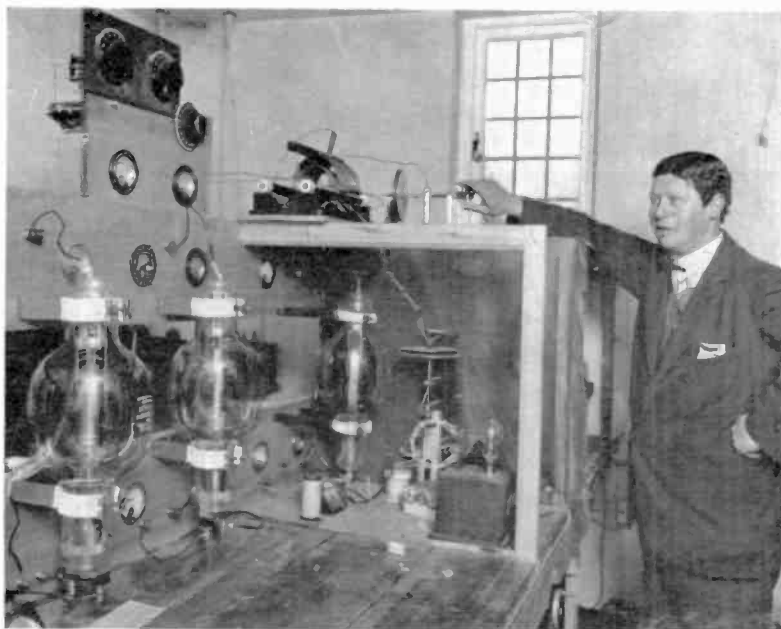
During the period of the "Great Names" the Annual Dinner of the Society was held at the Waldorf Hotel, London. In this picture taken on March 4, 1925, the President (Sir Oliver Lodge, in front row) has Dr. W. H. Eccles (President 1923-24) on the left and Admiral of the Fleet, Sir Henry Jackson (President 1922) and A. A. Campbell Swinton (President 1913-20) on the right.



The International Amateur Radio Union was formed in April 1925 at a meeting in Paris of delegates from a number of Amateur Radio societies. In this picture at the Inaugural session Hiram Percy Maxim and Kenneth B. Warner (President and Secretary of the American Radio Relay League) are seated second and third to the right of the speaker. Leon Deloy, F8AB (who, with Fred Schnell, U1MO, made the first two-way contact between Europe and the United States of America in November 1923) is seated second to the left of the speaker (M. Belin of France).



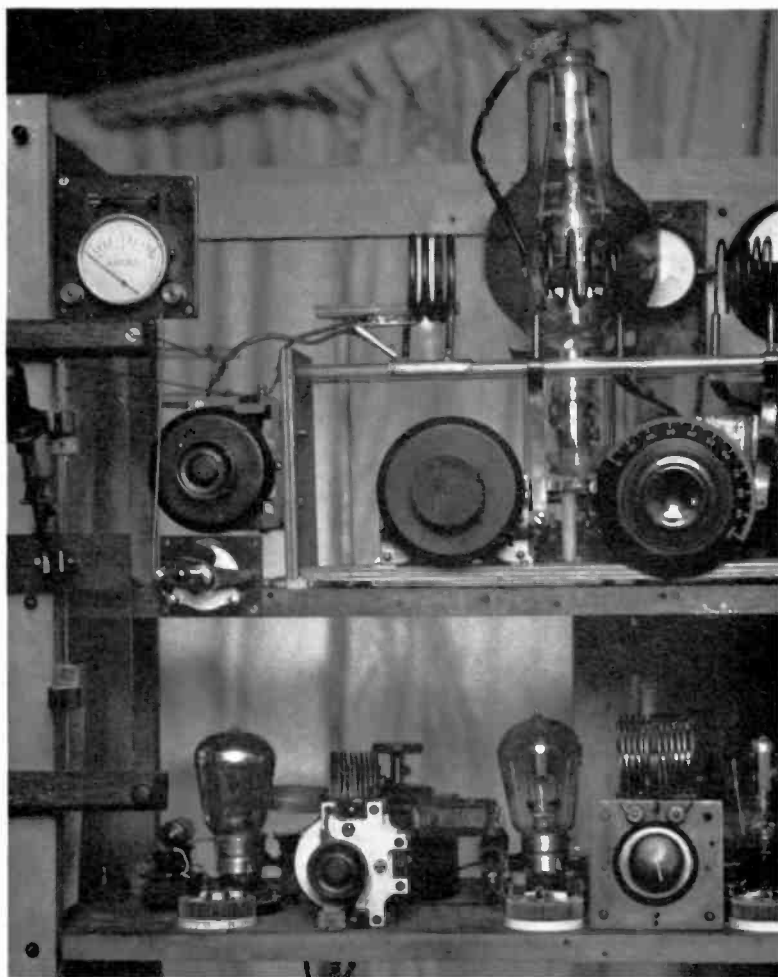
At a Conference held in Paris during May 1950 to mark the 25th anniversary of the formation of the International Amateur Radio Union it was decided to establish a Region I organization to safeguard the particular interests of radio amateurs in Europe and Africa. W. A. Scarr, G2WS, President of the RSGB, was elected Chairman of the Conference; President of Honour was Prince Louis de Broglie (front row, respectively 6th and 7th), Past Presidents G6LJ and G2NM were 2nd and 3rd in the front row. PA0DD, SM5ZD, G6CL, G2IG (2nd, 5th, 6th, 7th, second row), G6CJ and G2MI (2nd and 8th, third row) all contributed to the work of Region I Division during the years that followed the Conference.



Gerald Marcuse, G2NM, with some of the equipment he used for broadcasts to the British Empire, the first of which took place on September 1, 1927.



Artists and others associated with the first concert broadcast on short waves to the British Empire, from the station of Gerald Marcuse, G2NM, Caterham, Surrey, at a rehearsal in the Petty France Studios of the Columbia Gramophone Company. Sir Granville Ryrie (High Commissioner for Australia) and Capt. (now Lord) Ian Fraser, G5SU (President of the RSGB) are seated left and right respectively of the microphone. Gerald Marcuse, G2NM, is seated second from the left.



The ten metre (28 Mc/s) transmitter used by E. D. Simmonds, G2OD, in February 1929. The output stage used an OSRAM SW 250; LS5B's were used as frequency doublers from a crystal oscillator stage operating in the 80 metre (3.5 Mc/s) band. G2OD was one of the first U.K. stations to contact the United States on 10 metres.

Coursey concluded his article by saying that he hoped the question of amateur call-signs and similar matters of an international character would soon be placed on a permanent basis and be mutually agreed by all the amateur societies in the world.

Between the time Deloy and Partridge (in collaboration with Schnell and Reinartz) made Amateur Radio history, up to Easter 1925 when the International Amateur Radio Union Congress was held in Paris many outstanding DX achievements were recorded. The record of just one man—Ernest John Simmonds, G2OD, of Gerrards Cross, Bucks, is an example of what was done during that period. On December 16, 1923, as has been recorded earlier, he made the first two-way contact between England and Canada on 116 metres. On October 16, 1924, his signals were the first from Europe to be heard in the Antipodes on short waves. A month later on November 13, he became the first Englishman to contact an Australian (3BQ) on short waves. Early in January 1925 he was the first UK amateur to make two-way contact with Mexico when he worked 1B and in March of that year he was the first to transmit intelligible speech on short waves to New Zealand.

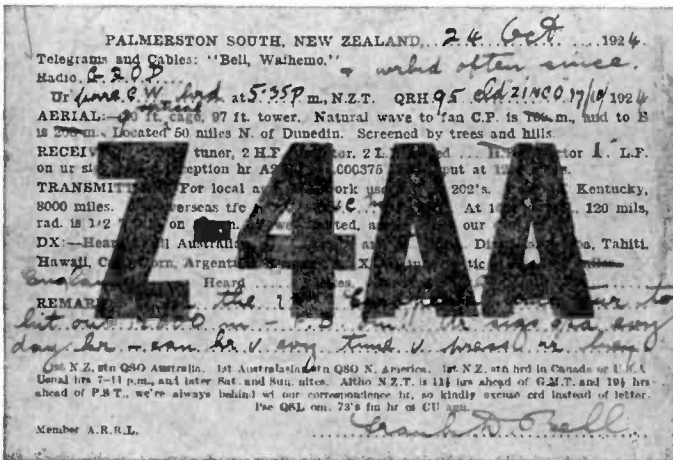
Cecil Goyder, a former pupil of Mill Hill School in North-West London,* using the school's transmitter (G2SZ) made the first two-way contact with New Zealand (Frank Bell, ZL4AA) on October 19, 1924—one day in advance of Simmonds, but Simmonds had been heard by Bell on October 16. In a reference to his work with Bell, published in the 21st Birthday issue of the *T and R Bulletin* (July 1934) Simmonds wrote:

“On October 17, 1924, a cable was received from Mr. Frank Bell of Weihemo, New Zealand, who reported that he had picked up the signals transmitted from G2OD on October 16, complete with the code word ‘Zinco’. The wavelength used was 95 metres and G2OD was thus the first European short-wave station to be heard in the Antipodes. The result of this experiment was far reaching and outstanding, for radio engineers and physicists were unable to explain this phenomena, as it had always been accepted that short waves were suitable for communication over comparatively short distances. It, therefore, became necessary carefully to examine these experiments and formulate fresh theories to account for the results; commercial interests quickly realised the possibilities which would result from the development of low power short wave stations for long distance communication.”

* Goyder was a student at the City and Guilds of London College at the time and his visit to Mill Hill School on October 19, 1924 was the first he had made for some months.

Bell's QSL card, reproduced below, confirmed reception of the code word *Zinco* and stated "Ur the 1st European amateur to hit out 12,000 miles. Ur sigs QSA evy day hr—can hr u evy time u press ur key".

The fact that young Goyder preceded Simmonds by making the first two-way contact between England and New Zealand bore heavily with G2OD for without doubt Simmonds was head and shoulders above most of his contemporaries in the zeal and assiduity with which he pursued his hobby. His standard of workmanship was of the very highest order and his death in 1942 at a fairly early age deprived the Amateur Radio movement of one of its most erudite scholars. An indication of the high esteem in which he was held can



be gathered from his own modest statement that in the late autumn of 1923 (before the Transatlantic successes of Deloy and Partridge) he was granted special facilities by the General Post Office to transmit telephony on certain exclusive wavelengths for experimental purposes. At the time the "exclusive wavelengths" were not generally known but they were, in fact, well below 100 metres. Even at that early date Simmonds had hit on the theory that very great distances could be spanned if the wavelengths used were altered to suit the time of day. His theory was proved when on May 2, 1925, he made two-way contact on 23 metres in daylight with Charles D. MacLurcan, A2CM, at Stretfield, New South Wales. This achievement was repeated regularly for several days, and during the second contact a message from the Prime Minister of Australia was sent to

the British Prime Minister, which read: "On occasion of this achievement Australia sends greetings." The QSL card reproduced below confirms the contact of May 4, 1925.

In February 1925 Gerald Marcuse, G2NM, worked SAWJS the base station of the Hamilton-Rice Expedition at Boa Vista on the Rio Branca in Brazil. Messages were passed from the Expedition to the Royal Geographical Society in London and the RGS in its turn asked Marcuse to relay information back to the expedition. At this time the expedition was exploring the Amazon.

After protracted correspondence, the Post Office, in a letter dated April 2, 1925, informed Marcuse they had "agreed with considerable reluctance" to allow the use of the fixed waves of 23 metres and 45 metres during the additional period of 4 p.m. to 6.30 p.m.



GMT on any day for the sending of signals in connection with trans-Oceanic tests. "Such use", Marcuse was informed "must, however, be restricted to a selected few—not, we think, exceeding twelve in the case of your tests—and we must, of course, reserve the right to grant similar facilities to other experimenters engaged in independent experiments." Marcuse was asked to let the Post Office have "the names of the selected few" as early as possible.

Marcuse's own permit, covering the period from April to October 1925, authorised him to use an input power not exceeding one kilowatt on 23 metres (fixed), 45 metres (fixed), and from 90 to 200 metres. Permission to use 23 and 45 metres was granted on the understanding that it could be withdrawn at short notice if such a course appeared to be necessary. Transmission was confined to the

periods midnight to 8 a.m. (any day), 6.30 p.m.—7 p.m. (Wednesdays and Saturdays only), 2 p.m.—3 p.m. and 7 p.m.—7.30 p.m. (Sundays only). The 4 p.m.—6.30 p.m. concession applied only to 23 and 45 metres but, and here was the rub, *the total transmission time was not to occupy more than thirty minutes during any consecutive period of twenty-four hours*. There were other restrictions which prohibited transmissions between 2 p.m.—3 p.m. (except on 23 and 45 metres), 6.30 p.m.—7 p.m. and 7 p.m.—7.30 p.m. when broadcasting was taking place. Permit holders were told that "In calling up a station in the United States, Canada, Mexico, Australia, South Africa, India or Egypt the letters N, CJ, CY, VH, VN, VT and SU respectively must be used to prefix the station call".

Looking back, it is a wonder that any worth-while work was done under such conditions but the British radio amateur, like the enthusiastic amateur in other spheres of activity, has become accustomed to bureaucratic control and has managed somehow to overcome the difficulties.

While the ink was still drying on Marcuse's permit he, with thirty-eight other British radio amateurs, was on his way to Paris to attend the first Congress of the International Amateur Radio Union. When the Congress was convened during the afternoon of April 14, 1925, it immediately became apparent that the 250 delegates in attendance were divided into two groups with widely divergent interests. On the one hand there was the august body of French savants formally convened as the International Radio Legal Committee. The other group consisted of genuine radio amateurs. The first joint session was welcomed by M. Edouard Belin, President of the Radio Club of France and by General Ferrié (a Vice-President of the RSGB). There the amateur group separated itself from the legal body and thereafter the two bodies met separately.

The Amateur Radio Congress began with the election of M. Belin as President, Maxim and Marcuse as Vice-Presidents, Beavais and Warner as Secretaries. Committees were appointed to consider five specific subjects:

1. The formation of the International Amateur Radio Union.
2. International amateur tests.
3. Wavebands for international work.
4. An international auxiliary language for amateur work.
5. The use of intermediate letters in amateur calls to indicate the country of origin.

The RSGB was represented on the various Committees by Ralph Royle, G2WJ, Hugh Ryan, G5BV (amateur tests), Harold Bailey,

G2UF, Fred Hogg, G2SH (wavebands) Stanley Lewer, G6LJ (call-signs). P. K. Turner of *Experimental Wireless* represented the U.K. point of view on the Committee dealing with auxiliary languages.

The British party, led by Gerald Marcuse, G2NM, included some of the best-known names in contemporary Amateur Radio within the British Isles. Among those who signed the register were, in addition to those already mentioned: Philip Coursey, Norman Edwards (Editor, *Popular Wireless*), Fred Mayer, G2LZ, Ernest Dawson Ostermeyer, G5AR, Hugh Pocock (Editor, *Wireless World and Radio Review*) Marcus Samuel, G5HS, E. J. Simmonds, G2OD.

Maxim and Warner represented the ARRL, Major William Borrett, (C2DD) represented Canada and Loyal S. Reid (C8AR), the oldest Dominion—Newfoundland. Representatives were also present from Argentina, Austria, Belgium, Brazil, Czechoslovakia, Denmark, France, Germany, Italy, Japan, Luxembourg, Norway, the Netherlands, Poland, Portugal, Roumania, Russia, Siam, Spain, Sweden, Switzerland, Uruguay and Yugoslavia, although many of them were no more than junior consular officials resident in Paris who had been appointed to hold a watching brief.

The most important work of the Conference centred around the Committee set up to consider the formation of the IARU. More than fifty delegates, with at least one from every country represented, served on the committee, which had Maxim as Chairman and Jean Mezger, F8GO, as Secretary. According to Clinton DeSoto, who describes the Paris meeting in some detail in *Two Hundred Metres and Down*, not all the delegates present contemplated the foundation of an organisation of two-way telegraphy amateurs but this the responsible leaders had determined and this it became. By its second meeting the Committee had unanimously agreed there was to be a Union, that it should have as its chief purpose the co-ordination and fostering of international two-way amateur communication, and it should be an organisation by individual memberships until strong National societies had been formed in the principal nations when a federation would be feasible. Its headquarters would be located at West Hartford, the home of the ARRL. Following these decisions a constitution was written through a day and night session with several delegates working until early morning preparing translations and copies. By the morning of April 17 every delegate had a copy and discussions began. By the afternoon of that day it had been examined section by section and later in the evening it was approved by the entire Congress.

The next business was the election of officers. Hiram Percy Maxim, UIAW, became International President, Gerald Marcuse, G2NM,

International Vice-President, Jean G. Mezger, F8GO, and Frank Bell, Z4AA, councillors-at-large, and Kenneth B. Warner, U1BHW, International Secretary-Treasurer. The Constitution provided that membership of the Union should be open to any person seriously interested in Amateur Radio work and that in countries in which there were twenty-five or more members a national section would be formed, each with its own officers.*

The committee dealing with international tests made only general recommendations, leaving each country to submit its own proposals to IARU Headquarters but the one concerned with wavebands produced a table of specific proposals as set out below.

<i>Country</i>	<i>Normal Wavebands</i>	<i>Extra Short Waveband</i>
Canada & Newfoundland	120-115	43-41.5
Europe	115-95 } 75-70	47-43
USA	85-75	41.5-37.3
Rest of World	95-85	37.3-35

Amateurs would be recommended to use wavelengths other than those in the table for short-distance communication.

Esperanto was recommended as a standard auxiliary language for telephony work, for translations from periodicals and for use at Congresses, but the Scandinavian group held out strongly for English claiming it to be the easiest to learn. The committee on call-signs, motivated by pressure from Warner and Maxim, recommended the adoption of the system which would replace the "de" sign by distinguishing letters. They also recommended that the numerals used to form call-signs should conform to a pattern, e.g. 1 for Italy, 8 for France, etc. This pattern was, in fact, followed by most of the European administrations until an increase in the number of licence holders made it necessary to assign additional numerals.

During the course of the Congress the Russian delegate announced that although he represented "several thousands of amateurs" he was not authorised to vote on any of the questions. He hoped that at

* For several years the Union flourished under this plan but by 1928 it became apparent that a change was necessary. From that time onwards IARU has been a Union of National Member Societies, with the American Radio Relay League acting as Headquarters Society.

future Congresses the Russian organisation would be counted as one of the branches (sections).*

After the Paris Congress had completed its work, Maxim, Warner, Borrett and Reid were entertained at the Waldorf Hotel, London, by a group of RSGB members. Among those who attended were: Ian Fraser, G5SU, Gerald Marcuse, G2NM, H. Bevan Swift, G2TI, Alfred D. Gay, G6NF, E. D. Simmonds, G2OD, W. K. Alford, G2DX, F. L. Hogg, G2SH, W. J. Crampton, G2KV, L. F. Fogarty, Marcus Samuel, G5HS, G. G. Blake, G2JM, Maurice Child, G2DC, F. Townsend, G2TO, W. Batement, G6TM and Hugh Pocock.

The 1925 Congress poses at least one major question—why did the Provisional Committee become involved with the International Radio Legal Committee? Was it a matter of prestige or of accommodation? Was the influence of M. Belin greater than the influence of Sir Oliver Lodge who was President of the RSGB in the year 1925?

* It was not until 1963 that the Radio Sport Federation of the USSR applied for and was elected to membership of the IARU.

Birth of the Bulletin

NO one could have brought greater distinction and dignity to the young Society than did that great scientist Sir Oliver Lodge when in 1925 he accepted the office of President. True he was but a name to the majority of the humble experimenters who made up the bulk of the membership and for many, his Presidential Address on "The Radiation of Matter" must have been a source more of wonderment and mystery than of enlightenment.

Nevertheless, the recognition of the Society by one of the greatest scientists of all time, gave a prestige and standing which one hopes will illuminate the history of the RSGB for ever.

Up to the end of 1924 *Wireless World and Radio Review* was the official Journal of the Radio Society of Great Britain, having fulfilled that task with enthusiasm from the days immediately after World War I. No history of the Society would, therefore, be complete without acknowledgement being paid to the important part played by the publishers, editor and staff of that magazine in helping forward the work of the Society during those momentous years. In December 1924 as the result of a change in the proprietorship of *Wireless World and Radio Review* another magazine of established merit, but somewhat more technical, *Experimental Wireless and the Wireless Engineer* became the Official Journal of the Society. The arrangement was however short-lived, because during the summer of 1925 the Committee of the T and R Section decided the time had come to produce a monthly publication which would be devoted exclusively to the interests of the transmitting amateur and which would circulate only amongst the members of that Section.

The first issue of the *T and R Bulletin* appeared in July 1925, having been edited by J. A. J. Cooper, G5TR (recently appointed Honorary Secretary of the T and R Section), but chief credit for the launching of this new venture—the first of many by the Society into the realms of publishing—must go to Henry Bevan Swift, G2TI, at that time Chairman of the T and R Section. Bevan Swift was a chartered electrical engineer whose interest in wireless dated back to the years before the war. He had been an early member of the Society and an

ardent experimenter. In his long association with the Society he held, at different times, every office, culminating in a wise and earnest Presidency (1931–33), but in the year 1925, and previously, he had done much to steer the newly-formed T and R Section along a path chosen to avoid friction with the parent body. Being older than most of the members of the Section his advice was sought after at every turn and almost always accepted. Under his skilful direction the *Bulletin* was born, although it had not been an easy matter to persuade the Council of the RSGB of the seriousness of the venture. Bevan Swift, with the backing of Gerald Marcuse, virtually guaranteed the financial side of the venture. Neither Bevan Swift nor Cooper had had previous experience of editorial work but from the first issue they struck the right note with the slogan “Written by and for the radio amateur”. The third member of the original editorial team—Ralph Royle, G2WJ, was an expert in the art of block making. His own and his firm’s* association with the Society has been a happy one from that time until the present day. Ralph Royle was one of the first to work across the Atlantic during the winter of 1923–4 and his station was as well known then as it was more than forty years later.

Writing in the first issue the editor had this to say:

“The *T and R Bulletin* is a new departure of the Section, mainly with the object of keeping those members who are unable to attend meetings in touch with the work carried on. It also has the object of informing members of programmes of transmissions, tests and results. It makes no attempt to pose as a commercial radio journal but to meet a want which is not met by any of the present publications, very few of which are able to do much for the transmitter on account of the far greater number of receiving interests. The success or otherwise of *The Bulletin* is entirely dependent upon the support it will receive from the members of the Section.”

Any doubts Cooper, Swift and Royle may have had in the summer of 1925 as to whether their venture would be favourably received, were instantly dispelled. They did not know it at the time but the publication for which they were responsible undoubtedly ranks as one of most important developments in the history of the Society.

Contributors to the first issue were E. J. Simmonds, G2OD, who described a circuit for the reception of 20 metre signals and Royle, who described and illustrated his 23 and 45 metre breadboard transmitter using the reversed feed-back type of circuit and a Mullard 0–150 valve. Another early amateur, Fred Mayer, G2LZ, contributed an account of the experimental work he had recently

* W. R. Royle & Sons, Government Printers.

carried out with Captain Durrant and others stationed with the Royal Air Force in Mosul, Iraq. The first "Letter to the Editor" came from an illustrious Past President, Admiral of the Fleet, Sir Henry Jackson who, as Chairman of the Radio Research Board, invited amateurs to assist in the extensive programme of research currently being conducted by the Board into the propagation of short waves with special reference to the part played by the upper atmosphere. Gerald Marcuse described the events which led up to the formation of the International Amateur Radio Union and the decisions reached on April 17, 1925 when the Union had been established in Paris.* The first list of Calls Heard was contributed by Ralph Royle, G2WJ, who reported logging more than fifty US stations on 45 metres and twenty-five on 23 metres.

The second issue of the *Bulletin*—"The Bull" as it then became and has been so described ever since—carried much eulogistic comment from enthusiastic readers of Vol. 1, Number 1. For example, G2OD—"a splendid effort and should do much to consolidate the Section"—G6LJ—"you have given us the exact style we want". G6OH—"a great start in the right direction".

A good start it had been and without doubt the decision to launch the *Bulletin* had been a wise one.

The leader page of the third (September–October 1925) issue carried a "Letter to the Editor" signed by Gerald Marcuse, G2NM, in his capacity as Honorary Secretary of the T and R Section, headed "Post Office concessions" and read:

"For some time past I have endured considerable difficulties with the Post Office owing to the fact that many members are not acting in compliance with the terms of their licences. Some of these members are now receiving gentle reminders from the PMG that they are not adhering to certain clauses. I would like to warn all members that it is up to them to play the game, otherwise all the concessions which we have so hardly won will be lost. I have suggested to the PMG that the new licences to be issued on October 15, 1925, for Trans-oceanic tests, the schedules for which the British Section of the IARU is arranging, shall be extended.

"It was proposed that the following wavebands be allotted for use for ten minutes any hour of the day and after 2300 GMT for fifteen minute periods:

Fixed 23 metres Inclusive 44–50 Metres

* The British Section had been formed at the Dinner held in London on April 24, 1925, when Maxim, Warner, and others who had attended the Paris Conference were entertained by the British delegates. E. J. Simmonds, G2OD, became the first National President of the British Section.

“This gives us two hours in the twenty-four instead of half an hour in the twenty-four. Power asked for is up to one kilowatt to be used any time during these periods. I have good reason to believe these permits will be granted from October 15, 1925, for a period of six months. This will be a decisive step forward in favour of the British amateur transmitter and I think that it will be appreciated.”

Members were asked to make application for a Transoceanic permit *via* the T and R Section, which virtually became the sole avenue to these permits.

The final outcome was that Marcuse and a few others obtained permission to use power inputs up to one kilowatt on the fixed waveband of 23 metres and on any wavelength in the band 44 to 46 metres with 90 to 200 metres thrown in for good measure. Many others were limited to 250 watts but the majority had to be content with 10 watts. Corsham, G2UV, for example, who was one of the pioneers of the Transatlantic tests, had a permit for only 10 watts. Transmission on weekdays on the band between 90 and 200 metres was restricted to the period between 2300 GMT and 0800 GMT. The total period of transmission on all or any of the authorised bands was not to exceed two hours during any consecutive period of twenty-four hours or ten minutes in any one hour between 0800 GMT and 2300 GMT or fifteen minutes in any one hour between 2300 GMT and 0800 GMT the next day. So, although Marcuse had achieved a good deal since the first Transatlantic permits were issued nearly two years earlier the facilities were still much restricted.

Because Marcuse had the wherewithal in life to build high-power equipment, his efforts on behalf of United Kingdom radio amateurs were frequently misunderstood; the younger generation, in particular did not always take kindly to any restriction in the issue of permits. Nevertheless Amateur Radio owed a great deal to Marcuse who, with his unorthodox methods, succeeded in persuading such masters of the art of skilled letter-writing as J. W. Wissenden—Assistant Secretary of the Post Office—that the most important person in the world at that time was the radio amateur.

The decision to issue Transoceanic permits must have given the Post Office a great deal of extra work and added considerably to administrative costs. The policy continued for some years, in fact until such time as world-wide communication by amateurs made the continuation of the practice a farce. The original decision to issue such permits in limited numbers was undoubtedly forced on the Post Office by the Service organisations.

Transatlantic tests for the year 1925, organised by the T and R Section of the RSGB and by the ARRL, took place on 23 and 45

metres from the U.K. and on 20 and 40 metres from the U.S.A. Test periods were arranged for October, November, and December with Code Groups still in use.

The ROTAB Trophy is the premier RSGB award but few today know how it originated or what the word means. ROTAB stands for the Royal Order of Transatlantic Brass Pounders, a fraternal body, originated by Major W. C. Borrett, (Canadian 1DD) using an elaborate initiation ceremony worked out by Borrett and a few of his close associates in the early Transatlantic tests. At the conclusion of the dinner in London, given by T and R Section members to the American, Canadian, and Newfoundland delegates to the IARU Congress in April 1925, Borrett told those present about the Order and promised to send a copy of the initiation ceremony to Marcuse. This he did and in the August 1925 issue of the *Bulletin*, Marcuse invited all who were interested to contact him, Borrett having previously suggested that Simmonds, G2OD, Partridge, G2KF, Hogg, G2SH, and Marcuse, should form a Committee to carry out initiation ceremonies. No record has been preserved of those who were initiated into the Order but Marcuse, anxious to preserve for all time a tangible link with the original Transatlantic Brass Pounders decided to donate a silver trophy to the Society for consistent DX work. The ROTAB thus became the first of a long line of trophies to be donated to the Society.

Low power work, always a fascination in amateur circles, had many supporters in 1925 and earlier. G5SI for example worked New Zealand 2AE using only $11\frac{1}{2}$ watts input on 45 metres. Marcuse, although a "high-power wallah", urged those who had so far failed to contact New Zealand and Australia not to give up just because they could only muster up a few watts from dry batteries. "Get out of bed at 6.30 a.m." he urged "and look for the DX boys on 35 to 38 metres."

The advent of the *T & R Bulletin* provided advertisers with a highly specialised market. Many names which have long since disappeared from the pages of the *Bulletin* and other Amateur Radio publications were, at that time, as familiar as the names of the then prominent manufacturers of broadcast receivers. Without the support of those firms, some now almost forgotten, the *Bulletin* could not have survived. Mortley Sprague, Leslie Dixon (later Electradix), Heayberd and Southern Radio (with Fred Mayer, G2LZ, in charge) were just four of the firms that played an important part in the development of Amateur Radio at this time. Others, a good deal larger, such as Mullard Ltd. and The General Electric Company were then, and still are, important patrons of the movement.

The success of G5SI in working New Zealand with $11\frac{1}{4}$ watts in daylight and several American amateurs with less than a watt was achieved with the aid of Mullard 0/40 and 0/30-A valves, a fact made public by the Mullard Company in its *Bulletin* advertisements. The *Bulletin* was the first to announce the arrival of the Osram DET.1, a famous valve which grew out of the even more famous LS5. The General Electric Company in its advertisement (December 1925) claimed that "the DET.1 was the first dull emitter valve to communicate with Australia at an input of 66 watts".* No price was quoted but it was asserted the valve would oscillate down to 5 metres.

One of the first commercial short-wave receivers advertised in the *Bulletin* was the Burndept "Ethophone" which had an operating range from 100 down to 30 metres, employed two Burndept valves, was fitted in a mahogany cabinet and sold for £18, plus 25s. royalty.

In an early issue, Kenyon Secretan, G5LF—a driving force in the firm of Secretan and Mallett Ltd—wrote in an advertiser's announcement, "No transmitter today can be considered entirely efficient as to conform to modern practices unless crystal controlled". Secretan assured prospective purchasers that "No two crystals will be supplied of the same frequency. Having control of the distribution of these oscillators, the elimination of interference is assured, since no crystal controlled set will ever be able to work on the same wavelength as another". Offered then at £4 each one wonders what would be the present day value of a personal frequency on 14 Mc/s.

Although the birth of the *T and R Bulletin* was, in retrospect, the most important event of the year 1925 there is little doubt that at the time far more attention was directed publicly to a parliamentary matter in which the Society was concerned. This centred around an attempt to pass a Bill amending the original Wireless Telegraphy Act of 1904. The primary necessity for amendment arose from the fact that certain anomalies existing in the Act were difficult to apply, due to the new conditions brought about by the advent of broadcasting. The new Act not only attempted to adjust those anomalies but it also sought to impose restrictions which would seriously hamper the genuine experimenter. The Society decided to oppose the passing of the Bill and a circular letter was sent to all affiliated societies explaining the reasons for this action. An application was made to the Postmaster General for the Society to present its case before a Committee of the House of Commons, and this was granted, Dr. W. H. Eccles (the Immediate Past President) being called to give evidence. At the same time both the national and technical press, sensing that

* One successful operator was Kenneth Alford G2DX, who in 1967 still had in his possession, intact, the DET1 with which he worked Australia in 1925.

the Amateur Radio movement was in some danger, threw in their weight on the side of the amateur with the result that the Bill, as originally presented, was withdrawn and a new Bill introduced which confined its attentions to the ratification of simple broadcasting licences and the regulation of the broadcasting services of the country. The offer of £500 made by *Wireless World and Radio Review* to defend the amateur cause should not be forgotten by later generations of radio amateurs.

A further difficulty arose at this time when the Post Office decided to prohibit the transmission of messages abroad unless the amateur was in possession of a Transoceanic permit. The prohibition led to much criticism of Post Office methods, an abundance of unnecessary correspondence and hundreds of illegal contacts. The prohibition ended with the demise of the Transoceanic permit.

In its Report to the membership for the year 1925 the Council said "The Society continues to be recognised as the most important national organisation in the Amateur Radio movement. Not only are the name and the initials of the Society becoming a pass-word in the United Kingdom but from many parts of the British Empire have come indications that the Radio Society of Great Britain has established its reputation as a thoroughly representative organisation which may confidently be looked up to as the mouthpiece for voicing the opinions and wishes of all wireless amateurs whose activities are controlled by His Majesty's Government. Societies in Africa, India, and Malta are now affiliated to the parent-body". The British Empire Radio Union, was still some years away but this was the first formal recognition by the Council that the Society had responsibilities well beyond the United Kingdom of Great Britain and Northern Ireland.

During 1925 the Society began negotiations with the British Engineering Standards Association (forerunner of the present-day British Standards Institution) for the formation of a Committee to draw up a British Standard Specification for Ebonite for Radio Purposes. The outcome of this first joint effort was so successful that before the year was out an attempt was made to bring about the standardisation of components and apparatus. Forty years later the RSGB still retained a close association with the BSI and had representatives serving on several Committees of the Institution.

The demand at this time by many members for a distinguishing badge was met by the Council who authorised production of a lapel emblem—an ornate affair—in which the Union Jack figured prominently. Today, examples of the Society's first badge provide one of the few souvenirs left to older amateurs to display as evidence of the

spacious days of the Great Names when there existed a closeness between the Society and the British Crown. The head of Britannia surmounted a scroll bearing the motto "Per Aether Is Undas".

With the passing of the years this type of badge gave way to the now familiar "black diamond". Featuring the graphical symbols of aerial, earth and condenser the Society's first "black diamond" was introduced by the T and R Section and bore the letters "T and R" in the upper half. The design followed closely upon that of the ARRL badge which used the graphical symbols of aerial, earth and inductance. The general pattern of the "black diamond" is today common throughout the world of Amateur Radio with variations in the arrangement of symbols and the choice of background colours.

The social side of the Society's activities at this time centred around an annual dinner—a formal dress affair—held in London, usually at the Waldorf Hotel, and an annual outing to a place of technical interest. The annual dinner attracted very few of the younger members of the Society but the prestige value of the function was considerable. Distinguished scientists, men of letters, prominent radio engineers, leading Post Office and Government officials as well as a number of politicians interested in radio matters were entertained by a succession of Presidents whose names were household words. Very soon all that was to change but in retrospect the Society should always be aware of the years following World War I when a tradition was founded upon which later generations of radio amateurs have been able to build.

It seems strange that at the Annual General Meeting held on December 16, 1925, with the President-Elect (Brigadier-General Sir Capel Holden, K.C.B., F.R.S., in the Chair), the retiring Council were castigated by one member (David Richards) for not doing more, during the year that was passing, to bring the work of the Society more prominently before the general public. The accounts also came under fire from Francis Fogarty who had been Honorary Treasurer in the early days of the Wireless Society of London. Fogarty complained that the then Honorary Treasurer (Professor Ernest Wilson) had made no reference in his Report to the precarious position of the Society's finances. He contended there had been a deficit on the year's work of £131 and not, as the accounts showed, a profit of £114. Apparently the previous year's balance had been added to the Income side of the Expenditure and Revenue Account. Notwithstanding the criticism, the Chairman's motion to adopt the Accounts was carried.

A feature of this period—and one referred to specifically in the Report of the Council—were the fortnightly broadcast talks given

from the London station of the BBC (2LO) by officials of the RSGB and T and R Section. These talks continued, at wider intervals as time went on, until the autumn of 1930 and there is ample evidence that they were of considerable value to the Society from a publicity point of view.* This is confirmed by looking at the membership figures at about this time. At the end of September 1924 the Society had 778 members, excluding the T and R Section. A year later the number had increased to 844. In the corresponding period the membership of the T and R Section jumped by nearly fifty per cent from 268 to 387. Needless to say the talks all laid stress on the activities of the T and R Section and on the joys of working DX.

During the Presidency of Sir Oliver Lodge in 1925, Captain Ian Fraser, Gerald Marcuse, Ernest Simmonds, and Bevan Swift, were the only members of the Council directly concerned with the T and R Section, although the Honorary Secretary (Maurice Child) was a licensed amateur, professionally engaged in wireless instruction. Dr. R. L. Smith-Rose, whose association with the Society commenced in 1913, was a member of the Council in 1925. He became President in 1959 and has continued his interest ever since.

As the first quarter of the twentieth century came to an end great changes were taking place throughout the world of Amateur Radio. Very shortly the T and R Section was to unite with the parent body and virtually assume control of the Society. Throughout Europe, national Amateur Radio societies were in process of formation. Frequency problems were beginning to assume great importance. Amateur Radio was really growing up.

* The author of this book received more than 500 letters and postcards following a broadcast from 2LO in 1928 on behalf of the Society.

First Convention

THE annual dinner for 1926 of the Radio Society of Great Britain, held at the Waldorf Hotel, London, on February 3, with the newly-elected President (Brigadier-General Sir Capel Holden, K.C.B., F.R.S., M.I.E.E.), in the chair, was attended, as in former years, by the older members of the Society with their ladies and eminent guests. For the average young radio amateur social events of such an ambitious character were beyond his resources and in any case were far too formal for most. He sought the informality of a meeting where the latest trick circuits could be discussed and criticised. It was not surprising, therefore, that his enthusiasm should be aroused by the publication in the June 1926 issue of the *Bulletin* of a notice inviting members of the T and R Section to support a "Ham Convention" in London on September 17-18, the last two days of the annual Radio Exhibition at Olympia. The announcement should have appeared a month earlier than it did but the May issue was not published because a General Strike put an end to all business for nearly three weeks and led to national chaos.*

Who first suggested that the T and R Section should organise an Amateur Radio Convention no one now knows but it was most probably Marcuse who had attended "hamfests" during a recent visit to the United States. The fact remains the response to the invitation was so good that detailed plans could be published in the July issue of the *Bulletin* but unfortunately, as was perhaps to be expected, the idea of terminating the Convention with a formal banquet at the, then, world-famous Holborn Restaurant, did not appeal to the younger element. As a consequence that part of the programme had to be cancelled.

The most pleasing feature of the Convention was the support it received from Provincial members. A photograph taken in the Lecture Theatre of the Institution of Electrical Engineers (venue for the various meetings) during the Saturday afternoon session shows

* A suggestion from a "high place" that amateurs should help with urgent radio communications during the strike was not followed up. It might have been regarded as "strike-breaking".

well over 100 present including most of the leading amateurs of the day. The well-known names included Henry Bevan Swift, G2TI, Chairman of the T and R Section who presided, supported by Gerald Marcuse, G2NM, Maurice Child, G2DC, J. E. Nickless, G2KT, E. J. Simmonds, G2OD, G. F. Gregory, G5PZ, J. A. J. Cooper, G5TR, Cecil Goyder, G2SZ, Ralph Royle, G2WJ, Hugh Ryan, G5BV, Fred Mayer, G2LZ, Arthur Watts, G6UN, E. Dawson Ostermeyer, G5AR, Alfred Gay, G6NF, F. J. H. Charman, G6CJ, Arthur Milne, G2MI, H. A. M. Clark, G6OT, J. W. Mathews, G6LL, T. A. St. Johnston, G6UT, Jack Wyllie, G(M)5YG, Frank Neill, G(I)5NJ, John Clarricoats, G6CL, and many others who had yet to make their mark in RSGB circles. Frank Bell, Z4AA, and Curt Lamm, K4CL, were among the visitors from abroad. The technical high-spot of the Convention was a lecture on Master Oscillators given by H. L. Kirke of the BBC. Commenting editorially on this lecture in the October *Bulletin*,* Bevan Swift wrote:

“The talk was very interesting and the subject very timely seeing that the use of master oscillators is undoubtedly the only satisfactory solution to the problem of high power transmission.”

The Past President, Dr. W. H. Eccles, F.R.S., in an address to the Convention predicted that the time might come when the activities of the Society, from an experimental point of view, would be largely in the direction of transmission work; he outlined a scheme for equipping the Dominions with short-wave apparatus for experimental purposes.

At an informal business session during the Saturday afternoon members of the T and R Section had their first real opportunity of discussing matters of nation-wide interest. Cooper (G5TR) led a debate on the *Bulletin*, Exeter (G6YK) discussed the low power tests which he had agreed to organise, Hampson (G6JV) from Norfolk, suggested ways and means of achieving better co-operation between provincial and London members and Jamblin (G6BT) from Suffolk explained the work of the QSL and QRA Sections. Marcuse (G2NM) wound up by expounding his views on methods of securing ideal conditions for British experimenters.

The Society's first Convention set a pattern of new activity which was to prove of great benefit in the years to come. The annual conventions achieved an ever-increasing popularity in the years that

* Among the many who took part in the discussion were Capt. P. P. Eckersley and Mr. (later Sir) Harold Bishop, both of the BBC. P.P.E. was at that time Chief Engineer and a Vice-President of the RSGB. Harold Bishop many years later succeeded Sir Noel Ashbridge as Director of Engineering, BBC.

followed the first venture in 1926 and it was only the outbreak of war in 1939 that brought the series to an untimely end. The 1926 Convention provided the background against which the T and R Section would shortly take over the control of the Society—as the outcome of fusion between the Section and the parent body. It led to the introduction of the first comprehensive Scheme of Representation* and it provided the base from which the Society was able, a few months later, to launch the British Empire Radio Union. During the course of the Convention Bevan Swift became the first recipient of The Woufhung, a club-like device donated to the T and R Section by James W. Noden, G6TW, of Nantwich, Cheshire. Intended to be placed before the Chairman as a symbol of his authority it was also designed to be used as a weapon by the chairman “to bring fear and trembling to those who behave badly on the air!”

The Society's stand at the 1926 Radio Exhibition aroused greater interest than usual because of the attendance there of several well-known DX personalities such as Frank Bell, Z4AA, from New Zealand, and many prominent Provincial amateurs who were in London for the Convention. The idea of linking up the Annual Convention of the Society with the Radio Show continued until 1938.

Although Sir Capel Holden officiated diligently at meetings of the RSGB held during the first year of his Presidency he did not put in an appearance at the Convention in September or at any of the T and R Section lecture-meetings. As a consequence the gulf between the parent body and the T and R Section gradually became wider. Matters moved to a climax towards the end of the year when at the Annual General Meeting of the Society the Honorary Treasurer (Dr. W. H. Eccles, F.R.S.) reported that entrance fees and subscriptions to the RSGB had amounted to £390 while subscriptions to the T and R Section were only £84 less. This meant that the T and R Section had more members than the parent body, the subscription to which was greater than that payable to the Section. Eccles also disclosed that although 200 local Societies were affiliated to the RSGB less than half had paid their annual renewal fee. Drastic action was needed. Two alternatives presented themselves—increase subscriptions or increase membership. Fusion between the Society and the up-and-coming T and R Section seemed to offer the most effective way of bringing about an increase in membership—the better of the two alternatives. When the Annual General Meeting of the T and R

* Earlier that year five prominent members (Mayer, G2LZ, Wright, G2DR, Hampson G6JV, Neill G5NJ and Wyllie, G5YG), had been co-opted to serve on the T and R Committee to represent the membership in Southern England, the North East, East Anglia, Northern Ireland and Scotland respectively.

Section was held on December 17, 1926, with Bevan Swift in the Chair, consideration was given to a proposal of the Council, previously circulated to all members, that the Section should join forces with the parent body. The fact that the proposal was accepted by 219 votes to thirty-two (including postal votes) gave no indication of the heated discussion that preceded the ballot. At this meeting E. J. Simmonds, G2OD, first holder of the ROTAB trophy, handed on the trophy to the next holder, Cecil Goyder, G2SZ—a nice gesture, which went far to end the intense rivalry that had sprung up between the young engineering student and the older and more experienced man, following Goyder's achievement in making the first two-way contact with New Zealand a few days after signals from Simmonds' station had been the first to be heard in that country from England.

Although short-wave history was still very much in the making the *T and R Bulletin* for October 1926 published an important contribution from Simmonds in which he traced the progress of Amateur Radio developments during the previous few years. The article dealt authoritatively with the early Transatlantic tests, the conquest of the Atlantic, and the more recent successful tests with Australia and New Zealand and is of great historic value.

In the general field of technical development, much attention was being given at that time to improvements in receiver design. A detailed description of a home-constructed short-wave superheterodyne receiver, contributed by Capt. H. J. B. Hampson, G6JV, was the first four-part article to appear in the *Bulletin*.

Among those co-opted to serve on the Committee of the T and R Section in the summer of 1926 was Cecil A. Jamblin, G6BT, of Bury St. Edmunds. Jamblin had offered earlier that year to undertake the task of acting as a clearing house for QSL cards—printed postcards used to confirm contacts or to acknowledge reports. No one seems to be quite sure who invented the QSL card but it is probable that some form of acknowledgement card was used by amateurs in the United States prior to World War I. W. E. Corsham, G2UV, of London, who participated in the first Transatlantic Tests, claims to have issued the first authentic QSL card in Europe but there is no example in existence nor is there a record in *Wireless World* or in any other known contemporary publication of the date it was issued. *Wireless World* reproduced a post card bearing the call 8ML in the issue dated May 5, 1923, and this, according to the caption, was "one of the specially printed cards circulated in America by members of the ARRL for reporting the reception of experimental transmissions". *Wireless World* advocated the adoption in the United Kingdom of a similar type of card for acknowledging reports.

Whatever the origin of the QSL card (the term QSL was not used by *Wireless World*) there is no doubt that Jamblin was the first British, and probably the world's first, QSL Manager. The idea of providing a central bureau to which all cards could be sent and collected for no more than the cost of postage, appealed to the young DX enthusiast who realised—as T and R Section publicity was quick to point out—that he could save the amount of his subscription in a very short time by using the RSGB QSL Bureau.

From 1930 to 1939 Douglas Chisholm, G2CX, managed the RSGB QSL Bureau from Society Headquarters but from the war years onwards the mammoth task of QSL Manager was undertaken by Arthur Milne, G2MI, from his home in Bromley, Kent. From there with the help of Mrs Lucy Milne and the assistance of a team of sub-managers, more than a million cards were handled annually.

During 1926 Gerald Marcuse raised with the Post Office the question of assigning a distinguishing prefix for Scotland and the Isle of Man (as had been agreed recently in the case of GI for Northern Ireland) but he was told by Assistant Secretary, J. W. Wissenden, "we are loath to make any new arrangements of the kind agreed to for Northern Ireland where the circumstances are altogether exceptional". Wissenden explained that "the object of the introduction of a prefix "G" was to bring amateur stations into line with international procedure in cases where such stations were conducting experiments with stations outside Great Britain and Northern Ireland; it was not intended to denote anything approaching the exact locality of the station". Several years were to pass before the Society finally succeeded in persuading the Post Office to issue distinctive prefixes for Scotland (GM) and Wales (GW) and much later for the Channel Isles (GC) and the Isle of Man (GD).

Notwithstanding its somewhat precarious financial position, the Society took two further important steps during 1926 to improve its status—it applied for and was granted a Certificate of Incorporation by the Board of Trade to carry on business as a company limited by guarantee and not having a share capital. It also produced a Memorandum and Articles of Association which were adopted by the membership and approved by the Board of Trade. The Constitution fixed subscription rates at one guinea a year for Corporate members living within a radius of twenty-five miles of Charing Cross, London, and 15s. for country members. The higher London subscription was intended to cover the cost of lecture meetings at the Institution of Electrical Engineers. There was, in addition, an entrance fee of 10s. 6d. The Constitution adopted in 1926 remained virtually unchanged for the next twenty-five years except for the removal of

the entrance fee and a lowering of subscription rates during the war for members on active service. The word "Incorporated" had now been added to the title of the Society and this addition remained until December 18, 1953, when a special resolution was adopted changing the name back again to Radio Society of Great Britain, permission having previously been obtained from the Board of Trade for that to be done.

As the year 1926 came to an end all was ready for the union of the T and R section and the parent body.

Fusion and Beyond

ALTHOUGH the vast majority of the members of the T and R Section had voted in December 1926 in favour of fusion with the parent body it was not until June of the following year that an official announcement appeared in the *T and R Bulletin* to the effect that all members of the Section had now become Corporate Members of the Incorporated Radio Society of Great Britain. But confusion was caused by the statement that "the T and R aspect of our work is continuing as the Transmitting and Research Section of the Society and all the original T and R Sectional members are members of this Section. The letters T and R now indicate a corporate section of the Society which is mainly concerned with transmission research and may be used to indicate that the member is a member of this section". Who was responsible for this interpretation of the initials T and R is not now known but it is a fact that the letters T and R had always signified Transmitter and *Relay* and that was the meaning given to them throughout the remainder of the life time of the *T and R Bulletin*.

To give effect to fusion, every member of the Section living within twenty-five miles of Charing Cross, London, was required to remit an additional 6s. to bring his annual subscription up to 21s. but any London member who had previously paid a subscription to both the RSGB and the T and R Section received a refund of his Section subscription. Fusion meant that all former members of the T and R Section would now have a say in the affairs of the Society. The T and R Committee would remain in office to give advice to the Council on matters of special concern to those who had been members of the Section. It was action taken a year hence by the Committee that led, in due course, to the management and control of the Society passing into the hands of a group of much younger men whose interests centred around Amateur Radio as distinct from the science of Radio in the much broader aspects suggested in the title of the Society.

The first outward and visible sign that the Council intended to give full recognition to the activities of the T and R Section came when the

President (Brigadier-General Sir Capel Holden) opened the proceedings at the second Convention, held during the weekend September 30–October 1, 1927, at the Institution of Electrical Engineers, London. Technically the event was a very great success, the tenor being set by Ernest Simmonds, G2OD, who described a 5-metre beam aerial system and showed how, by means of a comparatively simple arrangement of reflectors, radiation could be increased in any desired direction from a value of two without reflectors to a value of seven with the reflectors in use. And that lecture was given on September 30, 1927, when many were still to find 23 metres. John Clarricoats, G6CL, whose activities had been confined exclusively to low power work on 45 metres, using dry batteries, opened a discussion on the difficulties created by high power phone stations working on that band. The subsequent debate “Phone on 45” was long and fierce and was renewed with vigour in one form or another at every successive Convention for the next five years. Arthur Hinderlich, M.A., G2QY, one of the first amateurs to study the subject, described the phenomena associated with piezo quartz crystals and gave useful advice on how they could be used to control the frequency of amateur transmitters.

The 1927 Convention was marked by an important discussion, introduced by Capt. Hugh Hampson, G6JV, on extending the scope of the Society to include the Dominions and to form, with the Dominion Societies, a British Empire Radio League. J. A. J. Cooper, G5TR, the Secretary-Editor, submitted proposals, which were well received, for reorganising the T and R Committee. Eight members of a sixteen strong Committee would be elected Area Managers and eight others Section Managers to take charge of specific activities, such as licensing, social functions, publications, QSLs, instruments and tests.

The Convention concluded with a “Hamfest”, the first of a long line of similar events to be held at Pinoli’s in Wardour Street, a world-famous Soho restaurant. Organised by the four London Area Managers—John Clarricoats, G6CL (North), Cyril Targett, G6PG (South), Lawrence Fuller, G6LB (East) and George Exeter, G6YK (West)—the Hamfest was supported by seventy-five of those who had been present at the earlier proceedings at the Institution of Electrical Engineers. The meal was long remembered by those who were there for the “unusual noise effects” which were produced when a power failure brought the soup course to a temporary halt. Peace was not restored until a batch of candles was produced to give light to the scene! The success of the Convention Hamfest was largely due to the hard work previously put in

by the London Area Managers who, on June 29 that year, had organised for the benefit of London Members the first of the famous Pinoli Hamfests. Well supported by most of the leading London amateurs of the day the Hamfests took place at intervals of three or four months and it was at these gatherings that many of the ideas were born which later appeared on the agenda papers of Committee and Council meetings.

As a direct outcome of the 1927 Convention, T. Palmer Allen, GI6YW* of Belfast, agreed to organise a service for experimenters which he decided to call "Contact Bureau". The purpose of the Bureau was to provide a link whereby members working in the same field of experiment could be put in contact with one another. For the next twelve years Contact Bureau, and its successor, the Research and Experimental Section, were to play an important role in the activities of the Society. Most of the leading experimenters of the period became members and many of them acted as Group Leaders. The Letter Budgets circulated by the Group Leaders contained reports which revealed a high level of technical achievement. Contact Bureau was to the forefront in encouraging experimental activity on the 28 Mc/s, 56 Mc/s and 112 Mc/s bands and several of its members received high praise, both nationally and internationally, for their pioneer work in certain aspects of vhf propagation.

The coming of the *T and R Bulletin* in 1925, the beginning of Conventions in 1926 and the influence which the General Committee of the T and R Committee began to exert in 1927, all had a marked effect on the way the Society developed during the next decade.

With the passing of time since the end of the war in November 1918, the licence position generally had gradually deteriorated not only in the United Kingdom but throughout the world. Administrations were virtually at liberty to assign wavelengths as they pleased to the various services for which they had a responsibility. The arrival of broadcasting in the period between 1921 and 1923 brought chaotic conditions, particularly in the medium-wave part of the spectrum. As far as the amateur was concerned he was subject to whims and fancies of all kinds. Only in the United States and, to a somewhat lesser extent, in Canada, was there an obvious appreciation of his usefulness to the community at large. In the United Kingdom the amateur movement had been ringed with petty regulations, many of them introduced at the behest of the Defence Ministries who seemed to regard amateurs more as potential spies than as people anxious to play a useful part in the development of radio, and especially short-wave radio communication. Hedged in by restrictions

* Later Professor T. P. Allen, M.Sc., of The Queen's University, Belfast.

in respect of power, aerals, operating times, and even in the number of stations with whom they could establish contact, it was not to be wondered at that flagrant breaches of the regulations were a daily occurrence among the amateur fraternity.

During the early autumn of 1927 first news reached British amateurs of a pending international meeting that "would change the whole concept of Amateur Radio". On October 4, 1927, there convened in Washington, D.C., about 350 delegates of seventy-four nations to an International Radio Telegraphic Conference. Regulations and a treaty adopted at an International Conference in London as far back as 1912, had gone fifteen years without change; a world war had come and gone—radio had changed almost every aspect of life. The time had arrived to try to bring law and order out of the chaos into which broadcasting and a dozen other new services had plunged the spectrum.

The Society pronouncement on the Conference appeared in the November 1927 *T and R Bulletin*, when the Editor, J. A. J. Cooper, drew attention to certain matters which had been giving concern to British amateurs who were readers of *QST*. Writing in a recent issue of that journal, the Secretary of the ARRL, Ken Warner, had commented on the attitude shown by British Government delegates to Washington who, at a pre-Conference meeting in Canada (attended by U.S., Canadian and Dominion delegates), had affected ignorance of the strength of the Amateur Radio movement in the United Kingdom. Warner had sensed that this curious attitude, if pursued at Washington and followed by Dominion delegates, could have an adverse influence on the Conference insofar as amateur matters were concerned. Cooper, in his editorial, pointed out for the benefit of RSGB members that the British delegation was composed solely of Government officials, that the RSGB had not been invited to express its views on licence matters before the delegation left for America, and that the Postmaster General was guided very largely by the Wireless Telegraphy Board (a body composed of the Government Departments who used radio). The Society's President had been assured by Post Office officials that the needs of British amateurs would be borne in mind at the Conference, the Post Office was fully aware of the strength of the Amateur Radio movement and knew precisely how many licences had been issued, and a copy of the *T and R Bulletin* was sent to the Post Office each month.

Members heard for the first time that by arrangement with the Council, Ken Warner and the President of the ARRL, Hiram Percy Maxim were, in fact, representing United Kingdom amateurs at Washington and that the line they were taking was that the same

wavebands should be allocated to amateurs on a world-wide basis. Tough bargaining at the Conference table, in which the U.S. delegation ably supported by Warner and Maxim played an important part, led eventually to the adoption of the harmonic relationship principle of *frequency* allocations for amateurs. This was the first occasion on which allocations to all services were made primarily in terms of frequency and secondly in terms of wavelength. The frequency table finally adopted internationally for radio amateurs was as follows:

kilocycles per second

1715 – 2000
3500 – 4000
7000 – 7300
14,000 – 14,400
28,000 – 30,000
56,000 – 60,000

These allocations, constituting a total assignment of 7485 kc/s, represented a loss of 4515 kc/s (37.5 per cent) to American amateurs but increases of varying amounts to those of other countries, provided the full bandwidths were assigned. Unfortunately the ultra-cautious attitude which had characterised Post Office handling of all amateur matters, resulted in very severe restrictions being imposed when the Washington table of frequencies was introduced on January 1, 1929. Described in Post Office language as “tolerances” the restrictions reduced the width of every band by 25 kc/s at each end so that instead of having the use of 300 kc/s between 7000 and 7300 kc/s the width was actually 250 kc/s, i.e. from 7025 kc/s to 7275 kc/s. The RSGB protested vigorously but all to no avail. As the years passed by tolerances were gradually reduced and finally dispensed with altogether, following intense pressure by the Society, supported by strong technical evidence. By that time the Post Office had been made to appear rather outdated by the US and other administrations with a more progressive approach to Amateur Radio.

The results of the Washington Radio Conference were summed up in the January 1928 *T and R Bulletin* when praise in full measure was accorded to Ken Warner for his untiring efforts on behalf of all amateurs.

“Having finished the battle” wrote J. A. J. Cooper “we have now to take stock of our position. An active International Amateur Radio organisation is essential to our well-being. Our utmost strength is at home so that we can unite with amateurs of other countries and use our pressure wherever necessary. This time there were many weak

links, for the amateur has seldom given a thought to an International Conference being his Waterloo*. The British amateur has been somewhat self-centred himself, rather than considering Amateur Radio as a whole. The result was that the greatest nation in the world was unable to force its will on the Conference, for its amateurs are as yet poorly organised and only partly mobilised."

This was plain speaking, but more than justified. It was to become a primary task of the new-style T and R General Committee, and later of the Council, to set about improving international relations and mobilising resources in preparation for the next Conference five years hence.

Perhaps it was significant that, in November 1927, the Council decided the words "British Empire Radio Union" (rather than "British Empire Radio League" as Hugh Hampson had proposed two months earlier at Convention), should be added as a sub-title to the name of the Society and that Headquarters' notepaper should bear witness to the wider scope of the Society and to the fact that the RSGB was also the British Section of the International Amateur Radio Union.

An ambitious publishing effort, shared jointly by *Printing Craft Ltd.* of London and the Society, came to fruition during 1927 when a cloth-bound foolscap-size Diary and Log Book was presented to every member. The main features of the book were comprehensive lists of British and European amateur call-signs, a listing of the broadcasting stations of the world, and a day-to-day diary which could be used as a station log. There were also a number of technical articles and an extended list of valves in current use. Printed on glossy paper, except for the diary section, it was good value at 3s. 6d.—the price charged to non-members. For some reason (possibly economic) *Printing Craft Ltd.* did not repeat their offer a year later, and consequently the Council, feeling under some obligation to the membership, decided to proceed alone with an Annual. The end product was excellent but the financial results were disastrous. The call-sign section was considerably more comprehensive than that published in the 1927 Log Book as it included a greater number of countries. Among the technical contributions was one by Cecil Goyder, G2SZ, entitled "The Quartz Oscillator and its use in a Transmitter" and another by Ernest Simmonds, G2OD, on "Frequency Stabilisation by use of the Piezo-Electric Quartz Crystal". The 1928 Annual was essentially a log book and not a diary.

* Probably a reference to a Japanese proposal that in future all amateur work should be conducted on an artificial aerial. The United Kingdom delegation successfully opposed the proposal.

First elections to the T and R General Committee, constituted in accordance with the proposals made at the 1927 Convention and later approved by the Council, took place on December 3, 1927. The eight members of the T and R Section elected to accept responsibility for various aspects of the Society's work were: Geoffrey W. Thomas, G5YK (Tests and Organised Experiments), Ralph Royle, G2WJ, (Membership and Members' Register), L. Howard Thomas, G6QB, (Instruments and Calibrations), Gerald Marcuse, G2NM, (Licences), J. E. Nickless, G2KT (Publications and Papers), John Clarricoats, G6CL (Social Manager), C. A. Jamblin, G6BT (QRA Manager), Frank E. King, G5AD (QSL Manager) each of whom had power to co-opt no fewer than three and not more than five members to form a sub-Committee.

It was coincidence, but none-the-less fortuitous, that Ian Fraser, G5SU, the first practising amateur of the post-war era to become President, should begin his term of office on January 1, 1928, the day on which the members of the newly-constituted T and R Committee started their duties. Together they were to bring about many notable changes.

Empire Broadcasting

“**R**EGULAR broadcasting in the United Kingdom was initiated, not only at the request of, but through the insistence of, the experimental amateur”—so commented *Wireless World* in 1923. Two other ways in which amateurs have left a permanent mark on British broadcasting are to be found first in the work of R. J. Hibberd a prominent member of the RSGB who organised the Schools Radio Society (later the Schools Radio Section) and who introduced, on April 4, 1924, the first educational broadcast specially intended for reception in schools, and second in the work of Gerald Marcuse, G2NM, whose enterprise during 1927 and 1928 led to the introduction of a broadcasting service to the Empire and ultimately to the establishment of the Overseas Service of the BBC.

Throughout the years from 1923 to 1927, Marcuse, who then lived at Caterham, Surrey, had been prominent in developing the short-waves for international communication. His consistent work with the Rice-Hamilton Expedition in 1925, for example, had brought his name and his achievements to the notice of the general public. Pictures of his station had been featured in the national and technical press of many countries and he was well-known at St. Martin's le-Grand as spokesman for the RSGB on licence matters. He had pressed hard for transoceanic permits and for improved operating facilities. He had been one of the first British amateurs to use telephony and his voice had been heard in many parts of the world not only by other radio amateurs but by keen listeners who had acquired commercially-built short-wave receivers.

Marcuse, in a life story recorded shortly before he died on April 6, 1961, recalled that he was first drawn to the idea of providing a broadcasting service to the British Empire as the result of contacts with an amateur in Bermuda (BER) who re-broadcast transmissions from G2NM to other amateurs in neighbouring islands.

After a great deal of correspondence with the Post Office, Marcuse was finally informed in a letter from the Assistant Secretary, dated August 9, 1927, that the Postmaster General had decided to authorise

him "to transmit speech and music for a period not exceeding six months from September 1, 1927, by means of wireless telephony with power for transmission not exceeding 1 kW and waves of 23 and 33 metres". The letter of authority restricted his operating times to two hours on each occasion; prohibited him from transmitting news of current affairs; limited the number of gramophone records he could use during the whole period of the experiments to fifty and prohibited him from advertising on behalf of gramophone companies. He was also informed that "the Postmaster General held out no hope that a licence to transmit regular programmes to the Dominions or Colonies would be granted to any body other than the British Broadcasting Corporation".

Marcuse officially inaugurated his programme of "experiments to the British Empire" by transmitting a special concert to Australia on September 11, 1927. For this concert he enlisted the services of several well-known artists. He also arranged for Captain Ian Fraser, M.P., G5SU (President-Elect of the RSGB) and the, then, High Commissioner of Australia to speak during the course of the broadcast. Unfortunately the "experiment" was only partially successful due to a break-down in the transmitter power-supply but sufficient of the concert was received in various parts of the British Empire for it to be hailed as a great achievement. Marcuse was showered with messages of congratulation but an application which he made to the Post Office for permission to complete the programme a week later was rejected by the Postmaster General on the ground that the object of the "experiment" had been achieved. Could it have been that the W/T Board, the Post Office and the BBC were all a little envious of the accomplishments of just one amateur.

Notwithstanding the official rebuff, which in the light of the letter of authority in his possession was quite unjustified, Marcuse transmitted several more concerts, but most of his broadcasts—as he began openly to call them—were of a more homely character. The song of the blackbird and the thrush from his garden, the voices of the local Church choir, and the sounds of Big Ben were among the most popular items in his repertoire. When programme material was short he rebroadcast 2LO or used one of his scheduled stock of "fifty records". Sometimes a local friend would come along to sing or play the piano. Marcuse spent a great deal of money on his Empire Broadcasting "experiments" for, besides purchasing a mass of expensive equipment, he also rented two Post Office telephone lines from his home to the home of a nearby music enthusiast—Percy Valentine—who allowed his music room to be converted into a studio and control equipment to be set up in a nearby room.

Transmissions from G2NM continued almost daily until the end of August 1928. Long years afterwards Marcuse admitted to using for the "experiments" an input power of 1.5kW into a Zeppelin aerial. In his own words "the gear really did its stuff". His house in Caterham, Surrey, named "Coombe Dingle" is 700 ft. above sea level and on top of this excellent site Marcuse erected a 100 ft. mast.*

The decision of the BBC to commence an overseas short wave broadcasting service in 1928 was delayed for a variety of reasons—some political, some technical—but there is little doubt that the decision came none too soon because within three years every major nation had begun to realise the vast potentialities of the short-waves as a means of communicating news—and ultimately propaganda—to the remote corners of the globe.

Marcuse had shown the advantages to be gained by using wavelengths around 32 metres for Empire Broadcasting. The BBC began their overseas service on 20 metres with the result that for a long time signals from G2NM were received more consistently and more strongly in Australasia and other distant places than were those from the BBC Experimental short-wave station G5SW at Chelmsford.†

When the Overseas Service of the BBC celebrated its 25th anniversary in 1963 no reference was made by the Corporation, in any official document, to the work of Marcuse and others who had pioneered the short waves. This omission was one further example of the reluctance of the BBC in more recent times, to recognise the contributions which radio amateurs had made in the early days to the development of broadcasting.

* "Coombe Dingle" now bears a plaque erected in 1962 by members of the Radio Amateur Old Timers' Association, which records the fact that "from this house Gerald Marcuse G2NM inaugurated Empire Broadcasting in September 1927".

† The first experimental transmissions by the BBC to the British Empire took place on November 11, 1927, but a regular service did not commence from Daventry until 1928.



F. W. Miles, G5ML, of Kenilworth, Warwickshire, was the first British amateur to win the Senior British Empire Radio Union Contest (1932). His station, pictured here, was one of the best known in the higher power category during the "Thirties."¹



Douglas Walters, G5CV, and George Jessop, G6JP, were the first amateurs in Europe to establish two-way short wave radio communication between aircraft. This they did on June 18, 1933, using home constructed 56 Mc/s equipment installed in De Havilland Dragon-Moths. G5CV (top of steps) is seen taking a transmitter into one of the aircraft. G6JP (foot of steps) is carrying a filament battery.



During the middle 1930s, G6XQ of Birmingham was an Empire Link Station and the operator, Jack Owner, well known on the DX bands. This picture, taken in 1934, shows design features of that period.



The battery operated 3.5 Mc/s and 7 Mc/s transmitter and receiver used by the Oxford University Arctic Expedition 1933. The transmitter employed a tuned-plate fixed-grid high-capacity circuit and produced an output of three watts. Loomes' Radio (Reg. Loomes, G6RL, left, Eddie Read, G6US, right) were the manufacturers.



Alfred Gay, G6NF, with some of the equipment he used while acting as Calibration Manager of the Society. His station was prominent in many DX Contests and for three years (between 1937 and 1939) he won the Arthur Braaten Trophy as the leading United Kingdom contestant in the Annual ARRL DX Telegraphy Contest.

Emphasis on Empire

CAPTAIN H. J. B. Hampson, G6JV, of Norwich, Norfolk, was the first to suggest that the Society should extend its scope to include the Dominions and to form with them some form of British Empire Radio League which, to quote the words he used when introducing the idea to the members present at the second Annual Convention in September 1927, "would be worthy of the Empire and stand beside the ARRL and other existing national organisations with the IARU". Later that year, after the suggestion had been considered by the T and R Committee, the Council decided that the words "British Empire Radio Union" (BERU) should be added to the name of the Society as a sub-title "with the idea of enlarging the scope of the Society". Every known national radio society throughout the British Empire was informed of the decision and each was invited to apply for affiliation. There was a limited response during 1928 but there is no doubt whatsoever that Hampson's idea might well have petered out into wishful thinking on the part of the Council if it had not been for one man—Arthur Egerton Watts, G6UN, of Highgate, London. Arthur Watts—so soon to play a prominent part in the affairs of the Society—was, in 1928, virtually unknown except to a few London members. He had served, with distinction, in the Royal Navy during the first World War, had lost a leg at Gallipoli and had worked during the later stages of that war on special duties at the Admiralty. He was a director of a very old established firm of cardboard box makers, a Freeman of the City of London, and above all else, devoted to the ideals of Empire and in every sense a King's man. The idea of extending the scope of the Society in the way which was suggested appealed to him at once, for he saw in it a unique opportunity to increase the numerical strength of the Society as well as its prestige.

Watts had no practical knowledge at that time of International Radio Conferences but he visualised, perhaps more quickly than anyone else on this side of the Atlantic, that pressures would begin to build up against the amateur movement as soon as the next Radio Conference was announced. By creating a strong Society, with its

representatives authorised to speak for the British Empire, he foresaw the possibilities which BERU offered.

Geoffrey Thomas, G5YK, who became Honorary Editor of the *T and R Bulletin* in February 1929, probably did more than anyone else to encourage Arthur Watts to offer his services to the Society. Thomas wrote in his first editorial; "Progressive policy is the only one which will bring the Society into that predominance which it must have if it is to be recognised as the premier Amateur Radio Society within the Empire. Let us get to it during this new year and see if we cannot make the title 'British Empire Radio Union' a name to be considered wherever Amateur Radio is discussed. Most of our Dominions are already represented in the Society's membership with perhaps one or two names from each, but this is not sufficient. We want more and more of our Colonial friends to join in with us and help us to give the BERU a place in the sun of publicity."

The year 1929 saw Gerald Marcuse, G2NM—pioneer of Empire Broadcasting—in the President's chair. In his first editorial Thomas also wrote of the President's desire that the Society should build up its Empire membership. That was sufficient invitation for Arthur Watts to begin an association with the Society which would last for the next two decades. He had, in fact, been nominated for the 1929 Council but because he was comparatively unknown at that time he was unsuccessful in the ballot. However, he had, during the month he was nominated, decided to submit a design for a new Society certificate which had been invited by the Council. Three months later he was declared the winner and it was that design (finally executed by Bradbury Wilkinson & Co. Ltd. with minor modifications) that stood the test of time and was in use for the next thirty and more years.

Arthur Watts did not have to wait long for his chance to serve the Society more fully, because in March 1929 he was co-opted to the Council, to fill a vacancy created by the resignation, due to poor health, of E. J. Simmonds, G2OD, the Honorary Treasurer.*

From the time Watts joined the Council BERU began to play an increasingly important part in the affairs of the Society and continued so to do for many years.

A "British Empire Notes and News" feature appeared first in the July 1929 *Bulletin*. This was the outcome of efforts made by Watts to recruit overseas members of the Society to undertake the duties of BERU Representative, which included, in particular, the job of enrolling new members. It was natural that after a time some of the larger Dominion societies should show a tendency to resent what they

* Ernest Dawson Ostermeyer, G5AR, who was a member of the Council succeeded Simmonds as Honorary Treasurer.

thought was an attempt on the part of the RSGB—in the guise of BERU—to poach members from their own Society. Even the ARRL treated BERU with some suspicion wondering whether it would prejudice in any way the development of the IARU. But Arthur Watts, who had had much experience of the diplomatic method of approach, succeeded in almost every case in clearing up all doubts. The question of extending, still further, the scope of the Society was discussed at the 1929 Convention as an outcome of which, on the proposal of the Chairman of the T and R Committee (G6CL), Arthur Watts was elected Publicity Manager of the Society. In October 1929 the Council decided to allocate distinctive numbers to non-transmitting members resident in the British Empire. Thus did the first B.E.R.S. (British Empire Receiving Station) numbers come into existence.*

Before 1929 ended a suggestion had been made and accepted by the Council, that the Society should offer an award, to be called the "Worked British Empire" certificate, to any Corporate Member of the RSGB or the BERU who had effected two-way communication on amateur frequencies with at least one station in some part of the British Empire located in each of the five continents. British Mandated Territories and Protectorates were considered to be part of the British Empire.† The response to the invitation to submit claims was excellent and within a few months more than fifty certificates had been issued. At a time when the only other certificate of acknowledged merit was the "Worked all Continents" (issued by the ARRL) the W.B.E. soon became a yard-stick of achievement, especially amongst low-power operators.

Early in 1930, with Marcuse still in the chair as President, a fresh emphasis was placed on Empire Amateur Radio by the publication of a series of articles bearing the title "Our Empire Stations". No. 1, Egypt described the stations of SU8RS and SU8WY operated by Cecil Runeckles and William Wale who, at the time, were at Polygon, Cairo. Both were members of the Egyptian Signal Corps and were British subjects. They made many thousands of contacts with the U.K. during the time they were together in Egypt.

In the May 1930 issue of the *Bulletin* Arthur Watts wrote at length on the theme of BERU and emphasised the importance of strengthening Empire contacts. "It has long been a dream of mine" he wrote,

* It was not until 1960 that B.E.R.S. numbers finally disappeared, giving way to B.C.R.S. (British Commonwealth Receiving Station) numbers. These were, in turn, replaced in 1964 by O.R.S. (Overseas Receiving Station) numbers.

† The W.B.E. continued to be issued under that name until 1964 when its title was changed to W.B.C. (Worked British Commonwealth) Certificate.

“shared with others who have Empire Amateur Radio at heart, that we should aim to have every single overseas radio amateur a member of the Union and every portion of the Empire in permanent touch with the Mother Country.” How close he was to realising some of these ambitions was revealed later in his article—the Post Office had agreed to the Society’s request that nominated amateur stations in the United Kingdom should be permitted to exchange BERU messages with amateur stations in the Dominions and Colonies. This was indeed the break-through Arthur Watts and those behind him had hoped would come. Here again, much of the success was due to the persuasive powers of his pen and voice.

Then, on June 23, 1930, occurred an event that brought the BERU into great prominence. On that day the Society’s Patron (H.R.H. The Prince of Wales, K.G.) celebrated his 36th Birthday. Some weeks prior to that date Arthur Watts, as Publicity Manager, had written to BERU representatives throughout the Empire suggesting that they should send, via Amateur Radio, loyal greetings to His Royal Highness on the occasion of his birthday. The response was excellent and notwithstanding very poor radio conditions messages arrived from Canada, Newfoundland, South Africa, Ceylon, Iraq, Jamaica, Egypt, Kenya, Uganda, Tanganyika and Southern India. The Society’s own message of loyal greetings, together with those that had reached the Society from abroad, were delivered at York House (then one of the official residences of the Prince of Wales) by Mr. Watts. The next day the President (Gerald Marcuse) received a letter from Sir Godfrey Thomas, Private Secretary to the Prince, which read:

“I am desired by the Prince of Wales to convey through you to the Council and Members of the Radio Society of Great Britain, His Royal Highness’ thanks for their birthday congratulations which he greatly appreciated.

“Perhaps you would be good enough to convey to those radio relay leagues, groups and other amateurs whose greetings to the Prince you have forwarded, the enclosed message from His Royal Highness”

The message read:

“The Prince of Wales sends you sincere thanks for your good wishes, which His Royal Highness much appreciated.”

The Loyal Relay of 1930 led up to the appointment of Empire Link Stations and to the publication in the *Bulletin* of up-to-date news from remote parts of the Empire which had been received *via* the

link networks. Several of those who had been invited by the Council to participate in the Loyal Relay (they were Harold Old, G2VQ, Fred Miles, G5ML, Geoffrey Thomas, G5YK, Don Price, G6HP, L. Howard Thomas, G6QB and Alan Smith, G6VP) were among the first to be appointed Empire Link Stations and they were joined later by a number of other prominent amateurs, including Douglas Chisholm, G2CX, Victor Desmond, G5VM, James W. Mathews, G6LL, Frank Neill, GI5NJ, F. L. Stollery, G5QV, M. Wilkinson, G2YU, Harold and Leslie Wilkins, G6WN. The mark of distinction reserved for the Empire Link Stations, a red enamelled Society badge bearing the letters E.L.S., was the most coveted emblem in all Amateur Radio during the early 1930's.

During Convention 1930 a letter was read from the New Zealand Amateur Radio Transmitters' Society in which the suggestion was made that RSGB, on behalf of BERU, should arrange an annual Empire Radio Day. It was from that suggestion the first British Empire Radio Week Contest was inaugurated. Neville Shrimpton, ZL4AO, of Dunedin, New Zealand, and Jack Drudge-Coates, Y-DCR of India (later G2DC) were present at the Convention that year; both were exceptionally well-known DX operators. It was Shrimpton who proposed and Drudge-Coates who seconded a motion that "an Empire Radio Week be inaugurated and that this be held during the period 0001 GMT Sunday, February 22 to 2400 GMT Saturday, February 28, 1931". The proposal met with the full support of the Convention who charged Arthur Watts and his Committee to work out the details. The rules for the 1931 Contest make interesting reading today, now that the words "British Empire Radio Union" have lost their meaning to most of those who participate in the annual Empire Contest. But the annual event still takes place and the younger member thinks of this as "Beru" with never a thought for its original meaning. However in 1931 the first British Empire Radio Week contest created widespread interest in both the national and local press at home and abroad. The story of that contest will be related later. Suffice it to say here that during the short period of time Arthur Watts had been associated, officially, with the Society he had indeed placed the emphasis on Empire.

Metres to Megacycles

TODAY, most radio amateurs talk about frequency and wavelength in the same breath, referring, for example, to a frequency of "145 Megacycles (or Megs) in the Two Metre band". Everyone knows what is meant, in spite of the confusion of terms and the mathematical inaccuracy of the statement. But prior to 1928, amateurs and others concerned with radio communication matters, spoke—and wrote—only in terms of wavelength. Not until the Washington Radio Conference of November 1927, (when for the first time *bands of frequency* were allocated to various services) was any serious attention given to this form of nomenclature.

Early in 1928 the Licence Sub-Committee of the RSGB, under the chairmanship of Gerald Marcuse, G2NM, began a series of meetings with representatives of the General Post Office to consider the conditions under which a new form of amateur transmitting licence, based on the Washington Convention, might be drafted. For the next twelve months, many pages of the *T & R Bulletin* were devoted to the new techniques that would have to be applied in order to fulfil the new requirements. In September, for example, E. A. Dedham, G2NH, contributed an article on a crystal-controlled resonator and wrote:

"Although we cannot be sure exactly what is going to happen under the new regulations of the Washington Conference . . . there is one thing that stands out prominently from the somewhat hazy background. That is the fact that we are all going to need a really reliable and accurate wavemeter. Our new short wave bands are narrow but exclusive, therefore, we have every right justly to protect them if they are infringed upon by stations not entitled to use them. On the other hand we cannot expect any mercy if we stray into the bands that are reserved for other services. Up till the present ninety-nine per cent of us have referred to the waves on which we work as 'the 45 metre band' or 'the 23 metre band' and so on. In its way this has been all right because our bands have been fixed on a wavelength basis but under the new regime our bands have been granted on a kilocycles basis and it seems to me that now, at the very start, is

a most suitable time to change our nomenclature to the more correct kilocycle terms. In fact, surely, it will be easier for us to refer to 'the seven Megacycle band' rather than to 'the 41-42 metre band.'" Dedman was thus the first amongst British amateurs to write in terms of "megacycles" rather than "metres" and he was quickly supported in his reasoning by all the leading technicians in the Society. Geoffrey Thomas, G5YK, who was soon to become Editor of the *T and R Bulletin*, promptly began to refer to the calibration signals which he had been transmitting regularly for some months previously, as Standard Frequency Transmissions. Prior to October 1928 they had been referred to in metres. The first RSGB Standard Frequency Transmissions were on 7050 kc/s and 7250 kc/s—band edge markers against the time, fast approaching, when the new table of frequencies would come into operation.

A communication from the Post Office during the late summer of 1928 outlined the terms of the new licences. A recommendation of the Society that the use of raw a.c. and i.c.w. be prohibited had been adopted, as had a recommendation that all licence holders be authorised to use the new 1715-2000 kc/s, 7000-7300 kc/s and 14,000-14,400 kc/s bands. Transoceanic permits, issued on the recommendation of the Society, would continue in force and those holding them would be granted permission to use the 28-30 Mc/s and 56-60 Mc/s bands. The 3500-4000 kc/s band would be exclusively reserved for special experiments and permits to use that band would be issued only to experienced members on the recommendation of the Society after full details had been given of the proposed experiments. The band would be shared with stations in the fixed and mobile services. Some good purpose may have been served by continuing this special policy but there is no doubt it led to much bad feeling as all remember who had the responsibility at the time of addressing provincial meetings of members. Critics of the policy claimed that London members were receiving preferential treatment because they were better known to those who made the recommendations to the Post Office. There was, possibly, little or no truth in the criticism but the restrictive policy in respect of certain licence matters was at the bottom of the story that "London ran the roost".* Ian Fraser showed that he was sensitive to this point when in the May 1928 issue of the *T and R Bulletin* he wrote a Presidential Address to the membership. In this he commented that "a Society with a relatively small number of members—if it is National in character and operates in Great Britain must have its headquarters in

* Correspondence from critics published in *Wireless World* during 1928, referred to the 3.5 Mc/s band as "The RSGB band".

London. This is principally because about one-sixth or one-seventh of the population of Great Britain lives in the Metropolis. Every society of this kind, no matter what its objects, suffers from certain disadvantages. The Radio Society is no exception. The executive is almost certain to be composed mainly of persons who live in London. This is not because London wants to 'run the show' but because those who live at a great distance cannot afford the time and possibly the cost involved by regular service on an executive committee. Londoners must not be blamed for this, rather ought they to be thanked for bearing the burden of office, which is very often onerous".

The new licence did not come into force until the autumn of 1928, by which time the *Bulletin* had taken the opportunity of paving the way for new operating conditions by publishing some first-class technical articles. Ernest Simmonds, G2OD, Eric Megaw, G6MU, Cecil Goyder, G2SZ, T. Palmer Allen, G16YW, Geoffrey Thomas, G5YK, Frank Aughtie, G6AT, Ernest Dedman, G2NH, James W. Mathews, G6LL, Arthur Hinderlich, G2QY, H. Cecil Page, G6PA, F. Rodman, G2FN, and Marcus Samuel, G5HS, (now G4FX) were only a few of the leading amateurs of the day who made valuable contributions to the six issues of the *T and R Bulletin* from July to December 1928—a vintage period.

Perhaps as important as the technical articles was the great part played by Contact Bureau. Palmer Allen was a born leader and the manner in which he organised this new sectional activity brought for him wide commendation. As a mark of the Council's—and the Society's—appreciation of his work he was awarded the ROTAB Trophy for 1928. Allen received a great ovation when he attended the Annual General Meeting in December to accept the Trophy from the donor—Gerald Marcuse—who was in the chair that evening.

A further series of Pinoli "Hamfests" and the third Convention, held on September 28 and 29, were outstanding events during 1928. The "Hamfests" attracted even greater attendances than those held earlier, with a good number of amateurs from abroad joining in the proceedings. It was at these gatherings, in particular, that plans were made for the Convention which was supported by at least 150 members—more than one-tenth of the whole membership. A highlight of the technical session was a paper read by Ernest Simmonds, G2OD, on frequency stabilisation who described various methods of achieving crystal control. Cecil Goyder, G2SZ, argued a case for the master oscillator-power amplifier arrangement and the subsequent debate was one of the most important held at a Society meeting. A visit to the Research Laboratories of the General Electric Company at Wembley was the first of many similar visits to places of technical

interest to be arranged by the Social Committee at Convention time.

During the business meeting, John Clarricoats, G6CL, who had been co-opted to serve on the Council in July 1928 and was currently Social Manager and Vice-Chairman of the T and R Committee, outlined a Scheme of Representation which had become necessary to cope with the rapid growth of the Society. It was proposed to split some of the larger Districts (such as London) to allow District Representatives more readily to keep in touch with members. The proposals were unanimously approved for adoption with effect from January 1, 1929. In the absence of the President (Ian Fraser), who was abroad at the time, Bevan Swift proposed that future Annual General Meetings should be held during Convention. The proposal was approved by the members present and confirmed at the A.G.M. held in December but for some reason it was never followed-up in subsequent years. Like many other good ideas, such as the Radio Medal, it apparently got lost in the machinery of administration. A revised set of rules for governing the work of the T and R Committee also found favour with the members present at the third Convention. An important feature of the new rules was the decision to elect members to undertake specific duties. There was also provision in the rules for the appointment of *Bulletin* correspondents by overseas societies. The Convention dinner held, once again, at Pinoli's and presided over by Gerald Marcuse in his capacity as Vice-President, was attended by more than 120 members.

Commenting on the third Convention as a whole, Bevan Swift wrote in the October 1928 *T and R Bulletin*, "From the Presidential greetings at the opening session on the Friday evening to the last verse of 'Auld Lang Syne' sung by a closed circuit of hands at the conclusion of the dinner, the whole proceedings went with a swing. The arrangements throughout were in the hands of the Social Committee and affords ample proof of the necessity of this section to deal with matters of this kind". The thrills and excitements of those early Conventions will live long in the memories of those who were fortunate to be present.

The technical discussions which took place during the Convention of 1928 coupled with the important contributions made by eminent members of Contact Bureau, were directly responsible for the widespread interest which developed, in the autumn of that year, in the 10 metre (28 Mc/s) band. There was already some evidence from the United States that long distance contacts were a possibility on this wavelength but as far as European amateurs were concerned the band had not yet revealed many of its secrets. In the October 1928 issue of

the *Bulletin* James W. Mathews, G6LL, contributed an account of his own 10 metre work to date and recorded that "in America, many amateurs are in nightly communication with the opposite coast and several American stations have been heard in England. One, NU2JN, has succeeded in establishing two-way communication with EF8CT (France) but so far this is the only occasion on which a European station has been heard in America on this band. No NU (American) station has been heard over here after dark which would seem to point to the fact that for DX it is essentially a daylight wave. It could, of course, be useful for 'local rag-chews' during broadcasting since it is possible to work without an aerial".

Later that month on Sunday, October 21 Mathews, then living at Clapton in North London, became the first British amateur to establish two-way communication on 10 metres with the United States when he worked W(NU)2JN at 1430 GMT. The contact lasted for an hour and three-quarters. Later that day, at 1800 GMT, Simmonds, G2OD, worked W1AQD and remained in contact with him until 1940 GMT. He then contacted WIBJD. On October 28, Rodman, G2FN (ex-AI2KT of India) worked the U.S. West Coast station W6UF. Mathews used a crystal oscillator, two frequency doublers driving an *Osram* DET.1 valve producing an input of 50 watts. Power came from an ML Rotary Converter and the aerial was a Zeppelin-fed half-wave vertical about 40 ft. high.

Throughout the next few years 10 metres continued to attract much interest and as Mathews had predicted it soon established itself as a good band for daylight DX work but only during periods of maximum sunspot activity.

Notwithstanding the important part which the *T and R Bulletin* was playing in the development of the Society the high cost of production was still causing grave anxiety to those closely concerned with the affairs of the Society. Bevan Swift, Cooper and Marcuse frequently emphasised that the *Bulletin* would not survive unless more revenue could be obtained from advertising. The restricted field was, of course, the reason for the reluctance of many radio manufacturers and dealers to advertise in the *Bulletin*.

There is no doubt that during the late 1930s it would not have been possible to produce issues of the *Bulletin* containing sixty-four pages if the Society had not decided to enter into the publishing field by producing such best sellers as "*What is Amateur Radio?*" and '*A Guide to Amateur Radio*'. But in 1928 such "experiments" were still a long way away. At the Annual General Meeting that year Hon. Treasurer E. J. Simmonds, G2OD, reported a serious loss on both the *Bulletin* and the 1928 Call-Book but Bevan Swift,

G2TI, in his capacity as Honorary Secretary (he was doubling-up as Editor, Cooper having resigned in February for business reasons) was able to announce a substantial increase in membership. Contacts had been established with a number of Dominion, Colonial and Foreign societies who had appointed *Bulletin* correspondents. Several Dominion societies had become affiliated to the RSGB and the first steps had been taken to bring the British Empire Radio Union into being. More than 220 wireless dealers had been registered by a Joint Committee set up by the Society and the Wireless League—and some badly-needed income was expected to accrue from this source.*

Dr. John Wortley-Talbot, G6WT, of Torquay an enthusiastic vhf experimenter (who had become a member earlier in 1928) donated to the Society in the autumn of that year a most handsome silver cup—now known as the Wortley-Talbot Trophy—which he asked should be awarded annually to the member who, in the opinion of the Council, had carried out the most important experimental work during the year. The Council did not have far to look for the first holder—J. W. Mathews (“Jimmy” to his many friends) was indeed a worthy recipient. The donor was present at the A.G.M. in December to make the award in person to G6LL.

1928 was the year when many amateurs discovered that the Cleartron CT25X, available from Selfridge’s bargain basement for sixpence, made an excellent “power amplifier” in a T.P.T.G.† transmitter; Ernest Dedman, G2NH, suggested that Contact Bureau members should keep in touch through the medium of Letter Budgets; Ralph Royle, G2WJ, described the RSGB Amateur Bands Receiver (the first piece of short-wave equipment to carry the RSGB cachet) and the first Northern Area Conventionette was held in Manchester on March 31.

An interesting constitutional issue arose during the summer of 1928 when members of the Committee, assuming they were acting as the General Committee of the Society, nominated, in accordance with the existing Articles of Association, three of their number (Basil Davies, G2BZ, Geoffrey Thomas, G5YK and John Clarricoats, G6CL) to serve on the Council as co-opted members. The President (Ian Fraser) decided, however, that as the Committee was really no more than the old T and R Committee, working under a new

* In fact the Joint Committee Scheme continued until 1933 by which time it had become apparent that the scheme was outside the scope of the Society as it was then constituted. In the years between, both the Society and the Wireless League had benefited quite substantially.

† Tuned-plate, tuned-grid, single valve circuit.

name, it could not automatically be regarded as the General Committee of the Society. Accordingly he convened a joint meeting of Council and Committee members to discuss the issues involved. The outcome of the meeting was that the Council agreed, officially, to recognise the T and R Committee as the General Committee and to approve the regulations that had been accepted at the 1927 Convention as the official rules for the conduct of the Committee's affairs. It was agreed to co-opt Clarricoats and Thomas to the Council forthwith and authorise the Committee in future to submit the names of three members each year for election to the new Council. Clarricoats and Thomas were, in due time, formally nominated by the 1928 Council to serve on the 1929 Council and they were both elected. The Committee's nominations for the 1929 Council were D. P. Baker, G2OQ, J. W. Mathews, G6LL, and R. L. Royle, G2WJ, and all were elected. Baker, was at the time the society's District 5 representative (Midlands) and he was the first provincial member elected to the Council. His home was in Wolverhampton.

Into the Thirties

GREAT scientists, learned scholars, a distinguished admiral and a well-known military man were among those who led the Society during the first fifteen years of its existence. Each had special attributes and qualities to fit him for his high office but none had had the practical experience of Amateur Radio possessed of Gerald Marcuse, G2NM, who for two years (1929–30) was to bring that experience, as well as a most colourful personality, to bear on a multitude of problems as President of the RSGB.

“Gerry”—he was seldom called by any other name—had for years held positions in the Society. As Honorary Secretary of the T and R Section and then of the Society itself he had played a leading part in negotiations with the Post Office on all kinds of licence matters and it was he who had helped to bring to fruition, on behalf of the Society, the Transoceanic permits. He had earned public recognition for his pioneer work on short waves and in more recent years for his successful efforts to arouse interest in Empire Broadcasting. He had represented the Society at International meetings and had been closely associated with Hiram Percy Maxim and Kenneth Warner in the formation of the International Amateur Radio Union in 1924 and 1925. Having visited the United States and Canada, on numerous occasions partly on business and partly to make contact with those who knew him as a radio amateur, he was well-known personally to many amateurs on both sides of the Atlantic. There was assembled together at his home in Caterham, Surrey, a splendidly equipped station, where he was prepared at all times to extend most generous hospitality to those who came to see him—old hand and newcomer alike. For these and other reasons he was a most suitable person to occupy the Presidential chair.

Although the establishment of links between the RSGB and Amateur Radio societies and groups within the Empire was undoubtedly the most important development during the years that Marcuse was President, much else happened that had an important influence on the future of the Society. For example, the decisions reached at the 1928 Convention were reflected in the “new look”

T and R Committee which came into office on January 1, 1929. The Committee now consisted of sixteen District Representatives and six members who had been elected to undertake specific duties. Marcuse himself, although President, accepted the office of Licensing Committee Representative on the Committee, while Clarricoats, G6CL, doubled as a member of Council and as Social Committee representative. Geoffrey Thomas, G5YK, who succeeded Bevan Swift, G2TI, as Editor in February 1929 doubled the duties of that office with those of a member of Council. Thomas worked in the Bank of England but returned to his home in Cambridge every weekend to operate his station G5YK. He had a sound technical knowledge based on practical experience: even more important he possessed a flair for journalism. Under his able editorship the *T and R Bulletin* made great progress, especially in the technical field. He was aided by a team of enthusiasts including "Jimmy" Mathews, G6LL—who for the next thirty-five years and more was to retain an abiding interest in the work of the Society.* In the month that Thomas became Editor, he and Clarricoats opened a debate at a new venue for informal London meetings—the City of London Electric Company's Restaurant—on the subject "Should telephony be abolished on 7 Mc/s?" Clarricoats argued in favour of abolition but his motion was defeated by eighteen votes to ten with many abstentions. The subject of the debate was argued up and down the country for many years thereafter.

Although 7 Mc/s was possibly the most popular DX band at that time, interest in the "newly discovered" 28 Mc/s band continued to increase. During March 1929, under the auspices of Contact Bureau, a series of 28 Mc/s tests took place, the objects of which were:

- (i) to determine if the simultaneous reception of distant stations is obtained at different points in Great Britain.
- (ii) to determine the effectiveness of low and high power.
- (iii) to determine the possibility of communication with other continents.
- (iv) to investigate the suitability of various transmitting circuits.
- (v) to investigate the practical value of amplification at signal frequency on the receiver.
- (vi) to investigate the possible relation between solar and magnetic conditions and propagation.

This was certainly a formidable set of objectives. The response to the tests was considerable, so much so that for many months after

* J. W. Mathews was elected a Vice-President of the Society in 1956 after having served as a member of the Council for nearly twenty years.

they took place reports continued to reach Contact Bureau from all over the world.

In March 1929 Ernest Simmonds, G2OD, was forced to resign as Honorary Treasurer for health reasons. He had held the office for the past two years during which time the financial position had become more and more difficult, due to the high cost of producing the *Bulletin* and to the comparatively poor support from advertisers. Simmonds was succeeded by Ernest Dawson Ostermeyer, G5AR, who seven years later was elected President and then in due time an Honorary Member.

The great success of earlier gatherings in the Provinces led to many of the newly-elected District Representatives deciding to organise functions in their areas which soon came to be known as Provincial District Meetings. Throughout the period of Marcuse's Presidency and for the next ten years P.D.M's played a vital part in the life of the Society. Marcuse, himself, attended a number of meetings but the major load fell on Harold Old, G2VQ, of Nottingham (who was appointed in 1929 to the new office of Provincial District Representative with a seat on the Council) and John Clarricoats, G6CL (who acted as Honorary Secretary during 1929 and assumed that title after election on January 1, 1930). Attendances at early P.D.M's varied a great deal—from forty or fifty in the remoter districts to 100 and more in the larger cities. One attraction at these meetings was a chance to meet friends of the air and discuss technical matters, but the major "draw" (strange at it may seem to later generations of amateurs) was the business meeting. At that time in the Society's history and certainly up to the outbreak of World War II there was a much more lively interest in Society affairs than was the case thirty-five or so years later. Perhaps it was the personal contact that led to this enthusiasm.

At a Special General Meeting of the Society held in London during 1964, (when the membership was in excess of 12,000) to consider vital alterations to the Articles of Association, no business could be conducted because a quorum (fifty members) was not present. At the second meeting a week later less than a dozen members outside the Council circle attended to adopt the new Constitution. Thirty-five years earlier attendances of over 100 were regularly recorded at business meetings when the total membership of the Society was less than 2000. In those days few members had motorcars—those that had filled them with friends and often travelled long distances to support a Society function. Ladies very rarely attended P.D.M's in those days but there were two important exceptions. Barbara Dunn, G6YL, was the first exception. Being of a quiet and retiring nature,

for a long time few of the hundreds who contacted her efficient and intensely active low power station at Stock in Essex, knew the operator was a lady. Gerry Marcuse *did* know, however, and it was he who was probably responsible in persuading Miss Dunn to come to the 1930 Convention. A few weeks earlier, G6YL had been awarded the newly donated 1930 Committee Cup for outstanding work in the first series of 1.7 Mc/s tests. Her presence at the Convention Dinner caused quite a stir as did the fact that when Marcuse made the presentation she became the first lady to become the holder of a Society trophy. Barbara Dunn, who was licensed in 1927, remained Britain's only YL* transmitting amateur until 1932 when Nell Corry of Tadworth, Surrey, doubled the number by becoming G2YL. Miss Corry, who made history in 1935 by working a British Empire station in each of the five continents on 28 Mc/s during a period of six hours 20 minutes, quickly established herself as a most competent operator.†

The Conventions of 1929 and 1930 found "Gerry" Marcuse at his very best. Surrounded by many old timers (many of them from abroad) and by an ever-growing number of newcomers, he was equally at home at technical discussions, business meetings and social events. He enjoyed, as did everyone who attended, the Convention Dinner and his response to the toast each year to "The President" brought forth much humour and much sound commonsense.

It was during the 1930 Convention Dinner that the first of the soon-to-become famous "Clarry Swindles" took place. By its more modern connotation it was no more than a very good raffle but in 1930 it was something quite new at Amateur Radio gatherings. Prior to the Convention, the Secretary (who had many friends in the radio industry, having been associated since 1912 with the Western Electric Company and more recently with Standard Telephones & Cables Ltd) had succeeded in obtaining a great many substantial prizes from such firms as Mullard, Cossor, T.C.C., Ever-Ready, Quartz Crystal, Stratton, Belling & Lee, Dubilier, Edison Bell, Pertrix, Wingrove & Rogers and Exide. According to a contemporary report of the dinner "Considerable excitement prevailed during the drawing for prizes. It was pleasing to note that BERU members succeeded in 'pulling-off' some of the highest valued prizes while the provincial members also collected a good proportion of the gifts". "Clarry's Swindle" became an outstanding feature of every future Convention up to 1938—the last to be held prior to World War II.

During the business meeting at the 1930 Convention the suggestion

* Young Lady.

† More than thirty years later G6YL and G2YL were still active on the air.

was made that the Society should establish an official station at Headquarters but members quickly realised that such a project would be impractical at that time on the score of cost and the difficulty of finding a suitable venue in Central London. From the early 1920's until the outbreak of war in September 1939, the Headquarters of the Society was housed in three rooms in an office block at 53 Victoria Street, London, mid-way between Westminster Abbey and Victoria Station.

Two important constitutional changes were agreed at the 1930 Convention. Firstly, the T and R Committee would be disbanded at the end of that year, thereby overcoming the duplication of effort between Council and Committee which had been apparent for the past few years. Secondly, those elected to the Council would, in future, be required to undertake specific duties—a continuation of the principle that had governed the election of certain members to serve on the T and R Committee. The offices to be filled were those of Contact Bureau Manager, Districts' Manager, Editor, Licence Manager, Publicity Manager, QRA Manager, QSL Manager, Social Manager. Small committees to help the Managers would be set up in appropriate cases. The first Council to take office in accordance with the new arrangements was led by Bevan Swift, G2TI, who became President at the beginning of 1931 with Arthur Watts as his Vice President.

At the A.G.M. held on December 19, 1930, with more than 130 members present, the Honorary Secretary presented the most comprehensive Annual Review so far given to the membership. Covering every major aspect of the Society's work, special attention was drawn to the considerable increase in membership that had occurred during the year (a record number of 116 members had been elected at the October 1930 Council meeting). The Report recorded the thanks of the Council to Palmer Allen who, for business reasons, had been compelled to resign during the year as Manager of the Contact Bureau,* and to May Gadsden for the conscientious manner in which she had carried out her duties at Headquarters. Miss Gadsden had been appointed Assistant Secretary in December 1929 and for the next three years she remained the only paid member of the staff.† During that time she dealt with the routine requirements of a rapidly increasing membership as well as with the day-to-day business of the QSL Bureau, leaving only the queries to be dealt with by QSL Manager, Douglas Chisholm, G2CX.

* His successor was H. J. Powditch, G5VL, of Porth, Cornwall.

† She remained a member of the staff until December 1963 when she retired after thirty-five years service.

Gerald Marcuse's two years as President were years of progress for the Society, indeed they represented a turning point in its history. Behind were the landmarks upon which the Society had been founded. Ahead lay a great Society shortly to be governed very largely by much younger men than those they succeeded. Soon those younger men would, themselves, be creating new landmarks and helping to build on the traditions already established by the founders and those associated with them.

It was by the efforts of those young men, who gave of their very best, that the Society moved smoothly forward into the 1930's.

The Bevan Swift Era

AT the Annual General Meeting of the Radio Society of Great Britain held on December 29, 1933, the President-Elect (Arthur Watts, G6UN) had this to say when making a presentation to his predecessor, Henry Bevan Swift, G2TI:

“Mr. Swift, who is one of the oldest amateurs in the country, has served in turn in nearly every executive position in the Society and he has now occupied the Presidential Chair for three successive years. During those three strenuous years our Society has made astonishing progress which has not been confined to one or two departments but has embraced practically the whole of our activities. There are two things which I should like to mention especially and which I think may be described properly as landmarks in our history; one is the *T & R Bulletin* and the other is our Annual Convention, both of which we owe to Mr. Bevan Swift.

“Mr. Swift has been the master-mind at the back of the work achieved and we are much indebted to him for his guidance in our deliberations on Council, his unflinching courtesy to all and his kindly readiness to assist any and everyone who approaches him with a problem or difficulty.”

Who was Bevan Swift? Professionally he was a chartered electrical engineer with offices in Norfolk Street, off The Strand, a stone's throw from The Institution of Electrical Engineers, of which body he had been a member since a young man. He had been an amateur at least since 1908 when he began to experiment with the application of wireless signals to the timing of clocks. He was a member of the Wireless Society of London in 1913 and his description of the memorable meeting held in January 1914 has been related elsewhere in this book. He became a member of the Committee of the Society in 1921 and obtained his licence that year. His official work on behalf of transmitting amateurs began with the setting-up of the T & R Committee but he had made useful contributions to earlier discussions which led to the amalgamation of the various transmitting organisations. The years up to 1931 found him performing

many executive duties where his sagacity and wide experience enabled him to guide the deliberations of the T and R Committee and, when the need arose, those of the Council itself.

Bevan Swift revived the practice of Campbell-Swinton and other illustrious Past Presidents by delivering a Presidential Address. Choosing as his subject "Historical Survey of Amateur Radio" he traced its development back to the days of the earliest experimenters.*

One of the highlights of the early months of Bevan Swift's first year as President was the British Empire Radio Week held from February 22-28, 1931. The winner of this first Empire Contest was Trevor Evans, VK2NS, who had discovered a weakness in the rules which placed the amateurs of Australia and New Zealand in a very favourable position.† Evans scored sixty-four points from sixty-four contacts with Empire stations but no less than fifty-five of his contacts were with New Zealand stations (twenty each on 3.5 Mc/s and 7 Mc/s and fifteen on 14 Mc/s). He had three contacts with the U.K. compared with Fred Miles, G5ML, of Kenilworth, the leading G, who worked twelve Australians and twelve Canadians as well as stations in five other zones to give him a score of forty-two points. Harold Old, G2VQ, Stephen Townsend, G2CJ, and Victor Desmond, G5VM finished 2nd, 3rd and 4th respectively amongst the U.K. entrants. An indication of the poor conditions experienced during the contest can be gleaned by studying the report published in the *T and R Bulletin*, (June 1931). Of the thirty-two entrants from the U.K. (all from England) eight made one contact and seven only two. All but one of the top eight U.K. entrants were Empire Link stations holding high power permits. The total number of entrants was fifty-eight.

Few of those who admire the handsome BERU Senior Rose Bowl whenever it is displayed at RSGB Annual General Meetings know that it was purchased by members themselves in the year 1931. An invitation to subscribe towards the cost of purchasing a suitable trophy was published in the *T and R Bulletin* (March 1931) and within a few weeks £22 ls. 6d. had been donated.

A dominant topic for discussion throughout 1931 and in the early part of 1932 was the approaching International Telecommunication Conference due to be held in Madrid during the autumn of 1932. As has happened prior to every similar Conference since, the months

* *T and R Bulletin*, Vol. VI, Nos. 8 and 9.

† The rules permitted a competitor in one Zone to work up to twenty stations in another Zone on each amateur band. There were twelve zones and activity in eleven of them during the Contest. Australia and New Zealand were in different Zones for Contest purposes.

before the Madrid Conference were filled with alarms and excursions. Sages on both sides of the Atlantic read into their private crystal balls the utter reduction of the amateur bands but, as things turned out, all was well in the end.

During the summer of 1931 the Secretary of the ARRL and IARU (K. B. Warner) visited London en route to Copenhagen where he was due to attend the IInd Plenary Assembly of the International Radio Consultative Committee (CCIR). While in London he discussed the forthcoming Madrid Conference with Watts, Marcuse and others. Broad policy was agreed and a decision reached that both the ARRL and the RSGB should seek approval from their respective governments for delegates to attend the Madrid Conference. Warner was optimistic—Watts and Marcuse were no more than hopeful. Warner went off to Copenhagen as a representative of IARU but as he had predicted, amateur matters were not discussed at the Conference. He had, however, made useful contacts with many Government officials, contacts which were to stand him and others in good stead in later years. Watts and Marcuse followed-up their meeting with Warner by contacting the Post Office about representation at Madrid but it was not until September 1932 that it became known that Watts would be able to attend the Conference as an IARU observer.

Many pages of the *T and R Bulletin* were devoted to the Conference, including “on the spot” reports written by Arthur Watts, which helped members for the first time to appreciate some of the problems which had to be faced at international level.* However, when the final signature had been applied to both the Convention and the Radio Regulations, amateurs everywhere were able to breathe a sigh of relief because no cuts had been made in the amateur bands notwithstanding the tremendous pressures which had been applied to prevent amateurs from continuing their use of what is now called “Top Band” (1.8 to 2 Mc/s).

The Madrid Radio Regulations recorded a number of amendments to the Q Code some of which were adopted by amateurs. Changes were also made in the Phonetic Code for telephony operation but amateurs were surprised to find that an old friend Xanthippe had not been relegated to the land of X's.† Article 8 gave amateur stations, for the first time, a recognised place in the sun defining clearly the things they could and could not do internationally. The Frequency Table recorded no changes affecting amateurs but a Note in the Table in respect of the 1.7–2 Mc/s allocation in Europe

* The Madrid Conference 1932, *T & R Bulletin*, Vol. VIII. Nos. 5 and 6.

† X's meant “atmospherics”.

gave a warning of what might have happened if Watts and Warner had not been present to press the claims of amateurs for "status quo" on all bands. The former, in his second Report to RSGB members said "The Society may justly take some of the credit for the decision to retain the 1.7 Mc/s band for amateurs . . . and I do not think it an exaggeration to say that but for the British delegation the band would have been lost to amateurs in Europe". Those same sentiments concerning "Top Band" were often to be expressed by IARU—RSGB observers present at future Conferences of the International Telecommunication Union. From Madrid (1932) to Geneva (1959) the same comments were made. One further fact about the Conference must be recorded. Although the RSGB made a contribution towards the very considerable expenses incurred by Arthur Watts in representing the Society and the IARU, the major share of the cost was borne by Watts himself.

Before leaving the Conference reference must be made to the original series of band occupancy checks. Six months before the Conference opened a *Bulletin* Editorial (April 1932) commented on the apparent lack of interest shown by non-transmitting members in the work of the Society. Leslie Hill, then 2AGM of Bristol (later G5WI), took up the challenge in a Letter to the Editor in which he said, in effect "Give us a task to do and we will do it". At about that time G6CL had been considering how best to obtain—with Madrid in mind—some idea of the number of stations active on the various amateur bands in the United Kingdom. He had already done some work at home but his scope was limited. Leslie Hill's request to be given a task seemed to be a Heaven-sent opportunity to develop an idea which might produce the required result. The idea was to carry out systematic checks of the amateur bands at specific times during certain weekends. Hill was enthusiastic from the start and within a few weeks he had gathered together a group of helpers including G2WS (a future President of the Society), G5ZX, 2AWJ, 2BRA, BRS.497, 624, 689 and 815. The first checks took place during four weekends in July 1932 when activity on the 1.7, 3.5 and 7 Mc/s was recorded. The results of that check and of a second in September were made available to Arthur Watts before he left for Madrid and the information was used by him at the Conference as evidence of the growing pressure on the amateur bands. A full report on the work of the Band Occupancy Group, published in the *T and R Bulletin* (May 1933), showed that 712 individual U.K. stations had been heard during three checks—the third made in March 1933, had recorded 153 stations active on 1.7 Mc/s, 187 on 3.5 Mc/s and 331 on 7 Mc/s. The B.O.C. Group continued to operate for many years, in fact the

results achieved prior to the Cairo ITU Conference in 1937 were of very great value to the IARU observers. A B.O.C. certificate was highly prized by those who had qualified to join the Group.

One of the most irritating restrictions imposed on British amateurs following the Washington Conference of 1927 was that of "tolerances". These had the effect of reducing the width of every amateur band by a considerable amount—in the case of 7 Mc/s by 100 kc/s (7050 kc/s–7250 kc/s instead of 7000 kc/s–7300 kc/s). Following protracted negotiations between the Society and the Post Office "tolerances" were reduced by one half in October 1931 which meant that the 7 Mc/s band then became 7025 kc/s–7275 kc/s in width. This was an improvement but the remaining tolerances were still an unreasonable and totally unnecessary restriction. Nevertheless they were not finally removed until 1939.

The Loyal Relay of messages to the Society's Patron (H.R.H. The Prince of Wales, K.G.) inaugurated in 1930, on the occasion of his birthday, gathered momentum as the years passed but the valuable national and local press publicity which followed the first Relay, had to be discontinued in 1931 at the request of the Post Office, ever mindful of the Postmaster General's monopoly in respect of telegrams and radiograms. As operating techniques and equipment improved so did the number of messages received from Empire societies and groups increase.

When the RSGB membership total passed the 2000 mark for the first time in December 1933 an increase of 100 per cent had taken place in five years. Some of the increase had been due to the efforts of Arthur Watts and others associated with him in extending the British Empire Radio Union but an equally important factor was the valuable publicity which came to the Society with the appearance of a new publication *A Guide to Amateur Radio*. This fifty page booklet, edited by the Secretary, G6CL, grew out of a four-page leaflet which set out the aims and objects of the Society. The *Guide* made its bow to the public at the Radio Show in 1933 when 2000 copies were sold in ten days. Written with the object of providing an introduction to Amateur Radio, it contained much useful technical and topical information as well as advice about the benefits to be obtained by joining the RSGB. The technical section was based largely on fairly simple constructional articles previously published in the *T and R Bulletin*, together with a number of specially contributed features. One thing is quite certain, no one at that time could possibly have foreseen the tremendous influence the *Guide*—and its direct descendant *The Amateur Radio Handbook*—would play in the future development of the Society.

Some words contained in the Foreword to the first edition of the *Guide* have been repeated in different forms throughout the years since they were first written. "As a hobby Amateur Radio has no equal. As a scientific pursuit, for both old and young alike, it offers possibilities greater than those that can be derived from any other branch of electrical or mechanical engineering. As a means of linking together the peoples of the world its influence cannot be too strongly emphasised. Through its medium, barriers which normally surround class, creed and nationality are swept aside and the far ends of the earth are brought into our own homes. The formation of new and lasting friendships with unseen colleagues in distant lands become commonplace. Such then is Amateur Radio. May we ask you to come through the pages of this book with us and see whether Amateur Radio cannot help to make life more interesting for you?"

Convention, arranged to coincide with the Annual Radio Show, continued to draw large numbers each year, in fact, by the time 1932 arrived a great many members who had failed to book for the Convention Dinner either went empty away from Pinoli's or had to take "pot luck" in the general restaurant. In 1933 that problem was solved, at least for the next few years, by a move to The Florence, an equally well-known restaurant in neighbouring Rupert Street.* Convention business meetings, while following the general pattern of earlier meetings, now placed greater emphasis on the provision of facilities for the District Representatives to express their views on Society affairs. It was from these meetings that many important policy matters were initiated by the Council.

Provincial District Meetings were one of the factors that contributed to the growth of the Society at this time. During the three years (1930-32) when Clarricoats was Honorary Secretary of the Society, he attended, on behalf of the Council, about fifty such meetings, mostly at weekends, in all parts of the United Kingdom giving at each meeting an account of current Society affairs. Towards the end of 1932, with membership increasing rapidly, it became clear to the Council that a permanent secretary should be appointed. Clarricoats was invited to accept the position, which he did, and his appointment dated from December 5, 1932.†

* Like Pinoli's, The Florence, no longer exists.

† At the time of his appointment he had been licensed as G6CL for nearly seven years but he had been "in wireless" for nearly 20 years having begun to dabble in 1913. He had served as a Royal Flying Corps wireless operator in Belgium and France for more than two years during World War I and had, since 1912, except for war service, been with Western Electric Company and Standard Telephones & Cables Ltd. From 1919 he had been in charge of wireless inspection at Woolwich, Eltham, Stratford, New Southgate and Hendon.

Perhaps the development that brought the greatest national publicity to the Society during the Bevan Swift era was the establishment of the Royal Naval Wireless Auxiliary Reserve. Although efforts were made by G6CL as far back as 1930 to interest the Air Ministry in establishing a reserve of radio amateurs the Admiralty was the first of the three Service establishments to realise the possibilities of such a reserve. Negotiations began in January 1932 when Bevan Swift, Watts and Clarricoats were invited to attend a meeting at the Admiralty convened by the Director of Signals (Capt. J. W. Dorling, R.N.)*. Hugh Pocock of *Wireless World* represented the technical press, Capt. Echevarri, the Wireless Telegraphy Board, and Major W. H. Oates the "unattached" radio amateur. Dorling outlined the proposals of the Signals Directorate which, broadly speaking, were to establish a reserve of licensed radio amateurs who would be prepared to exercise with Admiralty personnel and be available in time of emergency to take up duties in a new section of the Royal Naval Reserve—to be known as the Royal Naval Wireless Auxiliary Reserve.† Exercises would be on frequencies near to the amateur 3.5 Mc/s band. At the second meeting held on June 1, 1932, with Capt. A. J. L. Murray, R.N., the new Director of Signals in the chair, the RSGB representatives received permission to discuss the project, for the first time, with their Council colleagues.

During the early thirties there was much talk of disarmament. It was a period too when strong pacifist views were held by men and women in every walk of life, the Amateur Radio movement being no exception. It was against this background that Bevan Swift and his colleagues had offered, subject to the Council agreeing, to provide facilities at the forthcoming Convention in September, for Capt. Murray to address the members present about the proposed Reserve. After much debate the Council agreed (by a majority vote) and in due time Murray attended Convention and delivered his address. A national press release made on the same day resulted in widespread publicity for both the Society and the new Reserve. The scheme, generally speaking, was well received by Society members but one who spoke out strongly against it on the ground that Amateur Radio should stand for world peace was Arthur Milne, G2MI.‡ He considered the Council had "sold the Society to the armed forces."

* James Dorling, later became Director of the Radio Industry Council and in 1955 he opened the RSGB Amateur Radio Exhibition. He had then retired from the Royal Navy with the rank of Admiral.

† The title was changed later to Royal Naval Volunteer (Wireless) Reserve, (RNV(W)R).

‡ Arthur Milne became President in 1954.

Notwithstanding Milne's protest the Reserve got off to a good start with Bevan Swift, Watts and Clarricoats on the now officially constituted R.N.W.A.R. Committee and with many well-known amateurs taking an active part in the organisation. In the months that followed, the Secretary of the Reserve Committee (Commander Leslie Saunders, R.N.) and the Secretary of the RSGB attended many "recruiting" meetings of Society members both in London and the Provinces.

The Reserve went into business with procedure exercises transmitted from the Admiralty *via* Cleethorpes (GYB) on three evenings a week on a wavelength of 3325 metres. As time went on the Reserve increased in strength and prestige. R.N.W.A.R. transmitting stations came into being and crystals were provided by the Admiralty but not until after much argument with "My Lords" who wanted the service but did not want to pay for any part of it.

The precise strength of the R.N.V.(W.) R. at the outbreak of war in September 1939 has not been made public but it was probably around 1000. The full story of the Reserve deserves a book unto itself, suffice here to say that when war came the Reserve upheld the highest tradition of the Royal Navy and of the Amateur Radio movement. The first casualties amongst British radio amateurs occurred with the sinking by enemy action of H.M.S. "Courageous" in September 1939 when Telegraphists Kenneth Abbott, G3JY, of Blackpool, and Jack Hamilton, G5JH, of Gloucester lost their lives.

The most popular outdoor event in the RSGB Calendar is National Field Day. It has been ever since it started, in spite of protests about rules, attempts to outwit the organising Committee and suggestions from time to time that it had outlived its original motive. The first N.F.D. took place during the first weekend in June 1933 and except for the war years it has continued as an annual event ever since. The idea emanated from talks between certain members of the old East London District (No. 14) who for years beforehand had enjoyed a Field Weekend each summer. The original purpose of N.F.D. was to demonstrate that low power portable stations set up at short notice out of doors were capable of maintaining reliable communication with other low power portable stations in different parts of the British Isles. The results showed "that if the necessity arose the Amateur Radio movement in the U.K. could place into operation an emergency network of stations at short notice".* The report on the first N.F.D. suggested that "such a necessity is hardly likely to arise in this country but it is reassuring to know our capabilities in this direction". Six years later, at the start of World War II, many radio

* *T and R Bulletin*, Vol. IX, No. 2.

amateurs, who were among the first of the many thousands of R.A.F. reservists to go abroad, were grateful for the experience they had gained from N.F.D. operation.*

The 1933 N.F.D. event was organised on a District basis with an "A" station (1.7 and 3.5 Mc/s) and a "B" station (7 and 14 Mc/s) operating from each of the eighteen Districts. The winners were West London (District 15) with a score of 364 points but their tactics in attaching their aerials to the masts of an old commercial station (Northolt), were severely criticised by many other Districts. Needless to say the rules (which had not been specific on the question of aerial height) were amended before the 1934 event took place. Second place in 1933 was taken by the Scottish District, centred on Glasgow, with a score of 357 but the Edinburgh group obtained the very high score of 209 points from the efforts of their single "A" station. "When the actual day came" wrote a *Bulletin* scribe in the August 1933 issue, "motorcars of all types, caravans, bicycles, donkey-carts and, in fact every conceivable mode of transport seems to have been pressed into service. Quiet villages, isolated hilltops, open fields and old barns became the centre of radio life; camp fires were lit—and then, it rained!" The pattern over the years has not materially changed—the *only real* change has been in the equipment used. In addition to National Field Day the period between 1931 and 1933 will be remembered for the introduction of several other Society contests—One Watt Week for example—and for the care taken by the Awards Committee, under the Chairmanship of T. A. St. Johnston, G6UT, to draw up what appeared to be "cast-iron" rules which "clever boys" somehow found ways and means of breaking by subtle methods. Contact Bureau, too, made great progress under the leadership of H. Cecil Page, G6PA, who had succeeded Powditch, G5VL. The latter had resigned after an unfortunate misunderstanding with the Editor (G. W. Thomas) which neither Bevan Swift nor the Secretary could resolve.

Douglas Walters, G5CV, led the Television Group of Contact Bureau with great distinction and much foresight as did George Price, G2OP, in respect of Aerials. Jack Hum, G5UM, then (as thirty years later) a keen "Top Band" enthusiast, edited a very readable technical letter budget as leader of the 1.7 Mc/s Group.

Technical lectures reached a very high level at this time. Eric Megaw, G6MU, spoke in March 1931 about Electron Oscillators and their application to U.H.F. Communication. His demonstrations,

* Included in this number were members of the R.A.F. Civilian Wireless Reserve serving with Fitting Parties and others attached to the Wireless Intelligence Screen in France and Belgium.

based on the pioneer work of Barkhausen and Kurz, gave some indication of the important work on which he was then engaged—the development of the Magnetron and early R.D.F. (Radar) equipment.* In April 1931 one of the most prominent physicists of the period, G. G. Blake, surveyed the World of Science in an address to the Society at the Institution of Electrical Engineers. His paper was given before a very large audience and evoked great interest in the scientific and technical press of the World. It was printed in full in the *T and R Bulletin*.† At Convention that year R. A. Watson-Watt, Superintendent of the Radio Research Board, lectured on Atmospheric‡ indicating during the lecture how radio amateurs could assist the Board in one of its then major projects—the plotting of thunderstorms.

Technical developments continued apace with more and more emphasis being placed on frequency control and frequency stabilisation. The Society's Journal featured a number of excellent circuit designs which were copied by experienced amateurs and newcomers alike. Interest was growing in the 56–60 Mc/s (5 Metre) band. To be long remembered were the tests conducted from the North Tower of the Crystal Palace in South London on May 21, 1933.§ L. Howard Thomas, G6QB, Donald Price, G6HP and Alfred Gay, G6NF, were in charge of the project but the man who brought it to the notice of the general public was Douglas Walters, G5CV, who, at the time was Radio Correspondent of the *Daily Herald*. Flying in a Puss-Moth aircraft, chartered by his newspaper, Walters, using home-built equipment logged 5 metre signals from the Crystal Palace station up to a distance of 130 miles, thereby setting up a record for reception on that band. His report was "R99 plus at 10,000 ft. somewhere north of the Wash".|| A month later, encouraged by the success of the Crystal Palace tests, Walters, in a De Haviland Dragon-Moth chartered by the *Daily Herald* and George Jessop, G6JP, in a similar aircraft chartered by *Popular Wireless* set out in an attempt to establish two-way communication between aircraft using home-built 5 metre equipment. Power was derived from dry batteries giving 7 watts input at the start but falling to 4.5 watts at the end of the trip. The tests—the first of their kind in the United Kingdom—

* Dr. Megaw was later appointed a C.B.E. for his work. His untimely death in 1956 deprived the country of one of its leading scientists. He was at that time Chief Officer in the Royal Naval Scientific Service.

† "A Journey into the World of Science", Vol. VI, Nos. 11 & 12.

‡ Robert Watson-Watt was knighted later for his outstanding contribution to the war effort in connection with the development of Radar.

§ The Crystal Palace was virtually destroyed by fire in 1936.

|| *T and R Bulletin*, Vol. VIII, No. 12.

demonstrated the advantages of the 5 metre band for reliable telephony communication between aircraft and between aircraft and ground using very low power and 2 volt battery valves. Like the first aircraft tests from the Crystal Palace, the second tests received wide publicity in the National and Technical Press.*

The *T and R Bulletin* for September 1933 carried a new feature entitled "Soliloquies from the Shack". For years the identity of the author of these provoking and stimulating articles remained a closely guarded secret. He was, in fact, L. H. Thomas, G6QB, who wrote under the pseudonym "Uncle Tom". In December 1933, Bevan Swift (who was acting as Honorary Editor of the *T and R Bulletin*, Geoffrey Thomas, G5YK, having resigned earlier that year, due to pressure of business) "wrote himself out" of the President's Chair, after holding that office for three years, with some apt words:

"Few will deny that extraordinary progress has been made . . . We must feel gratified that today we number 2000 members, a figure which illustrates clearly the interest which is being taken in a project we have made an important part of our life. Such a retrospect must only be a halt for breath for if we relax our efforts in but a small measure the foundation upon which our present strength is built will be in danger of destruction. Officers may change and policies vary but the task of upholding all that is best in Amateur Radio must be continued."

Henry Bevan Swift was an outstanding President and it was not surprising that when his life ended in November 1948 many of his closest friends in the Society should wish to keep alive the memory of his name for years to come. The Bevan Swift Memorial Premium is now an annual RSGB award.†

"A great leader, mature in years, young in outlook."

* *T and R Bulletin*, Vol. IX, No. 1.

† The Bevan Swift Memorial Fund was established at a reunion of Radio Amateur Old Timers on May 29, 1949, when the sum of £123 was donated.

From Peace to Tension

WHEN Arthur Watts took over from Bevan Swift as President of the RSGB at the beginning of 1934 he had already established himself as a man of great administrative ability, charm, with a determination to raise still higher the status of the Amateur Radio movement both at home and throughout the British Empire. His attendance as an observer at the Madrid Radio Conference in 1932 had given him opportunities to meet socially, as well as formally, many prominent Post Office and other Government delegates. It was not surprising, then, that one of the first tasks he undertook on becoming President was to urge the Post Office to adopt a more realistic attitude towards a number of licensing matters which, for many years, had been a source of irritation to amateurs.

Following a series of meetings and an exchange of correspondence, Watts was able to announce at the Convention held in September 1934 that:

1. tolerances at band edges were being reduced from 25 kc/s to 5 kc/s.
2. the lead-in, or transmission line, would not, in future, count as part of the 100 ft. (maximum) length of an aerial.
3. amateurs would, in future, be permitted to operate for four, instead of two, hours a day.

Appreciated as were these "concessions", they still savoured of the cautious outlook of both the Post Office and other Government Departments. The reduction in tolerances was an example of this attitude. Although the width of the 7 Mc/s band, for example, was to become 7005 kc/s-7295 kc/s, in fact no amateur would be allowed to set his carrier within 7 kc/s of the band-edge figures because the fringe of his wave might conceivably fall outside the band.* The clause limiting the length of an aerial, including the feeder, to 100 ft. had been ignored by most amateurs but its presence in the licence had always been a source of annoyance. The "concession" legalised the

* *T and R Bulletin*, Vol. IX. No. 3.

half-wave aerial on 40 metres with its Zeppelin feeder but it did nothing to satisfy those who were anxious to use a full-wave aerial on 160 or 80 metres. The Post Office agreed to look at special cases but few took the trouble to "make up a story" that would pass muster at St. Martin's-le-Grand. Today it is difficult to believe that, officially at any rate, amateurs were once authorised to operate for not more than two hours a day. The concession to double the operating period went some way to legalising a position that had got completely out of hand.

To the pleasure of a keen group of RSGB members the Post Office agreed in September 1934 to issue Amateur Television Licences to those able to justify their applications. Douglas Walters, G5CV, leader of the Contact Bureau Television Group, and his friends welcomed the announcement that vision would be transmitted in the experimental band 30-32 Mc/s and sound in the amateur band 28-30 Mc/s. To the credit of the Post Office, the United Kingdom was the first administration in the world to assign frequencies to amateurs for television experiments.

During the summer of 1935 the Post Office decided to allow amateurs to use the 3.5 Mc/s band at any time of the year, except on weekdays in September. Previously operation had been prohibited from May until September except at weekends—a restriction imposed by the Service Departments who objected to the possibility of amateur transmissions interfering with summer-time Military exercises. A sustained check by the RSGB of Service activity had proved that a case had been made out for complete or partial relaxation of the restriction. Authority for a portable station to identify itself by using the suffix P was also obtained at this time after years of negotiation between the Post Office and the RSGB. These concessions viewed objectively amounted to very little but to the radio amateurs of those days they were of considerable importance, as they represented an easing of the tight hold of the Service Ministries on the amateur movement.

An interesting example of how Arthur Watts was able to follow up contacts made in Madrid occurred during 1934, when the Society announced that the Colonial Office had been asked to approve a revised list of British Empire call-sign prefixes. For some years it had been realised that confusion was being caused in amateur circles because similar prefixes were being used in widely different parts of the Empire. As an outcome of discussions between Watts and the Colonial Office the Society was able, shortly afterwards, to announce that all officers administering the Governments of the Colonies and Protectorates, had been asked to conform to a revised list of call-sign

prefixes and to change any existing call-signs to conform to the new list. This meant that in future the VP group would be associated with the American Continent, the ZD and VQ groups with Africa, the VS and ZC groups with Asia, the VR group with Oceania and the ZB group with Europe. Previously VP calls, for example, had been used in many parts of the World.

In October 1934, an American amateur Arthur Braaten, W2BSR, of Riverhead, Long Island, New York, introduced to the world of Amateur Radio, through the pages of *QST* and the *T and R Bulletin* what he described as a standard system of reporting signals. Devised to overcome the difficulties of the old QSA-QRK system, the Braaten Code was based on the three important characteristics of every telegraphy signal—Readability, Signal-strength and Tone. The RST Code as originally printed in the *T and R Bulletin* remains unchanged today except that Braaten initially suggested the Signal-strength scale should be limited to five categories. He agreed later, under pressure, to increase the number of categories to nine. S1, S3, S5, S7 and S9 in the present scale have the same meanings as S1, S2, S3, S4 and S5 in the original scale. S5, “very strong signals” in the original scale has no exact counterpart in the present scale, where S8 indicates “strong signals” and S9 “extremely strong signals”.

Arthur Braaten, besides being associated with the now universally used RST code, will always be remembered in RSGB circles as the donor of a most handsome trophy which is awarded annually to the English (G) amateur who scores the highest number of points in the ARRL DX Telegraphy Contest.

The Coming of Age of the Society in July 1934 was marked by the publication of a special birthday issue of *The T and R Bulletin* featuring messages from the Society's Patron, H.R.H. The Prince of Wales, K.G.; from its two distinguished Honorary Members, Sir Oliver Lodge, D.Sc, F.R.S., and Senatore Guglielmo Marconi, G.C.V.O.; from all the other Past Presidents; the Postmaster General (Sir Kingsley Wood, M.P.), the Admiral Commanding Reserves (Vice Admiral G. K. Chetwode, C.B., C.B.E.), the Director-General of the B.B.C. (Sir John Reith), the President of the ARRL (Hiram Percy Maxim), and from leaders of the radio industry and the technical press. The birthday issue also contained an abridged history of the Society as well as important contributions from pioneer DX-workers Gerald Marcuse, G2NM, and Ernest Simmonds, G2OD. The production of a sixty-four page *Bulletin* at that time was no mean feat because almost all of the editorial work was undertaken single-handed by the Secretary. Two technical articles in that issue marked important advances in transmitting technique. The first dealt with new



George Brown, G5BJ, adjusting an experimental 58 Mc/s transmitter which operated during 1935, from the works of Stratton & Co. Ltd., Birmingham. A pair of Mullard TZ 0/25 valves in push-pull produced an input power of 50 watts. Signals were well received up to distances of 20 miles.



The transmitting equipment used by J. W. Mathews, G6LL, during the period 1937-1939 was housed in a wooden frame with plywood panels and metal chassis. The 14 Mc/s power amplifier used a pair of RK 20 valves, suppressor modulated. The panel on top with four dials carried the aerial tuning unit circuits for four bands, each pre-set for rapid band changing. The stages were all link-coupled by means of standard plugs and jacks—there were no coaxial plugs, or coaxial cable, at that time.



The equipment used by Lt. (later Major-General) Eric Cole, SU1EC, Cairo, when he won the Senior British Empire Radio Union Transmitting Contest in 1935. The Input power to the transmitter was 70 watts.



The Royal Air Force section of the first Wireless Intelligence Screen unit on parade in the Caserne Ney at Metz in North East France during the spring of 1940. The Commanding Officer at that time was Flight Lieutenant J. Boundy.

master oscillator drive circuits and the second with the design and construction of a modern transmitter.

On September 28 that year Ernest Dedman, G2NH, lectured to the Society on Directional Aerials for 56 Mc/s—the paper being published subsequently in the November 1934 issue of the *Bulletin*. This was one of the first articles on directional aerials to appear in the British technical press. The Editorial in that issue, had this to say about the subject:

“The interest evinced at a recent meeting of the Society on the subject of directional working is one of the best signs we have seen for some time. Here is a field which will bear every investigation and one which will lead us into new lines of thought. For years the amateur transmitter has pushed his short-wave signals into the ether with the hope that they will fall to earth somewhere and bear fruit in the shape of QSL cards and possibly a stray QSO. The commercial companies were not slow to discern the short-comings and by application of the beam principle have achieved a good degree of success. Why cannot we as amateurs branch out in the same field and secure that certainty which is badly needed to make our transmissions effective? We remember some years ago, E. J. Simmonds, G2OD, describing experiments he had carried out in directional working. A vast field of success lies before us if we can only develop the idea and endeavour to prevent our unguided signals just shooting off into the ether.”

The Editorial concluded with the suggestion that although much advantage would accrue from the use of directional aerials what was most needed was an aerial which would work equally well in all directions. It was in this way that the *Bulletin* gave a lead by putting forward the idea that a rotating aerial would be of great help in working a given distant overseas station at any time of day or night, under all conditions.

The decision of the Council in January 1935 to set up a Technical Committee was timely because it had become abundantly clear in recent years that members were expecting the *T and R Bulletin* to attain a very high technical standard. In addition it was imperative, in view of the success achieved by early editions of the *Guide*, to ensure that sound technical advice was available to the Editor to assist him with the work of preparing future editions. It is doubtful whether the outstanding contributions made by the Technical Committee of the Society in the years prior to World War II have ever been fully appreciated by the membership at large. Certain it is that had there been no Technical Committee the *Guide* would not

have arrived at the point in 1937 where it could be used as the foundation stone upon which to build the Society's major publishing effort—*The Amateur Radio Handbook*. The original members of the Technical Committee were H. A. M. Clark, G6OT, D. N. Corfield, G5CD, E. A. Dedman, G2NH, A. D. Gay, G6NF, J. W. Mathews, G6LL, and G. W. Thomas, G5YK, with John Clarricoats, G6CL, acting as Secretary—a position he held until he retired from the Society on December 31, 1963. On that date Corfield and Mathews were still members of the Committee; H. A. M. Clark remained Chairman from its inception until his sudden death on February 14, 1963.

In June 1935 the Society published what was probably the first technical description in the United Kingdom of Frequency Modulation. Hailed as a revolutionary development by its inventor (Major Edwin H. Armstrong of super-het fame) the system was described as being designed to overcome the effects of static, valve noise and fading. "The practical utility of the system" wrote Armstrong, then a Professor at Columbia University, "will be principally in the ultra-short and micro-wave signalling systems as the bands of frequency or width of channel required are greater than on normal broadcast wavelengths."

The years between 1934 and 1936 were marked by a number of important events, many of which provided wide local and national publicity to the Amateur Radio movement. In March 1934, for example, Folkestone amateurs gave help to the Lifeboat Service at Hythe, Kent; on July 5 Arthur Watts broadcast from London on the occasion of the 21st Birthday of the RSGB; in October Douglas Walters, G5CV, carried out 5 metre tests with gliders. Tragedy struck on February 19, 1935, when Don Price, G6HP, one of the world's most prominent amateurs of the time, was electrocuted while working in the Baird Television Studios at Crystal Palace only a few hours after taking an active part in the BERU Contest. In May, Lt. (later Major-General) Eric Cole, SU1EC* was operating an Amateur Radio station in the Egyptian Desert; in June came reports that 14 Mc/s beams were in use, in July Douglas Walters, G5CV, carried out 5 metre tests from the top of Snowdon and during the August Bank Holiday weekend a party, twenty-five strong, went to Belgium (with Max Buckwell, G5UK, as leader) to visit the Brussels Exhibition and to link up with members of Reseau Belge (forerunner of the present U.B.A.). That weekend the largest international gathering of amateurs, since IARU had been formed ten years earlier, assembled at the chateau home of Baron Louis Bonaert de la Roche, ON4HM

* President of the RSGB in 1961.

near Mons. In December 1935 a Committee consisting of Arthur Watts, G6UN, Victor Desmond, G5VM, Douglas Chisholm, G2CX, and the Secretary was set up to prepare for the Cairo Conference. In January 1936, B. J. Kruger, X1AY, of Mexico City was declared the winner of the first International 28 Mc/s Contest organised by the RSGB (the contest ran for a year from October 1, 1934). On January 24, 1936, the President on behalf of the Society, wrote to "The King's Most Excellent Majesty" tendering to him the deep sympathy and condolences of all members, on the death of his father, King George V. As a tribute to the memory of the late King, all members throughout the British Empire observed Sunday, January 26, as a day of silence by the cessation of all radio transmission from their stations. King Edward VIII ceased to be Patron on his accession to the Throne. In March the death was announced of Hiram Percy Maxim, President of the ARRL. On March 29 a group of Folkestone amateurs (G2FA) made the first 5 metre two-way contact with France (F8NW). Two months later the first G8 calls were issued and in July the "Heard the British Empire" (HBE) Certificate was introduced. In that same month under "Cosmic Notes" the first reports of a "hissing noise" on 28 Mc/s were recorded. In September it was decided to start up a new DX feature—"The Month on the Air" and John Hunter, G2ZQ, became the first contributor a month later.

The decision in 1936 to introduce a three-tiered scheme of representation was an acknowledgement that the gap between District and County Representatives and the membership at large was too wide. The Council anticipated that by inviting members to elect Town (or Area) Representatives local activity would be stimulated. Time proved the decision to be a wise one.

When, in December 1936, Arthur Watts retired as President, having completed the full term in that office permitted by the then Articles of Association, he intimated that should it be the wish of the Council he would be available to represent the Society and the IARU at the Cairo Radio Conference in 1938.

Ernest Dawson Ostermeyer, G5AR, who succeeded him as President, had been a member of the Council for the past ten years, having served for most of that time in the office of Honorary Treasurer. "Ack R", as he was known to most people and "Uncle Ernie" to his closer friends, had been a member of the Society since 1920 and a licensed amateur for almost the same length of time. A skilled craftsman of the old school he never effectively mastered the Morse Code, so his wife (Mrs F. E. Ostermeyer) who had had some World War I experience of line telegraphy, acted as his second operator, having herself passed the Post Office Morse Test in 1921.

"Ack R's" station at South Woodford, East London, provided an example of first-class workmanship and it was for many years one of the most active on 160 and 80 metres. An enthusiastic and experienced gardener, one of his greatest pleasures in life was to open his house to local amateurs when his famous vine was at its best and to send them home laden with bunches of high quality grapes. In the years between 1928 and 1930 Ostermeyer spent many hours each week "helping out" at Headquarters and frequently he had, anonymously, met the bill at London lecture meetings when the Society's financial position was insecure. Generous to a high degree he was quick to make friendships. On his own admission he was "no speaker" yet during his term of office he toured the country with the Secretary attending meetings in more than a dozen major centres and speaking briefly but effectively at each one. His Presidential Address, delivered on January 29, 1937, to a crowded meeting of members at the Institution of Electrical Engineers, reflected perfectly the approach of a modest and sincere man to the great responsibilities of his high office.*

Up to the end of 1936 Bevan Swift had been Editor of the Society's Journal, although almost all of the editorial work had, for the previous four years, been undertaken by the Secretary. To correct the position the Council announced in February 1937 that "as from January 12 last Mr. John Clarricoats assumed the title of Secretary-Editor".† The change in title was considered desirable in order that the Secretary could accept responsibility for the general editing of the Society's Journal. Bevan Swift continued to act as Honorary Editor until 1938. The office was ended when the Articles of Association were changed in 1954.

When Ostermeyer became President he did not immediately resign from the office of Honorary Treasurer, but at the first meeting of the Council in 1937 he asked to be relieved of the dual responsibility. Alfred Duncan Gay, G6NF, who had provided a much appreciated Calibration Service for members from the time the technical requirements arising from the Madrid Conference became known, was invited, and agreed, to succeed Ostermeyer as Treasurer.‡

The rapid growth of the Society had emphasised the need for offering sound technical advice to new members. To meet that need

* *T and R Bulletin*, Vol. XII, No. 8.

† Twenty-six years afterwards, to the day—January 12, 1963, Clarricoats handed over his editorial responsibilities to John Rouse, G2AHL, whose death on May 26, 1967 was a great blow to the Society.

‡ Alfred Gay was destined to lead the Society during three difficult war years (1941–43) as President.

Austin Forsyth, G6FO (at that time District Representative for South Wales and Monmouthshire) contributed a series of articles to the *Bulletin* and these appeared during 1937 and 1938 under the title "The Helping Hand".* When completed the articles were reprinted in booklet form and published under the title *The Helping Hand to Amateur Radio*. Many thousands of copies were sold prior to World War II and the demand continued long afterwards.

The Fifth Edition of *A Guide to Amateur Radio* surpassed all previous publishing efforts made by the Society and resulted in the production of a 164 page book which, like its four predecessors, was offered at sixpence a copy. Within two weeks of its first appearance on the Society's stand at the 1937 Radio Show, 12,000 copies had been sold.

An article of particular importance appeared in the November 1937 issue of the *T and R Bulletin*. Written by the Chairman of the Technical Committee (H. A. M. Clark, G6OT) in collaboration with his friend and business associate F. J. H. "Dud" Charman, G6CJ, the article dealt with the reduction of interference due to the radiation of third harmonics. T.V.I.—the amateurs' greatest bug-bear—had begun to rear its head. Regular B.B.C. television transmissions had started from Alexandra Palace on November 2, 1936, using Baird and E.M.I. systems on alternate weeks. These had given way on February 6, 1937, to the opening of a regular Television Service using the Marconi-E.M.I. system exclusively. The frequencies chosen, 41.5 Mc/s for Sound and 45 Mc/s for Vision, fell neatly within the third harmonic range of every amateur transmitter in London operating between 14 Mc/s and 14.4 Mc/s as the Vision bandwidth extended between 42 and 48 Mc/s. Hence the need for some timely advice from the Technical Committee.

In the light of future events, the Editor's comments, which appeared on the page prefacing H. A. M. Clark's article, are of interest:

"The advent of a high definition television service working on frequencies around 45 Mc/s, with a service area wider than was originally planned, brings to light the possibility of interference being caused to viewers by third harmonic signals from nearby radio amateurs working in the 14 Mc/s band. To close down an amateur station during television hours because of harmonic interference is to seek trouble later when the hours may be extended. The problem should be faced now and experience pooled."

* J. N. Walker, G5JU, was responsible for a second series of "Helping Hand" articles in 1939.

The problem of T.V.I. to which attention was drawn in November 1937 continues to press heavily on the amateurs of today notwithstanding the vast amount of technical information that has been published by the RSGB and other competent authorities since Clark and Charman wrote their original article.

By the end of 1937 membership had increased to 3300 and the Provincial meetings held during that year had attracted attendances totalling more than 800. At the Annual General Meeting, on December 29, 1937, it was reported that a "minority interest" had suggested to the Society that the Post Office should be asked to require all new licence holders to serve a probationary period on telegraphy before being allowed to use telephony but the Council had decided not to support the suggestion on the ground that it would be unwise for the Society to invite the Post Office to place restrictions on amateur experimental work. Years later a similar suggestion was made by a new "minority interest" and again the Council used the same argument when turning it down. During the course of the Annual General Meeting, Ostermeyer announced that Watts had been elected to succeed him as President and that the new President had offered to attend the Cairo Radio Conference early in the New Year as a representative of the Society and as an observer of the IARU.

From 1935 onwards, Kenneth Warner, in his capacity as Secretary of the IARU, had been urging the European Member Societies in the Union to press their licence-issuing authority to support a policy which would lead to an extension of the 7 Mc/s and 14 Mc/s bands at the next Radio Conference. Although the Council had little reason to believe that the United Kingdom administration would give its blessing to such a proposal, the RSGB agreed to submit a case for extension (particularly at 7 Mc/s) to the Post Office. Detailed information compiled by the Society's Band Occupancy Check Group was augmented by some convincing evidence produced by a small number of members who had been asked to check *commercial* activity between 7300 and 7500 kc/s. This showed that very few commercial stations were regularly using frequencies in that band whilst more than 800 United Kingdom amateur stations alone were operating in the 300 kilocycles between 7000 and 7300 kc/s.

The sub-Committee set up to liaise with the G.P.O. in preparatory work for the Cairo Conference met frequently and a comprehensive account of the progress made to date was published in the June 1937 issue of the *T and R Bulletin*. When the official Book of Proposals was issued by the ITU later that year it revealed the usual collection of "woolly" proposals in respect of amateurs similar to those that have

characterised every Radio Conference since Madrid, 1932. Fortunately most of the "bright ideas" got no further than the Book of Proposals.

It is certain that when Arthur Watts returned to office as President at the beginning of 1938 his main thoughts, in an Amateur Radio sense, were centred around the problems which he and Warner would have to contend with when they reached Cairo in February. Ever since 1933, there had been signs of disquiet abroad but few who had endured the sufferings of the 1914-18 war could bring themselves to believe that mankind would plunge into yet another world calamity. Looking back now it is easy to recollect how Amateur Radio altered in Nazi Germany during the late 1930's, how the whole character of the, then, German National IARU Member Society changed, almost overnight, into a near-military organisation, how first one and then another of the original members of the amateur movement in Germany "disappeared" from the scene. But in the first few weeks of 1938 the eyes of all radio amateurs were fixed on Cairo, where on February 1 an International Radio Conference opened under the patronage of King Farouk. Arthur Watts, who had been seen off with his wife from Victoria Station on February 3 by a host of well wishers, arrived in Egypt a week or so later.

From the outset of the Conference it seemed clear that the old order of exclusive frequency allocations to amateurs, on a world-wide basis, was likely to be altered. Whilst the United States Government was prepared to fight tooth and nail to preserve *status quo* on the DX amateur bands, demands for more and more frequencies for propaganda broadcasting made it virtually impossible for the British and other Governments favourably disposed towards the Amateur Radio movement to withstand pressures from many quarters that the top 100 kilocycles of the 7 Mc/s amateur band (7200-7300 kc/s) should be shared with broadcasting in the European Region. In like manner, military requirements in Europe led to a segment 50 kilocycles wide (3635-3685 kc/s) of the 3.5 Mc/s band being allocated to Services other than Amateur. U.K. amateurs were promised 50 kc/s elsewhere but, in fact, the allocation was never made.

A good deal of heat was generated when the 56-60 Mc/s band came up for consideration, one country insisting that because of forthcoming demands for television allocations in this part of the spectrum, amateurs should, in future, be barred from using the band. Both Arthur Watts and Paul Segal (who attended the Conference as Legal Adviser to the ARRL and IARU) prepared and submitted papers to the appropriate Committee supporting a case for *status quo*

but the Conference finally decided that the lower half of the band (56–58.5 Mc/s) should be assigned to television and low-power stations leaving the upper half (58.5–60 Mc/s) to be shared by amateurs and experimenters. Although the Post Office promised that U.K. amateurs would be allowed to continue to use the whole of the band, the segment between 56–58.5 Mc/s was not allocated to new licences and general operation in that part of the band was officially discouraged. The frequencies between 1715 and 2000 kc/s (Top Band), which many had thought would prove to be vulnerable, remained untouched and continued to be shared by amateurs with the fixed and maritime mobile services. The two remaining exclusive amateur bands (14–14.4 Mc/s and 28–30 Mc/s) also escaped attack, to the great relief of the DX fraternity.

Before the Cairo Conference ended it was decided the Convention would come into force on January 1, 1939, and that the new frequency table would take effect from September 1, 1939. It was also decided that the next Conference would be held in Rome during 1942. Nine years were to pass before another world Radio Conference became a practical proposition.

Without doubt the presence at the Cairo Conference of a strong IARU team of observers created a most favourable impression. Commenting in the May 1938 issue of the *Bulletin* on the outcome of the Conference, the Editor suggested that unless Amateur Radio had been properly represented amateurs might well, at that time, be facing the unhappy situation which had been predicted by the scare-mongers who had been active in spreading wild rumours.

By the time Watts returned from Cairo the threat of war seemed to be growing daily. It was certainly no surprise to him or to the Secretary when they were invited to attend an informal meeting at the Air Ministry to discuss a suggestion that radio amateurs should be invited to volunteer for service in a projected Royal Air Force Civilian Wireless Reserve. Throughout the spring and summer of 1938 informal discussions continued, until a scheme had been worked-out which was likely to appeal to air-minded radio amateurs. To Wing Commander L. H. (Joe) Stewart, goes much of the credit for bringing the CWR into being. Stewart had served in Singapore for some years and as the nominal licensee of VSIAL he had first-hand knowledge of Amateur Radio. He also appreciated the potential value to the Nation of a body of highly-skilled radio amateurs at a time of emergency. On his return to England in 1937 Stewart was posted to the Directorate of Signals, Air Ministry, where war preparedness had, by then, become a major policy matter. Stewart began by inviting Watts and Clarricoats to meet him informally at

the Air Ministry. They were joined later by Harold St. John, D.F.C., a first-war R.N.A.S.—R.A.F. pilot and recently retired. Squadron Leader St. John, an experienced signaller, was brought back from retirement to undertake the preliminary work needed to bring the new Reserve into being. Fortunately, at this time the Director of Signals (Air Commodore C. W. Nutting, O.B.E., D.S.C.), was himself well acquainted with the work of radio amateurs, having recently attended the Cairo Conference where he had met Watts and Warner as well as several local amateurs including Prince Abdul Moneim, SU1AM, a relative of King Farouk. Nutting had also known Paul Godley some years earlier and was aware of the resourcefulness of amateurs in an emergency.

During the summer of 1938 Watts and Clarricoats were given the all clear to discuss the Air Ministry proposals with the Council. Possibly because of the turn of events in Europe there was no division of opinion this time on the issue as to whether or not the Society should lend its support. The Council agreed, unanimously, that Nutting should be invited to attend the forthcoming Convention and speak about the Reserve to the members present. His address* outlined the main proposals. These were to establish a civilian reserve comprising, in the first place, licensed radio amateurs between the ages of eighteen and 55 who were not already committed to a similar Service organisation. They would be taught RAF procedure and instructed how to operate and service RAF equipment. They would visit RAF stations as part of their training but they would not, initially, be required to undertake annual training. Quartz crystals would be issued to enable them to work with Air Ministry stations on service frequencies. Small training allowances would be payable and a grant of £2 made on passing a Morse and procedure examination at eighteen words per minute. Scope for the continuation of experimental work would be offered and opportunities provided for promotion to commissioned rank.

The part played by the RAF Civilian Wireless Reserve during the next eighteen months was of major national importance. Suffice at this stage to say that some of the best-known amateurs of the day responded to the call. The President and Secretary were invited by Nutting to serve on the CWR Committee in an advisory capacity. Thus was established an official link between the Air Ministry and the Society which continued for very many years.

It was a natural consequence of the tension then existing that many members of the RSGB should enquire whether their services would be needed in the event of an emergency arising. In May 1938—

* R.A.F. Civilian Wireless Reserve, Vol. XIV, No. 3 *T and R Bulletin*.

with war clouds gathering—the Society was informed that “the use of radio has not been contemplated by either the Post Office or the Home Office in connection with Air Raid Precautions”. This attitude was attributable mainly to the Home Office who, for some reason, did not seem, at that time, to have much faith in the ability of radio amateurs to provide communications in an emergency. How wrong they were, time alone was to show. Notwithstanding the official rebuff, members were advised when joining their local ARP organisation, “to ask for a note to be made of their interest in radio in case it should be decided later to introduce radio into the scheme”.

For the next few months events in Europe appeared to be moving towards the inevitable catastrophe. And then, in the midst of the Czech crisis, a seeming miracle happened—the British and French Prime Ministers, Chamberlain and Deladier, met Hitler and Mussolini in Munich on September 29, 1938, and “came to an arrangement which, although it dispersed the clouds of war, deprived Czechoslovakia of vast areas of her land and left her broken and impotent against the Nazi juggernaut”.*

On the morning of Friday, September 30, 1938, the Editor of the *T and R Bulletin* wrote†:—

“With the good news from Munich ringing in our ears we can scarcely believe that the crisis which hung so heavily over the world for days past has been averted. To radio amateurs the threatened war brought home more forcibly than to most, the enormous power for good or evil which now lies at the command of those responsible for broadcasting. The crisis, too, brought into prominence the two Wireless Reserves which have had the support of the RSGB. The new RAF Civilian Wireless Reserve had had no time even to find its feet before many of its members had received notices advising them what to do if a state of emergency was declared. The Services need have no fear that the radio amateurs of Great Britain will fail them if the call ever comes; evidence of their desire to serve was clearly demonstrated during the critical days of late September when Society Headquarters was inundated with enquiries and offers to help.”

And so tension was relaxed.

On November 15, 1938, *The Amateur Radio Handbook* appeared—a publishing event without parallel in the history of the Society. With its 240 pages and hundreds of illustrations it would have been cheap at half a guinea; in fact it went on sale at 2s. 6d. Curiously

* “The War in Pictures” (First Year), Odhams Press.

† *The Tension Relaxes*, Vol. XIV, No. 4.

enough both the Council and the Technical Committee were concerned that the book might not be popular. They need not have worried because within a few weeks the whole of the first printing of 5000 copies had been sold.

In broad terms the *Handbook* comprised twenty-four chapters of technical and topical information; but its attraction lay in the fact that it was the first *British* publication of its kind. For ten years amateurs the world over had relied on Handy's *Handbook*—or to give it its more correct title *The ARRL Radio Amateurs' Handbook*.^{*} This had proved of immense value to all English-speaking amateurs but from a British point of view it fell short because the approach was, understandably, American. Ever since *A Guide to Amateur Radio* had appeared each year at the Radio Show in London the demand had increased for more and more technical information, especially on aërials. By great good fortune the team that had produced the *Fifth Guide* in 1936 with its 168 pages, were expert in many fields and once approval had been given by the Council to proceed with plans for a *Handbook* nothing could stop them. With a target of 220 pages and a retail price of 2s. 6d. in mind the Committee laboured long, bringing into their counsels other experts. Palmer Allen, GI6YW, for example, made a notable contribution by writing the important first chapter on Fundamental Principles.

An intensive pre-publication campaign paid dividends to such an extent that more than 1500 copies had been ordered and paid for before the first copy came off the printing presses. For the Council that meant a great deal as the Society's assets at that time were far from secure, in fact if the *Handbook* had failed the future of the Society itself would have been in jeopardy. Fortunately all was well and Headquarters received hundreds of messages of congratulations from all quarters—professional, academic and, of course, amateur.

The contribution made by the *Handbook* to the war effort will be related later. For the moment it is only necessary to say that before the year 1939 was very old a second printing had been put in hand.

^{*} F. E. Handy WIBDI, communications manager and later also Vice-President of the ARRL was the original author.

The Second World War

FOR British radio amateurs 1939 commenced under clearing skies with the threat of war receding into the background. RSGB membership continued to increase, meetings everywhere were attracting record attendances, the first of the G4 calls had just been issued; in fact, except for a possible threat to certain frequency allocations, the New Year appeared to hold promise of being one of the most successful in the history of British Amateur Radio. During the early part of the year the Council of the RSGB gave consideration to the terms and conditions of the current amateur transmitting licence and then submitted to the G.P.O. detailed recommendations for modification. It had already been decided that new licences would be issued prior to September 1939—the effective date for bringing into force the changes agreed to at the Cairo Radio Conference. The recommendations were well received by the Post Office but later events drove them into cold storage for the next six years.

In April 1939 the Society inaugurated its biggest drive yet to persuade British radio amateurs to support British radio manufacturers.* The first fruits of a campaign that had started a year or so earlier, were seen when Stratton's of Birmingham introduced their Eddystone Communication Receiver (the ECR) with an attractive offer to allow a substantial discount for a traded-in model. In support of the drive to "Buy British" the Council decided that the Society should break away from tradition by organising its own Amateur Radio Exhibition to coincide with Convention instead of taking stand space at Radiolympia. The Royal Hotel, Woburn Place, London, was reserved for three days—September 21–23, 1939—and a comprehensive programme, culminating in a Convention Dinner, was offered to the membership.

By the late spring of 1939 there were signs that tension was again increasing. The Air Ministry began to appeal in the *T and R Bulletin* and other technical journals to young men "to get in touch with a

* From 1937 onwards a great deal of U.S. amateur equipment had been imported into the United Kingdom.

good career by joining the R.A.F.". Society members were urged not to worry the Post Office unduly on licence matters "whilst the tension exists". Amateurs generally, were reminded that possession of a transmitting licence would not, of itself, "exempt a person from military training in connection with the call-up of young men under the powers of the newly-introduced Compulsory Military Service Act". The position on the continent of Europe seemed to be deteriorating, following fresh demands by Hitler and the Nazi Government. By this time the Royal Air Force Civilian Wireless Reserve had got well into its stride. Two groups had been established each led by a dozen experienced radio amateurs, named as Regional Controllers. The list of Controllers included such well-known names as John Hunter, G2ZQ, W. N. Craig, GM(G)6JJ, Maxwell Tyre, GM5TY, H. Cecil Page, G6PA, Rowley Scott-Farnie, GW(G)5FI, H. A. M. Whyte, G6WY, and J. N. Walker, G5JU, most of whom had been recommended by the Society. Group exercises were conducted on 2583 kc/s (Group A) and 2727 kc/s (Group B); an Air Ministry station located at Greenford, Middlesex (but keyed from London) acting as control.

During the summer of 1939, amateurs in possession of transmitting equipment were advised that in the event of war they should remove and pack all valves, prepare an inventory of their apparatus and ask for a receipt for anything taken away. In June the Postmaster General (Major Tryon) was asked in the House of Commons what steps the Government proposed to take to use the services of radio amateurs and their stations in the event of a war or a major break-down in the electricity grid system. In his reply the Postmaster General confirmed what the Council of the RSGB had been told months earlier would be the case, that in the event of war all amateur stations would be closed down. He explained to the House that the Government had already taken steps to enrol radio amateurs in Service reserves so that their skill would not be wasted.

Notwithstanding rumours of war, preparations for the Amateur Radio Exhibition and Convention planned for mid-September went ahead, and an application form for tickets was included in the August issue of the *T and R Bulletin*, but the days of peace were now numbered. First indications that a national emergency would soon be declared came during the last week of August when news reached RSGB Headquarters that members of the Royal Naval Volunteer (Wireless) Reserve and the Royal Air Force Civilian Wireless Reserve* had been called-up. A few, living in and around London,

* On enlistment Civilian Wireless Reserve personnel became members of the Royal Air Force Volunteer Reserve.

found time to call at Headquarters to say "au revoir". During the evening of August 31, 1939, the BBC announced in its nine o'clock news bulletin that all full and artificial aerial amateur transmitting licences had been "determined". From early the next morning until the end of September, Post Office officials were engaged in impounding transmitting equipment. Due to the urgency of the situation some of those deputed to undertake the task had little practical knowledge of radio, with the result that difficulties arose, especially when an inexperienced official, in the absence of the licensee (who had been called up), impounded equipment not even remotely connected with the generation of high frequency radio signals. To regularise matters RSGB members were advised to press for the immediate return of non-transmitting equipment.

At eleven o'clock in the morning of Sunday, September 3, 1939, Britain was at war with Germany. One week later, on Sunday, September 10, 1939, a special meeting of the Council of the RSGB was held at the Highgate, North London, home of Arthur Watts, G6UN. Present that morning, in addition to the President were E. D. Ostermeyer, G5AR (Immediate Past President), Arthur Milne, G2MI (Honorary Editor), F. J. H. Charman, G6CJ, H. A. M. Clark, G6OT, D. N. Corfield, G5CD, J. W. Mathews, G6LL, H. V. Wilkins, G6WN, and John Clarricoats, G6CL (Secretary-Editor). Decisions taken at that meeting had a profound effect not only on the future of the Society but on Amateur Radio in the United Kingdom and Europe. The Council decided that morning (i) that the work of the Society should be continued, (ii) that the business of the Society should be conducted from the private address of the Secretary-Editor, (iii) that the *T and R Bulletin* should continue to be published in reduced form, (iv) that the London area subscription should be reduced from 21s. to 15s. per annum, (v) that the subscription to be paid by members serving in H.M. Forces should be reduced to 10s. per annum, and that (vi) the services of the junior members of the staff should be terminated.

These vitally important decisions were made in the hope that a strong and virile Society could be kept in existence during the war so that in due time it would be able to negotiate with the Post Office for the early return of licences. The Council recognised that acceptance of the offer made by the Secretary to conduct the business of the Society from his own home, with greatly reduced staff, would produce considerable economies. The decision to continue publication of the *Bulletin* was made with the knowledge that a number of prominent radio manufacturers and suppliers had promised sustained support. In deciding to reduce the amount of the

subscription to be paid by members in H.M. Forces to a nominal 10s. per annum, the Council realised that the financial position of many members would be adversely affected by war service. A special circular, "The RSGB in War Time", issued on September 15, 1939, outlined the decisions of the Council, gave advice on the QSL Section and informed members that the Convention and Exhibition had, reluctantly, been cancelled.

On the day *before* war was declared Headquarters accepted delivery of a large reprinting of *The Amateur Radio Handbook*. What a prospect—3000 copies for disposal and Amateur Radio in a state of "suspended animation" for the second time in twenty-five years. Things indeed looked black at the time but a miracle was about to happen. "It is gratifying to report" wrote the Secretary in the Annual Report for the year ended September 30, 1939 "that within recent weeks large orders for the Handbook have been received from members in the Services who recognise the value of such a text-book at the present time." But who could guess what was to follow during the next five or six years. The story of the RSGB *Amateur Radio Handbook* provided one of the great publishing stories of the war. Beginning in September 1939 with a few orders from members who had been posted to Signals Schools and the like, the fame of the Handbook spread like wildfire. It seemed at one point that paper rationing would stop production but the Paper Controller, having been furnished with supporting evidence of the value of the publication by all three Services, gave the all clear for paper to be made available. The frontispiece of the 12th printing of the 2nd Edition of the Handbook tells the story, statistically. The figures are worth recording for posterity (see p. 180).

In the September 1939 issue of the *Bulletin*, Arthur Watts, on behalf of the Council, addressed a message to all members, in the course of which he recommended those in a position to do so, to continue experimental work within the terms of their broadcast licence. In that same issue the text of the *London Gazette* notice issued by the Postmaster General, which "determined" (note the word) all transmitting licences, was reproduced for record purposes.

The first known war casualties among RSGB members were Jack Hamilton, G5JH, and Kenneth Abbott, G3JY, both lost when H.M.S. "Courageous" struck a mine on September 15, 1939. Both had been members of the Royal Naval Volunteer (Wireless) Reserve and both had been drafted on the outbreak of war to H.M.S. "Courageous" as Telegraphists.

A humorist described, in the October 1939 issue of the *Bulletin*, what *might* have been the first RSGB Amateur Radio Exhibition.

FIRST EDITION			
<i>Printing</i>	<i>Number of Copies</i>	<i>Date of Publication</i>	<i>Total</i>
First	5000	December 1938	
Second	3000	August 1939	8000
SECOND EDITION			
<i>Printing</i>	<i>Number of Copies</i>	<i>Date of Publication</i>	<i>Total</i>
First	4000	July 1940	
Second	5000	January 1941	
Third	10,000	April 1941	
Fourth	10,000	September 1941	
Fifth	10,000	January 1942	
Sixth	20,000	April 1942	
Seventh	10,000	October 1942	
Eighth	10,000	January 1943	
Ninth	20,000	August 1943	
Tenth	22,500	January 1944	
Eleventh	30,000	August 1944	
Twelfth	30,000	June 1946	181,500

Firms known at that time to every amateur in the United Kingdom had promised their support. Eight years were to pass before the dream of 1939 came true but by then many of the pre-war names had disappeared from the scene. Fortunately some still survive to serve the radio amateur.

One of the main reasons for continuing publication of the *T and R Bulletin* during the war was to provide a medium which would enable members to keep in touch with their friends. From October 1939 until the end of the war lists were published monthly of members serving with H.M. Forces. From November 1939 a monthly feature entitled "Khaki and Blue" gave news of members on active service. "The Early Birds" (so named by the Editor of the *T and R Bulletin*) landed in France on September 4, 1939, and were under the command of F/Lt. C. S. Goode, G2OH, one of the RAF CWR Regional Controllers. F/Sgt. L. A. Ballingall and Sgt. S. Leslie Hill, G8KS, were the senior N.C.O's. The nominal roll totalled fifty-two of whom more than forty were licensed amateurs. They had all been members of the Civilian Wireless Reserve. Those on the nominal roll and still active amateurs more than twenty-five years later, included W. H. Allen, G2UJ, M. A. Brookes, G5OI, V. J. Flowers, G8QM, H. M. Fenton, G8GG, L. M. Gunnell, G8HB, V. H. Hammond, G4NL, D. J. G. Legge, G3MP, G. F. Mason, G5BR, J. Pollard,

G3IY, F. M. Trier, G8VH, J. H. Wightman, G3AH, R. W. Wynn, G8TB, L. J. Coupland, (G)2BQC, E. R. Dolman, (G)2DCG, R. Q. Marris, (G)2BZQ, R. F. Stevens, (G)2BVN, H. Willets, (G)2FPI. An account of the work done by "The Early Birds" appeared later in the *T and R Bulletin*.

Arthur Milne, G2MI, who had taken over "The Month on the Air" from H. A. M. Whyte, G6WY, in July 1939, decided to keep the feature going under the title "The Month *off* the Air", but he and his colleagues were a bit surprised at the amount of "local" activity which prevailed during the early months of the war on the amateur bands. Had he been able to make enquiries he might have traced the origin of some of the "local" activity and the inventors of some of the exotic call-signs. It was, of course, sheer coincidence that "The Early Birds" had been issued with service transmitters which could, without any great difficulty, be persuaded to put out a respectable signal on frequencies not far removed from 7 and 14 Mc/s.

The fact that members of the R.N.V.(W.)R. and the R.A.F.C.W.R. were able to go directly from civilian life into responsible technical jobs was not lost sight of by the powers-that-be and as the war developed it was to "The Early Birds" and the like that those in authority looked for future leaders.

Although the RSGB was not invited by the War Office to assist in the formation of a pre-war Army Reserve of radio amateurs it was known long before the war that many licensed radio amateurs were in Territorial Army Signal Units. Consequently when the first lists of members on active service were published the evidence was there for all to see that radio amateurs were making a full contribution to all three Services although the contribution made by amateurs to the war effort extended far beyond the sphere of the Armed Forces. For example a very large number of RSGB members and other qualified persons who for one reason or another could not join the Armed Forces, were enrolled into a War Office organisation to listen for enemy radio signals. Arthur Watts, G6UN, played a prominent part, nationally, in the organisation of this important work, while several of his Council colleagues—including F. J. H. Charman, G6CJ, H. A. M. Clark, G6OT, A. D. Gay, G6NF, and H. V. Wilkins, G6WN—organised local groups in London and the south of England. Known as the Radio Security Service, the organisation consisted of Voluntary Interceptors (V.I's), military personnel and civilian staff. The V.I's were, in general, radio amateurs, several of whom were ladies. As the war progressed, more and more RSGB members joined R.S.S. either in a full-time civilian capacity or in connection with their military service. Lord Sandhurst and Lt. Col. Kenneth

Morton Evans, G5KJ, held positions of responsibility in the organisation. Presumably, for security reasons the full story of R.S.S. has yet to be written, which seems regrettable at this late date.

To record all the tasks that fell to the lot of radio amateurs in war-time would be to tax the knowledge even of those who were intimately connected with war strategy—both offensive and defensive. It is well known, however, that the skill demonstrated by amateurs assisted greatly in the development and practical application of many effective counter-measures against air attacks on Britain. Amateurs played a significant part in the defeat of the magnetic mine and they helped in the successful Anti-Aircraft defence of London and other big cities. They participated in the development of the ultra-high frequencies for war-time purposes and, in quite a different field, they acted as instructors at radio and radar schools. At every major Signals training establishment they were to be found acting as instructors.

From the earliest days of the war the *T and R Bulletin* had been placed on the list of publications which were subject to censorship. Hardly a week passed without the Editor receiving from the Chief Press Censor private and confidential information to guide him (and all other editors of technical publications) on what could and what could not be published. Great care had to be taken to ensure that an apparently innocent item of news in, for example, District Notes, did not disclose the whereabouts of an Army or Royal Air Force concentration. Care too had to be taken with technical information submitted by columnists. Items which appeared to be quite harmless often led to questions being asked by the Censorship authorities. Publication of an observation about "fluttering" noticed on signals in the 28 Mc/s band, resulted in the Editor receiving a visit, one of many during the war, from a Ministry of Information representative. The Story of Radar had, at that time, not been told. The Special Branch of Scotland Yard also showed interest in what was published in the *Bulletin*. Enquiries made during the early days of the war concerning the whereabouts of the senders of certain QSL cards were followed later by requests for information about well-known European amateurs who had disappeared from the scene a year or so before the war.

The secret of Radiolocation (Radar) was well kept, although there was much speculation that Britain possessed a secret weapon which was helping the defences of the country. The National Press, more than the technical, were anxious to discover something about the secret device but it was not until June 17, 1941, at an Air Ministry Press Conference, that the first official disclosures were made. Even

then strict instructions were issued by the Chief Press Censor that no more should be said about the matter than that "Radiolocation is a system of ether waves unaffected by fog, cloud or darkness, which are constantly sent out far beyond the limits of our shores. Anything solid, such as an aircraft or a ship that is in the path of these waves reflects back the signal, which announces to the detecting station the presence of an object in the air or on the sea". Editors were warned that nothing must be said regarding the application of Radiolocation to the Army.

Notwithstanding the restrictions placed on the National Press the Editor of the *T and R Bulletin* submitted to the Chief Press Censor an article on Radiolocation for publication in the July 1941 issue. Except for the deletion of a brief reference to predictions made by that doyen of American space fiction writers, Hugo Gernsback in November 1940, that microwaves were being used for the "secret weapon", the article was passed for press. One paragraph in the article is of special interest today.

"The peace-time applications of Radiolocation in the field of commercial aviation and maritime engineering should provide employment for many thousands of those who, today, are engaged in applying the principles to Service needs."

In this way the Society's Journal was able to publish one of the first of the many articles that have since appeared on Radiolocation or, to give it its more modern name, Radar. No one knows how many radio amateurs helped to man the early RDF stations along the south and east coasts of Britain or how many, during the later stages of the war, became involved in Radiolocation (Radar) work in some form or other while serving at home or abroad, on land, at sea or in the air. All that we do know is that the numbers were very large indeed.

As the call-up got under way so did the membership of the Society start to fall but throughout the British Isles the thoughts of many amateurs, especially those in the Services, began to turn towards the idea of holding local meetings. Aldershot and Farnborough, twin centres of Army training in Hampshire, were alive with radio amateurs. On February 25, 1940, at the Y.M.C.A. in North Camp, Farnborough, more than fifty of them, including a number of Canadians who had arrived in England well before Christmas, took part in the first of many such gatherings in that area. Organised by DX enthusiasts, Jim Kirk, G6ZO, and Bill Wadsworth, VE5ZM, later meetings attracted good support from all over the south of England as well as from the London area.

Not to be outdone by their friends in the Army, R.A.F. personnel stationed at No. 1 Radio School, Cranwell, Lincolnshire, held their first war-time meeting at the Queen's Head, Kirby Laythorpe, on March 31, 1940. Organised by Squadron Leader L. E. Newnham, G6NZ, and civilian instructors Norman Davis, G6TV, and R. W. Standley, G8RW, the meeting and others that followed brought together service men stationed at Cranwell and thereabouts, as well as civilians. At meetings held on March 17, 1940 at Farnborough and on May 19, 1940, at Kirby Laythorpe, the Secretary of the RSGB attended and gave an account of the war-time activities of the Society. In addition to the informal meetings, arranged mainly for the benefit of amateurs on active service, more formal meetings were held at the Institution of Electrical Engineers, London. The first of these took place on February 23, 1940, when H. R. (Reg) Adams, G2NO, of *Webbs Radio* displayed and described an array of communication-type equipment.

In almost every district local activities were maintained, usually by holding meetings at the homes of members. By making use of the *T and R Bulletin* local representatives were able to attract good attendances. The "Hope and Anchor", a famous Birmingham hostelry, was the venue for the first war-time Provincial District Meeting. Held on April 28, 1940, the event brought together well over 100 members, including many stationed at Army and Royal Air Force establishments in the Midlands. District Representative, Victor Desmond, G5VM, was responsible for the arrangements.

The first of many war-time gatherings of radio amateurs to be held at No. 2 Radio School, R.A.F. Yatesbury, near Calne, Wiltshire, took place on August 4, 1940. Harold St. John, D.F.C., one of those closely associated with the establishment of the Civilian Wireless Reserve, had, by then, been promoted Wing Commander and was holding the tough job of Chief Instructor at the School. St. John, backed by a number of well-known radio amateurs in training at Yatesbury, was responsible for this and several other successful meetings. The Bank Holiday meeting was addressed by the Secretary of the RSGB as was a large meeting held on August 25, 1940, at the Tadworth, Surrey, home of Nell Corry, G2YL, who had Lord Sandhurst as one of her guests.

During this period of the war the Council of the RSGB, through the co-operation of The Television Society, and in particular of its energetic Honorary Secretary, Geoffrey Parr, met each month at 17 Featherstone Buildings, Red Lion Square, Holborn, Headquarters of The Television Society. Then came the London blitz and with it the destruction of many buildings in Red Lion Square. Serious

damage was done to Featherstone Buildings but fortunately The Television Society's valuable collection of museum pieces and books escaped unharmed. By coincidence a few days after the Red Lion Square incident a bomb fell at the rear of 53 Victoria Street, pre-war Headquarters of the RSGB causing great damage. From October 1940 onwards and for the next two and a half years, the meetings of the Council were held either at the home of the Secretary or at the Institution of Electrical Engineers.

In its report to the membership for the year ended September 30, 1940, the Council were able to announce that after a rather serious recession during the first few months of the war, membership was again beginning to increase. Continuing support for the *T and R Bulletin* from advertisers and an unexpectedly large demand for the Handbook had led to an improvement in the Society's financial position. So great had been the demand for the Handbook that a Second Edition of 4000 copies had been put in hand and published in July 1940.

After completing his second term of three years as President, Arthur Watts, G6UN, handed over the leadership on January 1, 1941, to Alfred Duncan Gay, G6NF. Gay had served on the Council since 1930, during which time he had held executive office for the previous four years, first as Honorary Treasurer (1937) and then as Executive Vice-President (1938-40). He had made an outstanding contribution to the work of the Society by undertaking the onerous duties of Calibration Manager (1929-39) and had achieved national recognition in the specialised field of frequency measurement. He had contributed handsomely to the *T and R Bulletin* and to *The Amateur Radio Handbook*, and he had been in frequent demand as a lecturer on many subjects. No President since Gerald Marcuse had earned such a high reputation for DX work as G6NF, whose call-sign was one of the best-known in the world. He had won the Braaten Trophy three times, having led the British Isles entrants in the Annual ARRL DX Telegraphy Contest for the years 1937, 1938 and 1939. Additionally he had been an active vhf enthusiast for twelve years. Professionally he was chief chemist for Schweppes, the mineral-water company.

Alfred Gay followed the tradition of his predecessors by delivering a Presidential Address, choosing as his subject "Frequency Standards" but, unlike those that had gone before, the Address was given at the Annual General Meeting held during the afternoon of Saturday, December 14, 1940—seventeen days before he became President. London at that time was in the middle of the Blitzkrieg—in fact only fourteen days after the A.G.M. the City of London was partially

destroyed in one of the fiercest fire-bomb raids of the war. One of those, among the many thousands, to suffer on that occasion was the retiring President, whose family business, *John, Son and Watts* of Bunhill Row, was very severely damaged.

In appreciation of his services to the Society, Arthur Watts became the recipient of an engraved walking stick and fitted dressing case subscribed to by those who had served with him and by members of Headquarters staff. In March 1941, Watts was elected an Honorary Member of the Society, to share that great honour with Ostermeyer and Bevan Swift; Sir Oliver Lodge, one of the earliest Honorary Members, having died on August 22, 1940, at the age of ninety-two years.

Although the evacuation of the British Army from Dunkirk, during May 1940, had been an outstanding achievement it brought in its wake much sorrow and suffering. In addition to those who had been killed on the beaches or in the small ships that came to the rescue, many had been taken prisoner. Early in 1941 arrangements were made to send the *T and R Bulletin* each month to the home address of every member known to be a prisoner-of-war and to retain his name on Society records during this enforced absence. One of those taken prisoner at Dunkirk was Capt. Ernest Shackleton, G6SN, who had contributed the Workshop Practice chapter to the Handbook. "Shack's" ingenuity while a P.O.W. earned for him recognition later when he was appointed a M.B.E. The "broadcast" receiver he constructed from the most unlikely sources while in a prisoner of war camp, was exhibited after the war to several groups of radio amateurs before being finally lodged in the Imperial War Museum.

Towards the end of 1941 the Editor of the RSGB Bulletin suggested that a Fund be inaugurated to send parcels to members held prisoner of war. A call for donations met with a prompt response, and C. H. L. Edwards, G8TL, of Ilford, Essex, offered his services as administrator of the Fund. "Eddie's" work as RSGB Prisoner-of-War Fund Administrator earned for him the grateful thanks of those held captive, as well as the warm appreciation of their families. Before Christmas that year more than £120 had been collected. As the war progressed the response to the appeal gathered impetus until by the end of the war close on £1600 had been raised by donations and other means.

Censorship was responsible for irksome delays in the delivery of the *Bulletin* to Northern Ireland whilst the Handbook was one of many technical books that could not be sent to Prisoner-of-War Camps.

In February 1941 *Wireless World* published an article by "Navigator" which contained a number of suggestions for less restrictive licences when these were again issued. In a vigorous reply the Council put the record straight by emphasising, as it had done in its Annual Reports and as its representatives had done at Provincial Meetings, that neither the RSGB nor the G.P.O. intended to wait until hostilities had ended before tackling post-war licence problems.

In its Annual Report for the year ending September 30, 1941, the Council had a good deal to say about matters which had been discussed with the G.P.O. High in the list was a suggestion that after the war those seeking to obtain transmitting licences should be exempted from taking a Morse test, or any technical examination, provided they had served in a specified radio "trade". The idea of introducing a technical examination as a licence requirement was not new, as it had been the subject of discussion between the Society and the Post Office before the war.

By the end of 1941 the Society had made great progress. From August 1939 to May 1940 (Dunkirk) membership had fallen from about 3600 to about 2500. From June 1940 to the end of 1941 the loss had been more than made up, and the 4000 mark was reached early in 1942. The RSGB Handbook was chiefly responsible for triggering-off interest (especially among service men) in Amateur Radio which, in turn, led to increased membership. The fourth printing of the 2nd Edition, when it appeared in September 1941, brought the total number of copies printed since the war to 32,000—an unbelievably high figure. The remarkable success of the Handbook and the economies effected in administration contributed to a very healthy financial state of affairs. Although much thinner than in pre-war days, the *T and R Bulletin* continued to publish articles on a wide range of subjects. For the member on active service the *Bulletin* was a boon.

For a few brief hours on Saturday, August 9, 1941, the spirit of pre-war Conventions was recaptured when more than 100 members and their friends met together at the Institution of Electrical Engineers, London, for the first and only war-time Convention. Catering difficulties prevented an organised luncheon being arranged but the manager of the always-crowded dining room of the nearby Strand Palace Hotel contrived somehow to find room for those who had come from far and near to meet and eat. An excellent group photograph reproduced in the September 1941 issue of the *Bulletin* provided a permanent record of the event which was presided over by Executive Vice-President, Ernest Gardiner, G6GR, and supported by Past Presidents Gerald Marcuse, G2NM, and Bevan Swift, G2TI.

During 1941 the Society was asked by the Wireless Telegraphy Board to invite members to sell or donate meters and instruments to the Government to meet a National shortage. Many did so but not until months later could any reference to this matter be published in the *Bulletin*. It came then in a letter of thanks from the Lord President of the Council (Lord Hankey).

On December 7, 1941, Pearl Harbour was attacked by the Japanese and in a matter of hours the European War had become World War II. Amateur stations in the United States were closed down officially on December 8, 1941, although in a letter to all ARRL members dated December 12, 1941, the League Secretary Ken Warner optimistically advised everyone to watch out for news bulletins from W1AW, the League's Official Station at Hartford, Conn. But optimism was short lived and U.S. amateur stations remained closed until after the war ended. In time for Christmas 1941 "Eddie" Edwards despatched the first batch of parcels to fifteen members known to be prisoners of war.

A new publishing venture was put in hand during the winter of 1941-42. Described as a companion volume to *The Amateur Radio Handbook*, the new publication, *The Radio Handbook Supplement* brought together in two chapters a series of articles on Radio Mathematics contributed to the *T and R Bulletin* by T. R. Theakston, B.Sc., 2DBK. There were also chapters on Cathode Ray Tube Techniques, Direction Finding, Radio Fundamentals, Data and Formulae. Trigonometrical, Logarithm and Anti-Logarithm Tables added to the usefulness of the book, especially for those under training in radio and electrical trades. Priced at 2s. 6d. the Supplement, like the Handbook, quickly passed into the "best seller" class. Anticipating a large demand the initial printing was for 30,000 copies—a figure no present-day publisher of technical books would dare to consider. But it must be remembered that during the war the demand for reading material—fiction or technical—was such that it could never be fully satisfied.

The first printing of the *Supplement* appeared in March 1942; the fifth, and last, in May 1945. The printing figures are of historic interest.

<i>Printing</i>	<i>Number of Copies</i>	<i>Date of Publication</i>	<i>Total</i>
First	30,000	March 1942	
Second	30,000	March 1943	
Third	15,000	January 1944	
Fourth	20,000	August 1944	
Fifth	20,000	May 1945	115,000

From September 1939 until March 1942 the *Bulletin* averaged forty pages per issue. On March 18, 1942, a Government Order made it an offence for any publisher to use, during the period March-June 1942, more than 19.5 per cent of the weight of paper used for the corresponding period in 1939. Converted to practical figures this meant that the April, May and June 1942 issues of the *Bulletin* would have to be restricted to not more than sixteen pages each. To cope with the emergency it became necessary to dispense with all advertising, except on the four cover pages, to lengthen each column of type by half an inch, to use smaller type for non-technical articles, to omit "The Month *off* the Air" and similar topical features.

"Paper is a Munition of War" ran the headline of the Editorial in the April 1942 *Bulletin*. Fortunately by then the *Handbook* had, itself, become established as a "munition of war" with the result that, although much pressure had to be applied initially, by both the Society and the printers (Sir Joseph Causton & Son Ltd), paper was made available by the Paper Controller for continuous reprints of the *Handbook* and, later, of the Supplement as well. The value of the assistance given to the Society throughout the war and for some time afterwards by the firm of Sir Joseph Causton & Son Ltd., and in particular, by the London representatives (Messrs E. J. Watts and J. A. Brymer) was immeasurable.

It took a war to make a change that had been resisted strongly in the past. After months, even years, of argument between the diehards of the early '20's and the progressives of the early '40's, it was finally decided that all references to T and R should disappear as from July 1, 1942. The *T and R Bulletin* would change its name to *RSGB Bulletin*, membership badges would no longer include in their design the letters T and R and Headquarters note-paper would refer only to the Radio Society of Great Britain. Many, who had been early members of the old T and R Section, lamented the change but newer generations of members had known only the RSGB.

The *post-war* disposal of Government surplus radio equipment began to arouse interest among members long before hostilities ceased. An editorial suggestion that the Board of Trade should establish maximum resale prices received widespread support from those with experience of the surplus radio market after World War I when huge profits were made by speculators.

The death on July 7, 1942, of Ernest J. Simmonds, G2OD, deprived the Society of a member who, for more than twenty years, had given of his best in advancing the cause of Amateur Radio. No new development in the field of radio communication had escaped his attention and it was largely as the result of his patience and

persistence during the early 1920's that the superheterodyne receiver, the master oscillator and later the quartz crystal oscillator reached such advanced stages of development in Amateur Radio circles in the United Kingdom. He had been a Vice-President of the RSGB since March 1929.

To strengthen the ties between the Society and the world of science the Council in November 1942 invited Professor C. L. Fortescue, O.B.E., to become a Vice-President and elected Dr. R. L. Smith-Rose to Honorary Membership. The former held the Chair of Electrical Engineering at the City and Guilds College, South Kensington and the latter was Superintendent of the Radio Department at the National Physical Laboratory and currently Chairman of the Wireless Section of the Institution of Electrical Engineers.

In a Christmas message to members* Alfred Gay tried to answer the question on the lips of all pre-war licensed amateurs "how long will it be after the war before the Post Office gives us permission to start up again?" "With many enemy amateurs still on the air† without apparently causing any embarrassment to the armed forces, there seems no reason why British licences should not be restored within, say, two months after hostilities cease, followed by the return of our impounded equipment. Power and frequencies should remain the same as before, until such time as a future International Conference decides otherwise. These important matters should be dealt with now and the decisions confirmed by the Government departments concerned. They should not be left over until post-war chaos and movement crowds them into the background." Gay, like other members of the war-time RSGB Councils, was determined to leave nothing to chance. Throughout his term of office as President, he, together with Arthur Watts and the Secretary, continued to meet representatives of the Post Office several times a year.

A brief statement by the Council, published in March 1943, regarding post-war licensing matters put an end, for the time being at any rate, to speculation. The statement reported that good progress had been made with a proposal by the Society that the Post Office should grant exemption from the Morse test and/or a technical examination to those who could provide evidence that they had served during the war in a radio trade. No undue delay in issuing licences to prewar licensees was anticipated. A post-war International Radio Conference would probably take place within

* *RSGB Bulletin*, Vol. XVIII, No. 6.

† For some reason which has never been explained certain German and a few Italian stations using amateur calls and procedure continued to operate until the last stages of the war.

two years of hostilities ceasing. In fact, all of these things happened as predicted.

By mid-1943 with membership up to nearly 6000 and the demands for Society publications increasing rapidly the Council decided that the time had come to re-establish Headquarters in Central London. During the three years and ten months that had elapsed since the pre-war premises in Victoria Street, Westminster, were vacated, the burden of the administration of the Society had fallen upon the shoulders of the General Secretary and the Assistant Secretary (Miss May Gadsden). The physical task of producing nearly 6000 *Bulletin* wrappers each month and of circularising the membership on a variety of matters presented many problems but the main difficulty was that of coping with a gigantic postbag. Literally thousands of single copies of the Handbook and Supplement were handled at the war-time Headquarters of the Society which meant, very often, a dozen journeys by the "staff" every day to the nearest post office, about half a mile distant. For long periods London was under "air raid alert" and during some of the worst phases of the war (particularly during the daylight raids) the hazards which had to be overcome by the civilian population were as great as those encountered by many who at that time were in war zones.

By good fortune a suite of rooms on the top floor of a five-storey office block in Little Russell Street, a stone's throw from the British Museum and in the heart of the publishing world, became available. Although, as things turned out, the acquisition had some disadvantages it proved to be a very suitable venue for war-time and immediate post-war activities. By coincidence the move to New Ruskin House took place on July 5, 1943, the 30th anniversary of the date on which Rene Klein founded the London Wireless Club. For some months all went well and then came the Flying Bomb (V1) and later the Rocket (V2). The top floor of any London building was not the most pleasant place to be during the V1 era but the problem of personal safety was secondary to the problem of safeguarding the vital master records of the Society. By the time the V1 attacks commenced in May 1944 membership had increased to over 7000. The only practical solution of the problem was to remove the master stencil file to the basement, together with the duplicating equipment. A duplicate card file of members was prepared and kept up-to-date by Miss Gadsden at her home in New Barnet, Herts. Fortunately New Ruskin House escaped damage from flying bombs and rockets but a number of serious incidents occurred within a short distance of the building. Many members and a number of visitors from abroad who turned up at RSGB Headquarters during one of the

“hot” periods found themselves in the basement turning the handle of the old duplicator then in use.

From July 1943 until the V1 attacks started a year later Council meetings took place at New Ruskin House. It was then decided to move across the road to the Kingsley Hotel where it was assumed a room on the ground floor would be immeasurably safer than the top floor of a building with a flat roof. All went well at the August 1944 Council Meeting until the noise of an approaching V1 began to attract the attention of members, one of whom happened to glance up only to discover that the Council's sole protection was a large blacked-out glass window wide-open to the sky about 20 ft. above floor level. Future meetings were held at New Ruskin House.

During previous discussions on the question of introducing a special technical examination for post-war applicants for the transmitting licence, the idea of inviting a recognised examining body to organise such an examination had not been considered. Arising from a suggestion made by the Post Office, the Council investigated, during 1943, the possibility of the City and Guilds of London Institute establishing such an examination for post-war applicants for a transmitting licence who could not claim exemption. The discussions led, later, to the introduction of the Radio Amateurs' Examination and to the appointment of RSGB representatives to serve on the Advisory and Moderating Committees.*

By the time the Annual General Meeting was held on December 18, 1943, C. H. L. Edwards, was able to report that more than 1000 parcels had been sent to prisoners-of-war. Since the beginning of the year the scope of the Fund had been extended to include non-members of RSGB who had held full or artificial aerial licences at the outbreak of war.

On January 1, 1944, Ernest Lett Gardiner, B.Sc., G6GR, succeeded Alfred Gay as President. In 1922, when still a junior, Gardiner was first licensed as 6SO in his father's name. After a short break, while studying for his degree at London University, he recommenced his activities as G6GR. As a Founder Fellow of The Television Society, he was one of the first amateurs to construct, and operate successfully, transmitting and receiving equipment for the thirty line system. He had also done much experimental work on high definition television systems and was an authority on the cathode ray oscilloscope. He had made numerous contributions to the Society's

* The original RSGB representatives were W. A. Scarr, M.A., G2WS, H. A. M Clark, G6OT, and John Clarricoats, G6CL. Clark served until his death in 1963. Scarr and Clarricoats were still members in 1967. Scarr had been Chairman throughout.

Journal and had written a chapter for *The Amateur Radio Handbook* on crystal band-pass filters, in which subject he had established for himself a high reputation.

At a meeting of the Society held on January 29, 1944, book tokens were presented to Alfred Gay "in warm appreciation of the able manner in which he had carried out his duties as President". The following month he was elected an Honorary Member, being the fourth Past President to be so honoured.

Gardiner followed in the tradition of his predecessors by delivering a Presidential Address. Choosing as his subject "The Development of Communication Receivers", he discussed selectivity improvements, laying special stress on the use of crystal band-pass filters and the duplication of the first i.f. stage.

In April 1944 the *Bulletin* reported the death on active service of Air Commodore Viscount Carlow, G6XX.* Carlow had succeeded Gay as Honorary Treasurer in 1938 and remained in that office until his Service duties made it necessary for him to resign in 1940. He was one of the first British amateurs to recognise the importance of Service Wireless Reserves and although his initial overtures to Air Ministry, like those made earlier by the Secretary of the RSGB, led to no positive results at the time, his subsequent persistence had no doubt contributed to the decision in 1938 to form the R.A.F. Civilian Wireless Reserve. Before the war Carlow had been Signals Officer at No. 600 Squadron (City of London) R.A.F. Auxiliary Reserve stationed at Hendon.

One of the premier awards of the RSGB today is the Pilot Officer Norman Keith Adams Prize. The origin of the award dates back to 1944 when, on August 22 of that year, 26-year-old radio amateur Norman Keith Adams G5NM whose home had been in Finchley, North London, lost his life while on a flying boat patrol in the Mediterranean. To create a permanent memorial to their son, Mr. and Mrs. H. F. Adams offered the Society the sum of £150 to be invested to provide an annual prize. The Declaration of Trust was accepted by the Society, the salient features of which were published in the *RSGB Bulletin*.† The prize, open only to members of the Society, "is awarded annually to the author of the paper or article bearing on radio science or its application thereof or upon subjects relating thereto, which in the opinion of the Council shall be the most meritorious published in the *RSGB Bulletin* during the previous twelve months". The prize can be withheld if it is considered that no paper or article justifies the award being made.

* Viscount Carlow was the eldest son of the sixth Earl of Portarlington.

† Vol. xix, No. 6.

Up to the middle of 1944 a programme of lecture meetings at the Institution of Electrical Engineers and district meetings in the Provinces had been followed through according to plan, with good attendances registered at most. The first P.D.M. to be postponed because of "prevailing conditions" was that planned to take place in Liverpool on July 8, 1944. "Prevailing conditions" in that instance meant V1s and/or V2s.

It required a world war to bring about the first Anglo-American "Hamfest". Held at the Mostyn (Red Cross) Club in the Edgware Road, London, not far from Marble Arch, on September 23, 1944, with the V1 menace at its peak and with limited publicity, more than fifty licensed U.S. amateurs and twenty-five or so U.K. amateurs attended this unique event. Chaired jointly by RSGB President, Ernest Gardiner, G6GR, and U.S.A.F. Lt. Col. David Talley, W2PF, with strong support from U.S.A.F. Chaplain Major Joseph D. Andrew, W4EFG, every U.S. Call District was represented. The U.K. contingent included Arthur Milne, G2MI, Nell Corry, G2YL, Reg Hammans, G2IG, and the RSGB Secretary, G6CL. A second "Hamfest" held on October 28, 1944, received even greater support with more than 120 licensed amateurs present from the United States, Canada and the United Kingdom. Leslie McMichael, G2FG, and Gerald Marcuse, G2NM, were present to support the President and other RSGB Council members. At the request of the Americans the chair on that occasion was taken by G6CL. Another lively organisation—known as the British-American Radio Amateur (Duration DX'ers) Club—was currently operating from Delhi, India, with ardent pre-war DX enthusiast Squadron Leader John Hunter, G2ZQ (soon to become a Silent Key) and Squadron Leader Frank Adams, G2YN, playing prominent parts in its activities. Meantime in Egypt, pre-war BERU Representative W. E. Marsh, SU1WM, with help from Captain (later Major) Ken Ellis, G5KW, and others succeeded in rallying together at "The Bystander", Cairo, large numbers of amateurs from many parts of the world. The Cairo International Conventionettes became nearly as famous as the London Conventions of pre-war days. At about this time a group of well-known amateurs whose whereabouts "somewhere in England" had been disguised in the description "Bachelor's all" dispersed, still wondering what strange stroke of fate had brought them all together soon after the war commenced. George Spencer, G2KI, Tom Shanks, G2QV, Ron Dabbs, G2RD, Bill Bartholomew, G8CK, and Les Parnell, G8PP, were among the "Bachelors".

At the Annual General Meeting of the Society held on December 30, 1944, the Council reported that during the twelve months to

September 30, 1944, membership had increased by 1900—easily a record—to a total of 7800; negotiations had been opened with Service ministries to ensure that amateurs would be given an opportunity after the war of purchasing surplus ex-Government radio equipment at reasonable prices and post-war licence policy had been fully examined. The Society's assets stood at £11,000 compared with £1400 five years earlier.

In amplification of the information given at the Annual General Meeting, the March 1945 issue of the *Bulletin* contained a statement, issued by the Council, outlining post-war licence policy. The statement explained that the military situation in Germany, after all organised resistance had ended, "might be such as to bring grave risks to security if a large number of amateur stations were permitted to resume transmissions on frequencies capable of reception in Europe". Service demands might also present problems. Notwithstanding these two problems the Post Office would restore facilities to all pre-war fully licensed amateurs upon application; pre-war call-signs would be re-allocated automatically. The Artificial Aerial licence would not be revived but holders of a pre-war A.A. licence would be granted a full licence subject to producing proof of Morse proficiency. Applicants who had served in a recognised radio trade in one of the three Services and could produce evidence of proficiency would be able to use this as a technical and/or Morse qualification for a licence. Others would be required to pass a simple technical examination and a Morse test. Guard-bands would be abolished and all licensees would eventually be authorised to use all amateur frequencies. There would be no restrictions on aerial systems (except on height in the case of stations near to airfields) or on sending times. Power limits had not been settled but a maximum input of 25 watts was anticipated. Publication of the statement removed all doubts that the Post Office intended to encourage experimental radio work once the war had ended and the military situation permitted the restoration of licences. Members who had been critical of the Council now realised the wisdom of their silence until clear-cut decisions could be announced. The decision, taken in September 1939, to keep the Society going, so that when peace returned a strong and virile organisation would be in existence to press for the early restoration of licence facilities, had been more than justified. True, in March 1945 the war in Europe had not yet ended but within two months Hitler and Mussolini were dead, the Axis had been destroyed and VE Day had been proclaimed. Certainly March 1945 was not too soon to let members know that the Council had been far from idle during the war years.

In March came the announcement—rather overdue perhaps—that the Council had elected Leslie McMichael an Honorary Member of the Society. Thirty-two years earlier McMichael had helped to found the Society. Since then he had seen service in the Royal Flying Corps and Royal Air Force during the first World War and in 1921 he had founded the radio firm which bore his name—McMichael Radio. In December of that year as Honorary Secretary of the Wireless Society of London he had presented the petition to the Postmaster General which led up to the weekly telephony transmissions from “2 Emma Toc” Writtle and laid the foundation stone of British broadcasting. McMichael maintained a close association with the Society throughout his life.

The May 1945 issue of the *Bulletin* had closed for press long before Winston Churchill announced on May 7 to a waiting nation that hostilities in Europe had ceased and that May 8 would be proclaimed VE Day. But this issue carried an announcement that gave pleasure to countless erstwhile radio amateurs, a list of the Service radio “trades” which the Post Office had agreed to recognise. Personnel who had served or were still serving in any of the “trades” listed would, in due time, be able to claim exemption from the Morse test and/or the anticipated technical examination, by submitting either their Discharge Leave Certificate or an appropriate certificate from a responsible authority. The basic suggestion, that the Post Office should grant exemption to men and women who had served, or were serving, in specified radio trades, had first been put forward by the Society in the summer of 1941, when it was recalled that following World War I, hundreds of qualified ex-Service wireless telegraphists seeking an amateur transmitting licence had been required to take the Post Office Morse Test because no documentary evidence was available to prove that they had passed Service tests at speeds up to twenty-five words a minute. The original list of radio “trades” published in May 1945 was subsequently extensively expanded.

The war years had brought great changes in the Society. Not only had the membership risen from 3600 in 1939 to about 9000 in 1945 but the assets of the Society had increased from £1,460 in September 1939 to nearly £16,000 by May 1945. The decision to fix the annual subscription paid by members on active service at 10s. per annum had prompted a large number of Service men to join the Society thereby entitling them to receive the *Bulletin* each month.

The happenings of the war years in Europe deserve a much fuller treatment than this volume will permit. Fortunately, in spite of paper rationing and countless war-time difficulties, a continuous record of



W. F. Holdaway, B.R.S. 15028 (right), of the Romford and District Radio Society, winner of the first and runner-up in the second post-war Direction Finding Contests organized by the RSGB during 1947. Also in the picture, R. Beardow, formerly G3FT, now VE3AML.



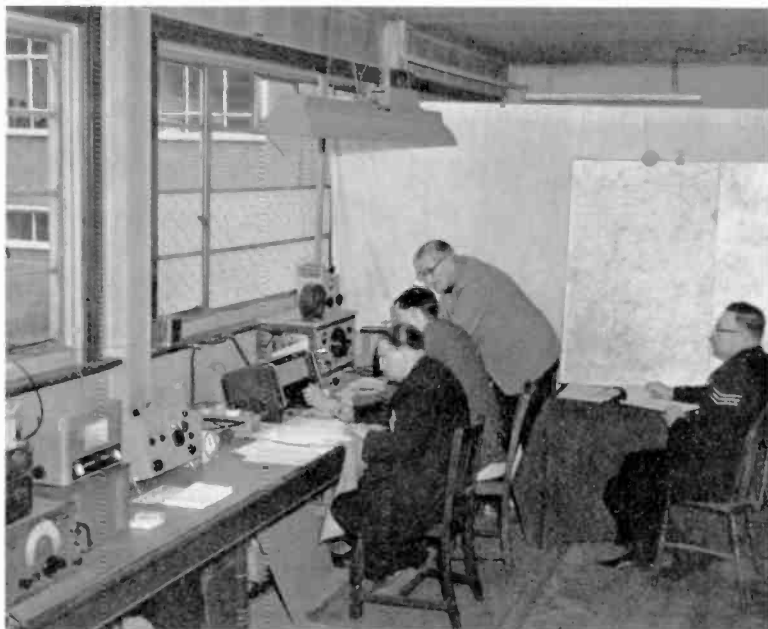
GB1RS
HEADQUARTERS STATION
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INC. RADIO SOCIETY OF GREAT BRITAIN
New Ruskin House, 28/30 Little Russell Street
LONDON, W.C.1. ENGLAND

We acknowledge with thanks your report on the experimental 3,500.25 kc/s. standard frequency transmissions from GB1RS which operates daily at each hour from 0600 to 2400 local time.



VIEW OF THE CONTROL UNIT AND E.M.I. 500 WATT TRANSMITTER

The special QSL card issued by the RSGB to confirm the reception of frequency marker signals from the Headquarters station GB1RS. The transmitter was donated to the Society by *Electric and Musical Industries Ltd.*



The control station of the Radio Amateur Emergency Network set up in the Headquarters of the Essex police at Chelmsford. C. H. L. Edwards, G8TL, is the operator nearest to the camera.



A typical National Field Day installation operated by the Norwood and District Group. The operators are G. M. C. Stone, G3FZL and A. J. Worrall, G3IWA.



This station was part of the National Field Day installation in 1950 of the Edgware and District Group. The operator is R. H. Newland, G3VW.



G8FC, the headquarters station of the R.A.F. Amateur Radio Society, was at one time located at Cranwell and this view of the workshops and the beam aerial arrays for 14 and 28 Mc/s was taken at a meeting there in 1950.

progress and achievement is preserved in the seventy or so issues of the Society's Journal that span the period between September 1939 and May 1945.

The value to the nation of the contributions made by radio amateurs during those six years cannot be assessed but all who lived *through* those years know that the extent of the contributions was very considerable indeed.

The Post-War Years

THE war against Hitler's Germany ended, officially, at one minute past midnight on Tuesday, May 8, 1945, but the struggle against Japan continued until after Hiroshima—on August 5, 1945—and Nagasaki—on August 9, 1945, had been laid waste by atomic bombs. Five days after the latter attack Japan surrendered, unconditionally, to the allied forces in the Far East. During the weeks that followed, conditions near to chaos existed on the amateur bands, mainly because certain allied military commanders in widely different parts of the world had given permission for pre-war licence holders to operate Service transmitting equipment. Done to boost morale the exercise was, however, in direct contravention of a diplomatic agreement reached earlier in the year by the United Nations assembly in San Francisco that *all* allied pre-war licensees should be reactivated as from an agreed date, when hostilities had finally ceased.

As soon as the Society discovered what was happening at military and air force bases around the Mediterranean, the Middle East and beyond, the Post Office was asked to reactivate certain amateur bands immediately, but the answer came back that for *military reasons* it could not be done. The position had become so absurd by the end of October 1945 that Arthur Milne, G2MI, was prompted to write in the first pre-war revival of his "Month 'off' the Air" column, that "unless the United Nations have another think it will take three times as long to rid our bands of 'pirates' as it will to remove the military stations therefrom—the ostensible reason which is put forward by the authorities for keeping us off the air at the present time".

Although progress seemed slow at the time, less than a month after VE Day (May 8) a notice appeared in the *RSGB Bulletin* inviting holders of pre-war transmitting licences issued by the Postmaster General to apply for a post-war licence. Three months later a similar invitation was directed to those who had held pre-war Artificial Aerial licences who could now produce evidence of Morse Code proficiency. The December 1945 issue of the *Bulletin* reproduced a copy of the new licence, the terms and conditions of which

represented a marked improvement over those of the pre-war licence. For example the new licence authorised the establishment of an amateur, as distinct from an experimental, station; it authorised the use of "CQ" in place of "Test" as the general call; it removed all restrictions on the length and height of aerial systems, except in the case of installations close to airfields; and it made no reference to guard bands or tolerances. It did make it obligatory however for the licensee to possess frequency measuring equipment accurate to ± 0.1 per cent. Pre-war limitations on sending periods (not more than four hours during any consecutive period of twenty-four hours) had disappeared and a new condition had been added which allowed the station to be operated by *anyone* provided it was done under the direct supervision of the licensee. Unfortunately this generous concession was soon abused, resulting in the present-day licence condition which restricts the operation of an amateur transmitting station to the licensee and to holders of an Amateur Radio Certificate.

On November 15, 1945, the United States Federal Communications Commission reopened the 28 Mc/s and 56 Mc/s bands as well as certain uhf bands for amateur use. At about the same time military personnel in the Central Mediterranean area were granted permission to operate in the 7 Mc/s and 14 Mc/s bands using calls in the XA series but as the result of pressure from the U.K. and U.S. Governments, operation was shortly afterwards confined to 28 Mc/s and 56 Mc/s. Meanwhile the RSGB continued to urge the Post Office to follow the lead given by the United States. Eventually, on December 15, 1945, came the long-awaited announcement that "licences authorising operation in the bands 28–29 Mc/s and 58.5–60 Mc/s will be issued within the course of the next few days to holders of pre-war radiating and non-radiating licences who have made application to the G.P.O.". The first post-war licences were, in fact, issued in January 1946 but amateur activity was mainly confined during the early months of that year to local contacts. C. G. Allen, G8IG, of Bromley, Kent, made one of the first authorised post-war amateur contacts between England and the Continent when he worked the Norwegian station LA8C during the latter part of January 1946 on 28 Mc/s.

On March 15, 1946, the remainder of the 28 Mc/s band (29–30 Mc/s) as well as Top Band (1.8–2 Mc/s) were released. Although 28 Mc/s remained virtually "dead" throughout that winter for DX the opening-up of Top Band brought to life dozens of call-signs that had not been heard since before the war. Soon Breakfast Clubs, Shaving Clubs and the like began to make their appearance. It was the activities of certain members of these so-called Clubs that led to

the Post Office having second thoughts about the wisdom of allowing all and sundry to speak into the microphone. It was not until July 1, 1946, that the first break came for the DX enthusiasts. At 0001 GMT that day frequencies between 7150 and 7300 kc/s and between 14,100 and 14,300 kc/s were released to U.K. amateurs. The pandemonium that broke out on both bands as midnight passed will long be remembered by those who were there to enjoy the fun. The pages of the *RSGB Bulletin* for 1946 and 1947 record the events as each band in turn came back into use but it was not long before the Council of the RSGB realised that if chaos was to be averted codes of operating practice must be set-up. The establishment of a Codes of Practice Committee and the introduction of a Band Plan will be referred to later.

Soon after the war ended the Council, recognising the importance of the post-war Amateur Radio market, circulated to the radio industry a comprehensive list of components, valves and complete equipments likely to be needed by radio amateurs. At about the same time the Post Office ruled that transmitting apparatus could once again be purchased without a permit. Six weeks after the first post-war licence was issued the total licences in force had increased to 1600—ample indication that the radio industry would soon be required to meet a heavy demand for suitable components and equipment.

The months that followed the end of hostilities saw a welcome return of social activities. On September 10, 1945, for example, an event unique in the history of the Society took place at the Kingsley Hotel, Holborn, when the six Honorary Members who had received that high honour during the war years were entertained by the President and Council.* The Honorary Members present on that occasion, in order of their election, were E. Dawson Ostermeyer, G5AR, H. Bevan Swift, G2TI, Arthur E. Watts, G6UN, Alfred D. Gay, G6NF, Reginald L. Smith-Rose, Leslie McMichael, G2FG. A month later, on October 19, more than 500 members attended the first post-war meeting of the Society at the Institution of Electrical Engineers when a series of colour films featuring a number of war-time technical subjects, including Radio Location, I.F.F., A.I., Gee and H2S were screened by Phil Thorogood, G4KD. On the following day (October 20) more than 120 members of the Society and their ladies attended the West London District 15 Dinner at the Park Royal Hotel, thereby setting in train a series of social events throughout the British Isles. The first post-war Provincial District Meeting was held on November 17, 1945, at The Stork Hotel, Liverpool.

* *RSGB Bulletin*, Vol. XXI, No. 4.

A feature of the Council's Annual Report for the year 1945 was the announcement that membership had increased by 7000 since 1939 and that the 10,000 mark had already been passed. The Report outlined achievements of the past year and listed some of the matters which would be considered during 1946. These included the future of the Society's QSL Bureau and the Experimental Section, Provincial Representation on the Council, a proposal for the setting-up of a Headquarters station and for the future administration of the Society. These and other matters were all fully discussed at the first post-war Conference of District Representatives held in Birmingham on March 23, 1946. The Conference was followed the next day by a Provincial District Meeting—the first held in the Midlands since the war. As an outcome of decisions reached at the Conference it was decided to introduce a new three-tiered scheme of local representation as from January 1, 1947. The scheme provided for the election of Town and Country Representatives and for the appointment by the Council of fifteen Regional Representatives.

The New Year Honours' List, published on January 1, 1946, recorded that F. J. H. Charman, G6CJ, F. W. Garnett, G6XL, H. J. Long, G5LO, Mrs. M. K. H. Myler, G3GH, H. W. Stacey, G6CX, J. N. Smith, GI5QX, and W. Jones, GW6OK—all listed as members of the Royal Observer Corps—had been awarded the British Empire Medal. Those with knowledge of the special work they and many other radio amateurs had been engaged upon during the war were glad to see that the work had received Royal recognition.

On many occasions prior to and during the war the suggestion had been made that the Society should seek permission to introduce a weekly news bulletin service for members on similar lines to that provided in the United States of America by WIAW, the Headquarters, and now the Maxim Memorial, Station of the American Radio Relay League. Tentative enquiries had shown reluctance on the part of the Post Office to enter into negotiations, mainly on the ground that if authority were granted it would confer upon the Society the right—limited though it would be—of broadcasting to the public. It was strongly hinted that the British Broadcasting Corporation would oppose the idea and the Postmaster General would be loath to grant even limited broadcasting rights to an "outside" organisation. Matters came to a head in December 1946 when Sir Ernest Fisk, the Managing Director of Electric and Musical Industries Ltd. presented to the Society a specially designed transmitter and associated equipment to form the basis for a Headquarters station. In his speech on the occasion of the presentation Sir Ernest said "as designers and makers of radio equipment we had the idea of

doing something to encourage not only the radio amateur in this country but also the Amateur Radio movement itself . . . Amateurs having pioneered, they must maintain their lead . . . As a Society you should do a bit of boosting with the gear we have given you, remembering always that not all the advances in radio techniques have come from the other side of the Atlantic".*

After prolonged discussion with the Post Office the equipment was finally brought into operation at the Society's Headquarters' address in Holborn on September 1, 1948, to provide an hourly frequency marker service on 3500.25 kc/s from 0060 GMT to 2400 GMT daily, using the special call-sign GB1RS.† The time clock and automatic switching equipment were provided by *The Synchronome Company* in which Mr. Frank Hope-Jones, Chairman in 1913, continued to retain a close interest.

Those who visited or worked at New Ruskin House during that period will need no reminding of the thumps and bangs that preceded and accompanied each marker transmission. Sooner or later complaints were bound to reach the Society. When they did it was found that not only television pictures were disappearing "on the hour" but the occupants of a flat in the building objected to being kept awake late at night and aroused at six in the morning by the noise of the mechanism.

So much then for Sir Ernest Fisk's laudable suggestion that the Society should seek prestige by using the Headquarters station to broadcast news bulletins.

The marker service continued until 1951, by which time the Society's plans to inaugurate a News Bulletin Service were beginning to bear fruit.

Following press disclosures, coupled with the appearance in the technical press of advertisements offering for sale certain types of Government surplus radio equipment, the Council decided to publish in the March 1946 issue of the *RSGB Bulletin* a full account of the frustrating negotiations that had taken place between the Society, the Ministry of Aircraft Production and the Radio Industry Council. The Society's report disclosed that the wireless disposals' scandals which occurred after World War I were being repeated on an even greater scale after World War II. Questions had been asked in Parliament and the national press had supported the Society's claim that radio amateurs should be given an opportunity of purchasing some of the wide range of Royal Air Force and Army communications equipment which had been declared surplus. Already much of the surplus apparatus had been purchased in large quantities at

* *RSGB Bulletin*, Vol. XXII, No. 5, No. 6.

† *Ibid.*, Vol. XXIV, No. 2.

ridiculously low prices by dealers who had offered it for sale to show huge profits. Three months later the Admiralty suddenly announced that "electronic scrap" would become available to radio amateurs from naval depots at a price of 50s. cwt. How many complete communication receivers, transmitters, frequency meters and items of expensive measuring equipment were sold in brand-new condition as "electronic scrap" no one can even hazard a guess but many fair-minded amateurs regretted the reasons which led to a decision to abandon the scheme barely six months later because of the abuses to which it had become subject. The decision was inevitable when it came to light that communication type receivers were being offered for sale by certain persons at prices fifty times or more greater than they had paid for them as "electronic scrap". Although the Admiralty scheme had to be abandoned the Council was aware that a good deal of valuable radio equipment was still held as surplus to Government requirements. Following negotiations with the Ministry of Supply, limited quantities of Government transmitters became available during 1947 at agreed prices to those holding amateur transmitting licences but because of the small quantities involved the scheme was short lived.

At the 20th Annual General Meeting of the Society held on December 20, 1946, another big increase in membership (to 12,750) was reported—nearly 3000 in twelve months. Total assets had risen to £19,000, of which more than £15,000 was in the form of cash and investments. Assets had increased from £1,400 to £19,000 in seven years due, in the main, to war-time economies, a four-fold increase in membership and heavy demands for Society publications.

On the page of the *Bulletin* that recorded the thanks of the Council to the staff who had carried the heavy administrative load during the war years, there appeared an announcement that Amateur Radio history had been made a month earlier when, on November 24, 1946, Denis Heightman, G6DH, of Clacton, Essex, received 50 Mc/s signals from the station of Edward Tilton, WIHDQ, located at West Hartford, Conn. This was the first occasion that 50 Mc/s signals, transmitted in the U.S.A., had been received on this side of the Atlantic Ocean.

In a message to the membership published in the January 1947 issue of the *Bulletin*, Stanley Lewer, B.Sc., G6LJ, wrote of his good fortune at being elected President at a time when post-war reconstruction was at its peak and Amateur Radio was stronger and more widely appreciated than ever before. He hoped that it would continue to contribute to international understanding and world-wide unity. During his year of office Lewer had the opportunities to play a

prominent part in furthering the growth of international friendship. As far back as 1925 he had shown an interest in the broader aspects of Amateur Radio when he attended the historic meeting in Paris at which it was decided to form the International Amateur Radio Union. Meticulous in all that he did, Lewer was well-fitted by experience to lead the Society in one of the most important years in its history. The story of the Atlantic City Conference, in which he figured prominently, will be recorded later, suffice it to say that no President could have devoted more attention to detail than G6LJ, whose reports and conclusions were presented in immaculate style.

In the course of his Presidential Address delivered at a meeting of the Society held on January 17, 1947, he discussed the theme that there is little new under the sun; old ideas and principles had, after a passage of time, been revived and applied to current radio problems. It was an Address delivered in the best style and in the tradition of those who had preceded him in the Presidential Chair.

Because of the continuing paper shortage it was decided early in 1947 to provide a little more technical material by publishing lectures and papers in a new publication *The Proceedings of the RSGB*. Lewer's Presidential Address appeared in No. 1, dated Spring 1947, together with a paper entitled "Centimetric Radar for Precision Gun-Laying" delivered by H. A. M. Clark, B.Sc., (G6OT) to a very large audience on May 31, 1946.

As from 1947 the Society agreed to purchase the copyright of articles published in the *RSGB Bulletin*. In deviating from the principle (which had been adhered to since 1925) not to pay for contributions the Council hoped that the new arrangements would lead to manuscripts of a higher technical standard being submitted but the standard did not improve very materially as the result of the incentive. However, by agreeing to purchase the copyright of articles published in the *Bulletin* the Society was offered more contributions than would otherwise have been the case.

The day after Lewer was installed as President there took place in London an event which prompted one who was there to write in the February 1947 issue of the *Bulletin* that "never before has there been such a gathering as the one held at Slater's Restaurant in The Strand on January 18 last". The occasion for this enthusiastic comment was a dinner given by the Council to Society members who had been prisoners-of-war, seventeen of whom were present with their ladies and a further thirty-two had been prevented from attending. During the evening C. H. L. Edwards, G8TL (who had been the Honorary Administrator of the RSGB Prisoner of War Fund) disclosed that

during the latter stages of the war several "Kreigies" had received parcels from the Fund, "containing equipment which, after judicious modification, had enabled them to receive news bulletins from home". He told how 351,000 cigarettes, 80 lb. of pipe tobacco and 2000 games had been despatched in 1300 parcels and reported that Model 7 Avometers had been sent to those who had been held prisoner by the Japanese, after it had been found impossible to send them parcels. "Eddie" recalled that the Fund had been started originally by Headquarters staff to provide small comforts for Captain Ernest Shackleton, G6SN, and one or two other members who had been captured during the evacuation from Dunkirk. The response for donations had, however, become so great that application had to be made to the Charity Commissioners for the Fund to be exempted under the 1940 Charities Act. Donations had ranged from the humble sixpence to a cheque for £100. By the end of the war a sum of £1672 11s. 7d. had been donated.

In addition to being the year of the Atlantic City Conference, 1947 will also be remembered as the year when the Society held its first Amateur Radio Exhibition. Staged at the Royal Hotel, Woburn Place, Holborn, the Exhibition was opened on November 19 by Col. Sir Stanley Angwin, K.B.E., a few weeks after his return from America, where he had led the U.K. delegation at the Radio Conference. Many who were there to hear Sir Stanley congratulate the Society on its enterprise remembered that if it had not been for the war, the first RSGB Amateur Radio Exhibition would have taken place in the same building in September 1939. It was at the 1947 Exhibition that the Council introduced the idea of entertaining to lunch representatives of Government Departments, the Services, the Radio Industry and the Radio Press. The contacts made on those occasions proved to be of value both to the Society as well as to those whom the Council entertained. The fact that the date chosen for the opening of the first Exhibition coincided with that of the wedding of H.R.H. The Princess Elizabeth of York and Prince Philip, was purely coincidental but the two events undoubtedly strained fully the resources of the Royal Hotel staff who, nevertheless, to quote from a contemporary report "were able to provide an almost perfect service throughout the Exhibition".

The exhibition, which ran for four days, enabled the radio industry to display its products to a keenly critical and well-informed public under ideal conditions, in spite of the abnormally high temperatures which characterised mid-November 1947. This was the first exhibition of its kind ever held in the United Kingdom—possibly in the world—and coming barely two years after the end of the war it

provided a stimulus for manufacturers to develop the Amateur Radio market. More than 5000 people visited the exhibition, with an attendance exceeding 3000 on the last day—a Saturday. In the December 1947 issue of the *Bulletin* under the title “It’s come to stay”, the Editor commented “From this time forward the radio industry will be on its mettle. As each exhibition approaches, manufacturers will be working on new models which, if our guess is correct, will be unveiled with as many heart-throbs as new models revealed on pre-war pre-view days at Radiolympia and the Motor Show. We really believe we have got something in this idea of an annual Amateur Radio Exhibition. We believe it has come to stay and we believe that before many years have passed it will rank amongst the leading exhibitions held in this little old island of ours”. Time has shown the truth of this statement. The 1947 exhibition was organised by Horace Freeman (the Society’s Advertisement Manager who organised on behalf of Bertram Day Ltd. the first Wireless Exhibition in 1922), the General Secretary and Miss May Gadsden.

The Council’s Annual Report for the year to September 30, 1947 showed that membership had increased by a further 1300 during the year, to a record total of 13,870. This represented an increase of 5000 since 1943 and more than 10,000 since 1939. More than 5500 transmitting licences were then in force compared with 3800 a year earlier. The big increase had come about very largely as the result of the decision by the Post Office to grant exemption from the Morse test and/or the Radio Amateurs’ Examination to those who had served in certain radio or signals “trades” during the war.

The results of the Radio Amateurs’ Examination held in 1947 revealed that less than forty per cent had passed. The high proportion of failures was attributed mainly to inadequate preparation. An application by the RSGB to the City and Guilds of London Institute to hold the RAE twice a year failed at the time on the ground that the Institute’s programme was overcrowded. Many years later a similar request was granted.

Following his reception on November 24, 1946, of 50 Mc/s signals from Ed. Tilton, W1HDQ, Denis Heightman, G6DH, urged the RSGB to obtain permission for him to transmit temporarily on that band. Permission came eventually from the G.P.O. on November 5, 1947, and on that day Amateur Radio history was again made when Heightman and Tilton established the first two-way Transatlantic communication on that band. Tilton’s telephony was S9+ in Clacton; Heightman received an S7 report from West Hartford.

Two days later Heightman made contact on 50 Mc/s with Major Ken Ellis, G5KW, then operating as MD5KW from the Suez Canal Zone—the first contact between the U.K. and this area. Minutes later Ellis worked E. J. Laker, G6LK, and W. E. Russell, G5WP—both located in Surrey. A full account of the events that led up to the Post Office finally giving Heightman and a few others permission to operate on 50 Mc/s was given later by Arthur Watts.*

In the years just after the war interest in DX work reached a new high level. The annual BERU Contest attracted wide support and the number of Dominion and Colonial Call Areas was so extensive that few operators could hope to work them all during the thirty hours allocated to the Contest. To provide an incentive for making contact with amateur stations in the British Empire the Council of the RSGB decided, during 1947, to offer a new award—to be known as the Empire DX Certificate—to those who could submit evidence of having established two-way contacts on 14 Mc/s (20 metres) with amateur stations situated in fifty different Dominion or Colonial Call Areas and also two-way contacts with amateur stations in fifty different Dominion or Colonial Call Areas on bands *other than 14 Mc/s*. More than 100 Dominion and Colonial Call Areas were in existence at that time with which two-way contacts could be established. For fifteen years each Empire DX Certificate was hand-produced on vellum and holders of the certificate received the E.DX badge which became one of the most coveted of all Amateur Radio insignia. The first six holders of the certificate and badge were Robert Holmes, G6RH, Peter Pennell, G2PL, Jim Kirk, G6ZO, Arthur Milne, G2MI, C. G. Allen, G8IG, and Frank Robb, GI6TK. Later the title of the Award was altered to Commonwealth DX Certificate to meet the many changes that had taken place within the British Empire since 1947.

The Royal Naval Volunteer (Wireless) Reserve was reconstituted in 1947 as a unit of officers and men who were specialists in wireless communications within the framework of the Royal Naval Volunteer Reserve. Engagement was for five years.† The Admiralty did not disclose the extent of the response to the call for volunteers but it was thought at the time to have been rather below expectation. A further appeal was published in the January 1949 issue of the *RSGB Bulletin* under the title "Spare time for Britain".

Appreciating that many years might elapse before a new edition of *The Amateur Radio Handbook* could be produced, the Technical Committee of the Society decided to meet the growing demand for

* *RSGB Bulletin*, Vol. XXIII, No. 7, p. 108.

† *Ibid.*, Vol. XXII, No. 11.

technical information by publishing a series of pocket-size booklets on a wide variety of subjects. *Microwave Technique*, the first in the series, appeared in 1947. Earlier, two reference booklets had been published; the first gave information to the newcomer and was entitled *The Transmitting Licence*; the other listed *Service Valve Equivalents*.

Atlantic City 1947

WAR-TIME demands for additional broadcast frequencies, coupled with the need to provide permanent allocations in the radio spectrum for the many new services that had “arrived” during the war made it essential for a world-wide Telecommunication Conference to be arranged without undue delay. The RSGB had been told as far back as 1944 that such a Conference would be held within two years of hostilities ending.

First steps to bring about a World Conference were taken during the latter part of 1945 when representatives of the United Kingdom and United States Governments met in Bermuda. A year later, at a meeting of telecommunication experts from China, France, the Soviet Union, the United Kingdom and the United States, held in Moscow, it was agreed to recommend to the International Telecommunication Union that a world Conference be held in Atlantic City, New Jersey, U.S.A. during the summer of 1947. Just prior to the Conference representatives from France, the Soviet Union and the United Kingdom met in Paris to consider the special problems peculiar to Europe. To the dismay of the RSGB it came to light in April 1947—just one month before the Conference was due to open—that as an outcome of the discussions in Paris, the United Kingdom intended to support a proposal in Atlantic City that the band 3500–4000 kc/s (currently assigned to the Amateur Service on a shared basis) should be reduced in width to 3500–3600 kc/s on an exclusive basis. It was also discovered that certain European countries would propose that the band 7000–7300 kc/s (currently allocated to amateurs on a world-wide basis)* should be reduced by one third to 7000–7200 kc/s. As a recompense proposals would be made for new exclusive amateur bands between 21.25 and 21.45 Mc/s, 168 and 170 Mc/s and 400–415 Mc/s. Although time was short when the proposals regarding the 3.5 Mc/s and 7 Mc/s bands first reached the Society the strongest possible protests were made to the Post Office. In reporting the facts to the membership. Arthur Watts, G6UN, continuing his work as G.P.O. Liaison Officer, emphasised that the

* Shared with broadcasting in Europe between 7200 and 7300 kc/s.

proposals were *only* proposals and that they would no doubt be severely mauled at the Conference. How right he was.

Some months prior to the Conference, IARU Headquarters had, through the medium of a special Calendar, urged Member Societies to appoint qualified persons to attend the Conference as Observers, at the same time indicating that K. B. Warner (Secretary of IARU) and A. L. Budlong (Assistant Secretary of IARU) would attend the Conference in that capacity. The Council of the RSGB recognising the important part Arthur Watts and Kenneth Warner had played at the pre-war Conferences held in Madrid and Cairo, appointed their newly-elected President (Stanley Lewer, G6LJ) and their General Secretary (John Clarricoats, G6CL) to attend the Conference as members of the IARU team of observers. In announcing the appointments, in the April 1947 issue of the *RSGB Bulletin*, Watts, on behalf of the Council wrote "Their chief task will be to secure for amateurs the best arrangement possible by enlisting the sympathetic support of the European countries as well as those of the Dominions. Without doubt the European problem will present many difficulties, particularly in view of the involved political situation. Much may depend on the support given by the smaller European countries to their amateurs".

Lewer was in Atlantic City for four months and the Secretary for one month less, in fact they were the only *permanent* IARU observers present at the Conference although several other amateurs who happened to be in attendance as members of national delegations were registered as IARU observers, as were the President of IARU/ARRL (George W. Bailey, W2KH) and the Canadian General Manager (later Canadian Director) of ARRL (Alex Reid, VE2BE) both of whom made brief appearances from time to time.

Largely as the result of efforts made by the RSGB/IARU observers European amateurs emerged from the Conference little the worse for wear except around 7 Mc/s. A major success was the retention of the band 1.7 to 2 Mc/s albeit retention was based on a footnote in the Radio Regulations the effect of which was to authorise the United Kingdom and some other administrations in Region 1 (Europe and Africa) to assign up to 200 kc/s between 1715–2000 kc/s to the Amateur Service. Attempts by a number of European countries to deprive amateurs—and in particular United Kingdom amateurs—of the use of frequencies in the band 1715–2000 kc/s nearly succeeded. This band had always been well used in the U.K. and its loss would have been a serious blow.

The most disturbing feature of the Conference from the point of view of the European amateur was the pressure brought to bear by

the broadcasting interests—especially those in tropical zones—who finally succeeded in forcing the Conference to agree to reduce the width of the much-used 7 Mc/s band by fifty per cent. At the Cairo Conference the allocation had been fixed at 7000–7300 kc/s with 7200–7300 kc/s shared with international broadcasting outside the Western Hemisphere. The conflict of views at the Atlantic City Conference was resolved on a political basis—the whole band remaining exclusively amateur in the Americas (Region II) but in the rest of the world the Amateur Service had to be content with 7000–7100 kc/s exclusive and 7100–7150 kc/s shared with broadcasting. The other half of the band (7150–7300 kc/s) was lost to broadcasting outside Region II.

The 3500–4000 kc/s band was allocated on a Regional basis with amateurs in the Americas again faring better than those in other parts of the world. Fortunately the U.K. proposal to provide a small exclusive amateur band 100 kc/s wide between 3500 and 3600 kc/s did not succeed, the final allocation in Region I being 3500–3800 kc/s with the Amateur Service sharing the band with the Fixed and Mobile (other than Aeronautical Mobile) Services. The 14 Mc/s band escaped serious curtailment, although in Region I the top 50 kc/s (14,350–14,400 kc/s) had to be sacrificed in order to accommodate other services pressing hard for frequencies. An unexpected bonus—although the RSGB had had prior knowledge of the proposal—was the allocation to the Amateur Service of an entirely new band 450 kc/s wide between 21 and 21.45 Mc/s. At that time no one knew whether it would become a worthwhile acquisition but as we now know the band possesses excellent characteristics during favourable periods of each sun-spot cycle. Like the 28 Mc/s band, which escaped almost unscathed, it has its days.

To the disappointment of European vhf enthusiasts the Conference failed to provide an amateur allocation in Region I around 60 Mc/s (5 Metres) although the band 56–60 Mc/s was allocated to the Amateur Service in Regions II and III. However, a new world-wide allocation was made between 144–146 Mc/s (2 metres) with extensions up to 148 Mc/s in Regions II and III. There was also a world-wide amateur allocation between 420–460 Mc/s but this time on a shared basis. Further world-wide allocations were made around 1215 Mc/s, 2350 Mc/s, 5650 Mc/s and 10,000 Mc/s, some on an exclusive amateur basis, others shared with different services.

On-the-spot reports from the Conference were published in the *RSGB Bulletin** and from these it became clear that the Society's observers felt some concern about the lack of top-level IARU

* Vol. XXII, No. 12, Vol. XXIII, Nos. 1, 2, 3.

representation due to a last minute decision by the Board of Directors of ARRL that Warner and Budlong should attend the Conference as members of the United States Government delegation.* In subsequent reports to the Council both Lewer and the Secretary drew attention to the Constitution of the International Amateur Radio Union which states that one of its main objectives is to represent the interests of Member Societies at International radio conferences.

It had become apparent from the start of the recent Conference that few of the delegates from countries in Region I had much knowledge of Amateur Radio or of the work done by radio amateurs even in their own country either before or after the war. They had made no contact with their national Amateur Radio societies prior to leaving for North America and knew little of the problems facing the Amateur Service. The lack of liaison between national Amateur Radio societies and their respective licence-issuing authorities was mainly due to the fact that almost every Society in Europe, other than the RSGB, had been forced to close down during the war and there had not been sufficient time since to re-establish official contacts. For example it did not become possible until the autumn of 1946—only a few months before the Conference opened—to establish a new national Amateur Radio society in Belgium—Union Belge des Amateurs-emetteurs (U.B.A.)—in place of the pre-war Réseau Belge and Vlaamsche Radio Bond. It was recognition of a lack of liaison between the national Amateur Radio societies of Europe and their respective licensing authorities, coupled with the fact that the two RSGB observers had been left, virtually, to speak for the IARU in Atlantic City, that led to the setting-up of an IARU Region I Bureau in 1950.

Although at the outset of the Atlantic City Conference doubts had been expressed about the amount of support the Amateur Service would receive from the United Kingdom delegation, in fact during the crucial final stages British Government delegates found solutions to several major problems. For this help amateurs in Great Britain were not slow to recognise the part played by Mr. (later Sir) Albert Mumford, at that time an Assistant Engineer-in-Chief of the Post Office.† Backed by the leader of the U.K. delegation (Col. Sir Stanley Angwin, K.B.E., recently retired Engineer-in-Chief of the Post

* The first intimation Lewer and his colleague received of the Board's decision was during a short visit to ARRL Headquarters a few days before the Conference opened.

† Later Mumford became Engineer-in-Chief of the Post Office and was knighted in 1963.

Office) Mumford cut across red tape and following informal discussions with Lewer and the Secretary he was able to bring about first, the introduction of the footnote in the Radio Regulations which left the U.K. clear to allocate frequencies in the 1715–2000 kc/s band to amateurs; second, the retention of practically the whole of the 14 Mc/s band, notwithstanding intense pressure from the Soviet Union and others to reduce the band by one half; third, the retention of one half of the 7 Mc/s band, in spite of demands for the virtual handing over of the whole band to the broadcasting service.

Running parallel to the Radio Conference, at least for part of the time, was an ITU Plenipotentiary Conference. This Conference overhauled the structure of the Union and made many important decisions, one of which was to set up administrative Headquarters in Geneva thereby replacing, after sixty years, the old Berne Bureau. The Plenipotentiary Conference also agreed that the ITU should seek to become a Specialised Agency of the United Nations, a request that was ratified while the Conference was in session.

A year after the Conference, IARU Headquarters acknowledged, through the medium of *Calendar 34* (July 1948); “the magnificent contribution of the RSGB in sending two of its officers to Atlantic City for several months, during which time—since most other amateur representatives were attached to delegations—they played the major role in the representation of the Union itself”.*

* *RSGB Bulletin*, Vol. XXIV, No. 5, p. 120.

Dastures New

VICTOR Michael Desmond, G5VM, of Birmingham, was the first Provincial member of the RSGB to occupy the Presidential Chair. First licensed in 1928 he had been closely associated with the work of the Society, particularly in the Midlands, from 1930 onwards. He was responsible for many highly successful pre-war Provincial district meetings held in Birmingham and also organised several wartime and post-war meetings of considerable magnitude. Prior to the war he attended almost every official RSGB meeting within a radius of about 150 miles of Birmingham using his own light aircraft for travelling from place to place. He served on the Council from 1935 to 1937 and in January 1946 took office as Executive Vice-President in succession to Stanley Lewer. In the course of his Presidential Address, delivered on January 9, 1948, at the Institution of Electrical Engineers, Desmond emphasised the importance of retaining Society Headquarters in London and stressed the need for better representation, especially in the remoter areas of the country. He referred to the forthcoming licence changes resulting from the Atlantic City Conference and announced his intention of donating two trophies for work on the proposed 420–460 Mc/s band. He regretted that the Society's station could not be used to broadcast news to members and emphasised the many opportunities open to the amateur, especially in the field of microwave research.

Desmond's Presidential Address was published in the same issue of the *Bulletin** as an account of a series of articles on single sideband suppressed carrier transmission currently appearing in *QST*.† Believed to be the first full description of this mode, it was forecast that ssb would have "a far-reaching influence on amateur telephony practice which will permit more than double the number of stations to operate without interference within any given band". Victor Desmond was one of the first British amateurs to appreciate the advantages of ssb and his station used that mode from an early date.

Although nearly three years had now elapsed since the war ended in Europe, rationing of food, paper, petrol and other commodities

* Vol. XXII, No. 8.

† January 1948.

continued. During those difficult times national and local radio societies in many parts of the world despatched food parcels to the families of United Kingdom radio amateurs. As late as February 1948, for example, the Queensland Division of the Wireless Institute of Australia was still demonstrating the real meaning of "Ham Spirit".

With an extension of television hours and a growing tendency on the part of dealers to sell receivers in fringe areas, the number of complaints of interference to television caused by transmissions from amateur stations began to assume considerable proportions. Technical advice for dealing with the problem appeared regularly in the Society's Journal and the subject was also dealt with at length in one of the RSGB new technical booklets. The Post Office, as well as manufacturers' associations, recognised that many television receivers were being installed at sites well outside the recognised service area for the London station—the only area at that time served by the BBC Television Service. The Society had suggested to the Post Office that a protection field-strength figure should be established, below which the amateur would not be expected to carry-out suppression. As time passed greater efforts were made by the Technical Committee to develop circuits which would further help to solve the problem of TVI but as the Television Service expanded so did the difficulties increase. Ultimately a special TVI/BCI Committee was set-up by Council to investigate individual complaints and to negotiate difficult cases with the Post Office. Although a good deal of success was then, and has been since, achieved the fact remains that even today a very large number of amateurs prefer to close down during the main hours of television rather than run the risk of causing annoyance to their neighbours.

The presence of many commercial and broadcasting stations in bands assigned on an exclusive basis to the Amateur Service led the Editor of the *Bulletin* to suggest during 1948 that groups of members would render a service to the movement by reporting to RSGB Headquarters and thereafter to the Post Office all cases in which the Radio Regulations had been persistently ignored. Out of that suggestion developed eventually the RSGB Intruder Watch. In later years many other IARU Member Societies, including the ARRL, followed the RSGB lead in this matter.

During the spring of 1948 the British National Committee for Scientific Radio (a joint Committee of the Royal Society and various British institutions) decided that observations made by radio amateurs would be of great value to scientific bodies. An appeal for co-operation made to the Council by Dr. R. L. Smith-Rose, (one of

the Society's Honorary Members,)* led to the setting-up of a Scientific Observations Committee under the chairmanship of the, then, Executive Vice-President, W. A. Scarr, M.A., G2WS. The Committee undertook to study four major problems:

- (i) Ionospheric propagation. Maximum usable frequencies. "Skip" effects.
- (ii) Solar, meteor and auroral effects.
- (iii) Tropospheric propagation.
- (iv) Wave interaction.

Mindful of the fact that in the future Amateur Radio would probably be judged even more than in the past by the usefulness of the services it could render in fields outside those of normal communication, considerable publicity was given by the Society to the S.O.C. Results achieved by observers were correlated by Scarr, personally, and it is known that much of the scientific data proved of value to the National Committee.

The high technical standard which had characterised the Society's lecture programme in the years before World War II was well maintained immediately after the war. On March 12, 1948, for example, D. N. Corfield, D.L.C. (Hons), A.M.I.E.E., (G5CD) read a paper on the "Practical use of Frequency Modulation on Amateur Frequencies". A month later Martin Ryle, G3CY, (later to become Professor Sir Martin Ryle, F.R.S., of the Mullard Radio Observatory, Cambridge) delivered to the Society one of the first lectures given in Great Britain on the new and absorbing subject of Radio Astronomy. Choosing as the title "Radio Signals from the Sun" this historic paper appeared in the *Proceedings of the RSGB* dated Autumn 1948.

During September 1948 the Post Office released half of the new 2m band (145-146 Mc/s) as well as the new 70 cm (420 Mc/s) and 15 cm (2350 Mc/s) bands. These facilities were obtained in advance of the official date fixed for bringing into effect the decisions of the Atlantic City Conference (January 1, 1949). On that date the remainder of the 2m band (144-145 Mc/s) became available in addition to the 1215 Mc/s, 5650 Mc/s and 10,000 Mc/s bands.

The second Amateur Radio Exhibition, held at the Royal Hotel, Woburn Place, London, was opened by Dr. R. L. Smith-Rose on November 17, 1948, who referred in his speech to the outstanding contributions made by radio amateurs during World War II. He spoke of the work being done by the Scientific Observations Committee and stressed the importance of amateurs showing a willingness

* Dr. R. L. Smith-Rose was at the time Director of Radio Research at the Department of Scientific and Industrial Research.

to undertake scientific tasks to supplement those of the professional engineers and physicists. A feature of the 1948 Exhibition was the considerable amount of new equipment, both commercial and amateur, on display. The variety of 144 Mc/s equipment provided a good example of how the smaller firms had been able to process a design from drawing board to prototype, with full production following often in a matter of weeks. As the new 144 Mc/s band—or rather a part of it—was not released until September 1948, the speed with which equipment had been produced led to much favourable comment.

Membership continued to increase throughout this period until an all time record was reached at the end of September 1948. By that date the total had risen to 14,439 of which number 12,336 were Home Corporate Members, 651 Overseas Corporate Members, 1354 Associates and Juniors, 90 Life Members and eight Honorary Members. The increase over the previous year had been 569. In his report to the membership the Honorary Treasurer (Alec Watson, G2YD) commented that the revenue had remained buoyant “so buoyant in fact that the credit for subscriptions showed an increase of almost £1000 where a decrease of about £1000 had been anticipated”. Watson warned, however, that the year ahead might prove difficult for the Society. In point of fact the expected decline in membership had begun in April 1948, from which date, every month, except one (August), had shown a fall compared with the corresponding month the preceding year. Watson recommended that the Council should be given power to vary subscription rates up to a specified maximum if occasion demanded. To provide for this power and other desirable changes in the Society’s Constitution draft resolutions had been submitted to the Board of Trade for approval. In due course the proposals would be submitted to a Special General Meeting.

The last few weeks of 1948 were saddened by the death on September 2, of Kenneth Warner, W1EH, Managing Secretary of the American Radio Relay League, and on November 3 by the death of Henry Bevan Swift, G2TI, Past President and an Honorary Member of the RSGB. Both men had played vital roles in the development of Amateur Radio in their respective countries. Warner’s work for the ARRL extended back more than thirty years. Only a few months before his death he had been to the forefront of the battle for frequencies in Atlantic City. As Secretary of the International Amateur Radio Union he had made several journeys to Europe and as a consequence was well-known in RSGB circles. Bevan Swift’s passing severed a link with the earliest days of the Society. It was he who led the Transmitter and Relay Section to

unite with the parent body (the RSGB) and it was he who, with J. A. J. Cooper, was responsible in 1925 for bringing the *T and R Bulletin*, into existence. A year later he was the driving force behind the Society's first Convention.

The old 5m (56 Mc/s) band, lost to the Amateur Service in the United Kingdom on March 31, 1949, went down with flying colours. According to a contemporary "activity had been increasing for a week or more prior to that date and culminated in a grand finale with so many stations taking part that it sounded, to listeners, like a well supported international contest on 14 Mc/s". Although conditions that night were not favourable for long distance inter-G working, calls unheard on 5 metres for months, or even years, appeared for a final fling and many "first and last" contacts were made in the closing hours.* "Five" had always attracted a very special type of amateur—the pioneer, the experimenter, the real enthusiast. Fortunately "two" and 70 cm were now to take its place but would they possess the same fascination as the old favourite they had replaced?

The first recorded instance of 420 Mc/s portable operation within the U.K. took place on January 22, 1949, when Scarr, G2WS, operating from the North Surrey Downs made two way contact with Charles Newton, G2FKZ (Dulwich) twelve miles away. On June 19, 1949, Scarr, Newton and others helped to establish new records on this band when distances up to forty miles were worked (G2FKZ and G3BEX). A month later Scarr, G2WS/P, operating portable from Charing, near Ashford, Kent, contacted Short, G3BEX/P, on the Devils Dyke, near Brighton, fifty miles away. On August 12, 1949, two Midlands amateurs, J. Spragg, G3APY, Kirby-in-Ashfield, Notts, and F. Pike, G3ENS, Loughborough, Leicestershire, made contact with one another and in so doing won the Desmond trophies for the first 420 Mc/s contacts between fixed stations over a distance of twenty-five miles. Interest in the new band continued to increase, reaching a peak on the day fixed for the first organised 420 Mc/s Tests—August 21, 1949. During the Tests G3AHB/A, on the roof of the EMI building at Hayes, Middlesex, worked G3FZL/A,† located in Hastings, over a distance of sixty-three miles thus establishing yet another new distance record between fixed stations. The greatest distance worked that day was ninety-five miles between G2JT/P on Scafell Pike, Cumberland, and GW4OS/P in Flintshire.

* *RSGB Bulletin*, Vol. XXIV, No. 4.

† The very young man who was operating G3FZL/A on that occasion was destined to become the 30th President of the Society in 1964—his name Geoffrey Stone.

A new perpetual trophy donated by Arthur Watts, G6UN, for uhf work and offered in connection with the organised Tests went to J. Spragg, G3APY, who had earlier won one of the Desmond trophies. On November 17, 1949, John Curnow, G6CW, and R. G. B. Tunney, G8DD, both of Nottingham, contacted one another over a distance of $4\frac{1}{2}$ miles on the new 1215 Mc/s (24 cm) band. Transmitters at both stations used triodes in the grounded-grid mode built into cavities. This contact was probably the first on the 24 cm band outside the United States.

By the end of 1949 W. H. Allen, G2UJ, was able to report in his monthly vhf column that two British stations, G3BLP and GI3FHN, had contacted one another over a distance of 327 miles on 144 Mc/s, GM2JT/P and GW6DP/P had raised the 420 Mc/s record to 130 miles while G3CBN and G8IH/P had broken new ground by establishing two way contact over a distance of $35\frac{1}{2}$ miles on 2350 Mc/s. Earlier in 1949 Allen had drawn attention to an intense manifestation of the Aurora Effect which had led to the establishment of a new British long-distance record of 363 miles on 60 Mc/s (5 Metres) between G5MA in Ashtead, Surrey, and GM2DAU in Cupar, Fife. Allen commented "so far no observations of this effect have been made on 144 Mc/s and it has been stated in American publications that it does not extend so high in frequency".*

An ITU Region I Conference of Member nations opened in Geneva on May 18, 1949, primarily for the purpose of preparing a frequency allocation table based on the broad principles laid down two years earlier in Atlantic City. The 3.5 Mc/s amateur band came under severe pressure from several countries who asked for a drastic reduction of band-width but fortunately the majority of nations, including the United Kingdom, decided that at the discretion of each administration the full Atlantic City allocation (3500-3800 kc/s) should be made available to amateurs in the Region on a shared basis.

After studying the views expressed by a number of the IARU Societies in Europe and also by individual amateurs the Council of the RSGB decided to put forward a revised Band Plan which it was hoped would be adopted by Societies and amateurs generally throughout Europe. Originally it had been felt that a Band Plan would fail unless it was made mandatory and written into the terms of the licence. Experience had shown, however, that amateur opinion was alive to its communal responsibilities in this matter and a voluntary plan was more likely to succeed. The RSGB Band Plan as submitted to the European Societies in 1949 covered the position as it then was

* Years later this contention was proved to be incorrect.

and as it would be after the Atlantic City frequency allocations came into force. During early 1949 IARU Headquarters wrote to IARU Member Societies to enquire what support would be forthcoming if plans could be made to commemorate during 1950 in some appropriate manner the 25th anniversary of the founding of the Union. The RSGB agreed to support the idea of a meeting, preferably in Paris, and promised to send a delegation provided there would be an opportunity to discuss the proposed European Band Plan, operating codes of practice and other matters of general interest to Member Societies.*

With Gerald Marcuse, G2NM, in the Chair the first post-war Old Timers' Dinner was held on May 29, 1949, at The Horse Shoe Hotel, London, W.C.1. This was organised jointly by the Editor of The Short Wave Magazine (G6FO) and the Secretary of the RSGB and the function was supported by seventy-five "old timers".† During the evening, following an appeal by G6CL, the sum of £123 12s. was donated to the Bevan Swift Memorial Fund which, up to that time, had produced less than £10 from the membership at large.

Without doubt the most important social event in the life of the Society prior to World War II was the Annual Convention. These events were held from 1926 to 1938 at the Institution of Electrical Engineers, London, at the period in the year which coincided with the Radio Exhibition (Radiolympia). Pre-war Conventions culminated in a dinner held originally at Pinoli's and later at The Florence Restaurant in London's Soho quarter. From 1945 onwards, there had been much talk of reviving Convention on pre-war lines but food rationing, in particular, presented problems, as did the difficulty of obtaining suitable accommodation at a reasonable price in Central London. In the period just after the war the Society was fortunate in finding several members with long experience willing to serve on the Council. One such was Ian Auchterlonie, G6OM, of Manchester, who, as Chairman of the Codes of Practice Committee, had already made an impression on the membership by his grasp of post-war problems. Having been a keen supporter of pre-war Conventions and appreciating current difficulties in London, he suggested that a National Convention be held in Manchester. The suggestion was well received throughout the country. Thus with the help of the representative for the North Western Region (George Webster, G5GK) and backed by a strong

* A conference was in fact held in Paris during May 1950.

† This expression is applied to those amateurs who have held a call-sign for an unbroken period of 25 years or more.

local committee, Auchterlonie had the satisfaction of seeing every Society attendance record broken on Sunday, October 23, 1949, when more than 650 members and their friends sat down to lunch at Belle Vue Gardens, Manchester. Two days earlier the Lord Mayor of Manchester (Alderman Robert Moss, J.P.) had opened an Amateur Radio Exhibition in the Corn Exchange, thereby giving a civic send-off to a weekend of activities unique in the history of the Society. The success of the Manchester Convention paved the way for future Conventions in the Provinces, of which Bristol in 1954 and Cambridge in 1960 provided outstanding examples.

Barely a month after the Manchester Convention, Lord Sandhurst, already very well-known to many members, opened the third Amateur Radio Exhibition at the now familiar venue—the Royal Hotel, London. Technical considerations apart, the Exhibition was an outstanding social event attracting wide support from members, many of whom made long journeys to be present.

For the first time since 1940 the Council had to report at the Annual General Meeting, held on December 16, 1949, a fall in membership. Although not very large—a matter of 401 in the year—it proved to be the start of a long period of recession which was not to be checked for many years. Several reasons could be advanced for the decline, chief of which was, undoubtedly, the need on the part of younger members to economise. Many of these members had joined the Society while on active service during the war at the special rate of 10s. per annum. Lack of suitable housing accommodation in which to set up a transmitting station also led many young men to withdraw from the Society. Although travelling difficulties and the need for economy had led to a marked falling-off in attendances at meetings, the decision reached at the beginning of 1948 to hold an official meeting (ORM) in each Region once every two years had been carried through to a successful conclusion.

Devaluation of the pound sterling from \$4.03 to \$2.80 resulted in a price increase for ARRL and other U.S.A. publications handled by the Society but the demand for technical literature continued. The Honorary Treasurer (Alec Watson, G2YD) in his report on the year's work wrote "It would be unwise to start guessing what the future holds for us but all the present trends indicate that it will be a period of contracting revenue and expanding expenditure. However, the Society's financial structure is sound and its reserves easily realisable. I have no doubt the Society can ride out an economic storm and still remain strong enough to be able to cater adequately for the radio amateur". With fixed assets amounting to £13,274 to back his forecast, Watson and his colleagues were, indeed, able to

ride out the economic storm which was then beginning to break but had there been no war-time Handbook and Supplement to create those assets the financial situation would have been very different.

The work done for the Society by Vic Desmond was recognised at the Annual General Meeting by the presentation to him of a leather brief case and fitted writing case.

Ebb and Flow

THE decade between 1950 and 1960 was as exacting and as exciting as the one that had gone before. When it began, the United Kingdom, in company with other nations struggling to recover from the efforts of the war years, was experiencing a period of economic recession. The Radio Society of Great Britain was losing members at a disquieting rate and the Council was under constant pressure from a vociferous minority.

Fortunately the wise leadership of William Arthur Scarr, M.A., G2WS, did much to minimise the full impact of what could well have been a disastrous era in the history of the Society. Scarr, whose work has been referred to earlier, had been a member of the Society for twenty years when he succeeded Victor Desmond as President at the beginning of 1950. His main interest had, from the earliest days, lain in the higher frequencies. Known locally as G2 Walking Suitcases, Bill Scarr tramped miles in the hills of Derbyshire during the middle thirties carrying a compact 5 metre station with him. For some years he had been the Society's representative for that part of England and as such he had acquired a close knowledge of provincial problems. He was at that time Director of Education at Ilkeston, Derbyshire. Later he held the office of Director of Education at Beckenham, Kent and it was during that period (1941) that he joined the Council. His wide academic experience proved to be of great value to the Council on many occasions. He had been an automatic choice in 1947 for the chairmanship of the City and Guilds of London Institute Advisory and Moderating Committees for the Radio Amateur's Examination and also for the chairmanship of the Society's Scientific Observations Committee. His gift as a writer was made evident in his Presidential Address delivered on January 27, 1950, to a crowded meeting in the Lecture Theatre of the Institution of Electrical Engineers, London. Choosing as his title "The Amateur Horizon"* he stressed the enormous opportunities which existed for valuable experimental work, all too often lost through the desire for DX records. He went on to consider the amateur as a member of an

* *RSGB Bulletin*, Vol. XXV, No. 8.

association of persons united for a common purpose, each having privileges or corresponding responsibilities. Finally he drew attention to the unparalleled opportunity possessed by the amateur to penetrate political barriers and national frontiers and so to make a unique contribution to the improvement of international relations.

The early months of 1950 will be remembered for two events of international significance. On February 25 the Swedish National Amateur Radio Society (SSA) celebrated its 25th anniversary in Stockholm. Three months later the Silver Jubilee of the International Amateur Radio Union was commemorated in Paris. An invitation to the RSGB to participate in the SSA celebrations was accepted by the Council who appointed the General Secretary and W. H. Allen, M.B.E. (G2UJ)* as their delegates. Whilst in Stockholm the General Secretary raised the question of IARU representation at future ITU Conferences as well as the more immediate matter of Scandinavian representation at the forthcoming IARU Congress in Paris. Following a meeting with representatives of the Danish, Norwegian and Swedish societies the RSGB Secretary was invited to address the Annual General Meeting of SSA. His appeal for Scandinavian support at the Paris meeting, according to a contemporary report, "so stirred those present that immediately afterwards a resolution to increase the annual subscription to SSA from 15 kr (21s.) to 20 kr (27s. 6d.) was adopted at once!" The additional income was to be used partly for IARU purposes.

Following the Stockholm meeting and in order to ensure that arrangements for the IARU Congress were proceeding smoothly the RSGB Council arranged for the Secretary to meet representatives of the French National Amateur Radio Society (REF) in Paris during April. As an outcome of the meeting, plans began to take shape rapidly, with the result that when the Congress opened on May 18 in the Grand Hall of the Aero Club de France, a full programme was offered to the 100 or so delegates present from fifteen IARU Member Societies. Considerable disappointment was expressed that IARU Headquarters was not represented at this important gathering—the first of its kind since the Union was founded in 1925—but the explanation was a simple one, the Congress clashed with the Annual Meeting of the Board of Directors of the ARRL. Unfortunately, although Scarr, President of RSGB (who had been elected Conference President) explained the reasons at some length, there was criticism of what some European delegates took to be a further example

* Allen was an excellent choice, as his war-time service with the Royal Air Force had brought him into close touch with "certain friends of Britain" in Sweden. He had flown many dangerous missions to that country.

of the "detached attitude" shown by IARU/ARRL Headquarters towards matters concerning the IARU Region I Societies. This point was further emphasised when a letter was read from the Managing Secretary of the ARRL (Arthur Budlong) to the RSGB on the subject of representation at international radio conferences. The ARRL view was that representation should be on a purely national basis and that representation in the name of the IARU would be infinitely less effective.* The Congress operated through Administrative and Technical Committees, with RSGB Past President Lewer (G6LJ) in charge of the former and REF delegate Lt. Col. P. Revirieux (F8OL) in charge of the latter. Discussions on representation at future ITU conferences and the administration of the IARU occupied a good deal of the time of Lewer's Committee whilst the Technical Committee discussed problems of the day. As an outcome of the Congress the RSGB was invited and agreed to accept responsibility for operating an IARU Region I Bureau to represent the interests of IARU Member Societies in ITU Region I (Europe, Africa and parts of Asia). A recommendation to hold Conferences of Region I Societies every three years commencing in 1953 was also adopted.

Bearing in mind that the original intention of the Conference was to discuss such matters as the RSGB Band Plan and Codes of Practice, its scope was greatly extended as the result of the discussions which had taken place earlier in the year in Stockholm. Up to that time the RSGB, although fully alive to the difficulties and problems that had arisen at Atlantic City, had found no easy way of drawing the attention of other European societies to those difficulties and problems. The pre-war links had not then been fully restored. The Paris Congress of 1950 completely altered the concept of IARU within the inner circles of European National Amateur Radio Societies in the same way as the formation of an IARU Region I Divisional organisation at Lausanne in 1953 was the first real attempt by a group of European Societies to make the IARU function as something worthwhile.

With the exception of a minor amendment to the 14 Mc/s band proposals, the RSGB Band Plan became the European Band Plan after the Paris Congress but most of the other administrative and technical matters discussed by the two Committees remained open for further discussion. Three months after the Congress ended the RSGB Council accepted the invitation to set up an IARU Region I Bureau at a cost not exceeding £500 a year.

Towards the end of 1949 the Secretary of the RSGB wrote a letter

* That was the view Warner and Budlong had taken at the Atlantic City Conference in 1947, but it was not shared by Lewer and Clarricoats.

to a number of members living or working in the Central London area inviting their support for a luncheon club which would meet informally once a month. A feature of the club would be the entertainment of visiting amateurs from abroad. Thirty-one people were present at the Kingsley Hotel, London, W.C.1., when the inaugural meeting of the club took place on March 14, 1950. Kenneth Alford, G2DX and W. E. F. Corsham, G2UV, took over the duties of Chairman and Secretary respectively and Clem Jardine, G5DJ, was appointed Treasurer. The London Members' Luncheon Club—to give it its full name—developed rapidly and during the first fifteen years of its existence acquired a unique collection of QSL cards donated by the many hundreds of amateurs from abroad who had enjoyed the hospitality of the Club. By 1965 cards from more than 100 countries had been collected and mounted in albums. Without doubt the Club's most successful period was during the chairmanship of Stanley Vanstone, G2AYC, and the secretaryship of Frank Fletcher, G2FUX, both of whom devoted much time and effort to ensure its continued progress. The idea which prompted G6CL to form the London Members' Luncheon Club was later copied by groups of amateurs in other parts of Great Britain and abroad.

On Saturday, May 14, 1950, about 200 members drawn from the four London Districts met at Denison House, Vauxhall Bridge Road, under the chairmanship of the President (W. A. Scarr), to discuss Society matters in general and in particular three motions that had been tabled covering first, the alleged "illegal" position caused by existing subscription rates (London 21s., Provincial 15s.), second, the wording of ballot papers at Council elections and third, the setting-up of a Committee to advise on possible improvements in the administrative machinery at Headquarters. The motions were adopted and subsequently discussed by the Council who decided that it would not be in the best interests of the Society to standardise the subscription at 21s., especially as the London resolution had indicated that the additional income should be used to subsidise the scheme of representation. The Society's legal advisers were instructed to look into the complaint about Council ballot papers and the Council set up a General Purposes Committee to review the organisation of the Society if they deemed it necessary.

A broadcast appeal to radio amateurs to listen for signals from an aircraft reported missing led the Society to suggest to the Air Ministry and Ministry of Civil Aviation during the early part of 1950 that radio amateurs should be asked to co-operate officially when an aircraft was in distress. Shortly afterwards, following discussions, the Society was able to announce that the offer had been

accepted by the Air Ministry and approved by the Post Office. This meant that in future when an aircraft had force-landed the operator would, after all normal distress procedures had failed, call on a frequency in the 7 Mc/s amateur band. Pat Hawker, G3VA, who had joined the staff in 1948 as an assistant to the General Secretary, followed up this announcement by a vigorous editorial, in which he drew attention to the importance of every licensed radio amateur taking the trouble to become adept in the use of the Morse Code. "To justify the confidence shown in us by the Air Ministry" he wrote "let us make certain that we devote a sufficiently high proportion of our operating time to c.w. work to ensure that we shall all be capable of coping with aircraft distress traffic and other possible emergencies."*

The prompt reaction of the Air Ministry was in strange contrast to that of the Ministry of Transport who rejected, out of hand, a similar offer of help made later in 1950 by the Society following the loss at sea of the steam trawler *Milford Viscount*. The Society had suggested to the Ministry that as radio amateurs had been called in to help when the trawler was first reported missing it would be worthwhile ensuring that if a similar emergency arose in the future the services of radio amateurs could be called upon in an organised manner. After months of procrastination and discussions with the Post Office the Ministry informed the Society they were satisfied that "the normal listening watch maintained by stations of the mobile service should be adequate in all ordinary cases to ensure that any distress message is picked up and acted upon". The Ministry argued that the number of occasions on which it would be necessary to call on the services of amateurs would be so exceptional and so few that it would be more satisfactory not to lay down any hard and fast procedure but to make the necessary arrangements in the light of the requirements of each individual case. Commenting upon the decision in the September 1950 issue of the *RSGB Bulletin* the Editor wrote "It would be a thousand pities if lives were lost because the Postmaster General is unwilling to admit that radio amateurs are capable of rendering a service of the nature envisaged". The policy of the Government departments concerned was soon to be proved short-sighted. The part which amateurs would play during the disastrous East Coast floods of January 1953 was still to be recorded.

Probably the first public demonstration in the world of Amateur Television took place in Bedfordshire on April 21, 1950, at an open meeting of the Shefford and District Short Wave Society with 250

* *RSGB Bulletin*, Vol. XXV, No. 9.

persons present. The proceedings were televised by Ivan Howard, G2DUS, using a 250 line Iconoscope camera over a closed circuit and the demonstration was witnessed by representatives of the national press who gave it wide publicity. Efforts made by the RSGB and the recently-formed British Amateur Television Club to persuade the Post Office to issue licences for the transmission of television signals on frequencies in the 420–460 Mc/s band had, up to that time, proved unsuccessful but following a visit by the Postmaster General (Rt. Hon. Ness Edwards, M.P.) to the 1950 Amateur Radio Exhibition circumstances began to change. During his tour the P.M.G. witnessed the first public demonstration in London of Amateur Television (again by Ivan Howard) and he was so impressed by the technical achievement as well as by the arguments put forward for using frequencies in the 420–460 Mc/s band, that he gave instructions for a series of tests to be carried out to ascertain whether, in fact, there was any substance in the contention by the Air Ministry that amateurs might cause interference to radio altimeters if they were allowed to transmit television signals in that band. Up to that time Amateur Television had been permitted only in the 1215 Mc/s and other higher frequency bands. The tests, which took some time to arrange, were carried out on Sunday, July 1, 1951, by a Hastings aircraft of R.A.F. Coastal Command. Television signals were transmitted from Howard's station at Stotfold, Bedfordshire, and from the station of R. Grubb, G3FNL, at Upminster, Essex, using frequencies in the 420–460 Mc/s band. D. N. Corfield, G5CD, and J. W. Mathews, G6LL, witnessed the tests on behalf of the Technical Committee at Stotfold; the Chairman of the Committee (Harry Clark, G6OT) and the General Secretary (G6CL) were at Upminster; the President (W. A. Scarr, G2WS) and Council Member Lyell Herdman, G6HD, were at West Malling Airfield, Kent. A few weeks after the tests had taken place the Society was able to announce that Amateur Television was to be permitted in the band 425–455 Mc/s subject to non-interference with other Services and to input power being limited to 25 watts. Success had thus been achieved thanks to the personal interest shown by Postmaster General Ness Edwards who had been willing to listen to the arguments put forward by Society members. The Coastal Command aircraft had confirmed the view of the Technical Committee of the Society and of members of the British Amateur Television Club that low-power Amateur Television signals transmitted on frequencies between 425 and 455 Mc/s would not interfere with radio altimeters operating in that band.

One of the best attended provincial meetings since the war was held



A stand displaying early equipment was a feature of the RSGB Exhibition at the Royal Hotel in 1951. This stand was organized by the East London Group of the Society.



The 1952 exhibition arranged by the RSGB was opened by Sir Ian (later Lord) Fraser (of Lonsdale), C.H. In this picture Sir Ian is seen examining a special meter made for blind radio amateurs. Sir Ian was President in 1928 when he held the call G5SU.



The Council and Staff of the Radio Society of Great Britain, September 1951. *Seated* (left to right), A. J. H. Watson, G2YD (Hon. Treasurer), Arthur Milne, G2MI (QSL Manager), Victor Desmond, G5VM (Immediate Past President), W. A. Scarr, G2WS (President), F. J. H. Charman, G6CJ (President-Elect), Leslie Cooper, G5LC, John Clarricoats, G6CL (General Secretary and Editor). *Standing* (left to right), W. H. Allen, G2UJ, W. N. Craig, G6JJ, May Gadsden (Assistant Secretary), Peter Amos, G3AGM, P. W. Winsford, G4DC. (P. A. Thorogood, G4KD, C. H. L. Edwards, G8TL, T. L. Herdman, G6HD, were also members of the Council in 1951.)



Rene Klein (then G8NK) pictured 40 years later in the room in which he founded the London Wireless Club on July 5, 1913.



The President's Chain of Office donated to the Society in 1954 by Wilfred Butler, G5LJ, of Sutton Coldfield. The names of past presidents are engraved on the bars.

at No. 1 Radio School, R.A.F. Cranwell, Lincolnshire, on April 23, 1950, when the Royal Air Force Amateur Radio Society acted as host to well over 200 amateurs, including R.A.F. personnel serving in many parts of the United Kingdom as well as Western Germany. Organised by Wing Commander W. E. (Wally) Dunn, G2LR, (ex-ST2LR), Chairman of the Air Force Society, with the active support of Honorary Secretary, Norman Davis, G6TV, and Committee Member, Ron Weston, G6PZ, a feature of the meeting was a tour of the workshops, where new 14 Mc/s and 28 Mc/s 4-element rotary beams (constructed by Jack Etherington, G5UG and on show for the first time) attracted much attention. Guest speaker at the business meeting was RSGB Secretary, G6CL, who had been provided with air transport that morning from Hendon to Cranwell.

The Royal Air Force Amateur Radio Society formed at Cranwell shortly before World War II had continued to grow in strength thanks to the efforts of such men as Wally Dunn, "Pop" Seymour, Norman Davis, Alec Gilding, Ron Weston, Jack Etherington, and a host of others whose names will always be associated with this, by far the strongest and most firmly established of the Service Amateur Radio societies. With the passing of the years a high proportion of its large post-war membership dropped service ranks and titles and became plain Mr, Mrs or Miss but the spirit of comradeship so evident on April 23, 1950, still lives-on in the memories of all who were once serving members of the Royal Air Force.

The big attendance at Cranwell in April was eclipsed three months later when nearly 350 members and their families met in Cambridge on July 9, to support an Official Regional Meeting arranged by the Regional Representative, Richard Thurlow, G3WW, who was Clerk to the Council of the Isle of Ely at that time. The announcement that Pye Ltd. were to demonstrate colour television was no doubt responsible for the big turn-out though in fact at the last minute a black and white demonstration had to be substituted for the greater novelty. Following a civic welcome from the Mayor of Cambridge (Alderman Captain A. C. Taylor, J.P.) a business meeting, attended by about 160 members, discussed the many problems which were at that time affecting the Society.

On September 24, 1950 (and for the first time) an Official Regional Meeting was held in Plymouth, when an attendance of 100 was recorded. Members came from many parts of the South West; Bristol, Weston-super-Mare, Penzance and Exeter all contributing their quota to a very sizeable gathering. The Regional Representative, Herbert Bartlett, G5QA, organised the meeting which was chaired by the President.

The July 1950 issue of the *RSGB Bulletin* reviewed the developments in Amateur Radio equipment and operating techniques that had occurred since the first issue had appeared twenty-five years earlier. Reproductions of photographs published in the first and subsequent issues emphasised more effectively than words how designs had changed from the simple bread-board lay-out to the then currently popular rack and panel arrangement. B. W. F. Mainprise, B.Sc. (ENG.), A.M.I.E.E., (G5MP), who contributed the review under the title "Bulletin Story", described, for example, how early receiver problems had been overcome by the development of the superheterodyne principle and later by the introduction of the crystal band-pass filter, how the variable frequency oscillator, introduced during the 1930's, had helped to overcome the frequency limitations of crystal control. He showed how interest in hf and uhf operation had been accelerated since the war by the greater availability of suitable valves and components, and how aerial systems had progressed from the simple length of wire, with or without counterpoise, to the carefully designed rotary beam in contemporary use. Clues to technical successes and difficulties, to propagation conditions and to general operation on the short waves—clues which demonstrate to posterity the way in which the popularity of British techniques rose as wavelengths shortened—are to be found throughout the pages of the Society's Journal but nowhere in greater profusion than in the first twenty-five volumes. Mainprise concluded his very excellent review with a tribute to all who had kept the *Bulletin* in existence throughout the war years and made reference to the unnoticed struggle that went on during those years to compress print and illustrations into a heavily restricted but balanced layout.

In 1947 the Government decided that the centenary of the Great Exhibition of 1851 should be marked during 1951 by means of national displays in the Arts, Architecture, Science, Technology and Industrial Design "so that Great Britain and the world could pause to review British contributions to world civilisation in the arts of peace". To demonstrate these contributions it was "necessary they should be exhibited in practical and applied forms against a background representing the living, working world of modern times" and to provide a proper place for the presentation a vast exhibition was to be created on the South Bank of the River Thames between Waterloo and Westminster Bridges.

Initial steps were taken during Scarr's first year as President to ensure that the Society would be able to participate actively in the Festival of Britain as it was to be called. Originally it was planned that the Society should operate an Amateur Radio station from the

Dome of Discovery, a feature of the South Bank Exhibition, but when it was discovered that the exhibition would be open twelve hours a day, seven days a week for six months, the Council reluctantly had to abandon the idea. However, with the passing of time other proposals developed, one of which led to the Society being able to make a worth-while contribution to the Festival. The acceptable proposal centred around a Land Travelling Exhibition which the authorities had decided should visit various parts of the country. At each provincial venue an Amateur Radio station would be established and operated by a group of local amateurs. Thus it came about that Ian Auchterlonie, G6OM, took charge of the station when the L.T.E. visited Manchester (May 4–27), Charles Sharp, G6KU was responsible in Leeds (June 23–July 15), Victor Desmond, G5VM in Birmingham (August 4–26) and John Curnow, G6CW in Nottingham (September 15–October 7). The Exhibition 100 watt transmitter was built by Teleradio (1943) Ltd., and Panda Radio Co. supplied the aerial tower and Selsyn Drive Unit, Stratton & Co. Ltd. and Q Max (Electronics) provided receivers. The Post Office issued a special licence to the Society allocating the call GB3FB. Special QSL cards printed by Eric Martin, G6MN, were used to confirm contacts. In addition to official co-operation between the Society and the Festival authorities, groups of RSGB members in various parts of the British Isles participated in Festival of Britain activities and in many cases operated Amateur Radio stations from local exhibition sites.

During 1950 growing interest abroad in mobile operation had led to some dissatisfaction with the restrictions placed on similar activities in the United Kingdom. The position, then existing, was that whilst a transmitter could be installed and operated from a motor car, transmissions could only be made when the vehicle was stationary and within a radius of ten miles prescribed in the licence. A hint of what was happening, unofficially, appeared in the November 1950 issue of the *Bulletin*—"Despite these restrictions the number of British amateurs equipped for mobile operation is increasing rapidly". Stressing the value of mobile facilities at times of civil emergency and emphasising the range possible with well designed mobile equipment, the Society pressed the Post Office for this type of operation to be authorised. Two months later Edgar M. Wagner, G3BID, in a letter to the Editor of the *RSGB Bulletin*, suggested that, perhaps, one reason why the GPO was reluctant to permit mobile operation was the fear of the danger on the roads of vehicles being driven by people whose attention was on the radio transmitter and not on the road. This danger, he contended, could be

removed by laying down in the licence that the operator of the set must *never* be the same person as the driver, when the vehicle is on the move. Wagner ended his letter with three questions—Why not permit mobile operation? Why not permit passing of third-party messages? Why restrict portable operation to a mere ten miles radius? Unfortunately the time was not yet ripe for the Post Office to look favourably on the request for mobile operation to be permitted. When permission came in 1955 it came unexpectedly and with no warning.

The critical attitude shown by certain members, especially some of those in the London Region, towards the Council and Headquarters' staff was much in evidence at the 24th Annual General Meeting of the Society held on December 29, 1950, when motions to approve the Minutes of the previous A.G.M., the Annual Accounts and the Report of the Honorary Treasurer were rejected. Criticism centred around many subjects, chief of which was the reluctance on the part of the Council to consider an increase in subscription rates while assets remained at ten times their pre-war level. Leading the criticism of the Council and staff was the London Regional Representative, W. H. Matthews, G2CD, who, prior to the meeting had submitted several motions for discussion. These related to subscription rates, services rendered to members and a demand that Regional Representatives should be entitled to receive notices of and be permitted to attend, but with no power to vote, at Council meetings. The President ruled that the motions could only be discussed at a Special General Meeting. The report of this meeting occupied nearly six pages of the February 1951 issue of the *Bulletin*. A significant feature of this particular period was the fact that, although no less than fifteen members were nominated for the seven vacancies on the Council due to occur on December 31, 1950, when the results of the ballot were announced it was found that all the nominees of the 1950 Council had been elected and that attempts to replace the Council's nominees for the offices of Honorary Secretary and Honorary Editor had failed.

In an effort to obtain a broad picture of the needs and wishes of members, the newly-elected Council issued a questionnaire setting-out twenty-two topics of current interest. Of the 3407 replies received just on 3000 asked for a new Handbook and 2400 for a larger *Bulletin*. Two-thirds were in favour of an increase in subscription rates but the answers to other questions bearing upon subscriptions—flat rate, London rate, Country rate, Overseas rate—produced some curious results. Londoners thought the Provincials should pay more, Provincials thought the Londoners should pay more! One of the big issues raised at the 1950 A.G.M. concerned local meetings;

Matthews and his friends contending that the Council should subsidise them. More than eighty per cent of those who replied to the questionnaire considered that the local meetings should be self-supporting.

Without doubt the most vital Regional Representatives' Conference yet arranged by the Council was the one held at the Kingsley Hotel, London, on April 28, 1951. The agenda covered a wide range of subjects and the verbatim report extended to nearly 100 pages of typed foolscap. The most important resolutions adopted at the Conference related to the future government of the Society and to the appointment of a full-time professional Editor for the *RSGB Bulletin*, the July 1951 issue of which devoted six pages to a summary of the verbatim report. The Conference demonstrated that a good many members were interested in Society affairs but the voting by the Regional Representatives revealed that on controversial issues, such as the one concerning the future management of the Society, only nine of the fifteen present were anxious for any radical change. A motion requesting the Council to refer back to the Society's legal adviser the question of the Secretary's appointment to serve on Committees of the Council, with voting power, was adopted by eight votes to seven but criticisms of the administration received virtually no support, and many delegates made it clear that they would not support what they considered was an unwarranted attack on Headquarters staff. In the long run none of the recommendations before the meeting was accepted fully by the Council but the ideas behind those which related to the government of the Society and the requisitioning of Special General Meetings were later incorporated into a revised constitution.

Early in 1951 Stanley Lewer's service to the Society was recognised when he was elected an Honorary Member. Others honoured at the same time were H. A. M. (Harry) Clark, G6OT, David N. Corfield, G5CD, and J. W. (Jimmy) Mathews, G6LL, all of whom were elected Vice-Presidents in recognition of their many contributions to the Society's technical publications. All three had been members of the Technical Committee since it was set-up prior to the war. It was on the recommendation of that Committee the Council decided, in February 1951, to close down the Headquarters station GB1RS. The station had then been out of action on a number of occasions and its usefulness as a frequency marker had gradually diminished. The Technical Committee then turned its attention to the possibility of setting-up a pilot station in the 144-146 Mc/s band to help members in the investigation of vhf propagation problems.

To meet an increasing need for an up-to-date list of United Kingdom

call-signs, steps were taken during the spring of 1951 to produce an RSGB Amateur Radio Call Book. Production became possible when the Post Office agreed that their records (which up to that time had been treated as confidential) could be used as the basis of information concerning call signs, names and addresses. John Tyndall, G2QI, agreed to act as compiler of the first edition of what was soon to become an annual publication. The first edition was published in August 1951 and subsequent editions were published in time for them to be placed on sale at each annual RSGB exhibition.*

The interest of the Postmaster General, Mr. Ness Edwards in the work of the Society was again demonstrated when he opened an exhibition of communications equipment and components held in conjunction with a South Wales Official Regional Meeting at Rhigos, Glamorgan, on April 22, 1951. His speech, widely reported at the time in the National press, emphasised the importance the Government attached to the Amateur Radio movement.

The 1951 Amateur Radio Exhibition held at The Royal Hotel, Woburn Place London, W.C.1., was opened by Charles Ian Orr-Ewing, O.B.E., M.P., M.I.E.E.† recently-appointed Parliamentary Private Secretary to the Minister of Labour and National Service, in the presence of a large and distinguished gathering which included the Admiral Commanding Reserves, the Director of the Signals Division, Admiralty, the Assistant Chief of Air Staff, Signals, the Director of Engineering, Air Ministry, the Director of Radio Engineering, Air Ministry, and the Director of Radio, D.S.I.R. Orr-Ewing was well qualified to open the Exhibition as he had been licensed as G5OG since before World War II, in which he had served as a Signals Officer with the Royal Air Force. The 1951 Exhibition marked developments in amateur application of the single sideband mode of transmission. Leading a display of home-constructed equipment was Technical Committee member, Reg Hammans, G2IG, who showed a highly selective receiver incorporating a crystal gate filter and a system of side-band selector switching which had been the subject of a Society lecture at the Institution of Electrical Engineers a few months earlier. Herbert Knott, G3CU, who had just commenced to contribute a regular single sideband feature to the *RSGB Bulletin*,‡ R. Morris, G3FDG,

* Will Kempton, G8LN, compiled the 1957 and 1958 editions. In 1959, the work was taken over by John Clarricoats, G6CL.

† Later Sir Ian Orr-Ewing, Bart.

‡ Knott claimed in his first contribution "CQ Single Sideband" (October 1951) that 150 stations were at that time using ssb. The first British station to adopt the system was H. Woodhead, G2NX (Oswestry) in August 1949.

G. Bagley, G3FHL, and H. Woodhead, G2NX, were others in the vanguard of a development which was soon to produce one of the greatest technical advances in Amateur Radio since the arrival of the superheterodyne receiver and the introduction of crystal control twenty-five years earlier.

During a year when amateur groups in many parts of the country were holding local exhibitions as part of the Festival of Britain, it was appropriate that Glasgow amateurs should stage a Scottish National Amateur Radio Exhibition for the first time. Their Exhibition opened by the Lord Provost (Sir Victor Warren), on October 29, 1951, was held in the Engineering Centre. It ran for a week and attracted large attendances from many parts of the country. Featured under the title "The Story of Amateur Radio" the Exhibition did just that in an entertaining and instructive way. Sixty items of home constructed equipment were put on display including several examples of contemporary vhf design. Leslie Fraser, GM3GNX, demonstrated how he, a sightless amateur, constructed and operated his equipment. A fully operational station using equipment loaned by GM3PB and GM3AXX was set up in a separate room, but the available accommodation was taxed to the limit, so great was the attendance at peak hours.

On November 17, 1951, Leslie McMichael, who with Rene Klein and three others had founded the Society (as the London Wireless Club) in July 1913, died on his 67th birthday. In the years immediately after World War I he was the Honorary Secretary of the Society and it was due to his drive and initiative that the famous broadcasting petition was presented to the Postmaster General in December 1921. Around that period, in partnership with Rene Klein, he founded the well-known radio firm that bore his name. In March 1945 he was elected an Honorary Member of the Society. A Quaker and a Freemason, Leslie McMichael was held in high esteem by his friends all over the world.

A year which had begun with harsh criticisms levelled at the Council ended with the receipt of a resolution from a well-attended Official Regional Meeting held in Aberdeen expressing confidence in the governing body. When the time came to nominate a new Council, Alec Watson, G2YD, who had carried the onerous burden of Honorary Treasurer since 1943, decided, for business reasons, not to seek re-election. In the subsequent election the Council's nominee for that office as well as the Council's nominee for the office of Honorary Editor were defeated by narrow margins. Peter Amos, G3AGM, a retiring member of the Council polled 1101 votes to the 1150 obtained by Douglas Findlay, D.F.C., A.S.A.A., G3BZG, for the post of

Honorary Treasurer. W. H. Allen, M.B.E., G2UJ, another retiring member of the Council polled 1119 votes to the 1143 votes cast in favour of Jack Hum, G5UM, for the office of Honorary Editor. Both Findlay and Hum had been nominated by the group of London Region members who had been critical of past Councils.

Alex Watson in introducing the accounts for the year 1950/51 commented on a loss of £260 which had occurred on the Festival of Britain Convention held in London. The Council had assumed that at least 600 people would attend the Convention but the support, particularly from London and the Home Counties, had been much below expectation. Watson reminded the meeting that in 1939 the Society's assets were around £1400—they had now risen to £20,000. As a mark of esteem and in appreciation of his services to the Society the retiring Treasurer was the recipient of a silver cigarette case at the close of the Annual General Meeting on December 18, 1951. At the same meeting Stanley Lewer, G6LJ, was presented with a certificate, on vellum to mark his election earlier in the year to Honorary Membership of the Society. In its Annual Report for 1950-51 the Council recorded that membership had dropped for the third year in succession (from 13,023 to 12,134) representing a fall of 2300 since the peak of 1948. The unsettled economic condition of the country was blamed for the decline, a state of affairs being experienced by hobby-type organisations generally.

Frederick "Dud" Charman B.E.M. G6CJ succeeded W. A. Scarr in the office of President on January 1, 1952. Since the early 1920's he had been interested in long distance short-wave communication. Possessed of a ready wit and an ability to find the right word for every situation Charman had achieved a high reputation in Amateur Radio circles long before the second World War. Frequently, in collaboration with his close friend and business colleague, Harry Clark, G6OT, Charman had contributed valuable technical information to the *RSGB Bulletin*. From the early days he had shown a special interest in aerial systems of all types and his chapter on Aerials in the first and second editions of *The Amateur Radio Handbook* was regarded by many as a classic. During the war he had undertaken voluntary interception duties and had shown great skill in devising aerial systems for special purposes. In more recent years he had achieved fame as a lecturer on aerial systems using scale models. When he took up the duties of President he had been a member of the Council since 1948 and a member of the Technical Committee since its inception many years earlier. His skill and success in DX contests and especially in the annual BERU Contest had led to many overseas friendships. His Presidential Address "A

Century of Amateur Radio" delivered on January 25, 1952 at the Institution of Electrical Engineers appealed to the spirit of adventure in every radio amateur and took his audience on a trip of imagination into the future. The amateur of A.D. 2000 will, he predicted, "Still do the things we do today—but with apparatus beyond our ken, using words, languages and a depth of interest which make our present efforts seem primitive".

In February 1952 Victor Michael Desmond, G5VM, was elected an Honorary Member and Alec John Henry Watson, G2YD, a Vice-President in recognition of their past services to the Society. Desmond had retired as Immediate Past President at the end of 1951.

The December 1951 Calendar of the IARU, which did not become available to the Member Societies until March 1952, reported that nineteen votes had been cast in favour of a proposal made by the RSGB following decisions reached at the Paris Conference in 1950, that at future ITU Conferences the IARU should be represented by at least one delegate from each of the three world regions. As far as Region I was concerned the cost of IARU representation at such Conferences would be computed proportionally on the basis of the number of members holding amateur transmitting licences in each society at the beginning of each Conference year. The ARRL and two other societies voted against the proposal. The ARRL submitted four reasons, two of which cut deep into the Constitution of the IARU. The first reason given was that as the administrative organisation of present-day ITU Conferences provides for effective representation only by delegates from individual governments there is little hope of effective representation by delegates of an international group. The second was even more disconcerting. It read "Since at any Conference where amateur matters are on the agenda ARRL will have its own representative present as a member of the United States delegation, ARRL does not feel it should share in the expenses of additional delegates."* The significance of this reasoning was not lost sight of by the RSGB or by the other European Societies who had supported the proposal to set-up an organisation to protect the interest of amateurs in Region I, especially at ITU Conferences. It was suggested in the same Calendar that although delays had occurred in implementing the Atlantic City frequency spectrum table below 27.5 Mc/s changes could be made by individual administrations in a very short time. Two months later the Post Office notified the Society that as from July 1, 1952, United Kingdom amateurs would be permitted to operate on frequencies between 21 Mc/s and 21.2 Mc/s—using telegraphy only.

* *RSGB Bulletin*, Vol. XXVII, No. 10, p. 454.

Interest in Amateur Television took a big step forward on May 1, 1952, when Harold Jones, G5ZT/T and Fred Rose, G3BLV/A/T established the world's first amateur two-way contact. Excellent pictures were received at both stations over a distance of three miles in a demonstration witnessed by representatives of the national and local press.* Rose made an overnight journey from Sunderland bringing with him his own equipment which was installed in the home of a listener in Plympton. Jones operated from his home in Plymouth. At about this time the Honorary Secretary of the British Amateur Television Club, Michael Barlow, G3CVO, began to contribute bi-monthly articles on Amateur Television to the *RSGB Bulletin*. In his first he reported that forty-two of the forty-five members of the Club were using closed circuit equipment.

In a letter to the Society, followed by the publication of an article "The Technical Aspects of the Amateur Licence", D. N. Corfield, D.L.C. (HONS), A.M.I.E.E. G5CD† discussed and described the nature of certain new concessions and additional facilities which had become available to U.K. amateurs following negotiations between the Post Office Engineering Department and the Society's GPO Liaison Committee. Frequency Modulation (recently authorised in the 144-146 Mc/s band), Pulse Modulation (authorised in three of the uhf bands), Amateur Television, Single Sideband and High Efficiency Grid Modulation were considered and methods of measurement suggested.

The restrictions placed on the operation of amateur equipment, other than from the home of the licensee, were to a limited extent lifted by an announcement during the summer of 1952 that the holder of a permit for alternative address or portable operation would be permitted to use his station at a location other than that specified in the licence, provided the Post Office Engineering Dept. had previously been notified of the proposed location by prepaid registered letter or telegram. How many amateurs availed themselves of the facility is not known but it is doubtful whether very many took the trouble to go through the involved processes laid down in the procedure outlined in the announcement which appeared in the June 1952 issue of the *Bulletin*.

As from October 10, 1952, the rest (top section) of the 21 Mc/s band (21.2-21.45 Mc/s) was released to U.K. amateurs but the restriction on the use of telephony continued for a further three years. The lifting, in October 1952, of the power input restriction of 25 watts on 420-460 Mc/s meant that U.K. amateurs could now

* *RSGB Bulletin*, Vol. XXVII, No. 12, p. 545.

† *Ibid.*, Vol. XXVIII, No. 1.

use up to 150 watts on all bands from 3.5 Mc/s to 420 Mc/s. Efforts to persuade the Post Office to release the segment 3535 kc/s to 3585 kc/s to amateurs had, up to that point, been thwarted by the Services but like other irritating restrictions that one also disappeared a few years later. A new draft licence based on the requirements of the Wireless Telegraphy Act of 1949 and the Atlantic City Convention of 1947 was sent to the Society in October 1951 but it was not until 1954 that the various points raised by the Society had been sufficiently clarified to enable the Post Office to bring the new Amateur (Sound) licence into force. Even then it was introduced only gradually as licences became due for renewal during 1954 and 1955.

Not since the day in 1926 when the Radio Society of Great Britain was registered as a limited company without share capital, had any major amendment been made to the Constitution. Recently, however, a cry had arisen, which the Council could not and did not wish to ignore, that the Constitution should be amended in several important respects. From the time of the 1950 Annual General Meeting and throughout 1951 up to the summer of 1952 the Council had devoted much time and thought to proposals for amendment. After arriving at what seemed to be a satisfactory solution to the various problems that had arisen since the end of the war, the Council met the Regional Representatives in July 1952 and after taking account of the views expressed at the Conference a final draft of the new Constitution was circulated to all members two months later. This draft although based on the original Articles of Association drawn up twenty-six years earlier, took into account many of the changes that had occurred in the character of the Society and of the Amateur Radio movement generally since that time. As things turned out the Article that gave the Council the right to increase annual subscription rates to a predetermined maximum ultimately caused one of the greatest upheavals in the history of the Society. At a Special General Meeting held on December 19, 1952, the Council submitted a motion to the effect that the annual subscription should be £1 10s. for Corporate Members and 15s. for Associates or such *lesser* sums as the Governing Body may decide from time to time. Bearing in mind that the annual subscription had stood at £1 1s. for London members (i.e. those living within a radius of twenty-five miles of Charing Cross), 15s. for Country members and 10s. for Associates *since* 1913, and that a deficit of £2000 on the year's work had been predicted by the Honorary Treasurer, the Council felt confident the motion would be accepted—and so it was by an overwhelming majority of the members present at the

meeting. Unfortunately however a group of provincial members were opposed to the principle of paying the same amount of subscription as London members with the result that when ten provincial members led by Basil O'Brien, G2AMV (the Society's Regional Representative for the North West of England), demanded a poll it was found that the total votes cast in favour was less than the number cast against the special resolution. Voting was 278 votes against the resolution (252 by proxy, twenty-six in person) and 157 for the resolution (118 in person, thirty-nine by proxy).

Having considered the events of December 19, 1952, the new Council, under the Presidency of Leslie Cooper, G5LC, immediately took steps to convene a further Special General Meeting in preparation for which the President, the Vice-President (Arthur Milne, G2MI) and the Honorary Editor (Jack Hum, G5UM) addressed a manifesto to the membership through the medium of the *RSGB Bulletin* explaining why it had become necessary to increase subscription rates. At the meeting on February 27, 1953, a Special Resolution, this time to the effect that the annual subscription should be £1 10s. for Home Corporate Members, £1 1s. for Overseas Corporate Members and 15s. for Associates, was carried by a show of hands (256 to fifty-three) but after a poll had been demanded and the proxy votes called in, the President announced that although 2247 votes (including 1991 proxies) had been cast in favour of the resolution it had not been carried by the requisite seventy-five per cent of the members voting in person or by proxies. A total of 1019 votes was cast against the resolution, including 996 proxies. Following the announcement of the result of the voting, five members of the Council (the Honorary Treasurer, (Douglas Findlay, G3BZG), Arthur Milne, G2MI, Ian Auchterlonie, G6OM, Herbert Bartlett, G5QA, and Hugh McConnell, GM2ACQ) tendered their resignation from the Council. Fortunately Findlay, Milne and Bartlett—all of whom were destined later on to lead the Society in the office of President—eventually withdrew their resignations. On the other hand Auchterlonie and McConnell felt so strongly that they had been let down by the very people in the provinces they had been elected to represent, they both declined to reconsider their decision. Both had performed yeoman service and their loss to the Council was a serious set-back to all who had hoped that when a substantial number of provincial members had been elected to serve on the Governing Body the criticism that "the Society is run by London members" would disappear.

"Third time lucky" was the comment by those who attended an Extraordinary General Meeting on October 23, 1953, when the

Special Resolution which had been lost by proxy votes earlier in the year was adopted by 1358 votes (including 1182 proxies) in favour to 144 votes (including 137 proxies) against. The percentage in favour had increased to ninety-one per cent.* At an Extraordinary General Meeting which followed the Annual General Meeting on December 18, 1953, a new Constitution was adopted. At the same meeting the name of the Society was changed by Special Resolution from Incorporated Radio Society of Great Britain to Radio Society of Great Britain. By the terms of the new Articles of Association, Council members would, in future, be elected for a period of three years instead of for one year, but the most fundamental change was the creation of six geographical zones, each of which could elect a member to serve on the Council—an innovation designed to end the criticism that the Provinces could not adequately be represented on the Council. The offices of Honorary Secretary and Honorary Editor were abolished and the Associate grade would, in future, be restricted to those under twenty-one years of age who did not hold an Amateur Transmitting Licence. With the coming into effect of new subscription rates and a broader based Constitution the Society would have been justified in looking forward to a more peaceful and settled period but real stability was still some distance away.

The constitutional issues which occupied much of the time of the Council during 1952 did not prevent the President ("Dud" Charman, G6CJ) from fulfilling a great many engagements in different parts of the country. Additionally, in August 1952 (in company with the General Secretary) he represented the Society at the Silver Jubilee celebrations of the Danish National Amateur Radio Society (Experimenterende Danske Radioamatorer) in Copenhagen where, as members of the IARU Region I Bureau Committee set up by the RSGB Council, they took the opportunity of discussing international affairs with their hosts and with representatives of other Scandinavian societies. The visit was marred by an accident to the President who literally walked through a large glass door while leaving the home of Dr. Curt Lamm, ex K4CL, after an afternoon visit. Fortunately his injuries were not so serious as, at first sight, they appeared to be, although hospital treatment was necessary.

On November 1, 1952, it was announced from Buckingham Palace that His Royal Highness The Prince Philip, Duke of Edinburgh, had been pleased to extend his Patronage to the Society. Thus after a

* As from November 11, 1953, subscriptions were increased from 15s. to 27s. 6d. per annum in the case of Country Corporate Members, from 21s. to 27s. 6d. in the case of London Corporate Members, from 12s. 6d. to 21s. in the case of Overseas Corporate Members and 10s. to 15s. in the case of Associates.

period of sixteen years the Society could once again claim Royal Patronage. The Patronage extended to the Society by H.R.H. The Prince of Wales, K.G., expired upon his accession to the Throne as King Edward VIII in January 1936.

The 1952 Amateur Radio Exhibition was opened by one of the Society's senior Past Presidents, Col. Sir Ian Fraser, C.B.E., M.P. Sir Ian had been of great help in making known to the Society's new Patron something of the work done by the Society and by radio amateurs generally during and since the war. For the first time a comprehensive display of equipment was shown by the Army, a point appreciated by Sir Ian Fraser who, notwithstanding blindness occasioned by war service in the Army during World War I, displayed keen interest in all that the Services had to explain to him.

In October 1952 John A. Rouse, G2AHL, joined the staff as Assistant Editor, taking over the duties of David McIlwaine who a year or so earlier had succeeded Pat Hawker, G3VA. John Rouse, holder of a pre-war Royal Artificial Aerial Licence, 2AHL, had seen service in India with the Royal Corps of Signals and had been active from that country as VU2AD.

At the Annual General Meeting held in December 1952 a further fall in membership—from 12,134 to 11,625—was reported, the unsettled economic state of the country again being blamed for the decline, but all the time the *RSGB Bulletin* was increasing in size. Volume XXVII (July 1951–June 1952) contained 568 pages compared with the 480 pages which made up the previous volume and more than 800 members had attended a dozen Official Regional Meetings held in widely separated parts of the British Isles.

Leslie Cooper, G5LC, who succeeded Frederick Charman as President on January 1, 1953, although a comparative newcomer to the Council had nevertheless been closely associated with Amateur Radio for many years and had, since the war, been President of the very active Thames Valley Amateur Radio Transmitters' Society. His first duty as President was to pave the way for the Special General Meeting on February 27, 1953, by signing, in company with Arthur Milne, G2MI (Acting Vice-President) and Jack Hum, G5UM (Honorary Editor) a manifesto to the membership explaining why it had become necessary to increase the annual subscription to 30s. In his Presidential Address, delivered on January 30, 1953, at the Institution of Electrical Engineers, Cooper spoke about the Amateur's Code.* With his thoughts very much on the subscription issue confronting the Society, the President reminded his listeners that it is

* For many years a copy of the Code has appeared as a frontispiece to the *Radio Amateurs' Handbook* published by the American Radio Relay League.

not good enough just to pay a subscription. "This wonderful hobby of ours allows an immensely free exchange of ideas and speech and wide social contacts. Our transmissions, our words and our actions are there for the world to listen to, so that only the best personal efforts are good enough." And how well were the actions of a few members soon to be heard by the world at large.

Two years earlier the Society had offered to set up a communications network to meet any national disaster on land, at sea or in the air but that offer was declined as the G.P.O. had advised the appropriate Ministry that the Post Office was quite capable of handling any such emergency without the help of radio amateurs. During the last few hours of January 1953 a flood disaster of immense magnitude struck the East Coast of England. Post Office telephones, Government wireless stations and the utility services were put out of action for days. Radio amateurs, in these stricken areas, ignoring the terms of their licence but feeling sure that public opinion would support them, immediately placed their stations and their experience at the disposal of the authorities. In Lincolnshire and Yorkshire, for example, when Humber Radio was put out of action by the floods, local amateurs maintained a continuous watch on the shipping frequencies. Four times in a few hours Grimsby and Hull radio amateurs intercepted distress calls from ships at sea, yet only a few months earlier those same amateurs had been told that "the Postmaster General is satisfied the normal listening watch maintained by stations in the Mobile Service would be adequate in all ordinary cases to ensure that any distress message is picked up and acted upon".

Writing at the height of the disaster under the headline "It *did* happen here" and before the Council had had an opportunity to review the situation, the Editor of the *RSGB Bulletin** referred to the short-sighted attitude of the Post Office—"so zealous of its rights as to spurn genuine offers of help". He went on to say "we should be failing in our duty if we omitted to place on record, once again, our concern that no provision has yet been made by the Government to establish a National Emergency Amateur Radio Communications Service. Is there no one in the present Government sufficiently powerful to say that the co-operation offered by the radio amateurs of the United Kingdom must be accepted?"

The North Sea floods, which brought death and destruction to the East Coast of England and even more disastrously to The Netherlands, led the Council, and the membership at large, to consider seriously, once again, the question of establishing an emergency

* Vol. XXVIII, No. 8.

communications network. Throughout the first ten months of his Presidency, Leslie Cooper campaigned vigorously for official recognition of a scheme which the Council had decided to sponsor—but recognition did not come. And so, in desperation, at the opening of the Amateur Radio Exhibition on November 25, 1953, the President announced the formation of the Radio Amateur Emergency Network. With leaders of the Post Office and the Armed Services in his audience Leslie Cooper presented a case which left the Post Office and the general public in no doubt of the determination of radio amateurs to prepare themselves for any future emergency. Cooper explained that R.A.E.N. would offer its facilities to the Post Office, the British Red Cross, the St. John Ambulance Brigade, the Women's Voluntary Service as well as to hospital ambulance services, public utility undertakings, rescue services, the police and civil defence units. Emergency Communication Officers would be appointed in all cities and major towns throughout the United Kingdom. The network would provide means of communication only when the Post Office telephone services were out of commission or overloaded and would feed its messages into Post Office lines at the nearest suitable point. The response which followed the announcement was much greater than the Council and the organising Committee had anticipated but as with all new organisations it experienced many teething troubles in the early days before it settled down to become a first-class network able to respond to any emergency. Amongst those who made major contributions during the early days were Dr. Arthur Gee, G2UK, of Oulton Broad, Lowestoft, W. J. Ridley, G2AJF, of Chelmsford, Essex, Lt. Col. Arthur Dunn, G2ACD, of Bridlington, Yorkshire, Clifford Fenton, G3ABB, of Chelmsford, Essex, F. R. Petersen, G3ELZ, of Grimsby, Lincolnshire, Arnold Matthews, G3FZW, of Lichfield, Staffordshire, D. F. Willies, G3HRK, of Holt, Norfolk, Ron Wilson, G4RW, of Felixstowe, Essex, C. H. L. Edwards, G8TL, of Theydon Bois, Essex, Leon Newnham, G6NZ, of Portsmouth and Arthur Milne, G3MI, of Bromley, Kent, Incidentally it was an editorial by Milne in the March 1953 issue of the *RSGB Bulletin* and an article in the same issue entitled "Operation Floodtide" written by F. R. Petersen, G3ELZ that led to the decision by the Council to sponsor an emergency network.

Eventually, after much pressure from the Society, the Post Office recognised the existence of the Radio Amateur Emergency Network by writing into the Amateur (Sound) Licence a clause which authorised the use of the station "as part of the self-training of the licensee in communication by wireless telegraphy, during disaster relief operations conducted by the British Red Cross Society, the St.

John Ambulance Brigade or any police force in the United Kingdom, or during any exercise relating to such operations”.

Those who today enjoy the highly successful Annual International VHF Conventions organised by the RSGB may not realise that the event sprang from a small dinner held at the Bedford Corner Hotel on January 15, 1953, and organised by the London UHF Group. In his speech as guest of honour on that occasion, the General Secretary of the RSGB (G6CL) spoke of the difficulties experienced by the three Services during the early days of World War II in finding men well trained in the fundamentals of radio science and with sufficient practical experience of electronics to undertake work on radar and kindred projects. Those available were found, to a very large extent, among the ranks of the radio amateurs of this and other countries. By far their greatest asset had been their practical experience in the principles and practice of vhf communication then in its infancy. The dinner was presided over by Phil Thorogood, G4KD, who had the support of many prominent vhf-uhf enthusiasts of the day. The London UHF Group was then meeting monthly in Central London. In 1967 the Group was still meeting monthly in Central London with many of its original members regularly in attendance.

In the same way that a Band Plan had been found to be necessary for users of the hf bands, so too had a Band Plan become desirable, if not so essential for regular users of the vhf and ulf bands. On July 2, 1953, a meeting between representatives of the Society's Technical Committee, *Wireless World*, *The Short Wave Magazine*, *The Radio Amateur*, The Television Society, The British Amateur Television Club and the London UHF Group took place at RSGB Headquarters when a proposal was adopted that the Two Metre Zone Plan, introduced earlier by *The Short Wave Magazine*, should be adhered to in its entirety but renamed The British Isles Two Metre Zone Plan. Proposals to divide the 70 centimetre band on a system or mode basis were also adopted, with Amateur Television assigned to the segment 425–432 Mc/s.

At the IARU Congress held in Paris during May 1950, it had been agreed that representatives of IARU Member Societies in Region I (Europe and Africa) should in future, meet once every two or three years to discuss matters of mutual interest. From May 13 to May 16, 1953, a Conference attended by representatives from thirteen European societies was held at the Hotel de la Paix, Lausanne. The RSGB was represented by the General Secretary (G6CL) and the Vice-Chairman of the Technical Committee (Reg Hammans, G2IG). Executive Vice-President, Arthur Milne, G2MI, attended in his

capacity as Hon. Secretary of IARU Region I Bureau. Capt. Per-Anders Kinnman, SM5ZD (President of the Swedish Society, SSA) was elected President of the Conference, Win Dalmijn, PA0DD, headed the Administrative Committee, and Harry Laett, HB9GA, the Technical Committee. Summing up the results of the Conference in the June 1953 issue of the *Bulletin*, Arthur Milne, G2MI, wrote "In recent years determined attacks have been made on our rights and privileges from many directions. At Atlantic City amateurs suffered a set-back due almost entirely to the fact that few European societies had an effective liaison with their licensing authorities. The main purpose and achievement of the Paris and Lausanne meetings has been to strengthen the ties between the societies in Region I, to exchange information and to help one another in the fight to retain our bands; for remember that however good . . . our own relations may be with the GPO a few European Government delegates at an ITU Conference, without the right ideas on Amateur Radio, can wreck everything".

The Lausanne Conference was the first real attempt in the history of the IARU to provide Member Societies with an opportunity of examining their current administrative, operational and technical problems in some detail. Amongst the forward-looking matters discussed were emergency communication schemes, international portable operation (the genesis of reciprocal licensing), future ITU conferences, licence conditions and systems of transmissions. The RSGB was invited to continue to operate the Region I Bureau but in future the Bureau would be assisted by a Committee of six, three of whom would be from countries outside the United Kingdom. Three funds would be established, one to enable the Region I Bureau to function effectively, one to enable members of the Committee to attend meetings of the Committee in London and one to enable the Societies in Region I to send a delegation to future ITU Administrative Radio Conferences. The total amount to be paid by each Society would be based on a percentage of the total number of licences in force in each country compared with the total for the whole Region. The RSGB contribution for the first three years was fixed at £336, based on 7500 licences (twenty-eight per cent) out of a total of 25,760 licences for the Region. Arthur Milne, G2MI, Reg. Hamman, G2IG, and the Secretary, G6CL, were appointed to serve on the International Committee with Capt. Per-Anders Kinnman, SM5ZD (Chairman), Win Dalmijn, PA0DD (Vice-Chairman) and Harry Laett, HB9GA. The various recommendations of the Lausanne Conference were adopted by the Council of the RSGB on June 18, 1953.

For six years—from 1930 to 1935—an important feature of Amateur Radio within the British Empire was the Annual Loyal Relay in June, when messages conveying birthday greetings to the Society's Patron (H.R.H. The Prince of Wales, K.G.) were relayed to RSGB Headquarters via Amateur Radio stations from societies and individuals throughout the British Empire. During the spring of 1953 the Council decided to organise a Coronation Relay to mark the Coronation of Her Majesty, Queen Elizabeth II on June 3, 1953. National and local radio societies throughout the British Commonwealth were invited to relay, via Amateur Radio stations, messages of loyal congratulations to The Queen. The response to the invitation was exceptional, messages reaching Society Headquarters from many parts of the Commonwealth as well as from the Argentine Radio Club. The Society itself presented an illuminated Address to The Queen which was handed to the Home Secretary together with copies of the messages which had been received from the Commonwealth and from Argentina. Herbert Bartlett, G5QA, was responsible for organising the Relay. Tangible recognition of the fact that the Society had again achieved Royal Patronage came during the summer of 1953 when the President and Mrs Cooper and the General Secretary and Mrs Clarricoats were invited to attend a Royal Garden Party at Buckingham Palace—the first occasion such an honour had been extended to representatives of the Society.

Until early 1953 the band 1715–2000 kc/s could still be used by United Kingdom amateurs on a shared basis with other services. Under the Atlantic City Radio Regulations, 1947, certain administrations in Region I, including the United Kingdom, were authorised to assign up to 200 kc/s to the Amateur Service between 1715 and 2000 kc/s on the basis "that no harmful interference is caused to authorised Services of other countries". In May 1953 the Post Office notified the Society of its intention to act on the terms of the Atlantic City Regulations and to assign a band 200 kc/s wide (between 1800–2000 kc/s) to amateurs "subject to strict non-interference with other services". To minimise the risk of interference with other services the Post Office issued a list of frequencies which it was expected "would be particularly vulnerable to interference and which amateurs would do well to avoid". The list included such well-known shore station calls as Wick (GKR) and Folkestone (GUR) on 1827 kc/s, Niton (GNI) on 1834 kc/s, Cullercoats (GCC) and Lands End (GLD) on 1841 kc/s, North Foreland (GNF) and Oban (GNE) on 1848 kc/s, Humber (GKZ) on 1869 kc/s. The fact that many years afterwards amateurs are still able to use

this band must, surely, be regarded as a triumph for tolerance and good sense.

On July 5, 1953, the Society celebrated its 40th anniversary but, unfortunately, proposals to mark the occasion with a dinner had to be abandoned owing to lack of support. Tribute was, however, paid to founder member Rene Klein in a full length feature article published in the July 1953 issue of the *RSGB Bulletin*. Reproductions of the famous Gamage Lease and of a 1913 licence added interest to the article. During the evening of July 5, 1953, the President (G5LC) and General Secretary (G6CL) took part in a pre-arranged six-way contact with amateurs in the south of England in the course of which G6CL recalled the events which led Rene Klein and Leslie McMichael to form the London Wireless Club forty years earlier. Later in the year Mr. Klein was invited to open the Seventh Annual Amateur Radio Exhibition but for health reasons he had to decline. He was elected an Honorary Member in February 1954.

To mark the Queen's Coronation, Louis Varney, A.M.I.E.E., G5RV, described in the July 1953 issue of the *RSGB Bulletin* a 150 watt TVI-proof transmitter which he called "The Elizabethan". This was one of the most successful efforts made to provide a technically effective answer to the problem of television interference. Based on earlier circuits evolved by Varney, "The Elizabethan" incorporated many improvements, including the use of two 807 valves in parallel in the power amplifier stage.

As Scarr in 1950 and Charman in 1952 had travelled to Paris and Copenhagen respectively to represent the RSGB at international gatherings, so Cooper during his year as President journeyed to Iserlohn in August 1953 to represent the Society at the annual convention of the rapidly-developing German National Amateur Radio Society (Deutscher Amateur Radio Club). Leslie Cooper took part in a "fox hunt"—a direction-finding event designed to test the physical endurance of all who participate in search of the hidden "fox". Cooper's "fox" was a two-metre transmitter placed high up on a wooded slope about five miles outside Iserlohn which had to be found with the aid of equipment carried by competitors on their person. Many years later European Fox Hunting Championships were being organised on an international scale by the International Amateur Radio Union, Region I Division.

Under the chairmanship of Mr. Harry Faulkner, C.M.G., Deputy Engineer-in-Chief of the British Post Office, a Plenary Assembly of the International Radio Consultative Committee (CCIR) opened in London on September 3, 1953. A month later at the Kingsley

Hotel, London, the President of the RSGB and other members of the Council entertained delegates to the CCIR meeting. The lunch party included Gerald D. Gross, HB9IA ex-W3GG, then Assistant (later) Secretary-General of the ITU. By coincidence the opportunity was also taken to entertain Capt. Per-Anders Kinnman, SM5ZD, Harry Laett, HB9GA, and Win Dalmijn, PA0DD, the European members of the IARU Region I International Committee who, with their RSGB colleagues (G2IG, G2MI and G6CL), were in London for a meeting.

The Seventh Annual Amateur Radio Exhibition like those that had gone before, was held at the Royal Hotel, Woburn Place, London. Opened by Hugh Pocock, M.I.E.E., Managing Editor of *Wireless World*, it is doubtful whether anyone in the very large audience could claim such a wide knowledge of the work done by the Society over the years as Pocock himself. Not only had he held a transmitting licence prior to the 1914–18 war but on numerous occasions since 1913 he had been closely associated with events of, now, historic importance as Editor of *Wireless World* and for three decades he had reported faithfully all the major developments in the field of wireless—commercial, broadcasting and amateur. At one period he had served on the Council of the RSGB. In his speech at the opening of the Exhibition he suggested that the Amateur Radio movement in Britain might well adopt as its Patron Saint, the late Lord Derby, who when presenting the Second Reading of the Wireless Telegraphy Act on August 10, 1904, said he would always have the greatest sympathy for those who wished to experiment with wireless telegraphy, that all applications for licences would be treated as liberally as possible and that no request would be rejected unless it had been reviewed by himself. At that time he was speaking as Lord Stanley, Postmaster-General. It was at the luncheon which followed the opening ceremony that Leslie Cooper announced the formation of the Radio Amateur Emergency Network. During the course of the Exhibition the first European Single Sideband Convention took place at the Bedford Corner Hotel, London. Opened by the Society's President, the chair was taken by Ernie Dedman, G2NH, who led a discussion on the technical recommendations adopted earlier in the year at the IARU Region I Conference in Lausanne.

At the Annual General Meeting held on December 18, 1953, a further substantial loss in membership was recorded (from 11,625 to 11,190) with the heaviest fall occurring among the Home Corporate members. At the Extraordinary General Meeting which followed the Annual General Meeting the revised Articles of Association were finally adopted.

When Leslie Cooper finished his year as President he had the satisfaction of knowing that under his guidance the Society had emerged from one of its darkest periods into an era which held promise of greater stability although *real* stability was still to be achieved. Cooper's handling of many difficult situations earned for him warm praise and the thanks of his colleagues.

The Mobile Age Arrives

JANUARY 1, 1954, was a Red Letter Day in the life of Arthur Oswald Milne, G2MI, of Bromley, Kent. On that day he became President of the Radio Society of Great Britain after serving on the Council almost continuously since the beginning of 1935. During that time he had filled the dual offices of Honorary Treasurer/Honorary Secretary in 1938, had been Honorary Editor from 1939 to 1940 and again from 1944 to 1952, followed by a year as Executive Vice-President. From the outbreak of World War II he had assumed the responsibilities of RSGB QSL Manager, a task that had grown considerably in magnitude in the years just prior to his election as President. He contributed a regular Month "off" the Air article to the *T & R Bulletin* from the outbreak of war in 1939 until March 1942 and resumed as Editor of The Month on the Air column in 1945, a task he continued until 1954. His station had by then become one of the best known in the world. For many years he had been interested in the international side of Amateur Radio and he had been one of the Society's representatives to the Paris Conference in 1950 when the IARU celebrated its Silver Jubilee. He was a member of the original IARU Region I Bureau Committee and in 1953 he became Honorary Secretary of the Executive Committee, a post he was to hold for five years.

On several earlier occasions Milne had been invited to accept nomination for the office of President of the Society but had declined because of his professional connection with the Post Office Engineering Branch. Eventually, however, he was persuaded by his colleagues that his long experience as a member of the Council outweighed any possible criticism that might be levelled against him as President that he was associated professionally with those responsible for the issue of amateur transmitting licences in the United Kingdom. In fact, Arthur Milne's professional connection with the Post Office was remote from the Radio Services Department. During the period 1941-43 the Engineering Branch was transferred from London to Harrogate, Yorkshire, and it was then that Milne had to become an onlooker as a provincial member. But not for long because with the

war in its critical stages he undertook the duties of representative for the North East of England and in fact he organised several local meetings at that time in Yorkshire. He also acted as honorary *Bulletin* draughtsman through the war years. Few have ever been better qualified to occupy the President's Chair than Arthur Milne when he succeeded Leslie Cooper on New Year's Day, 1954.

Those who knew Arthur Milne were not surprised to find that he had chosen International Amateur Radio as the theme for his Presidential Address at the Institution of Electrical Engineers on January 29, 1954. After tracing the early history of the IARU Milne described how the Region I Division had come into existence. "All the activities of the Division" he emphasised "are directed to one end—the preservation of the amateur bands." It was, of course, a coincidence that on the page of the *RSGB Bulletin* upon which was printed the Presidential Address there should also appear a statement telling of the efforts being made by the Council to persuade the Post Office to protest to foreign administrations about the continued presence in "exclusive" amateur bands of commercial stations. After a good deal of hedging the Post Office had finally agreed to forward the Society's complaints to the proper quarters although little hope was held out of any immediate improvement. What use, members were asking, was the Atlantic City Convention, signed seven years earlier, if it could not protect the interests of radio amateurs? That same question was to be asked many times in the future as the number of intruders increased. In June 1954 Mr (later Sir) Ian Orr-Ewing (Bart), O.B.E., M.P. (G5OG) raised the matter in the House of Commons but in a very disappointing reply the Assistant Postmaster General left Parliament with the impression that the problem was of no great significance although he admitted that protests had been sent to Greece, Iraq and Spain.

In February 1954, after much pressure from the Society, the Post Office released the segment of frequencies between 3635 kc/s and 3685 kc/s to the Amateur Service thereby removing one of the irritations that had come through from the post-war years of military caution. But because of the shared nature of the band (now 3500 kc/s to 3800 kc/s) amateurs were "urged to be conservative in the use of power and to give special attention to frequency tolerances and bandwidths".

At about this time Society members, especially those who operated on telephony, were advised to exercise great care when requested by European amateurs to obtain supplies of rare drugs for the treatment of people said to be seriously ill. After pointing out that recognised international channels exist for dealing with such requests, a warning

was given that by passing on requests to hospitals and doctors, members could innocently be assisting those operating a European Black Market in drugs. Members were advised to take no action on requests for drugs but to pass on details promptly to Scotland Yard.

Early in 1954* the Society announced that a new basic licence would shortly be introduced by the Post Office to cover the facilities provided by the then current fixed station, alternative address, temporary alternative address and portable licences. There would also be a separate licence for mobile working. In future an Amateur Radio Certificate would be awarded to those who were successful in the Radio Amateurs' Examination and Post Office Morse Test. The schedule of licence exemptions, introduced at the request of the Society after World War II, would be revised, with a view to encouraging more prospective amateurs to take the Radio Amateurs' Examination. The fees structure would be simplified to provide for a single annual fee of £2 for the basic Amateur (Sound) Licence—as it would be called—and a separate fee of £1 for the Amateur (Sound Mobile) Licence.† The new licences were notable for a lack of unnecessary restriction. In the case of the new Amateur (Television) Licence knowledge of the Morse code would no longer be required if the applicant intended to transmit television signals only but as no sound channel was authorised the licence was not, in itself, a very practical proposition. The fee of £2 charged (in addition to the fee of £2 charged for an Amateur (Sound) Licence) for those who required the "sound" facility, tended to make the hobby expensive for the young Amateur Television enthusiast. In due course this problem, like others, was resolved by the Society after discussions with the Post Office.

The full terms of the new Amateur (Sound) Licence were published as a supplement to the April 1954 issue of the *RSGB Bulletin*. Those of the new Amateur (Television) Licence appeared a month later. The first of the new licences were issued on June 1, 1954, and among the first to receive an Amateur (Sound Mobile) Licence were: G2QL, 4CG, 5AU, 5CV, 5HK, 5LJ, 6UC, 8BV, 8DF, 8TL, 2ACT, 2BXP, 3DSD and GM3AEI. Three months later a new feature written by John Rouse, G2AHL—Mobile Column—appeared in the *RSGB Bulletin*. In a foreword the author remarked "mobile operation and the equipment necessary has a particular fascination of its own. Technically it offers a new challenge in amateur high efficiency gear—it appeals to all types of radio amateur from Top Band enthusiast to vhf worker". It did indeed. The Mobile Age had arrived.

* *RSGB Bulletin*, Vol. XXIX, No. 10.

† *Ibid.*, No. 11.

Among the notes appended to the new licences was one which made it clear that the Postmaster General would regard himself as free to publish the name and address of every licensee at his discretion unless the licensee had asked that this should not be done. This arrangement opened up the way for the Society to publish a more comprehensive Call Book than had hitherto been possible.

Great interest had been shown during the 1953 Amateur Radio Exhibition in reports of the success achieved by Douglas Walters, G5CV, when operating a very small transistor transmitter on the 3.5 Mc/s (80m) band. As a follow up to this achievement a description appeared in the March 1954 *RSGB Bulletin* of a Top Band transmitter using a Mullard OC50 transistor, constructed by A. Cockle, G3IEE. In that same issue, G3CMH (the call-sign of the Yeovil Amateur Radio Club) reported a contact with G3CAZ (Haslemere, Surrey) on 3.5 Mc/s at a distance of ninety miles using 30 mW input to an experimental point-contact type transistor. The transmitter, made by C. G. Banbury, BRS.20100, was described in the April 1954 *RSGB Bulletin*. At that time the transistor was still something of a mystery to all but those who were concerned in research work or in the commercial development of the device. "Introduction to Transistors", by Lorin Knight, A.M.I.E.E., (G2DXK), published in the July 1954 *Bulletin* was one of the first full-length articles on the transistor to appear in the British technical press. Prior to that date much of the literature had been of a highly technical nature and, to quote Lorin Knight, "rather overwhelming because of the unfamiliar language in which it is written". After discussing the basic structure of matter, the author described the theory and construction of the germanium type p-n junction rectifier, the p-n-p transistor and the point-contact type. He concluded with the prophetic remark that "some old timers may tend to think of the transistor as a novelty of purely academic interest. It promises to be far more than this. Large scale production is just beginning to get under way and it is planned to manufacture several millions in the United Kingdom next year (1955). How many will find their way into ham shacks?" Not many years were to pass before Lorin Knight's prophecy was proved correct that the transistor had far more to offer than novelty value of purely academic interest.

Interest in Amateur Television had accelerated greatly after intervention by the Postmaster General had brought about the release to amateurs of frequencies in the 420 Mc/s band for television. During the summer of 1954 Jeremy Royle, son of Ralph Royle, G2WJ, described in the *RSGB Bulletin* the television transmitter which he and his father had constructed for operation on 436 Mc/s. Pictures from

G2WJ/T were first received in July 1953 by L. V. Dent, G3GDR, at Abbots Langley, near Watford, Hertfordshire, over a distance of thirty-one miles but reliable results could only be achieved under conditions of good propagation. Later (from February 1954) when using the 20 watt transmitter described in the article* consistently good signals had been received at Abbots Langley.

At the Kingsley Hotel, London, on July 13, 1954, past and present members of the Council met under the chairmanship of the President (Arthur Milne) to pay tribute to founder Rene Klein, G8NK, and Past President Frederick Charman, B.E.M., G6CJ, both of whom had been elected Honorary Members in February and to William A. Scarr, M.A., G2WS, who had been similarly honoured a year earlier. Following dinner the General Secretary, on behalf of the Council, eulogised the work done for the Society by each of the Honorary Members, after which framed certificates, produced on vellum in black and gold lettering were presented to them by the President. Not until December 19, 1963, was the next Honorary Member (the 17th) elected. Recipient of the honour on that occasion was the retiring General Secretary (G6CL).

The highlight of 1954 was a National Convention held in Bristol from September 17 to September 20. Concentrated for the most part in the Royal West of England Academy, the event was supported by nearly 600 members and their friends. Following the official opening by the Deputy Lord Mayor of Bristol (Alderman K. A. L. Brown) the Convention station GB3NCB (National Convention Bristol) came to life and began a high-speed programme of contacts with amateurs all over the world. Later the President, members of the Council and the General Secretary with their ladies were entertained by the Lord Mayor and Lady Mayoress of Bristol (Alderman Gilbert G. Adams, J.P., and Mrs Adams) at the Council House. An ambition was realised during the Convention when the General Secretary, on behalf of the donor (Mr. Wilfred Butler, G5LJ) invested Arthur Milne with a President's Chain of Office. During the ceremony the Secretary explained that he had often felt the society should possess a Chain of Office to be worn by the President at official functions. The matter had been mentioned privately to Mr. Butler who shortly afterwards had made his generous offer to the Council. During the ceremony, which was filmed for posterity, attention was drawn to the historic significance of the bars mounted on the blue ribbon, each of which bore the name of a Past President.

Organised by the Bristol Group under the able leadership of Roy Poeton, G3CTN, Don Davies, G3RQ, and Eric Chambers, G2FYT,

* *RSGB Bulletin*, Vol. XXIX, No. 8.

and skilfully guided by the Executive Vice-President, Herbert Bartlett, G5QA, the Bristol Convention of 1954 will be remembered as one of the most successful and best organised events in the history of the Society.

Another event during 1954 that will be especially remembered was the Society's participation, for the first time since 1938, in the National Radio Show which opened at Earls Court, London, on August 24. The Society's stand in the gallery, whilst not attracting quite so many people as before the war, nevertheless became a rendezvous for members and for all interested in Amateur Radio. The very considerable amount of space made available to the Society by the generosity of the Radio Industry Council, whose Director at that time was Vice-Admiral J. W. S. Dorling, C.B.* provided an example of the regard which the radio industry held, and still holds, for the amateur movement.

It was appropriate that Arthur Milne, who had played such a prominent part in the formation of IARU Region I Division, should be invited to represent the RSGB at a National Convention organised by the Yugoslav society (SRJ) in Ljubljana during the first weekend of August 1954. The invitation, which carried with it an offer by SRJ to meet the President's hotel and return travelling expenses, was accepted. On his return Milne wrote a first-class account of his visit which appeared in the November 1954 issue of the *Bulletin*.

The Eighth Annual Amateur Radio Exhibition held once again at the Royal Hotel, London, from November 24 to November 27, 1954, was opened by Mr. Harry Faulkner, C.M.G., B.SC.(ENG), M.I.E.E., who had recently retired as Deputy Engineer-in-Chief of the Post Office. Faulkner had presided at the Seventh Plenary Assembly of the International Radio Consultative Committee (CCIR) held in London during 1953 and was much in sympathy with the aims and objects of the Society. In his speech at the opening ceremony he paid tribute to the pioneer achievements of radio amateurs, many of whom he had known as a young man, and congratulated the Society on the lead it was setting by encouraging the use of new techniques—and in particular the single sideband mode of transmission. He expressed his pleasure that a Post Office man (Arthur Milne) had been chosen to lead the Society during 1954. As in previous years the luncheon which followed the opening of the Exhibition was attended by a great many distinguished guests—"a radio Debrett" as one press man aptly described the

* This was the same J. W. S. Dorling who, as Admiral Commanding Reserves, twenty years earlier had initiated the formation of the Royal Naval Wireless Auxiliary Reserve.

gathering. A feature of the Exhibition was an outstanding demonstration of Amateur Television by Ralph and Jeremy Royle (G2WJ/T).

During the autumn of 1954, in accordance with the requirements of the recently revised and newly adopted Articles of Association, Corporate Members were invited for the first time in the history of the Society to nominate candidates to serve on the Council as Zonal Representatives. Also for the first time nominations were invited for the office of Executive (instead of Acting) Vice-President. The offices of Honorary Secretary and Honorary Editor were to disappear at the end of the year.

Following the decision a year earlier to increase subscription rates, membership fell by 1455 (from 11,190 to 9735) in the twelve months up to June 30, 1954. Reporting this to the Annual General Meeting on December 17, 1954, the President, expressed confidence that a period of stability, followed by a period of steady growth, could be anticipated for the future.* Members who attended the annual meeting joined with the President and Council in offering congratulations to the General Secretary on completing twenty-five years of service to the Society. After paying tribute to his work, Arthur Milne, on behalf of G6CL's friends in the Society, presented him with a hand-made pig-skin brief case and cheque. He also handed to the Secretary an illuminated testimonial recording the presentation and signed by the members of the Council. In thanking the President, Council and members for their good wishes and gifts the Secretary referred to the loyal service given by Miss May Gadsden who had completed her 25th year of service as Assistant Secretary on December 2, 1954.†

The year 1955 began with the new style Council in office and with another "old timer"—Herbert Arthur Bartlett, G5QA, of Exeter—in the President's Chair. Although Bartlett's interest in the work of the Society dated back to the years before the war he came into greater prominence during the war, at least in the West Country, where he was an active member of a war-time voluntary organisation. As the Society's Devon County Representative, and later Region 9 Representative, he had been responsible for many social activities in his part of England and as Chairman of the Bristol Convention Committee he had earned for himself high praise as an organiser. As a keen DX man and an enthusiastic vhf worker his call was

* In fact it was not until 1960 that the membership reached the 10,000 mark once again.

† In recognition of her services the Council at its meeting on December 16, 1954, presented her with a cheque for £25.

well-known at home and abroad. Licensed in 1928 he had seen service with the Merchant Navy during the last year of World War I.

The year 1955 also began auspiciously for the General Secretary, whose name appeared in the New Year Honours' List as a newly-appointed Officer of the Most Excellent Order of the British Empire (O.B.E.). Commenting on the appointment in the January 1955 issue of the *Bulletin* Jack Hum, G5UM (in his last contribution as Honorary Editor) wrote "This is an honour not to the recipient alone but to British Amateur Radio as a whole. It is Royal recognition of the importance with which the movement is regarded in the country—an importance to which the General Secretary's twenty-five years of hard work have so largely contributed."

"Herb" Bartlett was formally installed as President by his predecessor in that office (Arthur Milne) at a well-supported meeting at the Institution of Electrical Engineers, London, on January 28, 1955. Choosing as the title for his Address "The Rebirth of Amateur Radio" the new President reminisced on the pleasures and excitements of pre-war Conventions, recalling how the spirit of good comradeship which had lain behind those events, had been recaptured again at the recent Bristol Convention. He called for a revival of station visiting and urged members to take an active part in the running of the Society. As a past holder of the coveted ROTAB Cup he spoke authoritatively on the important changes which had taken place since the war both in the design of equipment and in operating techniques. As a Regional Representative of long standing he urged those who held office in the Society to break down apathy where it exists. He spoke of the new Zonal scheme of representation which he suggested would only fully succeed if Zonal Representatives received the backing and support of members in their zones.*

The London lecture meeting the following month on Radio Astronomy† was of unusual interest. This was given by Dr. R. B. Jennison, one time G2AJV, and currently a member of the team of scientists at Manchester University, Jodrell Bank Radio Observatory, under the inspired leadership of Professor (later Sir) Bernard Lovell. The lecture received editorial comment in the April 1955 issue of the *Bulletin*. "On few occasions before, can the dignified precincts of the I.E.E. building have contained such an enthusiast for a cause. It was, indeed, the blazing enthusiasm which Dr. Jennison radiated that must have persuaded many of his listeners that here was an entirely new branch of the art which not only should, but must be

* *RSGB Bulletin*, Vol. XXX, No. 8.

† *Ibid.*, Vol. XXXI, Nos. 1 and 2.

investigated by the radio amateurs of this country in keeping with their prevailing tradition." Entitled "From Outer Space" Jennison's lecture was well ahead of the time when the first OSCAR* would transmit its signals back to earth.

The first International VHF/UHF Convention ever held took place in London at the Bedford Corner Hotel in Tottenham Court Road in May 1955. Phil Thorogood (G4KD) organised the event on behalf of the London UHF Group. The programme included an exhibition of equipment and a series of lectures followed by a dinner in the evening attended by more than 120 enthusiasts from many parts of the United Kingdom as well as from France, the Netherlands, Eire and New Zealand. The guest of honour was Dr. R. L. Smith-Rose who exhorted those present to concentrate on experimental work likely to increase knowledge of vhf and uhf techniques. He pointed-out that much was already being done officially with transmitters carried aloft by balloons and kites; amateurs possessing light-weight equipment could, he suggested, use similar devices to achieve long distance results.

Ten days later, on May 24, 1955, two Past Presidents (Arthur Milne, G2MI and Leslie Cooper, G5LC) were among the large gathering at Southgate Town Hall to see the General Secretary, in his capacity as an Alderman of the Southgate Borough Council, installed as Mayor of the Borough. In his inauguration address he spoke of the importance of youth in a modern society and stressed the unrivalled education facilities available to young people. During his year in office he found many opportunities to emphasise the importance of Amateur Radio and the scope it offers to old and young to enrich friendships made "over the air".

As the outcome of discussions between representatives of the Society and the Science Museum, South Kensington, London, arrangements were made during the summer of 1955 to establish an Amateur Radio station in the Communications Gallery of the Museum. Prime mover in this ambitious plan was the Deputy Keeper of the Communications Department (Mr. Gerald Garratt, M.A.) who had been licensed as G5CS for about thirty years, although the task of operating the station was undertaken, largely, by Mr. Geoff Voller, G3JUL (ex YI2AM) a member of the staff at the Museum. The main purpose of the station was, as now, to demonstrate Amateur Radio as a scientific hobby to members of the public visiting the Science Museum and to encourage young people, in particular, to consider the attraction of a career in some branch of radio or electronics. The Science Museum Amateur Radio station has

* Orbiting Satellite Carrying Amateur Radio.

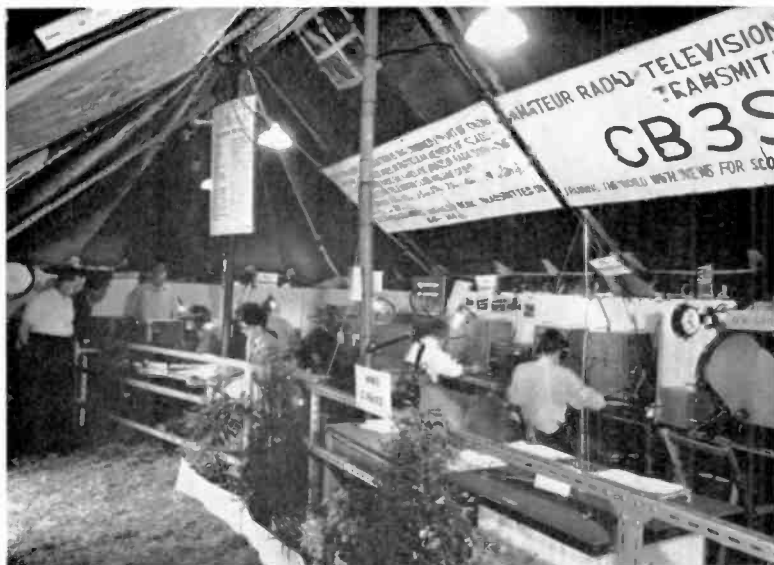
been a focal point for amateurs visiting London, many hundreds of whom have used the key or microphone at GB2SM. The station's record in DX contests has been one of the most consistent in the world. The original station included G.E.C., B.R.T., 400 and Eddystone 680X communication-type receivers and a Labgear rack-and-panel transmitter.

To mark the success of the Bristol Group in successive National Field Day events and as a permanent reminder of the highly successful Bristol Convention of 1954, a unique trophy was donated to the Society by members of the Group and handed to the President during one of his frequent visits to the County and City of Bristol. To be known as the Bristol Trophy the new acquisition was to be awarded annually to the RSGB Town or Group "which having entered only one station for NFD . . . shall succeed in obtaining the highest number of points in comparison with the score obtained by other groups entering on a similar basis". Main feature of the trophy is a miniature replica in silver of the famous Suspension Bridge over the River Severn at Clifton Gorge—a dominant Bristol landmark.

On Sunday, September 25, 1955, an ambition of the Amateur Radio movement in the United Kingdom was fulfilled* when at 1000 GMT that day the first RSGB News Bulletin was broadcast from the station of Council member Frank Hicks-Arnold, G6MB, of Walton-on-Thames, Surrey, using the Headquarters call-sign GB2RS. After years of negotiation—mainly on the question whether the Society should be permitted to broadcast messages to its members—the Post Office had finally decided that short news bulletins could be transmitted on Sunday mornings on a frequency of 3600 kc/s (83.3m) using telegraphy and telephony. With the passing of time and as the result of pressure from provincial members, the service was gradually extended to cover other parts of the country. Later, to meet the wishes of vhf enthusiasts, the Bulletins were also broadcast on frequencies in the 144–146 Mc/s (2m) band. Today news bulletins are broadcast wholly on telephony from stations situated in the South East, the West, the Midlands and the North West of England, in Scotland and in Northern Ireland.

"Mobile Rally Great Success", introduced an account in the October 1955 issue of the *Bulletin* of another event that made history for the Society, yet its significance did not become apparent until many years later. "Enthusiasm was the keynote", ran the account, "of the first Mobile Rally held at Binsey, near Oxford, on October 9 and attended by more than seventy-five members and friends. For several hours mobile operators demonstrated their equipment and

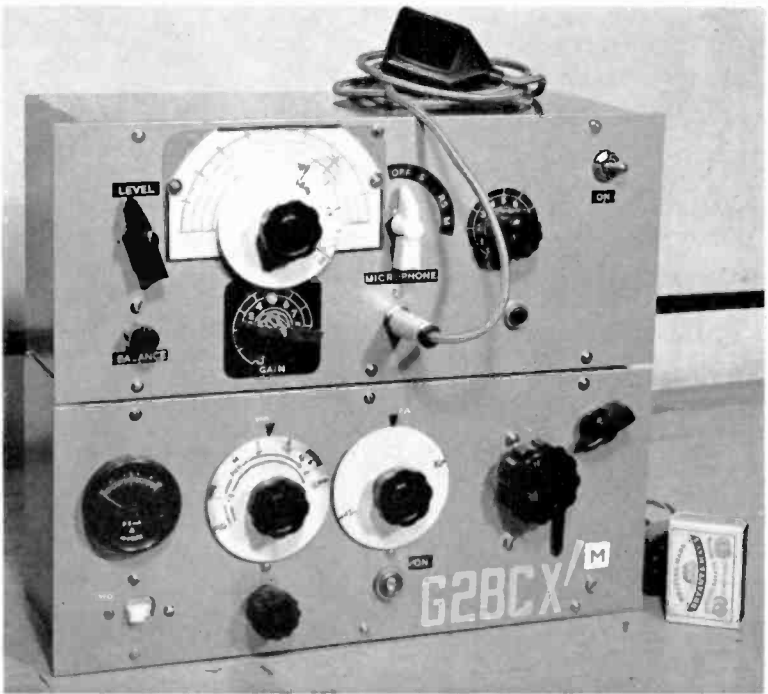
* *RSGB. Bulletin*, Vol. XXXI, No. 3.



The Amateur Radio station GB3SP in operation at the International Boy Scout Jamboree at Sutton Coldfield, Warwickshire, during the summer of 1957.



G. M. C. Stone, G3FZL, explaining International Geophysical Year data to Air Marshal Sir Raymond Hart, K.B.E., C.B., M.C. (Director of Engineering, Air Ministry) after the opening of the 1958 Amateur Radio Exhibition.



A transmitter-receiver of compact construction designed for installation in a private car.



The RSGB were hosts when IARU Region I Division held its fourth Triennial Conference at the Grand Hotel, Folkestone, in June 1960. Front row, seated Lt.-Col. Per Anders Kinnman, SM5ZD (Vice Chairman), W. R. Metcalfe, G3DQ (President RSGB), H. A. Laett, HB9GA (Chairman), John Clarricoats, O.B.E., G6CL (Secretary), Dr. R. L. Smith-Rose, C.B.E. (Immediate Past President RSGB), Dr. J. Simonnet, F9DW (Treasurer).



Horace Freeman, organizer of the first all-British Wireless Exhibition (held in the Royal Horticultural Society Hall, London, October 1922) photographed against a poster advertising that Exhibition. The occasion—a Radio Hobbies Exhibition, again held in the Royal Horticultural Hall 35 years later. Mr. Freeman was made an Honorary Vice President of the RSGB in 1960.

discussed the fine points of this absorbing new development in Amateur Radio. Thanks are due to E. B. Grist, G3GIX, and other members of Oxford and District Radio Society for the organisation of this very successful event." Who, present on that occasion, could have guessed that within five years Mobile Rallies would have become one of the most important features of Amateur Radio both in the United Kingdom and on the Continent as well. To John Rouse, G2AHL,* who conducted Mobile Column in the *Bulletin* with great regularity, must be accorded great credit for providing many interesting and stimulating accounts of the Mobile Scene as he saw it in the early days of its development.

At the same time as the Mobile Licence was welcomed by many, others were registering discontent at the insistence by the Post Office that new licensees should transmit telegraphy only for 12 months. Fortunately after the Society had made representations to the Post Office this restriction was withdrawn. The requirement that log books should be sent to the Post Office at the end of the first year's operation was also withdrawn. Nevertheless the Post Office safeguarded their position by stating that "The PMG regards this concession in the nature of an experiment and reserves the right to reimpose restrictions on the use of telephony by newly licensed amateurs if, in his view, such a course is necessary or desirable".

A feature of the Royal Air Force stand at the 1955 Amateur Radio Exhibition was a bamboo reconstruction of a typical sergeant's mess in Malaya showing an amateur station *in situ*. The centre piece of the ssb stand was a 3.7 Mc/s filter exciter using an 829B valve. This had been constructed by Dr. Desmond Downing, G13ZX, of Belfast. The vhf/uhf stand took on a new look with the advent of crystal controlled equipment for 1250 Mc/s and an amateur station—GB3RS—operated from the stand on 144 Mc/s. The exhibition was opened on November 23 by Vice-Admiral J. W. S. Dorling, C.B., M.I.E.E. (Director of the Radio Industry Council) and the opportunity was taken during the luncheon to thank Dorling and his Council for providing, at no cost to the Society, the floor space which made it possible for the Society to participate in the 1954 and 1955 Radio Shows at Earls Court.

Evidence of the increasing interest being shown, internationally, in vhf work was provided during the autumn of 1955 when the RSGB Council accepted an invitation to support a first meeting of VHF Liaison Officers (later called VHF Managers) in Belgium. Fred Lambeth, (G2AIW) who had been contributing the feature article

* Assistant Editor at that time.

"Two Metres and Down" to the *RSGB Bulletin*, was appointed to represent the Society at the meeting held in Brussels during the weekend November 19-20. Others present were Karl Lickfeld (DL3FM), Pierre Plion (F9ND), Hans Lauber (HB9RG), R. Furrer (HB9LE), Joseph Musche (ON4BK), Rene Vanmuysen (ON4VY), Jean Gerts (ON4LN), C. de Leeuw (PA0BL), Z. Vernic (YU2CF) and J. Kauric (YU2DV). Reporting fully in the January 1956 *Bulletin** Lambeth set out in detail conclusions reached on a wide range of subjects of general interest to vhf enthusiasts. Lambeth wrote "Apart from the tangible results the meeting was particularly worthwhile in that for the first time representatives from European IARU societies made known to each other their views on vhf problems. It is hoped that this friendly interchange of opinions will lead to increasing co-operation to the benefit of all vhf and uhf workers in Europe. It is only by such co-operation that the fullest advantage may be gained from the amateur allocations in the vhf, uhf and shf regions". The President Elect (Reg. Ham-mans, G2IG) represented the IARU Region I Committee at the meeting, at which Fred Lambeth was appointed Honorary Secretary, an office he was destined to hold for many years.

About seventy members were present at the 29th Annual General Meeting of the Society held at the Institution of Electrical Engineers, London, on December 16, 1955. Although a quiet meeting compared with those of recent years, Douglas Findlay's report as Honorary Treasurer came under fire—curiously enough, almost entirely, from those who had been responsible for nominating him, initially, for that office a few years earlier. The action of the Council in disposing of a large part of the Headquarters' station equipment (donated by EMI and other companies) for less than £30 led to much discussion as did the statement that revenue from the 1954 Amateur Radio Exhibition had fallen quite considerably. There was criticism of the way in which the cost of the Bristol Convention had been shown in the accounts but after everyone who wished to do so had spoken the motion to adopt the report and approve the accounts was carried unanimously. In presenting its report for the year to June 30, 1955, the Council recorded another substantial drop in membership, with the heaviest losses occurring in the Country Corporate (844) and Associate (497) classes. Increases in subscription rates were blamed for the loss—1576 during the year (from 9735 to 8159)—but the economic state of the country then prevailing would have contributed to a heavy fall in any case. This view could have been justified by taking note that the number of transmitting licences

* Vol. XXXI, No. 7.

in force dropped from 7624 at the end of June 1954 to 7384 at the same date in 1955. At the conclusion of the A.G.M. the President (Herbert Bartlett) presented the Bristol Trophy to the Slaithwaite Group who thus became the first holders. After winning National Field Day for three years in succession Bristol gave way to the Gravesend Group who in 1955 won the Shield for the first time.

When Reg Hammans, G2IG, took office as President on January 1, 1956, he had then been licensed for more than twenty-seven years. At the time he was chief engineer of Granada TV Networks Ltd., the programme contractors for weekdays in the Northern Region of the Independent Television Authority. Prior to that appointment he had been with the B.B.C. Although elected to the Council as recently as January 1953, Hammans had been Vice-Chairman of the Society's Technical Committee for many years and had been a Norman Keith Adams prizewinner in 1951 for outstanding technical contributions to the *RSGB Bulletin*. He had specialised in the design and construction of communication receivers and measuring equipment and was a pioneer in the development of single sideband techniques in the United Kingdom. It seemed natural, therefore, that he should choose the single sideband system of communication as the subject for his Presidential Address given at the Institution of Electrical Engineers, London, on January 27, 1956. Reg Hammans had represented the Society at IARU Conferences in Paris and Lausanne and was currently a member of the IARU Region I International Committee.

The year 1956 was only five days old when the fourth Annual Dinner of the London UHF Group took place at the Bedford Corner Hotel. The guest of honour was Dr. R. L. Smith-Rose who, in the course of a speech which eulogised the work of radio amateurs, placed on record that the science of radio astronomy is partly based on "The Hiss Phenomena" first observed by a British amateur, Denis Heightman, G6DH, in 1935. Very little attention was paid to the observations (reported upon at the time in the *T and R Bulletin*)* until the war years, when it was noticed that "hiss" increased if directional aerials were pointed to the sun. Smith-Rose suggested that radio astronomy was wide-open for future amateur investigation.†

At the beginning of the year Council and the staff found themselves faced with unexpected difficulties. First a printers' dispute delayed the February and subsequent issues of the *Bulletin*. Then the

* For example, Vol. XII, No. 1.

† *RSGB Bulletin*, Vol. XXXI, No. 7.

Chancellor of the Exchequer raised inland printed paper rate charges which put up the cost of posting the *Bulletin* from 1½d. to 2½d. a copy. Immediately afterwards came an announcement that printing charges would be increased by ten per cent at once. The effect of all this was to step-up *Bulletin* costs by £800 in a full year. An appeal by the Editor to members to make a serious effort to build-up the numerical strength of the Society to at least 10,000 within the next three years met with success and by June 1957 the tide had begun to turn and the 10,000 mark was, in fact, reached again sometime during the early months of 1960. The membership totals for those critical years, taken at June 30 in each case, are worth recording:

1954	1955	1956	1957	1958	1959	1960
9735	8159	8102	8495	9095	9590	10,036

For six days during June 1956 delegates from fourteen European societies met in Stresa, North Italy, for the second Triennial Conference of the IARU Region I Divisional organisation. The Technical Committee Chairman Harry Clark, B.Sc. (ENG), G6OT, and past President W. A. Scarr, M.A., G2WS, represented the RSGB with the President (Reg Hammans, G2IG) Past President Arthur Milne, G2MI, and the General Secretary, G6CL, present as members of the International Committee. Decisions reached at the Stresa Conference included the approval of a set of rules for the Division, approval of a suggestion that societies not operating emergency networks should endeavour to do so without delay, the setting-up of an *ad hoc* Committee to discuss vhf/uhf contests and other vhf/uhf activities in the Region and a recommendation urging every society in the Region to press its licensing authority to enter into reciprocal arrangements with other administrations. But by far the most important decision reached was acceptance of a recommendation of the Executive Committee that up to three observers from Region I Division should be appointed in due course to attend the next ITU Radio Conference. Commenting on the decision in the August 1956 issue of the *Bulletin* the Editor wrote "The pattern of the next Radio Conference is not by any means clear at present but it will no doubt be quite as drawn-out as the Atlantic City Conference. If the Conference takes place in Europe (Geneva is our guess) IARU representation should be a little easier, insofar as Region I is concerned, but even so it will not be a simple matter to find competent people who can spare the time to be away from their business for several weeks at a time; yet that may very likely be necessary. It is worth recording that the RSGB was the first to suggest to the societies in Region I that they should

get together in order to protect the interests of the amateurs in the Region as a whole at future International Radio Conferences".*

Colour Television, the subject of a well-attended Society lecture given earlier in the year by P. S. Carnt, B.SC. (ENG), A.M.I.E.E., provided material for the leading article in the first issue of Volume XXXII (July 1956) of the *Bulletin*. Contributed at a time when a commercial colour television service was but a distant dream in the United Kingdom the lecturer brought home to his audience, and later to readers of the article, some of the problems confronting the colour television research engineer. Carnt's lecture was the first on the subject given to the Society by a professional engineer,† but Grant Dixon of the British Amateur Television Club had, several years earlier, transmitted excellent pictures in colour over a closed circuit at RSGB exhibitions.

Although perhaps of little significance to the Institution of Electrical Engineers, the news that as from the summer of 1956 the premises of the Institution would no longer be available to outside bodies for the holding of business meetings came as a shock to all who, for decades, had become accustomed to gathering in the Lecture Theatre for their annual general meeting. The grant of a Royal Charter and the approval of a new Constitution to the Institution were responsible for the decision to debar societies, such as the RSGB, from using any part of the building for business purposes.

Since the formation of the Radio Amateur Emergency Network in 1953 great strides had been made during 1954 and 1955 to set up a country-wide organisation controlled by local representatives responsible, in particular, for regular exercises. Thanks largely to the energy and enthusiasm of the RAEN Controller (Lt. Col. Arthur Dunn, G2ACD, of Bridlington, Yorkshire) liaison was established with the executives of the British Red Cross Society who agreed that members of their Society should co-operate with members of the Network in disaster relief operations and exercises. Up to that time the Post Office had, unofficially, approved the arrangement, but on August 17, 1956, an announcement appeared in *The London Gazette* which varied the terms of the existing Amateur (Sound) Licence so that, in future, a station could be used "as part of the self training of the licensee in communication . . . during disaster relief operations or

* In fact the next Administrative Radio Conference was held in Geneva from August to December 1959 and IARU Region I representation was provided by observers from DARC (Germany), SSA (Sweden), VERON (Netherlands) and the RSGB who attended on a rota basis.

† At the time of his lecture Mr. Carnt was a member of the staff of the Research Laboratories of the General Electric Co. Ltd. Wembley, Middlesex.

during any exercise relating to such operations conducted by the British Red Cross Society . . ." Commenting on this important development, Jack Hum, G5UM, wrote in the October 1956 *Bulletin* "Preparedness demands practice; it is of little use belonging to RAEN unless regular participation in the Network's exercises over the air is intended. A RAEN station is still an amateur station. The best service to its cause can be rendered if its standard of operating is impeccable".

The most interesting item of licence news during 1956 did not break until November when the Post Office announced, quite suddenly, that it had been decided to make available to United Kingdom amateurs a narrow segment of frequencies between 70.2 Mc/s and 70.4 Mc/s but no operation would be permitted within a radius of fifty miles of Jodrell Bank Radio Observatory. Ever since the 56–60 Mc/s (five metre) allocation was lost (to television) in 1949 the British vhf enthusiast had turned his mind to the possibility of the Post Office making available a small allocation on a national basis somewhere around four metres. Just how difficult this was likely to be had been obvious from a study of the official frequency allocation charts. The amateur movement, therefore, could consider itself fortunate in having secured a new band around 70 Mc/s.* But let it not be forgotten that although the announcement came suddenly the success had been achieved solely as the result of protracted negotiations between the Society and the Post Office.

The decision by the Council during the early months of 1956 not to hold an Amateur Radio Exhibition that year was severely criticised by members of the Committee who had previously accepted responsibility for organising the RSGB stands at the more recent exhibitions held at The Royal Hotel. After the 1955 Exhibition complaints had been received that the venue was no longer suitable for an exhibition of the type appropriate to the Society. An offer by Mr. P. A. Thorogood, G4KD, to organise an exhibition in an entirely new venue was considered by the Council but finally rejected.

The 30th Annual General Meeting of the Society, held in the Lecture Theatre of the Electric Lamp Manufacturers' Association, Savoy Place, London on December 14, 1956 was the first not to be held in the Lecture Theatre of the Institution of Electrical Engineers since 1920. A few days after the A.G.M. the death occurred (on Christmas Eve 1956) of Captain A. M. Houston Fergus, G2ZC—"Fergie" to all his friends. More than thirty years earlier the call 2ZC came into prominence in Amateur Radio circles because of the

* Ten years later the band (then 70.1–70.7 Mc/s) was still available to United Kingdom amateurs.

success of the low power experiments which Fergus was carrying out from his home in Jersey, Channel Islands. In 1938 G2ZC (then living in Surrey) succeeded Cecil Page, G6PA, as Manager of the RSGB Experimental Section. During World War II he was engaged in work of a highly confidential nature and shortly after the war he, in association with another early amateur—Jimmy Catt, G5PS—resuscitated The First Class Operators' Club. He donated to the Society for low power work the handsome perpetual trophy that bears his name. A colourful and charming personality—his passing was much regretted.

The Way Ahead

DOUGLAS Alexander Findlay, D.F.C., (G3BZG) of Edgware, Middlesex,—the first post-war licensed amateur and the first post-war member of the Society to occupy the Presidential Chair—had come into prominence during that period when London members, in particular, were viewing with concern the manner in which the affairs of the Society were being administered. His association with the Edgware & District Radio Society had brought him into contact with members closely connected with the RSGB scheme of representation in London and when the financial structure of the Society came under fire during 1951 it was Douglas Findlay who was nominated to oppose the Council's choice for the office of Honorary Treasurer. Findlay won the election and took office for the first time on January 1, 1952. Five years later he was to lead the Society. Awarded the Distinguished Flying Cross during World War II, while serving with the Royal Air Force, the new President was now a practising accountant.

Following the example of his predecessors Douglas Findlay delivered an Address to the membership at the Institution of Electrical Engineers, London, on January 25, 1957, having been formally installed earlier in the evening, as 23rd President, by the Immediate Past President (Reg. Hammans, G2IG) in the presence of many past presidents and more than 100 members. Choosing as the title for his Address "The Way Ahead" the new President spoke of some of the more important matters which lay ahead. He referred in particular to the urgent need to increase the numerical strength of the membership to its post-war total of nearly 15,000, of improvements that could be made in the scheme of representation and of the future development of the Radio Amateur Emergency Network. He spoke about the work of the Council and of the various suggestions which had been made for improving the administration of the Society. He referred to the decision to produce a new Handbook, and to the desirability of creating a technical library. He hoped to reintroduce the pre-war practice of arranging visits to places of technical interest. He stressed the need for the Society to continue to play a leading role

in International Amateur Radio affairs. Following the Address, past president F. J. H. Charman, B.E.M., G6CJ, lectured once again to the Society on "Aerials for the Radio Amateur" using a number of ingenious models to demonstrate various patterns.*

Today, the letters IGY convey, even to the layman, something meaningful but when Dr. R. L. Smith-Rose, Director of Radio Research, Department of Scientific and Industrial Research contributed the leading article "Amateur Radio and the IGY" to the March 1957 issue of the *RSGB Bulletin* few, other than scientists, had heard of the International Geophysical Year and certainly few could see how amateurs could make a contribution. Fortunately members of the Society's VHF Committee had already been given an opportunity of discussing the long-term aspects of the IGY Project with Dr. Smith-Rose when he and Findlay had been guests of honour at the Annual London UHF Dinner on January 11, 1957, at the Bedford Corner Hotel, London; consequently when Smith-Rose's article appeared, the Society was in a position to publish a statement suggesting to members that they could make a useful contribution to the IGY by concentrating on one or more of the four special projects recommended by the author. Smith-Rose had outlined projects suitable for groups of amateurs in the United Kingdom, Belgium, Germany, Denmark and the United States. For example, U.K. amateurs were invited to study—

- (i) aurora and related transmission conditions on high frequency bands, using the U.K.-Canada route.
- (ii) the relationship between vhf/uhf propagation and meteorological conditions.
- (iii) auroral communication on vhf bands.
- (iv) the reception of solar noise on vhf/uhf bands.

The IGY was to be launched by the Society's Patron (H.R.H. The Prince Philip, Duke of Edinburgh) on July 1, 1957, and the Year was to continue until December 31, 1958.† Scientists throughout the world would carry out an intense programme of observations of various related phenomena occurring on the sun, in the earth's atmosphere and on the earth itself. The days selected for this work would be divided into two broad groups—Regular World Days and Special World Intervals to be selected at short intervals when unusual occurrences were forecast to take place on the sun. The

* The lecture was repeated by Mr. Charman at meetings in many parts of the United Kingdom during the next few years, being kept up to date by the introduction from time to time of new models.

† *RSGB Bulletin*, Vol. XXXII, No. 9.

activities of the RSGB IGY Group (D. W. Furby, G3EOH, and G. M. C. Stone, G3FZL, as co-ordinators, with K. E. S. Ellis, G5KW, A. L. Mynett, G3HBW, C. E. Newton, G2FKZ and J. A. Rouse, G2AHL, as members) have been fully recorded in the Society's Journal but even as late as 1967 it had not been possible because of the vast amount of data that had been collected, to publish a complete account of the work done by Society members during the IGY or during the year that followed (1959), described officially as International Co-operation Year (ICY). The setting-up of an Amateur Radio beacon station, GB3IGY, near London* and similar stations in other parts of the British Isles enabled members to make valuable contributions to international science.

At the IARU Region I Conference held in Stresa, Italy, during 1956 the problem of "intruders" in exclusive amateur bands had again evoked much discussion. Following the Conference, the RSGB suggested to the G.P.O. that a selected group of members should be authorised to notify Post Office monitoring stations by telephone whenever spasmodic broadcasting or commercial intruders were heard but the proposal was not acceptable to the Post Office. Instead they recommended that more attention should be paid by observers to providing comprehensive reports than on speed in communicating information to the monitoring stations. Accordingly the Council decided to invite a few experienced members to concentrate on preparing logs giving the frequency, times and source of persistent interference heard from intruders over periods of several weeks. Arising from this decision the now well-established RSGB Intruder Watch came into being, an organisation which has been copied by several other IARU Member Societies. Major Dennis Haylock, G3ADZ, supervised the Watch for a number of years during which time many reports were submitted to the Radio Services Department of the Post Office. Unfortunately the United Kingdom administration was not always able to take effective action in clearing the exclusive amateur bands of the intruders. In some cases protests would have been useless because the offenders were located in countries which were not Members of the ITU.

The death occurred on March 4, 1957, of Ernest Dawson Ostermeyer, G5AR, a Past President and Honorary Member of the Society. "Ack R" was one of the first persons to join the Wireless Society of London after the first World War and from 1928 to 1939 he served on the Council. He was Hon. Treasurer for several years before

* GB3IGY was established at the home of G5KW and consisted of a 500 watt automatic transmitter operating on 145.5 Mc/s into a 6-over-6 slot aerial having a gain of 18 dB beaming northwards from North Kent.

becoming President in 1938. Quietly spoken and generous to a high degree he was held in affection by all who knew him. Shortly after his death Mrs. F. E. Ostermeyer donated a handsome silver cup—The Five Ack R Memorial Trophy—for annual award to the member contributing to the Society's Journal the most meritorious description of a piece of home constructed radio or electronic equipment.

Realising the need to encourage the young member, the Society introduced in May 1957, the DX Listener's Century Award. To claim the Award non-transmitting amateurs had to submit verifications of reception from stations in 100 or more countries. The Award, unfortunately, has never made a great appeal to the BRS or Associate Member probably because it is not easy nowadays for a listener to obtain confirmations from as many as 100 countries. The issue of the *Bulletin* that announced the arrival of the DXLCA also carried an account of the first RSGB Telephony Contest (held during the weekend November 23–25, 1956). The contest brought well over 300 United Kingdom stations on to the 21 Mc/s and 28 Mc/s bands and before the event ended contacts had been made with stations in more than eighty overseas countries with the leading competitors making up to 300 contacts apiece. Douglas Edwards, G3DO, of Sutton Coldfield, Warwickshire, led the High Power section followed by James Taylor, GM2DBX, of Methilhill, Fifeshire, with Tom Higginson, GW3AHN, of Cardiff, leading the Low Power section. Since that first RSGB Telephony Contest in 1956 the event has continued to attract keen supporters each year, the number varying greatly with the ebb and flow of radio conditions.

Establishment of RSGB Headquarters at New Ruskin House, Little Russell Street—a stone's throw from the British Museum—had taken place in July 1943 when the staff numbered two (the General Secretary and Miss May Gadsden). At that time the accommodation was cheap and eminently suited to war-time requirements of the Society but fourteen years later the Council were faced with the problem of deciding how best to cater for the growth of Society activities. Among several suggestions made at that time was one that the Society should move from Central London, with existing funds purchase a house within a radius of about forty miles of the centre and establish there a new Headquarters with facilities for a laboratory, workshop and station. Unfortunately the task proved too difficult for the 1957 Council. Subsequently many hours were spent searching for a suitable house in Central London and later, in districts on the outskirts of London but in July 1967 the Society was still operating from the same small suite of rooms on the top floor at

New Ruskin House which they first occupied twenty-four years earlier.*

The problem of meeting increasing costs, particularly the cost of producing the Society's Journal, led the Council to give notice of its intention to increase the annual subscription of home Corporate members to 30s. as from July 1, 1957. The Articles of Association current at the time authorised the Council to fix the home Corporate subscription rate at any figure, provided it did not exceed 30s. The meagre increase of 2s. 6d. was long overdue.

Those who were connected with scouting in 1957 will long remember it as the Golden Jubilee year of the Movement when to commemorate the event a World Scout Jamboree was held at Sutton Coldfield, Warwickshire, from August 1 to 10. Throughout the Jamboree an Amateur Radio station was operated under the call-sign GB3SP.† To the surprise of many, the Post Office granted facilities for simultaneous operation of the station on more than one band as well as permission for the transmission of news bulletins. The station was organised by a local amateur, Alan Dennis, G3CNV, of Walmley, who received the enthusiastic support of the British Amateur Television Club (Birmingham Group), the Midland Amateur Radio Society and Slade Radio Society. On the day the station opened Lord Peter Baden-Powell (son of the founder of the Scout Movement) made a special recording to be broadcast from GB3SP. On August 9, the President (Douglas Findlay) and the General Secretary of the RSGB visited the Jamboree at the invitation of the Chief Scout (Lord Rowallan), after which the amateur station was inspected and the organisers congratulated. On the following day the President (in company with the Secretary) again visited the station, this time to present the newly donated Whitworth Trophy to the winner of the first RSGB Telephony Contest—Douglas Edwards, G3DO, of Sutton Coldfield. The ceremony was recorded and later broadcast from GB3SP. During the period of the Jamboree more than sixty licensed amateurs operated the seven transmitters installed at GB3SP and together were responsible for the 1712 contacts made with stations in seventy-one countries. The station was visited by many hundreds of scouts from overseas countries who sent messages to their homes.

It was from the Sutton Coldfield World Jamboree station that the idea germinated for an annual Boy Scout Jamboree-on-the-Air. The first of these took place at Gilwell Park, Essex, during the weekend

* In July 1961 the Council decided to inaugurate a Headquarters Building Fund and in December 1965 the Lambda Investment Company was formed.

† *RSGB Bulletin*, Vol. XXXIII, No. 3.

May 10–11, 1958, when the Wanstead, Woodford and District Radio Club operated an Amateur Radio station using the call GB3BP. The organisers were the Boy Scout International Jamboree on the Air, 965 Oxford Road, Tilehurst-on-Thames, Reading, Berks and the Organising Secretary was R. J. C. Broadbent, G3AAJ. The second Jamboree-on-the-Air took place during the weekend October 24–25, 1959, and was lead by L. R. Mitchell, G3BHK, of Wareham, Dorset, who continued as organiser for several years. The second Jamboree-on-the-Air and others that followed were open to all amateurs connected with the Scout movement.

From just after World War II up to the time of the Sutton Coldfield Jamboree the Society had pressed the Post Office and solicited help from members of both Houses of Parliament to set in motion machinery which would enable foreign licensed radio amateurs visiting the United Kingdom to operate amateur stations.

It was hoped that a reciprocal arrangement might also be authorised whereby British amateurs would be allowed to operate transmitters whilst temporarily abroad. Reciprocal licensing seemed to the layman to be so easy of achievement yet at every corner it was hedged in with difficulties, mostly created in the minds of the security departments of the many nations involved. And then during the summer of 1957, Louis Varney, G5RV, of Chelmsford, Essex, and currently working for the Marconi Company in Caracas, Venezuela, succeeded in obtaining a “vacation” licence from the Director of Communications of the Netherlands Antilles. Varney’s licence was the first granted to a non-resident foreign amateur and its issue marked the first stage of what was still to be a long series of discussions between Governments, which led eventually (in 1964 and 1965) to the widespread introduction of reciprocal licensing agreements between the United Kingdom, the United States and a number of other administrations.

As had been predicted, information reached the Society in July 1957 that an International Telecommunication Union Conference was being planned to open in Geneva during the summer of 1959. Although the information was only formally noted the Society lost no time in establishing contact with the appropriate executive members of the Post Office who would soon begin the task of planning for the Conference. Anticipating that the frequency spectrum would come under critical survey at Geneva the Postmaster General announced in the House of Commons, in July 1957, that he had decided to set up a Committee to advise him on the broad aspects of frequency allocation. The Society applied to the Post Office to be represented on this new Committee and in due course the

Postmaster General announced that the General Secretary and about eighteen other people had accepted an invitation to serve on the Frequency Allocation (later Advisory) Committee under the chairmanship of Sir Lawrence Bragg, O.B.E., M.C., F.R.S. Members were appointed on a personal basis for a period of three years at a time.*

For the fourth year in succession the Society took space at the National Radio Show, Earls Court, London, from August 27 to September 7, 1957. Equipment and literature likely to interest the newcomer to Amateur Radio were displayed but the results fell well below expectations. Any disappointment experienced at Earls Court was, however, more than compensated for by the overwhelming support given to the first of what was to be a series of Radio Hobbies Exhibitions sponsored by the Society and held in the Old Hall of the Royal Horticultural Society, Westminster, from October 23 to 26, 1957. By coincidence the Exhibition, opened by the Director of Engineering of the B.B.C. (Sir Harold Bishop, C.B.E.), took place exactly thirty-five years after the Society had sponsored the first all-British Wireless Exhibition, held, oddly enough, in the same building. The Exhibition was organised by Mr. P. A. Thoroughgood, G4KD, and attracted an attendance of more than 7,000 visitors in four days, proving conclusively, that a show concentrating on the hobby aspects of radio will always succeed provided it is held in an easy-to-reach hall with reasonably good facilities. A full account of the event was published in the November 1957 issue of the *RSGB Bulletin*.

The largest-ever United Kingdom gathering of mobile enthusiasts took place on Sunday, September 29, 1957, when more than 250 cars—mostly equipped for two-way mobile working—gathered in the grounds of Woburn Abbey, Bedfordshire, ancestral home for centuries past of the Dukes of Bedford. The attendance was estimated at between 500 and 600 many of whom had travelled long distances to be present. The event was organised by the President (Douglas Findlay), the Assistant Editor (John Rouse) and members of the Crystal Palace and District Radio Society. The Woburn Abbey Mobile Rally of 1957 was the forerunner of an annual series of Mobile Rallies sponsored by the RSGB. One of the most enthusiastic non-amateurs present was the Duke of Bedford himself.

On Friday, October 4, 1957—just three months after the start of the IGY—history was made when an earth satellite was launched from the Soviet Union. The satellite orbited the earth every

* Dr. R. L. Smith-Rose, C.B.E., (then Chairman) and Mr. John Clarricoats, O.B.E., with three others were the only members of the original Committee still serving in 1967.

ninety-five minutes and radiated c.w. signals in the form of fast dashes on 20.005 Mc/s and 40.005 Mc/s. Signals were audible at any part of the earth's surface for periods of between fifteen and twenty minutes as the satellite passed over. Writing in the October 1957 *RSGB Bulletin* the IGY co-ordinator, Geoff Stone, G3FZL, reported that many reception reports had been received from members and that a detailed analysis would be made from the regular reports of IGY observers. One month later Stone gave a full account of the launch of Sputnik I and of subsequent happenings based on information obtained from Government Research Establishments, the Mullard Radio Observatory at Cambridge, Jodrell Bank Radio Observatory, the British Astronomical Association and Society members. This masterly contribution—produced at short notice—placed the Society in the vanguard of the non-professional organisations participating in the IGY project.* It was perhaps fortunate that the Annual Report of the Council for the year ended June 30, 1957, appeared in the issue of the *RSGB Bulletin* which recorded the outstanding achievements of amateurs in providing Doppler tracking groups to operate for the first thirty-six hours after Sputnik II was placed into orbit on November 3, 1957.

The annual report, for the first time for many years, recorded a really substantial increase in membership—from 8102 to 8495. Evidence of what can be achieved by just one member was recorded in the report which disclosed that Mr. J. D. Kay, G3AAE, had personally written to 431 overseas amateurs during the year inviting them to become members and that eighty of them had, in fact, done so. At an Extraordinary General Meeting on December 13, 1957, a Special Resolution to amend the Article of Association dealing with subscription rates was adopted by a majority in excess of ninety per cent. This amendment gave the Council power to increase Corporate membership subscriptions to a maximum of 50s. but it was not until seven years later that this figure was established as the standard rate. Although at least 2000 members were at that time living in the London Region only 135 attended the meeting and only seventy-six members voted by proxy.

As the year ended three interesting matters concerning amateur licences were reported. First, certain amateurs in a few areas of the country were to be granted permission to operate on 52.5 Mc/s with

* Six years later at the Space Communications Conference in Geneva (November 1963) one of the IARU Region 1 observers present was called upon, also at short notice, to give an account of the contributions made by radio amateurs after the first Sputniks had been launched. The Conference at that time was considering allocating a band of frequencies to amateurs for space communication purposes.

a power input up to 500 watts as part of the Society's plans for the IGY; second, the system, whereby certain applicants for an amateur licence had been able to claim exemption from the Radio Amateurs' Examination and/or the Post Office Morse Test, would end on May 8, 1958; third, all operating frequencies must in future be logged. The exemption system was introduced at the request of the Society immediately after the 1939-45 war and was intended to operate for only a few years. Its primary purpose was to assist those who had attained a "trade" qualification whilst in the Services to obtain an amateur transmitting licence without passing the technical and/or Morse test.

Leonard Eugene Newnham, B.Sc., (G6NZ) of Emsworth, Hampshire, succeeded Douglas Findlay as President of the Society on January 1, 1958. Licensed in July 1926, he had been a member of the Council since January 1952. A schoolmaster by profession, he was seconded by the Portsmouth Education Committee to the Air Ministry in 1938 to undertake work in connection with the pre-war radio training of R.A.F. personnel and was attached to No. 1 Signal School (later No. 1 Radio School) Cranwell, Lincolnshire. "Len" Newnham served throughout the war with the R.A.F.V.R. rising to the rank of Squadron Leader. In 1946 he helped to resuscitate the R.A.F. Amateur Radio Society and was its first post-war chairman. During his chairmanship, the Society's station G8FC was reactivated, thereby enabling many of those who, today, are prominent radio amateurs to gain their first introduction to the hobby. An authority on the history of wireless communication, his library of first editions is probably one of the most extensive in the country apart from those of the professional institutions. In his Address delivered to the Society at the Institution of Electrical Engineers, London, on January 24, 1958, the new President chose to ask and then to answer the question "Why Amateur Radio?"* It was natural that he should make frequent references to views put forward by such eminent writers as Ladner and Stoner in their "Short Wave Wireless Communication", by Terman in his "Radio Engineering" and by Lt. Col. Chetwode-Crawley in his book on the development of electrical communications written after he had retired as Inspector of Wireless Telegraphy, G.P.O. They and many others, in their writings, had paid tribute to the pioneering activities of radio amateurs. Newnham concluded his Address by remarking that "Our hobby is worth every effort to ensure not only its continuance but its future growth. Let us all be sure that individually and collectively we play our part and do not rest on the achievements of a receding past to see us through".

* *RSGB Bulletin*, Vol. XXXIII, No. 8.

During his service on the Council, Newnham had concentrated on the activities of the Radio Amateur Emergency Network and on the problems associated with interference to television caused by amateur transmissions. He had been a member of the RAEN, TVI, and GPO Liaison Committees to all of which he made valuable contribution.

In the list of Council Members who took office for the first time on January 1, 1958, there appeared the name of Norman Caws, A.C.A., G3BVG, who had been associated with the London UHF Group (as Treasurer) from its inception. Caws was elected Honorary Treasurer in a straight ballot with Major K. E. S. Ellis, G5KW (another keen vhf/uhf worker) who, as a serving member of Council, had volunteered to accept nomination for that office when the then Honorary Treasurer (W. R. Metcalfe, G3DQ) was nominated for the office of Executive Vice-President. The failure of Ellis to secure re-election to the Council brought to light a weakness in the electoral system, for if he had not been pressed by his colleagues at nomination time in 1957 to stand for the office of Honorary Treasurer it is almost certain he would have been re-elected as an ordinary member of Council. A year later he was nominated for the 1959 Council and in due course was elected. Norman Caws was destined to play an important role in the subsequent affairs of the Society, both as Honorary Treasurer and as President during 1963—the Golden Jubilee Year of the Society. In his capacity as Honorary Treasurer he brought his wide experience as a professional accountant to bear on the financial activities of the Society.

A sharp reminder of one of the major problems likely to face the Society in the months leading up to the Geneva Radio Conference came in a note from the Post Office in April 1958 which pointed out that although the frequencies between 1800 kc/s and 2000 kc/s are available to United Kingdom amateurs their use is conditional upon the avoidance of serious interference to stations in the Maritime Service. It appeared that the Danish Administration (one of the chief objectors at Atlantic City in 1947 to amateurs in Europe being allowed to use Top Band) had complained to the Post Office that interference was being caused to their ship-to-shore radio telephone service during the hours of darkness by British Isles amateurs operating between 1800 and 2000 kc/s. The Post Office listed five spot frequencies to be avoided and reiterated an earlier warning that amateurs should also avoid frequencies used by U.K. coast stations.

Although a Triennial Conference of IARU Region I Societies had been held as recently as 1956 in Stresa, Italy, the Executive Committee of the Division decided that a further Conference should be

held during the summer of 1958 to draw up plans for Region I representation at the forthcoming Geneva Radio Conference. The Region I Conference duly took place in Bad Godesberg, on the Rhine, from July 21 to 25, when the Society was represented by the President (Mr. L. E. Newnham, G6NZ), the Executive Vice-President (Mr. W. R. Metcalfe, G3DQ) and the General Secretary, with Mr. J. A. Rouse, G2AHL, in attendance as an observer. Mr. F. G. Lambeth, G2AIW, represented the Society at a meeting of VHF Managers held during the Conference period. Commenting in a leader published in the May 1958 *RSGB Bulletin*, Jack Hum, G5UM, wrote "The Bad Godesberg Conference will be held none too soon, for administrations are now in the process of advancing proposals for the ITU Conference in Geneva next year. The Post Office will bear a large part of the load of preparing the U.K. proposals. The amateur case has already been stated to them. Broadly it is to preserve the *status quo*, frequency-wise, but to ask for modest additions here and there where such seem reasonable". And that, in fact, was the line which the Region I Conference took when plans for defending the amateur bands at Geneva in 1959 were discussed. A further decision of the Conference was to nominate an observer team consisting of four prominent members from four European societies to represent the Division.* This action confirmed in positive fashion the primary purpose for which the Region I organisation had been founded eight years earlier.

Commenting in the August 1958 issue of the *Bulletin* about the Conference the Editor said "Its value was inestimable for not only did it enable the delegates of the sixteen societies represented to deal collectively with matters of major policy but it also provided them with many opportunities of meeting informally to discuss day-to-day happenings of Amateur Radio. The Conference emphasised that there now exists among the IARU Societies in the European part of Region I an understanding that was sadly lacking in the years just after the war. At that time the RSGB was carrying the full brunt of IARU Region I representation". Detailed accounts of decisions reached at the Conference appeared in the August and September 1958 issues of the *RSGB Bulletin* and in both reports reference was made to fox-hunting, intruders, emergency networks and reciprocal licensing arrangements. An offer made by the RSGB, through the President, to act as host to the 1960 Conference was accepted.

It was at Bad Godesberg that the VHF Managers present succeeded

* The nominated team consisted of Major Per-Anders Kinnman, (SM5ZD) Ir. W. J. L. Dalmijn, (PA0DD), Otfried Luhrs (DL1KV) and the General Secretary of the RSGB (G6CL).

in convincing the final Plenary Meeting that, in order to further the important work being done internationally, a Region I permanent VHF Committee should be set-up to operate between Conferences. Dr. Karl Lickfeld, DL3FM, who had been chairman of the *ad hoc* VHF Committee, was elected chairman and Mr. F. G. Lambeth, G2AIW, (RSGB VHF Manager), secretary, in succession to Mr. J. Mussche, ON4BK, who had been secretary of the *ad hoc* committee.

On October 10, 1958, more than seventy radio amateurs who had held a transmitting licence issued by the Postmaster General for an unbroken period of at least twenty-five years including the war years, met informally at The Horse Shoe Hotel, Tottenham Court Road, London, W.1., under the chairmanship of the President (G6NZ). During the evening a proposal by the General Secretary (G6CL) that a Radio Amateur Old Timers' Association should be formed was enthusiastically accepted as was a proposal that Association members should contribute to a Benevolent Fund. Wilfred Butler, G5LJ, whose generosity has previously been mentioned, offered to donate a founder members' badge to all present at the dinner who paid a life subscription of one guinea.*

The second RSGB Radio Hobbies Exhibition, like its predecessor, was held in the Old Hall of the Royal Horticultural Society, London from November 26 to November 29, 1958. The Exhibition was opened by Air Marshal Sir Raymund Hart, K.B.E., C.B., M.C., A.R.C.S., M.I.E.E. at that time Controller of Engineering and Equipment at the Air Ministry† and attracted a record attendance of 10,000—3000 more than in 1957. In his speech Sir Raymund, who was Patron of the R.A.F. Amateur Radio Society and a Vice-President of the Radar and Electronics Association, referred to the debt the Royal Air Force owed to the Radio Society of Great Britain for assistance rendered prior to and during the 1939–45 War. In a reference to the RAF Civilian Wireless Reserve he remarked that it was the only reserve of men with knowledge of operating and of maintaining radio equipment that the RAF could call upon in an emergency.

The first public over-the-air demonstrations of colour television in the British Isles aroused widespread interest among visitors to the 1958 Exhibition. Arranged by Bernard Rogers, G3ILI/T, with the co-operation of his employers, Bush Radio Ltd. (who loaned two

* The Annual Reunion of RAOTA takes place in London, usually at the beginning of May.

† After his retirement from the Royal Air Force on January 31, 1959, Sir Raymund Hart became Director of the Radio Industry Council in succession to Vice-Admiral J. W. S. Dorling, C.B. In July 1960 Sir Raymund was electrocuted in his own garden while handling an electrically driven lawn mower.

experimental colour television receivers with 21 in. screens) the demonstrations included films transmitted by the B.B.C. from colour equipment at their Lime Grove Studios and colour films transmitted from G3ILI/T. Both the B.B.C. and G3ILI/T employed the British version of the American NTSC system, the B.B.C. operating on Channel I and G3ILI/T on 436.2 Mc/s.

Just before the year ended, the Directors of Mullard Ltd. announced their wish to offer an annual award to the member of the Society resident in the United Kingdom "who in the opinion of a Committee has, through the medium of Amateur Radio during the preceding calendar year, rendered outstanding personal service to the community by his own endeavour or by his own example of fortitude and courage". The Mullard Award would take the form of a gift in kind (preferably electronic or electrical apparatus and/or books) to the value of £25 and a commemorative plaque. For nearly forty years the Mullard company, inspired in the early days by its illustrious founder, Captain Stanley Robert Mullard, had gone out of its way to assist the Amateur Radio movement in general and individual amateurs in particular. The decision of the directors in 1958 to make an annual award of a unique kind provided a further example of the interest shown by the company in the work of the society and its members. At a reception in Mullard House, London, on December 10, 1958, the President formally accepted the offer of the Award from Mr. T. E. Goldup, C.B.E., a Director of the Company, who at that time was the Immediate Past President of the Institution of Electrical Engineers.

At the Annual General Meeting of the Society held on December 12, 1958, at Overseas House, St. James' Street, London, S.W.1., the Council was able to report for the second year in succession a substantial increase in membership (from 8495 to 9095), notwithstanding the recent increase in subscription rates.

The Geneva Conference

WITH an eye to the problems that were expected to face the Amateur Radio movement during 1959, particularly at the time of the Geneva Radio Conference, the Council broke from tradition during the autumn of 1958 by inviting a non-Council member (Dr. R. L. Smith-Rose, C.B.E.) to accept the office of President in succession to Mr. L. E. Newnham. Dr. Smith-Rose was eminently qualified to undertake the duties of that office having been a member of the London Wireless Club in 1913, a member of the Committee of the Wireless Society of London in the period following World War I and, since November 1942, an Honorary Member of the Radio Society of Great Britain. All of his adult life, since leaving college, had been spent on radio research and at the time of his nomination for the office of President he was Director of Radio Research in the Department of Scientific and Industrial Research, Slough, Buckinghamshire. The author of many reports and papers on radio subjects, he had for years been a leading authority on radio propagation. He had represented the United Kingdom at a number of international radio and scientific conferences and in 1958 was Chairman of two CCIR Study Groups dealing with ionospheric and tropospheric propagation. He was also Vice-President of the International Scientific Radio Union (URSI) at the time. In 1947 he had been awarded the United States Medal of Freedom with Silver Palms for his war-time and post-war service in scientific research and development and for co-operation with United States scientists. Two years later he had been appointed a Commander of the Most Excellent Order of the British Empire in recognition of his contributions to radio and radar research in the United Kingdom. In 1957 he had suggested that radio amateurs should participate in the International Geophysical year programme and had been a frequent guest at Society functions.

In the course of his Presidential Address, delivered at the Institution of Electrical Engineers, London, on January 23, 1959, Dr. Smith-Rose spoke of the early days of radio and of the important part played by the Society in the international field. He looked ahead

to the forthcoming Radio Conference soon to open in Geneva and congratulated the IARU Region I Division on the steps being taken to defend amateur frequencies at the Conference. Dr. Smith-Rose devoted the remainder of his Address to a description of the functions of the Radio Research Board and to the work of the Radio Research Station at Slough, in the course of which he described how the back-scatter method was being used for the preparation of frequency predictions. The Address was reproduced in the February 1959 issue of the *RSGB Bulletin*.

At the first meeting of the 1959 Council, William Herbert Allen, M.B.E., (G2UJ) was elected a Vice-President in recognition of his outstanding services to the Society over a period of many years. A member since 1934 and a licensed radio amateur since 1935, Bert Allen was a member of the pre-war R.A.F. Civilian Wireless Reserve and became an "Early Bird" when he went to France in September 1939. After the war he was the Society's VHF Manager for some years and was currently a member of the Technical Committee of the Council.

"Ignore Rumours" was the advice given on the Current Comment page of the April 1959 *Bulletin*. With the Geneva Radio Conference only a few months away rumours had already begun to circulate that certain frequencies currently available to radio amateurs were about to be curtailed or withdrawn. Similar rumours had swept through amateur circles prior to and during the Atlantic City Conference twelve years earlier. It was because the Council had no reason to suspect that any radical frequency changes affecting amateurs would occur at Geneva that the advice was given to ignore rumours.

An invitation to the Council to nominate a member to join the United Kingdom delegation to Geneva as an adviser on Amateur Radio matters was regarded as evidence of a closer understanding between the Post Office and the Society. Fortunately, the Immediate Past President (L. E. Newnham, B.Sc., G6NZ) was able to accept the invitation and he was present at the Conference for a number of weeks. This was the first occasion in the long history of international radio conferences, that the Society had been invited to appoint one of its members to serve on the U.K. Government delegation. Concurrently with the announcement of Newnham's appointment came news that the first two sections of the long-awaited Book of Conference Proposals had been issued from ITU Headquarters in Geneva. Few administrations had, up to that time, shown their hand in respect of frequency proposals concerning amateurs but the "Book" disclosed that the European Common Market countries had in mind

depriving the amateurs of Region II (the Americas) of the band 7150–7300 kc/s and reducing the width of the 28–29.7 Mc/s band by 700 kc/s at the high frequency end to enable the Fixed Service to be extended by that amount. Both proposals looked dangerous as did Australian proposals to reduce drastically the width of the 3.5, 7 and 14 Mc/s amateur bands. The Australian proposals were all the more disturbing because they had been kept secret from the Australian Parliament, Australian amateurs and the Australian press.

When the Conference opened in the Bâtiment Electoral, Geneva, on August 17, 1959, L. E. Newnham, G6NZ was in attendance with two observers from IARU Region I Division (Per-Anders Kinnman, SM5ZD, and John Clarricoats, G6CL). Also present were Arthur Budlong, W1BUD, and John Huntoon, W1LVQ, from ARRL Headquarters both of whom were attached to the United States delegation. John Moyle, VK2JU, represented the Wireless Institute of Australia and was attached to the Australian delegation; Alex Reid, VE2BE (Canadian Director of the ARRL) was a member of the Canadian Delegation. More than fifty other radio amateurs were present at the Conference in their professional capacities either as delegates or observers. The original IARU Region I Division team was augmented at different times by the presence of Arthur Milne, G2MI, W. J. L. Dalmijn, PA0DD, and Otfried Luhrs, DL1KV, with the result that Region I observers were in attendance for approximately twelve weeks between the opening on August 17 and the closing of the Conference on December 21, 1959. The leader of the United Kingdom delegation was Captain Charles Booth, C.B.E., who at that time was an Assistant Engineer-in-Chief of the Post Office, whilst the key-post in the ITU—that of acting Secretary-General—was held by Gerald Gross. Gross had held the amateur call W3GG prior to his overseas posting and was currently licensed as HB9IA by the Swiss Government. During the Plenipotentiary Conference, which ran parallel to the last three months of the Radio Conference, Gerald Gross was elected Secretary-General, a post he held until he retired at the end of 1965.

Some idea of the extent of the business facing delegates was given by Gross during his speech at the opening ceremony when he disclosed that more than 4000 proposals had been received to date—spread over 800 pages of printed text—and that many more were in process of being prepared for submission to the Conference.

Almost from the commencement, the greatest pressure on the amateur bands came from the international broadcasting service with particular pressure on the 7 Mc/s band, already split Region-wise by

the Atlantic City frequency allocation table. That table had allocated 7000–7100 kc/s to amateurs on a world-wide basis; 7100–7150 kc/s to amateurs and broadcasters in Regions I and III; 7150–7300 kc/s to broadcasters in Regions I and III, and 7100–7300 kc/s to amateurs exclusively in Region II (the Americas). At least a dozen nations proposed that the Atlantic City exclusive amateur allocation for Regions I and III should be adopted world-wide which, if it had been accepted, would have concentrated all amateurs using the 7 Mc/s band into the 100 kc/s segment between 7000 and 7100 kc/s leaving 7100–7300 kc/s free for broadcasting. Finally after tremendous pressure the matter was resolved with the full 300 kc/s being retained for amateurs in Region II (North and South America) whilst amateurs in the other two Regions lost the 50 kc/s segment they had previously shared with broadcasting. Thus, at 7 Mc/s, the rest of the world finished up with a band only 100 kc/s wide, between 7000 and 7100 kc/s. There was also a strong threat to the arrangement which permitted the Fixed, Mobile and Amateur Services to share the 300 kc/s channel between 3500 and 3800 kc/s. Various proposals aimed to provide a small exclusive band for amateurs, perhaps 50 kc/s wide, found support in several quarters but eventually a proposal that the *status quo* be maintained was accepted.

The pressures that had arisen at the Atlantic City Conference in respect of Top Band (160 metres) were renewed in Geneva twelve years later, particularly from Sweden, but fortunately the British delegation held-out firmly against proposals from several European countries that Atlantic City footnote 145 (which permitted the United Kingdom and seven other administrations to assign up to 200 kc/s between 1605 and 2000 kc/s for the Amateur Service) should be deleted. Later it was discovered that three additional administrations, Denmark (which at Atlantic City had been strongly opposed to the idea of amateurs being allowed to use frequencies in the Maritime Mobile band), Western Germany and Czechoslovakia, had become associated with a new footnote (194) to replace footnote 145.

As mentioned earlier in this chapter, several European Common Market countries had given notice, prior to the opening of the Conference, of their intention to propose that stations in the Fixed Service should be authorised to operate between 29 and 29.7 Mc/s. ARRL representatives and IARU Region I observers made strenuous efforts to persuade the delegations to withdraw this proposal but not until a late stage did they do so. When that happened it meant that the 28–29.7 Mc/s band had been fully preserved as an exclusive amateur allocation on a world-wide basis.

Summing-up the results of the Conference, the leader of the

IARU Region I team of observers wrote in the January 1960 issue of the *RSGB Bulletin*—

“It is proper to record that on every suitable occasion Government delegates spoke in high praise of Amateur Radio and of the work done by amateurs, especially during emergencies. Contributions made by amateurs during the IGY and in the development of the very-high and ultra-high frequencies were also referred to on a number of occasions. The Conference has shown clearly that the Amateur Radio movement is held in high esteem by the vast majority of Member Nations but some are still very much in the dark, while others, who should know better, are inclined to regard the movement with suspicion. A strong IARU Member Society in every country is the only effective way of overcoming ignorance and combating suspicion of Amateur Radio. Food for thought—nearly ninety nations were represented at the Geneva Conference—national Amateur Radio societies exist in less than sixty of them!”

Although 1959 was very much an international year, many events of national importance occurred. For example a decision by the Council to establish a Technical Development programme might have appeared, at first sight, to be rather too ambitious but without doubt the years since the war had brought to light the need for the Society to sponsor the development of equipment specially designed to meet amateur requirements. G. M. C. Stone, G3FZL, R. F. Stevens, G2BVN, D. Deacon, G3BCM, G. C. Fox, G3AEX and J. A. Rouse, G2AHL, were mainly responsible for devising the original programme and for carrying it out with considerable success.

The increasing popularity of the single-sideband mode of transmission was catered for by the publication in the September 1959 and subsequent issues of the *RSGB Bulletin* of a description of a transmitter providing full coverage on six bands with fifty watts peak output power. The author—G. R. B. Thornley, G2DAF—who had already come to the front as an authority on single-sideband techniques, was destined for the next few years to contribute regular articles to the *Bulletin* on the subject, as well as a number of first rate constructional articles which later were used as the basis for specialised RSGB technical publications. Although the ssb mode had been used by amateurs for some years prior to 1959, Thornley's articles were the first to provide full constructional information on designs for use on the bands between 1.8 and 28 Mc/s.

From the time the Post Office decided to permit amateurs to use radio equipment installed in moving vehicles, interest in mobile operation grew each year, until by the summer of 1959 attendances of

up to 1000 people were being recorded at the larger mobile rallies. Commenting on the success of these events in the May 1959 issue of the *RSGB Bulletin* the Editor wrote "If the advent of the Amateur (Sound Mobile) Licence has done nothing else it has brought renewed life to the spirit of friendship which epitomises Amateur Radio. The pages of the Society's journal continue to reflect the success of these rallies which possess, in varying degree, the characteristics of "hamfest", convention, technical seminar and garden party".

The mid-summer months of 1959 will long be remembered by vhf enthusiasts as a period of exceptionally good propagation conditions. On June 12, for example, G3KEQ (Sanderstead, Surrey) worked SM6ANR (Gothenberg, Sweden) to establish a new world record of 651 miles for the 144 Mc/s band. Two days later G5NF (Farnham, Surrey) achieved an excellent two-way telephony contact with I1KDB (Naples) to increase the record distance to 1084 miles. Another Italian station (I1SVS) had contacts on June 14 with G3MEV, G4PS, G6ZP, G6OU, G3NR, and G3HAZ, while G2AHL/M on his way to a Mobile Rally at Longleat in the West Country received strong telephony signals from the Italian station while driving at 50-60 miles an hour. On the same day W6DQJ/6 and K6AXN/6, both operating portable in California on 1296 Mc/s set-up a new world record for that band of 400 miles. A month later, on July 18, the Swiss stations HB1FU (Santes) and HB1JP (Chasseuron) raised the record for 10,000 Mc/s to 139 miles with a contact lasting nearly four hours, when signals were S9 both ways.

When presenting his second report as Honorary Treasurer to the Annual General Meeting on December 11, 1959, Norman Caws was able to announce a surplus for the year ended June 30, 1959 of £1020, compared with a surplus of only £590 the previous year. An increase of more than £1000 in subscription income helped to offset increases in expenditure. Membership had shown a further substantial increase from 9095 to 9540 but unfortunately a serious dispute in the printing industry had led to a reduction in the number of pages in Volume 34 of the *RSGB Bulletin*. During the course of the meeting the President (Dr. Smith-Rose) announced that in a ballot for the office of Executive Vice-President, Mr. Leslie Hill, G8KS, had outvoted the Honorary Treasurer (Mr. Caws) by 927 votes to 664, but a few days after the meeting Hill resigned from the office to which he had been elected because of business commitments. William Radcliffe Metcalfe succeeded Dr. Smith-Rose as President, taking office on January 1, 1960. At the first meeting of the new Council Herbert Bartlett who had been President in 1955, was elected Executive Vice-President. The new President was not very well-known in

Amateur Radio circles until he became a Zonal Representative—one of the first to be elected—on January 1, 1955. His home was then in Flamborough, Yorkshire, from where he frequently read the Society's news bulletin on Sunday mornings. Two years later he became Honorary Treasurer while continuing to act as Zone A representative. Cliffe Metcalfe had many business interests ranging from marine engineering to the operation of a travel agency, but in November 1959 he had been taken ill and there was some doubt whether he would be able to undertake the duties of President. By March 1960 he was well enough to continue his Society activities but his year as President was marred by further illnesses which culminated in his untimely death, on Christmas Day, 1960.

Because of his illness Cliffe Metcalfe was unable to deliver his Presidential Address on January 24, 1960. Instead Dr. Smith-Rose lectured on the Radio Aspects of the IGY. Shortly afterwards Dr. Smith-Rose presided at an informal dinner given by the Council to Captain Charles Booth, C.B.E., and other members of the United Kingdom delegation to the recently-held Geneva Radio Conference. The opportunity was taken to thank Captain Booth and his colleagues for the support they had given to the cause of Amateur Radio during the Conference. On the same day (March 18), the tenth anniversary of the formation of the London Members' Luncheon Club was celebrated at the Bedford Corner Hotel by a gathering of fifty members, many of whom spoke of the good work being done by the Club in furthering international friendship. Two weeks later the second Reunion of the Radio Amateur Old Timers' Association took place at The Horse Shoe Hotel, Tottenham Court Road, London, with RSGB Past President Arthur Milne, G2MI, in the chair, and about seventy other early amateurs present. The Guest of Honour was Air Marshal Sir Raymund Hart, K.B.E., C.B., M.C., who by then had become Director of the Radio Industry Council.

History was made in June when an IARU Region I Division Conference took place at the Grand Hotel, Folkestone. This was the first Conference of its kind held in the United Kingdom and the first to be supported by virtually all of the eighteen subscribing member societies in Europe. Fifteen societies sent delegates and the other three appointed proxies. The Conference was opened by the Mayor of Folkestone (Alderman F. W. Archer, J.P.), and the RSGB was represented by the President (W. R. Metcalfe, G3DQ), the Immediate Past President (Dr. R. L. Smith-Rose), the Executive Vice-President (H. A. Bartlett, G5QA), Arthur Milne, G2MI, R. C. Hills, G3HRH, and C. H. L. Edwards, G8TL. The Honorary Treasurer (Norman Caws, G3BVG) was present as an observer. The

General Secretary was in attendance as Conference Secretary and as Secretary of IARU Region I Division. In addition to donating lapel brooches and badges Mr. Wilfred Butler, G5LJ, presented to Region I Division a perpetual badge of office to be worn by each succeeding Conference Chairman. Harry Laett, HB9GA, who had been elected to that office, was duly invested with the new badge by the Conference Secretary.

The Conference at its final Plenary meeting decided that the annual contributions should be maintained for the next three years at fifty Swiss centimes per licensed member. A Region I Bulletin would be published regularly in future; licence information would be sought from member societies and a co-ordinated calendar of DX contests would be issued. New rules for the Division were approved and the Committee was asked to examine the possibility of organising European Fox Hunting Championships. Altogether more than thirty recommendations were adopted. The end-of-Conference dinner at the Grand Hotel was an outstanding event with the President of the RSGB in the chair and the Mayor and Mayoress of Folkestone as the guests of honour. During the dinner the ARRL/IARU Secretary, Arthur Budlong, W1BUD, made a token presentation to Cliffe Metcalfe of the Radio Club of Argentina Trophy which had been awarded, in accordance with the terms of reference, to the RSGB as being "the Member Society in IARU adjudged to have contributed most to the advancement of the amateur communications art and to international understanding among amateurs during the previous ten years". The token presentation took the form of a photograph of the Trophy (a 65 lb bronze statuette) and an illuminated scroll.* The offer to donate the Trophy was made by the Radio Club of Argentina in 1950.

The fourth post-war National Convention of the RSGB took place at Cambridge and was opened at midday on Friday, September 15, 1960, by the Mayor of Cambridge (Councillor Cecil A. Mole, J.P.). The event was exceptionally well organised and full of interest, but the attendance (less than 250) was a great disappointment to the Convention Committee, led by the Society's Eastern Region Representative (T. A. T. Davies, G2ALL), and to the Council. The Committee had planned a full programme based on an attendance of at least 350 on the Saturday—the fact that this figure was not reached by a big margin indicated a lack of interest on the part of members living within a short distance of Cambridge, notably London and the Midlands. The programme ranged from a civic

* The Trophy was later sent to the Headquarters of the Society in London where it is on perpetual display.

reception at the Guildhall, to a series of visits to the Mullard Radio Observatory where Professor (later Sir) Martin Ryle, F.R.S., (G3CY) personally demonstrated the equipment. Lectures by such eminent scientists as Mr. J. A. Ratcliffe, F.R.S., and Dr. B. H. Briggs, M.A., produced "house-full" notices but attendances at some of the discussion groups were much below expectations. The Convention Dinner was an enjoyable occasion failing only in the matter of attendance. The President, although absent from the opening of the Convention, was able to preside at the dinner.

The growth of the Society continued apace and by the time the Council presented its Annual Report in December they were able to report that in the year to June 30, 1960, membership had exceeded the 10,000 mark for the first time since 1953—the increase amounting to 496 (from 9540 to 10,036) over the previous year.

Attendance at the fourth Radio Hobbies Exhibition, organised by Phil Thorogood, G4KD, on behalf of the Society, and held at the Royal Horticultural Society's Old Hall, London, from November 23–26, 1960, was higher than in 1959 in spite of wet weather on the third day. The exhibition was opened by actor-manager Brian Rix, G2DQU, famous for his Whitehall Theatre farces.

For nearly forty years Horace Freeman had been Advertisement Manager to the Society and on his retirement in August 1960 the Council, in recognition of his distinguished services, conferred upon him the high dignity of Honorary Vice-President. Freeman's association with the Society dated back from the time when he managed the first All-British Wireless Exhibition and Convention at the Royal Horticultural Society's Hall in London from September 30 to October 7, 1922. In 1925 he became responsible for obtaining advertising revenue for the *T and R Bulletin* and he had continued as Advertisement Manager until his retirement. In addition he had organised the first nine post-war Amateur Radio exhibitions at the Royal Hotel. At the Annual General Meeting on December 16, 1960, he was given an illuminated scroll marking his election as an Honorary Vice-President.

Concurrently with an announcement in the *RSGB Bulletin** that Dr. Smith-Rose had been elected President of the International Scientific Radio Union (URSI), came news that Major-General Eric Cole, C.B., C.B.E., Director of Telecommunications, War Office, had accepted nomination for the office of President for 1961. Eric Cole had been a member since 1930 and in the years between 1932 and 1939 his call SU1EC was one of the best-known in the world. In 1935 while operating from Cairo he won the Senior BERU Contest.

* Vol. XXXVI, No. 4.

Four years later he again won the contest, this time from Trans-Jordan where he operated, temporarily, as ZC6EC. Immediately after World War II he operated from Greece and other places in the Mediterranean and Middle East and on his return to the United Kingdom he persuaded the Post Office to issue to him the first U.K. amateur call to include the letter E—G2EC. In 1947 he attended the Atlantic City Conference as Chairman of the British Joint Communications Board (previously the Wireless Telegraphy Board). Thus it came about that one of the world's most distinguished amateurs was destined to lead the Society into the year 1961—a year full of promise.

The sixth decade of the Twentieth Century—from 1951 to 1960—had witnessed important technical trends particularly towards smaller and more compact equipment, as well as in the design of amateur antenna systems. Knowledge of and interest in single-sideband techniques had been enhanced by publication in the *RSGB Bulletin* of authoritative articles by G. R. B. Thornley and others. Participation in International Geophysical Year studies had revealed the existence in the Society of a large number of keen experimenters with enquiring minds. The launching of Sputnik I in November 1957 had heralded a new era of space research and communication. J. P. Hawker, G3VA, through his bi-monthly "Technical Topics" had focused attention on many new techniques and devices. The Society's Technical Committee and more recently the Technical Development Sub-Committee had presented new designs and provided topics for technical lectures and discussions. The Contests Committee had encouraged the development of specialised equipment for specific purposes, and the Mobile Committee had provided a lead in the rapidly growing sphere of interest which followed the introduction of the Mobile Licence.

By the end of 1960 a new generation of radio amateurs—many of them born during or just before World War II—was beginning to shoulder responsibilities within the framework of the Society. Their ideas and their views about Amateur Radio will often differ radically from those whose names appear in this History but, as time passes, it is certain that, like their predecessors, they will have but one aim in mind—the advancement of Amateur Radio—greatest of all scientific hobbies.

Past Presidents of the Society

Alan A. Campbell Swinton, F.R.S.	1913–20
Major John Erskine-Murray, D.Sc.	1921
Admiral of the Fleet Sir Henry Jackson, G.C.B., K.C.V.O., F.R.S., D.Sc.	1922
Professor W. H. Eccles, F.R.S., D.Sc.	1923–24
Sir Oliver Lodge, F.R.S., D.Sc., LL.D.	1925
Brigadier-General Sir Capel Holden, K.C.B., F.R.S.	1926–27
Captain Ian (now Lord) Fraser (of Lonsdale), C.H. (G5SU)	1928
Gerald Marcuse (G2NM)	1929–30
Henry Bevan Swift (G2TI)	1931–33
Arthur Egerton Watts (G6UN)	1934–36
Ernest Dawson Ostermeyer (G5AR)	1937
Arthur Egerton Watts (G6UN)	1938–40
Alfred Duncan Gay (G6NF)	1941–43
Ernest Lett Gardiner, B.Sc. (G6GR)	1944–46
Stanley Karl Lewer, B.Sc. (G6LJ)	1947
Victor Michael Desmond (G5VM)	1948–49
William Arthur Scarr, M.A. (G2WS)	1950–51
Frederick John Henry Charman, B.E.M. (G6CJ)	1952
Leslie Cooper (G5LC)	1953
Arthur Oswald Milne (G2MI)	1954
Herbert Arthur Bartlett (G5QA)	1955
Reginald Harry Hammans (G2IG)	1956
Douglas Alexander Findlay, D.F.C. (G3BZG)	1957
Leonard Eugene Newnham, B.Sc. (G6NZ)	1958
Reginald Leslie Smith-Rose, C.B.E., D.Sc., Ph.D., F.C.G.I.	1959
William Radcliffe Metcalfe (G3DQ)	1960
Major-General Eric Cole, C.B., C.B.E. (G2EC)	1961
Edward George Ingram (GM6IZ)	1962
Norman Caws (G3BVG)	1963
Geoffrey Malcolm Cecil Stone (G3FZL)	1964
Eric William Yeomanson (G3IIR)	1965
Roy Frederick Stevens (G2BVN)	1966

Honorary Members of the Society

Sir William Crookes, O.M., F.R.S.	1914	
Sir Oliver Lodge, F.R.S., D.Sc., LL.D.	1914	President 1925
Senatore Guglielmo Marconi, G.C.V.O., D.Sc., LL.D.	1920	
Ernest Dawson Ostermeyer, G5AR	1938	President 1937
Henry Bevan Swift, G2TI	1939	President 1931–33
Arthur Egerton Watts, G6UN	1941	President 1934–36, 1938–40
Reginald Leslie Smith-Rose, C.B.E., D.Sc., Ph.D., F.C.G.I.	1942	President 1959
Alfred Duncan Gay, G6NF	1944	President 1941–43
Leslie McMichael, G2FG	1945	Founder 1914
Gerald Marcuse, G2NM	1946	President 1929–30
Ernest Lett Gardiner, B.sc., G6GR	1947	President 1944–46
Stanley Karl Lewer, B.sc., G6LJ	1951	President 1947
Victor Michael Desmond, G5VM	1952	President 1948–49
William Arthur Scarr, M.A., G2WS	1953	President 1950–51
Frederick Henry John Charman, B.E.M., G6CJ	1954	President 1952
Rene Klein, G8NK	1954	Founder-Secretary 1914
John Clarricoats, O.B.E., G6CL	1963	Secretary, 1930–63

Vice-Presidents of the Society

Maurice Child		1930
George Courtney Price, T.D.	GW2OP	1938
Walter Butt Sydenham, B.Sc.	G5SY	1947
David Nisbet Corfield, D.L.C (Hons), F.I.E.E.	G5CD	1951
James William Mathews	G6LL	1951
Alec John Henry Watson, F.C.A.	Ex-G2YD	1952
William Herbert Allen, M.B.E.	G2UJ	1959
Frederick George Lambeth	G2AIW	1961
Arthur Oswald Milne	G2MI	1964

Appendix

The following societies and clubs, affiliated at the time to the Wireless Society of London, were signatories to the Petition presented to H.M. Postmaster General on December 29, 1921.

The Halifax Wireless Club
The Wireless Society of Manchester
The Sheffield & District Wireless Society
The Wireless & Experimental Association
The Wireless Society of Blackpool & Fylde District
The Burton-on-Trent Wireless Club
The Wireless Society of Luton
The Leeds and District Amateur Wireless Society
The Wireless Society of Altrincham
The Birmingham Experimental Wireless Club
The Bradford Wireless Society
The Wireless Society of Preston
The North Middlesex Wireless Club
The Wireless Society of Handsworth
The Cardiff & South Wales Wireless Society
The Wireless Society of Wimbledon & District
The North London Wireless Association
The Wireless Society of King's College
The Wireless Society of Ilford
The Wireless Society of Ipswich & District
The Cambridge & District Wireless Society
The Edinburgh & District Radio Society
The Wireless Society of Smethwick
The Wireless Society of York
The Willesden Wireless Society
The Radio Scientific Society
The Woolwich Radio Society
The Wireless Society of Newcastle-on-Tyne
The Wireless Society of Leicestershire
The West London Wireless & Experimental Association

The South Woodford Radio Society
The Dundee & District Amateur Wireless Association
The Folkestone & District Wireless Society
The Southport Wireless Society
The Sussex Wireless Research Society
The Wireless Society of Coventry
The Borough of Tynemouth Y.M.C.A. Amateur Wireless Society
The Portsmouth & District Wireless Association
The Wireless Society of Lincoln
The Wireless Society of Stoke-on-Trent
The Wireless Society of Kensington
The Wireless Society of Wickford, Essex
The Radio Society of Hull & District
The Wireless Society of St. Austell
The Stockport Wireless Society
The Brighton Radio Society
The Wireless Society of Southend-on-Sea
The Wireless Society of Highgate
The Wireless Society of Newark on Trent
The Bradford-on-Avon Wireless Society
The Wireless Society of Epsom
The Wireless Society of Lowestoft & District
The Working Men's College Wireless Club
The Wireless Society of Dartford
Bristol & District Wireless Association
The Wireless Society of Gloucester
The Wireless Society of East Dorsetshire
The Plymouth Wireless & Scientific Society
The Rugby & District Wireless Club
The Wireless Society of Hounslow
The Wireless Society of North Staffordshire
The Wireless Society of Margate & District
The Glevum Radio & Scientific Society
The Guildford & District Wireless Society
The Liverpool Wireless Association

Index

Index

- Abbott, Kenneth, 158, 179
Adams, Frank, Sqdn. Ldr., 194
Adams, H. R., 184
Aero Club de France, 224
Affiliated Societies, 46, 48, 53, 56, 59,
73, 74, 79
Aircraft in distress, 226
Air raid precautions (ARP), 174
Air raids, 191
Airship R.34, 45
Alford, Kenneth, 15, 87, 113, 226
All British Wireless Exhibition, 75
Allen, C. G. (Bert), 199, 207
Allen, T. Palmer, 125, 140, 149, 175
Allen, W. H., 180, 219, 224, 236, 282
Amateur Radio Call Book, 234, 253
Amateur Radio Certificate, 199, 253
Amateur Radio Exhibitions, 6, 176,
205, 216, 221, 234, 242, 244, 249,
256, 261
Amateur Radio Handbook (The), 174,
179, 180, 185, 187
Amateur Radio Research Association,
88
Amateur (Sound) Licence, 239, 244,
253, 265
Amateur television, 163, 227, 238, 245,
253, 254, 257
American Radio Relay League, 135
Amos, Peter, 235
Andrew, J. D., Lt.-Col. Chaplain, 194
Anglo-American Hamfests, 194
Angwin, Col. Sir Stanley, 205, 212
Annual general meetings, 35, 38, 46,
56, 73, 82, 115, 119, 120, 143, 149,
170, 185, 192, 194, 203, 221, 232,
236, 242, 249, 257, 262, 266, 280, 289
Armstrong, Edwin H., Major, 166
Arthur Watts Trophy, 219
Artificial aerial licences, 195, 198
Ashbridge, (Sir) Noel, 61
Atlantic City Radio Conference, 209
Auchtelonie, Ian, 220, 231, 240
Aughtie, Frank, 140
Aurora effect, 219
Back-scatter, 282
Baden-Powell, Peter, Lord, 272
Bagley, R., 235
Bailey, George W., 210
Bailey, Harold, 104
Baker, D. P., 144
Ballingall, L. A., F/Sgt., 180
Banbury, C. G., 254
Band occupancy checks, 154, 170
Band plan, 200, 219, 225, 245
Bangay, R. D., 16
Barnet, H., 50
Barrow-in-Furness Wireless Club, 15,
20, 50
Bartholomew, W. E., 194
Bartlett, Herbert A., 229, 240, 247,
256, 258, 263, 286
Batchelors' all, 194
Batement, W. A. S., 107
Beacon stations, 270
Bedford, Duke of, 274
Bell, Frank, 101, 106, 118
Bell, Graham, Dr., 1
"Bending" of radio waves, 35
Bevan Swift Memorial Fund, 161, 220
Binyon, Basil, 33, 51
Birmingham (Amateur) Wireless
Association, 15, 20
Bishop, Harold (Sir), 118, 274
Blake, G. G., 1, 15, 33, 51, 68, 160
Blitzkreig, 184, 185, 186
Booth, Charles, Capt., 283, 287
Borrett, William C., Major, 105
Bouverie, Stuart, Hon., 29
Boy-Scout Jamboree-on-the-Air, 272
Boys' Own Paper, 15
Bradley, Clemence (Pim), 76
Braaten, Arthur, 164, 185
Bragg, Lawrence, Sir, 274
Brand, H. F., 26
Branley, Prof., 2
Briggs, B. H., Dr., 289
Bright, Charles (Sir), 29, 49
Bristol Convention 1954, 255
Bristol Trophy, 260
British Amateur Television Club, 228,
238

- British-American Radio Amateur (Duration DX-ers) Club, 194
 British Association, 29
 British Broadcasting Company, 61, 76
 B.E.R.U. Contests, 137, 152, 207
 B.E.R.U. Trophy, 152
 British Empire Radio Union, 119, 124, 129, 133, 143
 British Empire Radio Week, 137, 152
 British Red Cross Society, 265
 British Standards Institution, 114
 British Thompson Houston Co., 47
 British Wireless Relay League, 79, 82, 85
 Broadbent, R. J. C., 273
 Broadcasting Committee (1923), 81
 Broadcasts from 2LO, 116, 166
 Broadwood, L. A. T., 51
 Brookes, M. A., 180
 Brown, Frank J., 40, 96
 Brown, S. G., 29
 Brussels Exhibition Visit, 166
 Brymer, J. A., 189
 Buckwell, Max, 166
 Budlong, A. L., 210, 225, 283, 288
 "Bulletin Story", 230
 Burbury, H. H. T., 9
 Burndept, 113
 Burne, W. R., 66, 74, 85, 88
 Burnham, W. W., 56, 63, 67
 Butler, Wilfred J., 255, 279, 288
- Cairo International War-time Conventionettes, 194
 Cairo Radio Conference, 167, 170, 171
 Call-signs, 14, 50, 55, 100, 128
 Calls heard, 110
 Cambridge Convention, 288
 Carlow, Viscount, 193
 Carnt, P. S., 265
 Carter, A. F., 13
 Catt, J. E., 267
 Causton & Son Ltd., Sir Joseph, 189
 Caws, Norman, 277, 286, 287
 Censorship, 39, 182, 186
 Chain of office, Presidents', 255
 Chambers, Eric, 255
 Charman, F. J. H., 118, 169, 178, 201, 236, 241, 255, 269
 Child, Maurice, 16, 51, 62, 68, 85, 96, 116, 118
 Chisholm, Douglas, 121, 137, 149, 167
 Clark, H. A. M., 118, 166, 169, 178, 192, 204, 228, 233, 264
 Clarke, E. Russell, 29, 33
 Clarricoats, John, 118, 124, 129, 135, 141, 143, 144, 146, 147, 148, 154, 155, 156, 157, 166, 167, 168, 172, 178, 184, 191, 192, 194, 206, 210, Clarricoats, John—*continued*
 220, 224, 226, 228, 229, 234, 241, 245, 246, 247, 255, 257, 258, 259, 264, 272, 274, 278, 279, 283
 Cleartron CT25X valve, 143
 Clinker, R. C., 51
 Cockle, A., 254
 Cocks, A. G., 37
 Cole, Eric S., Lt. (later Major-General), 166, 289
 Colour Television, 265, 279
 Coming-of-age of the Society (1934), 164, 166
 Compulsory Military Service Act, 177
 Constitution of the Society, 27, 78, 82, 217, 234, 239, 241
 Contact Bureau, 125, 141, 146, 159, 163
 Conventions, 117, 124, 135, 141, 148, 156, 162, 187, 220, 235, 255, 288
 Cook, 1
 Cooper, J. A. J., 108, 118, 124, 126, 143
 Cooper, Leslie, 240, 243, 247, 248
 Copyright, purchase of, 204
 Coronation relay, 247
 Corfield, D. N., 166, 178, 216, 228, 233, 238
 Corry, Nell, 148, 184, 194
 Corsham, W. E., 66, 67, 85, 89, 111, 120, 226
 Coupland, L. J., 181
 "Courageous", H.M.S., 158, 179
 Coursey, Philip R., 15, 39, 51, 53, 62, 63, 66, 68, 69, 80, 82, 85, 105
 Courts-martial, 37
 Craig, W. N., 177
 Crampton, W. J., 107
 Cranwell meeting, 229
 Crookes, William, Sir, 29
 Croydon Aerodrome, 56, 83
 Crystal control, 138
 Crystal Palace & District Radio Society, 274
 Crystal Palace tests, 160
 Curnow, John, 219, 230
- Dabbs, Ron, 194
 Dalmijn, W. J. L., 246, 249, 278, 283
 Danish National Amateur Radio Society (EDR) Silver Jubilee, 241
 Davies, A. C., 88
 Davies, Don, 255
 Davies, T. A. T., 288
 Davis, Basil, 143
 Davis, Norman, 184
 Deacon, David, 285
 Dedman, E. A., 138, 140, 143, 165, 166, 249
 Deloy, Leon, 68, 70, 91, 92, 93, 94, 100

- Delves-Broughton, V. W., 26
 Dennis, Alan, 272
 Dennis, M. J. C. (Col.), 11, 15
 Denny, Mark, 20
 Dent, H. B., 15
 Dent, L. V., 255
 Derby and District Radio Society, 20
 Derby Wireless Club, 15, 20
 Desmond, Victor M., 137, 152, 167, 184, 214, 220, 230, 237
 Desmond Trophies (420 Mc/s), 214, 218
 DeSoto, Clinton B., 92, 94, 105
 Directional aerials, 164, 166
Directory of Experimental Wireless Stations in the United Kingdom Licensed by the Postmaster General, 15, 55
 District Representatives' Conference, 201
 Dixon, Grant, 265
 Dixon, Leslie (Electradix), 112
 Dolman, E. R., 181
 Dorling, James, W., Capt. (later Vice-Admiral), 157, 256, 261
 Downing, Desmond, Dr., 261
 Drudge-Coats, Jack, 137
 Drugs, requests for rare, 252
 Dublin Wireless Club, 20
 Donisthorpe, H. de A., Capt., 51
 Duddell, William, 29
 Dunn, Arthur, Lt.-Col., 244, 265
 Dunn, Barbara M., 147
 Dunn, W. E., Wing Comdr., 229
 Durrant, R. F., Lt., 45, 110
 Dutch (PCGG) concerts, 52, 56
 DX Listeners' Century Award, 271

 "Early Birds" (The), 180, 181
 East Coast floods, 243
 Earth satellites, 274
 Eccles, W. H., Dr., 4, 29, 40, 44, 78, 93, 99, 113, 119
 Eckersley, Peter P., Capt., 60, 87
 Edgware & District Radio Society, 268
 Edison, Thomas, 1, 9
 Editor, *T & R Bulletin*, 168
 Edwards, C. H. L., 186, 188, 192, 204, 244, 287
 Edwards, Douglas A. G., 271, 272
 Edwards, Ness, Rt. Hon. (Postmaster General), 228, 234
 Edwards, Norman, 105
 Eiffel Tower Station (FL), 12, 26, 31, 39, 52, 59
Electrician, The, 4, 33
 Electronic scrap, 202
 "Elizabethian" Transmitter, 248

 Ellis, Kenneth, Major, 194, 207, 270, 277
 Empire DX Certificate, 207
 Empire link stations, 136
English Mechanic and World of Science, 11, 12, 15, 17, 21, 25, 33
 Erskine-Murray, John, Dr., 29, 33, 38, 47, 53, 55, 73
 Esperanto, 106
 Etherington, Jack, 229
 Evans, K. Morton, Lt.-Col., 182
 Evans, Trevor, 152
 Exeter, G. A., 118, 124
 Exemptions, Morse and Technical Tests, 187, 276
Experimental Wireless and the Wireless Engineer, 108
 Extraordinary and special general meetings, 239, 240, 241, 275

 Faraday, Michael, 1
 Farnborough meeting, 183
 Faulkner, Harry, 248, 256
 Fenton, Clifford, 244
 Fenton, H. M., 180
 Fergus, A. M. Houston, 266
 Ferrié, Le Commandant, 29, 32, 104
 Festival of Britain, 230, 235
 Financial Reports, 195, 196, 203, 217, 221, 236, 262, 286
 Findlay, Douglas A., 235, 240, 268, 272, 274
 First Class Operators' Club, 267
 Fisk, Ernest, Sir, 201
 Five Ack-R Memorial Trophy, 271
 Fleming, J. Ambrose, Sir, 4, 8, 29, 35, 39, 44, 65
 Fletcher, Frank, 226
 Florence Restaurant, 156
 Flowers, V. J., 180
 "Fluttering", 182
 Flying bombs (V1) and rockets (V2), 191, 194
 Fogarty, L. F., 17, 26, 82, 116
 Folkestone Amateurs, 166, 167
 Food parcels, 214
 Forsyth, Austin, 169, 220
 Fortescue, C. L., Prof., 190
 Fox, G. C., 285
 "Fox Hunting", 248, 288
 Fraser, Ian, Capt. (later Lord Fraser of Lonsdale), 78, 87, 96, 107, 116, 129, 131, 139, 242
 Fraser, Leslie, 235
 Freeman, Horace, 75, 206, 289
 French National Amateur Radio Society (REF), 224
 Frequency Advisory Committee, 373

- Frequency allocations, 42, 106, 127, 138, 153, 171, 211, 219, 237, 284
 Frequency modulation, 166, 216, 238
 Fry, W. J., 26, 48
 Fuller, Lawrence, 125
 Furby, D. W., 270
 Fusion between Society and T. & R. Section, 119, 123

 Gadsden, May, 149, 191, 206, 257, 271
 Gamage, A. W., Ltd., 12, 14, 23, 26
 Gardiner, Ernest L., 187, 192, 194
 Garnett, F. W., 201
 Garratt, Gerald, 259
 Gatland, W., 50
 Gay, Alfred D., 107, 118, 160, 166, 168, 185, 190, 193, 200
 Gee, Arthur, Dr., 244
 General Electric Company Ltd., 112, 141
 Geneva Radio Conference, 273, 278
 German National Amateur Radio Society (DARC) Convention 1953, 248
 Gernsbeck, Hugo, 183
 Gilding, Alec, Wing Comdr., 229
 Glider tests, 166
 Godley, Paul, 64, 67
 Goode, C. S., F/Lt., 180
 Goldup, T. E., 280
 Government Surplus, 189, 202
 Goyder, Cecil, 101, 118, 120, 128, 140
 Gravesend Group, 263
 Gregory, G. F., 118
 Grid modulation, high efficiency, 238
 Grist, E. B., 261
 Grubb, R., 228
 Gross, Gerard C., 249, 283
 Guard Bands, 127, 155, 162, 195
Guide to Amateur Radio, A, 155, 169
 Gunnell, L. M., 180

 Halifax Wireless Club, 51
 Hamilton, Jack, 158, 179
 Hamilton, Noel H., 15, 68
 Hamilton-Rice Expedition, 103
 Hammans, R. H., 194, 234, 245, 246, 249, 262, 263, 264
 Hammond, V. H., 180
 Hampson, H. J. B., Capt., 118, 120, 124, 133
 Handy, F. E., 175
 Hanley E.A./D.A., 97
 Hansard, A. G., 26
 Harris, Percy W., 82
 Hart Raymund, Air Marshal Sir, 279, 287
 Hatton Garden (107), 24, 26, 30
 Hawker, J. Pat, 227, 290

 Haylock, Dennis, Major, 270
 Headquarters Building Fund, 272
 Headquarters' station, 149, 201, 234
 Heard the British Empire Certificate (HBE), 167
 Heather, H., 50
 Heayberd, 112
 Heightman, D. W., 201, 206, 263
 "Helping Hand" ("The"), 169
 Herdman, Lyell, 228
 Hertz, Henrich, 2
 Hibberd, John R., 82, 130
 Hicks-Arnold, Frank, 260
 Higginson, Tom, 271
 Hill, Leslie, 154
 Hill, S. Leslie, 180, 286
 Hills, R. C., 287
 Hillesdey, H., 12
 Hinderlich, Arthur, 124, 140
 Hippersley, B., Colonel, 15, 29, 99
 H.R.H. The Duke of Edinburgh, K.G., Patron, 241, 269
 H.R.H. The Prince of Wales, K.G., Patron, 76, 136, 155, 164, 167 (King Edward VIII)
 Hissing phenomena, 167, 263
 Hogg, F. L., 87, 94, 99, 105
 Holden, Capel, Brig.-Gen., Sir, 99, 115, 116, 124
 Holmes, Robert, 207
 Honorary Members, 2, 29, 83, 186, 190, 193, 196, 200, 233, 237, 248, 255
 Hope-Jones, Frank, 25, 46, 54, 79, 202
 Houston Fergus Trophy, 267
 Howe, G. Osborn, Prof., 29, 35, 40
 Howard, Ivan, 228
 Howgrave, Graham, R. P., 15
 Hughes, D. E., Prof., 2
 Hum, Jack, 159, 236, 240, 258, 266, 278
 Hunter, John, 167, 177, 194
 Huntoon, John, 283

 IARU constitution, 211, 237
 IARU observers, 154, 172, 210, 237, 265, 283
 IARU Region I Bulletin, 288
 IARU Region I Conferences, 246, 264, 278, 287
 IARU Region I Division, 213, 225, 237, 246, 252, 262
 IARU Region I VHF Committee, 279
 Incorporation (Certificate of), 121
 Ingram, Mrs C. E., 15
 Institution of Electrical Engineers, 265
 Inter-departmental Committee, 14, 40, 46

- International Amateur Radio Union (IARU), 97, 104, 105, 110, 172, 210, 212, 220, 224, 237, 245, 246, 285
 International Co-operation Year (ICY), 270
 International Geophysical Year (IGY), 269, 275, 287, 290
 International Radio Conferences, 126, 152, 170, 208, 264, 273, 282, 283
 International Radio Consultative Committee (CCIR), 152, 248
 International Scientific Radio Union (URSI), 80, 289
 International Telegraph Conference (1903), 5
 International VHF/UHF Convention, 259
 International 28 Mc/s Contest, 167
 Intruder watch, 215, 252, 270

 Jackson, Henry, Sir, Admiral of the Fleet, 3, 65, 73, 93
 Jamblin, Cecil A., 118, 120, 129
 Jardine, Clem, 226
 Jefferies, Stanton, 76
 Jennison, Roger B., Dr., 258
 Jessop, George, 160
 Joint Committee (RSGB-Wireless League), 143
 Jones, Harold, 238
 Jones, W., 201
Journal of the Radio Society of Great Britain, 85

 Kay, J. Douglas, 275
 Kempton, Will H., 234
 "Khaki and Blue", 180
 Kidd, A. H., 97
 Kilburn, D., 87
 King, F. A., 129
 Kingsley Hotel, 192
 Kinnman, Per Anders, Capt. (Lt. Col.), 246, 249, 278, 283
 Kirby Laythorpe meetings, 184
 Kirk, J. M., 183, 207
 Kirke, H. L., 61
 Kitchen, E. W., 26
 Klein, Rene, 15, 17, 21, 26, 45, 248, 255
 Knight, F. C., Dr., 25
 Knight, Lorin, 254
 Knott, Herbert, 234

 Laett, Harry A., 246, 249, 288
 Laker, E. J., 207
 Lambda Investment Company, 272
 Lambeth, Fred, 261, 262, 278, 279
 Lamm, Curt, Dr., 118, 241
 Lapel badge, 114, 189
 Lauber, Hans, 262

 Lee, A. T., 15, 21
 Leeuw, C. de, 262
 Legge, D. J. G., 180
 Leicestershire Radio Society, 44
 Le Queux, William, 50
 Letter Budgets (Contact Bureau), 143
 Lewer, Stanley K., 105, 203, 210, 225, 234, 236
 Licences determined, 43, 97, 178, 179
 Licence regulations/facilities, 14, 18, 47, 97, 110, 139, 162, 176, 190, 195, 198, 199, 200, 238, 239, 261, 266, 275
 Licences reissued, 50, 97, 199
 Lickfeld, Karl, Dr., 262, 279
 Lindsay, I
 Littley, Howard, 14, 15, 20
 Liverpool and District Amateur Wireless Association, 20
 Lloyd, W. H., Colonel, 21
 Lodge, Oliver, Sir, 1, 2, 29, 36, 75, 83, 108, 164
 Log Book and Diary, 128
 Log book entries, 261, 276
 London Districts' meeting, 226
 London Members' Luncheon Club, 226, 287
 London U.H.F. Group, 245, 259, 263, 269
 London Wireless Club, 14, 17
 Long, H. J., 201
 Loring, F. G., Commander, 29, 49, 53
 Low, A. M., Prof., 36
 Loyal relays, 136, 155
 Lucas, H. J., 33
 Luhrs, Otfried, 278, 283

 McConnell, Hugh, 240
 MacIlwaine David, 242
 Maclarty, B. N., 60
 MacLurcan, Charles D., 102
 McMichael, Leslie, 11, 15, 17, 23, 26, 45, 50, 82, 194, 196, 200, 235
 Macpherson-Grant, John, Sir, 29
 Madrid Radio Conference, 152
 Mainprise, B. W. F., 229
 Manchester Convention 1949, 220
 Manchester Conventionette 1928, 143
 Manchester Wireless Society, 50, 69, 79, 85
 Marchant, E. W., Dr., 29, 38
 Marconi, G., Senatore, 2, 3, 4, 43, 65, 93, 164
Marconigraph (The), 15
 Marconi Company, 47, 52, 59
 Marcuse, Gerald, 87, 89, 91, 96, 98, 103, 104, 105, 107, 110, 116, 117, 118, 121, 129, 130, 134, 138, 145, 164, 187, 194
 Marris, R. Q., 181

- Marsh, G. R., 13, 15
 Marsh, W. E., 194
 Marshall, A. W., 12
 Martin, Eric, 231
 Mason, G. F., 180
 Matthews, Arnold, 244
R. F. Mathews, s.s., 10
 Maxim, Hirim Percy, 93, 98, 104, 126, 164, 167
 Mathews, James W., 118, 137, 140, 142, 143, 144, 146, 166, 178, 228, 233
 Matthews, W. H., 232
 Maxwell, Clerk, 1
 Mayer, Fred, 105, 109
 Megaw, Eric, Dr., 140, 159
 Megson, Albert, 10, 15, 50
 Melba Concert, 52
 Membership Certificate, 134
 Membership figures, 30, 33, 36, 116, 149, 155, 170, 183, 185, 187, 190, 191, 195, 196, 201, 203, 206, 217, 221, 236, 242, 249, 257, 262, 264, 275, 280, 286, 289
 Metcalfe, W. R., 277, 278, 286
 Meters for Government use, 188
Microwave Technique, 208
 Miles, Frederick W., 137, 152
Milford Viscount, 227
 Milne, Arthur O., 118, 121, 157, 178, 181, 194, 198, 207, 240, 244, 245, 246, 249, 251, 256, 264, 283, 287
 Mitchell, L. R., 273
 Mobile Column, 253, 261
 Mobile licence, 253
 Mobile operation, 231, 261, 285
 Mobile rallies, 260, 274, 286
Model Engineer (The), 12, 15, 17
 "Month on the Air", 167, 198
 Morgan, A. P., 18
 Morris, R., 234
 Morse, 1
 Mortley Sprague, 112
 Moyle, John, 283
 Mullard Award, 280
 Mullard Ltd., 112, 280
 Mullard Radio Observatory, 289
 Mumford, Albert (Sir), 212
 Murray, A. V. L., Capt., 157
 Mussche, J., 279
 Myler, Mrs M. K. N., 201
 Mynett, A. L., 270

 National Field Day, 158
 National Radio Show, 256, 274
Nature, 33
 Neill, Frank, 118, 137
 Newcastle-on-Tyne Wireless Club, 20

 Newnham, L. E., 184, 274, 278, 279, 282, 283
 New Ruskin House, 191
 News Bulletin Service, 201, 260
 Newton, Charles, 218, 270
 Nickless, J. E., 12, 15, 87, 129
 Noden, James, W., 119
 Norman, Henry, Sir, 29, 75
 Norman Keith Adams Prize, 193
 Northants and District Wireless Club, 20
 North Middlesex Wireless Club, 44
 Nutting, C. W., Air Commodore, 173

 O'Brien, Basil, 240
 Official Regional Meetings, 221, 229, 234, 235, 242
 Old, Harold B., 137, 147, 152
 Old Timers' dinner, 220
 Onesti, Prof., 2
 Orr-Ewing, Ian, Sir, 234, 252
 Ostermeyer E. Dawson, 105, 118, 134, 147, 167, 178, 200, 270
 Oxford and District Radio Society, 261

 Page, H. Cecil, 140, 159, 177
 Paper rationing, 179, 189, 204
 Parnell, Leslie, 194
 Parr, Geoffrey, 184
 Partridge Jack 87, 88, 93, 94, 96
 Patron of the Society, 77, 136, 164, 241, 269
 Pearl Harbour, 188
 Pennell, Peter, 207
 Petersen, F. R., 244
 Petition to Postmaster General. December 29, 1921, 56, 196
 Phillips, Frank, 64, 65, 68
 Phonetic code, 153
 Pike, F., 218
 Pinoli Hamfests, 125, 140
 Plion, Pierre, 262
 Pocock, Hugh S., 6, 15, 54, 67, 82, 85, 89, 90, 98, 99, 105, 107, 157, 249
 Poeton, Roy, 255
 Popov, 3
 Pollard, J., 180
 Pope, H. W., 15
 Portable stations, 163
 Post-war licence policy, 195, 198
 Powditch, H. J., 149, 159
 Preece, William, Sir, 1, 3
 Prefixes, 100, 121, 163
 Presidential addresses, 31, 36, 139, 152, 168, 185, 193, 204, 214, 223, 236, 242, 252, 258, 263, 268, 276, 281
 Price, Donald, 137, 160, 166
 Price, George Courtenay, 159
 Prisoners-of-War Fund, 186, 192, 204

- Proceedings of the RSGB (The)*, 204, 216
 Provincial District Meetings, 147, 156, 170, 184, 200, 201
 Pulse modulation, 238
- Q code, 153
 QSL managers, 121
- Radar, R.D.F., Radio-location. 182, 183, 200
 Radio altimeters, 228
 Radio Amateur Emergency Network (RAEN), 244, 249, 265
 Radio Amateur Old Timers' Association, 194, 279, 287
 Radio Amateurs' Examination. 192, 206
 Radio Astronomy, 216, 258, 263
 Radio Club of America, 66
 Radio Club of Argentina Trophy, 288
Radio Handbook Supplement, 188
 Radio Hobbies Exhibition, 274, 279, 289
 Radio medal, 77, 80
 Radio Research Station/Board, 110, 160, 282
 Radio Security Service, 181
 Radio Society of Great Britain (change of name), 77, 85, 122, 241
 Radio Transmitters' Society, 78, 87, 96
 Ratcliffe, J. A., 289
 Reciprocal licensing, 273
 Redpath, E., 16
 Reeves, J. H., 99
 Regional Representatives, 201, 232, 233, 239
 Reid, Alex, 210, 283
 Reid, Loyal S., 105
 Reinartz, John, 91, 92
 Reith, John, Sir (later Lord), 79, 164
 Repton School, 15
 Reseau Belge, 166
 Richards, David, 115
 Ridley, W. J., 244
 Rix, Brian, 289
 Robb, Frank A., 207
 Rodman, F., 140, 142
 Rogers, Bernard, 279
 Rose, Fred, 238
 ROTAB (Royal Order of Transatlantic Brasspounders) Trophy, 112, 119, 140
 Round, H. J., Capt., 88
 Rouse, John A., 242, 253, 261, 270, 274, 278, 285
 Rowellan, Lord, 272
 Royal Air Force Amateur Radio Society, 229, 276, 279
 Royal Air Force Civilian Wireless Reserve, 172, 177, 193, 279
 Royal Flying Corps, 38
 Royal Garden Party, 247
 Royal Naval Wireless Auxiliary Reserve (Royal Naval Volunteer (Wireless) Reserve), 157, 177, 179, 207
 Royal Observer Corps, 201
 Royal Society of Arts, 48
 Royal Wedding, 205
 Royle, Jeremy, 254, 257
 Royle, Ralph, 99, 104, 109, 118, 129, 143, 254, 257
RSGB Bulletin, 189, 229, 242
RSGB in Wartime (The), 179
 RSGB Telephony Contest, 271
 RST Code, 164
 Runeckles, Cecil, 135
 Russell, W. E., 207
 Rutherford, Ernest, Prof., 3
 Ryan, Hugh, 95, 104, 118
 Ryle, Martin, Prof. (Sir), 216, 289
- St. John, Harold, Wing Comdr., 173, 184
 St. Johnston, T. A., 118, 159
 Salomons, David, Sir, 29
 Samuel, Marcus, 105, 140
 Sandhurst, Lord, 181, 184, 221
 Saunders, Leslie, Commander, 158
 Scarr, William A., 154, 192, 216, 218, 223, 224, 226, 228, 229, 255, 264
 Schemes of representation, 119, 141, 167, 201, 226
 Schnell, Fred, 69, 70, 90, 91, 92, 93
 Schools Radio Society (Section), 82
 Science Museum, London, 47, 259
 Scientific Observations Committee, 216
 Scott-Farnie, G. R., 177
 Secretan Kenyon, 113
 Secretary-General I.T.U., 283
 Secretary (Permanent) RSGB, 156
 Service radio trades, 195, 196
Service Valve Equivalents, 208
 Seymour, A. E., 229
 Scottish National Amateur Radio Exhibition, 235
 Shackleton, Ernest, Capt., 186, 205
 Shanks, Tom, 194
 Sharman, A. W., 9
 Sharp, C. A., 231
 Shaw, W. J., 12, 15, 26
 Sheffield and District Wireless Society, 44
 Shelford and District Short Wave Society, 227
 Short, 218
 Shrimpton, Neville, 137

- Simmonds, Ernest J., 87, 91, 94, 101, 102, 105, 107, 109, 116, 120, 124, 128, 134, 140, 142, 143, 147, 164, 165, 189
 Single sideband convention, 249
 Single sideband transmissions, 214, 234, 238, 256, 261, 263, 284
 Sleeper, M. B., 51, 62, 78
 Smith, Alan, 137
 Smith, H. S., 15
 Smith, J. N., 201
 Smith-Rose, R. L., Dr., 82, 116, 190, 200, 216, 259, 263, 269, 274, 281, 287
 Society Headquarters, 149, 191, 271
 Society Station—5WS (Wandsworth), 68
 "Soliloques from the Shack", 161
 Southern Radio, 112
 Spark prohibited, 97
 Spence, R. D., 66
 Spencer, George, 194
 Spragg, J., 218, 219
 Sputniks I and II, 275
 Spying suspects, 36
 Stacey, H. W., 201
 Standard frequency transmissions, 139
 Standley, R. W., 184
 Stanley, J. F., 99
 Stanley, Lord (Derby, Lord), Postmaster General, 5, 14
 Stanley, Rupert, 16
 Stevens, Roy F., 181, 285
 Stewart, L. H., Wing Comdr, 172
 Steinheil, I
 Stollery, F. L., 137
 Stone, G. M. S., 218, 270, 275, 285
 Subscription rates, 22, 121, 123, 217, 226, 232, 239, 240, 241, 257, 272, 275
 Sutton Coldfield Scout Jubilee, 272
 Swedish National Amateur Radio Society (SSA) Silver Jubilee, 224
 Swift, Henry Bevan, 31, 107, 108, 116, 118, 141, 143, 149, 151, 157, 161, 168, 187, 200, 217
 Swinton, Alan A. Campbell, 2, 3, 26, 31, 33, 35, 36, 38, 40, 46, 65, 73

T and R Bulletin, 108, 189
 T and R Committee, 124, 143, 149
 Taggart, John Scott, 15, 47
 Talley, David, Lt.-Col., 194
 Targett, Cyril, 125
 Taylor, James, 271
 Technical Committee, 165, 215, 245
 Technical development programme, 285
 Television interference (TVI), 169, 214
 Television service, 169
 Television Society, 184
 Thames Valley Amateur Radio Transmitters' Society, 242
 The Amateur Position (1919-1921), 43
 Theakston, T. R., 188
 Thermionic Valve, 9
 Thomas, Geoffrey W., 129, 134, 139, 140, 143, 144, 145, 161, 166
 Thomas, L. Howard, 129, 160, 161
 Thompson, Sylvanus, Prof., 9, 29
 Thornley, G. R. B., 285, 290
 Thorogood, P. A., 200, 245, 259, 266, 274, 289
 Thurlow, Richard, 229
 Tilsley, Charles H., 11
 Three Towns Wireless Club (Plymouth), 44
 Tilton, Edward, 201, 206
 Time signals, 25, 45
 Tolerances (Guard bands), 127, 155, 162, 195, 199
 Tonkin, Gilbert W., 11, 15
 Top Band, 153, 159, 172, 199, 210, 213, 247, 277, 284
 Townsend, F. T. G., 107
 Townsend, Stephen, 152
 Transatlantic tests, 51, 62, 64, 67, 68, 91, 111
 Transistors, 254
 Transmitter and Relay Section, 81, 85, 119
Transmitting Licence, (The), 208
 Transoceanic licences, 110, 114
 Trier, F. M., 181
 Trowbridge, I
 Tryon, Major, Postmaster General, 177
 Tucker, J. B., 20, 21, 37
 Tunney, R. G. B., 219
Two Hundred Metres and Down, 92, 94, 105
 Tyndall, John, 234
 Tyre, Maxwell, 177

 "Uncle Tom" (L. H. Thomas), 161
 Union Belge des Amateurs Emetteurs (UBA), 212
 United Nations, 213

 Vanmuyesen Rene, 262
 Vanstone, Stanley, 226
 Varney, Louis, 248, 273
 VHF achievements, 286
 VHF Band Plans, 245
 VHF Conventions, 245
 VHF Managers' Meetings, 261, 278
 VHF Pilot Station, 233
 Vice-Presidents, 11, 29, 233, 282, 289
 Voller, Geoff, 259

- Wale, William, 135
 Wade, W. R., 63
 Wadsworth, W. E., 183
 Wagner, Edgar, 231
 Walker, H. S., 15, 87
 Walker, J. N., 177
 Wallace, B. S. T., 12
 Walters, Douglas, 159, 160, 163, 166, 253
 Wanstead, Woodford and District Radio Club, 273
 Warner, K. B., 63, 67, 90, 93, 104, 106, 126, 153, 170, 188, 210, 217
 War-time Convention, 187
 War-time Headquarters (1939-1943), 178
 Washington Radio Conference, 126, 138
 Watson, Alec, 217, 221, 235, 236, 237
 Watson-Watt, Robert A., Sir, 160
 Watts, Arthur E., 118, 133, 137, 149, 151, 153, 157, 162, 167, 170, 172, 178, 181, 185, 186, 200, 207, 210
 Watts, E. J., 189
 Webster, George, 220
 Westminster City School, 23, 25
 Weston, R., 229
 Wheatstone, 1
 Whitfield, H. H., 66, 87
 Whitworth Trophy, 272
 Whyte, H. A. M., 177
 Wightman, J. H., 181
 Wilkins, Harold V., 137, 178
 Wilkins, Leslie, 137
 Wilkinson, M., 137
 Willetts, H., 181
 Williams, C. G., 88
 Willis, D. F., 244
 Wilson, Ernest, Prof., 29, 40, 82, 115
 Wilson, Ron, 244
 Winkler, W., 85
 Wireless and Experimental Association, 44
 Wireless Exhibition, 47
 Wireless Institute of Australia, 214
 Wireless Society of London, 23-29, 45
 Wireless Telegraphy Acts (Bills), 5, 47, 113, 239
Wireless World, 15, 18, 19, 26, 31, 33, 36, 37, 39, 43, 45, 48, 50, 53, 54, 62, 63, 67, 73, 75, 89, 98, 108, 114, 187
 Wissenden, J. W., 96, 111, 121
 Woburn Abbey, Mobile Rally, 274
 Woodhead, H., 234
Work, 15, 17
 World Scout Jamboree, 272
 Wortley-Talbot, John, Dr., 143
 Writtle Experimental Station, 60
 Worked the British Empire Certificate (WBE), 135
 Wyllie, Jack, 118
 Wynn, R. W., 181
 Yatesbury meetings, 184
 Yerbury, H. E., 49
 Yugoslav National Amateur Radio Society (SRJ) Convention 1954, 256
 Zonal Representation on Council, 241, 257
 21 Mc/s Band, 211, 237, 238
 50 Mc/s Band, 203, 206
 52.5 Mc/s operation, 275
 60 Mc/s Band, 160, 171, 211, 217, 219
 70 Mc/s Band, 266
 144 Mc/s Band, 211, 216, 217, 245, 286
 420 Mc/s Band, 211, 216, 218, 228, 238
 1215 Mc/s Band, 211, 216, 219, 261, 286
 2350 Mc/s Band, 211, 216, 219
 5650 Mc/s Band, 211
 10,000 Mc/s Band, 211, 286



