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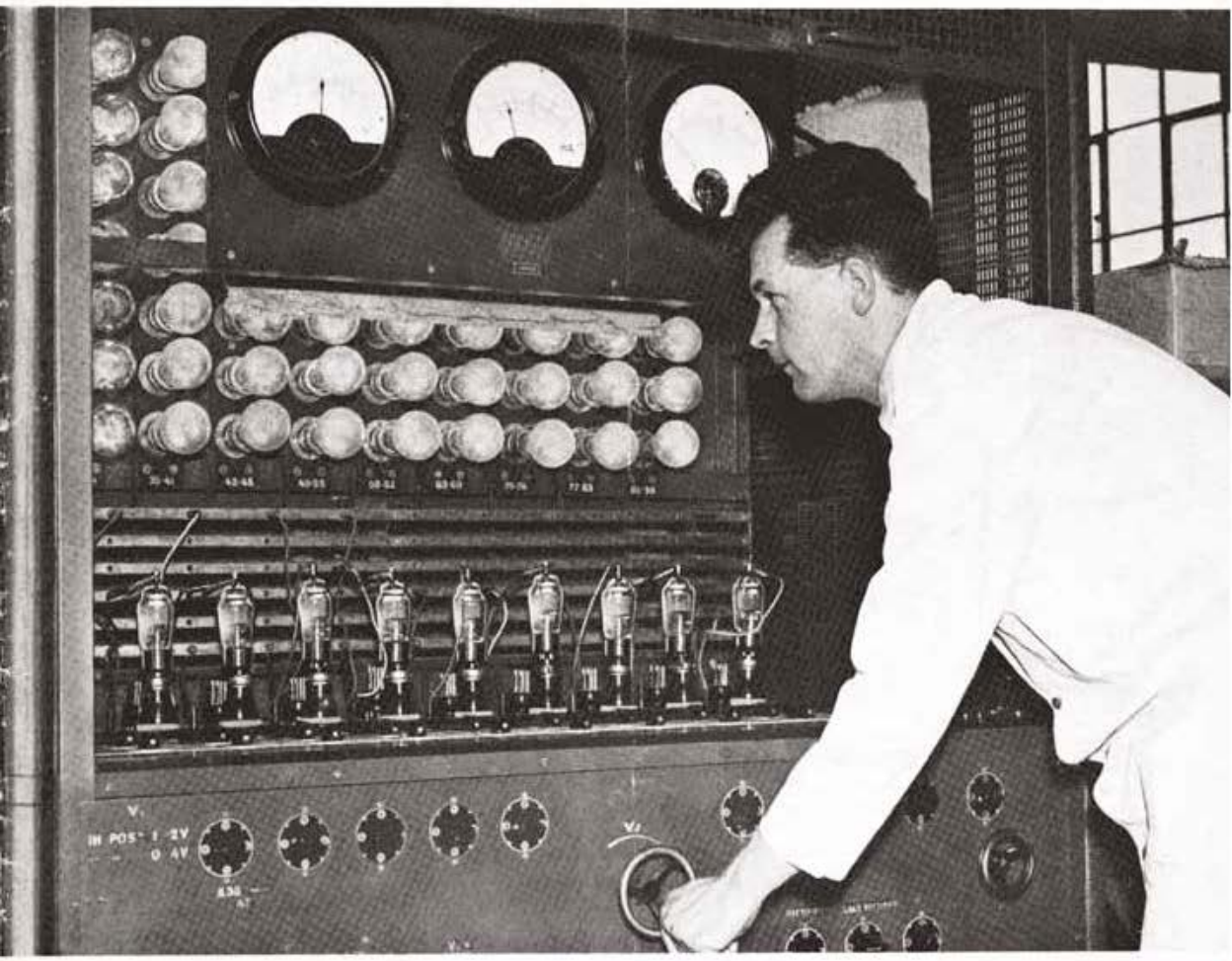
BULLETIN

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN



- VADE MECUM FIVE METRE RECEIVER
- NEW VERSATILE AERIAL SYSTEM
- TOP BAND CONTEST REPORT
- N.F.D. STATIONS

R.S.G.B. BULLETIN

OFFICIAL JOURNAL OF THE INCORPORATED RADIO SOCIETY OF GREAT BRITAIN

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VOL. XXII — No. 11

ROUGH SEAS AHEAD

BY the time this issue appears, the President and General Secretary will be in the United States preparing to participate in the International Telecommunications Conference due to open in Atlantic City, New Jersey, on May 15. They will be joined there by Mr. George Bailey and Mr. K. B. Warner, President and Secretary respectively of the International Amateur Radio Union and A.R.R.L.

The I.A.R.U. team knows that rough seas are ahead, but is hopeful, as we all must be, that some of the adverse amateur frequency proposals which have been tabled will fall by the way-side under the pressure of the arguments which it will put forward.

It seems desirable at this time to outline briefly how an International Telecommunications Conference operates—or rather how it has operated in the past.

The decision as to when and where a Conference is to be held is normally determined before the previous Conference breaks up. At the conclusion of the Cairo Conference, for example, it was agreed that the next should be held in Rome during 1942. The war prevented that Conference from taking place.

During 1945 and 1946 unofficial meetings took place between representatives of the U.K., U.S., U.S.S.R. and French Governments, and as a result of discussions at these meetings it was agreed in principle that an International Conference should be held in 1947.

Some months ago, the U.S. Government extended invitations to other Governments to attend a Conference in Atlantic City, and as we now know, these have been accepted.

In the past, the main work of a Conference has been done by Committees, and no doubt this procedure will be adopted in Atlantic City. The main Committees set up at the first Plenary Session of the Conference divide the work between the study of the existing regulations and frequency allocations (in this case Cairo) and examine all proposals put forward by the respective Governments.

Just prior to the Conference each Government is requested to send to the Bureau of the International Communications Union at Berne a list of its proposals for consideration at the impending Conference. In the case of countries such as Great Britain, and the U.S. the proposals are invariably extensive and cover a wide range of subjects. Some deal with the regulations, some with frequency allocations and some with definitions.

Although the smaller countries seldom submit many proposals, it must be remembered that their votes are just as important in the final stages as are the votes of the bigger powers. It is this democratic aspect of conference procedure which the I.A.R.U. team will study carefully, because if they can enlist the support of a group of small nations their votes may cancel out or outweigh the votes of those countries which are not prepared to give amateurs as much consideration as they deserve.

The I.A.R.U. delegates will have no voice at the Conference when in Plenary Session, but if pre-war practices prevail at Atlantic City the delegates of the amateurs will be permitted to state a case at Committee meetings.

When the Conference opens, a broad issue will be at stake. Up to the present time the principle of shared bands has been accepted by the majority of European countries, but to-day, if we judge the position correctly, the U.K. Government and certain other European Governments support the view that shared bands should disappear. This view does not apply to amateur frequencies alone, but to all other frequencies which at the moment are allocated on a shared basis.

It seems desirable and necessary to record the *General Observations* which accompany the U.K. proposals.

"*It is now nearly ten years since the allocation of frequencies was last considered, and in the meantime there has been a very considerable advance in radio technique.*

"*Consequently, the U.K. considers that the time has now come to recast the allocations in much of the radio spectrum. In order to prevent major changes in the future, the U.K. has endeavoured to plan not only for existing services and equipment, but also for those which are likely to expand or come into being within a foreseeable period. In so doing, the U.K. has had to keep in mind its interest in all services, and would resist a disproportionate allocation to any one particular service.*

In making the present proposals the U.K. has borne the following general principles in mind :—

(a) *Priority should be given to services necessary for the safety of life.*

(b) *Priority should also be given to services, such as Mobile Services, which have no means of communication other than by radio.*

(c) *Shared bands should be avoided as far as possible.*"

Thus it comes about that the U.K. is proposing that our 3·5 and 7 Mc/s. bands should be reduced in width and allocated on an exclusive basis. The Society, however, does not support the view of the U.K. Government, and our representatives will endeavour at the Conference to press for *status quo* on both bands.

The G.P.O. has already been advised that with a greatly increased number of amateurs now on the

Continued on page 194

THE "VADE MECUM"

An efficient and easily-built Three Valve T.R.F. receiver for the 60 Mc/s. band.

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

THIS little three-valve set, designed for easy portability and employing a minimum number of components, owes much of its efficiency to the use of the new 8D3 type midget pentode valve.

The circuit, shown in Fig. 1, is conventional but care has been exercised in the design to obtain maximum performance for the valves, smooth control and a complete absence of hand-capacity effects. As a result, the receiver handles distant C.W. signals with ease and produces readable speech from really weak carriers.

No attempt has been made to cover more than the 56–60 Mc/s. range although higher frequencies could easily be reached by a suitable reduction in coil sizes. Coil-changing could be introduced if desired.

The receiver as finally designed, fits a standard metal cabinet supplied by *Berry's Short Wave Limited*, which also contains a chassis 6½ in. × 8 in. and a panel 7 in. × 8 in. (Fig. 2).

Construction

For the benefit of those not familiar with the type of construction used, a word of advice will first be given on the problem of assembly. This must be carried out in the right order. The sub-panel and partition should first be cut and bent to the size and shape shown in Fig. 3; No. 16 or 18 S.W.G. aluminium sheet being used. Holes for the button-valve bases should be drilled in the sub-panel before it is bolted to the partition. The assembly should then be temporarily positioned on the chassis and the front panel added, the whole being moved into the cabinet to ensure correct alignment. Next, mark out the chassis for the holes which are to carry leads through from the valve bases. Remove the chassis and bore the holes, fitting grommets where special insulation is desirable. The sub-panel can then be bolted into position.

* 8 Beckenham Grove, Shortlands, Kent.

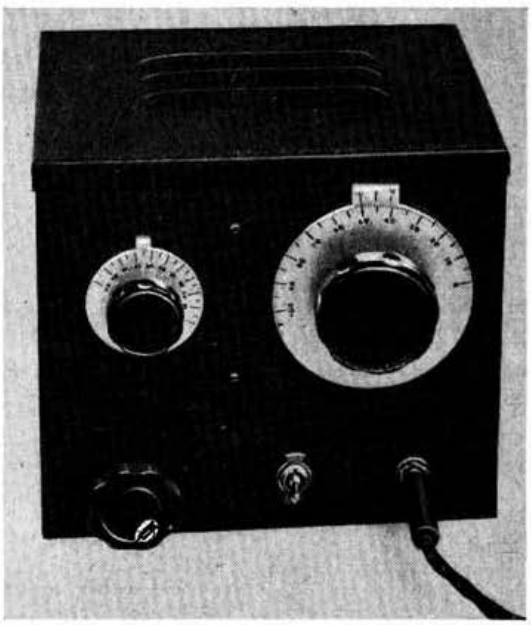

Fig. 2.
View of completed receiver showing position of various controls

Preliminary Wiring

Most of the wiring may now be undertaken before the front panel or variable condensers are mounted. Naturally all leads must be kept rigid and made as short as possible. In order to reduce stray currents, which would cause instability and capacity effects,

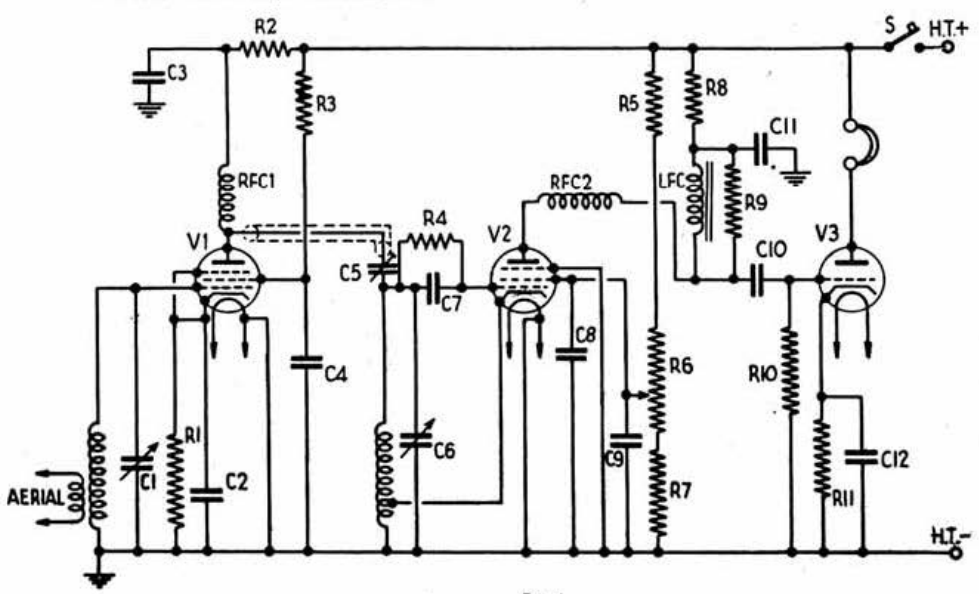

Fig. 1.
Circuit diagram of the "Vade Mecum" 5-metre Receiver.

all earth connections in the R.F. and detector stages should be made to single points. The best method of achieving this is to mount two small pillars (consisting of metal tubes about 1 in. long and containing brass bolts), close to the valve bases. The bolts are screwed to the chassis and a number of small soldering tags are clamped in at the tops of the pillars. All earth connections are made to the tags, as shown in the photograph (Fig. 4). By-pass condensers and resistances are now soldered into position and the two 5 μμfd. variable condensers (C1 and C6) screwed to the insulated brackets, which are then bolted into place. To obtain sufficient clearance in the R.F. compartment, it may be found necessary to saw-off the short coupling-rod at the back of the variable condenser in this section. The position of the variable condenser in the detector compartment must be decided in conjunction with the positioning of the main tuning dial.

Coil Construction

Having wired up the condensers, the construction of the coils may be undertaken. These are made of insulated wire No. 18 or 20 S.W.G., wound on $\frac{3}{8}$ in. diameter paxolin tubes screwed to the chassis. Small screws are forced into the paxolin at suitable points and the ends of each coil are soldered to the screw-heads, sufficient wire being left for connection to the correct points in the circuit. The grid coil in the R.F. stage consists of seven turns closely wound, an aerial coil of $1\frac{1}{2}$ turns being wound over this coil near the " cold " end. The wires from the aerial coil are conducted through a grommetted hole in the chassis and soldered to two lead-through insulators at the rear of the chassis which serve as terminals for the aerial feeders.

The detector coil consists of seven similar turns, tapped one turn from the lower end by a short wire taken direct to the earthing pillar.

Final Wiring

The final above-chassis connections will be those to the small grid leak and condenser and the lead from the anode of the R.F. valve. The latter is taken through a small hole in the partition to the trimmer condenser (C5) which is soldered directly to the detector tuning condenser. A short piece of screened wire should be used for this connection with the outer sleeving taken to earth.

The panel and dials are now fitted, together with the potentiometer reaction control, the H.T. switch and 'phones jack. The remainder of the wiring is " sub-chassis." A five-pin *Belling-Lee* plug and socket is used for supply connections, the socket being positioned in the side of the chassis behind the R.F. section. It will be noticed that no particular make of L.F. choke is specified. This is owing to the very limited availability of these components at the present time. It is essential that a good choke be used, however, if adequate low-frequency amplification is to be obtained. Space beneath the chassis is sufficient for installing a high-grade choke although the depth is limited to 2 in. and it may be necessary to mount the component on its side.

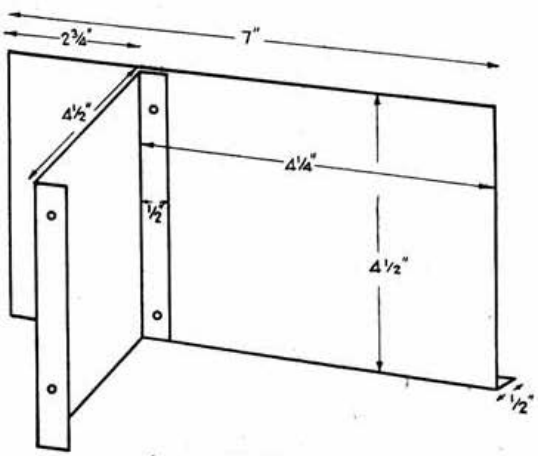

Fig. 3.
Scale drawing of sub-panel showing relative position of partition.

" VADE MECUM " RECEIVER

List of Components

C1, C6.—5 μμfd variable (*Raymart MC5DX*).
C2, C3, C4.—·003 μF (*T.C.C.*).
C5.—3–15 μμfd trimmer (*Polar*).
C7.—·0001 μF (*T.C.C.*).
C8.—·001 μF (*T.C.C.*).
C9, C11. 4 μF (*T.C.C., type CE32G*).
C10.—·01 μF (*T.C.C.*).
C12.—25 μF, 25 v. (*T.C.C. " Micropack "*).
R1.—150 ohms (*Erie*).
R2.—2,000 ohms (*Erie*).
R3, R5.—100,000 ohms (*Erie*).
R4.—1 megohm (*Erie*).
R6.—25,000 ohms potentiometer.
R7.—10,000 ohms (*Erie*).
R8.—50,000 ohms (*Erie*).
R9.—$\frac{1}{4}$ megohm (*Erie*).
R10.—$\frac{1}{2}$ megohm (*Erie*).
R11.—3,000 ohms (*Erie*).
V_1, V_2.—8D3 (*Brimar*).
V_3.—6J5GT (*Brimar*).
RFC1, RFC2 (*Eddystone, No. 1011*).
R.F. Tuning Dial (*Eddystone, No. 638*).
Main Tuning Dial (*Eddystone, No. 637*).
Insulated Brackets (*Eddystone, No. 1007*).
Benjamin Button-base Valve Holders with shields (*Webbs*).
On-off Switch (*Bulgin S259*).
Phone Jack (*Bulgin, J2*).
Phone Plug (*Bulgin, P38*).
Cabinet (*Berry*).
Lead-through Insulators (for aerial leads) (*Berry*).
Coils (see text).

Operation

The receiver works best with an anode voltage of between 100 and 150 volts. After switching on, the reaction potentiometer should be turned until the familiar noise of oscillation is heard. Pushing the reaction too far may produce super-regeneration, especially if a high anode voltage is used. In this condition, the receiver will probably howl and the control should be eased-off into the normal oscillating zone. Reaction should be extremely smooth—a condition essential for the reception of weak telephony signals. Should there be any harshness at the point of oscillation, the values of the resistance across the L.F. choke and the grid leak may be varied to obtain optimum values. The trimmer condenser may also be adjusted and this will serve to vary the frequency range and to bring the amateur band to the right place on the dial. Resonance in the R.F. stage is indicated by a slight increase in the tendency of the set to oscillate; if necessary, a minor adjustment of the R.F. coil may be made to ensure that the two tuning condensers " march in step." The R.F.

tuning is not critical and need not be altered whilst listening between 58·5 and 60 Mc/s. The R.F. condenser may, however, conveniently be used if desired as a pitch control (for varying the pitch of C.W. signals) or as a fine tuning control for the reception of 'phone. This is due to the very slight pull exerted by the R.F. tuning on the detector stage tuning.

In the original receiver, the 56 to 60 Mc/s. band extended from 10° to 90° on the dial, 58·5 Mc/s. being at about 45°. The receiver may be accurately calibrated by logging the harmonics of standard crystals by, means of a heterodyne wavemeter, or by recording stations in the five-metre band of known frequency.

Five-metre conditions vary so much from day to day that the efficiency of a receiver can be judged only after a fairly lengthy trial or by comparison with other receivers connected to the same aerial. There is therefore little point in making specific claims on the lines of " stations heard." Use of the set over a period of some months has shown it to possess exceptional sensitivity and a signal/noise ratio which enables one to listen to distant 'phone and C.W. stations with results comparable to those obtained from larger and more complex receivers.

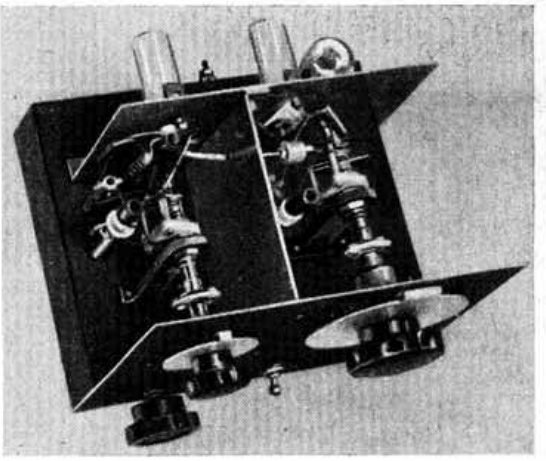

Fig. 4.
Plan-view of completed receiver.

IT MAY HAPPEN TO YOU

By W. TITTERINGTON, (G5MU).

IT was 11 a.m. on a Sunday morning in February, and shamefully enough, the Old-Timer was still in bed, reflecting on the previous night's DX, and drinking a cup of tea thoughtfully provided by his long suffering wife.

A discreet knock on the door and the Junior Op., aged 15, drifted in and sat on the bed. The O.T. sensed that something out of the ordinary had occurred but he was in no way prepared for the shock when Minor announced, with evident satisfaction, " Dad, you've had it, there is a gentleman from the G.P.O., complete with Radio Van waiting for you."

Hastily expelling Minor, the O.T. donned sufficient clothing to appear in decent company, arriving downstairs to find that the " Gent from the P.O." had departed and would return in half an hour.

This was a breathing space. While completing his toilet the O.T. racked what was left of his brains, to think what might have prompted this official visit on a Sunday morning.

Another knock—this was it.—No, it was BRS14,550 who inquired : " Why the ashen look OM ? " On ascertaining the reason he offered, at least, moral support, although the O.T. guessed he was going to get a kick out of it, watching the G.P.O. put him through the hoop. The remaining few minutes of the 30 ticked rapidly away and then Minor gleefully ushered in his friend with the van.

Introductions followed, and after the usual platitudes the dreadful news was imparted. . . . . The Old-Timer's call had been logged 5 kc/s. outside the 3·8 Mc/s. band limit, interfering with Service transmissions at such and such a date and time during a contact with G2 so and so . . . What did the O.T. know about it ? . . . Now right here, the O.T. pays tribute to the efficiency and fairness of the Official Radio Inspectors. There was the complaint—now it was up to him.

Righto ! The Log Book was produced and inspected. No entry of the alleged transmission. Why ? . . . because the O.T. had not made a QSO with G2 so and so, and moreover had never been at the H.F. end of the band.

" Fair enough," said Mr. Inspector, writing rapidly in his little black book, " A Pirate you think ? Well, we will keep a watch and try to locate him." " I hope you do," says O.T. fervently. " Please start up your transmitter," says Mr. Inspector and the O.T. now sure of his ground, proceeded to generate his 150 watts. of licenced power, and did that Inspector check the volts, the milliamps, the crystal frequency, the " neuting " of the TZ 40's, the link coupling, and the aerial, all the while monitoring for spurious emissions, and making copious notes.

The O.T. and BRS14,550 both sensed that he was after that alleged 3805 kc/s. emission, so, very heroically the O.T. spoke up ; " Mr. Inspector, many years have I been a ' Ham ' and many times has my call been filched but never has the O.M. been out of the band. The transmitter and the shack are yours, do what you like, I'm going indoors, call me when you've finished." From what I heard later from BRS14,550, Mr. Inspector just wallowed in the opportunity . . . but he couldn't get that 3805 kc/s. emission from any of the crystals owned by the O.T.

The O.T. being recalled, Mr. Inspector remarked that a communication would be received from the Engineer-in-Chief. Goodbyes were said and the matter remained in abeyance until to-day, March — when a letter arrived saying : " A satisfactory report had been received from the Inspecting Officer, no further action will be taken."

The O.T. now smiles again and in the quiet of his shack reflects that the moral of all this is, Heaven help the " pirates " when the P.O. locates them and also the Amateurs who use power in excess of licence, or infringe any of the regulations. Their defence, if any, must be unshakable. The P.O. is cleaning up.

Although this is written in the lighter vein, that confounded pirate might have cost the O.T. his licence and fellows . . . *It may happen to you.*

Holidays in Denmark

Mr. Hans Jorgensen, OZ1F, Landinspektor, Holsted, Denmark, offers accommodation for 8 days holiday during the comming summer to any British amateur in the London area willing to reciprocate with a similar offer during the same season. Anyone interested please write to OZ1F at the above address. He is a Royal Surveyor, aged 32, married with one, child. Interests : amateur radio, hunting and fishing. He was chief of the Resistance movement in his area during the German occupation.

A NEW VERSATILE AERIAL SYSTEM

By C. G. LEMON PH.D., F.C.S., F.PH.S., F.Z.S., F.R.S.A. (G2GL)*

An all-band semi-directive aerial system capable of transmitting and receiving at a higher level in a desired direction than omnidirectional types. Directivity is controlled by a switch.

Directive Aerials

ROTARY beams, directional arrays, rhombics, etc., have been designed and installed by a large number of amateurs with excellent results, but there are still many who have neither the facilities nor the space to erect even the most simple rotating beam. All such must rely on a straight wire aerial.

As we explore the higher frequencies the physical dimensions of a three-element rotary become more reasonable, and at 60 Mc/s. the system is not at all unwieldy. Even so, provision has to be made for rotation, preferably whilst operating. At 28 Mc/s. the structure becomes a little larger and a fair size garden is required ; at 14 Mc/s. we stop a little longer to consider. Below 14 Mc/s. it is more or less impracticable to instal a rotary although an aerial radiating in a fixed direction is still possible.

For many years the writer had only sufficient space for the erection of a straight wire, but even this simple type, if correctly fed, can be made to function extremely well.

A rotating beam, whether of conventional or unconventional design, if it is functioning at all, does considerably assist in the making of contacts.

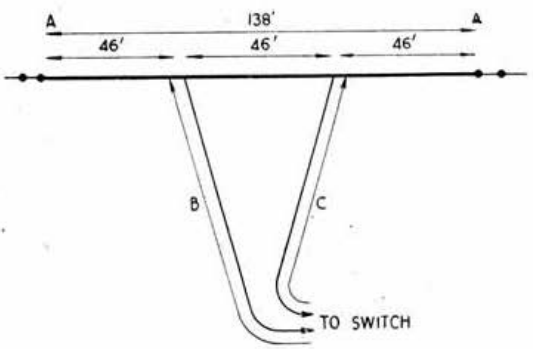

Fig. 1.
Dimensions of the aerial system.

In transmitting most of the available radiated energy is directed towards the receiver, but in receiving the advantages are manifold ; the array gives a greater signal input to the receiver and can be used quite often to minimise interference between stations that would normally prohibit working. Local and man-made interference can also often be reduced.

Details

The system to be described offers advantages over most straight wire and other aerials of an omnidirectional character, but it does not hope to compete with the greater directivity of a rotating array or similar system. Its versatility is such, however, that it will operate quite efficiently on the 1·7, 3·5, 7, 14, 28 and 60 Mc/s. bands, giving a controllable degree of directivity. Fig. 1 shows the fundamental design of the system—suitable for all band operation. The 138 ft. straight top is divided into three equal sections and a feeder wire is brought down from each end of the middle section. In locations where it is only possible to support an aerial 100 ft. long, the arrangement depicted in Fig. 2 should be used. In this case the two end lengths (19 ft. each) are allowed to drop down but are prevented from swinging by an insulated straining cord. In the case of Fig. 2, the aerial must be at least 38 ft. high at each end. There is still the possibility that even this arrangement will be too large for some locations. In such an event it is possible to erect an aerial of the same design but on a smaller scale, by reducing all dimensions by one half. The top will then be only 69 ft. long and the controllable directive properties will function on all bands except 1.7 Mc/s.

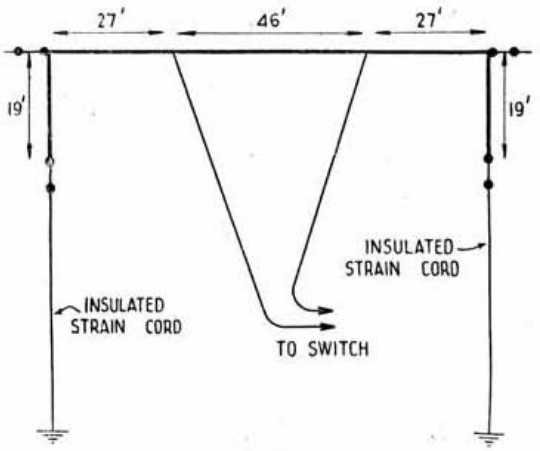

Fig. 2.
Contracted version of the system for restricted locations.

Feeders

The most important feature of the design is the feeding arrangement to the aerial proper. In order to avoid serious loss of power by incorrect matching, the aerial wire (A—A) must be three times the diameter of the feeder wires (B—B and C—C). This can be

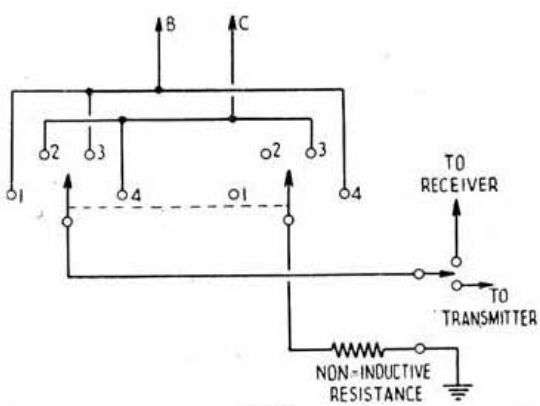

Fig. 3.
Switch connections for directivity control.

* " High View," Streatley, Berks.

accomplished by employing single 16 or 18 gauge wire for the feeders and using three strands of the same wire for the aerial. The strands can be twisted together. The joint, where the feeder joins the aerial, should be soldered and taped (or varnished), for protection. The feeders can be of any length but it is strongly recommended that both be of the same length. It *is* possible to operate the system with a great difference in individual lengths, but the aerial coil must then be retuned for each radiating position. The feeder wires from the aerial should slowly converge until the switch is reached. It is not advisable to run these wires parallel to one another.

Switching

Fig. 3 illustrates the switching arrangement required to transmit or receive in the required direction. For this purpose a two ganged four-way switch is necessary, together with a suitable non-inductive resistance capable of dissipating half the available power. The switch can be built up from various oddments lying about in the shack, but a small *Yaxley* or similar rotating type is not recommended owing to the close spacing of the contacts. The switch should be sturdy, easy to rotate, and connected as close to the transmitter as possible. For most purposes it has been found that a 100 watts 230 volts lamp with connections soldered to the lamp base is quite satisfactory as the non-inductive resistor.

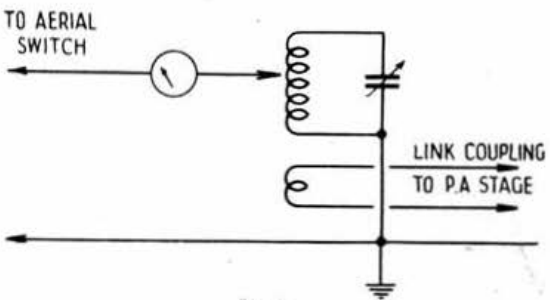

Fig. 4.
Simple aerial coupling circuit.

Fig. 4 illustrates a recommended coupling method for either a single or push-pull output stage, although any coupling system suitable for a single end-fed aerial would prove satisfactory. It has been found that, in certain installations of the new aerial, the feeder was voltage-fed on some bands and current-fed on others. This was due to the particular feeder length being in resonance with the frequency used.

Operation

With the switch in position 1, the tapping point on the aerial coil and the tuning should be so adjusted that correct loading of the output stage is obtained and the maximum transference of energy from the tank coil to the aerial is effected. As there is nothing unusual in feeding the aerial the normal procedure for determining the correct feed can be used. After completing preliminary tuning the anode current should be observed when rotating the switch. The load on the output stage may change slightly for each position, but if the feeder lengths are equal it will not be necessary to retune the aerial coil for each position. If, however, the feeder lengths do vary then some note should be made of the change required on the aerial tuning condenser for each switch position, so as not to lose time when making an actual contact.

For reception purposes the aerial is connected to the receiver in the usual way, but the lead from the switch must not be more than a few feet long.

In order to obtain some idea of the directional properties of the system and the particular direction in which the four positions of the switch operate, it will be necessary to devote a little time to receiving signals from known directions and ascertaining the best switch position. This data can then be graphed for each band on Polar paper. The simplest method when it is desired to make a contact is to set the switch to the position which gives the best reception and to use this position for transmitting. Two stations may be heterodyning one another badly, but if they are in different directions a change in switch position may reduce the interference considerably.

Results

The system described has been in use at the author's station for a considerable time, and the many hundreds of contacts made indicate that a good change of directivity is obtained for each switch position.

Experiments and tests are still being conducted, as it has been found that for certain frequency bands the replacing of the non-inductive resistor by a variable condenser makes the whole system radiate in a sharply defined path when tuned to resonance. Furthermore the two feeder wires may be fed in a similar manner to ordinary tuned feeders, in which case it will be found that the major radiation is in line with the aerial. Comparative tests made indicate that the new aerial gives a considerable advantage over straight wire radiation and its operation adds a great deal of interest to even the most ordinary contact.

Licences issued to date

Up to April 3 last a total of 4,771 licences had been issued by the G.P.O.

Band Planning

Those who have written enthusiastically in support of band planning may like to know that in response to the invitation published in the February issue of THE BULLETIN, only 287 votes were cast out of a total licensed membership of more than 4,000. Of this number 184 were in favour and 103 against band planning. Of the 184 in favour 19 agreed only on condition that band planning is applied internationally.

An analysis of the votes showed that 44 favoured planning on 1·7 Mc/s., 82 on 3·5 Mc/s., 105 on 7 Mc/s., 101 on 14 Mc/s., 76 on 28 Mc/s., whilst 68 favoured planning on all bands.

The Council proposes to take no further action for the time being but will reconsider the matter after the Atlantic City Conference.

Amateur Radio now permitted in Finland

It is understood that as the result of representations made by S.R.A.L. (the Finnish National Society), the ban on amateur radio in Finland was lifted as from April 1, 1947, and all pre-war bands have been allocated.

London (I. E. E.) Meeting

With Mr. S. K. Lewer, G6LJ (President) in the Chair, an attendance of about 120 was recorded at the April meeting when Mr. W. H. Allen, M.B.E., G2UJ, delivered his paper entitled "The Design and Construction of Short Wave Amateur Transmitters."

Messrs. D. G. Bagg, G4TO, H. V. Wilkins, G6WN, W. N. Craig, GM6JJ and A. O. Milne, G2MI, were among those who contributed to the subsequent discussion. A vote of thanks to the lecturer was proposed by Mr. W. A. Scarr, M.A., G2WS.

The substance of Mr. Allen's paper will be published in a new technical booklet, "Short Wave Transmitters" to appear later in the year.

PLUG-IN COILS FOR HOME-BUILT SUPERHETS

By G. C. EYRE (G8OJ)*

HAVING decided to construct a communications receiver along the lines of the one reviewed by McMurdo Silver in *Wireless World*, May, 1939, difficulties arose in connection with the trimming arrangements that could be employed when using plug-in coils and standard parts.

This problem presents little difficulty if a multi-switch is made use of, the various coils and condensers being soldered around the switch contacts.

However, after much experiment, the most efficient

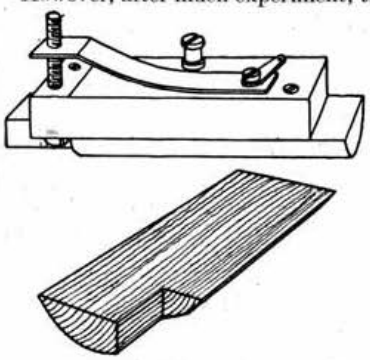

Fig. 1. Showing the method adopted by the author for screwing trimming condensers on to small wooden bases.

method appeared to be by screwing trimming condensers (the type as used in I.F. transformers) on to small wooden bases which could be easily fastened inside the coils. See Fig. 1.

The trimmers can be wired in circuit parallel or series connected depending on the coil range and their position in the receiver. In addition, a small variable condenser (15 μμF) connected across the detector coil, which is adjustable from the front of the set, is an easy and effective way of keeping the detector and oscillator in alignment. This is a very valuable attachment that helps in bringing in very weak DX stations. Shortly after fitting the device some idea of its worth was given whilst listening to a contact between a West Coast American amateur experimental station and J5DC (18 watts). These two stations were on the same frequency, the former being only a little stronger than the latter. Rocking the condenser (*i.e.* changing capacity by one or two μμF) appeared to have little effect on the strength of the American, but the slightly weaker station dropped below the mush level and could only be held with the greatest difficulty.

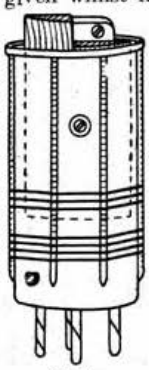

Fig. 2. The completed plug-in coil.

Construction

The formers were supplied by Raymart, threaded for 28, 14 and 7 Mc/s. and plain for 3·5 and 1·7 Mc/s., these coils being close wound.

Care should be taken in rounding-off the bases before fitting the trimmers. This operation when properly completed allows them to fit against the sides of the coil-former evenly —making for a tighter fit—with less possibility of damage taking place when they are screwed tightly in position. A few minutes spent in rubbing with fine sand-paper will do this quite nicely. Remember to place small washers under the screws; this is essential if round-headed screws are not available.

Before drilling the hole in the side of the former to secure the base inside the coil, make certain the adjusting screw will be easily accessible with a screwdriver. To take the "bareness" off the bases a thin coat of clear varnish, or enamel, applied to the wood improves the appearance.

The writer finds this method of fixing satisfactory, despite rough handling at times. Incidentally, the coils have required no attention since they were constructed some years ago.

* 46, Warbeck Road, New Moston, Manchester 10.

COIL INDUCTANCE MEASUREMENTS

By P. NEWTON NIELD (G8SH)†

THE measurement of inductance usually presents some difficulty to the amateur, as the construction and calibration of a suitable bridge is not easy, and the expense of a ready-made instrument is prohibitive.

For a time, the writer had access to a Marconi 1,000 kc/s inductance bridge recently recalibrated, and took the opportunity of making some inductance measurements on the popular 1½ in. diameter receiving type coils, threaded 16 turns per inch and wound with 20 S.W.G. enamelled copper wire.

The former was wound full, the inductance (at the pins) measured, and the turns were removed one at a time, the inductance being measured at every step. From these figures the data given below was obtained.

Turns	Inductance	Turns	Inductance
	μH		μH
0	0·05	17	8·70
1	0·13	18	9·42
2	0·33	19	10·13
3	0·61	20	10·87
4	0·98	21	11·60
5	1·40	22	12·37
6	1·83	23	13·10
7	2·37	24	13·87
8	2·92	25	14·64
9	3·47	26	15·41
10	4·06	27	16·20
11	4·68	28	16·97
12	5·32	29	17·75
13	5·96	30	18·58
14	6·63	31	19·32
15	7·30	32	20·10
16	8·03	33	20·87

The errors in measurement are not expected to be greater than 2 per cent., and should be much less. Upon winding various coils on similar formers the results were found to agree closely with the figures obtained. In all cases, the coils were wound starting in the bottom slot, *i.e.* the slot nearest the coil pins.

It is hoped that these figures will enable coils in the 0—20 μH range to be wound with sufficient accuracy for most amateur purposes, and to eliminate some of the time-consuming cut-and-try methods which many of us have had to adopt in the past.

† 5 Park Street, Loughborough, Leicester.

TOP BAND CONTEST, 1947

FIRST SECTION MARCH 1ST AND 2ND, 1947

ALTHOUGH activity during the first Section of this Contest was on a lower scale than that of the 1946 event, the total of 68 logs received (including check logs) was considered to be very satisfactory bearing in mind the adverse conditions under which the Contest was held. Power cuts, an extremely cold night and ignorance of the results of the last event, were contributory causes of this lower level of activity.

Appreciation

Everyone seemed pleased with the introduction of "QMF" even if it did result in a bunching of stations on certain frequencies. It was exceptional to find one station effecting a QSO with another on a different frequency. The standard of operating on the whole was excellent and a great improvement was noticed in the quality of signals. No one was disqualified for receiving consistently bad tone reports—a tribute to the superior apparatus in use, especially when one bears in mind that most stations did not employ crystal control. It was gratifying to note that entrants were on the whole more careful in making out their entry forms.

Criticism

Criticism was levelled at the Contests Committee for not publishing the results of the last Contest before holding the next event. This was entirely due to lack of space in the BULLETIN. Until that happy day, when space is not at a premium, Contest Reports cannot be published in detail and results may often have to be held over.

Several entrants regretted that the Contest involved lack of sleep. In this connection it must be pointed out that an equal number of critics located in more isolated areas reported that they were hard put to raise anything after daylight as the band "went dead on them." The duration of the Contest, although reduced considerably, is still felt by some entrants to be too long. A further reduction is not felt to be practicable as it would be likely to lead to a sharing of the leading positions by a number of stations.

Suggestions

Again, many suggestions were put forward, but they were of such a varied nature that few could be entertained on this occasion. Arrangements have been put in hand to inform Radio Societies abroad next time, and it is hoped that countries licensed for the use of this band will be represented in the Second Section of this Contest.

Power Cut

The Committee decided at short notice, in the interests of fairness, to terminate the Contest at 09.00 G.M.T., instead of 10.00 G.M.T., and this decision was communicated to as many top-band users as possible before the event. Points claimed for contacts after 09.00 G.M.T., have therefore been disregarded.

General

On the whole conditions were not up to the level of the 1946 event, but this was accentuated probably by the diminished activity (210 stations were logged, as against 430). G6BQ, however, reported that, during the early hours of the day before the contest, he had logged a number of American broadcast stations on nearby frequencies. It was noticeable this time that few stations used the edges of the band, all being clustered towards the middle. ON4AA was worked by two stations. In addition to D2CH and D2KW, who sent in entries, two other "D2's" were operating.

The Leading Stations

Mr. David Mitchell, GW6AA, of Colwyn Bay, the leading station with 98 points, needs no introduction. Always a keen entrant in pre-war top-band contests, he was placed first in the 1937 and 1939 Contests. His score should satisfy the critics who feel that stations located in the more populous districts of Southern England, possess all the advantages. Rapid operation was the key-note of this outstanding total. His transmitter consisted of a V.F.O. (12A6) and P.A. (1625) with 10 watts input feeding a 260 ft. end-fed Hertz, only 15 ft. high. The two receivers had separate 260 ft. aerials.

Mr. P. G. Tandy, G2DU, and Mr. J. A. H. Hunt, G2FSR, both with 86 points, share second place. G2DU of Bletchley, Bucks, used a KT8C as E.C.O. with an ESW2O P.A. with 206 ft. end-fed aerial. His receiver was an RCA. AR77. G2FSR of Chingford, E.4., placed fifth in the 1946 Contest, operated a V.F.O. with 6L6P.A. and a 100 ft. Marconi with 50 ft. counterpoise.

Mr. H. Mee, G5MY, of Long Eaton, also a high-scorer in the last event, was placed a close fourth. His 85 points were achieved with a Franklin V.F.O.–B.A.–P.A. with 10 watts input. His aerial consisted of a 264 ft. wire, centre-fed and the receiver an H.R.O.

The complete list of entrants in order of merit is as follows :—

Position	Call Sign	Points	Position	Call Sign	Points	Position	Call Sign	Points
1	GW6AA	98	22	G2AJ	73	42	GM3BL	50
2	G2DU	86	23	G6LD	71	42	G8QM/A	50
2	G2FSR	86	24	G8WF	70	42	G8QZ	50
4	G5MY	85	25	G8JR	68	45	GM4FK	49
*5	G5RI	83	26	G3CO	63	45	G8PI	49
6	G2MI	82	26	G4CF	63	47	G3MI	48
6	G5ZX	82	28	G2BGU	62	48	G8VN	47
8	G6BQ	81	28	G5MP	62	49	GW8WJ	46
9	G2LC	79	28	G8JD	62	50	D2CH	45
9	G5PR	79	31	G3ABB	61	50	G3ARS	45
11	G6VC	78	32	G8VR	60	52	G6UT	44
11	G6YR	78	33	G2FZ/A	59	53	G2AAU	37
13	G4AU	77	34	G6WH/A	58	54	G2FO	36
14	G2VD	76	35	G3ABG	57	55	G2SO	29
14	G2WQ	76	36	GW2HH	55	56	GM3AEY	27
16	G2HW	74	37	D2KW	54	57	G3BHN/A	25
16	G3AFZ	74	38	G5QU	53	58	G3AHU	24
16	G3GX	74	39	G2IX	52	59	G4MU	20
16	G6HD	74	39	GM3AWF	52	60	G6JF	19
16	GM6JJ	74	39	G6ZN	52	61	G6CL	15
16	G8OM	74						

* Shown as fourth with 85 points, in error, in the April issue.

Once again, a number of "short term" entries were received and these, consequently, account for most of the tail end of the above list.

The Contests Committee wish to thank all those who wrote expressing appreciation and offering suggestions, also the following members who sent in "check logs": G3BCB, 4KS, 5JL, 6CT, 8BN and GI5DX. BRS1535 is commended on an excellent and detailed listener's log.

THE MONTH ON THE AIR

By A. O. MILNE (G2MI)*

B.E.R.U.

WELL, how did you get on ? Some of the G's seemed to do fairly well but the majority gave it up. There is no doubt that crystal control just doesn't stand an earthly ! To be 5 kc/s. away from a DX station's frequency is too far. It was, so to speak the A.R.R.L. DX contest in reverse so far as the British stations were concerned. The DX just stuck on one frequency and we had to V.F.O. on to it or line up in the queue. Sad but true, that was the way things were. We'd take a bet that on the present rules, no G will ever again win the B.E.R.U. Trophy. Still, never mind, there remains the Col. Thomas Trophy awarded to the leading G.

Notes and News

Bill Marsh, G5WM, has worked OX3SL, who is a Dane. QSL via R.S.G.B., HP4Q, via A.R.R.L. and TR1Q who is O.K. and QSL's.

G3BGP says LJ2H is ex LA1H, address Oslo, Sjomannsskole, Oslo. The operator is a YL named Elsa Volsberg and her QSL is literally a picture !

G2IO gives C3LT as Box 163, Canton, China. VR2AL, writing from c/o Airadio Station, Naudi, Fiji, says there should be a sharp rise in the number of active stations soon, so look out for a rare country fellows !

VU7JU's address is Mr. S. G. Abbott, Officer's Mess, R.A.F., Bahrein. He is running 30 watts. VU7JUP is also O.K. on the same airfield.

VU2AT, now G3CAT, will QSL again to anyone who has not received a card.

G8TD with 70 watts to an 829 and a three element rotary has been doing very well. VS6AC, CR9AG, KH6FD, KG6AB and J9 are some of his best. Wants any information available on C2KT, Hankow, and VR1AD, both heard on 14 Mc/s.

G4KS has worked KA6FA on 14,090 about 22.00 G.M.T. QTH, Box 392, Koko, Panay Is., Philippines.

G8VR offers PZ1WK, 14,100, Box 637, Paramaribo, Surinam. KZ5ND, 28,030, Fort Sherman, C.Z. Says VK5NR very hot under the collar at the number of G's who tried to break up his QSO and "muscle" in during B.E.R.U. N.R. says he will not reply to anyone who breaks in before he finishes a QSO.

VS7IT is O.K., QSL via R.S.G.B.

Quite a number of VS6 stations are now active. VS6AA, although on a ship, is permanently moored at the Hong Kong quayside and should, therefore, count as a VS6 for certificate purposes. QSL all VS6's via R.S.G.B.

Via G8IH comes a message from VK2RA saying that on February 24 British signals broke through on 28 Mc/s. at 21.30 G.M.T. G6GN and G6HL were the stations heard. VK3HG was heard at the same time. The conditions lasted only a few minutes.

G6QB has worked K6ETF/KC6 on Canton Island, 14 Mc/s. 'phone. '6ETF says it is the first two-way G/KC6 'phone QSO ever. 'QB has also worked KP6AB on Palmyra Island and has heard ZK1AB and ZM6AC on 14 Mc/s. Wake Island, W6ONP/KW6 on 28,400 'phone is another of Tommy's plums. Nice work O.M.

G2QY worked ZD1KR, c/o Post Office, Freetown, Sierra Leone, on March 28, by the simple expedient of not calling him on his own frequency. This station answered no call nearer than 50 kc/s. from his own frequency. V.F.O.'s please note.

BRS13171, writing from M.E.L.F., assures us that ZC6SJR, who claims to be at H.Q. 6th Airborne Division, is a phoney.

XABK advises us that a new allocation of calls has been made to British Army amateurs in Greece. Henceforth they will be in the series SV0AA to AZ. His will be SV0AJ. The new calls do not apply to Crete or the Dodecanese.

XABU is now in Egypt.

G3ZJ, writing from Eritrea, says ET1JJ is a pirate in Asmara. I1AHC/I6 is also a pirate. The Radio Society of Eritrea is being formed and it is hoped that some stations will be active soon.

W6QFH appeals to G's to look for narrow band FM stations at the high end of 28 Mc/s. Just turn off the A.V.C. and tune to one sideband.

G6LX has worked 98 countries since the war. VP2LA (on St. Lucia), APO867, c/o P.M., Miami, Fla., and HH2CW are two of them. G3VI is now in Sudan and hopes to be active soon. ST2KA is another one to look for.

G8PB contacted FB8DC/F8NB on 14,140 and found he was in a French Skymaster over the South Atlantic.

The prefix ME has been changed to MD.

News from Tasmania

Eric Trebilcock has been hard at it as usual, says MX3KG is a Yank on 'phone. ZD6DT is c/o Royal Signals, Nyasaland. PK6AX is Bert Krygsman, Cantine-Laan 10, Macasser, Celebes. PK6EE is Box 76, Macassar.

G5CI had 9, Adige Road, Hibramia, Alexandria, given by SU3AA. He sends a fine list of DX with frequencies, but it doesn't seem much good quoting 'em in these V.F.O. days !

Kufra

Many thanks to G3AGN, G6HU and G6OY and others for the dope on Kufra. This station is operated by Cpl. J. Oliver, No. 1 R.A.F. Met. Unit, Cairo for Kufra. The unit is situated at the Oasis of Kufra about 600 miles south of Tobruk. There are 5 men on the station and they are very isolated with mail only once in two months. The note is not so good and the station comes up about 19.00 G.M.T.

Letter of the Month

Thanks Mr. Shinwell.

DEAR SIR,—I am sure I am voicing the heartfelt thanks of many XYL's to Mr. Shinwell for the power cuts. Never before have the Hams been so willing to assist with the washing up, dusting etc. My sympathy goes out to the unfortunate XYL whose husband uses a battery set. Quite a number of these about lately !

Yours faithfully,

EILEEN ROSE, G2DRT.

10 *South Parade,*
Spalding, Lincs.

Congrats

● To Mr. R. W. Standley, G8RW and Mrs. Standley on the safe arrival of a second son (Robert William) on March 19th last. G8RW is now an Assistant Signals Officer with the Ministry of Civil Aviation and living temporarily at 59 Henley Avenue, North Cheam, Surrey.

* 29 Kechill Gardens, Bromley, Kent.

NATIONAL FIELD DAY, 1947

Amendment to the Rules

Owing to the re-introduction of Double British Summer Time it will be necessary to read "D.B.S.T." instead of "B.S.T." throughout the Rules as published in the February BULLETIN.

List of Stations

Below we publish a list of stations for which application has been made to the G.P.O. to operate portable at the sites indicated. As soon as the authority is obtained the Society will notify the Town or Area Representatives responsible and entry forms will be forwarded to them.

The Swiss Amateur Radio Society hope to hold their Field Day, as in previous events, on the same dates and, if details are received in time, T.R's. and A.R's. will be given a list of their portable stations as well as any other additions to those set out below :

Town or Area	Station	Call Sign	Site
REGION 1 (NORTH-WEST)			
Cheshire			
Stockport ..	A	G4HK/P	Higher Disley, Cheshire.
Wirral	A	G8NH/P	Heswall Hill, Wirral.
	B	G3CK/P	Bidston Hill, Birkenhead.
Cumberland			
West Cumberland	A	G6WR/P	"Oldfields," Little Clifton, Cumberland.
	B	G3BW/P	
East Lancashire			
Accrington and Burnley	A	G8TD/P	Crown Point, Burnley.
	B	G2PB/P	Green Haworth, Accrington.
Blackburn and Darwen	A	G2HW/P	Nuttalls Farm, Belthorn, nr. Blackburn.
Bolton	B	G2BTO/P	Winter Hill, nr. Bolton.
Bury	A	G3BRS/P	Jackson Fold Farm, Pilsworth, nr. Whitefield, Manchester.
	B	G8NL/P	
Manchester ..	A	G2OI/P	Heaton Park, nr. Manchester.
	B	G2WQ/P	
West Lancashire			
Blackpool and District	A	G2COR/P	East Side of North Drive, opp. Mosson Lane, Norbreck.
	B	G8GG/P	Wildings Farm, Heyhouses Lane, St. Annes.
Liverpool ..	A	G6KS/P	Sports Field, Speke.
	B	G8AZ/P	A.T.M. Sports Field, Childwall.
Preston ..	A	G2NY/P	"Glenhaven," Lightfoot Lane, Broughton.
	B	G5AD/P	"Wyngarth," Bilsboro Lane, Bilsborough.
Southport ..	B	G2IN/P	Meols Hall, Churchtown, Southport.
Warrington ..	A	G8TR/P	The Towers, Myddleton, nr. Warrington.
	B	G3TM/P	
REGION 2 (NORTH-EAST)			
County Durham			
South Shields and Sunderland	A	G3IV/P	Fulwell Mill, Sunderland.
	B	G8KK/P	Horsley Mill Farm, South Shields.
West Hartlepool	A	G3UW/P	Elwick, nr. West Hartlepool.
	B	G3TO/P	
Yorkshire (East Riding)			
Hull	A	G3CC/P	Field, nr. The Mill, Keyingham.
	B	G6OS/P	Field, nr. Tranby Croft, Anlaby.
Yorkshire (West Riding)			
Barnsley ..	A	G2BH/P	Lees Hill, Ardsley.
	B	G5IV/P	Bull Fields, Broadway, Barnsley.
Bradford and Halifax	A	G3BAK/P	Crow Hill, nr. Sowerby Bridge.
	B	G3FX/P	Nr. Dobrudden Farm, Baildon Moor, Shipley.
Huddersfield ..	A	G8NT/P	"Upper Highfield," Slaithwaite.
	B	G8CD/P	Castle Hill, Huddersfield.
Sheffield ..	A	G3FN/P	Sunnybank Field, White Lane, Gleadless.
	B	G5TO/P	Herdings Farm, Norton.
York	B	G5KC/P	Knavesmire, York.
REGION 3 (WEST MIDLANDS)			
Shropshire			
Oswestry ..	A	G2AUZ/P	Racecourse, Oswestry.
	B	G6US/P	
Shrewsbury ..	B	G6KR/P	The Farm, Lyth Hill.
Staffordshire			
Burton-on-Trent	A	G2DAN/P	Field Lane, Burton.
	B	G2RH/P	Nr. Brizliriote Hall, Stapenhill.
Warwickshire			
Birmingham ..	A	G2AK/P	Brimstoke Hill, Coleshill.
	B	G4OI/P	Redhill Farm, Kings Norton.
Coventry ..	A	G2YS/P	Oaken End Farm, Allesley, nr. Coventry.
	B	G5PP/P	
Rugby	A	G8RL/P	Manor Farm, Newbold.
	B	G3DI/P	
Worcestershire			
Malvern ..	A	G6DX/P	Brick Kilns Rough, Besford Village, nr. Defford.
	B	G8QX/P	North Hill, Malvern Hills.
Stourbridge ..	A	G8GF/P	Clent Hill.
	B	G8PR/P	Hoo Farm, Kidderminster.
Worcester ..	A	G8JC/P	Fernhill Heath.
REGION 4 (EAST MIDLANDS)			
Leicestershire			
Leicester ..	A	G2IX/P	Grosvenor Road, South Wigston.
	B	G2RI/P	Massingham, Six Hills Corner, Thurmaston.
Lincolnshire			
Grimsby ..	A	G8KH/P	Rogers Farm, nr. North Thoresby Station.
	B	G3TZ/P	
Northamptonshire			
Northampton and Daventry	A	G3BA/P	Newnham Hill, Daventry.
	B	G4MU/P	Nr. The Red House, Hannington.
Nottinghamshire			
Mansfield ..	A	G3AFP/P	Codnor Lane, Codnor.
	B	G8SA/P	Warsop Windmill, Warsop.
Nottingham ..	A	G8DZ/P	Foss Farm, 7 miles East of Nottingham.
	B	G8DD/P	Kneeton Old Windmill, 8½ miles East-North-East of Nottingham.
REGION 5 (EASTERN)			
Cambridgeshire			
Cambridge ..	A	G5JO/P	Quaker Farm, The Gogs.
	B	G5DQ/P	Bendall's Farm, Bottisham.
Essex			
Chelmsford ..	A	G3AGH/P	Hazeleigh Farm, Maldon
	B	G5RV/P	
Southend-on-Sea	A	G6CH/P	Thundersley Glen, Thundersley.
	B	G5QK/P	
Huntingdonshire			
St. Ives ..	B	G5RL/P	Hill Farm, Huntingdon Road, St. Ives.
Norfolk			
Great Yarmouth	A	G3RW/P	Church Farm, Burgh Castle.
	B	G2FAO/P	
King's Lynn ..	B	G2JS/P	Knights Hill, South Wootton.
Norwich ..	A	G2MN/P	Norwich Union Athletic Association Sports Field, Thorpe.
Suffolk			
Ipswich ..	A	G5WW/P	Felixstowe Golf Course, Felixstowe Ferry.
	B	G5AM/P	Reavell's Sports Ground, Crane Hill.
REGION 6 (HOME COUNTIES)			
Bedfordshire			
Bedford ..	A	G5PA/P	Bury End Farm, Stagsdon.
	B	G2HK/P	Wheat's Field, Plummers Lane, Haynes.
Luton	A	G2MD/P	Bradger's Hill, Stopsley.
	B	G2LS/P	
Buckinghamshire			
High Wycombe	A	G3IF/P	Scrubwood, Ellesborough.
	B	G4NT/P	Eastwood Farm, Stokenchurch.

Town or Area	Station	Call Sign	Site
REGION 7 (GREATER LONDON)			
North London			
Finsbury Park	B	G8PP/P	Rear of 12 Henry Road, N.4.
St. Albans and Welwyn	A	G5UM/P	Field South of Hill End level-crossing, St. Albans.
	B	G8PM/P	Mardley Hill, Welwyn.
Southgate and District	A	G5FA/P	Barnet Gate, Arkley, Herts.
	B	G6ZO/P	Barnet Lane, Totteridge, Herts.
South London			
Bromley and Beckenham	A	G6HD/P	Westerham Heights, Westerham.
	B	G2NK/P	Marlings Park, Chislehurst.
Coulsdon ..	A	G2KU/P	Mitchley Woods, Purley.
	B	G2DN/P	Field above Hall & Co's. Lime Works, Byron Avenue.
Croydon ..	A	G5BT/P	
	B	G2FWA/P	Shirley Hills.
Dorking and Leatherhead	A	G3ASV/P	Leith Hill.
	B	G3AEZ/P	
East Molesey ..	A	G8SM/P	Broadmoor, nr. Dorking.
	B	G6NB/P	Chobham Ridges.
New Cross ..	A	G2HP/P	Sports Field behind Goldsmith's College, Marquis of Granby.
	B	G4DC/P	
Sutton and Cheam	A	G6KP/P	Wandsworth Gas Co.'s Sports Ground, Grafton Road, Worcester Park
	B	G4DH/P	Birch Grove Farm, Box Hill.
East London			
Brentwood ..	A	G3LA/P	Payne's Farm, South Weald Road, South Weald.
	B	G8RC/P	
Chingford ..	A	G2XG/P	Ludgate House (back of West Essex Golf Course).
	B	G3YF/P	Piper's Farm Lippetts Hill, High Beech
Grays	A	G3GF/P	Blackshotts Field, Socketts Heath
Ilford	A	G8TL/P	East London Mission Field, Lambourne End.
	B	G2QI/P	
West London			
Barnes, Putney and Richmond	A	G2BHR/P	400 yards, South of Roehampton Gate, Richmond Park.
	B	G5CI/P	
Edgware ..	A	G3HT/P	Woodcock hill, Elstree.
	B	G4KD/P	Weedons Farm Mote Mount.
Slough	A	G3XH/P	Stoke Poges Common.
	B	G6PR/P	
REGION 8 (SOUTHERN)			
Berkshire			
Reading ..	A	G2YI/P	Turnhams Farm, Tilehurst.
	B	G2BHS/P	
Hampshire and I.O.W.			
Portsmouth ..	A	G6NZ/P	Outside Fort Southwick, Portsdown Hill, North of Fareham.
	B	G5FF/P	
Kent			
Ashford ..	A	G2JF/P	Firth Farm, Aldington.
	B	G2QT/P	Hemminge Farm, Monks Horton.
Maidstone ..	A	G8UC/P	Rectory Farm, Langley.
	B	G6NU/P	Burham Downs, Blue Bell Hill.
North Kent ..	A	G4CW/P	The Gun Club, Crayford.
	B	G4MB/P	
Surrey			
Farnham ..	A	G8TS/P	Fox Hills, between Pirbright and Blackdown.
Guildford ..	A	G6NA/P	Pickards Farm, Sandy Lane, Portsmouth Rd.
	B	G2BYA/P	Hascombe Court, nr. Godalming.
Sussex			
Brighton and Hove	A	G8HV/P	Summit of Ditchling Beacon, South Downs.
	B	G5ZQ/P	
Heathfield ..	B	G5JZ/P	Syke Farm, Cade Street.
Worthing ..	A	G4NY/P	High Salvington.
REGION 9 (SOUTH-WEST)			
Cornwall			
West Cornwall	A	G2JL/P	The Coach and Horses, Kenneggy, Marazion.
	B	G8AW/P	Long Downs, Penryn, nr. Falmouth.
Devonshire			
Exeter and Torquay	A	G5QA/P	Pinhoe, nr. Exeter.
	B	G2GK/P	Little Haldon, nr. Teignmouth.
Plymouth ..	A	G6RF/P	1 mile East of Hoo Meavy, nr. Clearbrook.
	B	G3TX/P	1½ miles North of Station "A."

Town or Area	Station	Call Sign	Site
Gloucestershire			
Bristol	A	G5UH/P	Toghill House Farm, Tog Hill, nr. Doynton.
	B	G6GN/P	The Monument, Hawkesbury Upton.
Cheltenham ..	A	G3LP/P	Hartley Farm, Leckhampton.
	B	G8ML/P	Cleeve Common.
Gloucester ..	A	G3MA/P	Painswick Beacon,
	B	G3PZ/P	Painswick.
Stroud	A	G5WA/P	Nympsfield, nr. Stroud.
	B	G5HC/P	
Somerset			
Weston-super-Mare	A	G6LQ/P	Field nr. Golf Course, Bleadon Hill.
	B	G3AUV/P	Uphill Tower, Uphill.
Wiltshire			
Swindon ..	A	G8HI/P	Field beside Gable
	B	G3HS/P	Cottage, Broad Hinton.
REGION 10 (SOUTH WALES & MONMOUTH)			
Glamorgan			
Cardiff	A	GW2BG/P	Pantgelly Inn, nr. Abergavenny.
	B	GW3VL/P	Brunant Farm, Caerphilly Mountain.
Neath	A	GW6BI/P	Penrhiwtyn Hill, Neath.
	B	GW2FRB/P	
Swansea ..	A	GW5ZL/P	Leighton's Farm, Kittle,
	B	GW3AX/P	Bishopston.
REGION 11 (NORTH WALES)			
North Wales			
Llandudno ..	A	GW5UO/P	Nr. Bryn Meinen Corner,
	B	GW2BVA/P	Glan Conway Mountain
Rhyl and Prestatyn	A	GW5FU/P	Golden Grove, Prestatyn Mountain.
	B	GW4CX/P	Halkyn Mountain, nr. Holywell.
REGION 12 (NORTH SCOTLAND)			
Aberdeen, Kincardine and Banff			
Aberdeen ..	A	GM6LG/P	"Craigingles," Kincardineshire.
	B	GM3RL/P	Tyrebagger Quarry, Aberdeenshire.
Angus and Perthshire			
North Angus ..	A	GM6RI/P	Balmashanner, ¼ mile South of Forfar.
	B	GM3KC/P	Garvock, 1½ miles East of Laurencekirk.
Dundee ..	A	GM3NH/P	St. Mary's Farm, Downfield.
	B	GM5SC/P	Gagee, Tealing.
Northern Counties			
Morayshire ..	B	GM3UU/P	Upper Califer Farm, Rofford Parish.
REGION 13 (EAST SCOTLAND)			
Borders			
Berwick-on-Tweed	A	G8SG/P	Berwick Hill, North of
	B	G2YY/P	Berwick.
Galashiels ..	A	GM6RG/P	Nether Whittaw, Selkirk
	B	GM5FT/P	
Hawick ..	B	GM8RV/P	Parkhead, nr. Hawick.
Fife and Kinross			
Dunfermline ..	B	GM8BO/P	Powerhall, Townhill.
Kirkcaldy ..	B	GM4AN/P	Newton of Wemyss' Farm.
Lothians and Edinburgh			
Edinburgh ..	A	GM6JH/P	Field nr. the Pomathorn Howgate Cross Roads.
	B	GM6LS/P	1½ miles South-east of Penicuik, Midlothian.
REGION 14 (WEST SCOTLAND)			
Ayrshire ..	A	GM2BUD/P	Hill top Road,
	B	GM6RV/P	Mauchline.
Clackmannan and Stirling			
Stirling and Falkirk	A	GM3OM/P	Queenshaugh Farm, Stirling.
	B	GM6XW/P	Kirkland Farm, Denny.
Glasgow ..	A	GM2LQ/P	
	B	GM6MS/P	
REGION 15 (NORTHERN IRELAND)			
County Down ..	A	GI5UR/P	Glengormley, nr. Belfast
	B	GI6TK/P	Cloughey, County Down.
CHANNEL ISLANDS			
Jersey	A	GC8NO/P	Grosnez Point, Jersey.
	B	GC4LI/P	
DENMARK			
Aalborg ..		*	Hammer Hills, North of Aalborg.

* Portable Callsign not yet allocated, operator OZ2NU.

Re-constitution of the Royal Naval Volunteer (Wireless) Reserve

The Board of Admiralty have approved the re-constitution of the Royal Naval Volunteer (Wireless) Reserve.

The Reserve will consist of Specialist Officers, Wireless Operators and Radio Electricians. It will be built up within the general framework of the Royal Naval Volunteer Reserve and is intended to provide a reserve of trained W./T. Operators for the Fleet on mobilisation.

Units of 10–12 volunteers under a rating in charge will be formed in the major towns of Great Britain and Northern Ireland, and where possible Training Centres will be set up in which wireless sets, servicing equipment and a buzzer room will be installed.

Units will be grouped together into sections under a Lieutenant R.N.V.(W.)R. and each section will be allocated to one of nine districts covering Great Britain and Northern Ireland. Each district will be under the command of a Lieutenant-Commander R.N.V.(W.)R.

It is hoped to arrange for the issue of surplus Naval wireless transmitters and receivers to competent members to operate in their own homes.

Wireless exercise will be arranged for units, sections or districts, and instruction in Touch-Typing, Procedure and Servicing of wireless sets, will be given at the Training Centre.

Each Reservist will be expected to do a minimum of 16 drills each of one hour's duration, per quarter, and carry out 28 days' sea training over a period of five years.

A Bounty of £5 per annum will be paid to all Reservists who fulfil their training commitments and who are certified as proficient. An Efficiency Grant of up to £3 per annum is payable in addition.

When travelling to and from their training centre, officers and men of the Reserve who live more than one mile away will be allowed travelling expenses of 1½d. a mile.

In order to meet the cost of meals and other incidental expenses, a Training Expenses Allowance will be paid at the following rate for every attendance at the Training Centre of two hours or more, subject to a maximum payment in any one day.

	Hourly Rate	*Daily Maximum Payable*
All Officers	1*s.* 6*d.*	9*s.* 0*d.*
Chief and Petty Officers ..	1*s.* 3*d.*	7*s.* 6*d.*
Leading Rates	1*s.* 0*d.*	6*s.* 0*d.*
Able Seamen, Ordinary Seamen and equivalent rates	9*d.*	4*s.* 6*d.*

A Transmitter Upkeep Allowance of £3 per annum will be paid to those officers and men who operate their own sets in their own homes. This allowance is intended to meet the cost of upkeep of transmitters and to defray the cost of electricity consumed. An additional £2 per annum (maximum) may be paid on production of evidence that a sum in excess of £3 has been expended.

Any officer or man who wishes to join the R.N.V.(W.)R. on his release from the Royal Navy should apply, through his Commanding Officer, to Admiral Commanding Reserves, Admiralty, Queen Anne's Mansions, London, S.W.1, for full details as to enrolment, terms of service, etc.

Strays

ZL2CU, Box 37, Gisborne, N.Z., is a stamp collector who would like to exchange with G's similarly interested.

G2MI would like to thank the member who recently sent him back numbers of the BULLETIN. Unfortunately his original letter was accidentally destroyed and his identity is now a mystery. Many thanks with apologies O.M.

New Books

RADIO OPERATING—QUESTIONS AND ANSWERS. By Nilson & Hornung, McGraw-Hill Publishing Co., Ltd., Aldwych House, London, W.C.2. 434 pp. Well illustrated. Price 17s. 6d.

Since its first appearance in 1921 " Radio Operating, Questions and Answers " has expanded from its original pamphlet form to the now popular pocket-size book. The present edition, which has been fully revised, covers a wide range of engineering and operating problems, and introduces for the first time the American Standards Association approved symbols for radio, telephone, telegraph and electrical circuits.

The book is invaluable for those who are already trained in radio communication and whose requirements are a quick review of essential theory, arithmetic and diagrams. It can also be recommended to those who propose sitting for the C. & G. Radio Amateurs' examination. J. C.

* * *

BROADCASTING STATIONS OF THE WORLD. Compiled by *Wireless World*. Iliffe, 1s.

Comprehensive lists of Long, Medium and Short Wave broadcasting stations arranged in order of frequency and giving equivalent wavelengths, power and location. A column for dial readings is provided. In addition geographical lists, arranged in country sequence, provide an index to the main tables.

Kon-Tiki Expedition

Apropos the announcement in our February issue we now learn, from the G.P.O., that the call sign to be used by the Expedition will be LI2B. A main key station will also operate under the call WLMA/W3YA from Pennsylvania State College. Three other key stations will operate from Hartford, Conn., San Francisco and Washington, D.C.

Frequencies to be used are as follows :

LI2B			KEY STATIONS	
Main	*Alternative*		*Main*	*Alternative*
7062 A	7071 F	..	7062 M	7071 Q
14124 B	14142 G	..	14124 N	14142 R
27980 C	28248 D	..	28248 O	28284 S
	28284 H	..		
49980 E		..	50000 P	

Frequency change will be indicated by QSY followed by frequency letter as designated above.

Schedule Times

LI2B will send call signs for about half a minute at the beginning of every full and half hour, provided the necessary technical arrangement can be made on the raft. All reports on signal strength of these transmissions should give exact G.M.T. and be sent to A.R.R.L. Headquarters, marked Kon-Tiki. If the arrangement works satisfactorily call sign sending will continue on frequencies C and E throughout the Expedition.

At midnight and noon G.M.T., LI2B will call all key stations in sequence indicated and pass signal strength reports and traffic as required. Call will be made on frequency C at schedule times, but failing to achieve contact, frequencies B, E and A will be tried one, two and three hours after scheduled time for frequency C, respectively.

CQ calls will be made at irregular times, though mostly after traffic is passed on normal schedules.

Emergency equipment for use on 500 kc/s. and 8280 kc/s. will also be carried.

Information has been received that this expedition has commenced. Details were given on page 136 of the February issue of the BULLETIN.

REGIONAL NOTES SUSPENDED

ACTING ON THE ADVICE OF THE REGIONAL REPRESENTATIVES, COUNCIL HAS AGREED THAT REGIONAL NOTES SHALL BE SUSPENDED FOR THREE MONTHS. AT THE END OF THAT PERIOD THE MATTER WILL BE RECONSIDERED BY THE COUNCIL. " FORTHCOMING EVENTS " WILL CONTINUE TO BE PUBLISHED AS HITHERTO. DETAILS OF ALL SUCH EVENTS SHOULD BE SENT TO REACH HEADQUARTERS BY NOT LATER THAN THE 25TH OF THE MONTH.

Congrats

Congratulations to Mr. and Mrs. G. R. Chiffey, G3ZJ, on the arrival of son Peter in Mai Habar Hospital, Eritrea, on April 2.

1½ METRE 10 VALVE SUPERHET UNITS ★

Ideal for Conversion into Television Receivers

7 GNS.

CARRIAGE PAID
CASH WITH ORDER
Special discounts to Trade, Radio Societies, etc., in lots 25 or more receivers.

Circuit comprises—

1 Pre. Amp. Oscillator, Mixer. 5I·F's., Detector and Video Amp. I.F. Frequency 12 Megs., Bandwidth 4 Megs. Co-axial input and output sockets. An external source of L.T. and H.T. is required. Manufactured to stringent Government specification by such famous makers as R.G.D., Murphy, Pye, etc. Complete with 10 Mazda Mains type valves 6.3 volt filaments. Unused and in manufacturers' sealed cartons.

Also Ex-Admiralty Large Mains Transformers Type 62 230 Volts Primary. Secondries 700-0-700 volts; 0-1200 volts. Rectifier valve holders fitted on top panel for RZ1/150 and U17 Valves. Unused and offered at a fraction of original cost. Carriage paid **75/-.**

WIRELESS INSTRUMENTS
(LEEDS) LTD.
54 & 56 THE HEADROW, LEEDS, 1
Telephone 22262.

G3AOS

CONSTRUCTIONAL SERVICE

Enquiries invited for Transmitters, Receivers, Quality Amplifiers, etc., built to your own specification, or delivery from stock. Photographs of some models available for perusal.

Recent development being:—

90 WATT 4 BAND PHONE/CW TRANSMITTER.

6L6 Tritet, Pair of 6L6 Push Pull, Power Pack, Pair of 866 for PA, 83 for Modulator.
Comprehensive Meter switching, the whole built into a three tier standard steel rack grey or black crackle.
Complete with Coils, Valves, Crystal, etc. PRICE **£70**

Other Transmitters include :—

150 watt CW, **£70.** 25 watt CW, **£35.**

Above prices include Power Pack, Coils, Valves, Crystal, etc.

150 Watt PA. Pair of PT15's in Push Pull, complete with Coils and Valves, but less Power Pack, PRICE **£20.**

Agents for all leading "Ham" Manufacturers.

Prompt Mail Order Service.

Available shortly : **Eddystone "640" Receiver.**
PRICE **£42** + **£9** Tax.

Orders now taken, deliveries in strict rotation.

J. G. BARNES & Co.,
4 VICTORIA ROAD, HALE, CHESHIRE.
Works : Ashley Heath, Hale.
Telephone : ALT 4464.

GOODSELL LTD
40 GARDNER STREET
BRIGHTON 1.

FOUR BAND FEEDER UNITS.—Chassis 6in. x 6 in. x 3 in. DENCO C.T.2 turret and midget I.F.T.'s (Q.155). **Price,** including valves (6K8, 6SG7, 6R7), **9 gns.** Ready for use with dial, pointer, drive. Exceptional results.

SIX BAND with C.T.3 and 2 I.F. stages and four band coil packs using Maxi "Q" coils and ceramic switches. An R.F. and Osc. coming shortly. Write if interested.

B.F.O. Units or Coils available for use with above (465 kc/s. or 1·6 Mc/s.).

COMPLETE RANGE of DENCO and "Q-MAX" products.

WIDE RANGE of COMPONENTS for AMATEUR and CONSTRUCTOR.

DENCO CATALOGUE **6d.**

SPECIAL OFFERS:—

SUPERIOR QUALITY CERAMIC AMPHENOL PATTERN Octal Valveholders, **1/6** each.

CERAMIC Double pole, 4-way, single bank switches, **6/-** Double pole, 4-way triple bank switches, **12/6**

BEST QUALITY ¼ in. and ⅜ in., 4 and 6 B.A. nuts and bolts, brass, **8d.** doz.

Postage extra on all Orders under £1.

AGENTS FOR ARMSTRONG CHASSIS.

Call and hear one.

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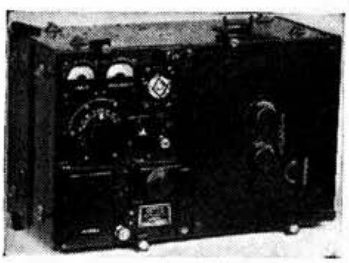
EX R.A.F.



TRANSMITTER—RECEIVER

Transmitter-receiver for short waves 20-40 metres Provision for crystal control. Uses standard headphones and microphone. Battery operated, requiring standard 120 volts h.t. and 2 volts l.t. Includes 9 valves standard English types. Six valves in receiver and three in transmitter. Circuit Rx, 2RF., Det., 2 Audio and Power. Tx, Osc. PA and modulator.

£6
CARRIAGE PAID

THE STAMFORD RADIO CO.
199 STAMFORD STREET
ASHTON-U-LYNE, LANCS.
Telephone : ASHton 1964.

THE MONTH ON FIVE

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

THE full story of PA0UN's achievements on 50 Mc/s. has been given in a letter he has sent to G6DH. When first heard in Capetown on March 26, the transmitter was being worked automatically, but on the following Saturday, ZS1P contacted PA0UN on 28 Mc/s. and then suggested his changing to 50 Mc/s. This was done and ZS1P picked up 'UN's signals at once and asked him to try phone with the result that a 50/28 Mc/s. cross-band QSO was possible for half-an-hour. This was mid-afternoon and 'UN was using 90 watts input to push-pull 807's, with a 4-element beam.

So much for super-DX ! Activity on the continent is increasing so rapidly on both "five" and "six" that we shall be swinging our beams regularly towards F, ON, PA and LA during the coming DX season. 6DH has already heard PA0PN calling "CQ5" (April 11, 21.20 G.M.T.) and 2MV is reported to have heard F8LR.

In Northern Ireland, GI6TK (Belfast) is very active and will shortly be joined by several other GI stations. He has received confirmation of a QSO with Italy.

There is also considerable activity in Southern Scotland and the London 5-metre men are hoping for GM contacts this summer.

The warm, calm weather during the second week in April, gave us the first spell of good tropospheric reception this year. G5BD (Mablethorpe) and G6CW (Nottingham) were consistently strong and steady signals in London throughout this period and on another evening when the Midlanders were less favourably received, G2BMZ (Torquay) came through well on phone.

Unfortunately DX signals are now being seriously interfered with in the London area by several local phone stations, whose main idea seems to be to make a local contact and then spend the evening on it ! It is indeed to be regretted that this practice has extended to our most important experimental band. We appeal to these operators to give the microphone a rest. Stations over 100 miles from London who are naturally unaware of this QRM will be well advised to use the higher frequency part of the band when looking for London contacts. There is at the present time hardly a station above 59·5 Mc/s. in South East England and those who will migrate to this half-megacycle will be well rewarded.

Any stations who worked F8RSN last year are asked to send cards to G5MQ (38 Linkston Road, Liverpool), who will forward them. G5MQ reports that the following F stations are now working daily on "five" between 12.00 and 12.45 G.M.T. and 20.00 and 22.00 G.M.T. :—F3JB, 8YI, 9AQ, 9BG and 9CV. All are situated in the South of France and they have been asked to send CW between 59 Mc/s. and 60 Mc/s. whenever possible.

* 8, Beckenham Grove, Shortlands, Kent.

DF CONTEST

Please note that frequency of G6CTP will be 1765 kc/s not 1755 kc/s as the latter frequency is so close to the BBC harmonic on this band.

Rules for the first Direction Finding Contest which is being held on Sunday, May 18, 1947, appeared in the March BULLETIN. Those members who are not able to comply with Rule 2 will be welcome, but it may not be possible for them to join the informal gathering and tea after the event.

The Second Contest is to take place on Sunday, July 6, 1947, when the rules published in the March BULLETIN will apply with the exception of Rule 4 and Rule 8, which are amended as follows :—

Rule 4 : Competitors will report at the official assembly point—near the "Stags Head," The Village Green, Godden Green. This village is located about 1½ miles due East of Sevenoaks and on the far side of Knole Park from Sevenoaks. Assembly 1 p.m.

Rule 8 : Ordnance Survey, New Popular Edition, one inch map, Sheet 171, will be used for this contest.

Maps : Competitors who have experienced difficulties in obtaining copies of the maps required for these contests may be more successful if they try *Messrs. Stanford, Ltd.*, Map House, 12 Long Acre, London, W.C.2.

Radar Camp

We have been informed by G. W. Fortnam, G2FJR, of 76 Bridge Road, Sutton Bridge, Spalding, Lincs, that the Radar Camp is again in occupation. A welcome awaits any ham who may be posted there.

CORRESPONDENCE

Quench Type Receivers

DEAR SIR,—I agree with Mr. E. L. Cameron (BRS8123) that the receiver he described in the June issue of THE BULLETIN is a "simple and easily constructed receiver of a type which will enable the newcomer to familiarise himself with this band of frequencies"—that is the 56 and 112 Mc/s. bands. I would, however, like to suggest that as quench receivers cause considerable local interference, the policy of the R.S.G.B. should be to discourage their use.

Here at Rugby we are troubled considerably by receivers of this type working in the 58·5 to 60 Mc/s. band. Such receivers radiate signals over a radius of more than a mile, thus making it impossible for us to receive anything except strong local stations.

I would ask those who intend to construct a receiver of this type to reconsider their decision or take the necessary steps to minimise radiation.

Yours faithfully,

W. H. TANSER (BRS12,482).

3 Pytchley Road, Rugby.

Can you Help ?

● Mr. F. J. Merriman, G2FPR, 123 Wolverhampton Road, Walsall, Staffs., is anxious to acquire the circuit diagram and instructions for the Naval B28 Receiver.

● Mr. W. H. Inchbold Stevens, of Bhim Tal, New Road, Ensbury, Bournemouth, with a small picture of the Eddystone All World Four Battery model.

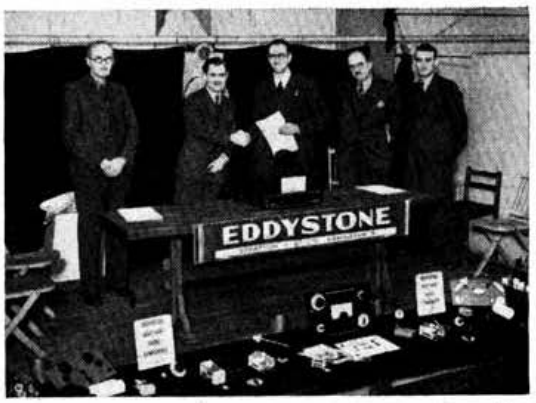
● Mr. E. W. J. Theobald, G2DWI, of 10 Eastbury Road, Fishponds, Bristol, who desires details of the R.A.P. 158 26-130 Mc/s. U.H.F. Receiver.

● Mr. C. Humberstone, G3BPO, of 98 West Street, Alford, Lincs. with Base Connections for the EF50 and Cathode Ray Tube NC4.

Another Presentation

NEW EDDYSTONE RECEIVER FOR HEADQUARTERS' STATION

DURING the morning of Sunday, April 20, the day of the Birmingham Official Regional Meeting, the President, Council and Regional Representatives of the Society were invited to inspect the works of *Messrs. Stratton & Co., Ltd.*, at West Heath. A special coach carried the party from the Imperial Hotel to the Eddystone factory, which is situated on high ground some six miles south-west of the City.



The visitors were greeted on arrival by the Eddystone Staff, who were to act as their guides. Breaking up into parties of convenient size, they were then taken on a conducted tour round the various sections of the factory and were greatly interested in the many mechanical and electrical processes involved in the production of modern high-quality radio equipment and components. The interest was of course increased by the fact that the majority of the items being produced were intended for use by amateurs—in fact, in slang terms, the visit was " right up their street ! "

Following the tour of inspection, the guests adjourned to the canteen, in which a running buffet had been set up. Whilst refreshing themselves, those present were able to view the finished products of the firm, all bearing the well known Eddystone trademark.

Chief among the new productions on view was the model " 640 " Amateur Communications Receiver, an all-British product incorporating the latest methods of manufacture. This receiver has been designed as the result of close collaboraton between a number of leading amateurs of wide practical experience. It possesses all the salient features it is possible to include in a receiver to be sold at a moderate price, and large scale production is due to commence shortly. It is confidently expected that the " 640 " will set the standard for amateur communication receivers in this country.

Then came the high light of the visit. This was the presentation to the Society of an Eddystone " 640 " Receiver, for use at the new Headquarters station GB3RS. In preliminary speeches, Mr. A. C. Edwards (G6XJ), Commercial Manager of *Stratton & Co., Ltd.*, said that many amateurs were on the staff of the Company, which devoted much of its business to the needs of the amateur, a policy that would continue to be pursued vigorously. Mr. H. Cox, Technical Director, gave information concerning the receiver and stated that suggestions from amateurs were always welcome and would be acted upon when possible.

The actual presentation was then made by Mr. Malcolm Laughton, a Director of the Company, who said he hoped the receiver would add to the efficiency and usefulness of the Headquarters station, and wished the Society every success.

The President, Mr. S. Lewer (G6LJ), replying for the Society, outlined the purposes of the H. Q. Station, preparations for the use of which were going ahead.

In proposing a vote of thanks to Messrs. Stratton, for their hospitality, the General Secretary, Mr. John Clarricoats (G6CL), referred to the good relations existing between the Society and the radio trade, a state of affairs which was good for both and which should be fostered.

LETTERS TO THE EDITOR

Junk Box Bureau

DEAR SIR,—The very thing that one member is in urgent need is often in another's Junk Box. In these days of short supply, a central register of the contents of Junk Boxes would be of use to all.

I have in mind a scheme, run on similar lines to the QSL Bureau by Mr. Milne, whereby members send in a list of their surplus gear. Those in need, sending in their requirements, can be informed where the item they want lies.

I am prepared to do the clerical work involved by such a scheme.

E. J. VALENCIA (G3BFO)

" Nascott,"
Aspley Guise,
Beds.

[*Members interested in this suggestion are requested to write to Mr. Valencia.—ED.*]

QSL Bureau—A Suggestion for Future Operation

DEAR SIR,—One cannot but feel the greatest admiration for the work performed by Mr. Milne (G2MI) and his colleagues in organising and maintaining the very efficient QSL service which is so important a feature in amateur circles. Members do not always realise that what they pay in annual subscriptions to the Society would be, in the case of an active amateur, expended many times over during the course of a year on the air.

However, it is realised that the operation of such a bureau as we have at present is a temporary measure, and one which should be put on a more permanent footing at the earliest opportunity now that amateur radio is again firmly established after the war.

A scheme which appeals to me and which might meet with the approval of other amateurs is, briefly, as follows :

(1) That each amateur pay a small annual subscription for the privilege of using the bureau.
(2) That this subscription be subsidised by the Society.
(3) That the sum thus amassed be used to pay the salary and expenses of a disabled amateur, to be selected from Society members, who shall devote his whole time to the QSL Bureau, operating from his private address.

A little arithmetic indicates that for a very small annual outlay by the amateurs using the bureau, a reasonable salary would be forthcoming for the chosen QSL Manager.

I understand that the Council are already drawing up plans for a QSL bureau, but I wonder if such a plan would commend itself to them in place of a rather more commercialised type of bureau ?

Yours faithfully,
K. E. V. WILLIS, A.R.C.S., B.Sc., (G8VR)

[*Mr. Willis's kind remarks are much appreciated by the QSL manager and his colleagues. One comment, offered after considerable experience is that as a long term policy the QSL Bureau is essentially an " office " job. Mr. Willis's disabled amateur would be tied to his home 365 days of the year. Nothing stops the continual avalanche of cards. Only the organisation of an office can safeguard the service against illness, holidays, etc.—A. O. M.*]

T.V.A.R.T.S.

The Thames Valley Society held a successful meeting on April 2nd, when an old friend in Mr. H. V. Wilkins (G6WN), gave a talk entitled " An Old Timer Looks Back." Meetings are held at 8 p.m. on the first Wednesday of each month.

List of Countries

Apropros the " List of Countries " published in the March, 1947, issue of this Journal, we would point out that " CQ " is the monthly journal of " Radio Magazines, Inc.," of New York, and not of "Radio Ltd." California, as stated therein. Our apologies are extended to the publishers for this error. We have also received a list of Prefices and Zones in connection with the W.A.Z. Award of Radio Magazines.

London Region Meeting

The first London Region Meeting took place on 23rd April, at the Royal Hotel, Woburn Place, W.C.1. For an initial event, the attendance of well over one hundred must be considered encouraging, but there is room for more still at future meetings.

G6CL spoke about the forthcoming Conference. Whilst not under-rating the difficulties of the R.S.G.B. Delegates, he spoke with optimism. The meeting wished our Representatives the best of luck.

G8TY outlined the Regional Scheme and emphasised that members can save much time by remembering that their T.R. (or, where necessary, C.R. or A.R.) can deal with much of the correspondence generally sent to H.Q. or to the R.R. (Please note your T.R.'s address as given separately in this Issue. Why not contact him ?)

The Hon. Secretary, G6OT, gave a brief but entertaining discourse on the H.Q. Station.

M.O.S. gear was the subject of a detailed statement by G8TL who, with G2NR, has arranged a further " distribution."

A hearty welcome is extended to all London members to the next Meeting which will take place on May 21, when Messrs. Strattons will demonstrate their new " 640 " receiver.

Spend your Summer Holidays among Amateurs in Denmark

E.D.R. is re-establishing this year its summer camp and invites R.S.G.B. members to participate.

About 15 years ago a group of E.D.R. members decided to spend their summer holidays together under canvas located near a forest and the seaside. Portable stations were brought along thus combining camping life, hobby and good fellowship.

This proved so successful that the camp became an annual event. The number of visitors has been ever increasing and before the war many foreign amateurs took part.

A station—OZ7EDR—is located in the camp and transmits daily camp news and makes contact with foreign countries and with other O.Z. stations.

Every year a new place for the camp is selected but always close to forest and seaside. This year it will be placed near the typical Danish town *Svendborg* on the southern coast of Fyn (Funen).

Q.T.H. is: E.D.R.'s Sommerlejr, Lehnskov pr. Svendborg.

The camp opens on July 6 and closes on July 13. Full daily board and lodging is available in the camp and the price of this amounts to approximately 5 to 6 Danish Kroner daily. It is advisable—but not a condition—to bring a tent. As in previous years, excursions to the surrounding country will be arranged as well as various entertainments and sports in the camp. Many amateurs bring portable stations, *e.g.* for the 60 Mc/s. band.

The train from Svendborg takes you direct to the camp.

As travelling facilities have improved, it is hoped that there will be many foreign guests.

It is regretted that E.D.R. cannot arrange your currency and travel conditions. On this you will have to consult your bank and travel bureau. But on request you may get all further information about the camp by writing to E.D.R.'s secretary: Math. Paulsen, OZ7MP, Hasselvej 48, Lyngby, Denmark.

Malta G.C.

A number of *QSL* cards addressed to unlicenced ZB1 stations have been received by Mr. Galea, ZB1E (the *QSL* Manager for Malta). Unfortunately the senders, for obvious reasons, will never have them acknowledged. In order to be of some assistance in this matter, the following is a complete list of Malta calls issued up to the present: ZB1E, 1L, 1M, 1S, 1AB, 1AC and 1AD.

(Amateur Radio journals please copy.)

ZB1E.

OK by you ?

OK1DE, Tomas Dvorak, student of Technical High School, QTH, Skorkov 57, P.O. St. Boleslav, will accept an English amateur if possible and his family during July and August. Board and lodging free in exchange for English conversation. For detailed information write to: International Student Service: Mr. James Henderson, 59 Gloucester Place, London, W.1, or direct to OK1DE. Contact may be established on 3·5 Mc/s., Sunday morning at 0600–0615 G.M.T. after a call.

Congrats

● To Wilf Edwards, G6BI, and his wife, of Briton Ferry, on the arrival of a son, Peter Robert.

● To Gordon Evans, G2AVV, and his wife, of Port Talbot, on the arrival of a son, Hubert John.

● To Mr. and Mrs. F. J. Merriman, G2FPR, on the arrival of a junior op. on April 16.

An Offer

Mr. C. A. J. Boswell, BRS11441, 87 Abbey Road, Smethwick, Staffs, offers to assist any member requiring valve data or details of equivalents. Enquiries should be accompanied by a stamped and addressed envelope.

OUR FRONT COVER

THIS month's picture, taken in one of the Mullard valve factories, illustrates the final or " ageing " process in the manufacture of the mercury vapour rectifier RG1–240A.

After the mercury has been introduced the valve is pumped. During this operation, the electrodes are degassed and the cathode activated by means of induction heating.

The purpose of the " ageing " process is to stabilise the cathode emission so as to ensure constant characteristics over a long life. The valves are run at the normal filament voltage on the " ageing " table, and pass about 300 m/A anode current, the load being formed by a bank of lamps of suitable rating.

NEWS FROM HEADQUARTERS

COUNCIL, 1947

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

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

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

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

March Council Meeting

*Resume of the Minutes of a Meeting of the Council of the Inc. Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.*1, *on Monday, 10th March,* 1947.

Present.—The President (Mr. S. K. Lewer, in the Chair), Messrs. Auchterlonie, Edwards, Evans, Gardiner, Mathews, Milne, Scarr, Watson, Watts and J. Clarricoats (General Secretary).

Apologies.—Apologies were submitted for the absence of Messrs. Bloomfield, Clark, Desmond and Hammans.

Contests

Resolved to award a trophy to the entrant securing the highest combined score in the two sections of the 1947 1·7 Mc/s Contest and to award certificates of merit to the winners and runners-up in each section.

Resolved to hold a Low Power Contest from midnight, September 20th, 1947, until midnight, September 27th, 1947.

Subscription Rates

Resolved that the Society's Solicitors be instructed to take the necessary steps to alter the Articles of Association, giving the Council express power to determine the rates of Annual subscriptions from time to time.

New Members' Lists

Resolved to discontinue the publication of lists of New Members, and to take steps as soon as possible to provide each R.R. with an up-to-date list of members in his Region.

World Telecommunications Conference

Resolved that the President and General Secretary be authorised to attend the World Telecommunications Conference in Atlantic City, U.S.A., for as long a period as they deem to be necessary and that their full expenses be paid by the Society.

It was agreed to request all members to reduce to a minimum any correspondence to Headquarters during the period when the General Secretary is abroad.

The Council received from Mr. Watts a statement outlining the proposals which the G.P.O. intend to submit to the World Conference.

Resolved to instruct the G.P.O. Liaison Committee to press vigorously for the widening of the proposed 3·5, 7 and 21 Mc/s bands and to demand an allocation around 60 Mc/s.

Membership

Resolved (*a*) To elect 273 Corporate Members, 51 Associates, 13 Junior Associates; (*b*) to grant Corporate Membership to six Associates; (*c*) to grant affiliation to the Wolverhampton Amateur Radio Society.

Northern Ireland Representation

Correspondence was submitted from certain members in Northern Ireland protesting against the decision of the Council to appoint Mr. F. A. Robb, G16TK, Acting Region 15 Representative.

The position was carefully reviewed and finally it was Resolved (*a*) To confirm Mr. Robb's appointment ; (*b*) to advise the members who protested of the reasons for the appointment of Mr. Robb.

Technical Publications

Resolved to authorise the publication three times a year of a new periodical entitled " Proceedings of the R.S.G.B." The Proceedings will contain papers read and lectures delivered at the I.E.E. (London Region) meetings.

Headquarters Station

Resolved to authorise (*a*) the purchase of timing equipment for use in connection with Headquarters' station; and (*b*) the hire of certain R.A.F. automatic sending equipment.

Radio Amateurs' Examination

Resolved to protest to the City and Guilds of London Institute against their decision that the Radio Amateurs' Examination shall be held only once each year.

The Council is of the opinion that these examinations should take place twice a year.

National Field Day

Resolved to authorise the production of a film of National Field Day activities in the London Region at a cost of approximately £15.

Radio Exhibition

Resolved to hold an Amateur Radio Exhibition at the Royal Hotel, Woburn Place, London, W.C.1, during the period November 17–22, 1947, and to appoint Mr. H. Freeman, Exhibition Manager.

The Meeting closed at 10.25 p.m.

A.R.R.L. Publications

In fairness to the A.R.R.L. and to those members who have complained to Headquarters about the late delivery of A.R.R.L. publications, we feel it necessary to explain that the League are encountering paper difficulties similar to those which persist in Great Britain.

Mr. David Houghton, A.R.R.L. Circulation Manager, advises that 150,000 copies of the 1947 Handbook were reserved before publication date and that considerable difficulty is being experienced in obtaining paper for reprints of this and other popular League publications.

Members may rest assured that the League will deal as promptly as possible with all orders received from the Society.

Staff Vacancy

A vacancy exists at Headquarters for an experienced Lady Clerk to take charge of records. Applications should be made in writing, to the General Secretary.

Cheadle (Staffs) and District Amateur Radio Society

Although formed only four months ago the Society has made excellent progress to date. Numerous lectures have been given thanks to help received from qualified wireless officers. Thirteen members of the Society hold licences, a figure which probably constitutes a record—based on population for the whole country. Cheadle has one licenced amateur to every 680 persons.

The first annual dance of the Society is due to be held on May 23. The Secretary is Mr. V. E. Hughes, Abbots Haye, Cheadle, Stoke-on-Trent, Staffs.

NORTH EASTERN REGIONAL MEETING

GREAT NORTHERN STATION HOTEL, LEEDS

SUNDAY, 22nd JUNE, 1947

Assemble	12.30 p.m.
Lunch	1 p.m.
Meeting	2.30 p.m.
Tea	4.30 p.m.

Tickets from Regional Representative G6KU.
10/6 *each.*

Accommodation limited. Book early

EDITORIAL—(*continued from page* 177.)

air, the proposed allocations are totally inadequate and that if the U.K. view (which incidentally is supported by many other European nations) prevails the amateur bands will become so congested as to destroy their scientific and inter-communication value. The U.S Government, broadly speaking, proposes *status quo* for its amateurs, and we can rest assured that their representatives at the Conference will do everything in their power to ensure that the movement continues to operate under the most favourable conditions.

In referring to the higher frequencies, the U.K. Government states, that, owing to the very important services which require allocations between 30 and 100 Mc/s, it is not possible to retain an allocation at this part of the spectrum for amateurs.

The statement further explains that a number of bands, suitably spaced at higher parts of the spectrum are proposed and these should enable amateurs to play their part in the development and use of very-high frequencies.

In our view, the frequencies between 30 and 100 Mc/s. are still under development and for this reason, if for no other, British amateurs should be allowed to continue their experimental work on frequencies, around 70 Mc/s. J. C.

EXCHANGE AND MART SECTION

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

ACORN Pentodes, Type 954 ; new and complete with ceramic holders, 15s. 6d. each.—RAWSTON, 155 London Road South, Lowestoft, Suffolk. [238

ADDITIONAL Waveband.—Covers 16·7 to 2·5 Mc/s.; special T1154 transmitter, £9 10s. Offers.—WOOLLETT, 32 Lakeswood Road, Petts Wood, Kent. [240

AMATEUR has for sale quantities of new radio components; valves, speakers, trimmers, condensers, resistances, volume controls, etc. S.A.E. for lists.—FORD, 411 Norwood Road, London, S.E.27. [225

A.S.W.6 by Berry's (EF50–ECH35–KTW61–6Q7–6F6–5Z4) assembled kit with coils covering 880 kc/s–34 Mc/s. Never used. Sacrifice at £15, plus carriage.—8 St. Crispins Road, Westgate-on-Sea, Kent. [220

BLEEDER Resistors.—High grade vitreous 100 watt, 20,000 ohms, brand new, 4s. 6d. post free.—G3OT, 11 Tachbrook Road, Leamington Spa. [247

COMM. Receiver for Sale R.C.A. AR88, first-class condition. New appearance. Best offer over £60.—Box 246, PARRS, 121 Kingsway, London, W.C.2. [246

COMMUNICATION Receiver for sale. Three I.F. stages, AVC/BFO 6K7's, 6Q7 6FC output. A.C. mains, recently serviced. Also R.S.G.B. BULLETINS, Vol. 21, copy 1 to date ; 4 milliammeters 0–20, 0–30, 0–50 mA ; 0–300 mA ; 1 voltmeter, 0–10v. The lot £30.—BRS10,996, 54 Dorset Road, St. Annes, Lancs. [176

COSMOCORD record playing desk, £5 10s. (pick-up head and auto-stop need adjustment). Rothermel senior crystal pick-up, £1 15s. Valves 6K7, 6K8, 6V6, 6s. 6d. each. Det. 20, 4s. All unused.—BRS6631, Ivy Cottage, Warren Road, Hayes, Kent.

COMMUNICATIONS Receiver R.C.A. AR-88, in superb condition. New rack and panel, cabinet on order. Amateur selling up. £60 or near offer.—D. V. BINGE, 3 Trevor Gardens, Ruislip, Middlesex. [206

COMMUNICATION Receiver, 1940 Skybuddy, excellent condition, little used, recently realigned, £25 or nearest offer. —DUCKWORTH, 564 Plodder Lane, Farnworth, Bolton, Lancs. [217

CRACKLE Finished Cases, suitable E.C.O. Monitors, Wavemeters, etc., 10s. post paid.—G4LY, 208 Lower Parliament Street, Nottingham. [215

EX R.A.F. Transmitter-Receiver, Model T.R.9., complete with 9 valves ready for operation, or contains useful items for your rig ; meters, etc., £4 carriage extra—EVANS, 7 Maesquarre Road, Ammanford, Carm. [224

EXCHANGE RCA-R88 with separate auto transformer and manual for senior H.R.O. with power pack and coils A.B.C. and D. For sale : 6L6 metal new, 6 at 12s. 6d. each. Clydon transmitting condensers, 150$\mu\mu$F new at 12s. 6d. each.—Box 213, PARRS, 121 Kingsway, London, W.C.2. [213

FIVE-Metre Walkie-Talkie. Complete with all spares, built-in crystal wavemeter, handsets, etc. In zip-sided rucsack. Factory built in U.S.A., £4 15s. 0d.—G8UA, 406 Higher Brunshaw, Burnley, Lancs. [222

FOR SALE.—2807 (4) 25s. each. 1T4 (20) 11s. each ; all unused. 1,500v. transmitting condensers by Hammarlund 1, 77 $\mu\mu$Fd max. to 15 $\mu\mu$Fd min. ± 2% ; 1, 116 $\mu\mu$Fd max. to 19 $\mu\mu$Fd min. ± 3%; both 25s. each.—BRS14,239, 37 Devonshire Road, Weston-super-Mare. [214

FOR SALE.—HMV plus-a-gram A.C. 230 with pick-up, £5 or nearest. Also Siemens Halsk pocket ohm-meter, s/c battery as new £3.—Write BM/NEU, London, W.C.1. [181

GERMAN LV1 Valve wanted. Also multimatch modulation transformer.—G8ML, 117 Fairview Road, Cheltenham. [204

GENERATORS.—12 volts. DC input, 450 volts 67 mA. DC output (E.D.C.) Another 11·5 volts DC input, 600 volts, 250 mA. DC output. Owner going on mains. Offers ?—Tel. Dummer 56. MISS HALL (G8LY), North Waltham, Basingstoke.

G5UQ all 1947 only tested, professionally built 25-watt transmitter, ready for operation, all complete. PA807 stage with fil supply only. 10-metre convertor in cabinet, no power supply 0 v 1, no coils or valves. Also used gear and crystals. Offers and inspection, 1,135 Alcester Road S., Hollywood, Birmingham.

HALLICRAFTER S.27 (27 to 145 Mc/s.), first class condition ; "spot on" all bands, with instruction manual, £45 or near offer.—W. H. BROWN, BRS14,085, 101 Wilson Avenue, Rochester, Kent. [244

HALLICRAFTER S.27 for sale. Range 28 to 140 Mc/s. for A.M. and F.M. reception in perfect order, price £50.— V. DESMOND, G5VM, 90 Worcester Street, Birmingham, 5.

HALLICRAFTER Skyrider 5–10, complete in perfect order, for sale.—Offers to ADCOCK, Market Place, Watton, Norfolk.

HALLICRAFTERS S. 38 for sale, 1946 model, almost new, perfect. 32 Mc/s. 550 kc/s. Offers over £30. Taylor Model 60 Signal Generator in good condition.—Offers, G4MH, Thornleigh, Station Road, Thornton, Blackpool. [196

HALLICRAFTER Sky Champion 820 for sale. Recently checked and aligned. Instruction manual. Offers.—37 Meadow Road, Beeston, Nottingham. [218

HAMMARLUND Super Pro 1·25–40 Mc/s., power supply and speaker, F.B. noise limiter, calibrated bandspread, really sensitive, £95. HRO senior all coils, power supply £80. Hallicrafters SX28, £75. Offers considered. Recent ex-lab. models, all below cost. Amateur selling up. Condition like new and perfect. Picked jobs, thoroughly vetted. Inspection London arranged.—Box 212, PARRS, 121 Kingsway, London, W.C.2. [212

H.R.O. Bandspread coils required.—Write Box 186, PARRS, 121 Kingsway, London, W.C.2. [186

HRO Senior bandspread coils wanted, 1·7–4·0, 3·5–7·3, 14·0–30·0 Mc/s. Condition and price to G4GR, 6 Friars Road, Newport, Mon. [178

KEEP a permanent record of your circuits! Blue prints drawn from your sketches, 5s.; extra copies 1s. 3d.—Send to BCM/MANUSCRIPTS, London, W.1. [112

LATEST Type Woden H.T. Transformer, 750–0–750,250 mA. scarcely used, 75s.; Mallory 6-volt Vibrator U.X. base, unused, 7s. 6d.; Mullard TZ08/20 (T20 equivalent) 10s.; Crystal pick-up, head perfect, arm slightly damaged 15s.; Rola 10 inch P.M. Speaker, less transformer, 27s. 6d.—G3MI, The Meades, Chesham, Bucks. [235

MAJESTIC radiogram parts. Large chassis with 4-gang, 9 valveholders, IF 110 kc/s; 15s. Speaker 12 in. Field 9000 ohms with push-pull transformer for load 5000 ohms, 25s. Transformer, push-pull input 8s. Valves 24, 27, 45, 51 4s. each. Naval gunsight telescope, low magnification, 25s.—Banham, Digby's, West Mersea, Essex. [185

MINIATURE communications receiver, five valve superhet, 100 kc/s to 15 Mc/s. with mains power pack, used once only, £7 10s. Unused valves, 1T4, 1S4, 1S5, 3S4, 3A4, 1L4, 1R5, 6J6, 9001, 9002, 10s. 6d. each. Many other transmitting and receiving components and valves, mostly new. Send S.A.E. for complete list.—Box 188, PARRS, 121 Kingsway, London, W.C.2. [188

MILLIAMMETERS, desk type, 0–1, suitable for conversion to multi-range test meters, 27s. 6d. Voltmeters, portable, in case, 0–150, 18s. 6d.—WOLSEY TELEVISION, LTD., 87 Brixton Hill. Tulse Hill 1240. [197A

NEW RCA 813's and 805's, 55s. KT8's, 7s. 6d.; PT15's (1154), 12s. 6d.; ML6's (1154), 7s. 6d.; DET12, 10s.; RK34's, 10s.; 4052A, 10s.; 807's, 15s.; EF50's, 4s.; 12C8, 4s.; 12SR7, 4s.; 12Sk7's, 7s. 6d.; 3½" 500 microamp, 50s.; 25W RCA amp., £25; S/Het feeder for same £5 10s.—Box 210, PARRS, 121 Kingsway, London, W.C.2. [210

PCR. Communications Receiver with preselector 150 kc/s.–19 Mc/s., hardly used.—BRS14,300, 103 Passfield Avenue, Eastleigh Hants. [216

QSL's and Log Books by Minerva. Samples free. For all your printing requirements apply 75 St. Andrew's Avenue, Elm Park, Romford, Essex. [227

RECEIVER R1132A 9-valve 112 Mc/s. F.B. condition, easily modified to 58–60. Best offer over £15. Crystals 7180 and 7194 in holders, £1 each.—G2BQC, 133 Carlton Road, Boston.

R1155 receiver for sale. Five bands, 75–200, 200–500, 600–1·5, 3·0–7·5, 7·5–18·0; BFO. Filter, AVC. Really good D/Xer. Bargain, £10.—G3AZB, 29 Ardrossan Gardens, Worcester Park, Surrey. [194

R107 Communication Receiver, 8 valve superhet, 800 kc/s.–17·5 Mc/s., variable pitch B.F.O., optional A.V.C. wide/narrow I.F. Sep. R.F./A.F. gain, audio filter, crash limiter, open/dipole aerial, 100/250V A.C. 12v D.C. 96 lbs. Phones, speaker circuits, E.M.E. Regs. First cheque £50 secures.—SINGLETON, 179 Stoke Road, Guildford. [195

R1155 brand new condition, tested, aligned and calibrated (purchased only 3 months ago), £15 10s. Motor generator 28v. D.C. to 220v. D.C., 35s. Wanted: R.C.A. 991 voltage regulator.—G4HL, 14 Longfield Road, Dover. [180

R1155 Communications Receiver, £12; R.A.F. TR9, £4 10s. Small U.S. Airborne receiver with valves, £7. Jackson test meter in case with prods, £9 10s.; Weston Antennae meter, £3. BTS A/W coil unit and condenser, 30s. Ladner & Stoner S.W. communication, new, 32s. 6d. All types American glass and metal valves; quantity of *QST's* and Proc. I.R.E.; S.A.E. please.—S. S. LOVEWELL, Police House, Wendling, Dereham. [237

SALE.—Brand New RCA AR88IF Communications Receiver. 150–500 kc/s. 15–30 Mc/s. Fitted in wooden cabinet. Nearest offer £80 secures.—NEAL, Tintagel Hotel, Tintagel, Cornwall.

SALE.—B.T.H. Motor/Generator. Gen. 1200v. 100mA. rot/-transformer, input 11/12v. 12a. output 1000v. 30 mA. £2 2s. Headphones, 15s. each. Neutralising unit (·5A thermo-couple bulb, etc.) £1 2s. 6d. Valves, unused, VP92, 20s.; D1, 10s.; SP41's, 10s. each; DF1, 10s.; U403, 10s. 6d.; U31, 10s.; EF39, 12s.; UU5, 10s.—TAYLOR, 372 Brentwood Road, Gidea Park Essex. [211

SALE.—Hallicrafter Sky-Buddy, 1940, as new, £15. "AVO" Universal 8, £7. Magazines: *Q.S.T.*, *Wireless World*, *Radio Craft*, 1944–46 at half-price. Also valves and components S.A.R. Amplifier and latest Columbia record player, £23.—C. F. LAWSON, BRS10,483, 155 Chipstead Valley Road, Coulsdon. Phone: UPL5341. [223

SALE.—AR88 Receiver, 75 kc/s. to 30·4 Mc/s., minus case, fitted "S" meter, perfect, £45 or near offer.—WATTS, G6WO, 817 Oxford Road, Reading. [232

SALE.—Two Hot Wire Ammeter, 0–2·0.—G2ORT, 10 South Parade, Spalding, Lincs. [263

SALE.—Ex R.A.F. TR9H 9 valves complete, battery operated 20–40 metres, £5.—KERR, 95 Belville Street, Greenock, Scotland. [245

SALE.—150-watt CW Transmitter. 6L6, 807, TZ40; 1500-volt power pack, £37 10s.; sale or exchange meters 300 volts AC/DC, 1000-volt electrostatic 2·5 amp. thermo; transformer 550v. 200mA. Maxi-Q coils Ae and Osc; Auto trans. 1500 watt. S.A.E.—G6GD, Green Mount, Stamford Road, Bowdon, Cheshire. [233

SALE.—Hammarlund Comet Pro', Crystal Gate (less crystal), five spare valves, coils to cover 9–250 metres. Full working order. Offers to G3BMO, "Greywell," Tollerton Lane, Tollerton, Lancs. [242

SALE.—Mullard B100 Cathode Ray Unit, as new, £10. Electronic Engineering, June, 1942, May, 1946, £4. Ghirardi's Radio Physics Course, 30s. as new. 7Q7GT, 17s. 6d., Z62, 10s. 6d., 6F7, 12s. 6d., 6E5, 42, 10s. each.—G4QG, Roselea, Carlton Road, Ryde, Isle-of-Wight. [203

SALE.—RME69 Receiver. Property of advertiser since new, £55. Wanted VR150 valves.—188 Cubbington Road, Leamington Spa, Warwicks. [205

SALE.—Marconi M.C.R.1. Miniature Communications Superhet, all dry, 100 kc/s.–15 Mc/s., set only. Complete with valves, £4.—S.A.E. details BRS8490, 34 Gorse Rise, Grantham. [200

SALE.—Hallicrafters SX25, one owner, best offer over £40, Parmeko 600–0–600 250 mA, £2. Lightweight headphones, new, 7s. 6d. Piles pre-war QST, Bulls, and S.W. Mags., approx. 100. Offers lot or separately.—G3HS, Coxwell Street, Faringdon. Berks. [80

SALE.—Cheap—all perfect. 2½ inch 0–1 mA, 30s.; 11-way 2-pole Yaxley type switch, 5s.; 32 μF 500v. working mansbridge, 10s.; μ4 F 1200v. working, 7s. 6d.; 50 uF 50v. working, 3s. Valves: 807, 10s.; EF50, 8s.; 5Z4G, 6s.; 5U4G, 8s.; EBC 33, 4s.; V960, 10s.; 6J7G, 5s. Several of each the above.—Box 197 PARRS, 121 Kingsway, London, W.C.2. [197

SALE.—Hallicrafters Challenger. Covers 10, 20, 40, 80, 160 and broadcast crystal gate with preselector, £30. Vortexion 50 Watt amplifier 807's output. Complete in case, only used a few times, £20.—GW3AX, "Roseland," Kittle, Bishopston, Swansea.

SALE.—G.E.C. electrostatic CRT's. 3 4205's 2¾ in. 35s. each; 1 4412 3½ in. 45s. A number of 807's and 1625's at 17s. 6d. each.—BRS4206 10, Robin Hood Way, Kingston Vale, S.W.15. [177

SHORT Wave Magazine from March, 1937 to September, 1939. Bulletin from August, 1938 to December, 1946. A.R.R.L. Handbook, 1937, bound. Offers, cash.—G3FT, 3 Geneva Gardens, Chadwell Heath, Essex. [208

SURPLUS to requirements. Two 813's brand new, unused. Best offer over £9 10s. (or singly).—BRS10,078, Dugmar, St. Guthlac Street, Hereford. [179

SURPLUS New Boxed Valves.—PX25, 30s. pair; 955, EF50, 1R5, 3Q5, 11s. each; 3" CRT, ECR30, 30s.—BRS14,519, 28 Cresthill Avenue, Grays, Essex. [202

SX28.—Reconditioned, ·55 to 43 Mc/s., R.F. and noise improvements, sensitive S'meter, excellent signal to noise ratio, exceptional sensitivity all bands (including Television), 7-position selectivity, panel Crystal phasing, pushpull audio, new valves, speaker, 110 to 250v., absolute satisfaction assured, guaranteed 3 months, heard any time, £65.—G3BJE, 1 Rupert Street, Reading 61635. [201

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VALVES.—Is your work held up for valves? If so, we may be able to help you. We have large stocks of all types available at list prices. Send for monthly lists.—SCOTT'S VALVE SERVICE (Dept. B), 14 Gardner Street, Brighton. [230

VALVES (new) 1625 (5), 1629 (1), 832 (1), 9003 (1), ML6 (3), 28D7 (1), EF50 (1); offers. Heavy duty key and bug wanted.—G3ABG, 66 Allport Road, Cannock, Staffs. [184

WANTED.—Communication receiver HRO senior, AR88, CR100 Hallicrafters, Hammarlund, 1155 RX. 14·254.—44 The Crescent, Walsall, Staffs. [175

WANTED.—AC/DC or DC Communication Receiver with bandspread and crystal filter. Also Philips Reed vibrator DC to AC converter. Write details and prices, INGRAM, G6ZY, 46 Upper Richmond Road, Sheen, S.W. 14. [229

WANTED.—Eimac 100th; also National HRO Senior Receiver Only first-class material considered. State firm prices expected. No offers given.—Box 239, PARRS, 121 Kingsway, London, W.C.2. [239

WANTED.—10-volt H.T. Accumulator Blocks, 5,000–6,500 milliamp-hours. Condition of plates unimportant if glass is sound.—G2XQ, 52 Easton, Portland, Dorset. [241

WANTED.—American BC348Q or BC342N Receiver. State price and condition.—Box 243, PARRS, 121 Kingsway, London, W.C.2. [243

WANTED.—14–28 Megacycle Bandspread Coil for H.R.O. Senior. Details and price to HARDCASTLE, 3 Shrubbery Street, Kidderminster. [207

WANTED.—One 25B8 and one 70L7. Can anyone please help? Offers to: TAYLOR, BRS10,413, 48 Gwaelodygarth, Merthyr Tydfil, Glam., S. Wales. [191

WANTED.—A ¼, ½ or 1-h.p. 230v. A.C. single phase motor. Exchange (2) 955's, 1S5 and other unused valves.—Box 198, PARRS, 121 Kingsway, London, W.C.2. [198

WANTED.—Variometer No. 19 Army Set, also 1G4GT (1) 1T5GT (1), HY62 (2), HY114B (2).—WHITHAM, 86 Providence Road, Sheffield. [199

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