

R.S.G.B.

JOURNAL OF THE RADIO SOCIETY OF GREAT BRITAIN

Bulletin

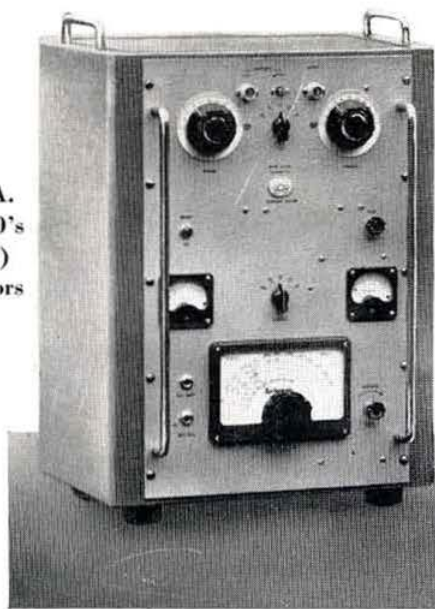
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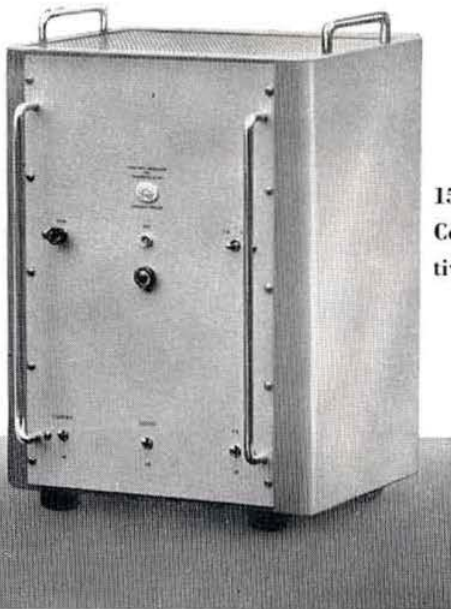
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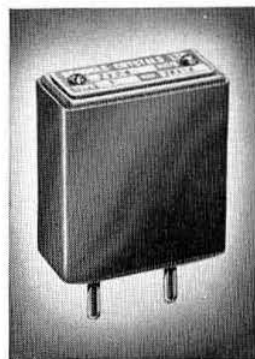
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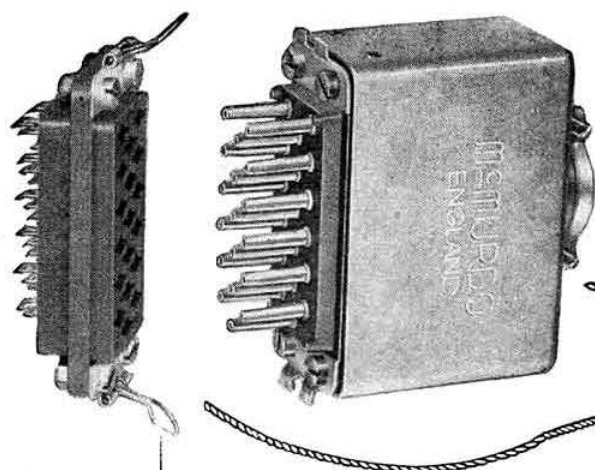
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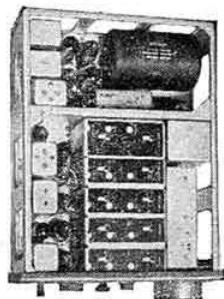
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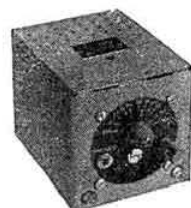
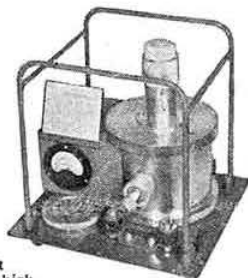
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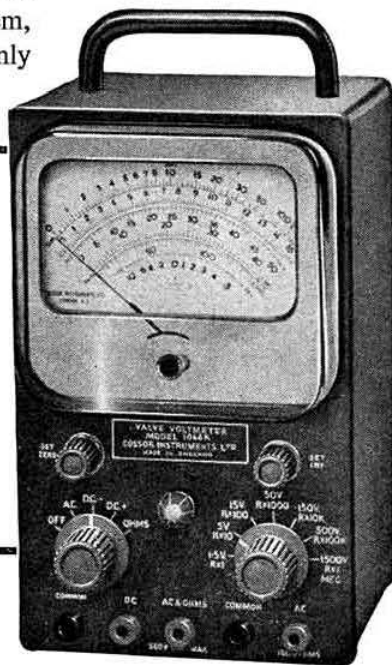
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R.S.G.B. BULLETIN

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Current Comment

Group or Club?

TWO BULLETINS ago details were given of the new arrangements by which Affiliated Societies are brought into the R.S.G.B. Scheme of Representation. A new abbreviation comes into the Amateur Radio vocabulary: A.S.R., meaning Affiliated Society Representative.

When a group of enthusiasts gets together in that gregarious way typical of the Amateur Radio man, it is often difficult to decide whether to form a local Group of the R.S.G.B. with its duly nominated Town Representative, or an autonomous club that will apply in due course for affiliation to the National Society, as most of the worthwhile radio societies of the country do.

If it is to be a Club, is it to contain within it a concurrent R.S.G.B. Group, with its T.R. separate from the club secretary, or if not, how is its identification with the R.S.G.B. best likely to be served?

This question, which has been asked many times upon the formation of a new local Amateur Radio unit, has now been answered by the official statement published under *Society News* last March.

The answer is simple and democratic: *You can have whichever you please!*

As from the start of the next R.S.G.B. financial year on July 1, 1957, Affiliated Society Representatives will have the same status as Town Representatives. Among the several useful privileges this confers is that clubs will henceforth—as from 1958—be able to enter stations for National Field Day.

Who shall be its A.S.R. is for each club to decide. In many cases no doubt the serving Hon. Secretary will be nominated, but the large club whose secretary already may have plenty to do will perhaps prefer to nominate another of its members as its A.S.R. Or thirdly, it may be felt that the *status quo* of incorporating a Town Group and its Town Representative within the framework of the Club should be maintained: an arrangement which has worked well in many areas for a long time.

However, those Clubs who *do* wish to be represented by an A.S.R. have two immediate jobs to do. The first is to make sure that the body is affiliated to the R.S.G.B., and if it is not, to apply for affiliation forthwith by submitting to Headquarters a list of officers, a statement of the number of members,

and a copy of the constitution—and of course the annual affiliation fee.

Secondly, it is necessary—as was stated in the official notice published in the March BULLETIN—to forward a nomination paper, duly signed by five Corporate members, to Headquarters within the next six weeks. This stipulation that the five nominators must be Corporate members of the R.S.G.B. aligns the appointment of A.S.R.s with the appointment of T.R.s where the same ruling applies.—J.H.

Making it too Easy?

AS will be observed from the report this month of *Council Proceedings*, it has been decided not to make any recommendation to higher authority on the subject of Novice and Technician licences.

When the matter was discussed, several members of the Council expressed themselves opposed to it. It was felt that the obtaining of an Amateur Transmitting Licence in the United Kingdom presents so few difficulties to those who take the hobby seriously that there is really no reason for lowering the present standard.

"It is almost too easy as things are already" was the general trend of thought, and with this most members will no doubt be disposed to agree, particularly those who recall how much more stringent were the licensing conditions before the war.

The present technical requirements are just about the minimum needed to operate a station intelligently; while any lowering of the Morse standard from 12 w.p.m. would reduce the efficiency with which information is communicated via the key. There are those who would declare that here, too, the present level is already low. Good Morse at 18 "per" is easier to copy than a halting, faltering 12 w.p.m. And incidentally no thought can be entertained of abolishing the Morse test altogether; that would be contrary to international requirements.

Now, is anyone interested in the opposite line of thought, of *increasing* the technical and telegraphy proficiency of licensees rather than reducing them? Or is the idea of an Extra Class licence (say 500 watts) for the more-than-usually-proficient amateur of no interest in these egalitarian days? The idea is thrown out for discussion as a purely personal thought in no way "officially inspired." Any opinions?—J.H.

THE STORY OF

G N F



BECAUSE it is a radio link for shipping entering and leaving the Port of London, as well as for coast-wise and cross-channel services, GNF is one of the busiest of the chain of Post Office stations around the U.K. seaboard.

For the past 30 years or so the station has operated from its present site at St. Peters, about $1\frac{1}{2}$ miles inland from Broadstairs, Kent, but long before that time GNF's distinctive spark note came from a site adjacent to North Foreland lighthouse.

As with the majority of the coast stations, traffic to and from ships is handled both on the 400/500 kc/s channel on m.c.w. and on telephony on channels in and around Top Band, the actual frequencies being 410, 418, 500 and 512 kc/s (m.c.w.) and 1848, 2182, 2698 and 2733 kc/s on telephony.

Operation

A ship wishing to contact a coast station first calls on 500 or 2182 kc/s according to whether Morse or R/T transmission is to be employed. The coast station replies on the same frequency and indicates which channel it intends to use, whereupon the ship states its operating frequency and communication then proceeds on the working channels leaving the calling frequencies free for further calls or distress operation.

At GNF there are four operating positions, two each for telegraphy and telephony working, fitted with Marconi Mercury receivers and controls for selecting the required frequency, mode of operation and transmitter. On the telephony side provision is also made

for putting the ship into direct communication with any subscriber on the inland telephone service. In addition there is a receiver automatically searching over a small band centred on 2182 kc/s, this being a Board of Trade requirement to ensure that no distress call shall be missed while the operator is listening on another channel. Messages from ships are taken down by the operator either in longhand or by typewriter direct on to a message form and are subsequently passed by teleprinter to the Post Office nearest to the addressee for delivery as a normal telegram.

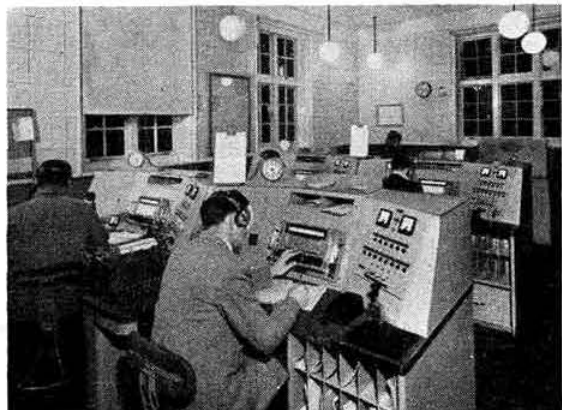
The Transmitters

Three transmitters in all are employed, two Post Office Type W5 covering all frequencies both m.f. and h.f. in use by the station, and a smaller unit operating on the telephony channels only. Crystal control is used in all cases. By means of a series of relays, pre-tuned circuits are selected in each stage of the transmitter and in the aerial tuning networks at the bases of the aerials, depending upon the transmitter and frequency desired by the operator. A system of coloured lights, backed up by electrical interlocks, prevent two operators selecting the same transmitter or the same frequencies on separate transmitters.

On the W5 units a maximum power of 800 watts is available in the 400/500 kc/s range and 500 watts in the h.f. range but a reduction to 260 and 80 watts respectively may be made at the will of the operator. Simplex or voice operated control is available on telephony, the latter system normally being employed. On m.c.w. the

transmitter is controlled entirely by the key once the required frequency has been selected.

The power amplifiers consist of a pair of air-cooled 5D/100A pentodes driven by a pentode type CV1506. All voltages, including the 3,000 volt main h.t., are supplied by metal rectifiers. Suppressor grid modulation is employed, thus doing away with the need for a high-power modulator and its attendant voltage supply.



The operating positions at GNF.

The Aerial System

For the lower frequencies a three wire horizontal aerial is in use with its coupling circuits situated in the transmitter. For higher frequency operation, connection is made by coaxial cable to vertical aerials, one a lattice mast radiator and the other a vertical cage. As previously mentioned each has its own tuning arrangements at the base. The smaller telephony transmitter is connected to a semi-vertical wire stretched between one of the masts and the station building.

Traffic

To give some idea of the extent of the station's work, a total of just over 4,000 messages were handled during August 1956 of which 247 were outgoing and 1,165 were links effected with the G.P.O. inland telephone service. Of the latter only calls in connection with ships' business are allowed, as facilities are not sufficient to permit the handling of ordinary conversations between passengers and telephone subscribers. A large number of W/T messages from ships consist of what is known as a "TR"—a statement of the ship's name, destination and position—and these are all sent by teleprinter to the Post Office station at Burnham where a record of shipping movement is compiled.

In addition navigational warnings and weather broadcasts are transmitted at intervals and a free medical service is available in case of emergency, the ship being put in touch with a hospital or doctor at the nearest port.

D/F facilities are immediately available on all channels but with the increase in the use of navigational aids this service is seldom requested by ships nowadays.

The author would like to express his appreciation of the willing co-operation he received during his recent visit from the Engineer-in-Charge, Mr. F. G. Harris and his staff.

The two photographs used to illustrate this article are reproduced by courtesy of H.M. Postmaster-General.

—W. H. A.

R.S.G.B. BULLETIN PRODUCTION

TO enable the R.S.G.B. BULLETIN to be published in time for bulk postings to take place by not later than the 14th day of the month, the closing date for editorial copy, namely the 22nd day of the preceding month, will be strictly adhered to in future.

Feature contributors, Society Representatives and Club Secretaries will greatly assist the Editorial staff by posting copy to reach Headquarters by not later than the 20th of the month whenever possible.

Copy received after the 22nd day of the month will be held over for future use if still topical.

VK/ZL DX Contest 1957

THIS year's VK-ZL DX Contest, organized by the Wireless Institute of Australia, will be held in October. The Telephony Section will commence at 10.00 G.M.T. on October 5 and end at 10.00 G.M.T. on October 6. The C.W. Section will take place between the same times on October 12 and 13. A précis of the rules will appear in a forthcoming issue of the BULLETIN.

New Zealand Mobile Marine Licences

BRITISH amateurs serving in the Merchant Navy may obtain ZL licences for operation while on the coast and in port in New Zealand by applying to the Radio Inspector, Central Post Office, Wellington. Applicants must have permission in writing from the shipping company and the master of the ship to operate on board. It is also necessary to produce the applicant's U.K. licence and log book.

Regulations in New Zealand are similar to those in the United Kingdom but the maximum power input is 100 watts.

Amateur Radio at Rochester Boy Scout Jamboree

THE Medway Amateur Receiving and Transmitting Society are to operate an Amateur Radio station on the site of the International World Jamboree for Roman Catholic Boy Scouts to be held at Buchmore Park, Rochester, during the period August 12 to 23, 1957. The call GB3BP will be used and the station will be active on 3.5, 14, 21 and 28 Mc/s using a PR-120V transmitter loaned by Panda Radio Co. Ltd. All QSOs will be confirmed by a special card printed for the occasion.

NEW FOREST MOBILE RALLY

Sunday, June 16, 1957

STONE CROSS AERODROME, NR. SOUTHAMPTON
(7½ miles west of Southampton on A.31 N.G.R.41/250118)

Rally Stations

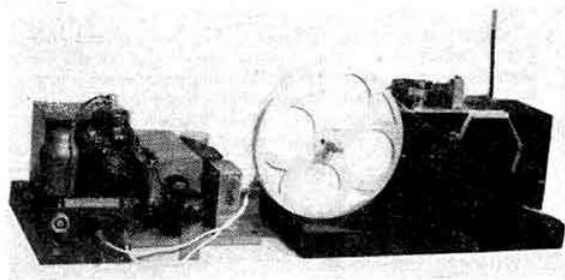
G3GYK/P—1860 kc/s or nearest clear channel
G2HIF/P—145, 145.35 or 144.72 Mc/s (depending on QRM) will be on the air from 10.30 B.S.T.
Mobiles are asked to contact the talk-in stations as soon as possible on their way to the site and to report progress periodically.

Visitors should bring picnic lunch and/or tea with them, although cafés in Stoney Cross can supply teas, snacks, etc., for those who do not wish to picnic.

Organized by Bournemouth Amateur Radio Society

The Construction of a Morse Recorder

By PETER LUMB (G3IRM)*



The Morse recorder with associated amplifier and power supply.

THE Morse recorder does not appear to be so common a piece of equipment in the average amateur station as its utility would suggest. Though its principal use is in learning the code it can be found very useful at a later date. Here are four suggestions:

(1) Connected to a key it will record the operator's own sending and so show up such errors as incorrect spacing, unequal length of dashes, etc. (Although no one has mentioned it over the air the writer always (unintentionally) makes a final dash in a letter or figure slightly longer than any other.)

(2) Clubs should find the recorder useful in training new recruits though it can be a source of embarrassment to the instructor!

(3) It can be used to set up a "bug" or "el-bug" key for correct spacing. The writer has used it in this way, connected to the receiver, to set up an "el-bug" key for someone at the other end of the country.

(4) Connected to a receiver in the manner to be described it will record incoming messages up to at least 30 w.p.m. and so can be used by anyone learning the code to check whether or not his reception is correct. It also shows up the other operator's mistakes in a fool-proof way.

Very few advertisements have been seen offering Morse recorders for sale and those recorders that are available are usually expensive.

The design to be described in this article has the following merits:

(1) It will record any hand Morse accurately at a reasonable speed.

(2) It will record Morse over the air provided that the interference level is fairly low. (In this connection the 3.5 Mc/s band is most suitable at a time when few stations are on the air. Top Band is all right for local stations where a strong signal is available but due to the noisy conditions usually prevalent the recorder often produces a good record of static and very little Morse. The essential thing is a good signal, well above the noise level, no matter how loud the noise may be).

(3) It is simple and cheap to construct with the usual tools found in an amateur's workshop. Apart from the motor and the few gears needed the remainder of the parts will be found in the average junk box or can be constructed from odd pieces of sheet or other metal.

The Case

Rough dimensions of the case are given in Fig. 1 but it must be emphasised that these depend entirely on what is to be included. Using exactly the same components as those used by the writer everything will be well. A slightly larger motor or mains transformer will make modifications necessary. Wood half-an-inch thick is used for the sides and top but a piece 1 in. thick is better for the base which measures 12 in. by 6 in. Heavy construction is essential as a certain amount of vibration is caused by the motor and pen mechanism. The front of the case is best made from $\frac{1}{4}$ in. ebonite but plywood will do if the cost is an important consideration. The front panel is fitted to the rest of the case by wood-

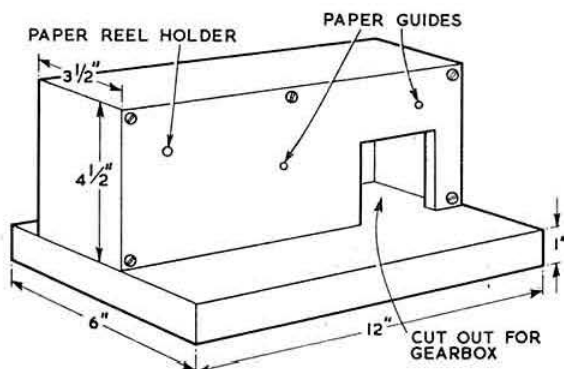


Fig. 1. Dimensions of the case for the Morse recorder.

screws so that it can easily be removed during construction and for any subsequent servicing which may be needed. Two or three coats of paint will improve its appearance.

The Tape Puller

Some arrangement must be provided to pull the paper tape at a constant speed past the pen arm and various methods have been used. Gramophone motors with a paper drum on the turntable are good but do not maintain constant speed. A capstan drive such as is used in

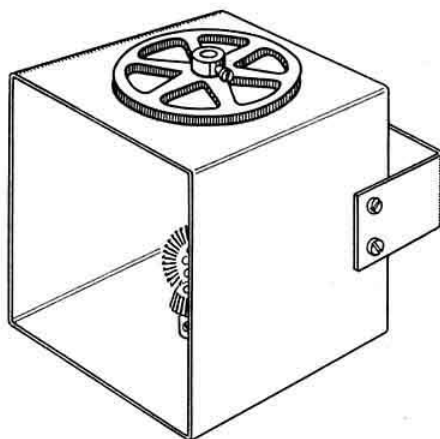


Fig. 2. A three-quarter rear view of the gearbox.

*19 Aspin Avenue, Knaresborough, West Yorks.

the writer's recorder is preferable. Using the arrangement shown it has not been found necessary to provide variable speed control. All Morse speeds used by amateurs up to 30 w.p.m. can be taken without modification but for very slow speeds such as may be encountered whilst learning, it may be advisable to provide some adjustment. These are taken care of by the use of easily obtainable Meccano gears and pulley wheels in the drive arrangements. The motor is a small two pole synchronous type obtained from W. A. Benson of Liverpool. It is small and ideally suited to the present recorder. Being of the synchronous type no interference is caused to receivers, which is an essential consideration when the recorder is coupled to the station receiver. The motor is mounted centrally in the case, though allowance must be made if other motors or gearboxes are used. It is better to make the gearbox first, mount this at one end of the case and then fix the motor.

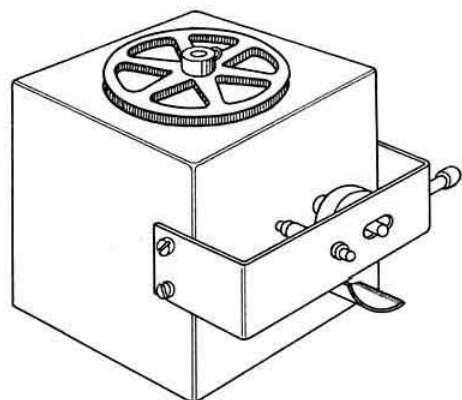


Fig. 3. The completed gearbox from the front.

The Gearbox

The gearbox is used to reduce the speed at which the motor works to one suitable for moving the paper tape past the pen arm. The box itself is made from 18 s.w.g. brass sheet and is cut and bent to form a $2\frac{1}{2}$ in. cube leaving one side open. Fig. 2 shows a three-quarter rear view. The four joints in the box are soldered to make the box rigid. An additional bracket is needed on the front to form the extra bearings for the moving parts and is made from a strip of similar brass 1 in. wide. This bracket should be fixed across the centre of the front of the gearbox. Axle holes (which should be made before the box is bent to shape and soldered) are drilled exactly in the centre top and bottom of the box and in the exact centre of the front. The open side of the box is, of course, the back. A hole corresponding to that in the front is made in the front bracket. This pair of holes takes the axle which forms the capstan. Each of the four holes thus made is fitted with a piece of brass tubing about $\frac{1}{4}$ in. long. The axles are standard Meccano parts and the tubing used for the bearings should be of sufficient internal diameter to allow the axles to rotate easily. Each piece of tubing is fitted in its hole and soldered in position. A small oil hole— $\frac{1}{32}$ in. diameter or thereabouts—should be drilled through the solder into the centre of the tubing to allow the bearings to be oiled. The bearing in the bottom of the box should be closed by a small disc of metal soldered in position on the outside. Into the cup so formed a steel ball is dropped to act as a thrust bearing for the upright axle. If the holes have

been drilled correctly it will be found that an axle dropped through one pair of holes will just touch the axle pushed through the other pair at the exact centre of the cube.

A pair of Meccano bevel gears (parts 30a and 30c) are used on the two axles, the larger one of the two being on the capstan axle. A pulley (part 20a) is driven by an elastic band or spring drive from the motor axle, the pulley being on the top of the vertical axle. Two fibre washers are pushed on to the motor spindle so that the drive band does not ride up or down.

The motor is mounted on brackets to hold it at the correct height to drive the 2in. pulley. A collar (part 59) should be fitted to the capstan at the back of the front of the box to keep the driven gear in place. A similar collar is fitted at the top of the driving axle. It will thus be seen that the motor turns the 2in. pulley giving a reduction in speed. A further reduction is obtained by the bevel gears. Variation of speed can thus be obtained in two ways—the bevel gears can be changed for two equal gears (a pair of part 30) or the 2in. pulley can be changed for either a 1 in. or the larger 3 in. type. It is thus possible to secure an increase in speed or a decrease by simply changing wheels. It will be found that the Meccano parts suggested form a suitable arrangement, but as stated earlier, the substitution of a larger pulley will allow tape to be saved and a better record produced at slow speeds. The capstan is covered with a piece of cycle valve rubber. A rubber covered pulley must be arranged to press against the capstan so that the paper tape is pinched between the two rubbers. A slot is made in the front of the case and another in the front bracket as shown in Fig. 3 so that a Meccano axle slides along about $\frac{1}{4}$ in. On this axle the rubber wheel is fitted and held there by means of two collars (part 59) and two large washers (part 38d). It is, however, allowed to revolve freely on its axle so that it rotates with the capstan. Two long screws and compression springs are used to hold the collars straight and the paper under pressure. Fig. 4 illustrates the idea. It has been found necessary to fit a curved plate under the capstan to enable the paper to run freely. This is shown in Fig. 3.

Two rollers, as shown in Fig. 5, are required to guide the paper. They revolve on screws passed through the case front in the positions shown in Fig. 1. Local model shops will turn the rollers up for a shilling or two.

The paper tape (Abarp tapes from manufacturers of high speed Morse equipment) is stored on a 9mm

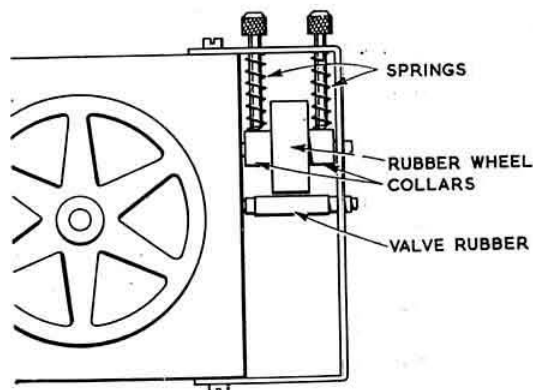


Fig. 4. Arrangement of the compression springs to hold the collars straight and the paper under pressure.

cinema spool. A suitable bearing for this can be made from an old condenser spindle which is usually fitted with ball bearings. Provision must be made to remove the spool for filling. The condenser spindle used by the writer is fitted with a knurled nut.

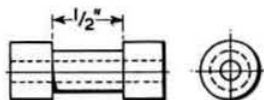


Fig. 5. Two rollers of this type are required to guide the paper on the Morse recorder.

The Pen Mechanism

The pen armature and coils are all made from miscellaneous pieces of scrap. Fig. 6 shows how the various parts fit together. A piece of metal (Fig. 7A) is screwed to the top of the wood case and the four screws appearing through this pass through slotted holes in an upper plate (Fig. 7B). It is thus possible to move the whole of the pen mechanism backwards and forwards so that at least three recordings can be made on the same tape. This together with three recordings on the reverse makes it possible to use the tape six times.

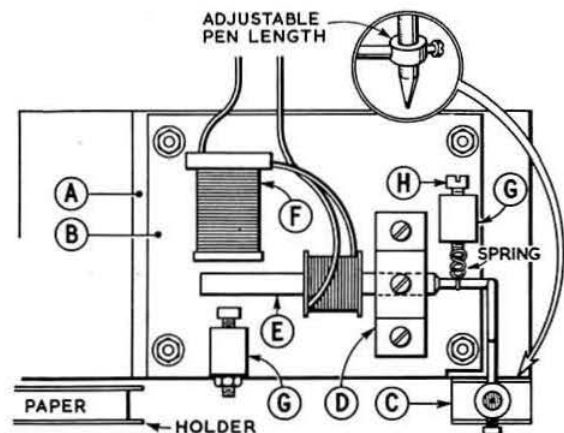


Fig. 6. Layout of the pen armature and coils. The parts keyed are shown in detail in Fig. 7.

A small channel (Fig. 7C) made from perspex is fitted to the base plate to act as a guide for the paper which therefore passes from the spool, under a guide roller, over the top of the channel piece, over a second guide roller, down between the capstan and the pinch roller, and then out of the machine.

The armature support (Fig. 7D) can be found ready-made in the Receiver type 25 where it is used to support the case top. The armature itself (Fig. 7E) is fitted with two paxolin cheeks to hold the wire in place and is wound full with 26 s.w.g. wire. A small conical hole (made by punching and drilling) is made on top of the armature and repeated underneath. A screw filed to a sharp point is screwed through the top plate (Fig. 7B) at the exact centre between the legs of the armature support. This screw together with the one which passes through the armature support itself (it has a locking nut too) allows the armature to move sideways freely. The other coil (Fig. 7F) is made from any soft iron screw or old relay bobbin and is wound fully with 26 s.w.g. wire. The two coils are connected in series. Two small pillars (Fig. 7G) are made from aluminium and both holes are tapped 4B.A. The hole in the bottom of each piece is used to fit to the upper plate while the other

hole takes a 4B.A. bolt. The head of one bolt has a piece of rubber cycle patch glued on and forms an adjustment for the armature. Tightening the screw restricts the movement of the armature and so the height of the individual characters formed on the tape.

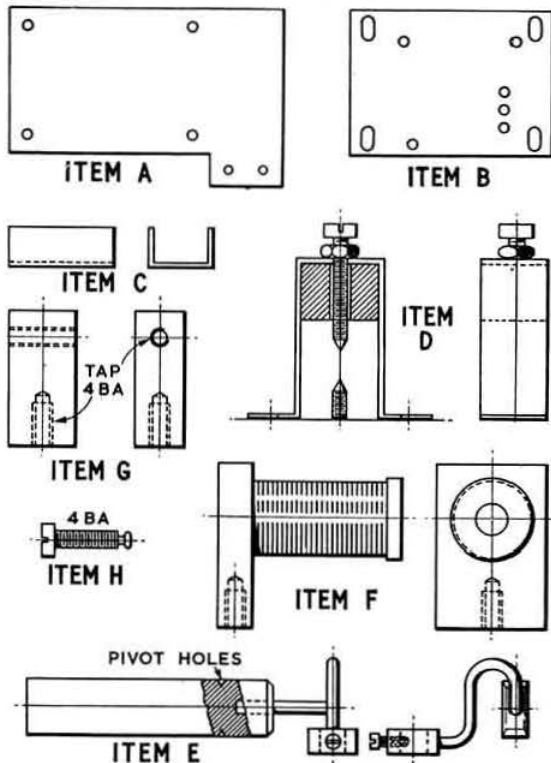


Fig. 7. Details of the mechanical parts of the Morse recorder.

Obviously the higher the speed, the more restricted must be the armature's movement. The screw fitted to the other pillars is filed as shown in Fig. 7H so that a spring can be looped round it, the other end of the spring passing round the armature. Sufficient pull can be given to return the armature to its static position after each mark. The pen arm carries a sleeve of metal tubing through which the ball point pen refill passes. Two collars and a spring ensure that the pen presses on the paper. Here again the pen pressure can be adjusted by the collars.

The Electrical Circuit

Fig. 8 shows the circuit for connecting the recorder to the receiver. In the writer's receiver, provision is made for connecting the oscilloscope into the detector; use is made of these connections to couple in the recorder amplifier which, as Fig. 8 shows, is fitted with its own gain control. When the amplifier is fitted in a desk the gain control can be mounted on the recorder case.

Signals pass from the receiver through the amplifier to the grid of a double diode output pentode valve in the anode circuit of which is an audio choke. Output from the anode passes to the diodes connected in parallel, the load on the diodes being a high resistance relay. At the time the recorder was built no suitable

relay was available and a Post Office type was unwound and rewound with the maximum amount of thin wire possible. The cathode resistor of the output valve can be made variable in order to set the best conditions for operating the relay; the figure shown was found to be the best for the valves used.

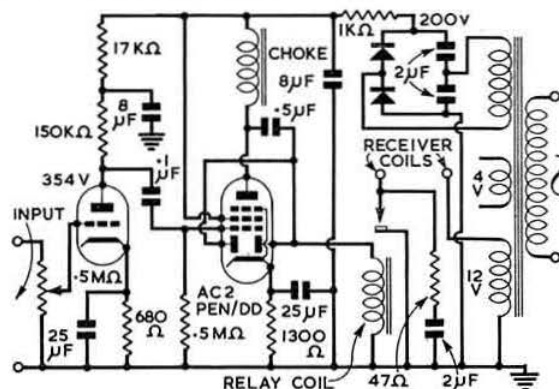


Fig. 8. Circuit of the recorder amplifier.

Any power supply can be used and liberties can be taken with the smoothing. The writer uses an old voltage doubler power pack taken from the receiver which provided the valves. Other types of valves can be used; for instance, a separate diode rectifier and pentode could be used if available.

In practice the relay was found to be quite sensitive and weak signals can be recorded provided the noise level is lower than the signal level.

Combined Aerial Coupler and Relay

By J. W. ELLIOTT (G2AHT)*

THE ex-U.S. Army Signal Corps aerial change-over relay type BC-442-A can usefully form the basis of an aerial coupling unit. Such a unit is used at G2AHT to couple a transmitter operating in the 160 or 80 metre bands to a 132ft long aerial. A choice of series or parallel tuning, to suit the band in use, is available at the throw of a switch, as shown in the circuit diagram. Parallel tuning is required for a half-wave aerial and series tuning for a quarter-wave.

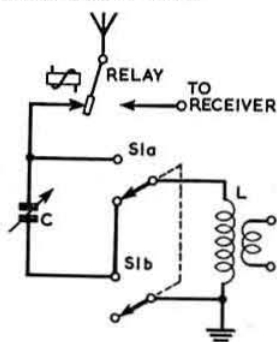
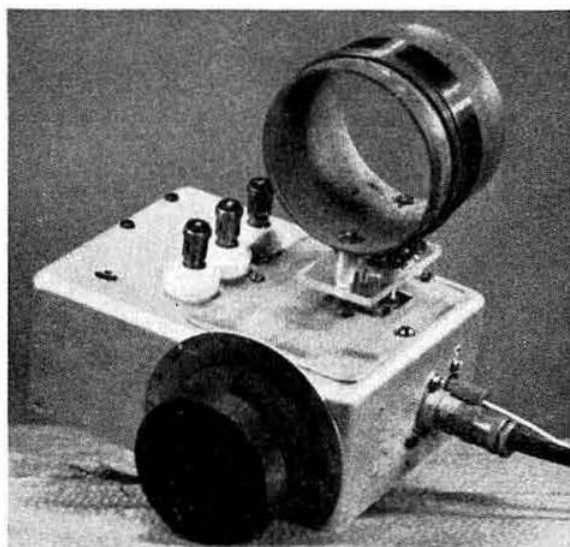


Fig. 1. Circuit diagram of the aerial coupler with the switch in the "series tune" position. C, 100pF variable; L, 3.5 Mc/s—17 turns 20 s.w.g. enam. (25μH), 1.8 Mc/s—29 turns 26 s.w.g. enam. (90μH), both coils close wound on 2 1/2 in. diam. formers with three turn links adjacent to the earthed end of the winding; S1a, b, d.p.d.t. toggle switch.

Construction of the coupler involves the removal of the small r.f. transformer, heating element, meter and d.c. input socket, whilst for further compactness the back-

plate holding the vacuum capacitor may also be removed. The relay energizing coils are wired in series in the original unit and require parallel connection if 12 volt operation is contemplated. The tuning capacitor is insulated from the casing to ensure correct operation when the switch is in the "series" position. The insulation and vane spacing of the tuning capacitor should suit the power input it is proposed to employ. In the coupler



General view of the Combined Aerial Coupler and Relay showing location of components.

shown in the photograph, the 100 pF of tuning capacity is actually made up of a 200 pF variable in series with a 200 pF fixed capacitor in order to take advantage of the slow motion drive incorporated in the former.

The tuning coils are home-constructed from paxolin formers, perspex strips and commercially available coil pins and sockets. Experiments have shown that coils with diameters large in relation to winding lengths give the best results on the lower frequencies.

Finally, it should be noted that as r.f. power is supplied to the coupler via co-axial cable, no external connection is made to the terminal marked "TR."

Who wants to QSO a barge?

G3JOO and G3JYH will be moving a 30 ft Dutch sailing barge from Whiteley Bridge, near Selby, Yorks, to Lymm, Cheshire, via the Aire and Calder Navigation and the Leeds and Liverpool Canals during the week commencing June 15. They will take with them a ZC1 Mk I transmitter adapted for Top Band and 80m and will operate during the period of the trip under the call G3JYH/M. The route is via Knottingley, Leeds, Skipton, Burnley and Wigan.

The two operators will be glad to make contacts with other amateurs and if the number of contacts makes it worth while they will issue a special QSL card to mark the occasion.

Can You Help?

● N. Jacobs (B.R.S.19323), 41 Queenborough Gardens, Ilford, Essex, who requires the circuit diagram and/or manual for the Admiralty P.104 receiver and any modification details?

● R. J. E. Mills (G3LCJ), 28 Chapman Street, Loughborough, Leics., who requires the circuit diagram and/or manual for Q-Max B4/40 transmitter?

22 Oldfield Road, Bedford

A Multiband Aerial

By R. F. STEVENS (G2BVN)*

IN order to make the best possible use of the modern bandswitched transmitter, either a selection of one band aerials, such as dipoles, or a multiband aerial, is necessary. The majority of the existing types of aerials capable of radiating efficiently on more than one band, such as the Zepp, must be fed with high impedance open lines which have to be coupled via an aerial tuning unit to the transmitter. The writer, however, wished to dispense with the tuning unit and couple low impedance cable directly to the output of the transmitter, the final stage of which uses a pi-network.

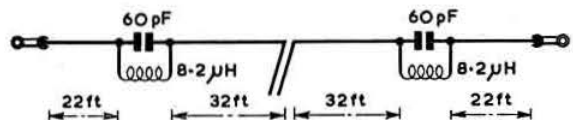


Fig. 1. The arrangement of the multiband aerial.

It was therefore with great interest that the article by W3DZZ in the March, 1955, issue of *QST* was studied. This described an aerial suitable for 3.5 to 28 Mc/s which could be fed with low impedance line. It is the writer's view that this aerial deserves to be more widely known.

The aerial requires 108 ft of wire (excluding insulator loops) and it is recommended that this be 14 or 16 s.w.g. hard drawn enamelled copper wire. The aerial is made up in the manner shown in Fig. 1 and is fed at the centre with 72 ohm coaxial cable or twin feeder. Following normal practice, the aerial is erected in the clear and as high as possible.

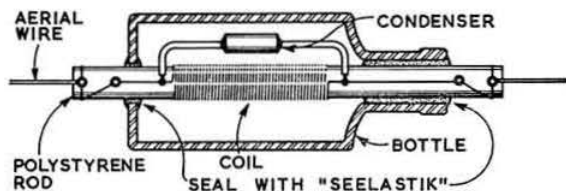


Fig. 2. The construction of the traps. The rod, with the condenser and coil, should be inserted in the plastic bottle at the bottom.

The centre insulator was made from Perspex, and after the necessary strain-free joints between feeder and aerial had been made, the whole assembly was given a thin coat of Holt's "Aquatect". This is a quick-drying liquid, obtainable at garages and cycle stores, which provides very effective insulation against dampness. It will be seen from Fig. 1 that at a distance of 32 ft either side of the centre point of the aerial there are two tuned circuits. These should resonate at 7.2 Mc/s using the capacity and inductance shown. On 3.5 Mc/s these traps increase the effective length of the aerial which thus becomes a dipole. On 7 Mc/s the system also radiates as a dipole as the traps isolate the two sections rendering the outer 22 ft lengths ineffective. On 14, 21 and 28 Mc/s, by reason of the capacitive reactance of the traps, the system resonates as an aerial of $3/2\lambda$, $5/2\lambda$, and $7/2\lambda$ respectively, and can thus be fed at the centre with low impedance line.

The traps originally described by W3DZZ were of

elaborate concentric construction, which was necessary to deal with powers of up to a kilowatt. However, with the modest 150 watts input allowed to British stations the construction can be simplified to the conventional coil and condenser combination.

The traps used by the writer consisted of a coil wound with 18 s.w.g. enamelled copper wire on a small length of $\frac{1}{2}$ in. polystyrene rod; a high voltage working ceramic condenser of 60pF capacity, encased in a plastic tube, was connected across the coil. Both condenser and coil were then given a coat of "Aquatect". The combination was then checked with a grip dip oscillator to confirm that the final resonance point was near to 7.2 Mc/s. The rod was placed in a small lightweight plastic bottle of the type obtainable at multiple stores, with sufficient protruding through the neck and bottom to allow secure and strain-free fixing between the ends of the coil and the aerial wire. Any gaps between the rod and the bottle were filled in with "Seelastik" which will remain pliable and will not harden and break away. The construction of the traps is shown in Fig. 2.

The aerial as originally described was fed with 80 ohm twin cable which will undoubtedly give a better balance than coaxial cable. However, the writer employs 72 ohm cellular low loss coax and a check with a sensitive field strength meter on 28 Mc/s revealed no startling disparities in the radiation pattern. Any unbalance was willingly accepted in the interests of simplicity.

Results

Whilst no outstanding results are claimed, reliable working has been possible on five bands with the minimum amount of bother. Using a Minimitter transmitter and an input varying between 50 and 150 watts trans-Atlantic working on the four high frequency bands presents no difficulty under normal conditions. 3.5 Mc/s is seldom-used but good reports have been received from Europe and the Near East. It should be mentioned that the circumstances at the writer's QTH are far from ideal as the transmitter is located at the end of the aerial involving a long run of feeder; the centre point is only about 20 ft above ground.

In conclusion it should be stressed that whilst the aerial described will obviously not provide results approaching those obtained from a beam, it will give reasonably efficient five band working using low impedance feeder and without the necessity of an aerial tuning unit.

Subscription Rates

BECAUSE of the all round rise in costs the Council has decided that the annual subscription to be paid by Home Corporate Members shall be increased, as from July 1, 1957, from £17.6 to £110.0.

Members who renew their subscriptions by means of a Banker's Order are asked to amend the Order at the appropriate time. A Banker's Order form to cover the new subscription rate can be obtained on application to Headquarters.

Article 19 of the Society's Articles of Association fixes the Home Corporate membership subscription at £110.0 per annum or such lesser sum as the Council may decide. The present Home Corporate membership subscription rate was fixed in November 1953 since when costs have risen very considerably.

*51 Pettits Lane, Romford, Essex.

Ionospheric Research

Some Effects of the Christmas Day 1954, Annular Solar Eclipse on Long Distance Radio Communication

By A. P. DALE (ZE4JC)*

IN conjunction with the research work being carried out at Rhodes on the ionosphere, the author considered that the Annular Solar Eclipse on December 25, 1954, offered an opportunity to study the effect of such an eclipse on long distance radio communication. Previous attempts of this nature have also been carried out by Appleton and Barnett¹, Stchoukin² and other Russian workers^{3, 4, 5}; Kato, Kaniyama and Kikuchi⁶, but not on as large a scale as on this occasion.

The propagation of radio signals over long distances is mainly dependent on the F₂ layer. For long distance propagation, the signal must necessarily be directed at an angle to the layer. The signal, as for vertical incidence, is then bent back to earth, due to the change of refractive index between the layer and its surroundings. Reflection of the signal will occur at all frequencies below the maximum usable frequency at the point of reflection for the given angle of incidence. The critical frequency at the point of reflection is the special case of the maximum usable frequency when the angle of incidence is zero. For a given angle of incidence θ , the maximum usable frequency f is given by the equation:

$$f = f_0 \sec \theta \dots \dots \dots (1)$$

where f_0 is the critical frequency, and it will be noticed that f is always greater than f_0 . It is of course necessary to bear in mind that greater absorption of energy will occur for a greater angle of incidence.

For the wave to be propagated over very long distances it is necessary for it to be reflected again at the surface and then again at the layer, remembering

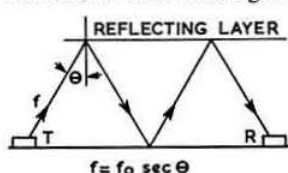


Fig. 1. Reflection of radio waves.

that energy is absorbed on each reflection (Fig. 1). In practice it has been found that the maximum distance that can be covered by a single reflection is 4000 km (2500 miles approx.). Assuming the height of the F₂ layer is 300 km., this gives a

maximum angle of incidence of 80° and m.u.f. as $6f_0$. In general, however, the m.u.f. is of the order of $3f_0$ giving an angle of incidence of 70°.

Between two points, the signal may be transmitted along different paths, e.g., by 1, 2, 3, etc., reflections. The paths will thus not be of the same length, and the two signals emanating from the same point will thus interfere with each other. When the signals arrive in phase, this corresponds to an increase in signal strength, and when they arrive out of phase a decline will occur—such a phenomenon is known as fading, well known in the reception of short wave signals.

Equipment

(a) Transmitting Station

The equipment used for the tests consisted of three transmitters working on 7020, 14040 and 21060 kc/s, which frequencies are within the bands allocated to

amateurs. The transmitters operated under the call sign ZS2RU, belonging to the Rhodes University Radio Club. The frequencies were harmonically related, this simplifying the construction of the transmitters. The fundamental, second and third harmonics of a crystal oscillator on 7020 kc/s were selected and amplified in three separate output valves. The output valves ran a power of 100 watts each, and were fed into three separate aeriols. Complete control of the three transmitters was thus obtained from the master oscillator which was keyed by a device automatically repeating a Morse code identification signal. The aeriols used consisted of half-wave dipoles, cut to the transmitting frequency on 14040 and 21060 kc/s, and a two wavelength long wire on 7020 kc/s.

The equipment was located at the Grahamstown Aerodrome which proved to be an ideal site for the satisfactory radiation of the signals, as the area surrounding the site is clear of large geographical obstacles.

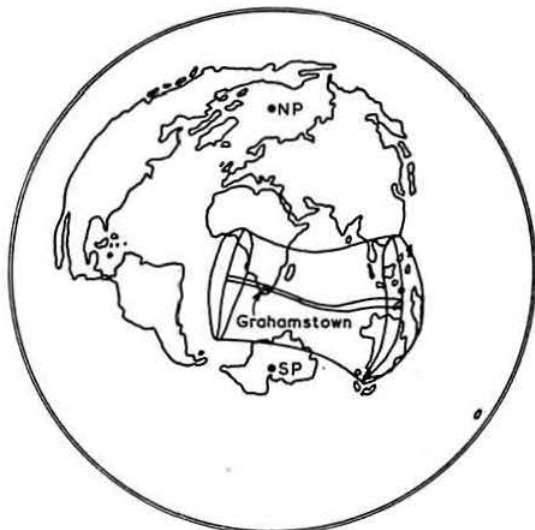


Fig. 2. Path of the eclipse over the world plotted on a radio great circle map.

(b) Monitoring Stations

Monitoring stations were situated throughout the world, with the greater number concentrated in Europe and the United States of America. The majority of the stations were owned and operated by radio amateurs. The equipment on the whole consisted of high quality commercially built receivers, which included meters giving direct readings of the signal strengths. The operators were all volunteers, who found in this experiment an excellent opportunity for the scientific use of their equipment. The advantage of having Amateur Radio enthusiasts as operators was that they were fully versed in the use of such equipment. A large number of monitoring stations were provided by the Military Affiliate Radio System of the United States Army and Air Force at their bases in Europe, North and South America and

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the Far East. Another station was provided at Panorama, the monitoring station of the South African Broadcasting Corporation near Johannesburg.

Observations

Transmissions were carried out from December 19 to December 31, 1954, from 04.00 G.M.T. to 10.00 G.M.T. On the twelve control days, monitoring stations were asked to submit reports at least every 30 minutes. On the eclipse day, reports were requested every 15 minutes. In most cases reports were submitted more frequently than this. Fig. 2 shows the path of the eclipse over the world plotted on a radio great circle map.

It was gratifying to note from the magnetic planetary indices, which are calculated from the observations of eight magnetic observatories throughout the world, that there were no magnetically disturbed days during the period of the experiment.

Effect within the Union of South Africa

(i) Within the path of annularity

A monitoring station, under the direction of Prof. F. R. N. Nabarro, was located at Beaufort West, 300 km distant from Grahamstown, and within the annular belt (Fig. 3). Readings were taken on the 23rd, 24th, 25th and 26th December. Fig. 4 (a) shows the mean signal strength on the three control days together with the corresponding data for the eclipse day.



Fig. 3. Location of South African monitoring stations within the annular belt.

Over such a short distance, it was only possible for a signal of 7020 kc/s to have been reflected from the F_2 layer since at all times the m.u.f. for the F_1 layer was too low, the highest value being 6.2 Mc/s. This was calculated from equation (1)

using the values of critical frequency obtained by sounding methods by Dr. Szendrei and Mr. McElhinny. Using this data, the m.u.f. for the F_2 layer on this path was calculated and Fig. 4 (b) shows a graph of the m.u.f.s versus time for the mean of the control days for the eclipse day.

From Fig. 4 (b) it is seen that the calculated time of initial reception (i.e., 05.40 G.M.T.) agrees with the

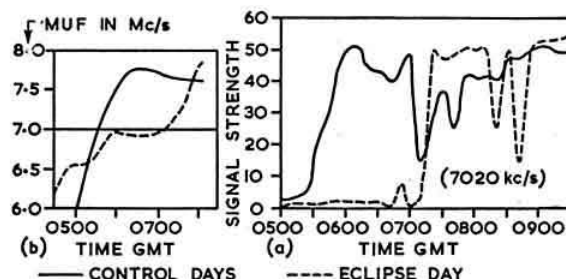


Fig. 4 (a). Mean signal strength on the three control days with corresponding data for the eclipse day. Fig. 4 (b). M.u.f.s versus time for the mean of the control days and for eclipse day.

experimental value and similarly for the eclipse day when the m.u.f. exceeded 7.02 Mc/s at 07.15 G.M.T., the eclipse effectively delaying the normal rise in m.u.f. during the early morning by one and a half hours. A further study of Fig. 4 (b) indicates that the m.u.f. on the eclipse day remained just below the transmitting frequency from 06.00 to 07.15 G.M.T.

Due to refraction within the layer, it cannot be said that the m.u.f. sharply defines the condition for reception and non-reception. This indicates that when the m.u.f. is just below the transmitting frequency, reception is still possible but at a very much weaker level than when the m.u.f. exceeds the transmitting frequency. Hence the very weak reception of the signals during this period.

The sudden drop in signal strength at 07.00 on the control days and at 08.15 on the eclipse day indicates that the critical frequency in the F_2 layer had reached a high enough value to allow reception on a double reflection, the drop in signal strength being due to interference effects during the change-over period. At this stage, while able to calculate the m.u.f. for either of the two paths, it was possible to deduce the interference effect. Once again the eclipse is seen to delay this change of path by one and a half hours.

(ii) Transvaal

Five monitoring stations were situated in the Johannesburg district during the tests. Of these, four were operated by amateurs and the other by the South African Broadcasting Corporation. Reports were submitted mainly on the 7020 kc/s transmission. Some reports were submitted

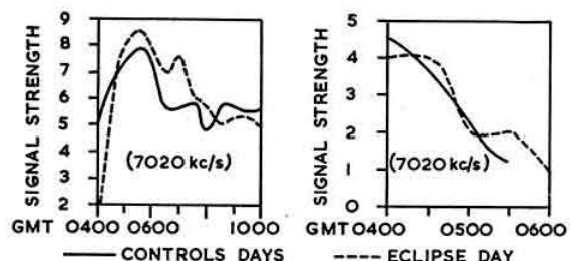


Fig. 5 (left). General effect for Johannesburg area. Fig. 6 (right). Increased signal strength during eclipse period, based on a report from Arkansas, U.S.A.

on 14040 kc/s but reception on this frequency was very irregular and the data was consequently insufficient.

Fig. 5 shows the general effect for the Johannesburg area. Reflection on this path takes place via the F_2 layer until 05.00 G.M.T. when the critical frequency in the E and F_1 layers becomes high enough for the m.u.f. on these paths to be greater than 7.02 Mc/s. Thus, after this time it is possible for the signal to be transmitted over three different paths. At the same time, due to the rapid increase in electron density in the E and F_1 regions, it is expected that the signal strength will drop, due to greater absorption and interference. This would account for the drop in signal strength after 05.30 G.M.T.

On the eclipse day it is seen that other than for the period 06.30 to 07.00 G.M.T. the signal strength curve closely follows that of the control days. This was to be expected since it would have required a very large decrease in critical frequency for the m.u.f. in the F_2 layer to have dropped below 7.02 Mc/s, a large decrease not even being observed in the annular belt. The increase in signal between 06.30 and 07.00 G.M.T. is apparently due to decrease in absorption in the E and F_1 regions during the eclipse period.

Effect on Overseas Reception

(i) Westerly Path

A typical example of the effect in this direction is illustrated in Fig. 6, which shows a report submitted from Arkansas, U.S.A., on the 7020 kc/s transmission. As can be seen no difference was observed between the

eclipse and control days. This was to be expected as the point of reflection (i.e., first reflection of several hops) lies just outside the eclipse zone.

(ii) Northerly Path

A typical example of the effect on this path is illustrated in Fig. 7, which was compiled from data received from Fayid, Suez Canal Zone. For this path it was calculated from critical frequency data that the signal was reflected a maximum of six times, indicating that the first point of reflection lay within the partial zone at a point of a maximum of 75 per cent. magnitude. For the control days the slight decline in signal strength after 05.15 G.M.T. is due to absorption, as at this time the F_1 layer is in the process of formation. Hence on the eclipse day, due to the delay in the formation of the F_1 layer it would be expected that the signal strength would not decline at this time. This is verified by the first portion of the curve. The sudden drop between 05.30 and 06.00 G.M.T. is thus inexplicable and may have been due to change in the number of reflections at this stage.

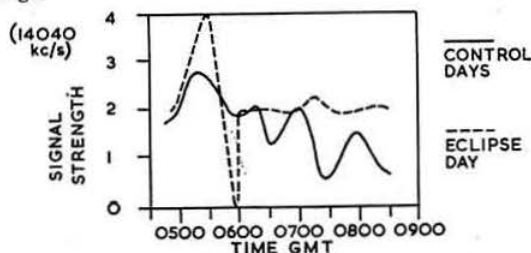


Fig. 7 Effect on a northerly path, based on a report from Fayid, Suez Canal Zone.

(iii) Easterly Path

An excellent report on signals in this direction was submitted by the receiving station of the United States Information Agency's Relay Base at Baguio, north of Manila in the Philippines. Reports were submitted on all frequencies, although due to propagation conditions only the 14040 kc/s report was suitable for analysis. Fig. 8 indicates the results obtained. For the control days the signal strength is seen to decline uniformly because of absorption due to the formation of the E and F_1 layers. At 06.30 G.M.T. the signal increased and this is presumably due to a change in the number of reflections. On the eclipse day due to the delay in the formation of the E and F_1 layers because of the eclipse, it would be expected therefore that absorption would occur at a later time. This is illustrated by the results obtained. The change-over in the number of reflections, however, will occur at the same time as on the control days due to the behaviour of the F_2 layer not differing appreciably on the day of the eclipse.

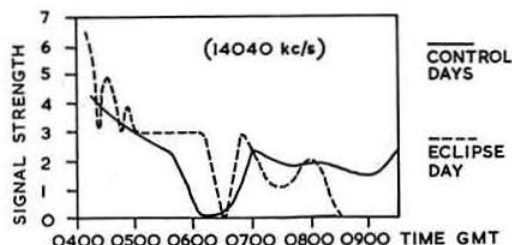


Fig. 8. Results obtained at Baguio, in the Philippines.

Conclusion

The above analysis shows that in general the effect of the eclipse was to prolong the effect of sunrise in the ionosphere. Radio conditions at the time were not favourable due to sunspot activity being at a minimum. Signals were not received well in most parts of the world and consequently the results are very satisfactory considering the circumstances.

It would seem that a future experiment of this nature would yield more profitable results if use were made of higher power and beam aerials along the path of the eclipse. Such an experiment has been undertaken by the author for an eclipse that occurred over the Far East on June 20, 1955.

Acknowledgements

The author would like to thank Dr. Szendrei and Mr. McElhinny for supplying the ionospheric data, and Mr. A. M. van Wijk of the Magnetic Observatory, Hermanus, for supplying the magnetic data.

In addition he would like to thank the numerous radio amateurs throughout the world who acted as monitoring stations, the South African Broadcasting Corporation and Captain W. S. Browne (Jnr.), U.S.A.F., Chief of the Military Affiliate Radio System of the U.S.A.F., who arranged for members of the U.S. Forces to operate monitoring stations at their bases throughout the world.

Thanks are also due to Professor Nabarro and the Wits University Physics Department for sending an expedition to Beaufort West to monitor the transmissions, and finally to the Rhodes University Physics Department for supplying the apparatus and facilities for construction of the transmitting station.

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British Wireless Dinner Club

AMATEUR Radio was well represented at the Thirty-fourth Annual Dinner of the British Wireless Dinner Club held at the United Services Club, Pall Mall, London, on Friday April 26, 1957.

The Third Sea Lord and Controller of the Royal Navy (Vice-Admiral Sir Peter Reid, K.B.E., C.B., C.V.O.) presided over a record attendance of 125 with Sir Ben Barnett, K.B.E., C.B., M.C., as guest speaker.

Licensed amateurs present included Sir Evan Nepean, Bart. (G5YN), Douglas Johnson (G6DW), H. E. F. Taylor (G6HT), J. N. Walker (G5JU), A. C. Edwards (G6XJ), Rowley Scott Farnie (G5FI), W. B. Brown (G6QY), John Clarricots (G6CL), David Deacon (G3BCM), Douglas Walters (G5CV) and C. M. Benham (G4TZ).

Among those present who were associated with the Society in its early days were Vice-Admiral J. W. S. Dorling, C.B., Capt. P. P. Eckersley, Philip Coursey, Hugh Pocock and Noel H. Hamilton, D.S.O.

The new President of the Club is Air Vice-Marshal E. B. Addison, C.B., C.B.E.

Four Metre Converter

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

MEMBERS contemplating the construction of a converter for the new 4 metre band would be well advised to follow the circuit and layout of the R.S.G.B. Two Metre Converter described by G2UJ in the February, 1954, issue of this journal. This excellent unit will provide a simple and highly sensitive receiver for four metres with no essential change from the original design except in the size of the inductances. The only special precaution to be taken is the avoidance of second channel interference from nearby B.B.C. television stations.

The Oscillator

In the London area the original intermediate frequency of about 10 Mc/s may be retained and the oscillator tuned from approximately 29.5 to 31.5 Mc/s. The doubler then covers 59 to 63 Mc/s and signals may be received between 69 and 73 Mc/s, thus including not only the British allocation of 70.2 to 70.4 Mc/s, but also the 72 Mc/s band available to amateurs in France, Russia and Yugoslavia.

Referring to the original article on the two metre converter, coil sizes may be as follows:—

L4—10 turns 16 s.w.g. enamelled copper, close wound, $\frac{1}{2}$ in. diameter

L5—10 turns 18 s.w.g. enamelled copper, $\frac{1}{2}$ in. diameter. Length of coil 1 in.

C17 may be increased to 3-30pF and the doubler circuit tuned to full resonance on 60 Mc/s. No change is needed in the other capacities associated with this stage, though owing to the increased efficiency of the stage at these lower frequencies some increase in stability may be secured by a reduction in anode voltages whilst maintaining adequate injection voltage. This is readily achieved by increasing R8 and R11 to between 30,000 and 50,000 ohms according to the voltage of the h.t. supply to the unit.

R.F. and Mixer

The dimensions of L1 are not critical, a $\frac{1}{2}$ in. diameter coil of about 10 turns being suitable. On the other hand, L2 and L3 must be designed with some care and the following specification may be adopted:—

L2—5 turns 18 s.w.g. enamelled, $\frac{1}{2}$ in. diameter, turns spaced $\frac{1}{2}$ in.

L3—8 turns 18 s.w.g. enamelled, $\frac{1}{2}$ in. diameter, turns spaced 1/10 in. R2 is tapped 5 $\frac{1}{2}$ turns from the anode end.

The method recommended by G2UJ for resonating L3 and tuning L2 should be carefully followed as the sensitivity of the unit is largely determined by this operation. Final adjustment of L2 may be made when a 70 Mc/s signal is tuned in.

R.f. chokes should be wound with approximately twice the length of wire used in the two metre design.

The I.F. Amplifier

As previously mentioned, the original i.f. coil dimensions may be used in the London area. With the intermediate frequency at about 10 Mc/s and the oscillator doubler at 60 Mc/s, second channel pick-up on 50 Mc/s will miss the television frequencies of 41.5 and 45 Mc/s. The i.f. should not be much greater than 10 Mc/s, however, as some interference was noticed when 12 Mc/s was tried.

In areas where B.B.C. television frequencies are higher it may be necessary to reduce the i.f. to 5 Mc/s (which

should not adversely affect the performance of the converter) or to design the oscillator to work on the high side of the signal frequency.

Performance

The stability of the oscillator designed as above, leaves nothing to be desired, but those who wish to simplify the circuit still further might care to eliminate the doubler stage, using a triode (6C4) in place of the 12AT7 (or 6J6) as a straight oscillator tuning from 59 to 63 Mc/s when the i.f. is 10 Mc/s. The writer has not tried this arrangement but undoubtedly the stability would be well maintained as in the original two metre converter.

Region I V.H.F. Managers' Conference

AN I.A.R.U. Region I V.h.f. Managers' Conference was held in Paris on April 27 and 28 when many subjects of mutual interest were discussed. Those present included DL3FM (Chairman), ON4BK (Hon. Secretary), EI2W, F9ND, G2AIW, HB9RG, IIXD, LX1AI, OE1-458, OH2TK, PA0BL, SP5FM and YU1AO. G2MI attended as Hon. Secretary, Region I Committee.

A full report will appear in a forthcoming issue of the BULLETIN.

G2AIW records his thanks for the personal hospitality extended to him by F3SK, F8NH, F8MX and F9CQ which will be long remembered.

Third International V.H.F.—U.H.F. Convention

Saturday, May 25, 1957

Bonnington Hotel,

Southampton Row, London, W.C.1

Programme

Convention and Exhibition opens - 10 a.m.
(During the morning there will be conducted visits to various radio stores)

Lectures and Technical Discussions commence - 2 p.m.

(Speakers include Dr. J. A. Saxton of the D.S.I.R. on "Tropospheric Scatter Propagation"; Mr. R. H. Miles of the G.E.C. Research Laboratories on "Over-tone Oscillators"; M. Pierre Millot, F3SK, on "Recent Developments in France"; Mr. Bill Sykes, G2HCG, on "Slot Beams for V.h.f./U.h.f."; Mr. D. N. Corfield, G5CD, on "The Neutrode"; Mr. H. F. Smith, G2DD, on "Miniaturized Equipment for V.h.f./U.h.f.")

Convention Dinner - 7 p.m.

Presentation of Exhibition Prizes and Free Draw - 9 p.m.

Convention closes - 10.45 p.m.

Tickets may be obtained by post from F. G. Lambeth (G2AIW), 21 Bridge Way, Whitton, Twickenham, Middlesex, at the following prices: Convention only —3/6; Convention and dinner—21/-.

Organized by the R.S.G.B. and the London U.H.F. Group.

*Heath Dormy House, Tadworth, Surrey.

FOUR METRES... ...AND DOWN

By F. G. LAMBETH (G2AIW)*

EVERYTHING is now in readiness for the Third International V.H.F./U.H.F. Convention at the Bonnington Hotel, Southampton Row, London, W.C.1, on Saturday, May 25. The proceedings will open informally at 10 a.m. when it is hoped that participants will get together for the time-honoured rag-chew which is such a feature of these gatherings.

It is regretted that it was not found feasible this year to arrange a formal lunch, but there should be no individual difficulties on this score either in the Hotel or at nearby restaurants. The formal programme will commence at 2 p.m., full details of which will be found in the display announcement on the opposite page.

The exhibition of v.h.f./u.h.f. gear will again be an important part of the Convention, and we trust that those who have not yet done so will find an exhibit to bring along, which may, moreover, win a prize.

After the Dinner, at which we expect to hear from some of the visitors who will be coming from the Continent and overseas, there will be the usual free draw for some excellent prizes which have been donated by the radio trade and press.

Among those expected will be VQ3AA/VQ4AA who is on leave in the U.K. at present. With VQ3CH/VQ4CH who arrives later and who may also visit the Convention, we have two of the active 2m stations in East Africa. 3AA/4AA holds the East Africa DX record of 350 miles. They both run about 70 watts to a QQQV06/40. With the issue of a G licence approved VQ3AA/VQ4AA hopes to be on 2m by the time this appears.

If you have not yet booked your ticket, there is still time provided you write to G2AIW at once.

Two Metre News from England

There has been nothing of special merit in the latest period, although in some areas activity appears to be on the up-grade. The band is sluggish and slow to open up generally: as a result, the reports this month are scanty.

B.R.S.16075 (Shirley, Southampton) says the month was not very good, but there were a few evening openings mostly along the South Coast. It was nice to hear G2BMZ (Torquay) again—an S9+ signal on the back of the beam. Several Southampton stations were preparing to take part in the Field Day on May 5. G3ION was going to his old site, accompanied by G8QW and '16075 with another S.W.L. Other stations taking part were expected to include G3HKT/P, '2DSW/P, '3KSR/P, and another manned by G3GOP, '3EVQ and '50B.

B.R.S.15822 (Clapton, E.5) has come back listening on 2m after about two years on the h.f. bands and says "The 2m band still has that attraction that the others have not quite got." The converter in use is a Labgear (6BQ7A—12AT7) into an R107 to which has now been added the 1951 G2UJ r.f. amplifier using two 6C91s. The signals certainly come much further out of the noise level with a single slot indoors. '15822

found April 4 quite a good evening, many locals working PA0s and ON4s—'15822 "only" heard PA0BL. He also received G3ALC (Rutland), '3JWQ (Ripley, Derbys), '3KFX (Ipswich) and '5BD (Mablethorpe) so that the indoor beam is certainly doing pretty well. (Try and get it outside and hear the difference!)

B.R.S.21136 (Ruislip) says conditions were average with rises to good on March 28, April 2 and 15 with activity slightly on the increase, a total of 58 stations being heard during the month. **B.R.S.20162** (Selsdon) reports fewer stations heard, owing to less time listening. Conditions have not been so good generally or so consistent as in the previous period. The Activity Nights, apart from April 8, seemed to suffer from below average conditions. It is, however, pleasing to report that there are a few newcomers each month.

G3EMU (Canterbury) started the month well, with quite a number of Continental QSOs. PA0KH was a new one and best DX for the month. On three mornings at 6.30 a.m. contact was made with PA0FB. **G4WK** has made a start on 2m from Canterbury.

G5MR (Hythe, Kent) had a first QSO on April 3 with G3LOK (Coves I.O.W.). In the early evening of April 15 G5YV was heard again, on phone, fading deeply. '5MR finds the rules for the 144 Mc/s Open Contest interesting, but not very encouraging from the point of view of those who depend on comparatively few QSOs at long distance rather than on many QSOs at all distances. Recently G5MP and '5MR visited G2JF at Wye, Ashford, where they found a really fine station; the afternoon was made thoroughly enjoyable by the hospitality of Mr. and Mrs. Foster and their daughter.

G2AHY (Crowthorne, Berks) is on the air most evenings with the "same old 4 element Yagi and 25 watts" looking for QSOs as always. **G3EOH** reports: 2m activity seems to be on the rise, probably partly due to the stimulating effect of the Monday Night Activity Period. It seems quite easy to get a QSO in the London area at any time on most evenings, and distant stations can frequently be heard again for the first time for about 7 months. G3JWQ has been worked.

G5KW had a very interesting QSO on April 15, working PE1PL/M operated by PA0BL (about 15 miles south west of The Hague) running only 2½ watts. PE1PL/M ranged between RS44 and RS58. '5KW was S9.

B.R.S.20133 (Melton Mowbray) has installed a Labgear Converter and is looking forward to a good month's listening.

G5MA worked G2FO (Stockton-on-Tees) on c.w. and heard G3BW and G13GXP during the month.

Two Metre News from Scotland

GM6WL (Glasgow) says that 2m has been rather quiet for the last two months or so. G3IBV (Larkhall) who hibernates during the winter months was heard once recently calling "CQ2" and '6WL wonders if this means he is preparing for the summer DX season. For those who have been wondering what has happened to GM3EGW, it appears the reason is not hibernation in

*21 Bridge Way, Whitton, Twickenham, Middlesex.

this case, but something more joyous (YL QRM). During the summer, it is hoped the YL will become the XYL and Fraser may then occasionally come back to 2m. Congratulations anyway OM! The sole standby in the East, greatly valued by the Glasgow enthusiasts is GM3DDE (Corstorphine, Edinburgh). GM3DIQ has settled in Kilbarchan, (Renfrews) after leaving Edinburgh and should shortly be on with a "terrific" stack on 2m (6 slots on a lattice tower) to make GM more frequently heard in the South.

Seventy Centimetre News from England

G5MR (Hythe, Kent) has made real progress with the converter due to the kindness of G2JF who presented a pair of cavities (oscillator and mixer) beautifully made by himself. The oscillator chain is working well, and more progress is confidently expected.

G3EOH (Enfield), having wound a new heater transformer for the 70 cm transmitter, is active on the band again. It was immediately apparent that aerial repairs were necessary, only two out of the six driven elements being connected to the feeder. The disconnections were due to electrolytic action between the brass connecting screws, and the dural elements, in spite of an initially good coat of paint. This resulted in the ends of the elements falling off. The necessary repairs were made and a tuning stub fitted. This has effectively doubled the radiated power ('SDT gives 3db up on previous best signals).

During a recent 2m QSO with G5BD (120 miles) Arthur suggested a test on 70 cm. This was done, and signals at Mablethorpe were RS56 on peaks with QSB. Since this QSO four further similar transmissions have been made, and each time signals have peaked to RS56. On one occasion S8 was recorded. However a satisfactory two way QSO on 70 cm would not normally be possible because signals often have been unreadable for over 50 per cent. of the time. Fortunately '3EOH can listen on G5BD's frequency on 2m whilst transmitting on 70 cm, and when he becomes unreadable Arthur comes up on 2m and stops him. A recent evening on 70 cm resulted in six stations being contacted on that band (two new ones included, thanks to 'SDT) and a further cross-band one with G5BD. Thus activity seems to be rising fast. On April 2 a test transmission to G2FMJ (Potters Bar, Herts) at 5 miles confirmed that his receiver was okay, in fact he was able to copy R5 with no aerial at his end.

Seventy Centimetre News from Scotland

GM3DDE (Corstorphine) has at last got a temporary aerial in the clear for 70 cm and has heard GM3GAB (Rutherglen, Glasgow) RS56 on several nights running. Great credit is due to GM3GAB who is running a QQV03/20A tripler and QQV03/20 p.a. modulated by an 815 to a 4-over-4 slot beam. **GM6ZV** (Clarkston, Renfrews) was also heard, but not so strongly although the carrier would be S6. If '6ZV could modulate a little better he too would make the crossing to Edinburgh (why not use c.w. anyway?) The distances are around 38/40 miles but the paths are quite difficult, with hills, Kirk O'Shotts TV, and a steel works in the way! There is otherwise very good activity on 70 cm in the Glasgow district with the following stations all equipped and looking for contacts: GM6ZV, '6KH, '6WL, '5VG, '4XH, '3INK, '3GVO, '2CQI, '3GAB, GM2CHN and '2DPW are receiving only. The latter has heard '6KH, '3GAB, '4HX, '3GUO and '6WL (in his first week) using a c.c. converter with an AR88 and indoor 6 element Yagi.

News from France

F3SK informs us that several French stations are now equipped with 4X150A frequency doublers on 70 cm in co-axial circuitry viz: F3SK, '9AJ (Le Mans), '8TD (St. Nazaire), '9TV/80S (Liancourt near Paris or le Gyla near Arcachon), '3YE, '9QB (Le Mans), and '3LS (20m south of Le Mans). Last year F9AJ and '8TD achieved excellent results at 170 miles distance. Some interesting and satisfactory results have been achieved on 70 cm in France using two grounded grid amplifiers ahead of the crystal mixer instead of only one.

F3SK (Asnières) has been testing out a new 23 cm converter with F8OL. '3SK wishes to work /P this coming summer, but it is necessary to have someone to work with, and F3JN, who started to build equipment, was unfortunate enough to have a motor cycle smash. (Nous espérons que vous serez bientôt guéri, OM.) F3SK has now built a converter based on the previous one, but with some improvements. This is the one mentioned above, and results have been surprisingly good. F8OL is located about 9 miles south west of Asnières, and '8OL's signal was mainly 549 with just a ¼ wave wire in the co-ax sockets, and about 589 with a 5 element Yagi in the same room and 59+++ with the aerial at the southern window. (The '3SK shack is in the northern part of the house, away from '8OL.) The u.h.f. part of the second converter is the same as before; the difference lies in the crystal chain. The i.f. section using parallel cascode (6AN4, 6AU4 or similar) is superior to the series connected 6BQ7A or equivalent. '3SK says that every day for about 10 months a crossband QSO has taken place (23cm/2m) between F8OL and '8GH. The distance is about 50 miles. F8OL is using beam aerials (one of 15db and the other more than 20db gain), sometimes a 2C39A tripler, more generally two 2C39A frequency doublers in cascode, after, of course, high stability c.c. exciters. F8OL has been working phone for about 4 months. '3SK does the same, modulating the two 2C39A f.d. in cascode (modulation is not satisfactory otherwise). '3SK is now working on a second 23 cm transmitter, which, like the first, will use an exciter giving 315 Mc/s followed by a 2C39A doubling to 630 Mc/s and a second doubling to 1260 Mc/s. The first easily gives 12 watts output—the last stage efficiency is slightly over 30 per cent. A QRP 23 cm transmitter is also being finished.

Four Metre Notes

G3EHY (Banwell) says the highlight of the present period has been several contacts with EI2W (Dublin), the best being on April 20 at 23.15, solid both ways on phone. Another nice contact was with one of the few stations heard from the north i.e. G3FUW (Hinckley, Leics). His c.w. signals were very strong at Banwell on April 7; phone signals were also read. Many contacts have been made with London stations such as G2DD, '5DS, '2ABD and '3CLW (now past the half century mark). Several experimental skeds have been worked around 08.00 with G2DD and '3CLW proving the band open at that early hour for c.w. working. '3EHY finds that with normally efficient equipment there is no doubt that DX can be worked regularly and with little effort. The patient calling of "CQ" over a period will nearly always bring results.

G3EOH notes that the increase in activity on 2m and 70 cm does not seem to have helped the 4m band. Whilst activity on this band has never been very high it was building up. Now, however, the reverse seems to be happening. Quite often one feels that the band is "full of life," but there just aren't any stations to work.

EI2W (Dublin) who is on 70.662 Mc/s made the first EI/G on 4m with G6NB. EI2W was RS57 and G6NB RS58. The noise was terrific and it was only when EI2W thought of possible aurora activity and turned the 3 element Yagi from south east to north east that '6NB was received in "bursts of sparks" then quite intelligible for a few moments and then more sparks. After many attempts, EI2W has worked G3EHY (Banwell) and a late telegram reports a QSO with G5KW for a record distance on 4m. These results after 5 weeks calling nightly are gratifying and a good augury for the future.

From **Radio ZS** it is learnt that **ZE2JE** (Salisbury) made the first 50 Mc/s contacts between Africa and U.S.A. on February 18 when he worked W8LPD, W8PKL, W8PBU (all in Cincinnati) and K4CTD (Nashville, Tennessee). Reports varied from RS59+ to RS56. ZE2JE was using an 807 running 40 watts input to a 4 element Yagi and an RF26 converter.

The same day **VQ2PL** (Livingstone) worked W8PNE, W8LPD, K9GGF, K4IDX and W8PBU. On the 19th VQ2PL worked K0BLD, W0KHI, K0QGL and W0EZH.

I.G.Y.

In connection with the I.G.Y., G3EOH and G3FZL require the co-operation of those in a position to operate regular skeds over non-optical paths. Those able to help are asked to write to the I.G.Y. Co-ordinators immediately.

It is to be hoped that there will be more to report next time, with more liveliness on the bands. Please note the deadline: May 20. Good hunting.

Third International V.H.F./U.H.F. Convention

AMONG the gifts kindly donated, up to the time of going to press, for the Third International V.H.F./U.H.F. Convention are the following:

Type "F" Headphones (S. G. Brown Ltd.).
Set of transistors (Edison Swan Electric Co. Ltd.).
Ball Point Pen (Enthoven Solders Ltd.).
Resistor Kits (Eric Resistor Ltd.).
Gift Voucher (McMurdo Instrument Co. Ltd.).
QV06-20 tetrode valve (Mullard Ltd.).
Soldering kits (Multicore Solders Ltd.).
Resistors (Painton & Co. Ltd.).
Brimar valves (Standard Telephones & Cables Ltd.).
Brush set (Stratton & Co. Ltd.).
Model 44A Test Meter (Taylor Electrical Instruments Ltd.).
Condensers (Telegraph Condenser Co. Ltd.).
Model 325 d.c. meter (Ernest Turner Electrical Instruments Ltd.).
DT3 transformer (Woden Transformer Co. Ltd.).
Pocket Voltmeters (Measuring Instruments (Pullin) Ltd.).
Two subscription vouchers and "V.H.F. Handbook" (Short Wave Magazine Ltd.).
"Frequency Modulation Engineering" by Tibbs and Johnstone (two copies) and "Hi-Fi Loudspeakers and Enclosures" by Cohen (Chapman & Hall Ltd.).
"Introduction to Ultra High-frequency" by S. E. Knight (two copies) (Sir Isaac Pitman & Sons Ltd.).
"Second Thoughts on Radio Theory" (Wireless World).
"V.H.F. Handbook" (London U.H.F. Group).

Worked and Heard on V.H.F.

Two Metres

G3BFP/A (Selsdon) February 25, March 4, March 13.
Worked: G2AJ5, 2DWD, 2RD, 2UJ, 3CGQ, 3CNF, 3CO, 3FMP, 3FNL, 3FVG, 3GHO, 3IJB, 3IRW, 3LOA, 3PV, 4DC, 5KG, 5KW, 5VW, 5YV, 8RW, PA0FC.

G3EMU (Canterbury) February 28-March 18.
Worked: F8AA, 9LD, G2FJ, 3IHU, 4IB/M, 5BD, 5KG, 5OX, 5YV, ON4HN, 4ZH, 4ZK, PA0CMM, 0FC, 0NO. Heard: G3JWQ, 4DC.

G3KHA (Bristol) February 18-March 17.
Worked: G2AHP, 2ANT, 2AUD, 2CIW, 2FJR, 2FQP, 2HOP, 2JF, 3CGQ, 3CNF, 3FEX, 3HBW, 3HHY, 3HXS, 3IRS, 3KEQ, 3KPT.

3YZ/P, 4DC, 4PS, 5DW, 5KG, 6AG, GW8UH. Heard: G2AIH, 2DDD, 2DVD, 2FNW, 2HCG, 2YB, 3ABA, 3BA, 3BW, 3CO, 3FAN, 3FQS, 3GHO, 3GHI, 3HRH, 3HIO, 3IER, 3IIT, 3JZN, 5BD, 5BM, 5KW, 5UM, 6RH, 6XM, 8KW, 8VZ, PE1PL.

G3LHA (Coventry) February 22-March 18.
Worked: G2ACY, 2ANS, 2ATK, 2AUD, 2CIW, 2CYD, 2DCI, 2DDD, 2FJR, 2FMO, 2FNW, 2JF, 2NV, 2YB, 3ABA, 3AZU, 3BA, 3BU, 3CGQ, 3VQK, 3DKF, 3DKF/A, 3EMG, 3ENY/M, 3ENY/P, 3FD, 3FMO, 3FTN, 3FUW, 3FW, 3GFW, 3GHI, 3GHO, 3GSO, 3HBW, 3HIO, 3HTY, 3HXS, 3IER, 3IRA, 3IRS, 3JGY/M, 3JQN, 3JWQ, 3JZG, 3JZN, 3JZW, 3KEF, 3KEQ, 3KEQ/P, 3KFX, 3KKV, 3LAY, 3LDW, 3LJ, 3LOK, 4PS, 5DS, 5KG, 5ML, 5YV, 6AG, 6XM, 6YP, 6YU, 8KW, 8VZ. Heard: G2AHY, 2AJ5, 2ANT, 2BVW, 2CZS, 2HCG, 2HDJ, 2HOP, 2MV, 2OI, 2RD, 2TP, 2WJ, 2WQ, 3ATZ, 3BIF, 3CO, 3DOR, 3EJO, 3ENY, 3FAN, 3FCO, 3FFV, 3FGT, 3FP, 3GDR, 3GWB, 3HA, 3HAN, 3HAZ, 3IIT, 3IJB, 3IOO, 3IWI, 3JGY, 3JR, 3KCB, 3KUH, 3LIA, 3XC, 3YZ/M, 4MK, 5BD, 5DW, 5KW, 5MA, 5NF, 5VW, 6JK, 6NB, 6XA, 6XX, 8BP, 8CZ, GC3EBK, G3GXP, GW8UH, PE1PL.

G5MA (Great Bookham, Surrey) February 16-March 18.
Worked: G2ANT, 2FNW, 2CG, 2OI, 3AGS, 3BA, 3BU, 3BW, 3GAV, 3GFD, 3HA, 3HHY, 3IOO, 3IRA, 3IWI, 3JWQ, 3JZG, 3LOA, 3NF, 5TP, 6XM, 6XX, 8PX, 8VZ, GD3UB, G3GXP.

PA0FB (The Hague, Holland) February 28-March 17.
Worked: DJ1XX, 3NR/P, DL3WR, 9FX, G3ANB, 3FQS, 3GHO, 3INU, 3KFX, 5KG, 5KW, 5YV, 6NB, 6XX, ON4DW, 4ZK.

B.R.S.15822 (Clapton, E.5): March 24-April 21, 1957.
Heard: G2AHP, 2AK/P (Enfield), 2BVW, 2CD, 2CIW, 2DDD, 2FMI, 2HCG, 2HDY, 2JF, 2NM, 2RD, 2WJ, 2XV, 3AEX, 3ALC, 2ANB, 3BFP/A, 3BII, 3CGO, 3CNF, 3CO, 3CZY, 3DOR, 3EIV, 3EIO, 3EIV, 3EYV, 3FCO, 3FD, 3GDR, 3GHI, 3GKZ, 3GOZ, 3HBW, 3HRH/A (Enfield), 3HWJ, 3IDD, 3IIT, 3IRW, 3IUL, 3JQN, 3JWQ, 3KEQ, 3KFX, 3KLI, 3KQC, 4DC, 4HQ, 4IB, 4OT, 5BD, 5DS, 5KG, 5KW, 5MA, 5MR, 5UM, 5VW, 6AG, 6LL, 6NB, 6NF, 6RH, 6YP, 8AL, 8KW, 8LN, 8RW, 8SC, 8SK, PA0BL.

B.R.S.16075 (Shirley, Southampton) March 20-April 17, 1957.
Heard: G2AUD, 2BMZ, 2DDD, 2HCG, 2JF, 2NM, 2YB, 3ALC, 3CZY, 3FEX, 3GHO, 3HHY, 3IRS, 3ITF, 3JFR, 3KHA, 3KPT, 3HA, 4DC, 5DS, 5MA, 5YV, 6AG, 6JK, 6NB, GC2FZC, 3EBK, GW8UH.

B.R.S.20133 (Melton Mowbray) March 19-April 20, 1957.
Heard: G3BA, 3DLU, 3DVK, 3EXX, 3FDF, 3FUR, 3GHO, 3KUH, 3JWQ, 4MK, 6XM.

B.R.S.20162 (Selsdon) March 14-April 17, 1957.
Heard: G2AHP, 2AHY, 2AIH, 2ANT, 2ATK, 2AUD, 2BDP, 2BVW, 2CD, 2CIW, 2CXP, 2DDD, 2DVD, 2FCA, 2FMI, 2FNW, 2GG, 2HCG, 2HDJ, 2HDY, 2JF, 2NR, 2RD, 2UJ, 2WJ, 2XV, 2YB, 3ABA, 3AEX, 3ALC, 3ANB, 3BA, 3BII, 3CGQ, 3CNF, 3CO, 3CZY, 3DF, 3DKF, 3DLU, 3DOR, 3DOZ, 3DVO, 3EIV, 3EMU, 3EIO, 3EYV, 3FAN, 3FCO, 3FD, 3FEX, 3FMP, 3FP, 3FPV, 3FQS, 3FUR, 3FVG, 3GAV, 3GDR, 3GFN, 3GHI, 3GHO, 3GZJ, 3GKZ, 3GOZ, 3GTH, 3HBW, 3HCC, 3HRH, 3HXS, 3IAM, 3IDD, 3IIT, 3IJB, 3IOO, 3IRA, 3IRS, 3IRW, 3IUL, 3JEP, 3JFR, 3JHM/P (Storrington), 3JLA, 3JN, 3JNI, 3JQN, 3JR, 3JTF, 3JWQ, 3JZG, 3JZN, 3JZW, 3KEQ, 3KEQ/M (Kent), 3KEQ/P (nr. Wrotham), 3KFA, 3KHA, 3KLI, 3KPT, 3KQC, 3KHU, 3LCK, 3LHA, 3LIA, 3LOA, 3LOK, 3PV, 3XC, 4DC, 4FB, 4IB, 4KD, 4PS, 4WK, 5BC, 5BD, 5BO, 5DF, 5DT, 5HN, 5KG, 5KW, 5LK, 5LL, 5MA, 5NF, 5OX, 5RD, 5UM, 5VW, 5YH, 5YV, 6AG, 6JK, 6JP, 6LL, 6LL/A (Cuffley), 6NB, 6NF, 6OX, 6RH, 6XX, 6YP, 8AL, 8HY, 8LN, 8MW, 8RW, 8SC, 8SK, 8UQ (Bucks), 8VZ, GW8UH, ON4HN, PA0BL, FB, FC.

B.R.S.21136 (Ruislip, Middx.) March 18 to April 15, 1957.
Heard: G2AHP, 2AIH, 2ANT, 2BDP, 2BZ, 2DVD, 2FMI, 2FVD, 2HDJ, 2HDY, 2UJ, 2YB, 3BFP/A, 3BFP/P, 3CNF, 3CO, 3CZY, 3DOR, 3DVO, 3EIV, 3EYV, 3FCO, 3FQS, 3FUR, 3GDR, 3GHI, 3GTH, 3HBW, 3HWJ, 3IUL, 3JQN, 3KQC, 3KEQ, 3KEQ/P, 3LOA, 3PV, 4DC, 4IB, 4HQ, 5DS, 5KW, 5MA, 5NF, 5UM, 5VW, 5YH, 6AG, 6JP, 6JK, 6LL, 6NB, 6RH, 6OX, 6SC, 8SK, 8RW, 8UG/A.

G2AHY (Crowthorne, Berks) March 24-April 19, 1957.
Worked: G2ANT, 2BVW, 2YB, 3DKF, 3DQC, 3EMG, 3FCO, 3GHO, 3IIT, 3JR, 3KHA, 3LHA, 3LOA, 5DF, 5NF, 5TP, 6AG, 8VZ. Heard: G2AHP, 2ANS, 2AUD, 2CIW, 2DDD, 2EIV, 2TZ, 3DLU, 3DOR, 3FEX, 3FNW, 3FQS, 3GHI, 3GVR, 3HBW, 3HRS, 3IKA, 3IUL, 3JWQ, 3JZN, 3KAG, 3KEQ, 5MA, 5KW, 5US, 5YV, 6JK, 6NB, 6NN, GC3EBK.

G3BFP/P (Woldingham Ridge, Surrey) March 31, 1957.
Worked: G2AHP, 2JF, 3CZY, 3IAM, 3JR, 3KEQ/P (Kent), 3KPT, 3LOA, 6AG, GW8UH.

G3BFP/A.
Worked: G2AHP, 2AHY, 2CD, 2RD, 3CO, 3CZY, 3FCO, 3FPV, 3GFN, 3IWO, 3KEQ, 3LHA, 3LOA, 3PV, 4DC, 5FB, 5KW, 5UM, 6AG, 8SC.

G3EMU (Canterbury).
Worked: G2JF, 4DC, 4IB, 4WK, 8BJ, 8RK, ON4HN, 4ZK, PA0BL, 0FB, 0KH.

Fostering Good Neighbour Relations over BCI and TVI

By BASIL WARDMAN (G5GQ)

"BY the way, old boy, have you been using your wireless transmitting set recently?" enquired a neighbour as he left my flat after spending the evening with me. I looked him in the eye and answered "No, it so happens that I haven't, but I've a feeling that you suspect me of causing some interference with your enjoyment, so come clean and tell me all about it and maybe I can help you".

Yes, he had been having trouble with his TV for some weeks, a noise that went on all the evening. I arranged to pop in the next night and sure enough there was a peculiar whine on the sound. It was definitely being generated inside the set and sounded like a microphonic valve. I explained to him what I meant by a microphonic valve and said that we might cure it by giving the offender a clout with a rubber on the end of a pencil. Our luck was in, for we spotted the offender

WE CLOUTED
THE VALVE
WITH A
PENCIL



almost at once, and one or two good bangs stopped it. I told him that it might only be a temporary cure, meaning that he might have to buy a new valve soon, or that it might be permanent, it was impossible to forecast; it has lasted two years now and he is delighted. The point I have got across to him is that if he hears any funny noises, then don't suffer for months, but come into the open and tell me at once: in all likelihood it's something quite simple.

Suspecting the local "ham" of being the cause of all the interference they suffer is the natural reaction of the general public. After all, they know that we have a roomful of strange and awe-inspiring equipment, and the papers say that interference can only be caused by electrical equipment, so isn't it only commonsense to put two and two together and pin all troubles on us? I agree that it's illogical, but it's natural, and it's up to every amateur to be a psychologist and deal with his neighbours as natural, and certainly not logical, beings.

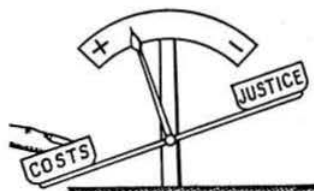
When I first started Amateur Radio, I was very young and foolish, and stopped all my neighbours to tell them what a clever fellow I was with my own transmitter, able to talk to people in distant lands. In those early days, my rig did interfere with local crystal sets and soon, from being the clever young Marconi of the locality, I was regarded as the public nuisance, responsible not only for my genuine interference but also for that produced by the local trams and overhead wire trains which existed in those days. Right up to the war, my life was made a misery through being too well known locally as the owner of a transmitting rig, although in those days I lived in a house with reasonable space between it and the nearest aerial.

Since the war, I have lived in a modern flat in Central London: there are over 350 flats in this block so that one is bang on top of one's neighbours. And that's a problem many of us are having to face. Having burnt my fingers once, I determined not to make the same mistake again, especially in such cramped quarters. Now I am discreet, I do not publicise myself or my activities. Hence I do not have my address published, but have all cards sent through the R.S.G.B. QSL Bureau. If they came direct, addressed to "Amateur Radio Station G5GQ", my presence would soon be noised abroad throughout the block and once more I should become the target for all the BCI and TVI caused by lifts, water pumps, cars, vacuum cleaners, electric razors, and what-have-you's. For preserving my anonymity alone, through the QSL Bureau, the R.S.G.B. more than earns any subscription claimed from me!



QSL CARDS
ARE BEST
RECEIVED VIA
THE QSL
BUREAU

Of course, my closest neighbours, especially those who visit my flat, know that I have a lot of radio equipment, and it may even enter their heads that part of it may be a transmitter, but I avoid *stressing* that point and never, under any circumstances do I let them see my rig in operation: that would fix the idea that I have a transmitter far too firmly in their minds. It must be realised that it only wants a few misguided neighbours to be convinced that the local amateur in their block is the cause of all their troubles, and for them to complain to the landlord, to result in the unfortunate person being told to close down or clear out. Yes, he might be able to win his case if he took it to Court, but who would pay his out-of-pocket expenses and compensate him for the worry? On the other hand, he might not win. We are a minority, granted our licences to transmit on the understanding that we do not interfere with the pleasures of others. Far too many amateurs assume that this gives them the right to transmit irrespective of others' troubles, and that it is the job of the Post Office to clear up any bother with interference, whether caused by them or by other sources. A bad impression is created locally from the start and so, when serious trouble does arise, it becomes awfully difficult for them,



WHO PAYS
FOR
JUSTICE?

or the Post Office, or the R.S.G.B. to smooth matters down. A little tact at the start, a little "good neighbour relations" policy to begin with would have saved most of the bother and provided a basis of give-and-take which would have made a solution simple.

Then there is the matter of positive co-operation. A chance remark from a casual acquaintance will elicit the fact that he is suffering from severe interference. One's first inclination is to keep quiet, in case unfair blame is put your way. It's far better to face up to it and say "I happen to know a little about radio—ring me next time it happens and I'll pop over and see if I can spot the trouble". Nine times out of ten it's something dead simple. The phone rings "I'm not getting the Third Programme, are you?" enquires a voice. You switch on and find it's OK, so along you trot to find that your caller's aerial has fallen out of its socket. He is delighted because you have regained his evening's programme. I get that about once a fortnight. Sometimes it's more serious, like a TV which lost its sound, and I had to tell the owner that something was wrong with the set and that it was a repairer's job, for never start doing repair jobs. He was grateful because he had got an unbiased opinion.



REVERTING TO MY OWN CONGESTED LOCALITY.....

Reverting to my own congested locality, having done all I can on artificial load to see that my rig is not causing trouble, and then having tried it on open aerial around 11 p.m. and again being satisfied, I contact my immediate neighbours, "Look," I'll say, "I've just been playing around with my radio and want to make dead certain that its not causing any trouble with your TV or radio. Would you mind switching on and listening for the next five minutes? Note that they are not told what is going to happen, they don't know whether it's phone or c.w., so no ideas are put into their heads. They get used to being asked occasionally and, what's more important, they get used to not hearing interference. So, when people further afield have trouble and suggest to them that I may be the cause, they are the first to defend me, asserting that I am most particular in checking all equipment with them as a precaution. In other words, the transmitting amateur should try to establish himself as the co-operative fellow who is the last one likely to cause interference.



THERE WAS A STRANGE CLICKING NOISE!

Lastly, there are genuine interference jobs, and here it is important to remember that the amateur should help, but not usurp the functions of others. As an example, I received a phone call recently from a neighbour asking me if I were having trouble with the broadcast programme that night. I told him that I had been watching TV and all that I had noticed unusual was a very faint ticking in the background, not loud enough to inter-

fere. That, he declared, could not be it, because his noise was so loud as to wipe out the local programmes, and also it sounded just like a typewriter, but had now stopped. He promised to ring me the next time he heard it, and, sure enough, at 7.30 the next night, he was on the phone. I put on an old receiver and faintly, between stations, I heard the same clicks, at about half second intervals, that I had heard the previous evening. We compared them over the phone, and they were what he was hearing, bearing absolutely no resemblance to the typewriter noise which he had suggested! I went down to his flat, and they were about 70 db louder, completely spoiling all programmes. A simple test showed that they were being caused externally, and were also causing equally bad interference with other sets on the same floor. This, I told him, was genuine interference and would have to be tackled by the Post Office, and I asked him to leave it with me for a while to think over.

Back in my own flat, I tuned in the noise on a receiver, and recorded it on tape, adding a commentary on the simple tests that I had done, and the fact that it was only severe in that particular part of the building, plus the suggestion that the half second clicking sounded like a condenser discharge. Having checked the recording to my own satisfaction, I phoned him to come to my flat where, to his astonishment, I played him the

HE WAS DELIGHTED, ESPECIALLY WHEN I ASKED HIM TO ADD HIS OWN REMARKS.



recording. He was delighted, especially when I asked him to add his own remarks on the opposite track, to which he responded courteously by saying first that I had been kind enough to give my time trying to help, and then he went on to confirm that it was the exact noise, the times that it was heard, and also his name, address and telephone number for the Post Office to contact. This took up about 30 feet of tape, which I cut off and sent to the Post Office with a covering note saying that I had been asked to help my neighbours, that it seemed to be a genuine case of interference, and that the enclosed tape would give them the exact noise that was being received. In a day or so the Post Office engineers arrived and, within 20 minutes had located the trouble, a faulty condenser in a neighbouring TV receiver! Once more enjoyable reception is possible, and I have received many telephone calls from other tenants thanking me for my efforts, to all of whom I have said "Thanks, it's been a pleasure and, if you ever have trouble again, please ring me in case I can help".

Of course it does mean a little extra bother for me. Most of the queries are trivial, but the serious one always does happen some time. Personally I do not consider it time wasted, but time well spent in fostering good neighbour relations.

Finally, it is important to co-operate and not interfere. It is not the business of the amateur to do repairs to neighbours' sets: that is a job for the local serviceman. Nor is it up to the amateur to go tracing interference: proving that it exists is one thing, tracing it is a job for the Post Office. For the amateur to go round looking for such things is likely to cause resentment, especially if in his enthusiasm he goes to the wrong

(continued on page 515)

THE MONTH

DATE TIME	FREQ.	STATION CALLED	CALLED BY	STATION HEARD OR WORKED		IF QSO RESULTED			REMARKS
				R	S	T	KC/S OR DIAL	MY SIGS. R S T	
<h1>ON THE AIR</h1>									

By S. A. HERBERT (G3ATU)*

OVER the past few weeks we have been given a convincing demonstration of one aspect of the present sun-spot situation. A superabundance of solar activity played havoc for a time with the high frequency bands, as users of ten and fifteen will know full well. However, these things are only to be expected and at least we are sure of good conditions in between storms! And that goes for the present period, for during the lulls in the solar outbursts, some excellent DX sessions have developed: on then with the month's mail.

Ten Metres

Inevitably, ten has borne the brunt of the storms and even the usual trans-atlantic barrage has been missing for days on end. However, things have been far from dull on the whole and G3AAE (Barnet) worked KR6BF (08.45), W5IDJ/KG6 (12.30), VS6DN, UA0SK (Irkutsk) on c.w. and VP5DS (Turks) on phone. G3IOR (Norwich) worked VK and ZL in the mornings and found the band open often up to 21.30. He also worked VE8OW on Ellesmere Is., which has a population of four Ws and four VEs! G5RV has been on again, this time signing G5RV/PJ2, a good signal from Curaçao, where he was using the efficient station of PJ2CA.

B.R.S.20135 (Newport, I.O.W.) logged ZL, VK, KG6AGW (13.30), VU2EJ, 2EB, KA2ZP (11.00), KZ5DG, 4S7YL, VS1, '2, '6, ZC6UNJ and SV0WE (Rhodes) on phone—all on Sundays. B.R.S.20911 (Berkhamsted) logged VP5DS and TI2RC, while B.R.S.20249 (Sutton) heard ZD2FNX on A3. B.R.S.21279 (Oldbury) logged YS2AG, VP5BH, PJ2AA and PJ2CA and A.1373 (Mill Hill) was pleased with ZD8SC, ZP5ET, CR5SP, CR9AK, '9AL and ZD4BV, all on A3. B.R.S.20106 (Petts Wood) picked up YA1AM (13.10), G3FYR/VS9, VP8CC and JAs on the key, while on A3, Norman got JZ0PC (13.55), HH2BR, '2W and VP5DS. ZL and KA were heard around 10.00 G.M.T. B.R.S.20317 (Bromley) had the finest month on the various bands since he started reading Morse back in 1955. The aerial he uses is interesting: it is a 7 Mc/s Windom running north/south fed with 300 ohm feeder in which there is a change-over switch. He finds that by reversing the input through this switch he is able to alter the directivity of the aerial, especially on the h.f. bands. His latest on phone include BV1US (10.40), ZC6UN (07.40) while new ones on c.w. were JA5AF, CX2FD, G3FYR/VS9, OA4FA, UG6KAF, UP2AS, W5DIJ/KG6 and XF1A.

Fifteen Metres

Activity continues to increase on this band, which should be the best of the lot for long distance work at this stage of the proceedings. While twenty—short skip troubles or no—remains the band for most of the rarer ones, fifteen is attracting more of the less common prefixes. Phone men in particular have little to grumble about here, though the c.w. fraternity continue to find the DX hard to dig from under the great mass of Ws

and Ks, to say nothing of the almost equally formidable WN and KN QRS Brigade.

G6GH (Boston) was among the successful ones and he worked VK9AJ (14.35), VK0AB (17.50, Davis Land) and LA1VC/G (17.25), who is in Queen Maude Land, Antarctica. Last month's reference to Masirah Is. brings confirmation from '6GH that it counts for Muscat/Oman. G3IDC/VS9 was active there for a short time and his QSL has been accepted for EDXC for that area. G3LEQ (Tunbridge Wells) found EL1P one morning for his first African, then talked to VK3JK. '3LEQ has now gone to Dorset to start his National Service and hopes to be on the air from there. G2HIO (Nottingham) QSO'd VP3HAG (20.30), KZ5FC, KA3CY (18.50), VS4JT (16.00), JZ0PC, CR7AG, ZD4CH (Ghana) and Antarctic VP8CH (Ron Evans, Halley Bay), VP8AQ (Falklands) and VP8CC (Deception Is., South Shetlands), all on phone.

G3AAE used the key to contact VK9XK, XE1PJ (13.00), YI3AA and UA0OM, then went on phone for BV1US (15.15), HS1B (16.45), and, helped by G3BID, he QSO'd VS4JT (08.00). John recently had a visit from W3ZA, en route for Saigon for a couple of years, who has a 1kW rig on its way there. He hopes to get the licensing situation put on a proper basis so that he may get on the air without delay. Up to date QTHs via G3AAE are: M.A.R.S. Station BV1US, PSD, A.P.O. 63, San Francisco, Calif., U.S.A.; HS1B, P.O. Box 1038, Bangkok; VP5BH—via W4KVX; VP5DS—via K4HOI.

DX LISTENER'S CENTURY AWARD





This is to Certify THAT

HAS SATISFIED THE COUNCIL OF THE RADIO SOCIETY OF
GREAT BRITAIN THAT HE HAS RECEIVED SIGNALS FROM
AMATEUR RADIO STATIONS IN _____ COUNTRIES.

DATE _____ PRESIDENT _____

Printed in red this new R.S.G.B. certificate will be awarded to non-transmitting amateurs who have obtained verifications from amateur stations in 100 or more countries.

*Roker House, St. George's Terrace, Roker, Sunderland.

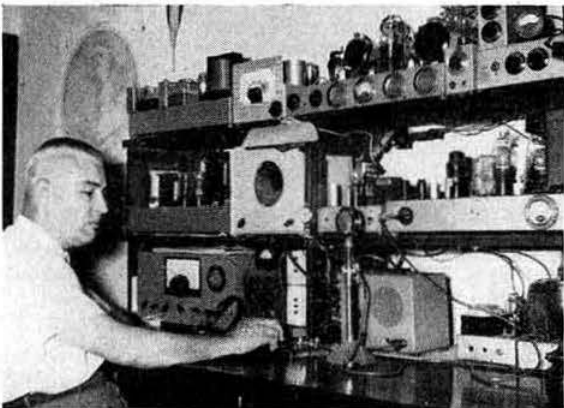
G3IOR raised new ones on A1 with 3W8AA, CR9AH, ZD2DCP, XF1A (Mexico) and VQ8CB, the last named being called by scores of Ws, despite someone on his frequency sending "Foney". On phone, G3IOR raised VQ5EK and OH0AA/0 for new ones, plus YN1HF (01.30), but he failed to rouse JZ0PC.

A.1328 (London, W.1) kept to phone and logged VP4KL, KZ5FC, VS2ER (18.45), MP4KAC and OD5CD—all new ones, while **B.R.S.20135** was listening to KH6AFS (09.40), VK9DB (14.30), HS1B, VS1, '2, '6, '4JT, VP5DS, CR9AL and VP8s 'BR, 'BT, 'BY, 'CC and 'CH. **B.R.S.20249's** happiest moments were when he heard 3W8AA twice on c.w.—and strongly. (As usual. He's strong, even on eighty!) TA3KW was also a new one, as were KH6AFS and TF2WBR on A3. **B.R.S.21279** happened upon VP4RV, VP8BS (Argentine Is.), ZD1FG, ZD6RM, VE8DG and KG1GW. **B.R.S.20317** logged AP2RH, CR9AH, DU6SV, G3FYR/VS9, KX6ZB (075, 11.15), ZL5AA (Cape Adare, '070, 11.00), VK9AJ, VP2AD (18.15) and YI3AA on c.w. and HR3HH, HS1B, VP3HAG and others on phone. **B.R.S.20106's** list includes VK9HO (Rabaul, 12.56), VK7WA and VP7NB on A3, with XF1A, 3W8AA (14.40), ZP9AY and KL7's on A1. **VS6BE** is consistently good on s.s.b. in the afternoons and **VS6CL** does well on A3.

Twenty Metres

The short skip appears to be getting worse if anything and early mornings or late nights seem to be the only periods free of the nuisance, so for much of the day the DX has to be separated from the splatter at one end of the band and the buzzes, clicks and chirps at the other. Judging by the quaint standard of behaviour now in vogue, there seems to have been a mass exodus onto the band from some of forty metres' more clueless inhabitants!

G6XL (Leeds) rose early and garnered QSOs with FW8AA (14.340), ZK1AU ('320), FO8AO ('377), KC4USV ('050) and FO8AP/MM ('333/340). The latter was probably the greatest thrill of G6XL's radio career—the raft *Tahiti-Nui*—at Lat. 33.54S, Long. 105.18W, on April 16. He had been heard weakly almost every morning from March 26, working F and FA—who seem to get him more strongly than we in the U.K.—and he was RST339 when he came straight back to '6XL for a difficult but definite QSO. FO8AM was heard to say "Look for the raft on 21140 kc/s", but unfortunately the band was dead on that occasion.



LU5DC at the controls of his station located at Buenos Aires, Argentina.



Maryann Myers (DL4PL) of Munich, is one of the most active phone operators on the DX bands. She is married to DL4GP.

G3ISV (Middlesbrough) has worked both Shackleton Base stations—VP8AO (Ralph Lenton) and '8BO (Taffy Williams)—and he took a tape recording of '8AOs phone one night. The VP8s run 300 watts to a rhombic beamed on London and are on most evenings. On Mondays, Ralph skeds Scott Base and on Thursdays he works London. His QSLs may be sent to 34 Lynwood Avenue, Luton. **G2DHV** (Lewisham) is running 75 watts on all bands to three dipoles and a 138 ft wire. Both he and G3HEV have QSLs from VK1RA (Mawson). **G3AAE** finds the YI Gang active again, so presumably they have sorted out the licensing problems. John's latest on c.w. were VP5BH, UM8KAA (16.30), LX1JW, YI2RM and UA0s 'KJB (22.45) and 'RK (23.15), both in Zone 19. **B.R.S.20135** got CR4AD, SV0WE and XE2BA (20.45) on phone, also VK3ATN at the unexpected hour of 21.07.

B.R.S.20249 heard UO5KPM and CP3CA (22.30)—new ones on c.w. and **B.R.S.20911** logged VS1GZ's A3 and A1 from VP8BW (South Orkneys) and KH6AIK/KG6 (18.50). **A.1373's** BC342 and 132 ft wire pulled in HI8BE, HZ1AB and W4DQA/VS4. (We have an idea this one may be KS4), with VP8AQ and TI9OE being called—all on A3, while s.s.b. came from BV1US, KG1FR, OA4CK and HB1FU/HE. **A.1387** (Scunthorpe) sends his first report. A 14 ft vertical wire brought him phone from VS1GR, UA9KB (15.00), KA3RB (17.45), ZC4CH, '4II and YK1AK (20.54). **B.R.S.20104** (South Harrow) used an S740 and 68 ft tilted E/W Windom to collect KC4USH (Cape Adare, '070, 12.15) and he had an airmail QSL from ZC5JM, who has left by now for VS1, leaving the Club activity in the capable hands of ZC5RF.

B.R.S.6841 (Bristol)—who is ex-D2AF—breaks the ice by reporting phones CR5SP (21.15), HZ1TA, MP4KAM (Box 146, Kuwait), OY2A (22.15), TG9MQ, TI7HM and XE3AF (05.30—QSL to Box 918, Merida, Mexico). **B.R.S.20317** found new ones on c.w. with FW8AA ('330), HS1WR ('082, 20.00) and ZC5RF ('045-16.55), plus rare ones CR10AA ('055-15.00/17.00), FB8YY (Adelie Land ('050-19.00), LA1VC/G ('065-19.50), FE8AH ('020-21.15), VK0AB, ZL5AA ('050-11.45), VP8BR (So. Georgia), ZD8JP, ZD9AE and a string of UA0s around 19/20.00! **B.R.S.20106** too found some good ones, particularly FO8AD (around '330-07.10), FW8AA (ditto), VS2DW (23.40), VK0AS (18.15), FG7XD, FL8AB, CE9AA, OYD (the French Polar Expedition) and M1H (Box 90, San Marino). These were on c.w. while, on phone, Norman overheard FB8BX (17.45) and XE2KW (05.00).

G3ATU draws attention to **VP3AD**, **YAIAM** (heard as late as 00.00), **FP8AP** (17.00), **LU9ZC** (So. Shetlands-22.00) and **FM7WR** (098-22.30) on c.w. **ZL1JX** was heard on A3 at 19.20 on 14100, but vanished under a **DM3**.

Forty Metres

Forty remains just as good as it is allowed to be and grim determination continues to bring rewards. **G80J** (Manchester) found early sessions good for QSOs with **UA0BC**, **CM8EM** and **ZAI1AA**. The **ZA** said he was in **Krag** and his name **Toni**. When asked if he was just "another of 'em," he said "No, no, twenty Gs have I worked and soon QSLs will be sent to the R.S.G.B." Perhaps! At any rate he was **T9**. **B.R.S.191** (Wickford, Essex) has been hearing **W5ZHR** on phone for a month past around 05.00 G.M.T., with the **W** at **RS58** between 7290/7296 kc/s. **W3PHL** is a good signal also and in a letter to '191, the **W5** says they are keen to QSO Gs; skeds can be arranged by writing to **W5ZHR**, 902 Sutton Drive, San Antonio, Texas. **B.R.S.20106** also heard the **W5** and has picked up **W6OUE** in addition, while on c.w., Norman mentions **W6RW**, '6MOJ, '0SOP, **KN8EEW**, **VP5BH** (07.00), **ZL1HY** and **CR6AI** (00.54). **B.R.S.20137's** c.w. list specifies **CO7HQ**, **EA6AF**, '8BK, **ZH3DL**, **UM8KAA**, '0KAD, **XF1A**, **VP2LU** and **ZS1CX**. **B.R.S.20911** heard **VEONE** on phone, but he was off Southampton at the time!

Eighty Metres

Eighty is not too popular these days, but some of the keen types still get up there. **G5MP** (Hythe) found **VP6GT** and **PJ2AN** doing a brisk trade during the final stages of the A.R.R.L. C.W. Contest, with **SV1AB** inconveniently closing down. '5MP put his W/VE score to "Eighty on eighty" in two four-hour sessions, which is considerable going. **B.R.S.20317** got **KP4ADS**, **KZ5KK**, **VP6GT** and **PJ2AV** for new ones—all on c.w. and heard **W5ZD**, while **B.R.S.20106** logged **KN2UCC**, **UA3DQ/MM** and **UA9KCC** (00.34).

GC3KPO made a short DXpedition to Alderney, most northerly of the Channel Islands, during the Easter weekend. Using a miniature battery operated "spy set" consisting of a 1 valve transmitter and 3 valve t.r.f. receiver, contacts were made on 3590 kc/s with stations in Southern England and with **GC4LI** in Jersey. A clothes line in the garden of the hotel had to be used as the radiator as it was discovered that overhead electric light cables precluded the erection of a proper aerial.

Overseas News

Cyprus: **ZC4CA** (**G3CAA**) sends news that **ZC4** will again be active during the 1957 N.F.D. The call used will be **ZC4CA/P** and they will work on 7, 14, 21 and 28.2 Mc/s (The i.f. bands will be too noisy to be of use) with seven operators eager for the fray and wishing the tented Gs a happy week-end with weather as good as it is sure to be out there! **G3III**, late of **ZC4AM**, now has his own call-sign **ZC4II** and is looking for Gs on 14 Mc/s. He admits to some "duff gen" about Top Band as he finds that his licence gives him permission to use 1.8 to 2 Mc/s with a maximum power of 150 watts!

G3KKC wrote while en route to Base J in Antarctica, where he will be active (he was expecting his call-sign when he arrived) on 14, 21 and 28 Mc/s, using 25 watts on crystal-controlled frequencies at 14.1, 21.15 and 28 Mc/s. Already active are **VP8CC**, '8CD (Port Lockroy), '8CF and '8CG, both at Hope Bay. **W6ZEN** tells **G2MI** that **FG7XE** is active on 14 Mc/s phone and that **C2AA** could be genuine, but a certain **AC4A** came in much too strongly with the **W6s** beam on Europe. (**B.R.S.20106** supplies that last nail for the coffin of this one, Norman

heard him sending ripe old crusted Morse to a G and saying, "Vrry plst to met you; yors sigs . . ." etc. Let's forget about him!)

K6IUW warns us to beware of a **KF1AA** or similar call. There is a genuine station with that call (on Fletcher's Ice Is.?) with s.s.b., a.m. etc. and this chap reads Morse. Two pirates who have been using the call—and others in **KG1**, **VE8** and **KL7**—do not read code and use U.S. military procedure. Should anyone log or work the pirates, please air-mail details to **KL7MF**. And yet another—**W6NIF** via **G6CJ** says an enterprising **Nip** has made plenty Europe QSO using call **VR2AB**. The real **VR2AB** is on 7 Mc/s phone only! Dud relays news that the former **VO6N** now signs **VO2AB**.

W3BIW (Bryn Mawr, Penna.), licensed just about one year, had a rose-tinted fifteen hours when on 15 phone she worked **TG7TU**, **ZL2ANZ**, **VQ2JC**, **V52DQ**, **DL4ULM**, **HK2GO** and **Ws** for a **W.A.S.** **Le Roy Waite** (Ballston Spa, N.Y.) covered the phone bands in March thus: 28 Mc/s—**CR4AD**, **UC2KAB**; 21 Mc/s—**K4EMH/KG6**, and s.s.b. users **HZ1AB**, **VQ4OE** and **KC4USK** (Wilkes Station, Knox Coast). On 14 Mc/s, **Le Roy** got **VR3G**, **KM6BD**, **KR6AF** and **KC4USA** (s.s.b.) on his new **SX100**, with 15 ft of wire indoors. When he really gets used to the new receiver—and it may take a month or two—he should be a happy man. **Emmet Riggle** (Ohio) was amazed at the strong phone signal from **FB8ZZ** (New Amsterdam Is.) on 21200 kc/s. **ZS7C** was equally potent on 28400 at 17.20Z.

ZS2AT (East London) confirms that **FB8CC** is in Madagascar (he is ex-**FB8XX**, what's more) but '2AT also confirms that **FB8BC** is—or will be—on from Anjou Is. in the Comoros. He remarks (and **G3ATU** confirms) that **3W8AA** requires his cards to be sent to Hop Thu 109B, Hanoi, Viet Nam, via Moscow and Peking. (If the "M & P" part is omitted, his cards are liable to go astray!)

G3AAE had a letter from **VS4JT** giving news that **VSSAT** will shortly be active, while '4JT, already well-known on 21 Mc/s, should by now have beams up for 14 and 28 Mc/s. He will be in Sarawak for several years and may eventually go on an expedition to one of the nearby islands. Norman Wilkinson ex-**MP4BBF**—may now be reached c/o Caltex Refining (India), Visakhapatnam, Andhra, India, whence he hopes to radiate as a **VU**. The last batch of **MP4** QSLs have been sent to the Bureaux, but if any have strayed, Norman still has his logs and some spare QSL cards. Ex-**VP2SE** is now in Jamaica and has the call-sign **VP5WB**. He should be on by now and looking for old friends.

VOIDX (ex-**VO3X**) is anxious to get a confirmation from **VP8AK**, for a QSO on October 11, 1949 on 14 Mc/s c.w. The operator at that time was called Jim and should this catch his eye, perhaps he would drop a line to **G3ATU** or to **G2MI**?

Fresh topicalities from **W6YY** are that **C3MH** operates on 14199 kc/s with 10 watts phone from an undisclosed QTH in South China. He says he is the only Chinese amateur on the air. QSL via **W6YY**. **ZC5DA** joins **ZC5AL** on 14 Mc/s c.w. from British North Borneo. **FB8BX/NB** is on c.w. from Nossi-Be and counts for **D.U.F.** **KG6IG** is now the only station active from the Bonin Is. There is nobody now on Iwo Jima. The S.A.R.L. is unhappy about a pirate signing **ZD9AF**. He says he is "Pete" on Tristan da Cunha, but apparently he is on a ship.

And that is all until next month, when we hope the solar outbursts will have moderated somewhat. Many thanks to everyone for keeping the news flowing so well. Happy hunting and 73 and please post your comments for the next **M.O.T.A.** to arrive by May 20.

"Captured in Tibet"

FEW more interesting books with an Amateur Radio background have been published than *Captured in Tibet*. It tells the story of Robert Ford's life, first in Chamdo and later in the hands of the Chinese Communists. To the DX fraternity the name Bob Ford will always be associated with the call-sign AC4RF.

Bob was less than a 100 miles from the eastern frontier of Tibet when the Chinese Communists invaded. He stayed at his post until the last then attempted to escape over the mountains by pony, only to be cut off and captured. He remained a prisoner of the Chinese for more than four years.

Captured in Tibet reveals the strange customs of the Tibetans and relates the author's adventures in bringing radio communication to a medieval land. It tells too the story of his weekly schedules with "Jeff" of G5JF and of the messages he sent to R.S.G.B. and A.R.R.L., pointing out that atlases were wrong in showing Chamdo as being in China instead of in Tibet—the elusive Zone 23, for W.A.Z. He also describes in vivid detail his countless interrogations at the hands of Communist officials who questioned him about his contacts with the outside world and about his chats by Amateur Radio and landline with Reg Fox, AC4YN, in Lhasa.

Published by George G. Harrap & Co. Ltd., 182 High Holborn, London, W.C.1 (18/-), *Captured in Tibet* is a Book Society Recommendation. It is fully illustrated with a number of excellent pictures including several with an Amateur Radio interest.

E.D.R. Summer Camp

FULL details of the 25th Danish Radio Amateurs' Summer Camp, which will be held in Northern Jutland from July 28 to August 3, may be obtained from OZ7NU, International Secretary, E.D.R., Box 335, Aalborg, Denmark. The programme includes talks, lectures, a direction finding contest and various excursions.

Contests Diary

1957

May 18-19	- Helvetia 22 Contest ¹
June 1-2	- National Field Day ²
June 16	- 420 Mc/s Contest ⁴
June 22-23	- First 70 Mc/s Contest ⁵
July 6-7	- 144 Mc/s Open Contest ⁶
August 18	- Second 144 Mc/s Field Day
August 25	- 1250 Mc/s Tests
September 1	- Low Power Field Day
September 7-8	- European V.H.F. Contest ³
September 7-8	- National V.H.F. Contest ³
September 8	- D/F National Final
October 5-6	- Low Power Contest
November 9-10	- Second Top Band Contest
November 16-17	- Second 70 Mc/s Contest
November 23-24	- 21-28 Mc/s Telephony Contest

¹ See page 465, R.S.G.B. Bulletin, April 1957.

² For rules, see page 230, R.S.G.B. Bulletin, November, 1956.

³ Both under Region I I.A.R.U. rules. See page 422, R.S.G.B. Bulletin, March, 1957.

⁴ For rules, see page 467, R.S.G.B. Bulletin, April, 1957.

⁵ See page 374, R.S.G.B. Bulletin, February, 1957.

⁶ For rules, see page 468, R.S.G.B. Bulletin, April, 1957.

⁷ For rules, see page 421, R.S.G.B. Bulletin, March, 1957.

National Field Day

THE Editor will be pleased to consider for publication photographs of general interest taken during N.F.D. week-end. Action pictures are especially invited.

Frequency Predictions for June, 1957

PREPARED BY J. DOUGLAS KAY (G3AAE)

With the start of the I.G.Y. imminent an extra column is now included in the predictions which gives the figures for the circuit between Rugby and Antarctica. In the column for the circuit between Rugby and Australia SP indicates the period when the short path will be open and LP the period when the long path will be open.
DX Television Predictions. During June and July, when the M.U.F.s are seasonally low, the B.B.C.'s Channel 1 transmissions should only be receivable in Accra and Capetown/Johannesburg between approximately 15.00 and 17.00 G.M.T.

BAND	NORTH AMERICA	CENTRAL AMERICA	SOUTH AMERICA	SOUTH AFRICA	NEAR EAST	MIDDLE EAST	FAR EAST	AUSTRALIA	ANT-ARCTICA
M.U.F.	27 Mc/s 2000	31 Mc/s 1930	36 Mc/s 1830	41 Mc/s 1615	33 Mc/s 0930	30 Mc/s 1000	28.5 Mc/s 1000	28.5 Mc/s 2200	32 Mc/s 1200
28 Mc/s	2000	1600—2200	1000—0000	0800—2000	0700—2000	0800—1600	0900—1100	2130—2300 LP	1100—1600
21 Mc/s	1000—0130	0800—0400	0900—0500	0700—0030	0600—0100	0630—2300	2300—2000	0800—1300 SP 2100—0000 SP 2100—0800 LP	1000—1700
14 Mc/s	ALL DAY	1700—1100	1800—1000	1400—0600	ALL DAY	1300—0500	1400—0200	1400—2300 SP 0000—0900 LP	1600—1900
7 Mc/s	0000—0900	2200—0700	0100—0700	1900—0200	1530—0600	1930—0000	1800—2100	2000 SP	2300—0700
3.5 Mc/s	0400	0200	0400	0000	2000—0100	2000	2000	2000 SP	0400

These predictions are based on information provided by the Engineer-in-Chief of the Post Office. All times are G.M.T.
It should be noted that between May and September Sporadic E propagation may result in short skip conditions on the higher frequency bands.

The Radio and Electronic Component Exhibition

FOR the first time, this year's Components Exhibition was in two parts: the larger in the customary venue, Grosvenor House, Park Lane, London, with a further selection of stands a short distance away in Park Lane House.

It is unfortunate that some of the attractive components on display are not available to the general public and so are out of the reach of the average radio amateur, but this left much not so circumscribed as the following selection will show.

New Valves

Mullard were showing a new v.h.f. double tetrode, the QQV02-6, which should be of interest to the 2 metre and 70 cm enthusiast. Mounted on a B9A base, this valve has a seated height of less than $2\frac{1}{2}$ inches and a bulb diameter just under one inch and is internally neutralised for push-pull operation. A centre tapped heater permits operation from either a 12.6 or 6.3 volt supply, current consumption being 0.4 and 0.8 amp, respectively.

Up to a frequency of 200 Mc/s the full rating of 275 volts anode and 200 volts screen and 3 watts dissipation on each anode may be employed while between 200 and 500 Mc/s the anode voltage is limited to 200 volts. Under these conditions a c.w. power output of 6 watts is obtainable with 60 per cent. efficiency with a drive of 1 mA to each grid against a bias of 25 volts. With anode and screen modulation 4.3 watts output is available up to 500 Mc/s with anode and screen voltages of 180, drive of 0.8 mA per grid, 25 volts bias and an efficiency of 60 per cent. The valve is also attractive as a frequency multiplier from 145 to 435 Mc/s where, with 180 volts on anode and screen, 0.8 mA per grid and 75 volts bias, an output of 2.3 watts is obtainable with 32 per cent. efficiency.

Although not quite a new production, the KT88 a.f. output tetrode by G.E.C. should not be overlooked by the 'phone man. For the quite modest h.t. of 625 volts and fixed bias the output is 100 watts of audio from a pair in push pull. The gm is 11 mA/V and anode dissipation 35 watts.

The "Fireball" TV Turret

A.B. Metal Products were showing a new American 13-channel TV turret known as the "Fireball" for which they have manufacturing rights in this country. Of very compact construction, this item is notable for the use of the Neutrode circuit in the r.f. amplifier.

Transistor Developments

The application of transistor amplifiers to relay operation was evident on several stands this year, an example being Magnetic Devices' Type 595 HS where a 24 volt coil with 0.4 watt loading and double pole changeover 5 amp contacts is tripped by 2 volts at 1 mA by the aid of a junction transistor which, together with a resistance or two, is accommodated inside the screen cover of the relay. On another stand was seen a sensitive polarised relay operated in this manner by a current of around 10 microamps. Magnetic Devices also showed a large variety of normal relays for both a.c. and d.c. operation with coil voltages from 6 and $1\frac{1}{2}$ respectively upwards which may be fitted with a wide range of contact arrangements including those specially designed for r.f.

BY W. H. ALLEN, M.B.E. (G2UJ)

Mercury Batteries

Mercury batteries made up from a number of sizes of cell were displayed by Mallory Batteries Ltd. These cells have an extremely long shelf life as no chemical action takes place during storage or between discharges and in addition full capacity is realized whether the battery is discharged continuously or intermittently. This coupled with a level voltage discharge characteristic and leak proof construction makes them worthy of consideration for portable or R.A.E.N. requirements.

Soldering Aluminium

A means of soldering aluminium as easily as copper or brass is claimed by Enthoven Solders for their aluminium cored solder, satisfactory results being obtainable with a normal 60 watt electric iron.

Cables and Connectors

The B.N.C. coaxial cable connectors made by Belling and Lee are designed for use with Uniradio 43 cable of 51 ohms impedance and are stated to have a negligible effect upon the s.w.r. at frequencies up to 3,000 Mc/s.

Plug and socket connectors for miniature apparatus often present a difficulty as normal components are completely out of scale. The Spear Engineering Co. showed a range of miniature insulated plugs having a pin diameter of 1 mm and a simple and positive method of securing the cable end. Insulated sockets for use with these plugs occupy a chassis space of only $\frac{1}{4}$ in. In addition this firm produces 7 and 9 pin plugs suitable for use with B7G and B9A valveholders.

Another item of test equipment which has been miniaturized is the crocodile clip. Under the name of the "Baby Alligator" clip this is made in various materials, including solid copper for r.f. applications, by the Standard Insulator Co. and measures $1\frac{1}{4}$ in. long with a jaw opening of $\frac{3}{16}$ in.

New Capacitors

Mullard are now making an improved version of the popular 30 pF concentric trimmer, well known by all v.h.f. men. This has p.t.f.e. insulation and a lead screw of finer pitch allowing more accurate adjustment.

Bypassing at v.h.f. is frequently a problem best solved by the use of stand-off or feed-through capacitors. Among those exhibited were the Theta 2000 type 1,000 pF feed-through "Ceramicon" manufactured by Erie Resistor which has an improved method of chassis mounting designed to dissipate the heat of soldering and to lessen the likelihood of damage due to thermal shock. The Dubilier CBH310 high-K ceramic type 1,500 pF condenser is supplied with three lugs for easier soldering to chassis and details are available of the bypassing efficiency at various frequencies and of optimum lead lengths when used as feed-through or stand-off.

Since the war, production in the Radio, Electronics and Telecommunications Industries has doubled every five years and now amounts, in round figures, to £300 million per annum. The output of components to keep pace with this prodigious expansion has increased by 500 per cent. in this time and is now in the region of six million items every working day. The sale of components overseas during the past ten years has amounted to £80 million with valves and tubes contributing a further £25 million, so it will be seen that the annual R.E.C.M.F. Exhibition of components is an important event for the Industry, not only in the United Kingdom but in many overseas territories as well.

First R.S.G.B. Telephony Contest Results

Outstandingly Successful World-wide Event

THE first R.S.G.B. Telephony Contest, held on November 24-25, 1956, brought more than 300 British stations on to the 21 and 28 Mc/s bands. Before calm was restored, contacts with more than 80 overseas countries had been recorded, while the leading stations were resting throats which had become hoarse from up to 300 contacts. This outstandingly successful contest—by far the most rewarding DX telephony event ever staged by the R.S.G.B. Contests Committee—was favoured by conditions that made possible many contacts on both bands with all continents. The natural closing of these bands during the night automatically limited operating hours and participation was widely reported as far more enjoyable than in the gruelling all-band affairs.

The accompanying analysis of DX contacts, based on a representative selection of logs, provides a striking comment upon modern amateur telephony operation. For further examples, if needed, G3HCU made some 22 contacts with New Zealand stations alone, while a typical extract from G3DO's log shows ZD8, KA2, ZD4, CR6, KR6 and four ZL contacts in less than one hour!

Leading Stations

The leading British entrant, D. A. G. Edwards (G3DO) of Sutton Coldfield made 269 contacts, 100 of them qualifying for the bonus points awarded for the first contact on each band with a new country (or, in some cases, new call area); 101 contacts (49 with bonus) were made on 21 Mc/s and 168 (51 with bonus) on 28 Mc/s. The runner-up, James Taylor (GM2DBX), of Methilhill, Fife, had 34 more contacts, beating the 300 mark, 150 on 21 Mc/s and 153 on 28 Mc/s, but the number qualifying for bonus points was appreciably lower (83).

The low power section received relatively little support, possibly due to the ending of the first year 25 watt

restriction, but the leading British entrant in this class—T. Higginson (GW3AHN) of Cardiff—showed what can be done on these bands with a modest 25 watts without the aid of beam aerials. With a 68ft "VS1AA" Windom, he made over 140 contacts, half of them qualifying for bonus points.

In a contest of this type, there can be no clear cut overseas winner, owing to the very different paths and seasons with which overseas stations have to contend. But two stations in particular deserve the warmest praise for contributing so many points to British stations: these are ZB1AJX and VP6WR, both of whom had more than 200 contacts. The leading station in each of the continents was: Europe—ZB1AJX; North America—VP6WR; Africa—VQ4RF; Asia—VS6CY; Oceania—VK2AKV; and South America—PY4AKT (PY2CK's log was invalid). The many European stations who took part must also be commended as they did not have the added interest of DX working. All six British prefix zones were represented, Scotland by more than 20 stations.

Equipment

Equipment in use at some of the leading stations included:

G3DO: Labgear LG300 (150 watts) transmitter modulated by 807s in Class AB2, Eddystone 888 and R.C.A. AR88 receivers, Panda "Minibeam" and vee beam (310ft legs) aerials.

GM2DBX: Panda PR-120-V (120 watts) transmitter. Radiovision "Commander" receiver. Folded dipole on 21 Mc/s. Long wire on 21 and 28 Mc/s.

G3HCU: Home-made 813 final (130 watts) transmitter modulated by TZ40s in Class B. AR88LF receiver. Two home-built semi-wide spaced Yagi beam aerials: 21 Mc/s (4 element, 45ft high); 28 Mc/s, 3 element, 40ft high;



Contest Winner

A view of the very fine station owned and operated by Doug Edwards, G3DO, of Sutton Coldfield, Warwickshire, winner of the High Power Section of the R.S.G.B. 1956 Telephony Contest. Picture shows, from right to left, Eddystone 888 receiver, RCA AR88 receiver, Labgear LG300 transmitter, speech amplifier for LG300 with BC221 frequency meter on top; direction indicator for the G4ZU Panda Minibeam is behind the LG300. In addition to the Minibeam, G3DO used a "Vee" beam, with 310 ft of wire in each leg, during the Contest. A Waltham 24-hour clock showing time in different countries is on the table. Microphones are Astatic D104 (being held by G3DO) and an Astatic DR10.

both aeriels rotatable from operating position with selsyn indicators.

G2CDI: Labgear LG300 (150 watts) transmitter. NC240D receiver with RF24 unit. Three-element beam on 21 Mc/s and two-element beam on 28 Mc/s.
ZBIAJX: Transmitter 807 final (40 watts); SX28 receiver; ground plane aeriels on both 21 and 28 Mc/s.
VP6WR: Transmitter 75 watts input, anode and screen modulated. SX28 receiver. Three-element wide-spaced beam on 21 Mc/s; four-element, close-spaced beam on 28 Mc/s.

Among the other aeriels were a 550ft end fed long wire (G3HFD); vee beam with 418ft legs, 75ft high (GM3HX); vee beams also found favour with VQ4RF, G6UT, ZD8SC, G3CQE; three 21 Mc/s Sterba curtains, a 28 Mc/s Sterba curtain and a three-element rotary (G2QT); 28 Mc/s cubical quad, 40ft high (G6XL). At the other extreme, the first five contacts made by G3COJ with a half-wave dipole were with KA, ZD4, VS6 and two ZLs.

What You Thought About It

Comments were almost universally in favour of the contest. The only real grouse was that, in spite of the fact that this event received more publicity than any other R.S.G.B. contest in recent years, so many stations were apparently unaware of it until they came on to the band. But overseas stations were heard describing the

rules to British stations which only goes to show that normal standards of publicity can never hope to reach all amateurs!

Other comments included:

"For the first contest of its kind, I think it was a great success. . . . Hard bitten Brass Pounder that I am, must confess to enjoying it"—G2DC. "Only operated for 12 hours but had a thoroughly enjoyable time"—G2CBA. "Must be many like me who normally hear the DX working everyone else and then going QRT to whom this contest must have given a very pleasant weekend"—GW2DHM. "Had a wonderful time operating mobile in the contest"—W1EXZ. "Obviously a contest for the 'beam boys' but nevertheless it ought to have brought out the 'lesser lights' in their thousands . . . to hear ZD4 explaining the rules to a G just about takes the biscuit"—G3EBH. "Most enjoyable and seemed to lack the frenzy and bad operating of others. Looking forward to next year"—G3JZK. "Congratulations for this new contest"—EA3GI. "Many thanks for nice contest"—F8OX. "Excellent contest but had to close down due to severe local TVI"—DLAFL. "American stations did not seem interested . . . otherwise enjoyable."—G3HTE. "Two sets of rules published here and they differed on bonus scoring"—W8NWO. "Contest was very fine business . . . enjoyed myself immensely although 21 Mc/s conditions not so good here . . . Had to QRT several times for lightning (you are really amongst it at 3,500ft

R.S.G.B. Telephony Contest 1956—Results

Call-sign	Score	PLACINGS			Call-sign	Score	PLACINGS		
		High Power section	Low Power section	Overseas stations			High Power Section	Low Power section	Overseas stations
G3DO	3345	1			EA4FU*	890			20
GM2DBX	3175	2			IICCO	890			22
G3HCU	3160	3			F8XP*	815			
G2CDI	3125	4			G2AJB	805	24		
G4ZU	2890	5			EA3GI	805			23
G3CQE	2475	6			OZ4IM*	770			24
ZBIAJX*	2470			1	OH3NY	740			25
G2QT	2300	7			VK2AKV*	725			26
GM3HX	2295	8			EA2CR	715			27
GM3KJF	2185	9			EA2EL	685			28
VP6WR*	2155			2	F8OX	675			29
G6XL	2155	10			LA5HE	660			30
GW3AHN	2110		1		DL4PL	650			31
G3KFT	2075	11			I1ZVY	645			32
VQ4RF*	1895			3	TC9AD*	635			33
ZD8SC*	1790			4	LA2AD	625			34
OE1FF*	1770			5	PY2CK	625			**
OH5QY*	1730			6	G3DVQ	625	25		
ZD6RM*	1505			7	SM5BAW	620			**
G2YZ	1485	12			LA4R	600			35
GM3WO	1405	13			VE2KG*	580			36
G13AXI	1385	14			VE2APH*	580			
G4JB	1385	**			GW2DHM	565	26		
FA3JY*	1360			8	ZL3BG*	560			38
ZD4BR*	1340			9	DL1YA	545			39
W1FZ*	1330			10	VE2CB	545			41
G3HFD	1320	15			OH2LP	510			42
CT1PK*	1320			11	OH3UI	505			43
I1AIM*	1320			13	ZSSOA*	500			44
LA3OD*	1305				EA7CQ	480			45
GM3EOJ	1290	16			PY4AKT*	445			46
G3HTE	1190	17			KL7RZ*	425			47
W8NWO*	1180			14	LA6GF	410			48
G2DC	1160		2		CT1ST	405			50
G3HFZ	1110	18			JA1BFJ*	405			51
G2CBA	1095	19			ZP5CF*	365			52
EA8BF*	1095			15	W1EXZ/VE2	300			53
I1ZCT	1095				W1WF	275			54
G6UT	1085	20			DL4FL	250			55
G3EBH	1080	21			HB9DB*	225			56
G3COJ	1070	22			CT1IQ	210			57
G3JZK	1005	23			JA1QI	200			**
VS6CY*	935			17	DL9PJ	200			58
DL9MZ*	905			18	CO2HB*	135			
W8AJW	895			19	F9DW	75			

* Overseas certificate award.

** Denotes invalid entry—unsigned and without declaration.

a.s.l.)—ZD6RM. "Very enjoyable . . . certainly hope it will be an annual event and that more British stations will participate"—WIFZ. "The idea for this phone contest was splendid . . . unfortunately advance information here almost nil"—OEIFF. "Congratulations on making 28 Mc/s sound like 7 Mc/s. Have never heard so much activity 28.0-28.5 Mc/s . . . plenty of DX for everyone"—G4AJ. "Enjoyed the short time I was on"—GM3UU. "Conditions between G and VQ4 were terrible . . . outstanding signal was G3HCU"—VQ4KPB. "Conditions on the first day were excellent with both bands open for world-wide reception . . . some stations did not repeat report received thereby preventing me from completing the log"—B.R.S.20249. "Sorry could not partake seriously . . . hope to continue to see lots of you on 15 metres"—ZL3RZ. "At end of contest found gale had twisted 21 Mc/s beam round 180°"—G6XL. "Quite well supported . . . scoring system simplicity itself and fair to all . . . My opinion is that this will be one of the most popular DX events in the Contests Calendar"—GW3AHN.

Awards

Whitworth Trophy—Leading British Isles station (High Power section), and highest-scoring station in the contest—D. A. G. Edwards, G3DO.
Metcalf Trophy—Leading British Isles station (Low Power section)—T. Higginson, GW3AHN.

DX CONTACTS FROM GREAT BRITAIN

NOVEMBER 24, 1956	
07.00	(21) ZD4, ZS; (28) VQ4.
08.00	(21) ZD4, ZL, JA; (28) ZS, ZL.
09.00	(21) ZD4, ZL, VK1; (28) ZS, ZD4, ZL, VK, VS6, JA, PY.
10.00	(21) VK, VP6; (28) VK, ZL, KR6, CR9, VS6, MP4.
11.00	(21) VK, VP6, VP4; (28) VK, VK1, ZL, VS1, 2, VQ4, ZD6, CR9, VS6, MP4, PY, VE1, 2.
12.00	(21) VK1, VK9, VK, KR6, W1; (28) UA9, CR9, VS6, VK, VP6, ZD6, W1, 2, 4, VE3.
13.00	(21) VS1, 2, 6, KR6, VK, W1, 2, 3, 4, 8, VE1, 2, 3; (28) ZD6, 8, ZE, VP6, W1, 2, 4, VE3.
14.00	(21) PY, VP6, W1, 2, 3, 4, 5, 8, 0; (28) VS6, ZD4, 6, 8, VQ4, ZE, PY, LU, VP6, CO, W1, 2, 3, 4, 5, 8, 9, 0, VE1, 2, 3.
15.00	(21) VK, VQ4, VP6, W1, 2, 3, 4; (28) VQ2, 4, ZD6, 8, ZS, ZP, VP6, W1, 2, 3, 4, 5, 8, 9, 0, VE1, 2.
16.00	(21) ZS, ZD6, VP6, W1, 2, 4, 7, 8, 9, 0, VO, VE3; (28) VQ2, ZE, ZD6, 8, LU, CO, W1, 2, 3, 4, 8, 9, 0, VE2, 3.
17.00	(21) 457, MP4, CO, VP6, W1, 2, 3, 4, 7, 8, 9, 0, VE3, 5, 7, VO; (28) CO, VP6, 7, W1, 2, 3, 4, 6, 9, 0, VE2, VO.
18.00	(21) 457, ZS, ZS3, ZD6, 8, VP6, 7, W1, 2, 3, 4, 7, 8, 9, 0; (28) LU, HK, VP6, W1, 2, 3, 5, 6, 8, 9, 0, VE2.
19.00	(21) ZS, ZD8, ZP, PY, HC, CX, LU, CE, VP6, W4; (28) LU.
20.00	(21) VP6, 8, PY, ZP, CE.
21.00	(21) PY.
NOVEMBER 25, 1956	
07.00	(21) MP4, EL.
08.00	(21) ZL, CR5.
09.00	(21) ZL, KL7, ZD4, VQ4; (28) ZD4, 8, ZE, ZS.
10.00	(21) ZL, KL7, VP6; (28) VS2, VK, ZL, ZD4, 6, VQ4, ZE, ET, PY.
11.00	(21) VK, VK1, VP6, KL7, VE8; (28) VS6, CR9, VK, ZS, ZD3, 4, PY, W1, VO, VE1.
12.00	(21) ZD6, VP5, 6, W1, 2, 4, VE3; (28) CR9, VK, PY, VP6, W1, 2, VE1.
13.00	(21) VK, W1, 2, 3, 4, 5, 8; (28) ZL, PY, VP6, W1, 2, 3, 4, 5, 8, VE1, 2.
14.00	(21) VS4, 6, VK, CO; (28) VQ4, CX, VP6, 7, W1, 2, 3, 4, 8, VE2, 3.
15.00	(21) MP4, ZS, VQ4, W1, 2, 5, VE2; (28) ZD6, PY, LU, CX, TG9, KP4, VP6, W1, 2, 3, 4, 8, 9, 0, VE1, 3.
16.00	(21) YV, VP6, W1, 2, 9; (28) ZS, ZE, OQS, ZP, TG, CO, VP6, W1, 2, 5, 7, 8, VE2, 3.
17.00	(21) YN, W1, 2, 4, 8, 0, VE2, 5; (28) CR7, LU, PJ, TG, CO, VP6, 9, W1, 3, 4, 5, 6, 8, 9, 0, VE1, 2, 3, 4, 5, 6, 7.
18.00	(21) ZS, PY, VP6, W1, 2, 4, 8, VE1; (28) OQS, HC, TG, VP6, 9, W1, 2, 3, 4, 5, 8, 9, 0, VE2, 3, 5.
19.00	(21) ZS, VQ4, 5, PY, VP5, 6, VE1, 3; (28) ZS, PY, VP6, W1.

(A useful guide to future as well as past conditions, based on a selection of contest logs. Times are shown to the nearest hour, e.g. 08.40 would be shown as 09.00.)



The leading station in the low power section, GW3AHN of Cardiff. In this picture, the Eddystone 5640 receiver is at the left, with the v.f.o., n.b.f.m. and speech clipper standing on top. To the right is the exciter unit using a Labgear multiplier with the a.t.u. above, and the band switched 807 p.a. standing on a TUS type v.f.o. not now in use. The rack on the extreme right contains (from top to bottom) an experimental p.a., speech amplifier and modulator and the p.a. power supply giving 400 volts at 150mA and 500 volts at 200mA.

Certificates

Leading GM station, High Power section:—

J. Taylor, GM2DBX.

Leading GI station, High Power section:—

R. J. Boal, G13AXI.

Leading GW station, High Power section:—

W. D. Andrews, GW2DHM.

Leading G station, Low Power section:—

J. Drudge-Coates, G2DC.

Runner-up G zone, High Power section:—

A. E. White, G3HCU.

Overseas certificate winners are indicated in the table of results.

Check Logs

Check logs are gratefully acknowledged from: G3HCL, 3IOR, 3KYD, 4AJ, GM3UU, B.R.S.20249, B.R.S.21008, CN2BN, OK1KKA, MP4BBF, VQ4KPB and ZL3RZ.

R.S.G.B. News Bulletin Service

GB2RS	3600 kc/s
10.00 B.S.T.	Sundays 12.00 B.S.T.

Fostering Good Neighbour Relations over BCI and TVI

(Continued from page 507)

people and blames them! That only makes it far more difficulty for the Post Office engineers when they are brought in to the case. And lastly, remember your own responsibility so that if you do have to contact the Post Office, you give them an accurate report. If it's a genuine wipe-out interference, making reception from the local broadcasting station absolutely impossible, and it is affecting a number of sets, then you are right to associate yourself with it. On the other hand, if only one TV set is troubled, and that is the only one without a proper aerial, then it's a job for the owner to see to first with a proper aerial and you'll be better off in the long run by telling him so frankly, rather than try to curry favour by deluding both him and the Post Office to the annoyance of both and the eventual discredit of yourself.

The R.S.G.B. Telephony Contest, 1957

United Kingdom versus The Rest on 21 and 28 Mc/s

RULES for the 1957 21 and 28 Mc/s Telephony Contest are practically the same as last year, the only change being the omission of the Low Power Section and the consequent amendments to rules 2 and 12. Once again, the Contests Committee invites all radio amateurs taking part to submit entries in the form shown below.

The Metcalfe Trophy will be awarded to the non-licensed British Isles member submitting the best check log, in the opinion of the Committee.

Rules

1. The contest is open to licensed amateurs in any part of the world.
2. Maximum licensed power may be used.
3. The contest will start at 07.00 G.M.T. on Saturday November 23, and end at 19.00 G.M.T. on Sunday, November 24, 1957.
4. Any type of telephony transmission for which the station is licensed may be used, e.g., AM, NBFM, SSB, etc.
5. Only the entrant will be permitted to operate the station for the duration of the contest.
6. Entries must be set out as shown in the example below, using one side of the paper only. Entries must be postmarked not later than December 9, 1957, and must be addressed to R.S.G.B. Contests Committee, New Ruskin House, 28/30 Little Russell Street, London, W.C.1. The closing date for acceptance of entries is January 31, 1958.
7. Entrants must operate within the terms of their licences.
8. Only one contact per band with each station will count for points, but duplicate contacts should be logged. Cross-band contacts are not allowed.
9. Overseas stations may only claim points for contacts with British Isles stations (G, GC, GD, GI, GM, GW). British Isles stations may not work each other for points.
10. For each completed contact British Isles stations will score 5 points. In addition a bonus of 20 points may be claimed for the first contact with each new country on each band. For the purpose of this rule the official countries list will apply, with the exception that VE, VK, W, ZS and ZL call areas will each count as a separate country. Overseas stations will score 5 points for each completed contact with a British Isles station. In addition a bonus of 50 points may be claimed for the first contact with each British Isles country-numeral prefix, e.g., G2—, G3—, G5—, GW2—, GM3—, G15—, etc.
11. Serial numbers must be exchanged and acknowledged before points may be claimed. The serial number of 5 figures consists of the RS report plus 3 figures which may start with any number

between 001 and 100 for the first contact and will increase by one for each successive contact, e.g., 59087 for the first and 58088 for the second contact, etc.

12. The Whitworth Trophy will be awarded to the leading British Isles station and the Metcalfe Trophy to the non-licensed British Isles member submitting the best check log in the opinion of the Contests Committee. In addition certificates will be awarded to the leading station in each section in each of the other five British Isles country-prefix zones, and also to the runner-up in the Trophy winner's zone. Certificates will also be awarded to the leading station in each overseas country, VE, VK, W, ZL and ZS call areas counting separately as in rule 10.

R.S.G.B. 21-28 Mc/s TELEPHONY CONTEST, NOVEMBER 23-24, 1957

Name Claimed score.....
Address Call-sign.....
Transmitter Input watts
Modulation system(s) used..... Receiver.....
Aerial(s).....

Date	Band Mc/s	Time GMT	Call-sign of station worked	My report on his signals	His report on my signals	Points claimed	Bonus Points	Leave blank
24	21	0706	G3XXX	57001	57003	5	50	
24	21	0714	G3ZZZ	56002	55006	5	—	
24	21	0750	GM3YYY	55003	57013	5	50	
24	28	0758	G3ZZZ	54004	55015	5	50	
Total (Points Claimed + Bonus Points)						20 + 150 =	170	

Declaration: I hereby certify that I have operated within the terms of my licence and in accordance with the rules and spirit of the contest. I agree that the decision of the Council of the R.S.G.B. shall be final in all cases of dispute. I certify that the input power to the final stage of the transmitter was.....watts.

Date..... Signed.....
CHECK LOGS FROM NON-COMPETING STATIONS WILL BE WELCOMED

Slow Morse Practice Transmissions

B.S.T.	Call	kc/s	Town
Sundays			
09.00 ...	G3GYV ...	1900 ...	Hartford, near Northwich
09.30 ...	G3BKE ...	1900 ...	Newcastle-on-Tyne
10.15 ...	G3FBA ...	1910 ...	Bath
10.30† ...	G3DGN ...	1930 ...	North London
11.00 ...	G2FXA ...	1900 ...	Stockton-on-Tees
12.00 ...	G3PLP ...	1850 ...	Cheltenham
12.00 ...	G3KAN ...	1850 ...	Northampton
12.00 ...	G1SUR ...	1860 ...	Belfast
21.00 ...	G2FIX ...	1812 ...	Nr. Salisbury
22.00 ...	G3ARM ...	1919 ...	Guildford
Mondays			
18.30 ...	G3NC ...	1825 ...	Swindon
Tuesdays			
18.30 ...	G2FXA ...	1900 ...	Stockton-on-Tees
20.30 ...	G3GDZ ...	1905 ...	Kingsbury, N.W.9
21.00 ...	G3EFA ...	1855 ...	Southport
21.45† ...	G3ETP ...	1875 ...	Lowestoft
22.30† ...	G3JMX ...	1860 ...	Norwood
	G3IIR ...	1915 ...	
	G3GQK ...		

B.S.T.	Call	kc/s	Town
Wednesdays			
18.30 ...	G3GCV ...	1830 ...	R.A.F., Dishforth
19.00 ...	G3HUB/A ...	1902 ...	Chelmsford
21.00 ...	G3HWI ...	1987 ...	Blackburn, Lancs
Thursdays			
18.30 ...	G3NC ...	1825 ...	Swindon
20.00-† ...	G2ABR ...	1919 ...	Hull, Yorks
21.00 ...	G3FCY ...		
	G3GWT ...		
	G3KTO ...		
20.30 ...	G3JQM ...	1878 ...	Barwick, Yeovil
Fridays			
20.00† ...	G2FNI ...	1875 ...	Wirral
	G3EGX ...		
	G3ERB ...		
20.30 ...	G3ICX ...	1915 ...	Sutton Coldfield
	G3KLZ ...	1860 ...	Bradford
21.30† ...	G3INW (or G3KSS) ...		Bradford
	G3KEP ...		Bingley
22.00 ...	G3KYU ...	1859 ...	Bournemouth
Saturdays			
13.00 ...	G2FXA ...	1900 ...	Stockton-on-Tees
21.00 ...	G3HWI ...	1987 ...	Blackburn, Lancs
23.00 ...	GM3HBY ...	1900 ...	Glasgow

† Alternately.

First Top Band Contest 1957

THE First Top Band Contest of 1957, run as a "short" contest of 5 hours duration, brought a marked increase in entries compared with the Short Sections of the first 1956 and second 1955 events. There were 89 logs, an increase of 48 and 38 over the entries received for the above-mentioned earlier contests. However, the total could have been much larger if stations, known to have been active, had taken the trouble to send in entries. Over 250 stations appear in competitors logs; from examination of the entries it was noticed that the serial numbers of several stations, who did not send in logs, either as entries or check logs, indicated that they had had over 50 contacts during the contest. There were no entries from GC, GD, GI or GM stations and only one from a GW station. The Contests Committee are grateful to the overseas stations for sending in check logs, in particular to OKIKKR who had 102 contacts with stations in the British Isles.

Contestants were rather more free with their comments than usual and nearly all were in favour of the contest as regards its duration and time of start and finish. Half a dozen thought it should go on for an hour or two longer and three wanted it to be of shorter duration. There were several comments on the poor quality of the notes heard yet there were only fifteen T8 and five T7 reports in the total of over 3,000 contacts in the entries and check logs submitted. Several stations remarked on the bad use of "BK". Those that commented on conditions reported that they improved during the latter part of the contest.

The Contests Committee have some comments to record on the subject of the logs entered. The majority of entries were satisfactory with a few outstandingly good. There were some, however, that left a certain amount to be desired. Those written in pencil, on both sides of odd sizes of paper, those that have many entries squeezed into a small space and those that have the "sent" and "received" report columns reversed make the task of checking much longer. If contestants would write clearly in ink or type their logs on one side of quarto or foolscap paper and differentiate between the letters "U" and "V" and also between "H" and "M" judging would be much easier. Finally, the Contests Committee were very interested in the reports of signals received by one station. They were all 579 except one which was 479.

Thanks for their work and good wishes to the Contests Committee expressed by two contestants are gratefully acknowledged.

The Somerset Trophy has been won by I. T. Cashmore (G3BMY) of Blackheath, near Birmingham, with a total of 124 points from 115 contacts. His equipment consisted of a four-stage transmitter with an 807 p.a., CR100 receiver and an end-fed half-wave aerial. Second place went to W. R. Steverson (G3JEQ) of Great Bookham, Surrey, with 119 points from 113 contacts, who used a G5RV (single 807) transmitter, an AR88 plus Q5'er as a receiver with half-wave and quarter-wave end-fed aerials. H. J. M. Box (G6BQ) of Gravesend, Kent, claimed third place with a score of 108 points from 101 contacts. He used a three-stage transmitter ending with a 6L6, a pre-selector and 11 valve superhet (both home made) with a converted BC453 Q5'er as a receiver and 180 ft plus 50 ft series-tuned "hair-pin" aerial.

The Maitland Trophy, awarded to the Scottish Station with the highest aggregate number of points in this contest combined with the second 1956 Contest, has been won by E. G. Ingram (GM6IZ) of Aberdeen with a score of 68 points gained in the second 1956 Contest.

Result of First Top Band Contest 1957

Posn.	Call Sign	Points	Posn.	Call Sign	Points
1	G3BMY	124	43	G3KPI	54
2	G3JEQ	119		G4CM	54
3	G6BQ	108		G2KK	53
4	G3FUR	107	45	G3AKY	53
	G3HVX*	105		G3IUL	53
5	G5JU	103		G8IM	53
6	G6VC	102	49	G2JB	52
7	G3ERN	99	50	G3LHJ	49
	G3GZB	99	51	G2HCZ	48
	G2JF	96	52	G3FVW	47
9	G8NF	96		G2XP	46
11	G3KKZ	93		G3DDM	46
12	G2HPF	91	53	G3EUE	46
13	G3HXI	89		G3GOX	46
14	G3CHN	88		G3HIW	46
15	G5LR	87	58	G3KOR	44
16	G4DC	86	59	G2HQR	43
17	G3ELZ	77	60	G3KAD	41
18	G5MP	76		G6NM	41
	G3COJ	74	62	G2ZR	40
19	G3GIO	74	63	G3KYU	37
	G3IIS	74		G3GDW	35
22	G5MR	71	64	G8BN	35
23	G3IRL	69	66	G3JXI	34
	G2ZZ	67	67	G3GFS	32
24	G4XC	67		G2AFV	31
	G3IIE	66	68	G3KMT	31
26	G3IXX	66		G3KWH	31
	G8ON	66		G2XG†	30
29	G3IAF	65	71	G3JDO/A	30
30	G3ZY	64		G8KU	30
31	G3CWW	63	73	G2YV	27
32	G3LBK/A	62	74	G3GRA	25
	G2DC*	62		G3LFU†	23
	G2FHF	61	75	G3LNO	22
33	G3HTI	61	76	G3GLV	21
	G3IYT	59		G6QM	21
35	G3JNJ	59	78	G3GWG	20
37	GW3LEW	58	79	G3LMT	18
	G3IPL	57		G5KT/A	18
38	G3LCH	57		G3HDG	15
	G3CO	55	81	G8DA	15
40	G3HLF	55	83	G6OO	12
	G3HLW	55	84	G3HMY	9
			85	G2CZU	7

* Invalid—Declaration not signed. † Invalid—No declaration.

Check Logs

Check logs are gratefully acknowledged from DL2ZO, G3RD, G3DXJ, G3FBA, G3ILC, G3IYQ, G3JII, G4LX, G5GQ, OK1YG, OK1AEH, OK1KKR, OK2KBE, ZBIHKO.

National Field Day, 1957

THE Official List of Stations taking part in National Field Day on June 1-2 will be sent to all T.R.s and A.R.s during May. Any member who wishes to obtain a copy may do so by sending a stamped addressed envelope to Headquarters.

CH. Tech. Tennant (VS1GV), No. 2 Sgts. Mess, R.A.F. Seletar, Singapore 28 who is organizing a number of portable stations to take part in the R.S.G.B. National Field Day, expresses his thanks to the Contest Committee and the Council for including the 21 and 28 Mc/s bands this year for the first time. VS1GV anticipates that at least three portable stations will be operating from R.A.F. Seletar but others may come in at the last minute.

THE Mashonaland Branch of the Radio Society of Southern Rhodesia are to operate a portable station (callsign ZE1JSY/P) during N.F.D. weekend (June 1-2) in Robert McIlwaine National Park about 25 miles from Salisbury. The station will be on the look-out for United Kingdom N.F.D. stations.

Council Proceedings

Résumé of the Minutes of the Proceedings at a Meeting of the Council of the Radio Society of Great Britain, held at New Ruskin House, Little Russell Street, London, W.C.1, on Monday, March 18th, 1957, at 6 p.m.

Present: The President (Mr. D. A. Findlay in the Chair), Messrs. W. H. Allen, H. A. Bartlett, C. H. L. Edwards, K. E. S. Ellis, F. Hicks-Arnold, J. H. Hum, R. G. Lane, W. H. Matthews, A. O. Milne, W. A. Scarr, John Clarricoats (General Secretary) and John A. Rouse (Deputy General Secretary).

Apologies for Absence were submitted on behalf of Messrs. R. H. Hammans, W.R.Metcalf, L. E. Newnham and J. Taylor. **Absent:** Mr. H. W. Mitchell.

Cash Account

Resolved to receive and adopt the Cash Account for February, 1957, as prepared and submitted by the General Secretary.

Reports of Committees

Technical

Resolved to accept a Recommendation of the Committee in respect to the purchase of a tape recorder, at a cost not exceeding £50, for use in connection with the Society's Recorded Tape Lecture Library.

Finance and Staff

Resolved (a) to accept a Recommendation of the Committee to confirm Mr. Rouse's appointment in the office of Deputy General Secretary and to enter into some form of pension scheme with him; (b) to accept a Recommendation of the Committee to determine the present BULLETIN printing contract with Haycock Press Ltd. and to place a new contract with Loxley Bros. Ltd. (The new contract will date from July, 1957—Editor); (c) to accept a Recommendation of the Committee to increase the annual subscription of Home Corporate members to £1.10.0 as from July 1, 1957.

Handbook Sub-Committee

Resolved to accept a Recommendation of the Sub-Committee to place the contract for printing the *Amateur Radio Handbook* with Loxley Bros. Ltd., to use Cotinex paper for the text pages, and a varnished cover.

It was agreed to discuss with Loxley Bros. Ltd. the question of binding the *Handbook* in a stiff board cover.

V.H.F. Committee

Resolved to accept Recommendations of the Committee in respect to (a) the appointment of I.G.Y. co-ordinators; (b) the setting up of an automatic transmitter under the call GB3IGY; (c) giving publicity in the R.S.G.B. BULLETIN to I.G.Y. Progress Reports.

R.A.E.N. Map

A letter was submitted from the Chairman of the R.A.E.N. Committee in which he asked for a map illustrating an East Coast Flood Warning System to be reproduced in the R.S.G.B. BULLETIN.

Mr. Hicks-Arnold offered to have made a lithographed plate of the map and to supply the R.A.E.N. Committee with a quantity of lithographic prints.

Resolved to accept with thanks the offer made by Mr. Hicks-Arnold.

Report of the General Secretary

Membership

(a) **Resolved** (i) to elect 90 Corporate Members and

13 Associates, (ii) to grant Corporate Membership to 3 Associates who had applied for transfer.

(b) The Secretary reported that of the 716 members whose subscription became due on December 1, 1956, 84 became three months overdue on February 28, 1957. Of this number 19 were London, 37 were Country and 18 were Overseas Corporate Members and 7 were Associates. Of those overdue 8 London, 22 Country, and 18 Overseas Members held an Amateur (Sound) Licence.

(c) The Secretary reported that of the 84 members referred to in (b) above, 12 had written to resign. Of this number 2 had given no reason for resigning, 1 had resigned for financial reasons, 7 had lost interest in Amateur Radio, and 2 had resigned for personal reasons.

Applications for Affiliation

Resolved to grant affiliation to: Flintshire Radio Society and Scunthorpe Amateur Radio Society.

O.R.Ms.

Resolved (a) to authorize the Region 10 Representative to hold an O.R.M. in Cardiff on Saturday, September 21, 1957. (b) to authorize the Region 11 Representative to hold an O.R.M. in Prestatyn on Sunday, September 29, 1957.

National Convention

The Region 5 Representative reported no local support for the suggestion that a National Convention be held in Southend-on-Sea during 1957.

Replies had not yet come to hand from the other three Regional Representatives who were written to after the January meeting of the Council.

Radio Hobbies Exhibition

Mr. Thorogood reported that he had not yet been able to settle a date for the projected Radio Hobbies Exhibition. He indicated that because the Seymour Hall has many regular bookings it may become necessary to hold the Exhibition in November instead of in October, 1957, as originally planned.

Expedition to Iceland

In connection with the International Geophysical Year, Mr. Scarr wrote to suggest that the Society should organise an expedition to Iceland to study phenomena relating to v.h.f. propagation under the special conditions associated with auroral manifestations.

Resolved to send copies of the letter to Dr. Smith-Rose and Dr. Gee and to ask them for their comments on the proposals contained therein.

The President thanked Mr. Scarr for his foresight in putting forward the proposals contained in his letter.

Novice and Technician Licences

The Council gave long and careful consideration to a suggestion that the Society should ask the Post Office to consider issuing a licence similar to the Novice or Technician Licence offered by the United States Federal Communications Commission.

Resolved to take no action on the suggestion.

Services' Liaison

The Council took note of suggestions made by Major Drudge-Coates designed to increase support for Society

Contests and interest in Society affairs on the part of Services personnel stationed abroad.

It was agreed to bring the suggestions to the notice of the Contests Committee.

Amateur Radio Call Book

The Council received a report from the *Call Book* Editor (Mr. W. J. H. Kempton).

Resolved to accept the estimate of Bentley & Co. Ltd. for printing 5,000 copies, 64 pages, of a new edition of the *Amateur Radio Call Book*.

Resignation of Mr. R. G. Lane

Mr. Lane informed the Council that he would be leaving for the United States on April 11, 1957, and that his letter of resignation would be sent to the President prior to that date.

Resolved to place on record the thanks of the Council to Mr. Lane for his past services to the Society.

Staff

The Secretary reported that twelve employment bureaux had been advised that vacancies exist for a junior clerk and for a qualified shorthand-typist but to date no applications for employment had been received.

Obsolete Technical Publications

It was reported that Mr. H. H. Garner had offered to store obsolete Society technical publications free of charge.

I.A.R.U. Region I News

The Secretary tabled a copy of the latest issue of I.A.R.U. Region I News.

R.S.G.B. Certificates and Awards

The Secretary submitted a letter from the President of the Netherlands National Society (V.E.R.O.N.) in which he asked the Council to consider issuing its operating certificates and awards free of charge to non-members on a basis of reciprocity with other Societies in Region I.

Resolved to instruct the Secretary to inform the Hon. Secretary, Region I Division, that the R.S.G.B. is not prepared to issue its operating certificates and awards free of charge to non-members on a basis of reciprocity with other Societies in Region I.

The meeting terminated at 8.50 p.m.

Propagation Reports

AS part of its English language programme "Panorama U.S.A." the Voice of America broadcasts an up-to-the-minute short wave propagation report every week-day at 18.05 G.M.T. on the following frequencies:—U.S. transmitters: 15270, 17795, 17830, 21540 and 21650 kc/s; relay transmitters: Munich 7250 kc/s, Tangier 9505 and 15130 kc/s. The forecast is repeated at 21.00 G.M.T. by Tangier on 9505 kc/s.

Blind Amateur seeks Rotary Contacts

BOB Posselt (ZS2FA), who is blind, wishes to contact blind amateurs in the United Kingdom, particularly those interested in Rotary. Letters can be sent via G2MI.

"Radio Paris"

MEMBERS who have complained to Headquarters about the activities of the French broadcasting station "Radio Paris" which has been operating on 7050 kc/s, will be glad to hear that the Post Office has taken up the matter with the French authorities. It is hoped that the interference will cease as a result of the official approach.

Society News

Resignation of Mr. R. G. Lane (G2BYA) as Zone D Representative

THE Council has accepted with regret the resignation of Mr. R. G. Lane (G2BYA) from the office of Zone D Representative. Mr. Lane left England on April 11, 1957, to take up an appointment with the Boeing Company in Seattle, Washington.

Consequent upon Mr. Lane's resignation a casual vacancy now exists on the Governing Body of the Society.

* * *

Not later than June 24 next any 10 Corporate Members resident in Zone D (Regions 6 and 9) may nominate any other duly qualified Corporate Member to serve as Zone D Representative on the Council, by delivering their nomination in writing in a single document to the Secretary, together with the written consent of such nominee to accept office, if elected, but each such nominator shall be debarred from nominating any other person for this election.

Candidates for Zonal Representative must be resident within the Zone for which they are nominated and the nominators must be resident in that Zone.

In the event of more than one candidate being nominated, a Ballot will be conducted in accordance with the Articles of Association.

R.A.E.N. Rally 1956

THE Council has accepted a recommendation of the R.A.E.N. Committee that the R.A.E.N. Rally Trophies shall be awarded annually to the leading registered R.A.E.N. member in each section of the R.A.E.N. Rally whether or not such members are members of R.S.G.B.

By virtue of the foregoing recommendation the Council has awarded the trophies for 1956 to the following:—

Operator of the Leading Fixed Station: Mr. J. Browne (G4XC).

Operator of the Leading Outstation: Mr. G. Lancefield (G3DWQ/P).

Operator of the Leading Receiving Station: Mrs. M. Jackson.

R.S.G.B. Bulletin—back issues for disposal

THE Society has for disposal, free of charge to members, certain back issues of the R.S.G.B. BULLETIN published prior to July 1954.

Members interested in obtaining any of these issues should write to Headquarters enclosing a 2½d. stamp for each copy required. A refund of stamps will be made if the issues are out of stock.

* * *

Certain back issues published since June 1954 are still available from Headquarters price 1/- per copy post free.

Side Slips

THE Contents Index published on page 441 of the April, 1957, issue contained several mistakes for which the Editorial staff apologise.

The article *Receiver Selectivity*, which began on page 444, was contributed by B. J. Rogers (G3ILI) and not by G. M. C. Stone (G3FZL). The title of the short article on page 448 was *The Audio Frequency Auto-Response Circuit* and not *Combined Aerial Coupler and Relay*. The short article on page 450, *A Simple Top Band Aerial Coupler*, by W. Farrar (G3ESP) was not indexed.

Letters to the Editor . . .

Neither the Editor nor the Council of the Radio Society of Great Britain can accept responsibility for views expressed by correspondents.

A Plea for More Intelligent Amateur Radio Abbreviations

DEAR SIR,—Recent BULLETIN Editorials have advocated greater use of c.w., with which I agree. I feel, however, that the main limitation of Morse, as compared with telephony, viz the speed with which intelligence can be exchanged, could to a great extent be mitigated by the greater use of intelligent abbreviation. For example, is it essential to send "ur sigs hr RST579" when "ur 579" would suffice?

The once familiar Amateur Radio abbreviations seem to be disappearing; I frequently hear "you," "your," "and," "are," etc. spelled fully.

Whilst deploring stereotyped QSOs and curtness, must every contact, however brief, be concluded with that over-worked gamut of "hpe cuagn sn, best 73 best of luck, best DX GN/GM," etc., etc.? As for that notorious time waster "OK on your" comment is superfluous.

Occupancy of any band is, after all, governed just as much by the length of the transmission as by its bandwidth.

Yours faithfully,
Reading, Berks. R. J. BUCKSTONE (G5JR).

Slow Morse

DEAR SIR,—May I appeal to Top-Band users to keep clear, during operating time, of the frequencies used for slow Morse practices? Many members give of their spare time in transmitting slow Morse into the blue to provide a valuable service to prospective licensees, such as the writer. When this service is blotted out by QRM, etc., the time spent by the transmitting and receiving station is more or less wasted.

Times of slow Morse transmission are published regularly in the BULLETIN together with the frequencies used, so please, Top-Banders, have a little forethought. . . . Thank you.

Yours faithfully,
London, S.E.12. D. F. OWEN (B.R.S.20416).

Elections and Contests

DEAR SIR,—One of your correspondents in the April issue of the BULLETIN has aptly described the main reason for apathy in the "electorate," and I think an abbreviated version of a nominee's Amateur Radio opinions would serve as a better guide than his life-history to members.

I support the suggestion that the B.E.R.U. contest be spread over two weekends for the following reasons:—(a) I cannot get on the air every weekend, and I expect there are other stations both home and DX who are similarly placed; (b) it follows from (a) that, in the event of my being able to be on for both weekends, I should get a greater variety of Empire Stations to "have-a-go" at.

I do not think there are too many contests, because one of my main interests being aeriels I find contests are an excellent means of testing their performance. I do, however, sympathize with the view of G3BID who wants only to ragchew and can offer the lame suggestion that he switches in his crystal filter and grits his teeth!

Yours faithfully,
Birmingham. J. WORTHINGTON (G3COI).

More About Low Polls and Antarctic "Intruders"

DEAR SIR,—After reading the comments, in the April issue, by my namesake G2FLP, regarding the low polls, and requests in the BULL for the reasons for this, may I add my agreement with him on the subject.

It should be obvious that the membership would take much more interest in who becomes a Council member, if they knew more about him. As matters stand, apart from

a few chaps we meet at Conventions, the average candidate is just a name and call-sign to most of us. To remedy this I should suggest a much more detailed list of the candidates' interests, achievements and, most important, a paragraph by each one stating his policy if elected, towards our current problems. This way members could at least know that they were voting for the men who pledged themselves to act in the best interests of all of us, and not just for men who by virtue of their profession can spare the time to attend the meetings, regardless of their abilities.

Finally, the great CE-LU QSL row: it is indeed a pleasure to read the statement by G2MI. If only we had a few more chaps who would stand by their guns against the QSL scramblers who don't seem to care what happens anywhere, and whether right or wrong, so long as they get their scrap of paper in return! Thank you A.O.M., it is nice to hear someone speak up for Britain for a change.

Yours faithfully,
Southport, Lancs. N. HORROCKS (G2CUZ).

Lightweight Telescopic Towers—Manufacturers Here's Your Chance

DEAR SIR,—Is it beyond the capabilities of any British manufacturer to produce, at reasonable cost, a triangular aluminium lightweight welded telescopic tower such as one sees extensively advertised in American radio magazines?

Surely there would be a sale for such a tower which would be invaluable for those living in built-up areas.

What do other readers think?
Yours faithfully,
Langkawi Island, Kedah, Malaya. J. C. PERSHOUSE (VS2DQ).

Advertisers Please Quote Prices

DEAR SIR,—I am sure it would help your readers, and especially those who are living abroad, if advertisers would always quote prices and the delay period (if any) for deliveries. I recently wrote to two firms for information about crystals and r.f. cables and received back some very fine literature but in neither case were prices quoted. Both manufacturers stated in their covering letters "we shall be pleased to quote."

My requirement for crystals had been quite clearly indicated. Result—my order went to a firm who had quoted prices.

The type of cable I required was not manufactured by the firm to whom I wrote but a substitute would have been considered. Result—my order went to a firm who had quoted the price of the substitute cable in its advertisement.

Yours faithfully,
Tourettes Sur Loup A.M. France. ERIC EARLY (F8ZF).

Silent Key

L. J. FULLER (G6LB)

It is with the deepest regret that we have to record the passing, on April 25, 1957, of Laurence Fuller (G6LB) of Great Baddow, Essex. For some months he had been seriously ill but throughout that time he maintained his well-known cheerfulness and humour. He was in his 53rd year.

His primary interest of recent years was DX work on Top Band, and the effort and enthusiasm he put into this was an example of the real "Ham Spirit" with which he was imbued.

He had been an active amateur for more than 33 years and during this time had always kept strictly to the code of the "Good Amateur" in which he so firmly believed. He had loyally supported and served the Society in many ways in the past, including holding office as East London District Representative, later as T.R. for Chelmsford.

His sterling work during succeeding National Field Days—which went back to the old days of Abbess Rothering—will long be remembered by those who shared those happy weekends with him.

Although not quite so well known to the newer generation, Laurie's passing will leave a gap in the ranks of the old timers that can never be filled. He will always be remembered by those of us who knew him as one of the best friends we ever had.

The interment took place on April 30 in the presence of a number of radio friends of G6LB including G2DQ, G2HGI, G2SA, G3ABB, G3CUH, G3GNO, G3KPI, G4DC, G4UX, G4VF, G6LL, and G6UT.

J.W.M.

Regional & Club News

Bristol.—Recent events have included a demonstration of Gelo and Hamobile equipment by R. G. Shears (G8KW) and a film show featuring the new Mullard films on transistors and Special Quality valves. A talk on the Minibeam is due to be given by G. A. Bird (G4ZU) on May 17. The design and construction of locally-built transmitters and other equipment will be discussed at the June and July meetings. Members who can contribute suitable items are invited to inform the *Hon. Secretary*: D. F. Davies (G3RQ), 51 Theresa Avenue, Bishopston, Bristol 7.

Bury Radio Society.—There will be a Junk Sale at the George Hotel, Kay Gardens, at 8 p.m. on June 11. As the July meeting at the same venue (on the 9th) falls during the town's Annual Holiday it will be a "Natter and Noggin Night." Plans are being made for the society's hamfest on September 14.

Falmouth.—The Falmouth Branch of the West Cornwall Radio Club will in future meet at the Y.M.C.A., Bar Road, Falmouth, on the first Wednesday in each month. Visitors to the town are assured of a warm welcome at meetings which commence at 7.30 p.m.

Flintshire Radio Society.—A successful Junk Sale was held at the April meeting with Peter F. Jones (GW3FPF) acting as "auctioneer." At the meeting at the Railway Hotel, Prestatyn, on May 27 at 7.30 p.m., local R.S.G.B. members will discuss final preparations for N.F.D. Three members—GW2CCU, GW2FVZ and GW3CF—are now mobile.

Mitcham & District Radio Society.—Recent events have included lectures on valves (Brimar), two metre mobile and Gelo equipment (KW Electronics) and a film on Ultrasonics (Mullard). As a result of remarks made by the Chairman, G. A. Hume (G5UX), at the A.G.M., members of the society have decided to make 1957 a year for concentration on TVI problems and their cure. Several talks have already been given and many more are planned. The society's first Dinner was held at the "White Hart," Mitcham, on May 11. Meetings will be held at "The Canons," Madeira Road, Mitcham, on May 24, June 7 and 21, at 8 p.m. *Hon. Secretary*: D. Tilcock (G3JYV), 67 Fleming Mead, Mitcham, Surrey.

Slade Radio Society.—Meetings have been arranged for May 24 ("Supply of Electric Power to Moving Machinery" by P. M. Williams), June 7 (Election of *Hon. Secretary*, followed by a talk on radio astronomy by Dr. R. S. McDonogh) and June 21 ("R. F. Coil Design" by Mr. Reynolds of Repanco, Coventry). All will be held at The Church House, High Street, Erdington, and will commence at 7.45 p.m. The Slade Net will be on the air on May 17, June 14 and 28. *Hon. Secretary*: C. N. Smart, 110 Woolmore Road, Erdington, Birmingham 23.

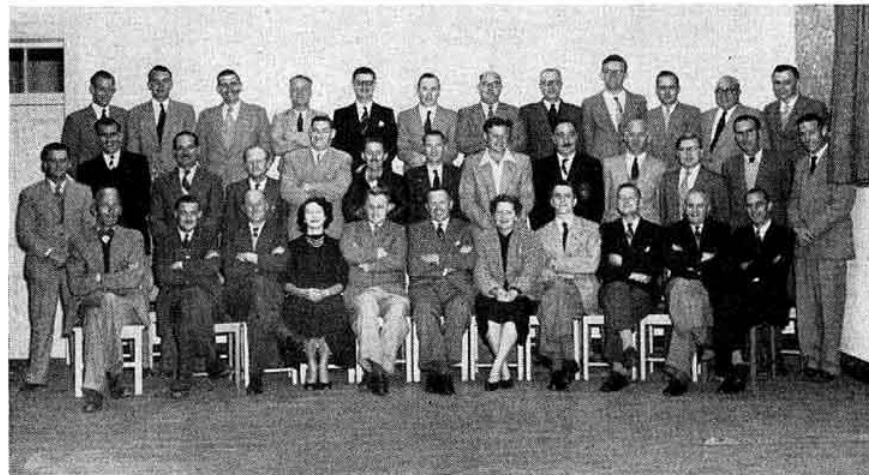


THE CUP WENT TO DIGSWELL

In spite of strenuous efforts by other members of the Welwyn Garden City Group, the "Stanley Harrison Trophy" has once again been won by Gerald Gibbs (G3AAZ), for the third time. It will now repose in the radio room at Digswell, Herts., at the base of the lattice mast which was illustrated in *THE BULLETIN* last year. Being engaged on T.A. duties, Mr. Gibbs could not be present at the Constructors' Exhibition put on by the W.G.C. Group on March 5. Our picture shows Mr. T. A. McMullin, Chief Engineer of the Murphy Radio Electronics Division, who judged the exhibits, holding the G3AAZ 1.8 Mc/s mobile transmitter which secured first place and the Challenge Trophy. Second prize went to John Burton, B.R.S.19748, for a two metre transmitter with built-in power pack and modulator (visible in the rear of this picture). Third place was taken by a tape recorder constructed by... yes, once again, Gerald Gibbs. The donor of the Trophy, Mr. R. L. S. Harrison (G3EPK), is on the right of the picture.

Stockport Radio Society.—At the recent A.G.M. the following were elected: *Chairman*—A. Smith (G3AYT); *Vice-Chairman*—E. Wiggell; *Hon. Treasurer*—W. H. Banks (G2ARX); *Hon. Secretary*—G. R. Phillips (G3FYE), 7 Germans Buildings, Buxton Road, Stockport; *Hon. Auditor*—E. Wood (G4JN); *Committee Members*—N. Paul, W. J. C. Cropper, W. P. Green, A. Royle. Subjects for forthcoming lectures are "N.F.D." (May 22); "S.S.B." (June 5) and "Workshop Practice" (June 19). Details of the society's activities may be obtained on request from the *Hon. Secretary*.

Sutton and Cheam Radio Society.—At the meeting to be held at the Harrow Inn, Cheam Village, on May 21, Mr. Stevenson of the Automobile Association will give a talk on the "A.A. Radio Communication Network." Visitors will be welcome and further details may be obtained from the *Hon. Secretary*: F. J. Harris (G2BOF), 143 Collingwood Road, Sutton, Surrey.



Most of the active amateurs in Southern Rhodesia attended the Annual General Meeting of the Radio Society of Southern Rhodesia at Gwelo last year. In this picture, taken on that occasion, the following can be identified (front row 1. to r.), ZE5JO, 4JR, 2JS, 5JY, 5JJ (Vice-Chairman), 4JZ (Chairman), 1FE, 3JJ, 3JO, 1JL (centre row, 1. to r.), ZE2JR, 5JG, 2JT, 6JO, 6JL, 1JC, 5JE, 6SY, 2KV, 5JV; (back row 1. to r.) ZE4JC, 2JG, 2JE, 1JA, 6JR, 2JH, 2KZ, 4JU, 6JT, 3JF, (ZE2JS, 3JJ, 1JL and 1JC are Members of the Council).

Forthcoming Events

REGION 1

Blackpool (B. & F.A.R.S.). — Wednesdays, Gadsby Street Hall, off Nelson Road.
Bury (B.R.S.). — June 11, 8 p.m., George Hotel, Kay Gardens.
Chester (C. & D.A.R.S.). — Tuesdays, 7.45 p.m., Tarran Hut, Y.M.C.A.
Crosby. — Tuesdays, 8 p.m., over Gordon's Sweetshop, St. John's Road, Waterloo.
Isle of Man (I.O.M.A.R.S.). — May 15, 7.30 p.m., Manor Guest House, 48 Victoria Road, Douglas.
Lancaster (L. & D.A.R.S.). — June 5, 7.30 p.m., George Hotel, Torrisholme.
Liverpool (L. & D.A.R.S.). — Tuesdays, 8 p.m., Room "G," Waverley Community Centre, Penny Lane, Liverpool, 18.
Manchester (M. & D.R.S.). — June 3, 7.30 p.m., Brunswick Hotel, Piccadilly, Manchester.
Manchester (S.M.R.C.). — Fridays, 7.45 p.m., Ladybarn House, Mauldeth Road, Manchester, 20.
Preston (P.A.R.S.). — Wednesdays, 7.45 p.m., 48 High Street, off Lancaster Road.
Southport. — Thursdays, 8 p.m., Sea Cadets Camp, Esplanade.
Stockport (S.R.S.). — May 22, June 5, 19, 8 p.m., The Blossoms Hotel, Buxton Road.
Warrington (W. & D.R.S.). — May 16, June 6, 20, 7.30 p.m., Royal Oak Hotel, Bridge Street.
Wirral (W.A.R.S.). — May 15, June 5, 19, 7.45 p.m., Y.M.C.A., Whetstone Lane, Birkenhead.

REGION 2

Barnsley (B. & D.A.R.C.). — May 24, June 14, 7.30 p.m., King George Hotel, Peel Street.
Bradford. — May 28, June 18, 7.30 p.m., 66 Little Horton Lane.
Doncaster. — June 4, 7.30 p.m., Lord Nelson Hotel, Cleveland Street.
Gateshead. — Mondays, 7.30 p.m., Mechanics' Institute, 7 Whitehall Road.
Hull. — Second and last Tuesdays, 7.30 p.m., "Royal Oak" (Tony's).
Leeds. — Wednesdays, 7.30 p.m., 4 Woodhouse Square.
Pontefract. — May 30, June 6, 8 p.m., Queen's Hotel, Tansley.
Rotherham. — Wednesdays, 7 p.m., "Cutler's Arms," Westgate.
Scarborough. — Thursdays, 7.30 p.m., Chapman's Yard, North Street, Scarborough.
Sheffield (S.A.R.C.). — May 22, "Dog & Partidge"; June 12, Albreda Works.
Slithwaite. — Fridays, 7.30 p.m., 3 Dartmouth Street.
South Shields (S.S. & D.R.C.). — May 29, 7 p.m., Trinity House Social Centre.
Spenn Valley. — May 29, June 12, 7.30 p.m., Temperance Hall, Cleckheaton.
York. — Thursdays, 7.30 p.m., Club Rooms, Y.A.R.S., Fetter Lane.

REGION 3

Birmingham (M.A.R.S.). — May 21, 7 p.m., Midland Institute, Paradise Street ("Eddy-stone 888," by J. Walker, G5JU), (Slade). — May 24, 7.45 p.m., ("Supply of Electric Power to Moving Machinery," P. M. Williams), June 7 ("Mapping the Galaxy," Dr. R. S. McDonogh), The Church House, High Street, Erdington. (South & Bournville). — Tuesdays, 7.30 p.m., No. 4 Committee, Cadbury Bros., Bournville.
Coventry (C.A.R.S.). — May 20, June 3, H.Q., 9 Queens Road, (Courtaulds). — Wednesdays, Courtaulds, Ltd., Foleshill Road.
Solihull. — May 27, June 10, 7.30 p.m., Civil Defence H.Q., Sutton Lodge, Blossomfield Road.

Stourbridge. — May 24, 8 p.m., White Horse, Amblecote, June 4 ("Home Built RX," by J. Hogg, G2OG), 8 p.m., King Edward VI School, Stourbridge.
Wolverhampton. — May 20 ("Colour TV Basic Principles," M. J. Sparrow, G3KQJ/T), June 3 ("Ultrasonics," Mr. Webb), Nechells Cottage, Tettenhall.

REGION 4

Alvaston. — Tuesdays, Thursdays, 7.30 p.m., Sundays, 10.30 a.m., Boulton Lane, Alvaston, Derbys.
Chesterfield. — Tuesdays, 7.30 p.m., Bradbury Hall, Chatsworth Road.
Derby (D. & D.A.R.S.). — Wednesdays, 7.30 p.m., Room 4, 119 Green Lane, Derby.
Ilkeston (I. & D.A.R.S.). — June 6, July 4, 7 p.m., Room 5, Ilkeston College of Further Education, Field Road.
Leicester (L.R.S.). — May 20, June 3, 17, 7.30 p.m., Leicester.
Lincoln (L.S.W.C.). — June 5, 7.30 p.m., Technical College, Cathedral Street.
Newark (N. & D.A.R.S.). — May 30, 7 p.m., Northgate House, Northgate, Newark.
Northampton (N.S.W.C.). — Fridays, 6.30 p.m., J-Beam Aerials' Factory (rear of Weston's Garage), Weston Fawell.
Nottingham. — May 17, June 21, 7.30 p.m., Basford Hall Miners' Welfare, Nuthall Road, Cinderhill.
Peterborough. — June 5, 7.30 p.m., 21 Hankey Street.
Scunthorpe (S.A.R.S.). — May 21, June 6, 18, 7.30 p.m., Talbot Hotel, Earl Street.
Retford & Worksop. — June 10, 7.45 p.m., Whitehall Youth Centre, Retford.

REGION 5

Chelmsford. — June 4, 7.30 p.m., Marconi College, Arbour Lane, Chelmsford.
Norwich. — Fridays, 7.30 p.m., The Golden Lion, St. John's, Maddermarket.

REGION 6

Cheltenham. — June 6, 8 p.m., Great Western Hotel, Clarence Street.
Cheltenham (C.A.R.S.). — Wednesdays, 8 p.m., Club Room, St. Mark's Community Centre, Brooklyn Road.
Gloucester (G.R.C.). — Thursdays, 7.30 p.m., The Cedars, 83 Hucclecote Road.
Oxford (O. & D.A.R.S.). — May 23, June 13, 7.30 p.m., Club Room, Cherwell Hotel, Water Eaton Road, Oxford.
Portsmouth. — Tuesdays, 7.30 p.m., British Legion Club, Queen's Crescent, Southsea.
Southampton. — June 1, 7 p.m., 1 Prospect Place, Above Bar, Southampton.
Stroud. — Wednesdays, 7.30 p.m., Subscription Rooms.

REGION 7

London. — May 25, 10 a.m. to 10.45 p.m., Third International V.h.f./U.h.f. Convention, Bonington Hotel, Southampton Row, W.C.1. (For details, see display announcement elsewhere in this issue.)
London (L.M.L.C.). — May 17, June 21, July 19, 12.30 p.m., Bedford Corner Hotel, Bayley Street, Tottenham Court Road, W.C.1.
Acton, Brentford & Chiswick. — May 21, June 18, A.E.U. Rooms, 66 High Road, Chiswick, W.4.
Bexleyheath (N.K.R.S.). — Second and fourth Thursday, 7.30 p.m., Congregational Hall, Chapel Road, Bexleyheath.
Chingford. — For date and venue phone: Wansstead 2321 or Silverthorne 1740.
Croydon (S.R.C.). — June 11, 7.30 p.m., "Blacksmith's Arms," 1 South End, Croydon, Surrey.
Ealing. — Sundays, 11 a.m., ABC Restaurant, Ealing Broadway, W.5.

East Molesey (T.V.A.R.T.S.). — June 3, 8 p.m., Carnarvon Castle Hotel, Hampton Court. ("Antennas," F. J. H. ("Dud") Charman, B.E.M., G6CJ).
Guildford & Woking. — May 26, 3 p.m., Royal Arms Hotel, North Street, Guildford.
Harrow (R.S.H.). — May 17, May 24 ("Useful Equipment"), 8 p.m., Science Laboratory, Roxeth Manor Secondary Modern School, Eastcote Lane, South Harrow.
Holloway (G.R.S.). — Mondays (RAE), Fridays (Club), 7 p.m., Grafton School, Eburn Road, Holloway, N.7.
Ilford. — Thursdays, 8 p.m., G2BRH, 579 High Road, Ilford.
Ilford (Q.M.C.E.A.R.S.). — May 21, 4.45 p.m., Queen Mary College, Mile End Road, E.1 (Demonstration of Hi-Fi Equipment).
Norwood & South London. — May 18, 8 p.m., Wilmere House, Westow Street, Crystal Palace ("Relays," Mr. Bevan).
Slough. — June 4, QTH from G2HOX, 13 Quaves Road, or G3YD, 5 Parklands Avenue, Slough.
Welwyn Garden City. — Tuesday, June 4, I.C.I. Bowling Pavilion, 8 p.m. ("N.F.D. Inquest" and plans for summer season).

FORTHCOMING O.R.M.s.
SATURDAY, SEPTEMBER 12:
REGION 10—CARDIFF
SUNDAY, SEPTEMBER 29:
REGION 11—PRESTATYN

REGION 9

Bath. — May 27, 7.30 p.m., 12 St. James Street West.
Bristol. — May 17, June 21, 7.15 p.m., Carwardine's Restaurant, Baldwin Street; May 10, 7.30 p.m., Grand Hotel, Broad Street.
Exeter. — June 13, 7.30 p.m., G3FLK, 43 Prospect Road.
Falmouth. — First Wednesday in each month, 7.30 p.m., Y.M.C.A., Bar Road, Falmouth.
North Devon (Bideford). — June 6, 7.30 p.m., G3BO, "Rosebank," Westcombe.
Plymouth. — Alternate Tuesdays, 7.30 p.m., Virginia House Settlement, Barbican.
Torquay. — Third Saturday in each month, 7.30 p.m., Y.M.C.A., Castle Road.
Weston-super-Mare. — Second Wednesday in each month, 7.30 p.m., Albert Hotel, Sea Front.
Yeovil. — Wednesdays, 7.30 p.m., Grove House, Preston Road, Yeovil.

REGION 10

Cardiff. — June 10, 7.30 p.m., "The British Volunteer," The Hayes, Cardiff.
Neath and Port Talbot. — June 4, 7.30 p.m., Royal Dock Hotel, Briton Ferry.
Pontypool. — Tuesdays, 7 p.m., Educational Settlement, Rockhill Road.

REGION 11

Prestatyn. — May 27, 7.30 p.m., Railway Hotel; June 1, 2, N.F.D. (Paddock of Nant Hall Hotel).

REGION 13

Edinburgh (L.R.S.). — May 16, 30, June 13, 7.30 p.m., 25 Charlotte Square, Edinburgh.

REGION 14

Falkirk. — June 7, 7.30 p.m., The Temperance Café, High Street, Falkirk.
Glasgow. — May 24, 7.15 p.m., Christian Institute, 70 Bothwell Street, Glasgow, C.2 (Lecture on "Antennas").

LONDON U.H.F. GROUP
 will meet at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road,
 at 7.30 p.m., June 6, 1957.
 All u.h.f. enthusiasts welcome.

LONDON MEMBERS' LUNCHEON CLUB
 will meet at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road,
 at 12.30 p.m. on Fridays, May 17, June 21 and July 19, 1957.
 Telephone table reservations to HOL 7373 prior to day of luncheon. Visiting amateurs especially welcome.

New Members

THE following were elected to Membership at the April, 1957, Meeting of the Council:—

Corporate Members, Home (Licensed)

- G2IV **†**R. W. WRATTEN, 76 Essella Road, Ashford, Kent.
 G2NG **†**J. M. R. SUTTON, 75 Langham Road, Teddington, Middlesex.
 G2AUU **†**F. H. WRING, 24 Arley Hill, Cotnam, Bristol.
 G3CZ **†**G. F. SHEPHERD, 78 Yarborough Crescent, Lincoln.
 G3DF **†**R. J. BATES, 99 Rodenhurst Road, Clapham Park, London, S.W.4.
 G3VK **†**J. D. KINGSTON, 51 High Drive, New Malden, Surrey.
 G3BNW **†**E. BAILEY, 13 Heywood Road, Alderley Edge, Cheshire.
 G3BRA **†**O. C. DOLEY, 37 Mansfield Road, Tewkesbury, Warwick-on-Tweed.
 G3FYS **†**J. L. HOOPER, 4 Balston Road, Parkstone, Dorset.
 G3GFK **†**E. RATTIGAN, 197 Mill Lane, Sutton, St. Helens, Lancs.
 G3IGT **†**W. G. BORLEY, 1 Lansdowne Gardens, South Lambeth, London, S.W.8.
 G3KZX **†**L. J. LOVELAND, 39 Beech Avenue, Beeston, Notts.
 G3LDN **†**C. DODD, 24 Main Street, Embay, nr. Skipton, Yorks.
 G3LHG **†**E. W. SMITH, Sheldcliffe Kennels, Church Road, Shelford, nr. Radcliffe, Nottingham.
 G3LPH **†**D. EARNshaw, "Gerharden," Alkington Road, Whitechurch, Salop.
 G3LIU **†**A. D. H. LOONEY, 149 Page Moss Lane, Knotty Ash, Liverpool, 14.
 G3LOA **†**G. R. HARTSTONE, 428 Whitehorse Road, Thornton Heath, Surrey.
 G3LOF **†**G. D. PESKETT, 14 Bromley Grove, Shortlands, Bromley, Kent.
 G3LOD **†**G. R. KAY, 6 Westbrooke Park Road, Woodston, Peterborough, Northants.
 G5SB **†**J. J. MONAGHAN, 5 Emyr Way, South Shields, co. Durham.
 G3GOB **†**W. A. KANE, 25 Victoria Avenue, Newtownards, co. Down, N. Ireland.
 G3BQA **†**J. S. McCaig, 19 Edinburgh Road, Cockenzie, East Lothian.
 G3FKS **†**G. T. J. DONALDSON, 342 King Street, Aberdeen.
 GW3LIY **†**R. W. PRICE, Tylehurst, Montpellier Park, Llandrindod Wells, North Wales.
 GW3LKL **†**R. J. PUGH, Ullswater, Temple Street, Llandrindod Wells, North Wales.

Corporate Members, Overseas (Licensed)

- DL2AL **†**R. D. RUSSELL, Radio Servicing Filt., Tech. Wing, R.A.F., Oldenburg, B.A.O.R. 25.
 K4EHA **†**P. H. CONNER, 6214 Harding Road, Nashville 5, Tennessee, U.S.A.
 K4EJO **†**C. R. CONNER, 6214 Harding Road, Nashville 5, Tennessee, U.S.A.
 UC2AA **†**W. K. BENZAR, P.O. Box 41, Minsk, U.S.S.R.
 VE1PA **†**G. H. McKENZIE, Lakeburn, New Brunswick, Canada.

- VE2AXS **†**P. A. ALLAIRE, P.O. Box 7, St. Jerome, Quebec, Canada.
 VE6JR **†**R. J. HEPPELL, 718-8th Street South, Lethbridge, Alberta, Canada.
 VK2BQ **†**G. C. PAGE, Richmond Street, Tumut, N.S.W., Australia.
 VK4DF **†**C. W. MANN, Wavell Road, Port Lincoln, South Australia.
 VP8AQ **†**G. B. DAVIS, c/o Postmaster, Port Stanley, Falkland Islands, South Atlantic.
 VQ4DT **†**H. OVERGAARD, P.O. Box 633, Nakuru, Kenya Colony.
 W1ISS **†**J. F. DINEEN, 9 Winter Terrace, Westwood, Mass., U.S.A.
 WN1WZ **†**M. J. BLENDER, 72 Bartlett Avenue, Cranston, Rhode Island, U.S.A.
 WN1KGR **†**M. J. BLENDER, 72 Bartlett Avenue, Cranston, Rhode Island, U.S.A.
 W1UVB **†**H. E. MOSHER, 147 Main Street, North Reading, Mass., U.S.A.
 W2BUL **†**H. F. DANIEL, 2802 Hayes Avenue, Camden 5, N.J., U.S.A.
 W2CJJ **†**G. L. BOSE, 1531 Oxford Road, Wantagh, Long Island, N.Y., U.S.A.
 W3AHX **†**J. R. McMURRAY, 6729 Paschall Avenue, Phil. 42, U.S.A.
 W3UNV **†**C. R. BEACHY, Box 73, Grantsville, Maryland, U.S.A.
 W3VKD/W3LXE **†**A. E. LEWIS, 37 S. 6th Street, Indiana, Pa., U.S.A.
 W4IMP **†**J. S. GALESKI, Jr., Post Office Box 658, Richmond, Va., U.S.A.
 W4LCY **†**F. A. PHILLIPS, P.O. Box 283, Crestview, Florida, U.S.A.
 W7DIU **†**W. D. MARSHALL, 3208 Plymouth Drive, Bellingham, Wash., U.S.A.
 W8AJW **†**JOHN E. SINGLER, 2972 Clague Road, Cleveland 26, Ohio, U.S.A.
 W8WKK **†**E. N. TULEY, 146 Winston Drive, Hamilton, Ohio, U.S.A.
 W8JAO **†**J. W. SCHWALL, 1110 Catalpa Drive, Middletown 10, Ohio, U.S.A.
 W9VVI **†**R. C. FERGUSON, P.O. Box 322, Fort Wayne, Indiana, U.S.A.
 ZC5DA **†**D. M. ANDERSON, Cpl., RAAF Detachment, Labuan, North Borneo.
 ZB1CP **†**A. A. MILHAM, Flat 16, 2 St. Mary St. Tigne, Sliema, Malta.
 ZE4IU **†**T. GREAVES, P.O. Box 857, Salisbury, Southern Rhodesia.
 ZD8JP **†**J. E. PACKER, c/o Cable & Wireless, Ltd., Ascension Island, South Atlantic.

Corporate Members (British Empire Receiving Stations)

- 948 **†**J. FRASER, Civilian Wing, 2 Wireless Regt., Royal Signals, B.F.P.O. 53.
 949 **†**W. NORRIE, Royal Signals School, B.A.O.R. 15.
 950 **†**A. W. HOLBROOK, P.O. Box 857, Salisbury, Southern Rhodesia.

Corporate Members (British Receiving Stations)

- 8917 **†**W. D. JONES, 15 Cunliffe Road, Epsom, Surrey.
 17406 **†**P. A. WHITE, 14 Coates Road, Elstree, Herts.
 20198 **†**S. KING-COOK, Ladydene Mews, Little Kimble, Aylesbury, Bucks.
 21388 **†**T. GILBERT, Trelavour Road, St. Dennis, St. Austell, Cornwall.
 21389 **†**R. HILDITCH, 22 Sussex Avenue, Didsbury, Manchester 20, Lancs.
 21390 **†**R. F. G. COZZELL, 70 Farren Road, Northfield, Birmingham, 31.

- 21391 **†**W. G. SKINNER, Cairo Cottages, Thraps-ton Road, Woodford, Kettering, Northants.
 21392 **†**H. H. PRESTON, 24 Cromwell Road, Malvern Link, Worcs.
 21393 **†**E. CARR, 27 St. Margarets Road, Micklethorn, Methley, nr. Leeds.
 21394 **†**G. MARTIN, 42 Rose Street, Dunfermline, Fife, Scotland.
 21395 **†**H. M. HAYFIELD, 113 Hamlin Lane, Exeter, Devon.
 21396 **†**M. FIRTH, 48 East Street, Lightcliffe, nr. Halifax, Yorks.
 21397 **†**D. J. HOWELL, 82a Richmond Park Road, Kingston-on-Thames, Surrey.
 21398 **†**R. N. WHITE, Lakeside, Hatfield Heath, nr. Bishops Cleeve, Herts.
 21399 **†**A. B. MILLER, 15 Chatham Avenue, Bromley, Kent.
 21400 **†**R. N. MARTIN, "Crail," Fore Street, North Petherton, nr. Bridgewater, Somerset.
 21401 **†**J. H. W. BROOMHEAD, 62 Upper Holland Road, Sutton Coldfield, Warwick.
 21402 **†**R. S. EMMERSON, 312 Norton Road, Norton, Stockton-on-Tees, co. Durham.
 21403 **†**L. H. FIELDING, 397 Torbay Road, Harrow, Middlesex.
 21404 **†**H. J. BALLINGER, 5 Offerton Avenue, Derby.
 21405 **†**R. A. HALE, 13 Conway Road, Luton, Beds.
 21406 **†**G. REID, A.M.I.E.E., Church Cottage, Glegt, nr. Weymouth, Dorset.
 21407 **†**R. F. J. HEATH, 47 Tulsemere Road, London, S.E.27.
 21408 **†**J. E. ORME, 86 Cheriton Avenue, Ilford, Essex.
 21409 **†**J. CALLUM, 55 Blairlogie Street, Ruchazie, Glasgow, E.2.
 21410 **†**F. D. W. ASH, 8 Haldon View, Heavitree, Exeter, Devon.
 21411 **†**J. G. AYTON, 76 St. Bernard Road, Stockton-on-Tees, co. Durham.
 21412 **†**C. HARDCASTLE, 136 Hull Road, York.
 21413 **†**K. R. MAYO, 58 Ridgefield Road, Oxford.
 21414 **†**T. C. G. WHITEHEAD, 25 Oak Road, Redcar, Yorks.

Associates

- G. M. ALDER, 7 Vassall Road, Fishponds, Bristol.
 A. BAGLEY, 10 Colin Road, Claines, Worcester.
 J. A. BEVERLEY, Hill House, Hill Street, Cleckheaton, Yorks.
 J. W. BODEN, 152 Weston Park, Crouch End, London, N.8.
 C. S. T. BUCKLEY, 24 Eastwood Road, Goodmayes, Ilford, Essex.
 D. A. DYKE, 153 Manley Road, Whalley Range, Manchester, 16.
 I. GIBBS, 12 Kennion Road, St. George, Bristol, 5.
 D. GODFREY, 73 Leamington Avenue, Morden, Surrey.
 D. MUNRO, 13 Sandfield Road, Prestwick, Ayrshire.
 M. S. OCKENEN, 32A Meads Street, Eastbourne, Sussex.
 L. B. POVOAS, 56 Hilders Road, Western Park, Leicester.
 G. M. J. SAUNDERS, 64 Thorpedene Gardens, Shoeburyness, Essex.
 T. J. VENN, Mawells, Dunksell, Honiton, Devon.

* Denotes transfer to Corporate Grade.
 † Denotes re-elected.

KW Electronics Ltd. have placed on the market a six band aerial consisting of a centre fed dipole 108 ft long which has two resonant traps, one each side of the feed point and 65 ft apart. It is fed with 75 ohm co-ax. The system acts as a half-wave dipole on 40 and 80 metres, as 7 half waves on 10 metres, 5 on 15 metres and 3 on 20 metres. By joining the feeder together at the transmitter end the system will also operate as a top loaded Marconi aerial for 160 metres. The complete aerial costs £6.15.0 including 90 ft of semi-air spaced co-axial cable; the traps are available separately for home construction of the aerial at £2.10.0 per pair.

Labgear (Cambridge) Ltd. are now manufacturing a pre-amplifier for use with any Band III television receiver. The single cascade stage has a gain of 15db and can be adjusted quickly for channels 8, 9 and 10; the bandwidth at the 1.5db points is 3.5 Mc/s. The power supply is self-contained and the unit may be switched in or out of circuit at will. The price is £6.15.0.

As a result of increased production facilities, it has become possible to reduce the price of the Panda Cub transmitter, manufactured by Panda Radio Co. Ltd., to £59.10.0 carriage paid.

New Books

RADIO, Vol. 3, by J. D. Tucker and D. F. Wilkinson, B.Sc. Size 7½ in. x 5 in. 249 pages. Illustrated. Published by The English Universities Press Ltd. Price 12/6.

The third volume of *Radio* has been designed mainly to cover the requirements of the City and Guilds Radio 3 Examination. The subject matter has been broadened to include the relevant parts of the Higher National Certificate (A1), the Advanced Radio Engineering, Radio Transmission and Radio Reception Syllabuses of the British Institution of Radio Engineers, and of the various examinations conducted by the Institution of Electrical Engineers.

There are specimen papers included at the end of each Chapter. The scope of Volume 3 ranges from Aperiodic Amplifiers to the Principles of Picture Transmission.

Of special interest to those studying for the Radio Amateurs' Examination are the chapters on Aerials and Transmission Lines, Radio Transmitters and V.H.F./U.H.F. Amplifiers.

The book is very well illustrated.

* * *

ESSENTIAL SERVICING DATA, Vol. I, Television Receivers. Compiled by Gordon J. King, published by British Radio and Television Ltd. Size 7½ in. x 4½ in. 141 pages.

Contains the essential servicing data on many hundreds of British made Television Receivers. Each entry lists the valve line up; c.r.t. in use; i.f.; channels covered; controls; types of electrolytic condensers, fuses, pilot lamps used; recommended aerial; E.H.T. Where applicable information is also given on the type of Band III converter to use.

No more useful book could be provided for the service engineer whose job it is to cope with an increasingly large number of different TV receivers.

Representation

THE following are additions to the list of County Representatives published in the December, 1956, issue:—

Region 4—Derbyshire

T. Darn (G3FGY), 42 Laurel Avenue, Ripley.

Region 12—Northern Counties

J. MacIntosh (GM3IAA), "Broompark," Cradlehall, Inverness, Scotland.

* * *

The following are amendments to the list of Town Representatives published in the December, 1955, issue:—

Region 6—Hampshire

Portsmouth

A. Cake (G3CNO), 7 Wheatstone Road, Southsea.

Region 7—London (South)

Croydon Area

R. I. Richardson (G3KXT), "Knivesmire," Brookside Way, Shirley, Croydon, Surrey.

Region 9—Devonshire

Bideford

D. H. Jones (G3BO), "Rosebank," Westcombe.

Change of Address

The Town Representative for Worthing, Mr. R. B. Forge (G3FRG), now lives at 14 Poulter Lane.

Affiliated Societies

THE following are additions to the list of Affiliated Societies published in the October, 1955, issue of the R.S.G.B. BULLETIN:—

Amateur Radio Club (SA1TP), Tripolitania Signal Troop, British Forces Post Office 57.

Flintshire Radio Society, c/o J. Thornton Lawrence, "Perranporth," East Avenue, Bryn Newydd, Prestatyn.

Scunthorpe Amateur Radio Society, c/o J. Stace, 38 Skip-pingdale Road, Scunthorpe, Lincs.

How's DX?

This new R.S.G.B. publication compiled by well known DX man Ron Perkes, G4CP, gives details of 70 of the world's best known operating certificates and awards. While radio conditions are good begin working for some of the handsome certificates and awards offered by the R.S.G.B. and other Amateur Radio organisations.

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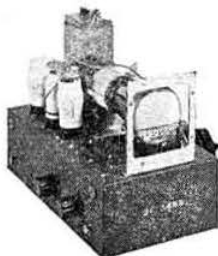
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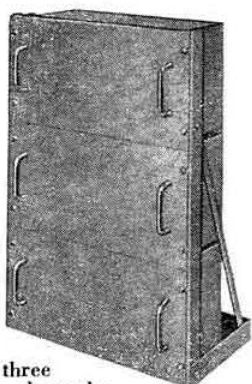
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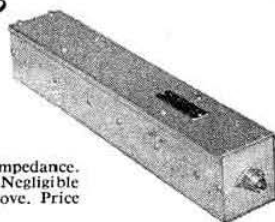
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(continued on page 532)

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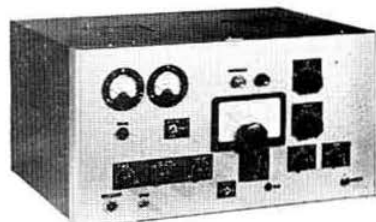
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