
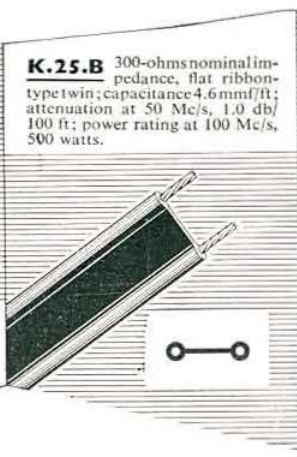



R.S.G.B.



BULLETIN

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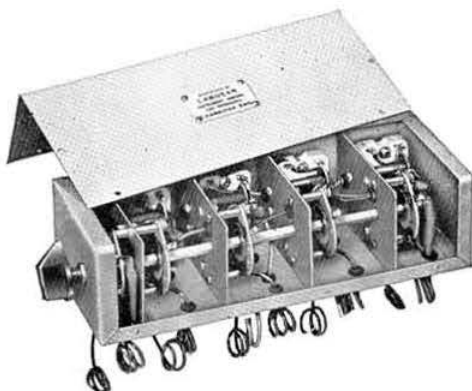
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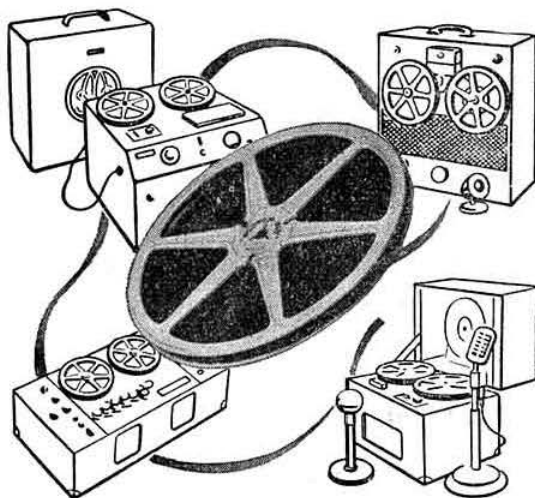


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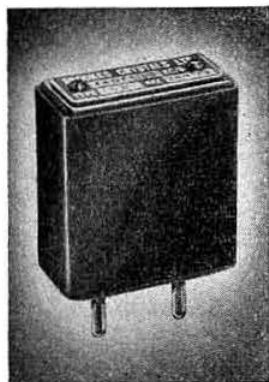
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R.S.G.B. BULLETIN, July, 1953.

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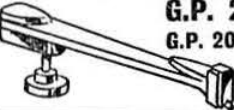



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* * *

What is perhaps more serious is the loss of those 85 kc/s. This, following the loss of 50 kc/s at the “high” end of 14 Mc/s last year, may justifiably prompt the thought: “Where is this going to stop?” The feeling of loss will not be wholly allayed by the reminder that there are considerable compensating gains at 21 Mc/s and 420 Mc/s—bands which we never had before.

The answer, in the case of the Top Band, is that the British amateur now holds no prescriptive right to be there, and is in fact fortunate to retain as much of the band as he has. He is in exclusive company, since none of the other administrations in Region I (Europe and Africa) allocate it to their amateurs. The answer, too, to anyone who feels inclined to ask “What is the R.S.G.B. doing about it?” is that the Society’s close liaison with the Post Office was the main factor in preserving the band for British amateurs. It would have heartened the membership to hear the insistence with which the Society’s G.P.O. Liaison Committee put the amateur case at their meetings with the G.P.O. when this question was discussed.

Opening out from this particular issue is the general one of amateur liaison with the licensing authorities. The report of the Lausanne I.A.R.U. Region I Conference, published elsewhere in this issue, shows that the degree of liaison varies very much from country to country. But it shows, also, that radio amateurs, internationally, are well aware of the need for them to be represented at the next

and future International Telecommunications Union Administrative Conferences. At the last one (Atlantic City, 1947) the R.S.G.B. was frequently a lone voice upholding the cause of Amateur Radio. Only because it was a loud voice were amateur freedoms preserved—including the Top Band.

All those collective actions would be impossible if the British radio amateur did not have a virile National Society to represent him. Unrepresented, he remains unheeded. Unilateral action by individuals, either singly or in small groups, is equally futile.

The old truism about “united we stand” was never more apt, when applied to Amateur Radio, than it is today.

What is an Old-timer?

OBJECTS steeped in years become either venerable monuments or slums. It might be a little cruel to apply the phrase to radio amateurs who are steeped in years—but we know people who would!

Joking apart, is there anything inherently worthy about being patriarchal? And, anyway, where is the datum line to be drawn? The expression “old-timer” is itself quite a relative one. Among the post-war old-stagers G3AAZ must seem quite venerable and greatly experienced in radio lore to G3JZZ! And to the pre-war licence holders some of the skill and erudition of many a new man is—or ought to be—positively intimidating; indeed, conveying the feeling that they, the old-timers, were born too soon.

Which goes to show what has been shown many times before—that there is room for all manner of contributions from “all sorts and conditions of men” to the general good of Amateur Radio.

That would make a pleasant “Hollywood sunset” conclusion to this slightly frivolous “Current Comment,” but we do not propose to stop at that point. We prefer to stick the “Hon. Editorial neck” out just a little by means of a parting shot which by ruffling readers a little may perhaps cause them usefully to think around the subject a little further:

Are not the Spirit of Amateur Radio, and its standards of operating (especially telephony), lower now than they were 15 years ago? And is it not incumbent on the older-timers to set an example of “how to do it,” based on their customs of pre-war, when different licensing conditions imposed a stricter, but still voluntary, discipline upon operators? Or are they no better than their successors?

And having, we hope, ruffled the hair of both oldsters and youngsters alike, we will leave them to fire the next shot!—J.H.

In the Beginning

A tribute to Founder Member and Vice-President Rene Klein and all who were associated with him in laying the foundations of the Society 40 years ago.

TO Rene Klein belongs the honour of founding the Society. In a letter which he wrote to the Press during the early summer of 1913, Mr. Klein deplored the fact that there was no association in London to which amateur experimenters, interested in wireless problems, could meet and discuss their hobby. To fill this obvious need he invited such persons to communicate with him, with the result that on Saturday, July 5, 1913, a meeting was held at his West Hampstead residence.

The London Wireless Club

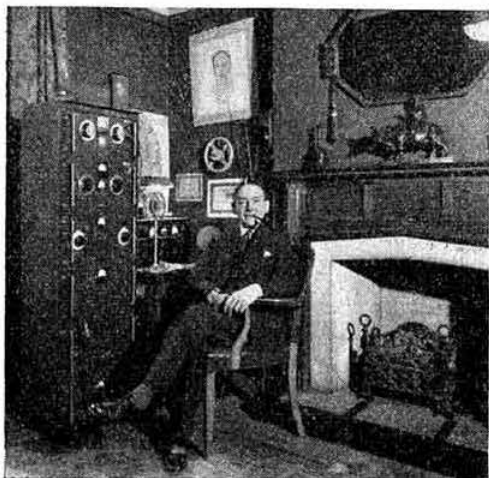
At that meeting it was decided to form the London Wireless Club, with Mr. Klein filling the office of Honorary Secretary.

Among the periodicals carrying a report of the meeting was *English Mechanic and World of Science*. The report, as it appeared in the issue of that paper dated July 11, 1913, is reproduced herewith. A similar report appeared in the issue of *Work* dated July 19, 1913.

Liaison with the G.P.O.

Just prior to this inaugural meeting, the Post Office had indicated to all licence holders that new regulations were about to be framed. It was this knowledge that prompted Mr. Klein to propose the setting-up of a Club to safeguard the interests of its members.

Within a day or two of the Club being formed the Post Office advised all licensees that—for the first time—a fee (of £1 1s.) was to be charged to cover office expenses connected with the issue of each licence and the inspection of the installation. It was explained that such licences would not, however, be subject to any annual royalty. To



This recent picture of Founder Member and Vice-President Rene Klein, was taken in the room in his West Hampstead home in which the London Wireless Club was founded on July 5, 1913. Mr. Klein now operates under the call G8NK.

soften the blow, the Post Office indicated that no limit of power was being laid down as applicable generally to experimental stations licensed for transmission. The power permitted would depend in each case upon the character and locality of the installation. Happy Days! !

In writing to one licensee of that period the Post Office said, "It is considered that a power of 50 watts used in conjunction with wavelengths not exceeding 200 metres should be sufficient for the purposes specified in your application." That was long before the 440 and 1000 metre days.

Less than a week after the meeting at West Hampstead, Mr. Klein requested the Post Office to receive a deputation of members of the Club to discuss "the new regulations affecting the issue of licences for experiments in wireless telegraphy."

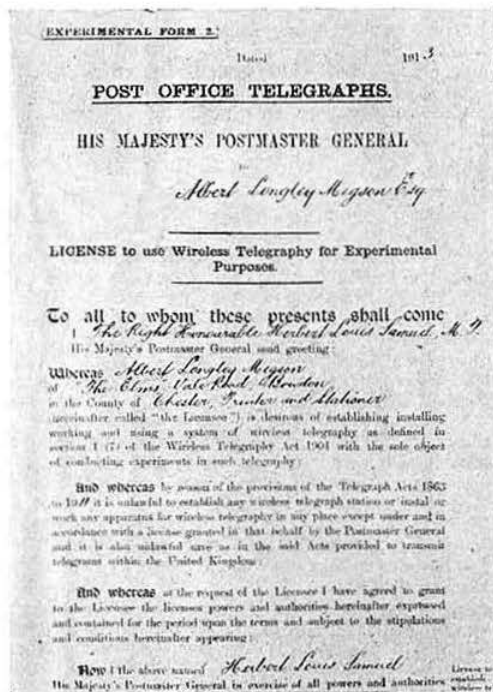
The meeting duly took place on July 25, thus paving the way for official liaison between the G.P.O. and the Society—liaison which has continued for 40 years.

Although the representations made by Mr. Klein



The formation of the London Wireless Club was announced in the technical Press of the day. This is the announcement as it appeared in the "English Mechanic and World of Science."

and his colleagues did not result in a withdrawal of the demand for a licence fee, the Post Office accepted the views put forward by the delegation that "the issue of licences should be restricted, as far as possible, to persons who desire to use wireless installations for bona fide experimental purposes."



A 1913 Licence

A reproduction of part of an experimental transmitting licence issued to Mr. A. L. Megson (now G2HA) during the year 1913.

poses." Of even greater significance, perhaps, was the acceptance by the Postmaster-General of an offer which the Club had made for certifying the qualifications of applicants for licences. This meant that the Post Office was prepared to "accept testimonials given by the Members of the Club who possess an expert knowledge of wireless telegraphy and are qualified to give such testimonials." An important step forward in those early days.

First Exhibition Station

During October, 1913, the G.P.O. authorised Mr. Klein to transmit signals from his home to a station set up at the Model Engineer Exhibition held in the Horticultural Hall, Westminster, from the 12th to the 18th of that month. Transmissions were made on a wavelength of 250 metres and with an input of 40 watts. Unfortunately, we have no photograph of the station nor any record of the results achieved.

Distinctive Call Signs

On October 16, 1913, the P.M.G. notified all licence holders 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 signal of the station with which it is desired

to communicate and end with its own call signal." Mr. Klein was allotted the call KXJ.

Thus was established the principle that each amateur station should possess its own call sign.

Change of Name

The first General Meeting of the Club was held at Westminster School on September 23, 1913. Frank Hope-Jones was elected *Chairman*; Leslie McMichael, *Vice-Chairman*; Rene Klein, *Honorary Secretary*; and L. F. Fogarty, *Honorary Treasurer*.

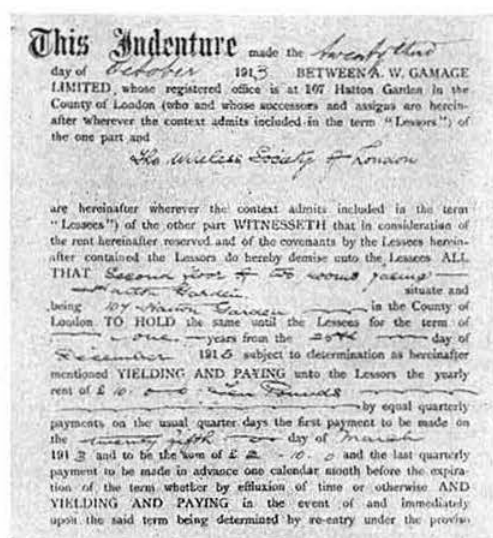
At that meeting it was decided to appoint a Committee to draw up the Rules and Regulations of the Club. An Advisory Committee was also appointed to give advice to members on matters appertaining to the issue of transmitting and receiving licences and to negotiate with the G.P.O. on matters of mutual interest. The meeting also decided that there should be two grades of membership—Members and Associate Members. Full membership was restricted to persons over 21 years of age who had been engaged on experimental work for at least two years and/or had satisfied the Committee that they possessed the necessary qualifications and training. At the same time the name of the organisation was changed to the more dignified "Wireless Society of London."

The Gamage Lease

One of the greatest problems facing the founder members was that of finding suitable accommodation in Central London for the establishment of a Club station and meeting room.

On July 11—only six days after the inaugural meeting—Leslie McMichael wrote to Messrs. A. W. Gamage Ltd. of High Holborn, requesting permission to exhibit a small notice in their Wireless Department drawing attention to the aims and objects of the Club. At that time the firm of Gamage carried large stocks of apparatus suitable for wireless experiments. Permission to exhibit the notice was granted.

As the result of informal discussions on the question of accommodation, Mr. A. W. Gamage



The Gamage Lease, 1913

The helpful co-operation of Mr. A. W. Gamage enabled the Society to establish a Club Room in Central London for the benefit of its members.

(who was then the Managing Director) wrote personally to Mr. McMichael and offered to lease to the Club two useful-size rooms above his firm's premises at 107 Hatton Garden. A nominal rent of £10 per annum was suggested. This generous offer was promptly accepted.

On October 13, 1913, an Agreement was signed between A. W. Gamage Ltd. and the Wireless Society of London. The first page of this historic document is reproduced herewith.

The newly-acquired meeting place was soon fitted up with wireless equipment of all kinds and on January 15, 1914, an experimental licence was issued to the Society.

The terms and conditions under which that licence was granted make interesting reading; they were as follows:—

"It is understood that the Society would be willing to use a wavelength of 850 metres instead of the wavelength of 700 metres mentioned in your application; and the Lords Commissioners of the Admiralty stipulate that, before a licence is granted, a trial shall be carried out with the full power of $\frac{1}{2}$ kilowatt on the wavelength of 850 metres, in order to ascertain whether interference is caused with the reception of signals at the Admiralty station at Whitehall. I am accordingly to request that you will be good enough to state on what date and at what time you will be prepared to carry out such a test. Notice of not less than a week should be given, in order that the necessary arrangements may be made.

"As it is the practice to fix a period of two hours per day (or two periods of one hour each) for the working of experimental stations on high power, you will perhaps be so good as to state the period or periods which would be suitable for the working of the station in question. In order to avoid interference with military wireless apparatus it will be a condition of the licence that the Society shall from time to time communicate with the Commandant, Army Signal School, Aldershot, and obtain that officer's concurrence as to the arrangements to be made for the experiments.

"It will also be stipulated in the licence that the apparatus shall only be worked by operators who have obtained the First or Second Class certificate of proficiency in radiotelegraphy issued by the Postmaster General.

"I am to add that a general permission cannot be given to communicate with any members of the Society within a certain range. It is necessary for the stations with whom communication is authorised to be mentioned specifically in the licence; and, in accordance with the conditions applicable to licences for experiments, the number of stations with which a licensee is authorised to communicate is limited as a general rule to five, and in no case must exceed ten. I am to request, therefore, that you will be good enough to specify the stations, not exceeding ten in number, with which the Society wishes to be licensed to communicate, and to arrange for the licences of those stations to forward their licences to this Office for amendment, reference being made to the registered number at the head of these papers."

Great Names

Within six months of its foundation the Society (as it had by then become) could boast of many great names among its list of Members.

Sir William Crookes, O.M., and Sir Oliver Lodge were elected Honorary Members—to be followed shortly afterwards by Senator Marconi.

Mr. Alan A. Campbell Swinton became President—an office he filled with distinction until 1920.

Among a galaxy of talented Vice-Presidents appeared the names of Charles Bright, S. G. Brown, E. Russell Clarke, William Duddell, Dr. W. H. Eccles, Dr. J. Erskine Murray, Commandant (later General) Ferrié, Dr. John (later Sir) Ambrose Fleming, Commander Hippisley, Professor G. W. Osborn Howe, Commander F. G. Loring, Dr. E. W. Marchant, Sir Henry Norman, Professor Silvanus P. Thompson and Professor Ernest Wilson.

Rules and Regulations

It is of special interest to record that many of the Rules and Regulations which were drawn up by the Committee—and subsequently approved by the membership—for governing the Society 40

years ago were preserved when the Society's present Articles of Association were drafted.

The annual subscription was fixed at £1 1s. for Members and Associates, and 10s. 6d. for Country and Foreign Members. Country Members were defined—as they still are today—as persons residing outside a 25 miles radius from Charing Cross.

The London Corporate Membership subscription rate has, thus, remained static for 40 years. Can any other comparable organisation lay claim to such a record?

Life Membership was fixed at Ten Guineas in 1913. It is still Ten Guineas in 1953!

Membership

Towards the end of 1913 the Society issued its first list of members, giving the names, addresses and call signs of all persons elected up to November that year. The list shows there were at that date 151 Members and 11 Associates. Seventy of the Members held a transmitting licence. Among those included in this historic list appear the names of Maurice Child, Dr. Eccles, L. F. Fogarty, Noel Hamilton, Commander Hippisley, H. W. Pope and, of course, Rene Klein—all of whom are still happily with us.

It is not the purpose of this present tribute to the Founders of the Society to relate events which took place after the year 1913, but we may perhaps be forgiven for touching very briefly on that memorable meeting held on January 21, 1914, in the Lecture Theatre at the Institution of Electrical Engineers, for it was at that meeting that the Society was acclaimed and accepted as a National organisation.

Campbell Swinton's Presidential Address was widely reported upon in the lay and technical Press, whilst great publicity was given to the message of greetings to the Society from Commandant Ferrié which was transmitted from the Eiffel Tower during the Address and received in the Lecture Theatre on an "organ pipe" loudspeaker.

On that day Amateur Radio history was made. On that day, too, a great tradition was founded.

The Evening of July 5, 1953

DURING the evening of Sunday, July 5, 1953, the President (Leslie Cooper, G5LC) and the General Secretary (John Clarricoats, G6CL) took part in a six way QSO on "Top Band" from Mr. Cooper's station in East Molesey, Surrey.

In the course of the QSO, G6CL re-called the events which had prompted Mr. Rene Klein and the late Mr. Leslie McMichael to form the London Wireless Club on July 5, 1913.

The transmissions from G5LC were recorded by Tony English, G3FPS (East Molesey), who is presenting the tape to the Society.

Others taking part in the Fortieth Anniversary QSO were Stan. Robinson, G2ANX (East Molesey), Charles Noakes, G2AOP (Ripley), Douglas Mead, G3IDM (Chertsey) and Joe Denny, G6NK (Weybridge). B.R.S. 19670 was present in the shack at G6NK.

Specially autographed QSLs have been sent to all the stations concerned.

Identify Yourself on the Road
by Flying a

R.S.G.B. PENNANT

Large size 6/6; small size 5/6
(postage 3d. extra)

The Elizabethan

A 150 Watt TVI-proof Transmitter using Parallel 807s

BY LOUIS VARNEY, A.M.I.E.E. (G5RV)*

Here is a transmitter worthy of Coronation Year, a full power successor to the famous series of TVI-proof transmitters described by the author in recent years. This new design, while retaining many of the features of the earlier versions, incorporates a number of worthwhile improvements.

FOLLOWING the success of the G5RV 75 Watt TVI-proof transmitter,¹ it seemed logical that the next step should be to increase the p.a. input power to 150 W while maintaining a degree of harmonic suppression which would enable it to be used in close proximity to TV receivers. By making minor modifications to the original exciter circuit, and adding a second 807 in parallel with the original p.a. valve, this object has been achieved.

Parallel operation of the p.a. valves has been adopted in preference to push-pull working for the following reasons: (a) better suppression of both even and odd harmonics due to the deliberately increased effective valve inter-electrode capacity; (b) desire to use the pi-filter tank circuit, which is itself helpful in suppressing TVI, and (c) the more convenient mechanical arrangement possible.

Circuit Details

The exciter stages are similar to those previously described¹ but in order to obtain sufficient drive for the 807s when operating in the 3.5 Mc/s band,

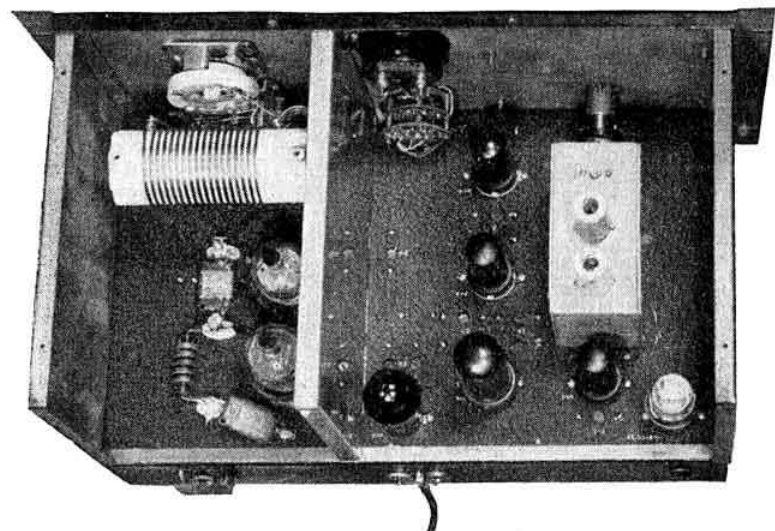


Front view of the Elizabethan all-band 150 W transmitter showing the neat arrangement of the controls. From left to right (bottom row), excitation (drive), variable power control, exciter band-switch, coarse loading and fine loading (as used in model shown). Above (left to right), v.f.o. tuning, meter switch and p.a. tuning, with the p.a. band-switch above.

padder condenser C3 to obtain the exact amount of bandspread required is also made easier. In addition, the screening given by the box is advantageous.

Circuit Improvements

Comparison of Fig. 1 with the circuit diagram of the lower power version will disclose a number of improvements. Keying takes place in the cathode and control grid d.c. return of V2, so permitting the use of a suitable valve keyer with minimum "insertion" loss. The spacer signal



Above chassis arrangement of components. Note the separate 28 Mc/s p.a. coil mounted vertically between the tank condenser and coil tapping switch. On the right may be seen the v.f.o. box on top of which the miniature valves used in the first two stages are mounted.

the v.f.o. operates on that frequency, V3 being used as a tuned buffer amplifier and not as a frequency multiplier. As the 1.8 Mc/s band has been omitted, it is possible to use a greater degree of bandspread on the v.f.o. which is enclosed in its own screening box forming a separate assembly. Adjustment of the coil LO and the

when the key is up during operation on 3.5 Mc/s is also reduced.

The wide band couplers all employ the improved coupling described in the January, 1952, issue of the R.S.G.B. BULLETIN.² Care should be taken to ensure that the link coils are wound in the correct sense (i.e. that which gives the maximum p.a. grid current for a given degree of

* 184 Galleywood Road, Chelmsford, Essex.

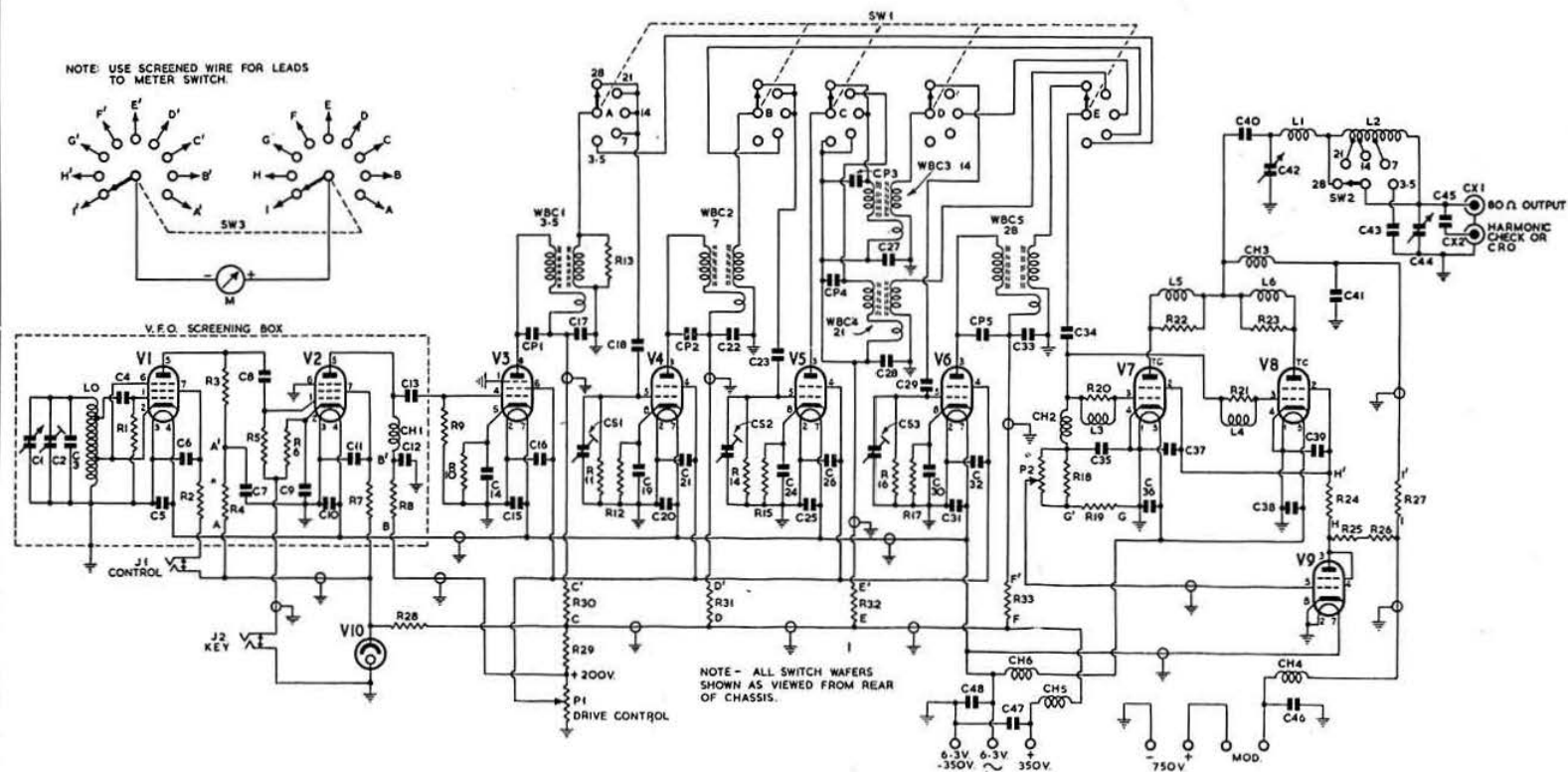


Fig. 1.—Circuit diagram of the 150 W transmitter using parallel 807s in a pi-filter circuit.

coupling). If the primary and secondary are wound in the same sense, then the link coil should be wound over the secondary in the *reverse* sense in order to take advantage of the stray mutual coupling which exists between primary and secondary. Correct sense of the link coil can result in as much as 100% more grid drive to the p.a.

The potentiometer P2, which is used to vary the bias on the clamper valve (V9), acts as a variable power control in an arrangement suggested by J. W. Mathews (G6LL) and enables p.a. input to be varied from a few watts to full power. It replaces the "Net-QRP-QRO" switch used in earlier transmitters.

A single 0.5 mA meter is used in conjunction with SW3 and suitable shunts to measure all anode currents. P.A. control grid and screen grid currents are also metered in this way. Meter shunts R30, 31, 32 and 33 for V3-6 respectively should be adjusted to multiply the meter scale by 10. Shunt R24 (p.a. screen current) should also multiply by 10. R19 (p.a. control grid current) should multiply by 3 and R27 should multiply by 50 to read p.a. anode current (i.e. full scale deflection = 250 mA).

P.A. Tank Circuit

A larger value of tuning condenser (C42) than is customary with single valve power amplifiers is

necessary because the optimum load for parallel 807s is only 1,800 ohms.³ For example, at 3.5 Mc/s the tuning capacity should be approximately 370 μF , so that a condenser with a maximum capacity of at least 350 μF is desirable. The additional capacity is provided by the anode-cathode capacity of the 807s and by circuit strays. However, in order to tune the 28 Mc/s band with a reasonably correct value of capacity (46 μF) a condenser with a low minimum capacity must be selected. It must be capable of withstanding approximately 1,500 V during peaks of 100% anode and screen modulation.

A twin-gang (500 μF per section) receiver condenser is used for the loading control (C44) and an additional fixed loading condenser is switched into circuit on 3.5 Mc/s.

Suitable p.a. r.f. choke

A choke suitable for use with single or parallel 807s in a pi-filter tank circuit may be wound on a $\frac{1}{2}$ in. diameter paxolin former 3 in. long. The winding should commence $\frac{1}{2}$ in. from one end of the former, using 36 s.w.g. enamelled copper wire. A $1\frac{1}{2}$ in. winding (approximately 180 turns) is then wound, followed by $\frac{1}{2}$ in. space, then a $\frac{1}{2}$ in. winding (approximately 30 turns), followed by $\frac{1}{2}$ in. space and a second $\frac{1}{2}$ in. winding (30 turns), then a space of $\frac{1}{2}$ in. followed by a $\frac{1}{2}$ in. winding (10 turns). The anode of the p.a. valve is con-

Components List for Fig. 1

C1	5-100 μF Polar air trimmer	*WBC3	14 Mc/s wide band coupler
C2	3-50 μF Polar air trimmer	*WBC4	21 Mc/s wide band coupler
C3	330 μF silver mica $\pm 5\%$	*WBC5	28 Mc/s wide band coupler
C4, 8, 13, 18, 23, 29, 34	100 μF silver mica or ceramic	R1, 5	100,000 ohms
C5, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17, 19, 20, 21, 22	0.01 μF 350 V wkg., tubular paper, T.C.C. CP32N	R2	47,000 ohms
C24, 25, 26, 27, 28, 30, 31, 32, 35, 36, 37, 38, 39, 47, 48	0.001 μF mica, 350 V wkg., T.C.C. CM20 or similar midget type.	R3	10,000 ohms
C40	0.002 μF mica, 1,500 V wkg.	R4, 8	Meter shunts 100 ohm $\frac{1}{2}$ W (X1 for V1 and V2)
C41	0.001 μF mica, 1,500 V wkg.	R6	150 ohms
C42	15-390 μF variable (See text)	R7	4,700 ohms
C43	500 μF mica transmitting type, T.C.C. 3U	R9	47,000 ohms
C44	500 μF per section twin gang receiver type variable condenser (sections in parallel)	R10	330 ohms
C45	5 μF ceramic	R11, 14, 16	22,000 ohms
C46	100 μF mica, 1,500 V wkg.	R12, 15, 17	470 ohms
CP1, 2, 3, 4, 5	5-22 μF ceramicon (values determined by test)	R13	10,000 ohms
CS1, 2, 3	3-30 μF Mullard-Philips concentric trimmers (or mica compression type)	R18	15,000 ohms, 1 W
LO	18 t., 20 s.w.g. enam. copper, close wound on $\frac{3}{8}$ in. diam. former. Tapped at 6 and 15 t.	R19, 24, 27, 30, 31, 32, 33	Meter shunts (see text)
L1	5 t., 14 s.w.g. enam. 1 in. i.d. self-supporting, length $1\frac{1}{2}$ in. (Adjust to tune 28 Mc/s with C42 near min. capacity.)	R20, 21	220 ohms
L2	18 t., 14 s.w.g. enam., wound 8 t.p.i. on $2\frac{1}{2}$ in. diam. Eddystone ceramic former. Tapped from anode end at 2 t. (21 Mc/s), 5 t. (14 Mc/s) and 10 t. (7 Mc/s) and R21	R22, 23	100 ohms, 1 W
L3, L4	8 t., 22 s.w.g. enam. wound on R20 and R21	R25, 26	10,000 ohms, 36 W wire wound (Berco, Welwyn or Painton)
L5, L6	6 t., 18 s.w.g. tinned copper, $\frac{1}{8}$ in. i.d.	R28	5,000 ohms, 12 W wire wound (Berco, Welwyn or Painton)
CH1, 2	R.F. choke, 2.5 mH (Eddystone type 1010)	R29	4,700 ohms, 3 W, carbon
CH3	See text	All Resistors are	$\frac{1}{2}$ Watt types unless otherwise stated.
CH4, 5	V.H.F. choke (Eddystone type 1011)	P1	30,000 ohms, 4 W, wire wound pot. (Bulgin)
CH6	V.H.F. heater choke, 2 in. winding 18 s.w.g. enam. on $\frac{3}{8}$ in. diam. tufnol rod	P2	50,000 ohms carbon pot.
*WBC1	3.5 Mc/s wide band coupler	SW1A-E	Exciter range switch. Oak type, 5 wafers, 1 pole, 5-way each.
*WBC2	7 Mc/s wide band coupler	SW2	1 pole, 5-way, ceramic (ex-TUSB or similar unit)
		SW3	2 wafer, each 1 pole, 9-way (Oak)
		V1, 2	EF91 (6AM6) or 6SJ7
		V3	6AC7
		V4, 5	6V6, 6V6GT or KT63
		V6	6L6, KT66 or 1622
		V7, 8	807
		V9	6Y6, 6L6, or KT66
		V10	VR150/30 or QS150/45 (English Electric Valve Co.)
		CX1, 2	Co-axial sockets (Belling-Lee L604/S)
		J1, 2	Closed circuit jacks (Igranite)
		M	0-5 mA m.c. meter
		V.F.O. Dial	Eddystone full vision s.m. Cat. No. 598
		V.F.O. Box	Eddystone Cst. No. 650 ($4\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x 2 in.)
		Metalwork	Complete assembly, C4B1, Philpotts, Loughborough

* Described in R.S.G.B. BULLETIN, December, 1951. (Coil assemblies for the wideband couplers may be obtained from Panda Radio Co., Rochdale.)

nected to the 10-turn section, the other end of the choke being connected to h.t. positive.

Mechanical Details

The transmitter is assembled on a standard 17 in. x 10 in. x 3 in. 16 s.w.g. aluminium chassis with a 19-in. x 10½ in. x 14 s.w.g. dural front panel. Removable end pieces and an intermediate screening partition are used above the chassis, so that when the removable top and back "L" shaped piece is in place, the p.a. is enclosed in its own screening compartment. The approximate positions of the major components may be judged from the photographs. Although the layout need not be duplicated exactly, it should follow that shown reasonably closely.

Tuning and Adjustment

The v.f.o. and exciter portion of the transmitter should be aligned as described in the January, 1952, issue of the R.S.G.B. BULLETIN.² The p.a. should then be checked for parasitic oscillation by running it with the h.t. on, but with no drive from the exciter. C42 should be rotated on each band while watching for signs of control grid current, with the exciter bandswitch set to the band on which the p.a. is being checked. If any signs of parasitic oscillation are observed, the resistors R22 and R23 should be tapped across an additional turn of the coils L5 and L6 respectively.

When these tests have been completed, the exciter may be switched on and the transmitter adjusted for correct control grid current (about 5 mA) on each band. The p.a. should then be loaded up to 200 mA at 750 V, using a suitable dummy load in place of the normal aerial. It may be necessary to adjust L1 (28 Mc/s p.a. coil) in order to obtain resonance at any point in the 28 Mc/s band. Details of the correct values

of L and C are given in Table I and typical operating conditions in Table II.

Table I

Mc/s	C1 μ F	C2 μ F	L μ H
3.5	370	1440	6.6
7	185	720	3.3
14	92	360	1.65
21	61	240	1.1
28	46	180	0.8

Pi-filter Tank Circuit Component Values for Parallel 807s operating at $E_a=750$ V and $I_a=200$ mA, where the optimum valve load impedance is 1,800 ohms, and the output load impedance is 80 ohms, C1=anode tuning condenser, C2=output loading condenser, L=tank inductance, XC1=120 ohms, XC2=30 ohms and XL=150 ohms.

Table II

Stage	Valve	E _g Volts	E _a Volts	I _a mA
ECO	EF91	100	115*	1.6
BA	EF91	120	200	2.5
FD1	6AG7	140	350	12
FD2	6V6	140	350	18
FD3	6V6	140	350	22
FD4	6L6	140	350	16†
PA	2x807	250‡	750	200

Typical operating conditions of Elizabethan. Output frequency 14.2 Mc/s. (c.w. key-down.) I_g p.a.=5 mA. I_{sg}=20 mA.

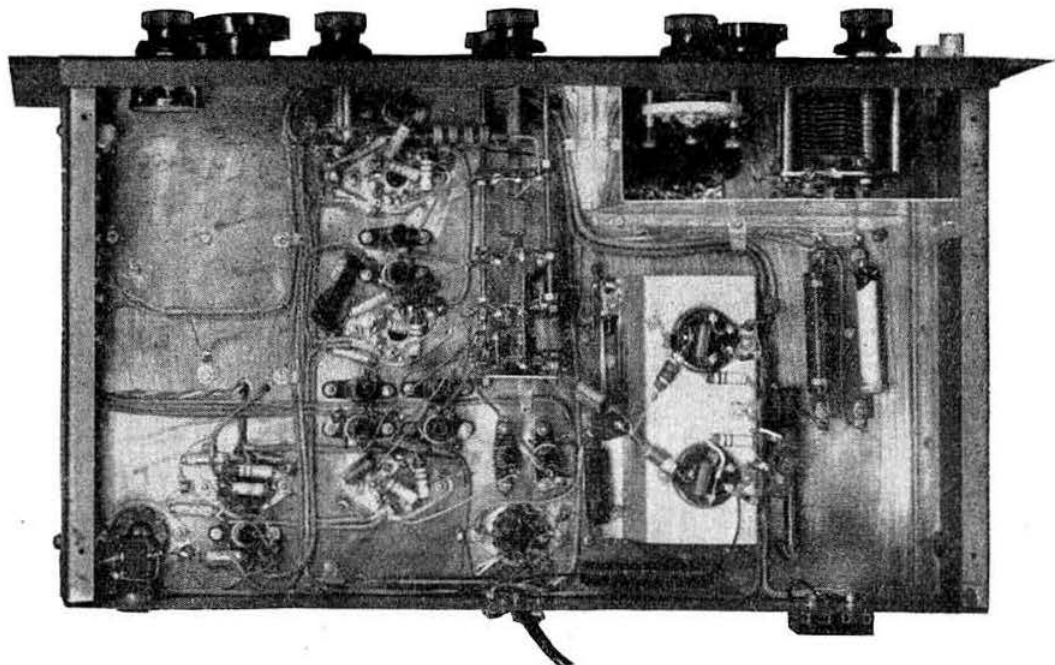
Results

The transmitter has proved completely successful on all bands using both telegraphy and

* Calculated from voltage drop in R3. Other values measured with AVO model 40 on 1200 V range.

† Adjust value of R25, R26, if required to obtain correct screen voltage with key down and transmitter loaded. Note: P.A. minimum $I_a=40$ mA (dip) at $I_g=5$ mA and no output load. Standing I_a (key-up)=60 mA.

‡ Undriven.



Underside view of chassis showing the mounting of the coarse and fine output loading controls in screened enclosure at top right-hand side. In a later model the coarse loading switch and condensers were dispensed with, as shown in Fig. 1. The p.a. tuning condenser was moved 2 inches to the left and the twin-gang .0005 μ F loading condenser C44 mounted 4 inches to the right of C42 on the same level. (See front panel view.) P1 and P2 were then mounted directly beneath the v.f.o. dial knob, and the p.a. band-switch respectively, and on a level with SW1A-E to achieve a well-balanced layout conforming to the final circuit arrangement of Fig. 1.

telephony. It may be anode and screen modulated by any suitable modulator capable of delivering 60 watts of peak audio power, but for 'phone operation the p.a. input should be reduced to about 180 mA at 650 volts. If a common h.t. supply capable of delivering 650 to 700 volts at 350 mA is used for both p.a. and modulator (class B 807s) it will be found that the h.t. will rise to approximately 750 volts if the screen grid supply for the modulator valves is switched off during c.w. operation.

Modifying Earlier Versions

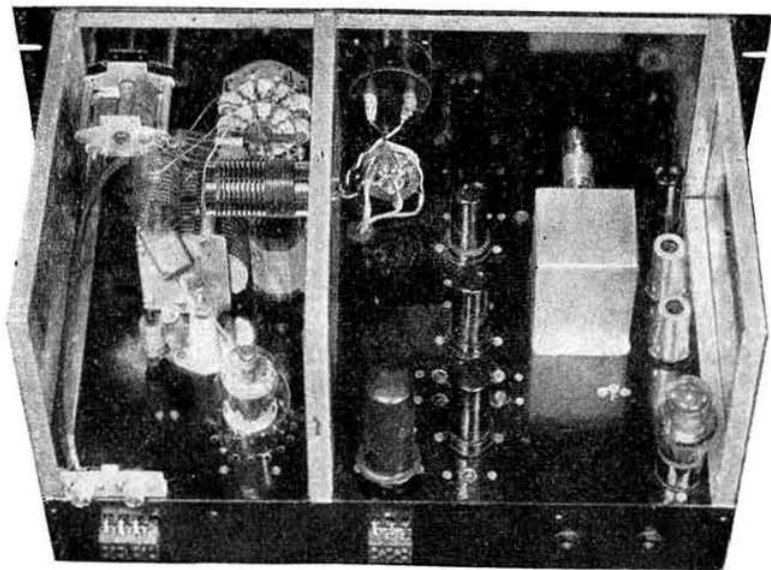
The circuit improvements employed in the *Elizabethan* may be used to modernise earlier G5RV-type transmitters while retaining a single 807 as the p.a. valve. It is particularly suggested that the p.a. tank circuit should be changed to a pi-filter network.

Modernisation of the Power Amplifier

Use of the pi-filter network enables all harmonics to be effectively attenuated whereas the original trap circuit gave very effective suppression at one harmonic frequency only. The modified p.a. output circuit is shown in Fig. 2, from which it will be seen that the existing coil turret is modified by removing the link coils so that SW2C may be used to select the approximately correct value of output or loading condenser (C47, 48, 49, 50 and 51). C43, originally the link coil series condenser, is changed to a 350 or 500 μ F midget receiving type variable while the original C47 and LT (harmonic trap components) are removed. C42A is added to ensure that there is adequate tuning capacity for the 1.8 Mc/s band. The r.f. choke (CH6) should be wound as described earlier in this article. This choke is CH3 in Fig. 1.

The co-axial output lead from CX1 is connected directly to the stator plate terminal on C43. The leads from SW2C to C43, 47, 48, 49, 50 and 51 must be as short and as direct as possible.

A very good idea of the success of the pi-filter tank circuit in suppressing unwanted harmonics may be gained from the tests tabulated in Table III.



The arrangement of the p.a. stage in the modified 75 W transmitter may be clearly seen in this photograph.

Improved Power Control and Metering

The power control circuit used in the *Elizabethan* may also be employed in earlier versions by mounting P2, the power control potentiometer, in place of the original SW4. The latter should be modified to a 2-wafer 3 position type which

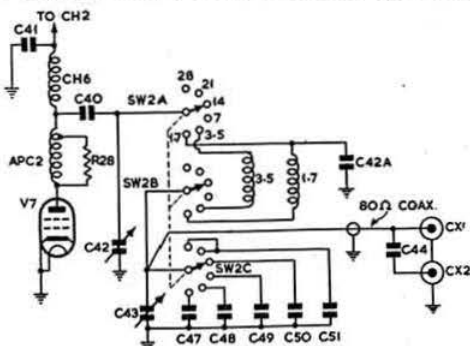


Fig. 2.—Pi-filter p.a. tank circuit for the 75 W transmitter

- C42A, 50 .0002 μ F, mica, 350 V wkg.
 C43 350–500 μ F midget, variable
 C47 .0015 μ F (.001 + .0005 μ F) mica, 350 V wkg.
 C48 .001 μ F mica, 350 V wkg.
 C49 .0005 μ F mica, 350 V wkg.
 C51 .0001 μ F mica, 350 V wkg.
 APC2 6 t., 18 s.w.g., $\frac{3}{8}$ in. i.d., $\frac{1}{2}$ in. long, tapped at 5 t. from anode end
 R28 100 ohms, 1 W carbon
 CH6 See text.

Other components are as in the original circuit.

may then be mounted in place of the original toggle switch (SW5) for use as the meter switch, using shunts to measure p.a. control grid, screen grid and anode current. It has been found that the addition of the potentiometer P2 in parallel with R24 (22,000 ohms) results in an effective value for the p.a. grid leak of about 18,000 ohms which appears to be more suitable than the original value.

Initial Tuning-up Procedure

A simple 80-ohm non-inductive carbon rod or lamp load should be connected by a suitable length of co-axial cable to CX1. A 0-1 thermo-ammeter should be connected in series with the load. The transmitter is then set up on each band in turn and the p.a. grid drive adjusted to about 2 mA. The power control should be set so that the 807 is drawing approximately half-power. With C43 (fine loading control) at minimum loading (shorted or maximum capacity), C42 is tuned for minimum anode current. Table IV shows the anode current dip which may be expected on each band with zero loading. The fine loading control is then decreased in capacity (i.e. loading is increased) and C42 trimmed for maximum dip. The procedure is repeated until an optimum value

of C43 is obtained at which output is maximum, while resonating C42 causes a dip in anode current of 10-15%. If it is found that C43 has to be at almost minimum capacity on any band, the associated coarse loading condenser (C47 to 51) should be decreased in value. The correct value for these condensers has to be found by experiment as the mica condensers generally available have a tolerance of 20%.

When the initial adjustments have been made the harmonic content should be checked using the method described in an earlier article.³

This arrangement also avoids unduly high cathode bias on V2 when a valve keyer is used, due to the inherent resistance of the keyer valve under key-down conditions.

Improved Anti-parasitic Device

It has been found that a small inductance (APC2) with a 1 W 100 ohm resistor (R28) tapped across it is superior to the original arrangement.⁴ Tapping R28 across 5 turns of a 6-turn coil of 18 s.w.g. wire $\frac{1}{16}$ in. i.d. appears to be the optimum condition.

Table III

Test	Transmitter	Input (Watts)	Microamp indication at harmonic frequency (Mc/s)*							
			28	35**	42	49	56	63**	70	84
1.	C6LB†	50	56	0	0	2	0	0	18	0
2.	C4FN†	50	110	2	0.5	0	115	0	0	3
3.	C4FN†	50	1	0	0	0	12	0	0	1
4.	C5RV‡	75	1	0	0.5	0	0	0	0	1
5.	C2SA‡	150	0	0	1	0	0	14	0	0

Relative Harmonic Suppression Tests

Conditions: Fundamental output frequency 14.2 Mc/s.

* Taken at harmonic check point (CX2) using the improved harmonic monitor (R.S.G.B. BULLETIN, June, 1952).

** 5th and 9th harmonic of 7 Mc/s f.d. respectively.

† Normal tank circuit. Harmonic trap adjusted for maximum suppression at 42 Mc/s.

‡ After modification to pi-filter p.a. tank circuit.

§ Using pi-filter p.a. tank circuit.

¶ Using 2 parallel 807s in pi-filter tank circuit.

Choice of Clamper Valve

When h.t. voltages of over 500 are used it has been found that a 6Y6 or 6L6 is preferable to the 6V6 as the clamper valve (V8).

Improved Keying System

Improved keying may be obtained by wiring the keying jack in the cathode and control grid d.c. return of V2 (v.f.o. buffer valve) as in the *Elizabethan*. The lower end of the V2 grid leak is disconnected from earth and returned to the lower end of the cathode bias resistor so that both cathode and grid circuits are keyed simultaneously.

Oscilloscope Facility

When CX2 is not being used for harmonic checking it offers an ideal means of feeding a cathode ray oscilloscope for visual monitoring of the modulated waveform. A co-ax. lead may be used to connect the Y plates to the transmitter via C44.

Acknowledgments

The author wishes to express his thanks to those who co-operated in the tests mentioned in this article.

References

- (1) *An Improved 75 Watt TVI-proof Transmitter*, Varney, R.S.G.B. BULLETIN, December, 1951.
- (2) *An Improved 75 Watt TVI-proof Transmitter*, Varney, R.S.G.B. BULLETIN, January, 1952.
- (3) *The Design of Pi-Network Tank Circuits*, Whalley, R.S.G.B. BULLETIN, April, 1952.
- (4) *V.H.F. Parasitics in Beam Tetrodes*, Grammer, *QST*, August, 1952.
- (5) *An Improved Low Pass Filter*, Varney, R.S.G.B. BULLETIN, June, 1952, page 530.

Table IV

Mc/s	Ig mA	Ia mA (minimum)	Ia mA maximum
1.8	2.0	15	60
3.5	2.5	15	>125
7.0	2.5	22	>125
14	2.5	30	>125
21	2.5	30	>125
28	2.5	40	>125

Approximate anode current dip (unloaded pi-filter tank circuit) on each band for single 807 at Ea=750 V (Ea=300-350 V on 1.8 Mc/s band). C43 (fine loading control) short-circuited, i.e., no load on p.a.

Cure for BCI

THE use of narrow-band frequency modulation appears to be an almost complete cure for BCI from a transmitter operating on 3.5 Mc/s. R. J. Donald (G3DJD) employs a reactance modulator on his Clapp v.f.o. and reports show that the system compares favourably with the high-level modulation which is also in use. The bandwidth is stated to be no greater than with a.m. Receivers capable of sharp selectivity are an advantage but even those of the "Command" type are satisfactory. Reports on transmissions from G3DJD will be welcomed and should be sent to 2 Cranfield Road, Brighton.

The Morse Code on Stamps

THE 1953 New Zealand Health stamps are to picture Boy Scout and Girl Guide activities in the Dominion. The top border of the Guide stamp (1½+½d.) will incorporate the Morse Code characters for "N.Z.", this motif being carried right round the border of the Scout stamp (2d.+1d.). Date of issue is expected to be October 1st.

(The Editor will be pleased to consider for publication a short article featuring radio and allied subjects on stamps. Offers to Headquarters first please.)

Triode R.F. Stages for 144 Mc/s.

By P. F. CUNDY, A.M.I.E.E. (G2MQ)*

THE purpose of this article is to review the various popular low noise triode r.f. stages suitable for use on 144 Mc/s. A novel arrangement is also suggested which, though no improvement in performance is claimed, offers certain simplifications in construction and adjustment.

Modern Circuits.

(i) *Earthed-Grid*.—This arrangement provides good wide-band termination to low-impedance unbalanced feeders. The low input impedance, however, prevents voltage magnification in the input circuit—a limitation which usually necessitates a second stage to ensure that the signal at the frequency-changer grid is sufficient to over-ride the mixer noise. The connection of a balanced feeder to such a circuit requires a *balun*; in the case of high-impedance balanced feeder (e.g. 300-ohm ribbon), an impedance matching device is needed.

(ii) *Cascode*.—In this circuit, a standard earthed-grid stage is driven by a conventional earthed-cathode amplifier with unity coupling. The anode load of the earthed-cathode stage is about 200 ohms, and its voltage gain is not likely to be greater than two. The main improvement in performance arises from the high input impedance of the first valve which permits considerable voltage magnification in the first tuned circuit. By a suitable arrangement of coupling coils, a wide range of feeder impedances can be accommodated. The coupling which gives maximum gain is not the optimum for best noise factor; this is provided by what would normally be regarded as a somewhat over-coupled condition.

As there is no source of out-of-phase voltage to permit capacitive neutralisation, the earthed-grid stage is usually neutralised inductively. Neutralisation is not essential for stability—with low stage gain, instability is unlikely to occur—but it improves the noise factor.

(iii) *Push-pull neutralised earthed-cathode*.—This arrangement has reasonably high input and output impedances, so that both appreciable input-circuit voltage magnification and improved stage gain are obtainable, enabling sufficient signal to be built up to overcome mixer noise. Out-of-phase voltage, permitting capacitive neutralisation, is derived by cross-connection of the neutralising capacitors between the balanced input and output circuits; to preserve this balance, push-pull connection of the frequency-changer grid circuit is essential.

The elaboration of a push-pull mixer stage is not always desirable, however, and the process of neutralisation, with both elements of the capacitors "hot," can become tedious. The circuit shows up to its best advantage when a common-cathode double-triode such as the 6J6 is used, because r.f. currents in the external cathode lead are minimised.

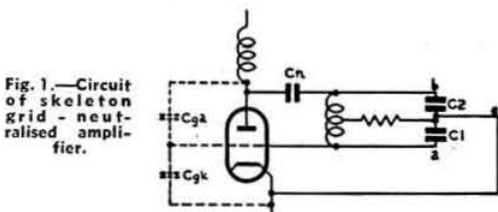
Other Possible Arrangements

(iv) *Single inductively-neutralised stage*.—The writer's aim was to devise a circuit using a single unbalanced earthed-cathode stage that would have high-impedance input and output circuits, so that sufficient input-circuit magnification and stage gain would be obtained to permit direct connection to an unbalanced mixer. A cascode circuit, without

the second stage, was tried, the frequency changer being fed directly from the anode coil of the earthed-cathode stage. The inductively neutralised stage was now working into an anode load some 10 to 20 times higher than in the cascode circuit, and the neutralising adjustment, previously not very important, became most critical. In spite of the expenditure of considerable time and patience, freedom from feedback was never achieved.

It has been suggested that this difficulty was due to the poor "Q" of the inductor, and that the adjustment of inductance should have been carried out with a silver-plated copper slug rather than a dust-iron one. This may be true, but the basic coil size must be made larger and, bearing in mind that this coil must pass through a hole in the inter-circuit screen and be connected with the shortest possible leads, considerable constructional difficulties appear to be involved.

(v) *Single capacitively-neutralised stage*.—In order to achieve capacitive neutralisation, a source of out-of-phase voltage is essential, and, as the use of balanced anode circuits complicates the design of the frequency changer, the balanced input circuit using grid neutralisation seems to be the only practicable method.



Referring to the skeleton circuit of Fig. 1—if C_n is made equal to C_{ga} , and the input circuit is fully balanced, neutralisation is achieved, i.e. $C_1 = C_2$ (C_1 including the C_{gk} of the valve). Further, if C_n is twice C_{ga} , the circuit will neutralise provided V_{ae} is twice V_{be} , i.e. C_2 is twice C_1 . It follows that if C_{ga} , C_n and C_1 are all fixed, neutralising adjustment can be made by variation of C_2 . One element of this capacitance is at earth potential so that the correct neutralising point, when found, is not upset when the trimming tool is withdrawn. Variation of C_2 also modifies the resonant frequency of the whole circuit; this

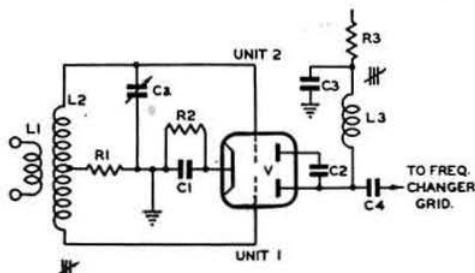


Fig. 2.—Circuit of partially self-neutralised amplifier. R_1 , 56,000 ohms; R_2 , 150 ohms; R_3 , 10,000 ohms; C_1 , 3, 250 μ F; C_2 , 100 μ F; C_3 , 15 μ F; C_4 (see text); L_1 , coupling coil to suit feeder; L_2 , 5t, $\frac{3}{8}$ in diam. $\frac{3}{4}$ in long, with dust-iron slug; L_3 2t, $\frac{3}{8}$ in diam. $\frac{3}{4}$ in long, with dust-iron slug; V , 6J6.

* 52 Highfield Close, Amersham, Bucks.

must be restored by adjusting the inductance value by means of a tuning slug.

The circuit cannot be expected to produce as much gain as the push-pull neutralised circuit, because there is no r.f. current cancellation in the cathode lead, and only half of the voltage developed across the grid coil is usefully employed. Nevertheless, the gain obtained is adequate to over-ride the noise of a moderately quiet frequency changer.

Details of Final Circuit

A circuit of the type just described, suitable for use with a 6J6 valve in what amounts to a partially self-neutralised arrangement, is shown in Fig. 2. Compared with Fig. 1, the capacitances are as follows: C_{ga} in Fig. 1 is C_{ga} of unit 1 in Fig. 2, and C_n of Fig. 1 is C_{ga} of 6J6 unit 2 in Fig. 2. C_l of Fig. 1 is C_{gk} of 6J6 unit 1 in parallel with the capacitance between the tuning slug and the turns L_1 , the slug being earthed and fed into the coil from the unit 1 side. C_2 of Fig. 1 is C_{gk} of 6J6 unit 2 in parallel with an external adjustable neutralising capacitance C_a .

The presence of space current in unit 1 will make the inter-electrode capacitance higher than in unit 2; this is also allowed for in the setting of C_a . The external adjustable capacitance required in this case is quite small, and may conveniently take the form of a small vane soldered on the grid connection of the unit 2 valveholder and mounted parallel to the chassis, approached by a disc ($\frac{1}{4}$ -in. diam.) soldered to a 4 B.A. screw passing through a tapped hole in the chassis, with a lock-nut to preserve the adjustment once it has been determined. The grid and anode tags of the valveholder should be separated by an under-chassis inter-circuit screen.

Adjustment of the circuit is complicated by interaction between the tuning and neutralising controls, but, since both are earthed, there are no "hand-capacity" effects. The neutralising capacitor affects neutralising more than frequency, while the converse is true of the slug. The most satisfactory criterion of adjustment is complete stability with minimum external damping on the input and output circuits when both are adjusted for mid-band resonance. The blocking capacitor of the frequency-changer grid circuit should be disconnected from the anode coil, its lead being permitted to remain in the vicinity of the anode terminals to provide a minute coupling capacitance. One side of the aerial coupling coil should be earthed and the other side fitted with a short probe about 1½-in. long. Initially, low values of h.t. should be applied to the r.f. stage via a potentiometer, for tests and adjustments. A strong local signal on 145 Mc/s is also required; the second harmonic of a grid dip oscillator set to 72.5 Mc/s and located about 8 ft. away from the stage under adjustment was found to be suitable.

Adjustment

With a low value of h.t. applied to the r.f. stage, both the grid and anode-circuit tuning slugs should be adjusted for maximum signal; if oscillation occurs during this operation, the h.t. voltage should be further reduced. The neutralising capacitor is then trimmed. In either direction of rotation, signal strength will fall due to detuning of the first circuit, but the decrease will be much more marked in one direction because, in addition to detuning, there is also loss due to feed-back. The point of minimum signal in this direction should be found, advancing the h.t. control as necessary to maintain the signal strength. The grid-circuit tuning slug should then be re-set for maximum, neutralising re-set for minimum, and the cycle repeated three or four times until stability is

attained with full h.t. applied, both circuits being peaked at 145 Mc/s.

If instability occurs at or above two-thirds of the maximum h.t., it should be remembered that reconnection of the aerial and frequency changer loads will ensure stability, though there will be a slight fall in noise performance if feed-back is present.

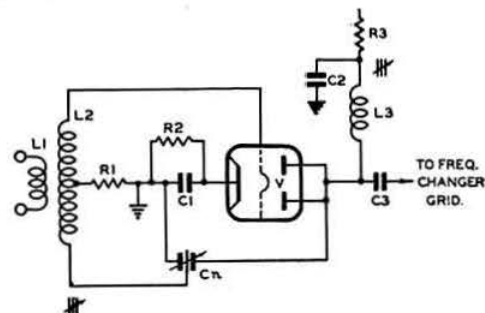


Fig. 3.—Neutralised amplifier using 3-element neutralising capacitor.

R_1 , 56,000 ohms; R_2 , 25 ohms; R_3 , 5,000 ohms; C_1 , 2, 250 μ F; C_2 , 15 μ F; C_n (see text); L_1 , coupling coil to suit feeder; L_2 , 3½ in. diam. ½ in. long, with dust-iron slug; L_3 , 2½ in. diam. ½ in. long, with copper slug.

The frequency-changer grid condenser should then be re-soldered to its normal place on the anode coil, and the anode slug re-set for maximum signal, after which the aerial may be reconnected—a final check for aerial coil resonance being made with a local 2-metre station. If appreciable movement of the slug is required to restore resonance, indicating reactance in the feeder, neutralisation will be upset, and it may be advisable to repeat the whole operation with the aerial connected. The loading of the aerial coil thus introduced will increase the range of approximate neutralisation over which stability will be achieved and, therefore, the adjustment will not be so exact, but it will probably be more accurate than that resulting from readjustment of the slug after neutralisation in the unloaded condition.

An arrangement of this type, feeding a triode-connected 6AK5 as a mixer with control-grid injection, has shown a measured noise factor of 4.2 db.

Variations

Another scheme, tried with equal success, is illustrated in Fig. 3. In this case both halves of the 6J6 were connected in parallel, a three-element neutralising capacitor (Fig.

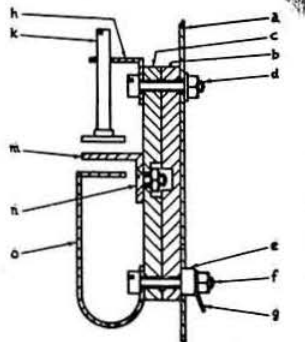


Fig. 4. Construction of the 3-element neutralising capacitor.

(a) Inter-circuit screen; (b) polystyrene 1½ in x ½ in x ½ in; (c) polystyrene 1½ in x ½ in x ½ in; (d) 6 B.A. cheese-head bolt, earthing (h); (e) insulating bush; (f) 6 B.A. cheese-head bolt; (g) soldering tag connecting to (o); (h) brass bracket 1/16 in thick, with ½ in x ½ in flanges ½ in wide, tapped 6 B.A. for (k); (k) 6 B.A. cheese-head bolt with ½ in diam. brass disc soldered to head; (m) brass bracket 1/16 in thick, with ½ in x ½ in flanges ½ in long, for grid-coil connection; (o) 26 s.w.g. phosphor-bronze electrode—part adjoining (m) ½ in x ½ in, remainder 3/16 in wide. The clearance between (o) and (m) should be about 1/32 in; capacity adjustment is by variation of overlap.

4) being constructed to ensure circuit balance.

The fixed half of the condenser was made equal to the data-sheet value of the two parallel anode-grid capacitances, plus $2\mu\text{F}$ for strays. The capacity was measured on an impedance bridge, but, as an approximate figure only is required, it could be calculated from the ordinary formula for parallel plate capacitors.

Neutralising adjustment was made by means of the earth-connected screw as already described. Since there is more capacitance across the coils than in the previous case, the coil sizes are smaller, but the higher valve slope produces an identical overall result. An A1714 valve used under these conditions (the 3-element condenser was re-set for the smaller valve capacitances, and the inductances increased) had a measured noise factor of 3.7 db. This arrangement was also tried with an earthed-grid stage between the r.f. amplifier and the frequency changer, an impedance step-down of about 10:1 being obtained by tapping the cathode coupling condenser towards the "earthy end" of the anode coil of the first stage. About 12 db more gain was obtained than in the cascode circuit, but there was no change in the noise factor, indicating that the original single stage was providing sufficient gain to over-ride the frequency changer noise.

Conclusion

The noise performance of this circuit is comparable with that of other popular arrangements and, in the writer's opinion, the stage is easier to construct and adjust. Although the actual gain is lower than with some other circuits, this is not an important factor, because the stage usually forms part of a converter ahead of an already highly sensitive communications receiver.

The Station Behind the Call-G3CJU*

STATION G3CJU—first licensed in 1947—is equipped for operation on most bands although work is principally confined to 14 Mc/s.

The equipment shown in the photograph comprises, from left to right, BC221 frequency meter, National NC-100A receiver, station control unit, type 145 v.f.o., crystal microphone (using a Mic-6 insert) and the main transmitter, the line-up of which is 6V6 Pierce oscillator (switched for crystal or v.f.o.)—6V6 frequency multiplier—807 buffer amplifier (or p.a. up to 60 watts) and 813 final. The r.f. stages are housed in the upper sections of the rack, with the modulator and power supplies below. The modulator comprises a 6SJ7 speech amplifier—6SN7 voltage amplifier and phase inverter—6SN7 driver, transformer coupled to p.p. 807s in Class AB2.

The control unit, which is the "nerve centre" of the station, performs the following operations by means of relays and switches: sets-up correct conditions for c.w. or 'phone; in the c.w. transmit position, lights a red warning lamp, permits the v.f.o. and transmitter to be keyed simultaneously, mutes the receiver and changes over the aerial; in the phone position, the send key (through the medium of relays) connects the aerial to the transmitter, applies the drive and h.t. and mutes the receiver, at the same time connecting the output from the phone monitor to the headphones.

Other equipment (not shown) includes a B2 transmitter-receiver, a No. 9 set (as a standby

*A. W. Grimsdale (ex-VU2WG), 164 London Road, Newbury, Berks.

for 3.5 Mc/s) and an SCR522, which is being converted for work on 144 Mc/s.

The aerials in use are a dipole for 14 Mc/s and a long wire for other bands.



A recent picture of G3CJU showing the neat arrangement of the operating position.

Although the station is equipped for 150 watts operation most of the work has been done with an input of 25/30 watts on both c.w. and 'phone, the results being comparable to those obtained with the 813.

An aid to operating convenience is a card index of stations worked, both as G3CJU and VU2WG.

Direct Reading Low-ohms Resistance Meter

FOLLOWING publication of the article by P. R. A. Dolphin (G3ELH) in the June, 1953, issue of the BULLETIN, H. W. Rees (GW3HWR) wrote to suggest that the difficulties encountered in measuring very low resistances may be overcome by providing four leads to the unknown resistance. The revised circuit is shown in Fig. 1. The leads from A and B terminate in

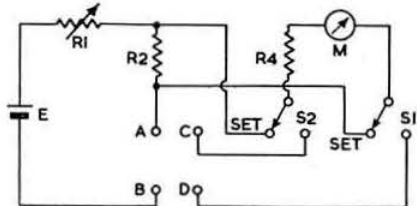


Fig. 1.—Revised circuit of the direct reading resistance meter. The component values are the same as in the original.

strong crocodile clips and those from C and D in sharp test prods. An example of the use of the instrument is illustrated in Fig. 2 where the

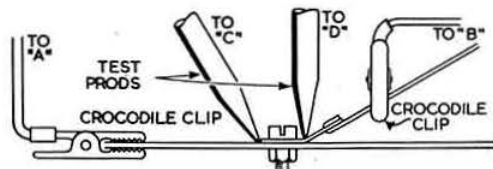


Fig. 2.—Method of connecting modified meter.

connection between a solder tag and chassis is suspect. A is connected to the chassis and B to the wire to the tag at any point; C and D are connected to the chassis and tag as near to the joint as possible. In this way the same current flows through the standard resistance R_2 as through the joint but the resistance of the connecting leads to A and B no longer affects the reading.

LAUSANNE CONFERENCE

Twenty Region I Societies Represented — International Committee Formed — Financial Responsibilities to be Shared.

THE deep waters of lovely Lac Lemman and the majestic snow-capped mountains of the Savoy provided a background of unusual beauty for the first International Amateur Radio Union (Region I) Conference, which opened on Thursday, May 14th, 1953, at the famous Hotel de la Paix, Lausanne.

No less than 13 of the 23 National Societies in Region I (Europe and Africa) sent delegates. Seven of the remaining Societies in the Region were represented by delegates from other countries.

The R.S.G.B. was represented by Mr. R. H. Hammans, G2IG (Vice-Chairman of the R.S.G.B. Technical Committee) who served as a Member of the Technical Committee, and Mr. John Clarricoats G6CL (General Secretary), who served as a Member of the Administrative Committee. Both of the R.S.G.B. representatives were present at the I.A.R.U. 25th Anniversary Conference in Paris three years ago. The General Secretary also represented the Society at the Atlantic City I.T.U. Conference in 1947.

Mr. Arthur Milne, G2MI (Acting Vice-President of R.S.G.B.), attended the Conference in his capacity as Hon. Secretary, Region I Bureau Committee.

Organisation

The organisation of the Conference was undertaken by Mr. Pierre Maeder, HB9CA, who had the assistance of a team of experts from U.S.K.A.

The use of simultaneous translation equipment assisted materially to speed up the work of the Conference.

Opening of Conference

The Conference was opened at 10 a.m. by the President of U.S.K.A. (Robert Grisch, HB9ER), who extended a warm welcome to the delegates from other countries and to a number of important official guests. Brief speeches were made by Dr. Metzler (Chief of the Radio Branch, P.T.T. Berne), Col. Div. Buttikofer (C-in-C. Signals, Swiss Army), Mr. W. F. Studer (a Member of the I.T.U. Council, Geneva) and a representative of the Lausanne Municipality, after which nominations were invited for the office of President of the Conference. Mr. Clarricoats proposed that the honour should be given to Capt. Per-Anders Kinnman, SM5ZD (President of S.S.A.). In support of his proposal Mr. Clarricoats referred to Capt. Kinnman's wide knowledge of international affairs and to his work on behalf of Amateur Radio in Sweden. The proposal was unanimously approved.

Capt. Kinnman expressed his thanks to the delegates for honouring both him and the Scandinavian Societies.

FIRST PLENARY ASSEMBLY

The first plenary session was opened at 11.15 a.m. with Capt. Kinnman in the Chair. A telegram of good wishes for the success of the Conference was read from Mr. Leslie Cooper, G5LC (President, R.S.G.B.). Greetings to the Conference were also conveyed in a letter from S.A.R.L. to the R.S.G.B. authorising the delegates of that Society to represent the South African Radio League. A message of greetings was read by one

of the three delegates from the Yugoslav Society (S.R.J.).

A proposal by Mr. R. H. Hammans, G2IG, that Mr. Harry A. Laett, HB9GA, should be Chairman of the Technical Committee, met with unanimous support, as did a proposal by Mr. J. Oesterlund, OH2QM, that Mr. W. J. L. Dalmijn, PA0DD, should be Chairman of the Administrative Committee.

Mr. Clarricoats proposed, and the delegates agreed, that Mr. Arthur Milne, G2MI, should act as Secretary to the Congress.

Messrs. J. J. Mussche, ON4BK, and J. E. Lienhard, HB9DM, were appointed Joint Secretaries to the Technical Committee. Dr. R. Sesia, IIFA, and Arthur Milne were appointed to undertake a similar task on behalf of the Administrative Committee.

After a brief speech by the President, each delegate introduced himself to the Assembly.

Preliminary Discussions

Mr. Laett referred briefly to the tasks which faced the members of the Technical Committee and outlined a method of procedure for dealing with the very comprehensive agenda. He expressed the view that the technical skill and knowledge of the members of the Committee could make a valuable contribution to the art of Amateur Radio within the Region.

Mr. Dalmijn asked that the Conference should decide whether or not Region I Bureau is to continue to function and whether or not the present Conference supports the view expressed in Paris three years ago that Region I should be represented at any future I.T.U. Conference where matters concerning the Amateur Service are due to be considered.

After general discussion it was proposed by D.A.R.C., seconded by R.S.G.B. and agreed, that the work of Region I Bureau should be continued. It was further agreed to discuss the future of Region I Bureau at the first meeting of the Administrative Committee.

ADMINISTRATIVE COMMITTEE

Session I, 2.15 p.m. May 14, 1953.

The meeting opened with a survey by Mr. Milne of Region I Bureau activities since the time of the Paris Conference. Mr. Milne explained that the Bureau was set-up to provide information on licence and other matters of general interest to the Societies in the Region. The R.S.G.B. had been asked by the Societies represented at the Paris Conference to act as the Bureau Society. The Council of the R.S.G.B. had accepted the invitation and had agreed to set aside a certain amount of money for the purpose of running the Bureau. In actual practice the cost had been negligible, mainly because the expense of printing the first issue of "Region I Bureau News" had been borne by Members of the Region I Bureau Committee. Mr. Milne regretted that the Bureau had not been able to undertake as much work as had been anticipated in Paris. This had been due largely to the fact that Members of the Committee had been fully

engaged on internal R.S.G.B. affairs. The one and only number of "Region I Bureau News" had been well received, but Mr. Milne questioned whether the project, if continued, would serve any useful purpose because of the irregular dates of publication. He considered that it would be better to issue information to the various societies whenever special matters arise.

Mr. Milne expressed the view that it is essential, if societies are to be kept properly informed on international matters, for a Liaison Officer to be appointed by each Society. The duty of the Liaison Officer would be to maintain close contact with the Region I Bureau Executive.

Mr. Milne explained that, at present, the control of Region I Bureau is in the hands of a small Committee appointed by the Council of the R.S.G.B. The Society would, he believed, be ready to hand-over the organisation of the Bureau to any European Society able to undertake the duties involved.

After a brief discussion it was agreed to defer further consideration on the future of the Region I Bureau until the Administrative and Technical Committees have decided what work they wish the Bureau to undertake.

The Low Frequency Bands

The delegate of the R.S.G.B. (Mr. Clarricoats) referred to the recent changes in Top Band allocations which had occurred in the U.K. and reminded the Committee that seven Administrations in addition to the U.K. agreed at Atlantic City to allocate up to 200 kc/s in the band 1715-2000 kc/s to the Amateur Service. In view of that fact he recommended that the representatives of the amateurs in the seven countries concerned (Austria, Ireland, the Netherlands, Northern Rhodesia, Southern Rhodesia, Switzerland and the Union of South Africa) should, if permission has not already been given, make an early application to use frequencies in the Top Band.

The delegate of O.V.S.V. pointed out that amateur licences are not at present being issued by the Austrian Government. The delegate of U.S.K.A. explained that, although Swiss amateurs are not officially licensed to use frequencies in the Top Band, the P.T.T. is prepared to allow experiments to be conducted in that band. The delegate of V.E.R.O.N. stated that no attempt had, so far, been made to enlist the support of the authorities for the use of Top Band frequencies by Netherlands amateurs.

During a general discussion on the 3.5 Mc/s band it was disclosed that Italian amateurs, for some reason which had not been explained, are allowed to use only 34 kc/s between 3.5 and 3.8 Mc/s.

The delegate of D.A.R.C. stated that the German licensing authorities were anxious that German amateurs should be allowed to use the 3.5 Mc/s band with as little interference from other Services as possible. Already a number of Services had been transferred to other bands. The view was expressed that unless amateurs in Region I make the fullest possible use of the 3.5 Mc/s band it may be lost to the Amateur Service at the next I.T.U. Conference. Reference was made to the fact that, during the recent flood emergency, stations in other countries "moved in" on the Dutch network under the mistaken belief that the channel was free from amateur operation.

I.A.R.U. Region I International Committee

Chairman: Capt. Per-Anders Kinnman (SM5ZD), *Vice-Chairman:* W. J. L. Dal-
mijn (PA0DD), *Honorary Secretary:*
Arthur O. Milne (G2MI), *Members:* John
Clarricoats (G6CL), Reg. H. Hammans
(G2IG), Harry A. Laett (HB9GA).

In view of the fact that certain Administrations appear not to have assigned the full Atlantic City frequency allocations to their amateurs it was agreed to

Recommend to the Plenary Assembly that Region I Bureau shall send a questionnaire to each Region I Society, in order to obtain detailed information concerning licence conditions in that country.

In order to obtain the maximum liaison between the various Societies in Region I it was agreed to

Recommend to the Plenary Assembly that every Region I Society shall appoint a permanent Liaison Officer to act as a contact between his Society and Region I Bureau.

It was also agreed that each Liaison Officer shall be supplied with a copy of "International Radio Regulations, Atlantic City, 1947" (obtainable from H.M.S.O., London, price 3/6).

During a discussion on operating practices the



Region I International Committee

All six members of the newly-formed Region I International Committee appear in this picture taken outside Conference Headquarters. From left to right: SM5ZD (President of the Committee and of the Conference), PA0DD (Chairman of the Administrative Committee), G2MI (Hon. Secretary to the Committee and to the Conference), HB9GA (Chairman of the Technical Committee), G6CL (General Secretary, R.S.G.B., and Member of the Administrative Committee), PA0LR (Member of the Administrative Committee) and G2IG (Vice-Chairman, R.S.G.B., Technical Committee and Member of the Technical Committee). SM5ZD, HB9GA, PA0DD, G2IG, G2MI and G6CL constitute the Region I International Committee.

delegate of the R.S.G.B. urged the use of the minimum input power when effecting communications on the low frequency bands.

The delegate of S.S.A. reported that in Denmark the licensing authorities had recommended the use by amateurs of N.B.F.M. on 3.5 Mc/s in order to reduce interference to broadcast reception.

The DX Bands

The delegate of the R.S.G.B. outlined the current position in the United Kingdom and drew particular attention to the difficulties which had arisen as the result of the continued operation of broadcast stations in the exclusive amateur part of the 7 Mc/s band. References were made to the demands at the Atlantic City Conference for frequencies in the 7 Mc/s amateur band for Tropical Broadcasting and to the requirements of the United Kingdom, France and Russia for allocations in the same band for propaganda broadcast purposes. The delegate of the R.S.G.B. urged that all Region I Societies should report consistent "intruders" in the exclusive amateur DX bands.

The delegate of D.A.R.C. submitted a list of "intruders" which had been logged by German amateurs. An examination of the list showed that practically all of the offending stations were operating in countries which had not taken part in the Atlantic City Conference. After considerable discussion it was agreed to

Recommend to the Plenary Assembly that Region I Bureau be asked to produce a standard form of log sheet for recording details of persistent intruding stations in exclusive amateur bands.

Mr. Milne expressed the hope that, prior to the next I.T.U. Conference, all I.A.R.U. Societies would use their best endeavours to see that their particular country is officially represented. Much of the present difficulty would have been avoided if Spain had been represented at the Atlantic City Conference.

The delegate for D.A.R.C. was of the opinion that a good deal of the interference on 7 Mc/s emanates from "intruders" in countries where the liaison with Region I Bureau is poor.

Information was obtained for record purposes of the Administrations that had already implemented the Atlantic City decisions in regard to amateur occupancy in the 7 Mc/s band.

Review of the European Band Plan

The delegate of the R.S.G.B. reminded the Committee that the present Band Plan had been put forward by that Society at the Paris Conference and had been unanimously accepted. Since that time the plan had been adopted with marked success by all Societies in Region I.

The delegate of S.R.A.L. agreed that the plan had worked well, except for a few amateurs who had persisted in ignoring it.

The delegate of V.E.R.O.N. concurred and expressed the view that it would not be wise to make the plan obligatory.

Considerable criticism was levelled against American Military and civilian personnel in Region I who use amateur frequencies for traffic handling. It was reported that many DL4 stations use phone patches for linking-up persons in remote areas with radio amateurs in the U.S. and elsewhere. The view was expressed that such actions are contrary to the Spirit of Amateur Radio as it is understood in Region I.

It was agreed unanimously to

Recommend to the Plenary Assembly that

Region I Bureau be asked to protest strongly to I.A.R.U. Headquarters regarding the misuse of amateur bands by U.S. Military and civilian personnel in Region I.

The delegate of D.A.R.C. suggested that the present Band Plan should be modified to permit the use of telegraphy as well as telephony within the portion from 3.6 to 3.8 Mc/s. The delegate of S.S.A. stated that Swedish amateurs had adhered to the present plan except that telegraphy is permitted between 3.6 and 3.8 Mc/s.

The delegate of D.A.R.C. explained that his suggestion was only intended to apply when it becomes difficult to continue contact on telephony. Mr. Milne considered that the D.A.R.C. proposition would be difficult to administer.

It became clear from the discussion that, with the exception of Italy, the United Kingdom and Switzerland are the only two countries in Region I who have not released the frequency band between 3635 and 3685 kc/s to amateurs. In the case of Switzerland, however, the band is open up to 3950 kc/s.

The delegate of S.S.A. suggested that, in the 14 Mc/s band, the channel 14000-14100 kc/s (instead of 14000-14125 kc/s) should be set aside for telegraphy only.

The session terminated at 5 p.m.

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Session II, 9.15 a.m. May 15, 1953

Review of European Band Plan (Continued)

After further discussion the delegate of S.S.A. withdrew his proposal regarding the 14 Mc/s band.

It was thereupon agreed to adhere to the present Band Plan in its entirety.

Future of Region I Bureau

After thanking the R.S.G.B. for acting as the Region I Bureau Society since 1950, the delegate of S.R.A.L. proposed that a small Sub-Committee be set up to consider the future of the Bureau.

Mr. Milne suggested that for the next three years the Committee responsible for organising the Bureau should be members of a Continental European Society.

The delegate of A.R.I. expressed the hope that the R.S.G.B. would be willing to continue to act as the Region I Bureau Society even if the organisation of the Bureau is undertaken by a Committee drawn from European Societies.

The delegates of U.S.K.A., V.E.R.O.N. and other Societies supported the Italian viewpoint.

At this stage it was agreed to appoint a small Sub-Committee, consisting of Messrs. Osterlund, OH2QM, Assman, DL3DC, and Schiff, IIAXD, to consider how best the interests of Region I Societies can be safeguarded.

The members of the Sub-Committee then left the meeting to begin their deliberations.

C.C.I.R. Reunion

The delegate of R.S.G.B., after referring to the C.C.I.R. Reunion to be held in London during September, 1953, stated that arrangements are to be made by that Society to provide opportunities for radio amateurs attached to official delegations to meet socially.

It was agreed that Societies in the Region should endeavour to provide the R.S.G.B. with the names of those official delegates who are also amateurs.

Liaison with Licensing Authority

The delegate of the R.S.G.B. explained how that Society maintains liaison with the Technical

and Administrative Departments of the British Post Office. Other delegates also explained the methods of approach used in their own country. It became clear during the discussion that several licensing authorities are at present giving consideration to new terms and conditions governing the operation of amateur stations.

The delegate of D.A.R.C. reported that in the case of German amateur stations power is measured in terms of anode dissipation and not as input to the valve or valves delivering power to the aerial.

The delegate of the R.S.G.B. gave details of the charges made by various administrations for Amateur Licences and stated that a summary of the information would be circulated for information at a later date.

The delegate of S.R.J. mentioned that his Government had issued 320 licences, of which number 30 are held by Clubs. There are 62 separate amateur stations in Yugoslavia.

The V.H.F. and U.H.F. Bands

The delegate of the R.S.G.B. informed the Committee that U.K. amateurs are authorised to use all v.h.f. and u.h.f. allocations as agreed at the Atlantic City Conference.

The delegates of S.S.A., U.S.K.A. and S.V.J. reported that the Atlantic City table had been fully implemented in Sweden, Switzerland and Yugoslavia respectively.

The delegate of the D.A.R.C. reported that at present German amateurs are only permitted to operate in the 2m. and 70 cm bands.

The delegate of R.E.F. stated that a number of French amateurs are using the 72 Mc/s band.

(In France and the U.S.S.R. the band 72—72.8 Mc/s is allocated to the Amateur Service).

The delegate of A.R.I. reported that about 100 Italian amateurs are active in the bands 144—146 Mc/s and 420—450 Mc/s.

The delegate of V.E.R.O.N. stated that Amateur Television is permitted in Holland on frequencies within the band 144—146 Mc/s. All other Atlantic City v.h.f. and u.h.f. allocations are open to Dutch amateurs.

Emergency Communication Schemes

The delegate of the R.S.G.B. summarised the United Kingdom viewpoint on the establishment of emergency communication schemes and explained what the Society had done to date. The delegate of S.S.A. congratulated the R.S.G.B. on the steps which that Society had taken to set up an emergency communications scheme.

During the discussion it was agreed to request the Technical Committee to give consideration to the question of frequencies to be used for emergency services.

The delegate of A.R.I. stated that during the Po River floods Italian amateurs co-operated closely with the Red Cross and other public services. Frequencies in the 14 Mc/s band were used.

The Chairman, after giving an account of the emergency arrangements which operated in the Netherlands during the recent floods, expressed the view that the success of the Dutch amateur network could be attributed to the fact that it was not over-organised.

Mr. Milne agreed with the Chairman that a rigid organisation is not necessary but those par-

ticipating in emergency relief work should know how to contact the Red Cross, Police and other public services. Amateur Communication Networks should be officially recognised. The Chairman stated that V.E.R.O.N. proposes to publish a book, written in simple form, to explain what was done in Holland during the floods.

The delegate of R.E.F. stated that an offer to help in an emergency had been made to the French P.T.T. but to date it had not been accepted.

During the recent emergency, Belgian amateurs offered to help, but were told not to interfere with the Dutch network on 3.5 Mc/s. An emergency service between Ostend and Bruges was eventually set up with the aid of motor vehicles.

The delegate of D.A.R.C. stated that German amateurs had been asked by the G.P.O. to submit proposals for emergency operation.

Dr. Arthur Gee (G2UK)—who was an observer at the Conference—related how official communications had failed during the recent floods in East Anglia.

The session terminated at 12.50 p.m.

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Session III. 2.45 p.m. May 15, 1953

International Portable Operation

The delegate of the R.S.G.B. outlined the views of the Society on the question of international portable operation. It was explained that the principle of reciprocity as between administrations is the keynote to the proposal to allow the qualified radio amateurs of one country to operate portable equipment in another country for short periods.

The delegate of R.E.F. agreed that the idea was very sound but in the case of France it is very difficult for even French amateurs to obtain permission to operate portable equipment. The delegate of A.R.I. stated that portable operation is not permitted in Italy.

The delegate of S.S.A. agreed that the idea was excellent, but he doubted whether the Swedish P.T.T. and Military authorities would allow foreign amateurs to operate portable equipment in that country. If, however, any other administration is willing to consider introducing reciprocal arrangements S.S.A. would be glad to approach the Swedish P.T.T. The delegate of D.A.R.C. stated that portable operation is permitted in Western Germany. In addition any qualified person permanently resident in Western Germany is permitted to operate an amateur station. The D.A.R.C. would be willing to approach the West German licensing authority on the question of reciprocal arrangements.

The delegates of V.E.R.O.N. and S.R.J. expressed doubts whether their respective administrations would permit foreigners to operate portable equipment.

Mr. Milne stated that he was not prepared to accept the argument of security. If a person intends to operate a radio transmitter in a foreign country he will do so—knowing the risks. The proposals put forward by R.S.G.B. would ensure that no abuses occurred. The delegate of R.E.F. stated that reciprocity already exists between France, Belgium, Switzerland, the Netherlands on certain aspects of amateur transmitting.

It was finally decided that two or more of the countries which at present enjoy fixed station reciprocity arrangements should endeavour to

obtain the approval of their respective administrations to portable station reciprocity.

Region I Field Day

The delegate of the R.S.G.B. expressed the hope that, in future years, all National Societies in Region I would hold a National Field Day during the same weekend. For the current year U.B.A., V.E.R.O.N., U.S.K.A., R.E.F. and D.A.R.C. are to hold a National Field Day to coincide with the R.S.G.B. event.

It was agreed to.

Recommend to the Plenary Assembly that the Societies in Region I be asked to consider the desirability of ensuring that their National Field Day activities coincide with the R.S.G.B. event.

QSL Cards

The delegate of S.S.A., on behalf of N.R.R.L., suggested that the Universal Postal Union be asked to agree that QSL cards sent in bulk should be accepted at the Commercial Paper Rate. It appeared that the Norwegian Post Office had insisted that QSL cards sent in bulk should be treated as parcels.

Mr. Milne (speaking as Manager of the R.S.G.B. QSL Bureau), expressed the view that it would be unwise to ask the U.P.U. for the matter to be discussed.

During the debate it became clear that a number of countries allow cards to be sent at the commercial paper rate whilst others have adopted the principle that QSL cards are not commercial papers.

It was finally agreed to

Recommend to the Plenary Assembly that Region I Bureau be instructed to request I.A.R.U. Headquarters to approach the Universal Postal Union in Berne with a view to a decision being reached that all QSL cards sent in bulk shall be carried at the "Commercial Paper" rate.

The R.S.G.B. voted against the recommendation which was carried by 15 votes to 1.

Amateur Radio Camps

The delegate of S.S.A. suggested that steps should be taken to give widespread publicity to Amateur Radio Camps.

It was agreed to

Recommend to the Plenary Assembly that Region I Societies which intend to hold Summer Camps or similar functions should be asked to inform Region I Bureau at least three months in advance so that other Member-Societies can be informed.

It was agreed that in order to avoid abuses the negotiations in each case shall be conducted initially through the respective National Societies.

Common Phonetic Alphabet

The delegate of S.S.A. suggested that the Committee should draw up a new phonetic alphabet for use by telephony stations.

The delegate of the R.S.G.B. explained that a great deal of time had been spent at the Atlantic City Conference in drawing-up a new phonetic alphabet. This had not, however, met with universal approval; consequently in amateur circles, at any rate, the Inter-Services alphabet, introduced during the 1939-45 war, had been widely adopted. He suggested that it would not be desirable to

introduce yet another phonetic alphabet.

After hearing the views of the R.S.G.B. the delegate of the S.S.A. agreed that no further action need be taken.

Austrian Position

The delegate of the R.S.G.B. explained to the Committee that, for political reasons, Amateur Radio was banned in Austria. Although the United Kingdom and possibly France and the United States were prepared to allow Amateur Radio to restart, they were powerless unless all four Members of the Allied Control Commission expressed agreement. The U.S.S.R. appeared not to be in favour.

The position had become more complicated because the U.S. Federal Communications Commission had informed U.S. amateurs that they must not work with Austrian amateurs. This state of affairs had been brought about because the Austrian Government had been forced by the Allied Control Commission to notify the I.T.U. that Amateur Radio is not permitted in that country. The delegate of the R.S.G.B. reminded the Committee that at the opening of the Conference the Austrian delegation had handed to all other delegates a full statement of the current position. He expressed the view that the delegates present should use such influence as they may possess to obtain an improvement in the situation.

The delegate of the R.E.F. agreed to take up the question, privately, with the French representatives on the Allied Control Commission.

The delegate of O.V.S.V. thanked the Committee for its sympathetic appreciation of the present position in Austria.

Region I Contests

The delegate of the R.S.G.B. expressed the view that as the European DX Contest had, apparently, lost its appeal, it should be dropped from the calendar of events.

The delegates of several other Societies supported that view.

The delegate of D.A.R.C. hoped that the Committee would agree to limit the number of European Contests to not more than four a year. He suggested as a basis that the Region should organise a DX Regional Contest, a V.H.F. Contest, a Field Day event and an Inter-Regional Contest on the lines of the A.R.R.L. Sweepstakes Contest.

Mr. Milne considered that the A.R.R.L. and "CQ" DX Contests were the only two events which have an international appeal. He suggested that local DX Contests might perhaps be linked-up with the "CQ" Contest.

The delegate of the R.S.G.B. referred to the lack of support for the 1951 European DX Contest organised by the R.S.G.B. and for the 1952 event organised by E.D.R.

After a lengthy discussion it was agreed by 9 votes to 3 to

Recommend to the Plenary Assembly that International DX Contests be decreased in number and that the European DX Contest be discontinued.

The delegate of the R.S.G.B. read to the Committee a letter from Mr. B. W. F. Mainprize, G5MP, suggesting that the number of European Contests should not be reduced.

The delegate of the D.A.R.C. agreed to discuss

his Society's proposals for an Inter-Regional Contest with the R.S.G.B.

Certificates and Awards

The delegate of the D.A.R.C. expressed the view that there are too many minor Certificates and Awards in existence which have little real significance.

The delegate of the R.S.G.B. considered that the Committee might be criticised if any attempt were made to tell Societies what they should or should not issue.

The delegate of A.R.I. tabled specimens of a new Worked all Mediterranean Countries certificate, the rules for which require that contacts shall have been made after June 1st, 1952. Mr. Milne considered it was unfortunate that A.R.I. and certain other Societies had introduced a rule barring contacts made before a specific date. Mr. Milne pointed out that Amateur Radio did not start in 1945. Contacts made prior to the war should be regarded as valid for all awards.

After a lengthy discussion it was decided to make no recommendation to the Plenary Assembly.

Future I.T.U. Administrative Conferences

The delegate of the R.S.G.B. expressed the view that the next Conference to consider a revision of the Radio Regulations is unlikely to be held before 1957 and possibly much later. Atlantic City Radio Regulations (insofar as they affect frequency allocations) had not yet been fully implemented, notwithstanding the fact that the Conference, at which the regulations had been approved, took place in 1947.

Mr. A. L. Budlong (Secretary, A.R.R.L.) had confirmed that no Administrative Radio Conference had been specifically provided for in the future. The view in official circles is that a reasonable opportunity must be provided to make the Atlantic City frequency allocation plan work.

In the light of the above information the delegate of the R.S.G.B. considered that Societies in Region I should plan to establish a Fund which would enable the Region to be represented by one or two delegates at a Conference to be held during some period between 1957 and 1960.

Emergency Communications

The delegate of the D.A.R.C. suggested that Emergency Communication Networks should adopt the signal QRR.

Mr. Milne agreed to bring the suggestion to the notice of the R.S.G.B.

QSL Cards

Mr. Milne drew attention to the fact that certain Societies in Region I refuse to allow non-members to collect cards. He considered that it is the duty of every Society to provide facilities for non-members to collect cards.

Various viewpoints were expressed, after which it was agreed to

Recommend to the Plenary Assembly that Region I Societies should give careful consideration as to whether or not non-members of their respective societies should be allowed to collect cards which come to the National QSL Bureau.

The opinion was voiced that those Societies who, at present, do not accept cards for non-members might be well advised to review their attitude.

The Future of Region I Bureau

Consideration was given to a Report prepared by the Sub-Committee appointed to put forward

proposals in regard to the future of Region I Bureau.

The Report visualised the setting up of a special organisation (centred around the R.S.G.B.) with a General Secretary responsible to an International Committee. It became clear from the Report that the Members of the Sub-Committee were unaware of the extent of the duties which fall upon the General Secretary of the R.S.G.B. or of the amount of work which would have to be undertaken if the full proposals were adopted.

After a lengthy discussion it was agreed that the Chairman, together with other Members of the Committee, should examine the proposals of the Sub-Committee with a view to putting forward a more realistic plan.

The session terminated at 6.25 p.m.

* * *

Session IV. 9.30 a.m. May 16, 1953

Approval was given to the Recommendations of the Committee which had been adopted to date.

Future of Region I Bureau

During a further lengthy discussion on the Report of the Sub-Committee, Mr. Milne expressed the view that "Region I Bureau News" should be discontinued and replaced by the issue of circulars dealing with matters of topical interest.

The Chairman emphasised that the chief purpose of the Bureau is to create liaison organisations to defend the amateur bands.

The delegate of the R.S.G.B. emphasised that, in the past, many of the Societies in Region I had either ignored or had been slow in answering requests for information.

Following a private meeting between the Chairman and other delegates, the Committee agreed to

Recommend to the Plenary Assembly:—

- (1) That the Radio Society of Great Britain shall be asked to continue to act as the Region I Bureau Society.
- (2) That an International Region I Committee shall be set up.
- (3) That the Committee shall consist of five Members and an Honorary Secretary, of which Members, three shall be members of Societies outside the United Kingdom.
- (4) That a Fund shall be established immediately to enable Region I Bureau to continue to function effectively. All monies for this Fund to be paid direct to R.S.G.B. London annually on July 1st, commencing July 1st, 1953.
- (5) That a Fund be established to enable members of the International Committee to attend meetings of that Committee in London. All monies for this Fund to be paid direct to a Swiss bank annually on January 1st, commencing January 1st, 1954.
- (6) That a Fund be established to enable the Societies in Region I to send a delegation to the next I.T.U. Administrative Conference. All monies for this Fund to be paid direct to a Swiss bank annually on January 1st, commencing January 1st, 1954.

The Committee further agreed to advise the Plenary Assembly that it had considered the financial implications of the above recommendations and had decided that, for the next three years, the total amount to be paid annually by the

23 Societies in Region I to each of the three funds shall be £400.

The Committee agreed that the total amount to be paid annually by each Society shall 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 annual contribution due to be paid by the R.S.G.B. is £336, based on 7,500 licences—28%—out of a total for the Region of 25,760 licences, and a total for the three funds of £1,200.)

The delegate of the R.S.G.B. did not vote on Recommendations 4, 5 and 6.

The delegates of A.R.I., E.D.R. and S.S.A. reserved their vote on Recommendations 4, 5 and 6 because the number of members in their respective societies is considerably less than the number of licences in force. The delegate of A.R.I. stated that of the 3,100 licence holders in Italy only 1,600 were members of A.R.I. The figures for Sweden were 1,800 and 1,200 respectively.

The session terminated at 1.25 p.m.

Session V. 2.35 p.m. May 16, 1953

The delegate of U.S.K.A. proposed and it was agreed to

Recommend to the Plenary Assembly that the Assembly shall officially declare its sympathy with the radio amateurs of Austria in that they are not permitted fully to pursue their hobby.

Vote of Thanks to Chairman

The delegate of the R.S.G.B. proposed that a vote of thanks be recorded to Mr. Dalmijn for the able manner in which he had conducted the business of the Committee.

The Chairman expressed his appreciation of the valued services given by the Secretaries to the Committee and by the interpreters.

The session terminated at 3 p.m.

TECHNICAL COMMITTEE

An account of the deliberations of the Technical Committee, together with a summary of the various recommendations which were approved by the Plenary Assembly will be published in a forthcoming issue of the BULLETIN.

The recommendations deal with Operating Standards, the use of the R.S.M. Code, Systems of Transmission, Amateur Television, V.H.F. Propagation, Microwave Development and Licence Conditions.

The Technical Committee also prepared a statistical table of the present licensing conditions in the countries represented at the Conference.

SECOND PLENARY ASSEMBLY.

The President (Captain Per-Anders Kinnman) read to the Assembly a telegram of good wishes from Mr. A. L. Budlong (Secretary, I.A.R.U.).

The Secretary was requested to arrange for a suitable expression of thanks to be sent to Mr. Budlong.

The Assembly then considered the Recommendations of the Technical Committee. The Recommendations were approved subject to minor amendments suggested by the R.S.G.B.

The Assembly then considered the Recommendations of the Administrative Committee.

Arising from a consideration of the Recommendation relating to the future of Region I Bureau the following were elected to serve as Members of the International Committee:—
Capt. Per-Anders Kinnman, SM5ZD, *Chairman*.

Mr. W. J. L. Dalmijn, PA0DD, *Vice-Chairman*.
Mr. Arthur Milne, G2MI, *Honorary Secretary*.
Mr. John Clarricoats, G6CL, *Member*.
Mr. R. H. Hammans, G2IG, *Member*.
Mr. H. Laett, HB9GA, *Member*.

Mr. Robert Grisch, HB9ER, was an unsuccessful candidate for election to the Committee.

The Recommendations of the Administrative Committee were then approved.

The President expressed his satisfaction with the work of the Conference and thanked those who had been responsible for the arrangements.

Mr. Milne voiced the thanks of all delegates to Mr. Pierre Maeder, HB9CA and those associated with him in the organisation of the Conference, remembering especially the translators and clerical staff.

* * * Lausanne Conference

At a Meeting of the Council of the Society held on June 18, 1953, the Report of the I.A.R.U. Region I Conference, as set out above, was approved, and the various Recommendations contained therein adopted. The most important aspect of this decision is that the Council has accepted, on behalf of the R.S.G.B., the financial proposals put forward at the Conference for safeguarding the interests of amateurs in Region I.

SEVENTH ANNUAL R.S.G.B. AMATEUR RADIO EXHIBITION, NOVEMBER 25-28, 1953

Amateur Radio Stations at Eltham Scouts' Coronation Celebrations

TWO Amateur Radio stations, manned by members of the Eltham and Sidcup Group, were in operation in the grounds of Eltham Palace from May 23 to 25, 1953, in connection with the local Scouts' Coronation Celebrations. A *Panda* Table Top transmitter was operated on 14 Mc/s using the call-sign GB2ER, with a "ZL Special" aerial and a G.E.C. BRT.400B receiver. GB3ER (on 3.5, 7 and 14 Mc/s) employed a *Q-max* 40 watt transmitter, a *Marconi* CR.150 receiver, a 135 ft. end-fed aerial and a 14 Mc/s beam. More than 100 stations in 20 countries were worked despite the exceptionally high local noise. Some difficulty was also experienced due to the unusual call-signs, lengthy explanations being frequently necessary.

Special QSL cards are being sent to all stations worked. Cards for GB2ER and GB3ER should be sent to G3GJW via the R.S.G.B. QSL Bureau.



A view of the operating position at GB3ER showing the *Q-Max* transmitter and *Marconi* CR150. G2WI is holding the microphone, and G3GJW is at the receiver.

R.S.G.B. BULLETIN, July, 1953.

National Field Day, 1953

A Preliminary Report on an Outstanding Event

DESPITE periods of poor weather, the Coronation Year National Field Day was an outstanding success. Reports from all parts of the country suggest that however few or however many the number of points scored enthusiasm for this most popular of Amateur Radio contests was greater than ever before.

Around the Stations

Most stations shared the same air of being a cross between a Signals "scheme" and a holiday under canvas. Not so however, with the Sutton and Cheam Group who set up their equipment in the beautiful grounds of Banstead Hall. Tents were, of course, used for the actual stations but in addition several caravans were also en site. Their nearby rivals—East Molesey—on the other hand chose a location deep in the Surrey countryside at Broadmoor (near Dorking). One of their two stations looked more like an outpost of the Empire, complete with flag flying, although not all those present were able to preserve the pukka sahib look. More serious matters claimed the attention of the Master Cook shown in the photograph. It



G3IIR/P, one of the Norwood and District Group stations. G3IIR is operating and G3IRF logging.

was at this site that Headquarters party—under the skilful guidance of President Leslie Cooper (G5LC)—explored some of the surrounding country in what seemed, at the time, to be tropical heat. Fortunately the monsoon did not break then but torrential rain made the dismantling process rather unpleasant. From this peaceful rural retreat it was a far cry to the rather unusual Walsall site, for this year their N.F.D. stations became one of the main attractions at the Bloxwich Carnival. One member of the public expressed keen disappointment on learning that a 40 ft. mast was not for the use of a high wire acrobat! Nevertheless, members of the group answered many queries about Amateur Radio and distributed informative leaflets.

Some Notable DX

The Guildford-Woking Group set up their stations in a hilltop clearing not far from the famous beauty spot of Newlands Corner and on the site which in past years has proved a good starting point for signals. Their efforts were well rewarded although, like many others, they found

conditions on 14 Mc/s rather "patchy." The spot chosen by the Leicester Group was on Sconsbrough Hill where enthusiasm was so intense that the general topic of conversation in the "local" during the Saturday evening was the latest N.F.D. score! The Bristolians—1952 winners—again chose Dundry Hill where they erected ten masts. The success of their aerial systems is evident in the amount of notable DX worked during the contest. Members of the Group may be excused for feeling hopeful that once again they will be well in the running. The Aberdonians used different locations for their A and B stations but although they did not "set the heather on fire" they had a first-class weekend. That indeed is how many groups seem to view N.F.D.

The Equipment

Although much originality is still to be seen at every station, it did seem to the writer that there must have been an "issue" of *National HROs* for the 1953 N.F.D.! The general standard of equipment is no doubt rising and every effort continues to be made to attain the utmost efficiency and operating convenience. With the intense competition which now exists—and it is likely to increase when more European societies hold their field day events on the same date—every improvement is likely to pay handsome dividends.

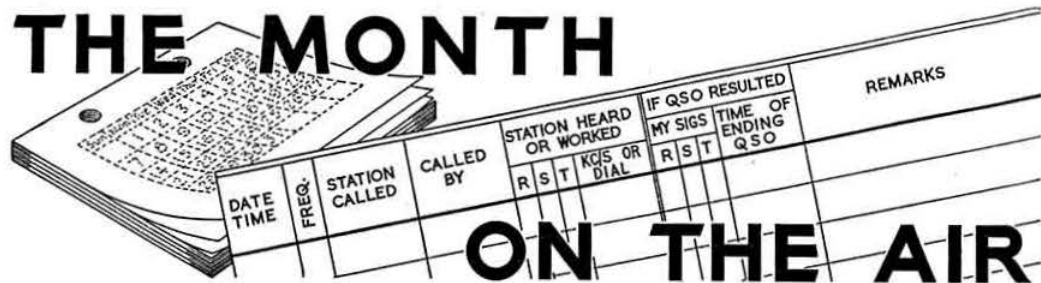
The successful stations realise that in addition to manning the operating positions continuously there are a hundred and one other jobs to be taken care of, not least the dull task of keeping the batteries charged. Nevertheless, the "phut-phut" of a chore-horse will remain a nostalgic memory for many until next year's event.

One point is proved very decisively by N.F.D.—given a good site, plenty of DX can still be worked using low power.



Peter Bradley (G8KZ) in action at the East Molesey Group station G8SM/P.

THE MONTH



BY ARTHUR O. MILNE, G2MI*

Monaco

G6LX and G4QK have obtained a licence to operate in Monaco using the call-sign 3A2AY. Before leaving G-land, they told us to look out for them on 3.5, 7, 14 and 21 Mc/s phone and c.w. during the period July 8 to 18. The transmitter is EF42-EF42-6AG7-815 with 25 watts input. The receiver is a Hammarlund HQ120X with crystal controlled converters for 14 and 21. Cards should be sent via R.S.G.B.

Notes and News

From G3CMH (Yeovil) comes news that the Club station there is very active on 21 Mc/s. VQ3RJB (Box 107, Moshi) has been heard but VQ4RF is still the outstanding DX station on that band. CMH says the AG QSL Bureau is now Box 5, Trieste. Cards for KV4BD should be sent to P.O. Box 588, Christiansted, St. Croix, Virgin

R.S.G.B. QSL BUREAU: G2MI, BROMLEY, KENT

Is. and for VS9GV c/o I.A. Ltd., via Aden Airways, Aden.

G8FC (Locking) sends the following calls and frequencies: CR4AJ, 14006, 1900; CR9AH, 14120, 1500; ET2IK (By the way, all MI calls have now been changed to ET2) 14056, 2010; HC1GL, 14014, 0015; MP4BBL, 14050, 1940; MP4KAB, 14154, 1515; VQ9MR (status unknown), 14025, 2000; YK1AH, 14025, 1518; ZP9RY, 14120, 2200; VS9AR c/o R.A.F., Khomaksar, Aden.

B.R.S. 19771 (Worthing) reports CR5SP active in Sao Tome Is. He asks if anyone has had a QSL from VQ6MY? Yes, all contacts have been QSL'd. Your report should be sent to G6LX who holds the log. A card from FM7WF arrived after a long delay, but it is understood that the French QSL Bureau is now under new management and that better service may be expected. B.R.S.19771 gives the address of CP1BT (heard at 2330) as Box 194, La Paz, Bolivia. He has also logged VP5BF, 2230 and OZ7EJ/MM on an oil tanker. He has received a card from KB6AQ (Canton Is.).

G3EMD (Birmingham) offers the following: W5RYF/VE8 (Padloping Is.) at 2030; CP5AB and CP5EK at 1950; DU1FC and DU7SV, 1755. He asks for a list of the various certificates which are now available throughout the world. We will see what can be done but a full list would take up a lot of space. From G4CP, who runs the G5 section of the R.S.G.B. QSL Bureau but still finds time to work some DX, we learn that ZK1AB is on 14035 every Friday from 0430 G.M.T., looking for Europeans. In three years he has raised only three Gs! G4CP who also operates the Bureau

for certain stations in Egypt particularly emphasises that cards for both SU and MD5 calls must be sent via the R.S.G.B. QSL Bureau. By any other route they are simply impounded by the Egyptian authorities and are employed to bring about trouble. Service personnel are again asked to use the MD5 prefix and to send all outgoing cards through the R.S.G.B. Bureau.

Eric Trebilcock (B.E.R.S. 195) who has overheard several QSOs recently between UA0 and W stations on 7 Mc/s wonders if the ban is being relaxed. He says VK1RL (Russell Fraser) and VK1AE (Scott Little), both on Macquarie Is., are active on 7 Mc/s between 0800 and 1200 G.M.T. He has had a card from FB8AX (Adeliland) and says that ZC5VS is operated by F. S. Hugh, Box 136, Sandakan. G3GUM wonders if CE0AA will ever go to Easter Is. At the time of writing, he had still not started! G2BJY (West Bromwich) mentions recent short-skip conditions on 21 Mc/s. He has worked F, EA, CT1, DL, ON, LA, SM, OH, LX, I, IS, YU, HB, GM and OZ. VQ4 is the most consistent country on the band. He has heard no DX from the east, north or west. Conditions seem to be best between 1800 and 2100 B.S.T. His total number of countries worked on the band is 64, including ZP5DC, CP5EK, VQ2DT, VQ2HA, ZD2S, ZD4AE and ZD2JDH.

Can anyone loan G3BAK the circuit diagram of the American ATB set? He is sub-manager of the G3B section of the QSL Bureau. B.R.S. 20000 (Cambridge) reports a number of late evening openings to South and Central America on 14 Mc/s. At the same time several North Africans were heard. G3HEV (Ravensbourne A.R.C.) has made 150 QSOs on three bands, which is good going for a Club station. G3ETQ considers that conditions are improving on 14 Mc/s but we should warn him that the pundits say the present year is the bottom of the sun-cycle curve! G2HKU (Sheerness)—on the air again after the flood damage—reports that OH2MA—one of the Top Band gang—is in the U.K. to learn English.

Who's Who

Phil Zeid (VS2CP) active again from Dublin Estate, Karagan, Kedah, Malaya, has a nice rotary beam. GM3DHD reports that W6UXX will be operating next month from Cocos Island as T19UXX. We understand he will be there for only a short time and will be giving the W6s first preference. G3IFB will be operating with a B2 as GC3IFB/A from July 17 to 31. He hopes to work phone and c.w. on 3.5 and 14 Mc/s. QSL via R.S.G.B.

G3HER says that XZ2OM is on 14020, 14140 and 14240, phone and c.w., from 1130 to 1530 G.M.T. daily. He QSLs 100%. G3HFY has a card from YU1AQ confirming a QSO on 7 Mc/s

* 29 Kechill Gardens, Hayes, Bromley, Kent.

c.w. at 1630 on December 25, 1952. As he does not operate on this band he thinks the card may be for someone with a similar call.

Jim Jamie, of EQ3UU, YA3UU and other exotic calls is now ST2UU (Box 81, Khartoum). G2RO has been operating as VQ3, 4 and 5RO and will be working later from VQ1, 8 and 9. He is c.c. on 14016 and 14040 c.w. only. Keep off his frequency when calling. QSL cards should be marked "c/o. G2RO via the R.S.G.B." On arrival in Nairobi, he telephoned the P.T.T. and said "How does one get a transmitting licence?" Within one hour he was on the air! He also obtained permits for VQ3 and VQ5. The man on the other end of the line was VQ4HJP who issues the licences. John Brown, famous as VU7BR, is now in Australia, there is no news of his getting on the air.



News from France

F9RS, whom we had the pleasure of meeting recently on the quayside at Calais, has sent in some authentic information concerning stations in the French colonies. He reports that although FI8AA, AB, AC, AG, AH and AJ have now closed down, six new licences have been issued—FI8AK to FI8AP. The address of the QSL Bureau is Box 527, Saigon, Viet-Nam. An FN station may be active shortly in Pondicherry (French India). In Oceania, FK8AO (ex-FQ8AE) is on 7 and 14 Mc/s using phone and c.w. FU8AA is active; FW8AB may soon be on Wallis Is. FO8AD is on Rapa Is. but is at present suspended. Cards from F8EX/AR are valid for the D.U.F. certificate if they confirm contacts between December 1, 1950

and March 8, 1952. The following are now in France: Jo and Louis of FB8ZZ, FY7YB and YC, FF8AF (now F8HZ), FF8AB, AN, AS, and FQ8AL. F3RG (ex-FD3RG/FF3RG) will soon be in Tananarive and will probably operate on 21 Mc/s. FF8AJ is at present on holiday. FF8AG returns to France in August where he will again be F3AT. FB8BB who has been in France, is returning to Madagascar.

They get there in the end.

A card received recently at the QSL Bureau was addressed to "Mr. J. Lambert, Mnj Tnx Fer QSO. Hpe Cuagn 73, London, England." It was from someone in Italy and referred to meeting Mr. Lambert during the shooting of a film. Two "J. Lamberts" are members of the Society, one of whom (G3TA) lives at Iver, Bucks. Bearing in mind that Iver and Denham are close together, we took a chance and forwarded the card. It came off! Jack had given his QSL to an Engineer he had met in Italy, saying "That's my address." The poor Italian had got a bit mixed up, but the G.P.O. and the Bureau got it.

New Bureau Sub-manager

Members with call-signs in the series G3GAA-HZZ are asked to note that their new QSL Bureau Sub-manager was Mrs. Shears, wife of G8KW.

Piracy

G18PA states that a station signing G8PA, with a T6 note, is a pirate. G3GAL, who has caused G13GAL so much trouble, is in the same category.

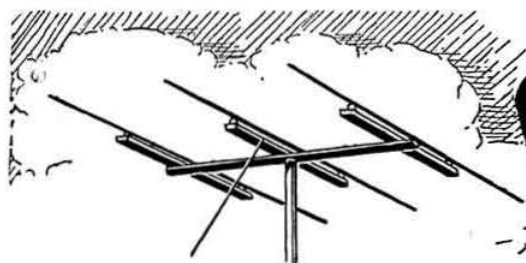
Old timers will be interested to see this recent picture of Ted Brookes who, in pre-war days, operated from Bristol as G6VK. Ted is now a station engineer with the M.E.A.F. somewhere in Egypt. His post-war calls have been VS9AB and SUIAB.

Slow Morse

OWING to pressure on space, details of the Slow Morse Practice Transmissions have been omitted from this issue. The only alteration to the list published last month is that transmissions from G3ICX on Sundays at 0930 B.S.T. have now ceased. His transmission on Thursdays at 2130 B.S.T. is now on 1915 kc/s.

This photo was taken when VP6FO visited the Jamaica Amateur Radio Association recently. From left to right (back row), VP5FR, VP5BI, VP5AM, VP5AD, VP5RS, VP5AO; (front row), VP5DX, VP6FO, VP5AK and VP5MU.





AROUND THE V.H.F.'s

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

R.S.G.B. 2 m Field Day

CONDITIONS for the 2 m Field Day were, as so often happens during contests, far from good. How many portable stations were active and what was done throughout the country, will not be known until the logs and reports have been examined by the Contests Committee. This preliminary survey must, therefore, be based mainly upon observations at the writer's station.

Ten portable and 26 fixed stations were logged and there were indications that a further 15 were active. Both G4FB (Tonbridge, Kent) and 2UJ noticed a high level of background noise and pronounced flutter on practically every station heard during the Sunday morning at distances greater than about 15 miles, the effect being similar to rapid aircraft flutter or auroral reflection. The flutter was sufficiently intense to impart an "off-colour" tone to nearly all transmissions. The effect disappeared in the afternoon together with what little DX there had been.

GW5MA/P who was again working portable from near Blaenavon, Monmouthshire, put in an S8 signal, with some fairly deep fading, for long periods. G3WW operated portable 4 miles south east of Cheltenham at a height of 970 feet a.s.l. in cloud and heavy rain. Richard was assisted in the erection and dismantling of the station by G5BM, 3IER and 2AOK who came over from Stow-in-the-Wold despite the bad weather. Forty stations were worked, including twelve portables, the best contact from the point of distance being with GW2ADZ. During a preliminary test on the previous evening from another site near Cheltenham, eight stations were worked in an hour including G2ASF/P (Worcs.) 650 ft. a.s.l. Signals were RS59 both ways. G3EHY, 5YV and 8OU were heard.

Isle of Man Portable

GD3DA/P was again portable on the summit of Snaefell from June 16 to June 21 on both 2 m and 70 cm. Operation was mainly between 1900 and 2400 B.S.T. Apart from the first evening, conditions on both bands were poor. Despite its remoteness from any form of man-made interference, Snaefell is a very noisy location, even the best receivers being handicapped by what is thought to be small static charges in the clouds which almost invariably surround the mountain. For this reason many stations called GD3DA/P in vain. However, 2 m contacts were made with Cambridge, Mablethorpe and Devon as well as with various parts of Northern Ireland, Scotland and Wales.

The first GD/GI 70 cm contact was made with G13GQB. During the evening of June 17 'GQB was worked on 2 m and a sked fixed for 70 cm. There was much more in this than the statement conveys, for all the 70 cm apparatus at the Belfast station had been dismantled and no converter was available. Undaunted, 'GQB reassembled the

equipment and on the 21st the contact took place with an RST599 report from Snaefell. Other 70 cm contacts were made with G2OI and G3AOO (Manchester), 2JT (Oldham) and GW5MQ (Mold), while G3AYT/P (Cheshire) and 3IWJ (Liverpool) were worked, cross-band—transmitting on 2 m and receiving on 70 cm—the former having only 0.5 watt output. Unsuccessful attempts were made to communicate with G3IOO, 5YV, GW2ADZ and EI2W.

The 2 m transmitter at GD3DA/P employed a 6J6 overtone oscillator tripler, 6F12 f.d., QVO4-7 b.a. and 832 p.a. with about 2.5 watts output to a 3-element Yagi. This transmitter was used to drive a further 832 as tripler to 70 cm, the aerial for that band being a 6-element Yagi. A cascode converter was used on 2 m while that for 70 cm used a 446A r.f. stage, 1N23A crystal mixer and c.c. oscillator. An unsuitable aerial send-receive switch caused some loss on 70 cm. '3DA would welcome views on the most suitable method of effecting a low loss changeover with portable equipment at this frequency. Undoubtedly correct matching is an essential but is a suitably small relay available?

FLASH!

BOTH the 2 m and 70 cm bands opened wide on several occasions, between June 29 and July 5. LA8RB (Sandefjord) made a dramatic appearance on 2 m being first heard by G6LI (Ludborough, Lincs.), at 0017 B.S.T. on June 30. A contact was attempted but broke down under fading and the first two-way was made by G6NB (Brill, Bucks.), at 0037 B.S.T. On the following day the Norwegian station made numerous contacts in the east and south-east of the U.K., including G2HDZ, 3CFK, GDR, GSE, 5DS and 8OU. On 70 cm GW2ADZ made the first GW/PA contact on that band by working PA0NL (Amsterdam) at approximately 300 miles on July 1.

Two Metre News

G3BNC (Southsea, Hants.) is situated at sea level 4 miles south of Portsdown Hill (350 ft.) which forms an effective barrier to signals from most parts of the country. In consequence his "Ladder" score of 10 Regions, 75 stations and 8 countries may be considered extremely good. The converter is one designed by G6VX employing permeability tuning and a neutralised 6J6 r.f. stage. Considerable improvement has been made by the addition of an i.f. amplifier and cathode follower to couple it at 8 to 10 Mc/s to an HRO. All contacts have been made on 'phone, a pair of TZ40s in class B modulating an 829B p.a. in a modified SCR522 transmitter. As the operating

* 32 Earls Road, Tunbridge Wells, Kent.

position is in the basement of the house the coaxial feeder is 60 ft. long and is connected to a 4-over-4 w.s. Yagi array via a matching transformer to 300 ohms. This method of feeding obviates change of load in wet weather.

G3WP (Brightlingsea, Essex) commenced operations on 145.66 Mc/s on June 13 with 7 watts input to a 6J6 working as a push-pull p.a. and a dipole 18 ft. off the ground. The latter is to be replaced by a 3-element Yagi. For reception, a 5 valve c.c. converter feeds a home built communications receiver on 9 Mc/s. So far, 7 stations have been heard and 4 contacted, including G2WJ at 30 miles. Reports from listeners more than 30 miles distant would be appreciated. **G8VN**, at present the only v.h.f. station in Rugby, has worked G3EPW (nr. Bury), 3FUM (Kingsclere, Hants.), 5BD (Mablethorpe, Lincs.) and 5YV (Leeds, Yorks.) but has been unable to raise any station in London or the south-east. 'VN' is normally active between 1900 and 2000 B.S.T. and occasionally from 2230 to 2330. Stations heard include G3GNJ, HWF, IUK, 5DS, 6PG, RH, 8DV/A, OU and GW2ADZ. G8VN will welcome reports of reception at distances of over 100 miles and will send QSL cards in return when requested. **G3GHO** (Rode, Northants.) worked ON4BZ on 'phone at 1040 B.S.T. on May 25, reports being S8 in and S9 out. ON4BZ and EI2W were called on May 28 without success but G3FAN (Ryde, I.O.W.) was worked at RS59. Conditions on June 10 were good and brought a contact with GD3DA/P at RST579 both ways and with G3IUD (Wilmslow). G3YH (Bristol) was worked on sked, on June 4, 5, 9, 10 and 11 but has not been heard since. **G3BA** has returned South and is again living at Daventry. He should soon be active on both 2m and 70 cm. **G6XX** (Goole, Yorks.) has found conditions on 2 m generally poor recently although some improvement was noticed on May 24 and June 6, 7 and 8. Consistent signals are received from G6NB (Brill, Bucks.), and from G5BM (Cheltenham) now that the latter has a stacked array. GM3EGW (Dunfermline, Fife) has added a new Region to his Ladder score, but a station has yet to be worked in South Wales.

Another station joining in the north/south session on Friday evenings is **G3GOP** (Southampton) who will be beaming north on a frequency of 145.01 Mc/s with an input of 100 watts. He was active as G3GOP/P on June 21 but heard no other portable station although he seemed to be getting out well until 1300 B.S.T. when heavy rain brought to an end what had been fair conditions. Fifty contacts have been made while working portable since August 1952. On 70 cm G3GOP operates on a frequency of 435.03 (with 433.5 or 436.2 Mc/s available if required) and has an array consisting of four slots. The transmitter uses an 832 tripler. He also possesses two good converters. Contacts with G5BY and G3ABH were made with this equipment two years ago and tests can be arranged with anyone interested.

International V.H.F. Society

The newly elected officers of I.V.H.F.S. are Messrs. H. Riley (EI2G), *President*, Cecil Dorrity, *Secretary and Treasurer*, B. E. King (EI5Y), J. F. O'Mahony (EI9C) and R. V. N. Sadleir (EI4D), members of the Administrative Committee. EI6G and EI5C were co-opted as representatives for Eire and DL3QA, GW2ADZ, ON4BZ and PA0FB for their respective countries. Messrs. Charman (G6CJ), Smith (G6UH) and Tilton (W1HDQ) have been made Honorary Members in recognition of their work in the v.h.f. field. The President of the

R.S.G.B. (Mr. Leslie Cooper G5LC), has also been made an Honorary Member. At a meeting in Dublin EI2W reviewing the Society's work during the past year, said that 36 stations were active or about to become so on the v.h.f.s in Ireland as a whole; he had already received 19 QSL cards from Irish stations.

Other News from Ireland

Although off the air for some time due to a fractured rib, EI2W has worked EI2A (Navan, Co. Meath) on several occasions on 2 m. GM5VG (Glasgow) was raised for the first time on June 7 when Scottish stations were received well in Dublin. GM3DIQ and GM6WL were also contacted, the former reporting that he could hear G5YV at S8/9. GM3DIQ was also worked by EI3S (Dublin). **G16UV** (Belfast) is again active on 2 m. G5YV was heard on 70 cm by EI2W on May 31 at 1519 B.S.T. The Dublin station operates on 436.54 Mc/s with an 832 tripler and a 16-element stack.

70 cm Activity

G2RD's list of 70 cm stations worked or heard by him or his correspondents during the month ended June 21 is as follows: G2DD, FKZ, HDZ, WJ, 3BKQ, ECA, EOH, FP, FZL, GDR, 4RO, 5AA, DT, 6NF, 8SK, GW2ADZ.

Balanced v. Unbalanced Feeders at 420 Mc/s

Discussing the pros and cons of balanced and unbalanced feeders, Sven Weber (B.R.S. 19317), co-author of the article *Receiver Design for 70 cm* in the June BULLETIN, states his preferences for coaxial cable: (1) its characteristics are unaffected by wet weather; (2) it will tolerate a higher s.w.r. without losses due to radiation; (3) it is the logical means of feeding into or out of receivers and transmitters which employ coaxial lines. In his own receiving installation a 7-element Yagi, T-matched and with a terminal impedance of 300 ohms, is connected to 72 ohm coaxial cable via a combined step down and balance-to-unbalance transformer.

For apparatus where a balanced input or output is essential, coaxial feeder in conjunction with a *balun* transformer at each end of the line, is well worth while. If a balanced feeder throughout is desired, one of 150 ohms impedance would appear to be the best compromise between the critical matching required by 80 ohm twin and the radiation losses and risk of serious unbalance in wet weather inseparable from 300 ohm ribbon.

French 2 m Tests

From **G6YP** we learn that on July 19, F3LC will be operating portable on 144.652 Mc/s from Mont Ventoux, 44 km. north east of Avignon, at a height of 2,000 metres, from 1000 G.M.T. until 2400 G.M.T. and again from Ballon d'Alsace (1250 metres), 20 km. north of Belfort, on August 15/16. In both cases it is hoped to establish contact with stations in the U.K. F3LC will also have a 70 cm transmitter and receiver available, the former on 433.956 Mc/s.

The Regional Ladders

Only three claims have been received this month for the 2 m Ladder. Presumably the majority of contestants are saving up their entries for the final results to be published in August. G6XX moves into fourth place immediately after G3WW.

LONDON U.H.F. GROUP

will meet at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road, at 7.30 p.m., on August 6.
All u.h.f. enthusiasts welcome.

with a score of 13-129-10, a long sought contact with GM3EGW having given him his 13th Region. G2DDD and G5MR occupy 22nd and 23rd positions with respective scores of 10-104-5 and 10-96-6.

Assistance Required.

Offers are invited from anyone (preferably living near Tunbridge Wells or who is in business in London), who would be prepared to assist in the preparation of this feature. Up to now *Around the V.H.F.s* has been produced single-handed, even during holiday periods. This year, the writer will be abroad when the October issue goes to press and writing this feature will be out

of the question. In addition it would be politic to have a stand-in to cope with emergencies such as illness, etc. The main difficulty arises from our practice of keeping the deadline for reports close to the printing date so that the information given may be as up to date as possible, we do not wish to alter this arrangement unless absolutely necessary. This means that a considerable volume of correspondence must be analysed, and the article written, in a week-end or, more often than not, in the course of a few evenings.

Reports for the August issue are requested by July 21.

V.H.F. & U.H.F. Band Planning

IN view of the great increase of interest in v.h.f. and u.h.f. work, the Council of the Society recently authorised the Technical Committee to convene a meeting of all interested parties to give consideration to the Band Plans which already exist, and to make recommendations for the future.

The meeting duly took place at Society Headquarters on July 2 when the following representatives of publications and organisations were present:—

- Mr. H. B. Dent (Wireless World).
- Mr. A. J. E. Forsyth (The Short Wave Magazine).
- Mr. H. E. Smith (The Radio Amateur).
- Mr. E. A. Dedman (The Television Society).
- Mr. M. Barlow (The British Amateur Television Club).
- Mr. P. A. Thorogood (London U.H.F. Group).

The Society was represented by the President (Mr. Leslie Cooper), the Chairman of the Technical Committee (Mr. H. A. M. Clark who presided), Messrs. W. H. Allen, D. N. Corfield and J. Hum. The General Secretary (Mr. John Clarricoats) and Mr. J. A. Rouse were also present.

The 70 cm. Band

Following general discussion the meeting agreed, unanimously, to recommend the adoption of the following plan for the band 420-460 Mc/s:—

Mc/s	Assigned to:
420-425	Self-excited oscillator emission (Telegraphy and Telephony).
425-432	Amateur Television.
432-438	Frequency stabilised emission (Telegraphy and Telephony) including Narrow Band Frequency Modulation.
438-445	Amateur Television.
445-455	Future Amateur Developments.
455-460	Self-excited oscillator emission (Telegraphy and Telephony).

The meeting agreed, unanimously, that stations using frequencies between 432 and 438 Mc/s should do so on a Zonal basis because of the harmonic relationship which exists between those frequencies and frequencies in the 144-146 Mc/s amateur band.

The 2 Metre Band

The meeting gave long and careful consideration to the present 2 Metre Zone Plan, introduced originally by The Short Wave Magazine.

The suggestion was made that the width of Zone J (London and Home Counties) should be increased by 100 kc/s, by merging Zones H (250 kc/s wide) and I (150 kc/s wide) into one Zone 300 kc/s wide, but after discussion it was agreed, unanimously, to recommend that the present Two Metre Zone Plan be adhered to in its entirety.

The meeting agreed, unanimously, that the present Two Metre Plan (as set out below) should, in future, be known as the "British Isles Two Metre Zone Plan."

Zone	Mc/s	Area
A & B	144.-144.2	All Scotland.
C	144.2-144.4	Lancs, Yorks and English Counties Northward.
D	145.8-146.	All Ireland.
E	144.4-144.65	Cheshire, Derby, Notts, Lincs, Rutland, Leics, Warwicks and Staffs.
F	145.65-145.8	Flint, Denbigh, Shrops, Worcs, Hereford, Monmouth and Westward.
G	144.65-144.85	Northants, Bucks, Herts, Beds, Hunts, Cambs, Norfolk, Suffolk.
H	145.25-145.5	Dorset, Wilts, Glos, Oxford, Berks and Hants.
I	145.5-145.65	Cornwall, Devon and Somerset.
J	144.85-145.25	London, Essex, Middlesex, Surrey, Kent and Sussex.

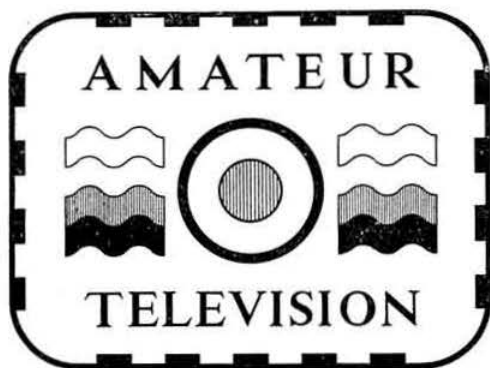
Publicity

The meeting agreed, unanimously, that every effort should be made by the organisations and publications represented at the meeting to give the widest possible publicity throughout Europe to the 2 metre and 70 cm. Band Plans.

The R.S.G.B. offered to reproduce an up-to-date map showing the various 2 Metre Zones.

Above 70 cm.

The meeting agreed, unanimously, that the time was not opportune to plan any of the higher frequency amateur allocations.



By M. BARLOW (G3CVO)*

RESEARCH by members of the British Amateur Television Club into better and more economical methods of transmitting TV continues most successfully. Recently, a master pulse generator using only seven valves and capable of producing a full B.B.C.-type synchronising waveform, together with blanking pulses, has been developed. Experiments are now being made to design a simple counter chain to lock the line frequency to the mains supply for interlace working. As may be seen from the appended list of Amateur TV stations, several are now using interlacing rather than the simpler sequential scanning. This has the effect of increasing the number of lines in the picture without increasing the transmitted bandwidth. On the vision side, the basic requirements of simple flying-spot scanners have been determined and work on reducing the complexity of live camera circuits is in progress. Simple but reliable transmitting and receiving equipment is now being designed with the special requirements of TV in mind. Amateur Television offers wide scope to the experimentally-minded, and the numbers of those actively interested grow steadily.

Notes and News

A successful display was given recently at the Wisbech show using Ian Water's equipment which is basically the same as that used at the 1952 R.S.G.B. Amateur Radio Exhibition, except that it now provides a correct blanking waveform. The new equipment also supplies modulated output on any B.B.C. TV channel, so that the whole layout is self-contained. Some difficulty was

* Cheyne Cottage, Dukes Wood Drive, Gerrards Cross, Bucks.



Jeremy Royle using one of the cameras at the Wisbech Show.

encountered in the marquees of the Show owing to low mains voltage, but in spite of this and the rather dull weather, some excellent pictures were displayed on commercial TV sets, identical models of which were showing B.B.C. pictures for comparison.

A demonstration of amateur TV will be given at the 8th Annual Electronics Exhibition to be held at the Manchester College of Technology, Sackville Street, from July 15 to 21.

For the Dagenham Show on August 29 and 30 an electrically-driven camera crane, weighing a quarter of a ton, has been specially made by B.R.S. 19675.

Two more cameras are nearing completion. John Watts (Clevedon, Som.), has built a very fine unit, the amplifiers of which are flat to 8 Mc/s. G3AHB is experiencing some trouble in winding his camera coils, one of which consists of 25,000 turns of 38 s.w.g. wire on a 3½-in. former! C. G. Dixon's colour camera is mounted on a tripod dolly, with the regulated power supply at the bottom. The camera includes a 3-in. c.r.t. with enlarging lens as a monochromatic viewfinder. The colour disc, which has six sectors, is 12 in. in diameter and runs in an airtight chamber. The discs are driven by converted selsyn motors through a 3 to 1 reduction drive employing small bicycle chains. The mechanical noise is surprisingly low but would be even less if the drive were via toothed rubber belts which,



When Gilbert Harding was interviewed by G3CVO at the Wisbech Show he confessed he was very shy of "these television contraptions."

Unfortunately, are unobtainable. A 3 ft. 6 in. rack carries all the pulsing and mixing equipment, and an ACR1 c.r.t. is used as a colour monitor with its own colour disc.

G8PX has increased his signal to 22 db above the noise at a distance of 25 miles and hopes to be able to modulate it shortly. G13FW/T has been using a "boot-strap" modulator with his push-pull 8012 p.a. with great success. G3CVO also uses this type of modulator which has great advantages when employed for wide-band modulation of earthed grid stages in particular. G2WJ/T continues to grid modulate his CV53 p.a.; the new camera is giving good pictures. The DET24 high power transmitter is now under test.

TV in the Antarctic

R. H. Shepherd who is in charge of the electronic equipment on board the whaling factory "Balaena" whiles away the time in the Antarctic by transmitting 16 mm film to the whales! As the risk of interference is negligible,

he is able to use high power on a fairly low frequency. The scanner employs a 3.5MV1AX tube, specially designed for the purpose. Sound is transmitted on a frequency in the 2 Mc/s region.

Overseas News

W4MS/TV has started the American Amateur Television Society which already has 48 members. U.S. amateurs are allowed to use 50 W on 420 Mc/s and above with no restrictions and no charge. The 5527 camera tube is most popular at the moment but some 6198 Vidicons may

become available when they go into mass production. The best TV DX so far appears to be from W6VSV/TV (Berkeley, Calif.), who has been transmitting consistent snow-free pictures over a 100 miles path. The A.A.T.S. hopes to exchange lecture tapes with the B.A.T.C. The first British tape-lecture is "Colour Television" by C. G. Dixon. The B.A.T.C. may also be able to send the A.A.T.S. a copy of the film "Amateur Television at the 1952 R.S.G.B. Exhibition."

Reports should reach the author by the 20th of the month preceding publication.

AMATEUR TV STATIONS

Call-Sign	Location	Vision frequency and power	Sound frequency and power	Standards	Operating Times
G2WJ/T	Dunmow, Essex	437 Mc/s, 3 W	—	200 line, 50 picture sequential	Saturdays 1800
G2DUS/T	Baldock	427 Mc/s, 3 W	—	200 line, sequential	—
G3ACK ¹	Blyth	426 Mc/s, 50 W	422.5 Mc/s, 25 W	405 line, interlace	—
G3BLV/T	Sunderland	—	—	405 line, interlace	—
G3CVO ¹	Gerrards Cross	438, 429 Mc/s, 6 W	1805 kc/s ²	405 line, interlace	Weekends
G3FNL/T	Upminster	445 Mc/s, 25 W	—	405 line, interlace	—
G5ZT/T	Plymouth	427 Mc/s, 3 W	—	200 line, sequential	Evenings
G13FWF/T	Belfast	437.75 Mc/s, 40 W	—	405 line, interlace	—
PA0ZX	Gronigen	2350 Mc/s, 1/3 W 145 Mc/s, 50 W	29.6 Mc/s, 50 W	312 line, sequential	Sundays 1500—1700

¹ Station under construction.

² Sound also by pulse width modulation of sync. pulses.

Amateur Radio Station GB2CRA

EARLY this year members of the Chelmsford R.S.G.B. Group were invited to set up an Amateur Radio station at the forthcoming Chelmsford Coronation Show. A small committee was appointed to make the necessary arrangement. To everyone's surprise and pleasure the G.P.O. agreed to issue a special call sign (GB2CRA) for use at the station which was established in a large marquee surrounded by other tents housing hobby exhibits.

Although the Exhibition was only open to the public during the afternoon and evening of Saturday, June 6, and during the afternoon of Sunday,



The Mayor of Chelmsford (Alderman W. W. Farthing, J.P.) with Joan Gilbert, the television star who opened the Chelmsford Show, together with G3ABB, G5RV, G3EHZ and G2HGI.

June 7, it was considered unwise to leave the equipment unattended. Volunteers, who included nearly all the licensed amateurs in Chelmsford, therefore manned the station continuously from 10 p.m. on June 5 until 7 p.m. on June 7, operation being principally on 3.5 Mc/s phone. During that time nearly 250 contacts were made, all of which have been confirmed by a special QSL card sent via the R.S.G.B.

The equipment in use comprised a G5RV-type 75 watt TVI-proof transmitter, with pi-filter output, and an HRO receiver. Halfwave dipoles were employed on all bands from 3.5 to 28 Mc/s. Equipment constructed or modified by local members was also exhibited.

Those on duty were kept fully occupied in answering questions put to them by the general public who showed great interest in the display. There is little doubt that this show did much to publicise Amateur Radio in and around Chelmsford.

South Shields Show

TAPE recorders, oscilloscopes and a complete Amateur Radio station operating under the call-sign G3ELP/A will be among the exhibits arranged by members of the South Shields and District Amateur Radio Club at the South Shields Flower Show from August 28 to 30, 1953. Contacts will be acknowledged by special QSL cards and listeners' reports will be welcomed.

Side Slip

THE call-sign of John Proctor—a blind amateur living in Sussex—is G3JFP and not G3FJP as printed on page 547 of the June issue. The frequencies used by Mr. Proctor are 3502, 3520 and 3552 kc/s.

Society and Contest News

HOME OFFICE,
WHITEHALL,
27th June, 1953

Sir,—I have had the honour to lay before the Queen the Loyal and Dutiful Address of the President and Council of the Incorporated Radio Society of Great Britain on the occasion of Her Majesty's Coronation, and I have it in Command from The Queen to convey to you Her Majesty's warm thanks for the expression of loyalty and devotion which it contains.

I am,

Sir,

*Your obedient Servant,
(Signed) David Maxwell Fyfe*

*The President,
Radio Society of Great Britain.*

Revised Articles of Association

THE Council wishes it to be known by the membership that the redraft of the revised Articles of Association has been returned to the Society's legal advisers by the Board of Trade with a large number of amendments.

The amendments are at present being examined by the Council, after which a further statement will be issued.

Seventh Annual Amateur Radio Exhibition

FOUNDER Member and Vice-President, Rene Klein, G8NK, has accepted an invitation extended to him by the Council to open the Seventh Annual Amateur Radio Exhibition at the Royal Hotel, London, at 12 noon on Wednesday, November 25. The Exhibition will run from that date until Saturday, November 28.

Direction Finding Field Days

DETAILS of the qualifying event to be held on Sunday, August 16, 1953, are as follows:

Organiser: R. T. Craxton, c/o Electronics Engineering Dept., B.T.H., Rugby.

Call Sign: G3BXF/P.

Frequency: 1875 kc/s.

Assembly Point: Road junction near Mousley End, N.G.R. 214696.

Map: Ordnance Survey, New Popular Edition, Sheet 131.

Assembly Time: 1330 B.S.T.

Intending competitors should notify the organiser by Monday, August 10, stating the number in their party requiring tea. The location of the restaurant will be notified to competitors when their entries are acknowledged.

SEVEN * competitors * successfully * located the Shidden transmitter at the Edgware Qualifying D/F Field Day Event held on May 3, 1953. Messrs. Charlton, Hallett and Glazier qualified for the National Final to be held in September. Unfortunately the advertised frequency could not be used due to the reduction of the Top Band allocation, but this did not materially affect

matters. Fine weather proved a welcome change from that usually experienced during D/F field days.

To give contestants additional experience in direction finding a second station was brought into operation as soon as the first had been located. It was not necessary, however, to find the second in order to qualify for the National Final. Thirty-four members and friends took tea at the Premier Restaurant when it was all over.

Region 1 Field Day

THE annual Region 1 Field Day will take place on September 13. The event is open to any individual group in Region 1, however small (it could be one person) but all entrants must be members of the R.S.G.B. The 1.8, 3.5 and 7 Mc/s bands will be used and competitors will be looking out for contacts with portable stations in other parts of the country. A copy of the rules can be obtained from the Regional Representative, Mr. B. O'Brien, G2AMV, 1 Waterpark Road, Prenton, Birkenhead, Cheshire.

The winner of the Field Day will hold the Region 1 Trophy for one year.

Two-Metre Open Contest, 1953

The leaders in the above event—held during the weekend May 2-3—were as follows:

1. H. Beaumont (G5YY), 13,996 pts.
2. R. F. G. Thurlow (G3WW), 8,999 pts.
3. N. H. R. Munday (GW5MA/P), 8,845 pts.

A report and full list of entrants will be published next month.

Barnsley & District Amateur Radio Club 40th Anniversary

THE Barnsley and District Amateur Radio Club was formed on August 21, 1913, under the title "Barnsley and District Amateur Wireless Association" and has been in active existence since that date. It is interesting to note that the President to-day (Mr. G. W. Wigglesworth, G2BH, ex-YXK in 1914) was a founder member. In 1914, after 7 months' extensive negotiations, the Club was granted the call AXR, which was later changed to G6AJ, 1926-38.

To celebrate the 40th anniversary, the following members will, during the period September 12 to 20, 1953, inclusive, operate on various amateur bands with the object of making as many world-wide contacts as possible: G2AFV, 2BH, 3ABS, 3AMH, 3DHU, 3DOI, 3EAE, 3FLQ, 3GAH, 3GKK, 3GNK, 3GXB, 3HTM, 3YA, 4JJ, 5IV, 5KM, 6LZ, 6UF and 8VX. Every contact will be confirmed by a special Coronation commemorative QSL card.

LONDON MEMBERS' LUNCHEON CLUB

will meet at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road,

at 12.30 p.m., on July 17 & August 21.

Visiting amateurs especially welcome.
Telephone table reservations to HOL 7373
prior to day of luncheon.

It's Topical

IN response to requests from television manufacturers and retailers, the B.B.C. Television Service now radiates **Test Card C** for 10 minutes and the clock caption and music for four minutes before the commencement of each transmission. In addition, the Test Card (with an audio tone on the sound channel) is radiated during the period between the end of the afternoon transmission and the beginning of Children's Television.

VP6CDI, VP6FO and G6MB broadcast to the West Indies on June 19. The transmission went out from the B.B.C. in the programme *West Indian Diary* and told the story of how all three met through Amateur Radio. They were the guests of Bertie Clarke (Dr. C. B. Clarke), the well-known West Indian cricketer, who is a regular contributor to the programme.

V.H.F. radio, supplied by *Pye*, will be used for control purposes at the **All Britain Model Aircraft Rally** which is to be held at the Handley Page Aerodrome, Radlett, Herts., on September 20, 1953. The equipment will include a 15 watt transmitter mounted in the recovery vehicle, "Reporter" radiophones and "Walkie-phones."

The **Television Society's 12 watt 405 line transmitter** at the Norwood Technical College should be in operation using the call-sign G3CTS/T by the end of July. In addition to providing a signal for members interested in u.h.f. reception it will serve as a demonstration for students attending the television training classes in the college. The station will operate on 427 Mc/s.

Reception of the Home Service in St. Leonards, Bexhill, Hastings and Eastbourne will be improved when the **new 2kW relay station** (to be built on a site at Bexhill) comes into operation later this year.

A **new Welsh Home Service transmitting station** at Towyn was brought into service on June 21. The transmitter has a power of 5kW and operates on 341 metres (881 kc/s). The station is designed for unattended operation with remote control from another B.B.C. centre. A 2 kW standby transmitter has also been installed. Both were manufactured by Marconi's Wireless Telegraph Co., Ltd.

An appropriate and topical name for an inn in Oxfordshire is **The Viewer's Retreat**.

In addition to providing the technical equipment necessary for relaying the Coronation TV programme to the Continent, Standard Telephones and Cables, Ltd., loaned a **ground radio direction finding system** for the assistance of R.A.F. and R.C.A.F. aircraft taking part in the Coronation Fly-Past. The same d.f. equipment was also used for the Royal Birthday Fly-Past and for the R.A.F. Review at Odiham on July 15. In this system, which is not a form of radar, the bearings are measured on radio-telephone signals radiated from the aircraft in the ordinary course of communication with the ground. Bearings can be taken off signals as short as half a second.

Sir Ian Jacob, Director-General of the B.B.C., recently outlined the **B.B.C.'s Ten Year Plan** for the expansion of television and sound broadcasting. He stated that the Corporation hoped to build a second TV network in due course and that colour television might be introduced if a method compatible with the present system could be devised. So far as sound is concerned, it is considered that complete coverage would only be possible by the introduction of **v.h.f. broadcasting**. Although he foreshadowed licence increases, Sir Ian held out no hope of a comprehensive TV

service before the present Charter expires. The mixture was, indeed, "as before."

An interesting accessory which should find a place in any Amateur Radio station operated by a verbose operator was recently demonstrated in New York. According to *QST*, this device is capable of **contracting speech length** without affecting voice quality!

The **technical training display** at the 1953 Radio Show is being arranged by S. N. Ray (Borough Polytechnic) with the co-operation of the B.B.C. Engineering Training Establishment, E.M.I. Institutes, King's College (University of London), Norwood Technical College and Borough Polytechnic.

The Coronation Naval Review at Spithead was the **first naval review to be televised**. It was also the first time that a live TV broadcast had ever been made from British warships. The sound transmitters operated in the 90 Mc/s band and were manufactured by G.E.C. The cameras were of the image-orthicon type made by Marconi's Wireless Telegraph Co., Ltd., and *Pye*, Ltd.

London Members' Luncheon Club

A PAST President of N.Z.A.R.T. and a past winner of the B.E.R.U. Senior Contest were among the overseas guests at the Club Luncheon held on Friday, June 19, 1953.

Jack Freeman, ZL2AFB (ex ZL3FB) brought greetings from his colleagues in New Zealand while Freddy North, 1951, B.E.R.U. Contest winner, related some amusing incidents in his life abroad. Other visitors included Fred Olton—the male half of that well known DX station, VP6FO—and Bob Gaiser, W2PRF. The latter has frequently contacted Fred Olton's station but he had to come to London to make a personal QSO! The Chairman of the Club—Stanley Vanstone, G2AYC—presided.

The Club is due to meet again on Friday, July 17, 1953, at the Bedford Corner Hotel, Tottenham Court Road at 12.30 p.m. Provincial and overseas amateurs are assured of a very cordial welcome. Those who wish to attend the luncheon are asked to telephone May Gadsden on HOL 7373 well in advance.

Radio Amateurs' Examination and Morse Classes East London District

COURSES of instruction have again been arranged at the Ilford Literary Institute, commencing September, 1953. Prospective students are asked, in the first instance, to send their name and address to C. H. L. Edwards, A.M.I.E.E. (G8TL), 10 Chepstow Crescent, Newbury Park, Ilford, so that a place may be assured.

The courses have now been running for five years during which time nearly 100 candidates have been successful in obtaining their licence.

Further details will appear in the August, 1953 issue of the *BULLETIN*.

Telling the World

MR. William Hamilton, who is an evening student at the School of Engineering, Burbank, Hamilton, Lanarkshire, Scotland, contributes an article on Amateur Radio to Vol. 1, No. 1, of the *School Magazine*. The article traces the development of the hobby from the early days and gives much information of topical interest. The author chose as his title "Radio Amateurs Span the World."

Council Proceedings

Résumé of the Minutes of the Proceedings at a Meeting of the Council of the Incorporated Radio Society of Great Britain held at New Ruskin House, Little Russell Street, London, W.C.1, on Friday, May 8, 1953, at 6 p.m.

Present.—The Acting Vice-President (Mr. Arthur Milne) in the Chair, Messrs. H. A. Bartlett, C. H. L. Edwards, D. A. Findlay, F. Hicks-Arnold, J. H. Hum, L. E. Newnham, P. W. Winsford and John Clarricoats (General Secretary).

Apologies for absence were submitted on behalf of the President (Mr. Leslie Cooper) and Mr. R. H. Hammans.

Membership.

Resolved:—

- to elect 45 Corporate Members and 16 Associates;
- to grant Corporate Membership to 5 Associates who had applied for transfer;
- to grant Life Membership to Messrs. A. G. Blackmore, G3FKO, and J. B. Parke, G18PA.

Aberdeen Meeting.

Resolved to authorise the Region 12 Representative (Mr. J. Douglas) to convene an Official Meeting in Aberdeen during the weekend, October 17-18, 1953.

Special General Meeting of February 27, 1953, and Minutes of Meeting held on February 26, 1953.

After considering correspondence from Mr. I. D. Auchterlone, it was Resolved to amend the Minutes of the Council Meeting held on February 26, 1953, by adding the words "after the Special General Meeting" to the penultimate paragraph.

The amended Minute then read: "It was mutually agreed that all Members of the Council should consider themselves free to state their personal views on the issue of subscription rates after the Special General Meeting." (See Page 448, April, 1953, BULLETIN. Section headed "Special General Meeting.")

Council By-Election.

Resolved to invite Messrs. Barnard, Green, Ruth, Yates and Yeomanson to scrutinise the Council By-Election Ballot on Tuesday, June 9, 1953.

National Radio Show, 1953.

Consideration was given to a proposal put forward by the Radio Industry Council that the Society should reserve space at the forthcoming National Radio Show. After a full

discussion on the financial aspects it was Resolved to advise the Radio Industry Council that the Society does not feel able to justify the expense of exhibiting at the National Radio Show, 1953.

During the discussion it was made clear that the Radio Industry Council would be prepared to offer the space at a special rate.

It was agreed to advise the Radio Industry Council that the Council would be prepared to reconsider the matter next year, by which time it is hoped that the financial position of the Society will have improved.

Loyal Address.

The Secretary submitted the Loyal Address which had been executed on vellum by Mr. G. Wakeling.

Resolved that the Loyal Address of Congratulation to Her Majesty Queen Elizabeth II, on the occasion of her Coronation, be signed and sealed.

Special General Meeting.

It was agreed to reserve accommodation at the Institution of Electrical Engineers for a Special General Meeting on Friday, September 25, 1953.

Report from London Regional Representative.

Consideration was given to a further letter from the Region 7 Representative (Mr. W. H. Matthews) regarding the report of the recent meeting of London Representatives (see *Résumé of Minutes of Meeting held on April 27, 1953*).

Resolved to inform Mr. Matthews that the Council is prepared to appoint two representatives to meet him and the London D.R.s to discuss matters raised at the meeting of London Representatives held on April 13, 1953.

Liverpool Meeting.

The Secretary read to the meeting a letter from the President reporting upon a private meeting which he and Mr. Hicks-Arnold had attended in Liverpool on May 1, 1953, to discuss matters arising from the recent Special General Meeting. It was stated that a full account of the meeting was in course of preparation for submission to the Council. Mr. Hicks-Arnold reported briefly upon the meeting.

Cash Account.

Resolved to accept and adopt the Cash Account for April, 1953.

The meeting terminated at 8.35 p.m.

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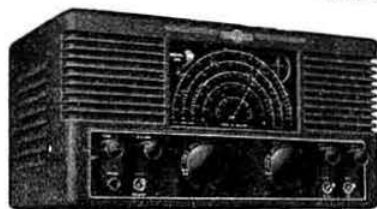
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R.S.G.B. BULLETIN, July, 1953.

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Regional and Club News

BRISTOL.—At the June meeting, Gilbert Tonkin, G5RQ, who was first licenced as TBX in 1910, spoke on the "Early Days of Amateur Radio." As a sequel, members visited the home of Commander B. Hippisley, G2CW, at Ston Easton Park on June 21 to see his collection of early wireless apparatus. Wenvoe TV station was visited on June 27. *Group Secretary:* D. F. Davies (G3RQ), 51 Theresa Avenue, Bristol 7.

CAMBRIDGE AND DISTRICT AMATEUR RADIO CLUB.—Bob Bass (W3JC1) will speak on "Amateur Radio in the U.S.A." at the meeting on July 17, at the "Jolly Waterman," Cambridge, (8 p.m.). A V.H.F. picnic and D/F contest—to be held at the Roman Road, The Gogs—is arranged for July 19. *Hon. Secretary:* T. A. T. Davies (G2ALL), Meadow Side, Comberton, Cambridge.

CHELTHAM.—At the meeting on July 2, the Group's results in N.F.D. were analysed and suggestions for improvement noted for 1954. A number of visits and other events have been planned. The T.R. is J. J. Yeend (G3CGD), 30 St. Luke's Road, Cheltenham.

CHESTER AND DISTRICT AMATEUR RADIO SOCIETY.—The Society now publishes an informative Newsletter entitled *Deva Calls*. Visitors are always welcome at the meetings held on Tuesdays at 7.30 p.m. in the Tarran Hut, Y.M.C.A., Chester. *Hon. Secretary:* A. N. Richardson (B.R.S. 19678), 23 St. Mary's Road, Dodelston, near Chester.

CHINGFORD.—The 1952 N.F.D. film was one of several screened at the June meeting. The Group operated G2CVO/A at the Chingford Day fete on July 11.

COVENTRY.—N.F.D. arrangements went so well that, members of the Group decided to take part in the 2 Metre Field Day. The next meeting is on July 16.

GRAFTON RADIO SOCIETY.—Thanks are extended to those stations with which contacts were made during the Club's Field Day on Hampstead Heath. G3IXE/P was on Top Band, G3AFT/P on 3.5, 7 and 14 Mc/s and G3HEA/P on 144 Mc/s. The club is now closed until September. *Hon. Secretary:* A. W. H. Wennell (G2CJN), 145, Uxendon Hill, Wembley Park, Middlesex.

KINGSTON AND DISTRICT AMATEUR RADIO SOCIETY.—A series of talks on ex-Government and commercial receivers is being given at meetings, held at 7.45 p.m. on alternate Wednesdays at Penrhyn House, 5 Penrhyn Road, Kingston. V.H.F. and QRP groups have been formed. John Whitehead (Hon. Secretary, QRP Research Society) and G2CNC have given talks on low power work. Morse and radio theory classes continue. The Society has now received its transmitting licence. *Hon. Secretary:* R. S. Babbs (G3GVU), 28 Grove Lane, Kingston-on-Thames.

LEICESTER RADIO SOCIETY.—The next meeting will be held at 7.30 p.m. on July 20 at the Holly Bush Hotel, Belgrave Gate. The programme for the coming Winter session is now being planned, full details of which may be obtained from the *Hon. Secretary:* N. Wibberley, 21 Pauline Avenue, Leicester.

MANCHESTER AND DISTRICT RADIO SOCIETY.—The first meeting of the new session will be held on September 7 at the Brunswick Hotel, Piccadilly, Manchester. *Hon. Secretary:* K. Brockbank, 17 Burleigh Road, Stretford, Lancs.

NORWOOD AND DISTRICT.—Meetings are held on the third Saturday in each month at Windermere House, Westow Street, Crystal Palace at 7.30 p.m. A Junk Sale is arranged for July 18.

QRP RESEARCH SOCIETY.—The Society is developing a scheme of group membership for senior science pupils in schools in the British Isles. Full details may be obtained from the *Hon. Secretary:* J. Whitehead, 92 Rydens Avenue, Walton-on-Thames.

SLADE RADIO SOCIETY.—Members will give short lectures at the meeting on July 24 at the Church House, Erdington. There will be no meeting on August 7. The Society now holds the licence G3JBN. *Hon. Secretary:* C. N. Smart, 110 Woolmore Road, Erdington, Birmingham 23.

SOUTHEND AND DISTRICT RADIO SOCIETY.—Members of the Society are acting as stewards and interpreters at the International Radio Controlled Models Contests on July 25 and 26. A Radio Garden Party will be held at 27 Park Road on July 18. *Hon. Secretary:* J. H. Barrance, M.B.E. (G3BUJ), 49 Swanage Road, Southend-on-Sea.

STOCKPORT RADIO SOCIETY.—Meetings are held at 8 p.m. on alternate Wednesdays at the A.T.C. Headquarters, St. Petersgate. The programme includes talks on "Two Metres" by G3AJO (July 22), "Practical Transmitting Circuits" by G2FOS (August 5) and "Aerials" by G3AJO (August 19). Morse and technical classes are held regularly. *Hon. Secretary:* G. R. Phillips (G3FYE), 7 Germans Buildings, Buxton Road, Stockport.

WEST LANCASHIRE RADIO SOCIETY.—Meetings are held on Tuesdays above Gordons' Sweetshop, St. John's Road, Waterloo, Liverpool 22, at 8 p.m. Morse and technical classes and a monthly series of film shows and lectures will commence in September. *Hon. Secretary:* T. Searle, 11 Sefton Drive, Thornton, Liverpool 23.

Contests Diary

1953

August 16	D.F. Qualifying (Rugby/Slade)*
August 30	144 Mc/s Field Day (No. 2)
September 6	Low Power Field Day
September 6	D.F. Qualifying (Romford/Southend)*
September 13	420 Mc/s Tests
September 27	D.F. National Final*
October 3-4	Low Power
November 7-8	"Top Band" (No. 2)

* For rules, see page 400, R.S.G.B. Bulletin, March, 1953.

Coronation Year Bucket & Spade Party

The Coronation Year Bucket and Spade Party will be held at Worthing on Sunday, July 26th. The Organising Committee will be in attendance from 10 a.m. onwards at The Kiosk, Beach House. No set programme is being arranged but given fine weather a happy time should be enjoyed by all.

Representation

The following is an amendment to the list of Regional Representatives published in the February, 1952, issue:—

Region 5

W. J. Ridley (G2AJF), Gablehays Lodge, Springfield, Chelmsford, Essex.

Vacancies

Consequent upon Mr. Ridley's election as Region 5 Representative, a vacancy now exists for the office of County Representative for Essex (outside the London Region).

Messrs. R. A. Stringer (G3IOZ), H. G. Kimber (G3HAC) and W. Farrar (G3ESP) have resigned as Representatives for the Towns of Stockport, North-West Manchester and Pontefract respectively, and Mr. A. A. Barrett (G5UF) as Representative for the County of Dorset.

Nominations for their successors should be made in the prescribed form and sent to reach the General Secretary by August 31, 1953.

Change of Address

Region 7—London East (Harlow)

Correspondence intended for the Harlow T.R. (Mr. H. Ivan Wright) should be addressed to him at 45-47 South Street, Bishops Stortford, Herts, and marked "Personal."

Regional and Club News

Contributions to this feature should be topical, concise, and typed—using double spacing—and sent to reach Headquarters by not later than the 28th of the month preceding publication.

Forthcoming Events

REGION 1

Bury.—August 13, 7.30 p.m., Y.M.C.A., The Rock, Bury.
Chester (C. & D.A.R.S.).—Tuesdays, 7.30 p.m., Tarran Hut, Y.M.C.A., Chester.
Crosby.—Thursdays, 8 p.m., Scouts' Hall, East Street, South Road, Waterloo, Liverpool.
Darwen & Blackburn.—July 31, 7.30 p.m., Y.M.C.A., Limbrick, Blackburn.
Rochdale (R.R.S.).—Fridays, 7.45 p.m., 1 Law Street, Sudden.
South Manchester.—Alternate Fridays, 7.30 p.m., Ladybarn House, Mauldeth Road, Manchester 14.
Stockport (S.R.S.).—July 22, August 5, 19, 8 p.m., A.T.C. Headquarters, St. Petersgate, Stockport.
Wirral.—July 22, August 5, 19, 7.45 p.m., Y.M.C.A., Whetstone Lane, Birkenhead.

REGION 2

Barnsley.—July 24, 7.30 p.m., King George Hotel, Peel Street.
Bradford.—August 18, 7.30 p.m., Cambridge House, 66 Little Horton Lane.
Catterick.—Wednesdays, 7 p.m., Loos Lines, Catterick Camp.
Darlington.—Thursdays, 7.30 p.m., 129 Woodlands Road.
Doncaster.—August 12, 7.30 p.m., Black Bull, Market Place.
Gateshead.—Mondays, 7.30 p.m., Mechanics' Institute, 7 Whitehall Road.
Hull.—July 28, August 11, 7.30 p.m., Rampant Horse, Paisley Street.
Middlesbrough.—Thursdays, 7.30 p.m., Joe Walton's Boys' Club, Feversham Street.
Newcastle.—July 20, 7.30 p.m., British Legion Rooms, 1 Jesmond Road.
Newcastle (N.E.A.T.S.).—August 4, 7.30 p.m., Barras Bridge Hotel, Sandford Road.
Pontefract.—July 23, August 6, 8 p.m., Fox Inn, Knottingley Road.
Rotherham.—Wednesdays, 7 p.m., Cutlers Arms, Westgate.
Searborough.—Thursdays, 7.30 p.m., B.R. Rifle Club, West Parade Road.
Sheffield.—July 22, 8 p.m., Dog and Partridge, Trippet Lane; August 12, 8 p.m., Albreda Works, Lydgate Lane.
Slithwaite.—Fridays, 7.30 p.m., 3 Dartmouth Street.
Spenborough.—July 29, 7.30 p.m., Temperance Hall, Cleckheaton.
York.—Thursdays, 7.30 p.m., Club Rooms, Y.A.R.S., Fetter Lane.

REGION 3

Birmingham (South).—August 7, 7.15 p.m., Stirchley Institute (Room 7).
Coventry.—July 17, 7.30 p.m., Priory High School, Wheatley Street.
Kenilworth, Warwick & Leamington.—July 16, August 20, 7.30 p.m., Dalehouse Lane.
Stourbridge (S. & D.R.S.).—August 4, 8 p.m., King Edward's School.
Wrekin (W.A.R.S.).—Mondays, 8 p.m., Wrekin Service Club, Roseway, Wellington.

REGION 4

Alvaston.—Tuesdays and Thursdays, 7.30 p.m., Sundays, 10.30 a.m., Nunsfield House, Boulton Lane, Alvaston, nr. Derby.
Chesterfield.—Tuesdays, 7.30 p.m., Bradbury Hall, Chatsworth Road.
Derby (D. & D.A.R.S.).—No meetings July 8 to August 5.
Leicester (L.R.S.).—July 20, August 17, 7.30 p.m., Holly Bush Hotel, Belgrave Gate.
Lincoln (L.S.W.C.).—July 22, August 5, 7.30 p.m., Technical College, Cathedral Street.
Loughborough.—July 15, August 19, 7.30 p.m., Great Central Hotel.
Mansfield (M. & D.A.R.S.).—No August Meeting.
Newark.—July 19, August 16, 7 p.m., Northgate House, Northgate.
Northampton (N.S.W.C.).—Fridays, 7 p.m., August 7, 6 p.m., Club Room, 8 Duke Street.
Nottingham.—July 17, 7.30 p.m., Sherwood Community Centre, opposite Woodthorpe Drive, Sherwood.
Peterborough.—August 5, 7.30 p.m., New Inn, New England, Peterborough.
Retford.—No August Meeting.

REGION 5

Chelmsford.—August 4, 7.30 p.m., Marconi College, Arbour Lane.
Ipswich.—July 29, August 12, 7.30 p.m., T.A. Drill Hall, Woodbridge Road, Ipswich.
Lowestoft & Beccles (L. & B.A.R.C.).—July 29, August 12, 7.30 p.m., Y.M.C.A., Lowestoft.

R.S.G.B. BULLETIN, July, 1953.

REGION 6

Cheltenham.—August 6, 8 p.m., 128 Prestbury Road.
Gloucester.—Thursdays, 7.30 p.m., The Cedars, 83 Hucclecote Road.
Oxford (O. & D.A.R.S.).—Alternate Wednesdays, 7.30 p.m., The Club Room, Magdalen Arms, Ilfley Road.
Portsmouth.—Tuesdays, 7.30 p.m., Signals Club Room, Royal Marine Barracks, Eastney.
Southampton.—August 1, 7.30 p.m., 1 Prospect Place.
Stroud.—Wednesdays, 7.30 p.m., Subscription Rooms.

REGION 7

Acton, Brentford, Chiswick.—Tuesdays, 7.30 p.m., A.E.U. Rooms, Chiswick High Street, W.4.
Barnes, Putney & Richmond.—August 11, 7.30 p.m., 337 Upper Richmond Road, East Sheen.
Barnet (B. & D.R.C.).—Wednesdays, 8 p.m., "Hopedene," The Avenue.
Bexleyheath (N.K.R.S.).—July 23, August 13, 7.30 p.m., Congregational Hall, Chapel Road, Bexleyheath.
Bromley (N.W.K.A.R.S.).—August 7, 8 p.m., Shortlands Tavern, Station Road, Shortlands.
Chingford.—July 28, 8 p.m., A.T.C. H.Q., Pretoria Road.
Croydon (S.R.C.C.).—August 11, 7.30 p.m., "The Blacksmiths Arms," South End Croydon.
Dorking.—Tuesdays, 7.30 p.m., 5 London Road.
Ealing.—Sundays, 11 a.m., A.B.C. Restaurant, Ealing Broadway.
East London.—Summer Recess.
East Molesey.—August 5, 8 p.m., Design of miniature gear, G2ANX, Carnarvon Castle Hotel, Hampton Court.
Eltham & Sidcup.—Summer Recess.
Enfield.—August 16, 3 p.m., George Spicer School, Southbury Road.
Finbury Park.—July 21, August 18, 7.30 p.m., 164 Albion Road, N.16.
Guildford & Woking.—Summer Recess.
Harlow.—Summer Recess.
Hendon & Edgware (E. & D.R.S.).—Wednesday, 8 p.m., 22 Goodwins Avenue, Mill Hill.
Hoddesdon.—August 6, 8 p.m., "Salisbury Arms."
Ilford.—Thursdays, 8 p.m., G2BRH, 579 High Road.
Kingston (K. & D.A.R.S.).—July 15, 29, August 12, 7.45 p.m., Penrhyn House, Penrhyn Road.
Kensington & Shepherd's Bush.—Summer Recess.
Lewisham (R.A.R.C.).—Wednesdays, 8 p.m., Durham Hill School, Downham.
Norwood.—July 18, August 15, 7.30 p.m., Windermere House, Westow Street, Crystal Palace.
Slough.—July 16, August 20, 7.45 p.m., Labour Hall, Chandos Street.
Southgate & Finchley.—August 13, 7.30 p.m., Arnos School, Wilmer Way, N.11.
Sutton & Cheam (S. & C.R.S.).—July 21, "The Harrow," Cheam Village.
Uxbridge.—August 7, 7.30 p.m., "The Vine," Hillingdon.
Watford (W.A.R.S.).—July 21, August 4, 7.30 p.m., "Cookery Nook," The Parade.
Welwyn.—Summer Recess.

REGION 8

Brighton.—T.R. at Home, Wednesdays, 7.30 p.m., 27 Warren Avenue, Woodingdean.
Chatham (M.A.R.T.S.).—Mondays, 7.30 p.m., Club H.Q., Five Bells Lane, Rochester.
Isle of Thanet (I.O.T.R.S.).—Fridays, 7.30 p.m., George Hotel, Hawley Street, Margate.
Maidstone (M.K.A.R.S.).—Fridays, 7.30 p.m., Elms School, London Road.
Worthing.—Bucket and Spade Party, 10 a.m., Sunday, July 26, Seaford, opposite Beach House, Worthing.

REGION 9

Bristol.—July 17, August 21, 7.15 p.m., Carwardine's Restaurant, Baldwin Street, Bristol 1.
Exeter.—August 7, 7 p.m., Y.M.C.A., St. David's Hill.
North Devon.—August 6, 7.30 p.m., Rose of Torridge Cafe, The Quay, Bideford.
Penzance.—August 6, Railway Hotel.
Plymouth.—July 18, August 15, 7 p.m., Tothill Community Centre, Tothill Park, Knighton Road, St. Jude's.
Torquay.—July 18, August 15, 7.30 p.m., Y.M.C.A., Castle Road.
West Cornwall (W.C.R.C.).—July 16, August 6, Fifteen Balls, Penryn, near Falmouth.
Weston-super-Mare.—August 4, 7.30 p.m., Y.M.C.A.
Yeovil.—Wednesdays, 7.30 p.m., Grove House, Preston Road.

REGION 10

Cardiff.—August 10, 7.30 p.m., "The British Volunteer," The Hayes, Cardiff.

REGION 13

Dunfermline.—Mondays and Thursdays, 7.30 p.m., behind 34 Viewfield Terrace, Dunfermline.

REGION 14

Falkirk.—July 31, August 14, 7.30 p.m., The Temperance Cafe, High Street, Falkirk.



Subscription Rates

Dear Sir.—Much has been said in public and in private and, unfortunately, over the air and much has been written in the BULLETIN and elsewhere of the action of certain members of the Society who opposed the Special Resolutions which were put by the Council before the Society in Special General Meeting in December and February last.

I am one of those members, and I ask this opportunity through the medium of your columns to state my own feelings in the matter. I believe those feelings are shared by my colleagues and by the vast majority of the members who gave us support, but for what I write in this letter I accept full personal responsibility.

It is assumed and believed in certain quarters that we were and are opposed to any increase in subscription rates whatsoever. Such was and is not the case. We realise that an increase is essential if the Society is to continue to be conducted in a proper and efficient manner.

Our principal reasons for opposing the Resolution put forward by the Council in December were these:

1. Because the figures supporting the proposed increases had never been given to members, despite requests which had repeatedly been made by Representatives and others. Even at the meeting, the only figures quoted were those put forward by Mr. Basil O'Brien when he asked why an increase at 15/- per head for a country Corporate Member was called for when the loss on the year's working to June 30th last represented only 3/8 per head. No answer was given. Our calculations, based on the balance sheets and the income and expenditure accounts published by the Society over the past few years, justified an increase of 8/- per year to recover the losses over the past two years and to cover a similar loss during the present year—and to provide a working credit balance for future years. Our figures were not discounted at that meeting.

2. Because we believed that the attempt to double the subscriptions for country Corporate Members would have an adverse psychological effect, especially on the B.R.S. member. Frankly, we feared that the failures to renew subscriptions at 30/- per year would be so many that no increased revenue would result, particularly if the increase in subscriptions was made without any adequate attempt to explain the reason for it. Surely it is in the interest of the Amateur Radio movement of this country that the Society should claim the greatest possible support from the members of that movement?

The rejection of the Special Resolution in December had two desirable results so far as the membership were concerned. It spurred the Council into publishing a financial statement and it persuaded them to circulate proxy forms to enable proxy votes to be used by the whole membership with ease.

Up to the time that we organised opposition to the Special Resolution to be put before the February meeting no statement had been issued by the Council. The situation as we saw it was that once again the same or a similarly worded resolution was being put forward without any attempt at explanation or justification. But the publication of the financial statement in the February 1953 BULLETIN did not satisfy us that a good case for a 30/- subscription rate had been made out. We did not consider that the financial situation had been properly and adequately put before the members.

Naturally when the financial statement came into our hands we analysed it carefully and these briefly were some of our conclusions:

1. It contained no mention of the income of the Society obtained otherwise than from subscriptions, although in the financial year 1951/52 this other income amounted to no less than £1,545. The suggestion was implied that the difference between the 15/- subscription and the 22/- per member which it cost in that year to run the Society represented a loss for each country Corporate Member of 7/-, and so on for other classes of member. Such was not the case. The subscription income of the Society for the year 1951/52 amounted to 15/8 per head when averaged over the total membership. The other income of the Society amounted to 2/8 per head, making a total income of 18/4 per member. By deducting 18/4 (the average total income per member), from 22/- (the total cost of running the Society per member) the result is 3/8, which is the figure mentioned by Mr. Basil O'Brien which I quoted above. Could the Council therefore

honestly say that this statement justified an increase of 15/- for country Corporate Members and 9/- for London members?

2. Why were publications now to be financed out of subscription income? New publications should be floated out of reserves and then made to pay. The profit so made is a return on the capital invested. The suggestion appeared to be that new publications would be subsidised by the members' subscriptions. This was a new feature as previously profits had been made on the sale of publications.

3. We believed that with proper and efficient office organisation headquarters staff could be reduced. We have no wish to reduce the salaries of senior members of the staff who have given long and loyal service to the Society, and we realise that owing to the shortsighted policies of past Councils it has, of late years, become necessary to purchase deferred annuities by way of retirement pensions for senior members at disadvantageous terms, but, nevertheless, we believe that by improving efficiency, some of the junior staff, who in these days are expensive to provide in relation to their usefulness, can be dispensed with.

4. What was meant by "Partial Subsidisation of Associates?" This item was already included in the 22/- per member which it cost to run the Society and was added in for the second time under the heading of "Additional Expenditure."

The fact that the Council, at their February 1953 meeting, decided that in the event of the Special Resolution being approved the subscription rate for home Corporate Members should be 27/6, was itself an indication that 30/- was not essential. We still believe that 25/- is the most that can be justified. But if 30/- was to be a ceiling figure, why did the Council not say so? Was there anything in the financial statement to lead members to believe that 30/- was a ceiling figure only, particularly as the statement was headed "Why is 30/- Essential?"

It was in the light of these conclusions that we determined to continue our opposition to the Special Resolution before the February 1953 meeting.

Let us hope that some solution can be found which will be acceptable to both sides in this unfortunate disagreement. I believe that a solution can be found.

The 1953 Council have a great opportunity to pull the Society together and to set it on the right road. Speaking for myself I believe that guided by the firm hand of our President they will find that road. We need a strong and united Society today more than ever in the past.

Yours faithfully,

PETER CAWSON (G2ART)

Southport, Lancs.

Dear Sir.—Amongst the many letters which have appeared on this subject, one frequently comes across the statement, to quote G5SP, that the London Membership have considerable more facilities than the provincial members. What, may I ask are these facilities? Whilst it is true that the meetings in the I.E.E. building can normally only be attended by the London members, I know of no other facility which is available to the London Membership only. In fact the provincial member has at least two main advantages over his Town counterpart, viz. a lower cost of living, and a reduced subscription rate. I think that a Corporate Member should be compelled to pay the same subscription rate wherever he lives.

Surely anybody who is sufficiently interested in the Society would not object to paying an extra 15/- a year in order to put it on a sound footing. I am sure that the members who are rebelling against the rise in subscriptions would not hesitate in spending a sum far in excess of this figure on surplus gear, more correctly termed junk, on a Saturday afternoon. I can only suggest that the Society would be better off without these people, then at least we should have a nucleus of members who have the interests of the Society at heart and who back up the Council they elect.

Yours faithfully,

D. W. ROBINSON (G3FMT)

London, S.W.14.

T.R. Putney, Barnes & Richmond.

Election Addresses

Dear Sir.—I have, to the best of my knowledge, voted in every Council election since joining the Society, but often wonder if my vote has been wasted or wrongly placed. How can we expect to obtain a full and fair poll when the great majority of those entitled to vote have no means of knowing the views of those who they are called upon to vote for? In the recent by-election we were instructed to vote for two candidates but, like many other members, I found that out of the four gentlemen nominated, only one was known to me and he only slightly. The remainder were no doubt first rate candidates for office, but surely it is unfair to ask members to vote blindly for candidates whose views on the running of the Society are completely unknown to them. The system is claimed to be democratic but can even its most ardent supporters imagine the outcry which would take place were a similar system used at even a single parliamentary or local government election? No Sir, let candidates for Council tell us their intended policy through the pages of the BULLETIN and we shall see some life and reality brought back to our Council elections.

Yours faithfully,

ANGUS D. TAYLOR (G8PG)

Wirral, Cheshire.

Two-Metre Open Contest, 1952

Dear Sir,—As no doubt Members have read in the May BULLETIN that my entry in the 1952 Two Metre Contest was disqualified on account of "inaccuracies in log," I feel that some explanation by me on this matter would not be out of place.

The Council's decision to disqualify my entry was brought about by the lack of confirmation from certain stations which I worked. The absence of these confirmations can only point to the fact that the call signs in question must have been "pirates." If this is the case—and in my mind I have no doubt now—I feel that "Ham" Radio has deteriorated to a very low level.

No doubt many Members who, like myself, have taken an active interest in contests over a period of years, will feel very strongly about this matter. For myself I feel that if this sort of thing can happen during a contest serious consideration must be given as to whether or not participation in future events is worth while.

In closing, I should like to thank the Contest Committee for all the trouble they have taken in connection with the checking of my entry.

Cleeve Hill, Gloucester.

Yours faithfully,

W. R. Joss (G2AJ).

Footnote by Contest Committee. Mr. Joss is not really accurate when he states that the disqualification was brought about by "lack of confirmation." More correctly it was because a number of stations confirmed that certain contacts claimed had not, in fact, been established with them.

The enquiries were made with the knowledge and permission of Mr. Joss and to ensure impartiality, the stations of which information was sought were given no indication as to which or how many logs were being investigated.

New Books

RADIO ENGINEERING. Vol. II (Second Edition) by E. K. Sanderman, 613 pages. Profusely illustrated. Page size 8½ in. x 5½ in. Published by Chapman and Hall, London, W.C.2. Price 55s.

This is a text book for beginners and a reference book for experienced engineers and designers of radio equipment and circuits. It is intended to educate the novice to the level of an expert and to provide engineers with a series of properly designed tools ready for immediate use. As the method of approach is fundamental and general the more specialised aspects of the allied arts, such as radio and television, are not covered. Practically the whole of the subject matter is, however, an essential part of such arts.

The origin of the book was an instruction manual written primarily for maintenance engineers at B.B.C. transmitting stations; the author, at that time, being in the Engineering Division of the B.B.C.

The new edition embodies a number of minor additions and the addition of a new section on Transmission Line Filters.

The enquiring radio amateur, who is an amateur in the full sense of the word, would do well to study this book closely for it will provide him with a clear explanation of many complicated circuit problems. In particular he will find the chapters on Interference and Noise, Radio Interference, Measuring Equipment, Feedback, and Filters, of special interest.

THE HISTORY OF BRITISH ARMY SIGNALS IN THE SECOND WORLD WAR, by Major General R. F. H. Nalder, C.B., O.B.E. 377 pages. Page size 9½ in. x 5½ in. Published by Royal Signals Institution, London, and obtainable from Gale and Polden, Ltd., Aldershot. Price 17s. 6d.

This book traces the development of Army Signals from the late Nineteen-Twenties up to and including the Second World War. It describes in a most entertaining way how development followed development as defence turned to attack. An account is given of the part played by Army Signals during the early campaigns (France and Belgium 1939-40, U.K. 1940-41, and Middle East 1940-43), and of the demands made on the Signals organisation throughout the later campaigns in the West. In one chapter we learn of the theatre landline system in Italy, the purpose of the State underground cable, the extent of the signal despatch services, and of the numerous radio links which had been established. Signals systems and traffic, the part played by the Women's Services in Signals, co-operation with the Royal Navy and Royal Air Force, signal transmitting and equipment are all described in some detail. An extensive chapter is devoted to wireless communication, with specific reference to frequency coverage and to the development of the use of the frequency spectrum.

Those who have served, or are now serving, in Royal Signals, should not miss the opportunity of adding this most fascinating book to their library. Others will find it of great interest.

R.S.C.B. BULLETIN, July, 1953.

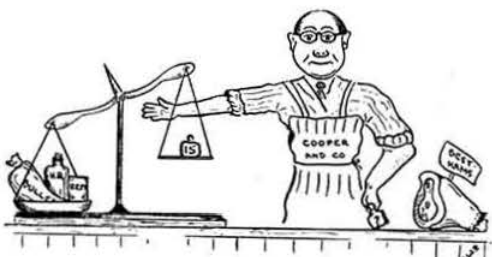
RECEIVERS, PRE-SELECTORS & CONVERTERS. Compiled by the staff of *The Radio Amateur* and *The Radio Constructor*. 36 pages, 27 illustrations. Data Book Series No. 7. Published by Data Publications. Price 2/6.

Descriptions are given of a general purpose short-wave mains receiver, an "all dry" 3-valve superhet for portable operation, a band spread 3-valve receiver, a television sound receiver, a pre-selector to cover the bands 13.5-31 Mc/s, a regenerative pre-selector unit, a television pre-amplifier, a high gain 28 Mc/s converter, and a single valve 14 Mc/s converter.

The newcomer to Amateur Radio—as well as the more advanced worker—will appreciate the valuable information on modern receiver designs contained in this little booklet. The illustrations are excellent and the text lucid.

NAVIGATION TODAY. By D. Chilton. Published by H.M.S.O. Price 1/6.

This book contains a description of the items which are on display at a special exhibition in the Science Museum, London. The chapters deal with the Navigator's Problem and his Environment, the Principles of Position Finding, Marine Navigation, Air Navigation, and Land Navigation. The exhibition contains much of interest to the enthusiastic radio amateur.



We can't run a business like that, you know!

Silent Keys

It is our sad duty to record the passing of Capt. Gibson Ferrier Steven (GM5BA), of Berwick-on-Tweed. Capt. Steven was a member of the London Wireless Society but his interest in wireless dated back even earlier, for when still a schoolboy, in 1910, he built his first receiver. A year or two later he obtained permission to operate a transmitting station, and this he did successfully from his school in Edinburgh.

After the first World War he established one of the first amateur telephony stations in the U.K., his nightly transmissions being listened to by a wide circle of enthusiasts. Many of the artists who voluntarily performed at 5BA were later heard over the air from B.B.C. stations. During the 1939-45 war Capt. Steven carried out V.I. duties in his home.

In addition to his interest in Amateur Radio Mr. Steven was a Rotarian, a philatelist, and a King's Scout. He was Director of a prominent newspaper and Manager of "The Berwick News" and "The Berwick Journal."

Capt. Steven's death—at the age of 56—will be mourned by a very wide circle of radio amateurs who will wish to be associated with his more intimate friends in expressing their heartfelt sympathy to his widow and family.

It is with deep regret that we record the sudden death, on June 29, following an operation at Addenbrooke's Hospital, Cambridge, of Charles Smith, G2UQ, of Whittlesey.

Prior to the war, G2UQ was one of the very few transmitting amateurs in this locality, and it was due to his guidance and help, and the ever-open door of his shack, that others became licensed. During the war he served as a Radar Mechanic in the R.A.F. In recent years his activities were mainly confined to the 3.5 Mc/s and 144 Mc/s bands, and he will be greatly missed by his many friends who work on those bands.

G3BK, 3DY and 3WW attended his funeral at Whittlesey on July 3.

To his wife and son our sympathies are offered. G3BK.

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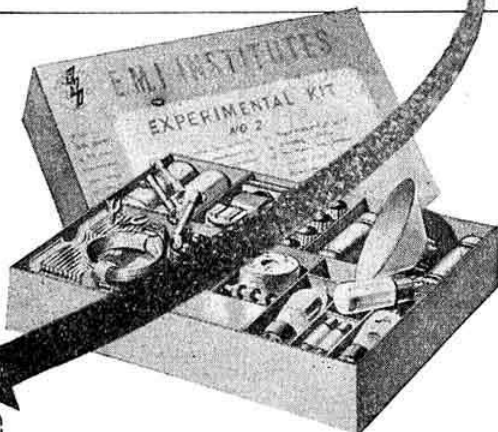
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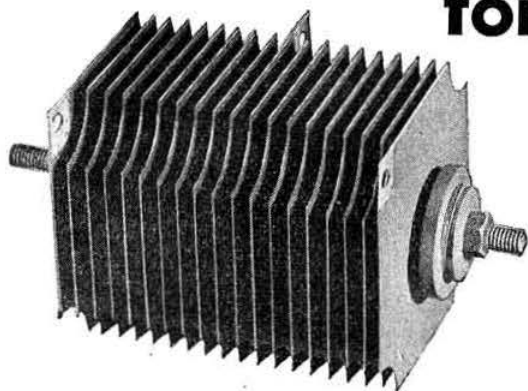


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25	1/10	2/2
26	2/-	2/4
27	2/-	2/4
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(Continued on page 48)

EXCHANGE & MART SECTION

(Continued from page 47)

SALE.—30 V-4 A battery charger reconditioned as new; also 5 ft. 6 in. steel rack with undrilled chassis.—For further details, etc., of either item, write G8UN, 15 Leach Street, Prestwich, Manchester. (538)

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VALVES at 2/-, VR92 (5). At 3/6, CV66 (1), 2D21 (1), 956 (1). At 5/-, 6K7M (3), VR91 (16), 6SL7 (3), 35Z4 (1), RL7 (2). At 6/-, 6B8 (1), 12AH7 (2), VT501 (3), VT52 (2). At 7/6, 6V6 (1), 6V6G (6), 25L6 (3), or £10 10s. the lot.—Box 529, THE NATIONAL PUBLICITY Co., Ltd., 36-37 Upper Thames Street, London, E.C.4. (529)

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V.H.F. for sale, c.c. 70 cms converter i.f. 30-27 Mc/s. As, S.W.M., June 1950, £5 5s. c.c. 145 mc converter i.f. 17.5-19.4 Mc/s, £3. Power pack suitable both converters, £2 10s. c.c. 145 mc transmitter 6V6 QVO47 (2), 832, £5. Power pack for transmitter, £2 10s. i.f. meter, 70 cms or 145 mc, 7/6. C.R.T. 139, holder, chassis, cover, £1 10s. BC.453B (Q5er) with 24 V heater transformer, £1 15s. Separate, or the lot £20. Buyer collects or carriage extra.—S.A.E. please to G8LY, "Restawhile," Clanwilliam Road, Lee-on-the-Solent (Tel. 79547), Hants. (520)

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WANTED.—BULLETIN, August 1926, February 1928, October 1934, February 1941. "QST," 1915 to 1924, April 1945. "CQ," 1945 and 1946. 153 odd "Practical Wireless" pre-1938, and Nos. 441, 457, 459, 511, 512. "B.S.W.L. Review," 1936 to 1942, September, 1948 to February 1949. "QRP," November 1949. Most "Radio," "R/9," "Amateur Radio," "Break-In," "Popular Wireless."—G3DGG, 95 Ramsden Road, London, S.W.12. (512)

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Official Appointments

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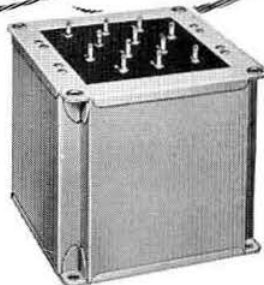
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