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The SHORT WAVE LISTENER

DEVOTED EXCLUSIVELY TO
SHORT WAVE RECEPTION

JANUARY 1950
VOLUME 4 · NUMBER 2

THE **SHORT WAVE** LISTENER

A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME 4 **JANUARY 1950** NUMBER 38

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Payment at good rates is offered for articles of short wave listener interest.

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JANUARY 1950

EDITORIAL

Survey

This is the time when we are able to wish our readers a Happy Christmas and a Prosperous New Year—with the hope that 1950 will be another twelve months full of interest, with new achievements recorded in all branches of SWL activity.

Looking back on the past year, it is obvious that progress has been most marked in the field of DX reception on the amateur bands—still the sounding board for the great majority of short wave listeners, who collectively have reached a very high level of operating efficiency on these frequencies. One can in fact say that little or nothing of any interest goes unnoticed on the DX communication bands.

But the same is not so true on VHF, where it is evident that our SWL's still have a great deal of leeway to make up ; during this coming year we hope to see a considerable upsurge of interest in VHF reception.

Through the *Short Wave Listener* in the next twelve months we shall be putting forward new projects for SWL activity and interest ; some of these will, of course, be unfolded in the *BSWL Review,* since they will concern League members only. We shall be devoting a great deal of time and energy (to say nothing of expense) to the affairs of the British Short Wave League itself, since it is our firm resolve to build the BSWL up into a strong and virile organisation able to pull its full weight in the world of Amateur Radio, with all that is implied thereby.

It will be interesting to see, this time next year, how much we have achieved and how far we have been able to get with these projects.

And so, once again, every good wish to you for the Season of the Year.

Two Metres with the RF-27

DETAILED CONVERSION DESIGN

by **D. T. BRADFORD**

(This article describes the modifications called for to derive a good two-metre converter from the well-known RF-27 Unit. It should be noted that the modifications are extensive and that considerable detail work is necessary; the finalised version may properly be described as a converter built round the RF-27. Our contributor has put in much practical work on the SWL aspects of VHF operation.—Ed.)

MANY readers found, when the old 5-metre band closed, that they were in possession of a "redundant" Type 27 RF unit. The thoughts of most of the VHF-minded turned at once to the 145 mc band. But results on this band, with a unit only slightly modified, were found to be very poor. If, however, one is prepared to go somewhat deeper and carry out a more extensive modification, together with the addition of a few refinements, the results are considerably improved and can easily fulfil the requirements of the average listener. These "additional refinements" are in the form of a low noise, grounded grid, stage of RF amplification and a voltage stabiliser for the oscillator HT.

The final circuit is then: CV66 grounded grid triode RF, with the broad band, low noise characteristics attributed to this type of valve; followed by a normal EF54 RF stage giving useful image rejection, and this runs into another EF54 as a mixer. All stages are broadband pre-tuned with the exception of the EF54 RF stage, which has provision for peaking at the band edges. The local oscillator is also rearranged and a greatly improved performance results.

Constructional Notes

This begins with the details of the additional units. These are situated on a small chassis 2 in. wide and of equivalent depth to that of the RF unit. On the rear end of this and next to the oscillator stage is the voltage stabiliser. The HT dropping resistor is of such a value that the neon just strikes when HT is applied. (The stated value is for a supply of approximately 300 volts.) In front of this and near the front panel is the CV66 RF amplifier. It is arranged so that the anode pins (2) are on the front-panel side of the screen which is placed across the valve-holder, allowing short connections to the grid circuit of the EF54 2nd RF stage.

TABLE OF VALUES

Two Metres with an RF-27 Unit

C1 = 2-8 μμF, Phillips Concentric Type
C2, C8, C9, C10, C11, C12, C13, C14, C18, C19, C20, C21, C22, C23, C27, C29, C30, C31, C32, C34 = 500 μμF, mica
C3, C4, C7 = 5 μμF (4·7 μμF), Ceramicon
C5 = 1·5-7·5 μμF (As in RF26/27—10c/11744)
C6 = Modified Ant. Trimmer
C15 = 8 + 8 μμF
C16 = ·005 μF, mica
C17 = 10 μμF
C24, C26 = 8-30 μμF, Phillips Concentric Type
C25 = Modified 2-gang condenser
C28 = 2 μμF, injector condenser
C33 = 10 μμF, coupling
R1, R9 = 150 ohms
R2, R10 = 1,000 ohms
R3, R8, R11 = 100,000 ohms
R4, R5, R7, R13 = 10,000 ohms
R6 = 1,500 ohms
R12 = 15,000 ohms *(See text)*

Coil Winding Data

L1 = 1 turn centre tapped for 80 ohm, twin
2 turns centre tapped for 300 ohm, twin
L2 = 4½ turns 16 SWG on ⅜ in. diam. self supporting
L3 = 4 turns as L2
L4 = 5 turns ⅜ in. diam. as L2
L5 = Loop of ¼ in. brass rod or suitable diam. copper wire, 1½-in. high by 1½-in. wide, to fit condenser lugs

All RF Chokes

18 turns, 20-22 SWG enamelled copper close wound self supporting ¼ in. diam. Approx. 1 in. in length

***Note:** Points X in the circuit show where the add-on unit can be isolated if it is not built in the first instance. In that case, L1 is coupled directly to L3 and R12 is increased in value and rating, depending on the HT voltage used.*

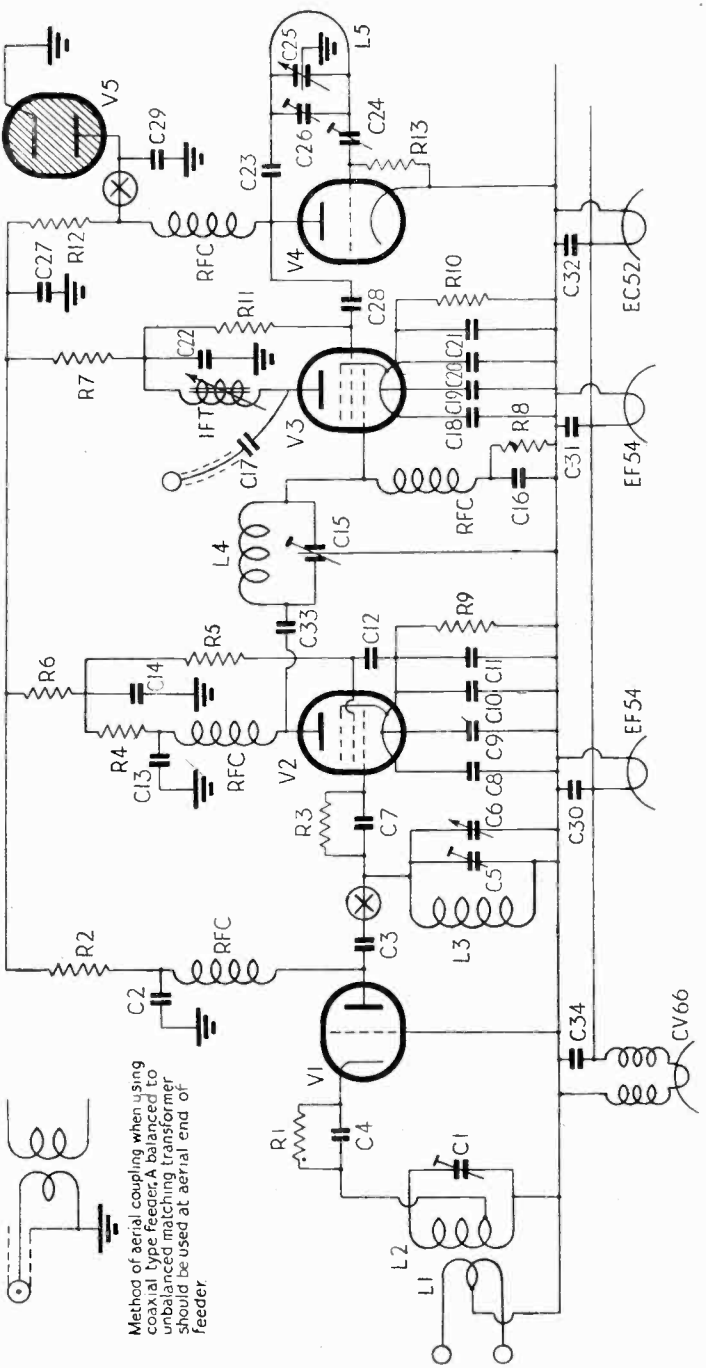


Fig. 1. Circuit of the much-modified RF-27 Unit to make an effective two-metre converter of it. Full details are given in the text. (*See reference to point X.*)

The grounded grid stage is quite orthodox, with the cathode tapped down L2 to a point about ½-turn from the earthy end. This point was found to be fairly critical and it will be necessary to experiment to obtain best results. Use is made of all four grid pins and each is earthed separately to the valve-holder screen. Both anode pins are shorted together. Output is taken from the anode *via* a choke-capacity coupling network to L3. Chokes are included in both heater leads to the CV66, and are the same as the other RF chokes.

The alterations to the Type 26/27 RF Unit are carried out as follows :

***Compartment* 1.**—Remove all coils and tuning gear, leaving only the 1·5-7·5 $\mu\mu$F ceramic trimmer. All vanes are taken off the original "Ant. Trimmer" with the exception of 1 fixed and 1 moving. This may best be carried out by a sharp pull with a pair of thin-nosed pliers ; it is not advisable to attempt to unsolder the plates. This condenser then becomes the peaking control for the EF54 RF stage. As the tuned circuit is not quite sufficiently damped, this is arranged to have a flat response across the two megacycles ($\pm$1 mc) which is asked of it, especially if slight regeneration is present. The adjustment of this control on signals near the band edge should give a small but noticeable increase in signal-to-noise ratio. A similar fine-adjustment control could also be added to the EF54 mixer, but in the author's experience the trouble involved, due to layout difficulties, does not justify it, especially in view of the slight improvement only obtained.

***Compartment* 2.**—Again all coils and trimmers are removed, together with the 3-gang condensers and associated trimmers from above chassis. Also the mixer "co-axial Injection Pipe" is taken out. Rewiring to diagram presents no difficulty, although some trouble may be experienced in finding a suitable condenser to tune L4, in view of the small space available. It should be remembered at this point that some of the 2-gang condensers available on the surplus market are well suited to this task as regards physical dimensions ; also, as 180-deg. rotation is obtained, compared with 90 deg. on a Butterfly type, greater ease of adjustment is obtained.

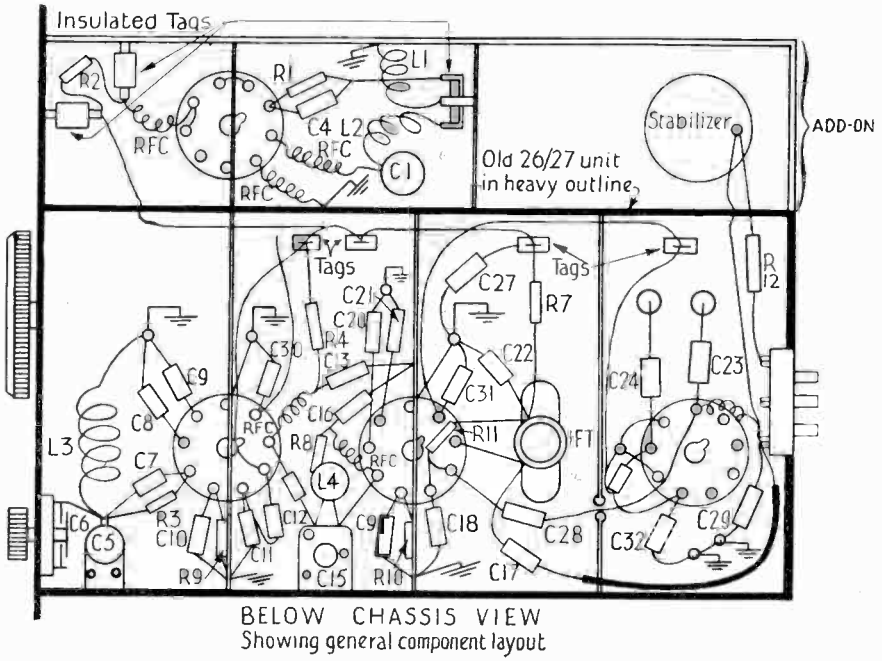
The combination of a de-coupled grid leak resistor in series with an RF choke helps to kill any unwanted IF break-through, as the RF choke, while effective on 145 mc represents an almost direct short-circuit to ground (*via* the de-coupling condenser) for the 8 mc signals. The chokes in the anodes of both RF stages perform the same purpose. This (together with an earthed centre tap to the aerial coupling coil) ensures the dead silent background essential to weak-signal reception, provided of course that no pick-up occurs after the mixer valve.

***Compartment* 3.**—Remove the 10,000-ohm damping resistor from across the IF transformer, also the screen grid de-coupling condenser, as screen injection is employed. (The original 2 $\mu\mu$F condenser from the "co-axial pipe" can be used here.) This passes from the mixer screen pin to the oscillator anode *via* a ¼ in. dia. hole in the sub-chassis screen, fitted with a rubber grommet. This lead should be kept as short as possible to avoid radiation and losses. It will be advantageous to remove the dust core from the IF transformer, as this will increase the IF to between 8 and 9 mc approximately. This increase makes it possible to remove the local oscillator frequency further from that of the signal, and thus reduce oscillator pulling and also swamping of the wide-band CV66 stage. In the author's case the IF was taken as far as 13 mc ; here, pulling is negligible, although it was found to be quite satisfactory in the 8-9 mc range.

***Compartment* 4.**—The most important part of the alterations is carried out in this section. Trouble here can spoil the whole job. The main tips, in order of importance, are : Rigidity of construction ; short, low inductance leads ; and good de-coupling to a common earth point. (The latter is also important in the RF stages.)

Remove all components, leaving only the 6-pin Jones plug and the insulated tag carrying the LT supply. The valve-holder (EC52) is replaced so that the grid and anode pins are brought near the 2-gang condenser, allowing short direct leads.

The 2-gang condenser is cleared of all components and wires, and all the rotor vanes are removed leaving only one plate in each section. Similarly all stator vanes are taken off with the exception of two in each section. Thus, each rotor meshes with its two immediately neighbouring stator vanes. The resultant capacity is roughly 6 + 6 $\mu\mu$F. This condenser is then mounted over the oscillator valve holder, slightly to the rear of its original position and such that the oscillator grid and anode leads are shortest. These



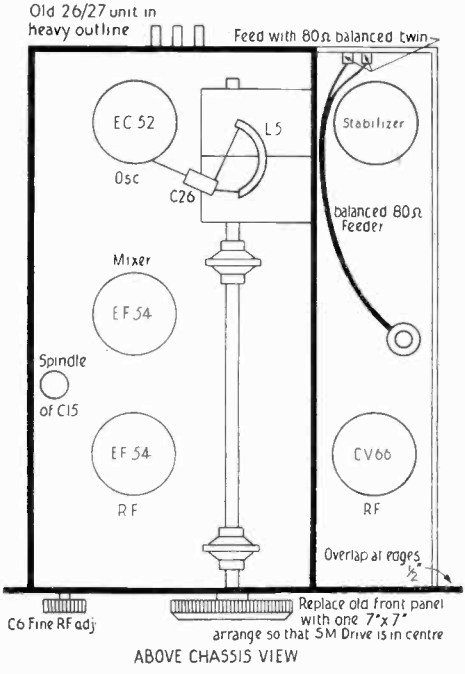
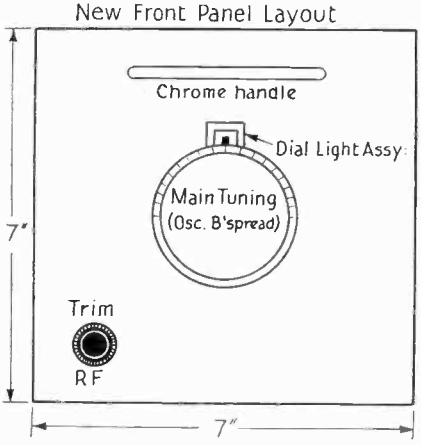


Fig. 2. These sketches suggest general layout details of the unit.

pass through holes in the chassis directly below the condenser lugs. Across the top lugs are soldered a Phillips concentric type 8-30 $\mu\mu$F trimmer (*ex* RF24-25, etc.). This is the band set trimmer. Also across



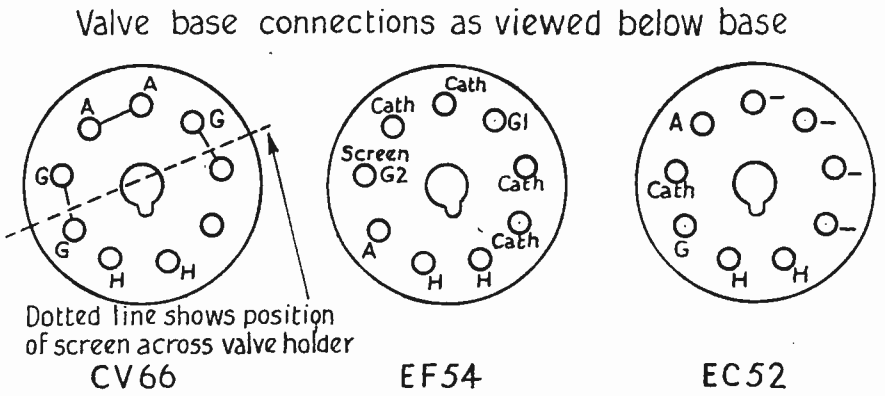


Fig. 3. Diagram showing valve base connections.

the lugs is a loop inductance of $\frac{1}{8}$ in. dia. brass-rod or suitable gauge wire. For best results the oscillator operates on the LF side of the signal frequency and the inductance is designed accordingly.

Alignment

This is complicated by the difficulty of "finding the band," a game which many played last winter ! If a calibrated signal source is not available, as will be so in most cases, one must rely on amateur activity. Although in event of a lack of such activity it is useful to know that in various parts of the country there are police channels in the 146-147 mc spectrum. These would serve as a useful guide, especially in the London area. A better method is to seek co-operation from a local amateur on two metres.

The converter is set up with power supply and an aerial, with the IF output connected to the main receiver. The RF fine adjustment is set at half mesh, also the oscillator band-spread (2-gang).

The main receiver is tuned around the 6-10 mc range for an increase in noise. This should give a sharp peak at the converter IF. The band-set trimmer is now rotated until a signal in the middle of the band is located. RF and mixer stages are now trimmed for maximum signal. Readjustment of oscillator tuning may now be necessary due to the pulling of RF and mixer signal circuits. Tuning procedure should be repeated at least once to ensure correct alignment.

Performance

When built as described the band should be found to occupy about 90 deg. on the dial. If this spread is not considered adequate it may be further increased by removing one stator on each section on the oscillator 2-gang condenser. The band should then be spread over the complete dial.

Various departures from the original circuit, as in this article, may be pursued if the reader so desires.

The oscillator may be operated on half frequency, injecting the 6th harmonic. This would give a greater degree of stability and improve the note, although a T9 signal sounded T9 on the converter even when the oscillator was working (145 mc + IF) mc, provided that due care is taken in the construction of this stage. Even without the CV66 and voltage stabiliser quite good results can be obtained and the author used such a receiver for some time, although, as would be expected, sensitivity and signal-to-noise ratio are not so good. A "dirty" or "rough" local oscillator will give the effect of poor signal-to-noise ratio. It was found that if an EC52 is slightly soft the note is often poor ; this may easily occur in the case of the delicate metal-to-glass seals becoming fractured. Reduced filament volts also give rise to "rough notes," and poor contact between pins and holders should always be guarded against when using B9G base valves (EF54, EC52, CV66, etc.). Whilst a converter of this type would in all probability not be as good as one using 6J6's, it does not come very far behind, thanks to the CV66. The author has had his for some time now and has logged numerous two-metre stations, including many over the 100-mile path. The aerial is a 4-element Yagi well below roof-top height.

Aerials for DX Reception

DIRECTIVITY OF MULTI-WAVE TYPES

PART II

by **THE OLD TIMER**

(The first part of this useful article—of particular interest to all SWL's concerned with getting the best possible results under practical conditions—appeared in our issue for November, 1949. Reference should be made to it for methods of coupling into the receiver, and the design of dipole aerials. In this part, our contributor discusses the problem of the directivity of an aerial and how to install it for reception from the required areas.—Ed.)

IN the previous instalment of this article we dealt chiefly with dipoles and aerials of "odd lengths," together with the methods of coupling them to various types of receivers. In this latter section I propose to make good my promise of some details about directivity.

It is very important to realise that almost any piece of wire—if it is long enough to be of any use at all—will have a directional effect to some extent. Many listeners who become discouraged because they don't hear some DX region well are not, as they think, *screened* from that region. It is merely that their aerials are not favourably aligned for it.

If, for instance, you have a dipole running North and South, there's not much point in complaining that you can't get good signals from South Africa, especially if you add "But I receive the States and Australia very well, so it can't be the aerial." That's just where you're wrong—it probably *is* the aerial. And the mere fact that its maximum directivity is to the East and West, thereby giving you *extra strong* signals from those directions, will show up the fact that it is poor to the North and South. (And it also proves that the aerial is working according to theory.)

First, let us consider the polar diagrams of a few simple lengths of aerial. Assume, for the sake of simplicity, that they all run North and South. The dipole (½-wave long) will give you the familiar "double doughnut" pattern with maxima to East and West. An aerial twice that length—full-wave—will give four main lobes, which are inclined to the actual plane of the aerial by 54 deg, but for practical purposes we may as well consider them as covering the North-East, South-East, South-West and North-West.

Now make it twice as long again—two wavelengths long—and you will still have four major lobes, now inclined at 36 deg. to the plane of the aerial. For practical purposes the pattern is, as yet, unaltered, and you will be best off for the four main directions we have just mentioned.

As you make the wire longer and longer, so do these four main lobes close in towards the plane of the wire, until, when you can say that you have a "very long wire" in terms of wavelength, the main lobes have practically gone round to the ends of the aerial.

For the record, here are the actual figures showing the inclination of the main lobes to the plane of the wire :

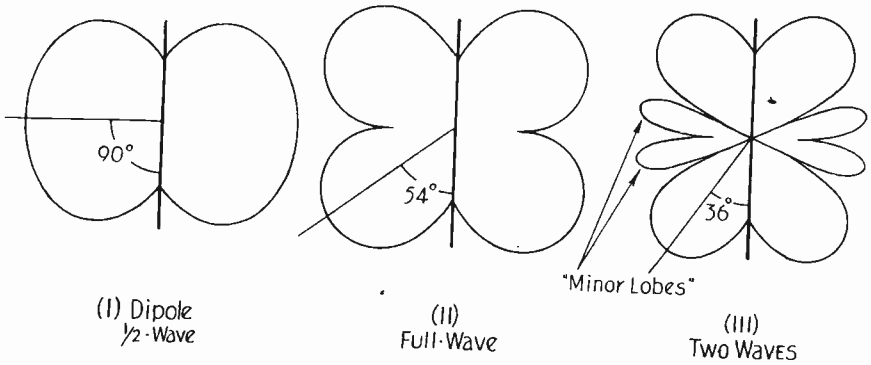
Half-wave :	**90 deg.**
Full-wave :	**54 deg.**
Two waves :	**36 deg.**
Three waves :	**29 deg.**
Four waves :	**25 deg.**
Six waves :	**21 deg.**

Note, also, that as the lobes swing round towards the plane of the aerial they become narrower and, if you like, "longer"—in other words there is a substantial *gain* in those directions over that given by a dipole. Taking the signal received by a dipole as the standard figure of 1, one finds that an aerial four waves long gives a gain of about 2½ in the direction of the major lobes ; by the time you reach something 12 wavelengths long you have a power gain of 7, which is very considerable in comparison with the simple dipole.

So you will realise from this that an aerial, say, two waves long, so aligned as to put a lobe in your favourite direction, will be *better* for you than a dipole. I mention this because so many beginners seem to regard the simple dipole as if it gave a sharp *beam* in its two main directions, which it certainly doesn't.

The preceding paragraph will explain (if you care to check with a Great Circle Map) why a 66-foot, or even a 33-foot, aerial running East-West will give you better signals from the U.S.A. than a dipole running North-South.

The moral is this : If you *have* some outside space, by all means use as much of it as you can, particularly if you are interested in more than one wave-band. Check up the



Polar diagrams of the receiving aerials discussed in the text. In the average location, they conform very closely to this in practice, and directivity can be confirmed by carefully plotting on a great-circle map the signal strengths of received stations.

direction in which your wire will have to run (unless you are in the open country and can put up two of them at right-angles) and then draw a rough lobe-pattern on a Great Circle map, and you will see roughly what areas you can expect to cover with substantial help from your aerial.

If, on the other hand, you are short of space, make the best of things with a dipole or dipoles, which, by the way, don't *have* to be fed with co-axial line. A dipole is still a dipole even if it's a Windom, fed by a single wire tapped one-third of the way along the aerial. Furthermore, a long wire can be fed in this way and it will still perform well on several bands.

Once you start making your wire *really* long (four waves or more) you can end-feed it with impunity, by including the length of the downlead in the total length of wire. If the downlead is not much longer than half a wavelength it will have practically no effect on the pattern of the flat top, and, furthermore, will give you a beneficial bit of vertical or sloping wire which helps in covering the areas which normally come in the *minima* of the pattern given by the main wire.

Vertical Aerials

This brings me to the subject of vertical aerials, which are not, of course, directional but are nevertheless very useful where space is short. They can be *made* directional by putting another vertical wire behind them, in the manner of the familiar "H" type of television aerial ; but even for the ten-metre band this implies the possession of a certain amount of space.

Similarly those dipoles in the roof can be made directional by putting up a reflector, but not many short wave listeners would have any use for an aerial that can pick up in one direction only. Rotary beams are the logical development of the fixed dipole and reflector, but they cannot be installed in the average loft, and even if you go to the trouble of building a substantial mast or tower and putting one outside, you are still tied down to one wave-band.

Which Direction ?

In case you have not a Great Circle Map (and you certainly should have, because it tells you a lot of things that you would never guess from looking at "Mercator") here is a greatly simplified grouping of the main areas of the world under eight headings :

North :	Alaska, Midway, Fiji, Samoa, North Island of N.Z.
North-East :	Siberia, New Zealand, Japan, Marianas, Solomons, New Guinea.
East :	India, Ceylon, Singapore, Dutch East Indies, China, Hong Kong, Australia.
South-East :	Egypt, Aden, Sudan, Kenya, Uganda, Tanganyika, Mauritius, Ethiopia, Somalia.
South :	Gold Coast, Nigeria, Ascension, Tristan da Cunha, South Africa.
South-West :	All South America.
West :	West Indies and all Central America, Mexico and some of the U.S. Fourth District.
North-West :	U.S.A., Canada, Tahiti, Hawaii.

Do some of those surprise you ? They probably do.

You will see, from that list, that any longish wire running *either* East-West or North-South (and therefore best, roughly, for the four directions North-East, South-East, South-West and North-West) will bring in most of the world's DX areas.

Another point I have not mentioned is that the longer wires all have a convenient bunch of minor lobes spreading round the

direction at right-angles to the wire, so that the only areas which are really *poor* are those off the ends of the aerial. As the aerial is made longer these become less poor until they almost become the maxima.

For this reason an East-West long wire will bring in what we may call the four "diagonal directions" (see above) and will also be reasonably good to North and South. A North-South aerial will have a somewhat similar main pattern but will also be fairly good to East and West.

So think it over ; look at the direction and the length that you have available ; and then put up the piece of wire that makes the best use of it. It will, of course, give you different polar diagrams on the various bands, but that all adds to the fun. One thing I can guarantee will tend to surprise you : if it is reasonably clear of obstructions your aerial *will* conform to the theoretical prophecy! If you mark in, on a Great Circle Map, the places from which you receive the very strongest signals, you will gradually find that you are drawing the lobe pattern of your aerial.

Likewise, if you already have a cherished "piece of wire" of indeterminate length, find out what its length and direction is. The answer may explain a lot.

PSE QSL

The operators listed below have informed us that they would like SWL reports on their transmissions, in accordance with the details given. All correct reports will be confirmed by QSL card. To maintain the usefulness of this section please make your reports as comprehensive as possible.

CR7BC *Manuel Pereira da Silva, P.O. Box* 812, *Lourenco Marques, Mozambique.* 14008, 14083, 14104, 14168 and 14251 kc 'phone and CW.

DL1FQ *Elmshornerstr.* 100, *Itzeho/Holstein, Germany.* Modulation of 3·5, 7 and 14 mc 'phone, week-ends. 0900-1600 GMT.

DL1GV *Neustadt* 2, *Flensburg, Germany.* Reports from B.W.I. and S. Africa, 3500, 7000, 7020 and 14048 kc CW. 0400-0700 and 1700-0100 GMT.

DL1MB *Merzigwer* 6, *Ulm/Donau. Germany,* 3·5, 7 and 14 mc 'phone and CW, 2000-2359 GMT.

DL1NS *Emschestr.* 4, *Hattingen/Ruhr. Germany.* 3·5 and 7 mc CW at 0100, 0800-1100 and 1700 GMT.

DL2MO *R. Wallis. Army Kinema Corp., Iserlohn, BAOR* 24. 14 and 28 mc 'phone, 1700-2359 GMT.

G2BDR, 57 *Bradwell Avenue. Stretford, Manchester.* 7 and 14 mc CW, VFO, operating 2000-2200 GMT.

G2CDN 16 *Southside, Dalmeny Avenue, London,* N.7. VFO-controlled 14 and 28 mc 'phone, 1230-1330 and 1800-2015 GMT.

G3CIL 48 *Rishton Avenue, Bolton, Lancs.* 7 and 14 mc CW, 0300-0630 and 1800-2200 GMT. Reports from outside U.K. only.

G3CNF 3 *Burnham Crescent, London, E.*11. 145·2 and 145·44 mc 'phone, evenings and week-ends.

G3EGE 16 *Lorne Grove, Woodborough Road, Nottingham.* 1·8 mc 'phone and CW, Sundays 1900-2230 G.M.T.

G3EKP 2 *Church Terrace, Darwen, Lancs.* Critical reports on quality of 1·7, 7 and 14 mc 'phone.

G3FEH 63 *Bordesley Road, Morden, Surrey.* Reports from Zones 5, 15, 33, 34 and 35 on VFO-controlled 7 mc CW, 1800-2200 GMT.

G3FRT 32 *Cable Road, Hoylake, Ches.* 1·7, 3·5, 7, 14 and 28 mc CW, 0700-0830 and 2200-2359 GMT.

G3FWE 23 *Fitzroy Street, Sandown, Isle of Wight.* Reports on 7, 14 and 28 mc CW operation.

G3FZS 26 *Redhill Drive, Fishponds, Bristol.* 1·7 and 3·5 mc QRP CW operation.

G3GBH 32 *Willow Garth, Newby, Scarborough, Yorks.* Stability of 7 mc CW, VFO, after 1800 GMT and week-ends. Reports from over 100 miles.

G3GBO 9 *Oxford Gardens, Denham. Bucks.* Stability of 1·7 mc, VFO, and 145·72 mc CW, evenings.

G3GSS *Loretto, Gores Lane, Formby, Liverpool.* 1·8 mc CW, VFO, operating 1900-2200 GMT on Tuesdays, Thursdays and Fridays.

HA4SA *Jaszkurt-u.* 2, *Szolnok, Hungary.* 3·5, 7, 14 and 28 mc 'phone and CW, operating 0500-0630 and 1830-2300 GMT.

HC5MM *P.O. Box* 198, *Cuenca, Ecuador.* 3·5, 7, 14 and 28 mc 'phone, operating 1100-1500 GMT.

OH3PB *Hallituskatu* 20, *Tampere, Finland.* 3680, 7100 and 14200 kc 'phone operation.

ON4IB *P.O. Box* 38, *Brugge, Belgium.* 3·5, 7, 14 and 28 mc CW operation.

OQ5DG *P.O. Box* 43, *Usumbura, Ruanda Urundi, Belgian Congo.* 28194 and 28240 kc 'phone, 1730-1900 GMT, and Sunday mornings.

PY1ACY, *Rua Nascimento Silva* 572, *Rio de Janeiro, Brazil.* 28408 and 28460 kc 'phone, operating 1700-2000 GMT week-ends.

PY5RT *Willenski, Joao Pessoa, s/n, Italopolis, S. Catarina, Brazil.* 3824, 7045, 7135, 14090 and 14270 kc 'phone and CW, 2100-2359 GMT.

PY6CO *P.O. Box* 1101, *Salvador, Bahia, Brazil.* VFO 'phone, 0830-1130 and 2000-0200 GMT.

SM4ANM *Vindarnas vag* 12.A, *Karlskoga,* 5, *Sweden.* 7 mc CW, operating 1600-2359 GMT.

SM5RE *Idungatan* 10, *Stockholm, Sweden.* Quality of 3·5, 7 and 14 mc 'phone, and CW, 1600 GMT.

ST2AM *R.A.F. Station, Khartoum, Sudan, M.E.A.F., M.E.L.F.,* 4. 28·3 mc 'phone and CW, 1200-1600 GMT.

ST2KR *P.O. Box* 253, *Khartoum, Anglo-Egyptian Sudan.* 7, 14 and 28 mc 'phone and CW. 1200 GMT onwards. Report transmissions *not* beamed on U.K. with type of aerial as stated in same.

VE2AGO *c/o* 193 *Worting Road, Basingstoke, Hants.* 3·5 mc CW, and stations heard calling VE2AGO.

VE2TA 4575 *Lacombe Avenue, Montreal, Quebec, Canada.* 7 mc CW, 0400 GMT; 14 mc CW, 2100 GMT.

VE3BSN 1030 *Frances Street, London, Ontario, Canada.* Modulation of 28272 kc 'phone, 1400-1600 GMT.

VE3GU 130 *Garfield Avenue, Toronto, Ontario, Canada.* 28350, 28472 kc 'phone quality, 1430-1530 GMT.

VE6AC 1708 *Sixth Avenue N.W., Calgary, Alberta, Canada.* 3·5, 7. 14 and 28 mc 'phone and CW.

VK3NM 61 *Narrawong, Caulfield, S.E.8, Victoria. Australia.* 14 and 28 mc 'phone and CW, VFO.

VP3TY 223 *Camp Street, Georgetown, British Guiana.* 7 and 14 mc 'phone and CW, at 1600 GMT.

VU2JP *J. Nicholson, Munnar P.O., Travancore, India.* 14030, 14234, 28060 and 28468 kc 'phone and CW. 0800-0900, 1130 GMT, and week-ends. Reports from Cupar, Dundee, Leuchar, Edinburgh.

W1JGY 28 *Holmes Road, Pittsfield, Mass., U.S.A.* 3·5, 7, 14 and 28 mc 'phone and CW, VFO.

W1KTG 26 *Gray Gardens E., Cambridge, Mass., U.S.A.* 14080 kc CW, 1900-2300 GMT. Details Wx.

W1WU 88 *Dudley Street, New Bedford, Mass., U.S.A.* VFO all bands, AM, FM and CW, 1200-2359 GMT.

W2OZ 46 72*nd Street, Brooklyn, N.Y., U.S.A.* 3·5, 7 and 14 mc CW operation.

W3NJL 1042 *Water Street, Moosic* 7, *Pa., U.S.A.* 14 and 28 mc 'phone, VFO, 1500-2359 GMT.

W5LMO 162 *Evans Street, Houston* 17, *Texas,* U.S.A. Quality of VFO-controlled 14 mc CW.

W6ZEN *F. McPherson, c/o Mayfair Theatre, Ventura, Calif., U.S.A.* 7, 14 and 28 mc 'phone and CW, 2300-0200 GMT.

W8BMD *H. W. Allen, R.R.*3, *Box* 134, *Dayton* 3, *Ohio,* U.S.A. 14 mc CW operation, after 2230 GMT.

W8JWC 706 *Grove Street, Conneaut, Ohio, U.S.A.* 14060 kc CW, 3 watts, 2200-0300 GMT.

W8WWU, 810 *Webster Avenue, Hamilton, Ohio, U.S.A.* 14 and 28 mc CW, 0400-0700 and 1100-1300 GMT.

W8ZJO *E. M. Quinn, RFD,* 1, *Wickliffe, Ohio, U.S.A.* 14 mc CW, 1100-1400 and 2300-0100 GMT.

W9KQB 2001 *Washington, Manitowoc, Wisc., U.S.A.* 7000-7050 kc CW, 0400-0700 and 1200-1500 GMT.

WØEWF 577 *West Jackson, Marshall, Mo., U.S.A.* 14014, 14046, 14081, 14093 kc CW, 0600-0800 and 1800-2100 GMT. Tone and "echo" reports.

WØGNG 4342 *N. James Avenue, Minneapolis, Minn., U.S.A.* 14·1 mc CW, VFO, 0500-0600 and 2100-2300 GMT.

WØMJA *G. Boltz, Box* 257, *RFD.* 5, *Denver, Colorado, U.S.A.,* 4. 14 and 28 mc 'phone operation.

WØNFA 2110 *Parkridge Avenue, Brentwood, Mo., U.S.A.* Portable mobile, 14 and 28-30 mc'phone, 1330-1430 and 2330-0130 GMT.

XE1WW *P.O. Box* 12544, *Mexico City, Mexico.* 14·3-14·325 mc 'phone, 0300-0600 GMT; 28·8-29·5 mc 'phone, 1800-2359-GMT.

ZE2KJ *Box* 999, *Umtali, S. Rhodesia,* 14140 and 28280 kc 'phone, 1630 GMT. Reports especially from Sheffield and Derby areas.

ZS5BK 13 *Baker Road, Pietermaritzburg, S. Africa.* Comparative reports and quality of 14010-14350 kc 'phone and CW, 1500-1900 GMT.

4X4RE *Box* 4099, *Tel Aviv, Israel.* 14 and 28 mc CW, 1700-2100 GMT. Report tone, also details of any harmonics. Enclose IRC.

THE CALL BOOK

The G listings in the latest (Autumn) issue of the American *Radio Amateur Call Book* run to 48 columns, giving the addresses of some 5,500 British stations. Amateurs throughout the world are listed, the first section consisting of 654 columns of American stations, with the rest of the world shown alphabetically by country prefix and giving the Zone area for the country in each case. It should be noted that for the present, the *Radio Amateur Call Book* cannot be obtained by direct order in this country. We hope shortly to be able to announce new arrangements for those—and they are many—who want it as each quarterly issue appears.

THE BSWL

We are glad to be able to say that although the reorganisation of the British Short Wave League was only announced last month, the new basis of working has already found wide favour and there is a steady demand for details of membership. The League is a very attractive proposition for anyone who, with a real interest in short wave radio, wishes to join a progressive association aiming to cater for all branches of the art. The combined *Short Wave Listener/BSWL Review* is a 44-page monthly which is alone well worth the subscription. Write The Manager, British Short Wave League, 53 Victoria Street, London, S.W.1, for full details.

Have you heard?

AMATEUR BAND COMMENTARY *by the DX Scribe*

ONCE again we stop the busy roar of generators, transformers, battery-chargers and furiously-rotating receiver controls in "The Shack" to bring to you the news of the month. Every time that your Scribe has to tear himself away from the receiver for a few days in order to write this Commentary for you, the conditions suddenly seem to improve ; but listening on the amateur bands and writing about them don't mix, so the customary blank pages in our own log will be there again this month.

Everything goes along ; conditions have been patchy but, on the whole, very good. The Set Listening Periods were well supported, although the hour on 14 mc seems to have been pretty dull going. The 28 mc morning period was much more fun and readers, between them, raked in such nice prefixes as CR7, YV, HC, VP4, ZD1, HH, KG6, VS7, OQ, TF, LX, VP6 and MP4—just to quote the better ones as they come out of the hat. But most of the DX reported was rather of the bread-and-butter variety. Not one of those red-letter days when KJ6, KS6, ZD9 and AC4 come showering down like confetti ! (Was there ever one ?)

DX OF THE MONTH

I have decided to try a slight change in the layout of this feature—chiefly for *your* benefit. Lately, I have been covering the DX bands in separate sections, and this has meant that most readers have been mentioned at least twice, and in some cases as many as four times. Then, if they have miscellaneous "gen" and queries to add, there are two more mentions. All this is a little wasteful of space. So, in future, I propose to start off by covering the main DX of the month, band by band, as extracted from all your letters.

After this I will cover your various points, irrespective of whether they are queries, statements, claims or whatnot, letter by letter.

BEST DX FOR NOVEMBER

Here is your super-DX, sorted out into bands. No individual credits are given, because there is too much of it ! **28 mc phone** yielded the following : From Africa there were CR7IL and 7IW, ET3AF, FF3CN and 8FP, VQ5ALT, ZD1BD, 1FB and 1PW, and ZS9F. From Asia we had HS1SS, PK3WH and 4DA, and lots of VU's, XZ's and KR6's. From Central America there were HH1SW and 2W, HP1LA, VP5AR, YN1HB and 4NW, and YS2AG. South America gave us CP1AM, ZP3AW and 5BL, and Oceania fairly dripped KG6's.

28 mc CW produced nothing very unusual except CR9AG, FM8AD and FO8AB.

The best DX on **14 mc phone** seems to have been CR7BV, EA8BC and 8CM, FM8AD and F9QU/FM8, FF3CN, 8FT and 8MH, HH3DL, HI6EC, HP1CN, HR2RF, lots of KR6's, OQ5DZ, TF3EA, VP2DB, 3HAG, 3HL and 3LF, VR2AA, XZ2KN and 2SY, VQ8AX, YS1GM and 1MS, and ZP6AC.

14 mc CW was the best of all, with AC4RF, C8FP, CE7AA and 7AK, CT3AV, EA9AI, FF8MH, FI8AK, FK8AC, FM8AD, FO8AC, FY8AC, HS1SS, HZ1KE, KG6DI, VK1VU, VP8AK, VQ1CUR, VQ8AX, ZD2LMF, ZD7G, ZD9AA and ZS9D. (Quite a few happy smiling faces represented among that lot !)

Those who listened to **7 mc CW** were well rewarded with AP2K, C1ST, CO5PN and 6ZE, CZ2AC (?), EA6AF, EK1AO, FE8AB, KJ6BG, KZ5DR, MD2PJ, TA3GVU, TF5TP, YV5BX and a lot of VK's, ZL's and ZS's. **7 mc Phone** yielded no more than CO6AB, CT3AC, LU9BH, PY2AI and ZB1AJX.

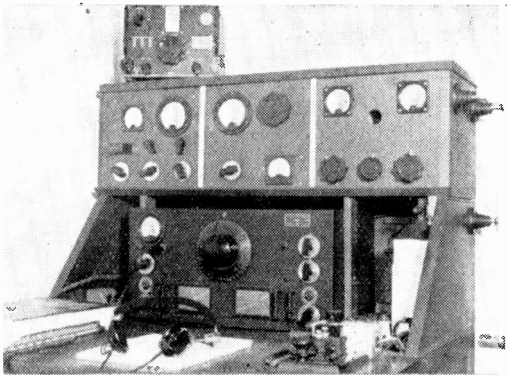
The few followers of the **3·5 mc band** found CT3AB, EA9OL and VK5KO on *CW*, with FA8BG, CT1EQ, OY2RD and TA3GVU on *phone*.

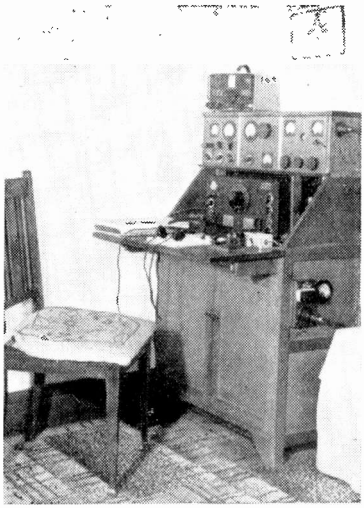
One single surprise packet on the **Top Band** was MD2GO on *CW*.

Congratulations and thanks to all those readers who made this little summary possible. Now to deal with some of them individually.

READERS' NEWS

D. W. Bruce (Eltham) will be "leaving us" for a while to sample the joys of the R.A.F. We wish him luck. As a parting shot he writes that he has heard the following Mobiles :





G5SR, Harrow, is operated on 14 and 28 mc CW only, and is housed in an oak desk. The Tx is 6V6-807-807 into a pair of 807's in parallel running 100 watts input. The aerial is full-wave on Twenty, fed with 600-ohm line, and 165 countries have been worked on 14 mc.

W2RVY, 2PRP, 4JQU, 8GHV and 8RHG. Most of them used nothing more than a whip aerial on the car, and power was generally less than 20 watts. He adds that they are naturally very bucked at receiving reports, and always QSL. Something here worth listening for ! D.W.B. logged FO8AB at 1830 on 28 mc CW —unusual and worthy of note.

H. M. Graham (Harefield) asks whether Saipan counts as a country. It doesn't—it's just "Marianas," along with Guam and Tinian. H.M.G. has found 7 mc rather better, and logged CT3AC and ZB1AJX on 'phone up there. K. Parvin (Thornton Heath) sends a good list of DX and asks who VK8RA (called by ZL4HP) might be ? He also tells us that FY8AA has been donated a modulation transformer by some enterprising W's, so he will soon be on 'phone ! FR8AA is on 14010 CW, according to the W's, and VP5BD and 5BE are both operating 7 mc CW from Cayman Islands.

Talking of 7 mc, D. Powell (Wilton) has been active there and heard, among lots of others, our old friend CZ2AC (who *was* a phoney).

A. H. Edgar (Newcastle) rises to the proud position of heading the "Zones Heard" list this month—he bagged them all ! Having found C8FP and AC4RF for a "double" in Zone 23 early in the month, he decided to go flat out for the 40, and succeeded. He has been most pleased with 7 mc, where, he says, the Far East has been bowling in around 2200 GMT. Among his best are AP2K, KJ6BG, CE's, KL7's, TA3GVU and YJ1AA—although I think the latter might be phoney. On 3·5 mc he heard VK5KO. With regard to the possibilities of DX on the Top Band, A.H.E. adds that he logged PJC (a commercial in Curacao) on 2315 kc at 2100 one evening, so it looks hopeful.

Forty was also well combed by W. J. C. Pinnell (Sidcup), who extracted F9JD/Corsica, HP1LL, EK1AO and VP7RL. He adds the welcome news that he has received a QSL from SP5AB, complete with Polish stamp and Warsaw postmark—this for a 7 mc report.

TOP BAND TOPICS

Slight break-off for some Top Band news. Thanks to the many readers who have written to say that Ken Ellis, HZ1KE, is active on the band (although no one has yet heard him). I have heard from him direct, and this is what he says : "Shall be on Top Band during week-ends, about 0200-0300 GMT, all through winter looking for G contacts, also 3·5 mc by arrangement. Am receiving a lot of listener reports (most of them useless) but will reply if stamped addressed envelopes are enclosed. International or B.E. coupons no good here as our own mail goes out with British stamps." Note that "most of them useless"—and don't just send him a report on 14 mc or somewhere when he obviously knows that signals are getting to England anyway !

D. Powell (Wilton) scooped the pool this month by hearing MD2GO working G5KT (about 0215 GMT). He was near 1720 kc and peaked at RST 568. During the MCC

FOUR-BAND DX

Listener	28 mc	14 mc	7 mc	3·5 mc	Total
A. Bannister (Manchester)	136	150	22	21	166 (P)
R. L. Bastin (Coventry)	71	97	18	20	113 (P)
J. C. Beal (Wembley)	73	150	36	19	154
N. S. Beckett (Lowestoft)	70	157	74	29	168
D. W. Bruce (Eltham)	154	208	69	34	217
P. Bysh (London, N.8)	83	90	18	14	110 (P)
A. T. Cheesley (London, E.10)	77	108	13	9	120 (P)
P. E. Chinn (London, S.E.22)	136	124	11	11	146 (P)
D. K. Cocking (Farnborough)	37	76	16	6	86 (P)
T. W. W. Dearlove (Frimley Green)	102	92	17	11	133
F. K. Earp (London, S.W.11)	118	144	31	27	162 (P)
R. A. Fowler (Cranwell)	89	140	27	21	154
A. O. Frearson (Birmingham)	68	64	14	8	102
C. J. Goddard (Coventry)	3	116	26	26	116
O. A. Good (Oswestry)	126	205	14	8	206
H. M. Graham (Harefield)	66	124	24	19	131 (P)
J. M. Graham (Glasgow)	133	140	25	26	149 (P)
K. G. Harland (Westcliff)	45	69	10	17	89 (P)
R. A. Hawley (Goostrey)	139	158	29	19	188
F. A. Herridge (London, S.W.12)	134	93	37	16	152
B. Hummerstone (S. Harrow)	59	96	17	17	112
A. L. Higgins (Aberkenfig)	71	103	18	15	118
T. W. Jones (Birmingham)	54	183	63	22	184
D. S. Kendall (Potters Bar)	132	142	26	29	161 (P)
A. Levi (Belfast)	110	127	10	18	153 (P)
R. J. Line (Birmingham)	66	96	11	8	115 (P)
P. G. Lucy (East Barnet)	106	111	21	23	137 (P)
D. G. Martin (Cheltenham)	87	115	17	19	141 (P)
O. R. F. Mason (Prittlewell)	3	76	16	11	77 (P)
D. L. McLean (Yeovil)	145	148	19	18	168 (P)
J. P. Moore (Solihull)	94	15	18	17	103 (P)
G. Murray (Newcastle)	4	74	14	3	75 (P)
G. Musk (Blackpool)	17	96	12	14	100 (P)
C. A. Naylor (Farnworth)	98	72	15	12	113 (P)
E. J. Parish (Watford)	115	142	17	23	159 (P)
K. M. Parry (Sandwich)	102	107	13	15	125 (P)
K. Parvin (Thornton Heath)	119	151	29	29	157 (P)
W. J. C. Pinnell (Sidcup)	130	181	83	29	189
C. S. Poole (Ipswich)	70	98	21	24	116 (P)
D. Powell (Wilton)	83	128	69	29	142
A. W. Robertson (Cranford)	96	145	22	20	158
A. G. Scott (Liverpool)	30	67	15	5	79
D. Shallcross (Derby)	91	110	19	20	126
K. Smecton (Barnton)	97	132	22	22	145 (P)
A. Studley (Harrow)	51	131	63	37	141
L. Tombs (Swindon)	122	116	17	21	139 (P)
D. W. Waddell (Hitchin)	84	182	62	27	186
J. P. Warren (Croydon)	75	123	17	12	131 (P)
M. G. Whitaker (Halifax)	98	128	24	27	146 (P)

(P) *Signifies 'Phone Only*

event, D.P. heard 8 *countries* on the band, and he has now heard 10 altogether.

G. C. Allen (Thornton Heath) made the best of both the RSGB and the MCC Contests, and still leads the "Counties Heard" with what I think is an unbeatable score of 65. During the tests he heard everything that was going, but his total was already so high that he found little new. Of those 65 counties he says that 61 have QSL'd ; as G.C.A. has now heard more than 1,000 G calls on the Top Band alone he finds himself practically running a QSL Bureau !

L. Singletary (Bicester), another ardent devotee, hopes that GW3FFE in Rhigos might give him another county, but as Rhigos is in Glamorgan I doubt it ! He still gets a big kick out of the band and says that far too many people thrash 14 and 28 mc to death. Those in search of something fresh might well note those remarks.

BACK TO THE DX

D. L. McLean (Yeovil) comes up with his usual imposing lists on 14 and 28 mc. He has found the latter band very good, although it fades out at 1930 whereas at the same time last year it was open two hours later. Round about 1000 GMT the KG6, KR6 and JA stations have been good, but not for the whole morning. D.L.M. tells us that he heard FF8JA mention that the following were active : FF8CG, 8FP, 8GP, 8MM and FD3RG. And a fellow SWL has received a QSL back from YJ1AA for a 14 mc 'phone report, which was the first from G ; the YJ was heard about 0800.

MARITIME MOBILES

L. Chastey (Penzance) says that an American Maritime Mobile Club has now been formed, and has 67 members already. The guiding light is W5AXI/MM ("Hutch"), and any station working 30 of the members will be presented with a handsome certificate. Worthy of mention is L.C.'s reception of FY8AC on 14 mc CW.

R. A. Hawley (Goostrey) has been chasing the MM's, as usual. He should be made an Honorary Member of that Club ! Funnily enough he, too, logged FY8AC on 14 mc—perhaps it's a reward for Mobile-chasing ? He wants a list of UAØ calls in Zones 18 and 19. All I can say, at the moment, is that UAØKFD and UAØKQA are definitely in Zone 19 and that all the other *active* ones, including UAØAA, a newcomer, seem to be in Zone 18. E. H. Williams (Poole) also mentions the MM's and says that W5AXI/MM is to be "Vice-Commodore" of the fleet.

U.S. MILITARY STATIONS

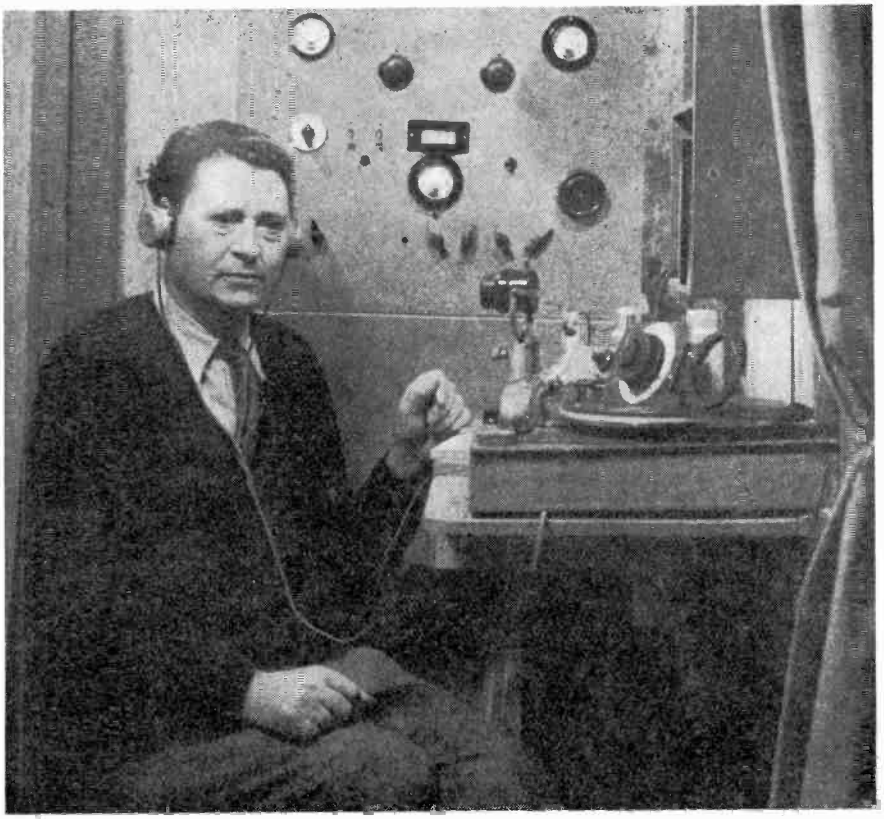
R.A.H., E.H.W., and several others mention the stations AK2CO and AK2COA on 14410 kc. These are in the same category as AE3US, AE4US, AJ3H, AIR and all that crowd on 27990 kc. They are stations in the Military Amateur Radio Service and are not allowed to work crossband (that is, into the amateur bands). Many of them *are* active amateurs, but they just have to shift frequency and revert to their amateur call-sign if they want to work others. WAR, on 14410, asked for reports, by the way, so this "just-outside-the-band" business may interest some of you —but don't let's devote *too* much space to it, particularly as these chaps are all very high-powered by amateur standards.

O. A. Good (Oswestry) says that his best single day's reception was on November 7, with KG6SF (28 'phone) in the morning, FK8AC (14 CW) in the evening, and then, later on 14 mc 'phone, HI6EC, CR5UP, YN4CB, VP5RS, CO8MP, HP1LB, HR2RF, TI2KW and F9QU/FM8. Lots of listeners would be glad to log that crowd in a month ! O.A.G. found an unusual number of CR7 stations both on 14 and 28 mc, and, of course, logged CR5UP nearly every day. He, by the way, is on his way back to Portugal, so if you don't hear him soon—you've had him !

A. Poklewski (Iver) remarks that people seemed to miss VQ1CUR (Zanzibar) during the *CQ* Contest early in the month. As it happens, he's right—very few do mention

DX QTH's

EA8AE	Lucas Fernandez St. 17, Puerto de La Luz, Canary Is.
EK1DL	Box 57. RCA Communications, Tangier, Morocco.
KG6SF	Navy 3245, c/o PM, San Francisco, Calif.
MI3SI	Radio Marina, Asmara, Eritrea.
VE8MC	c/o Weather Bureau, Washington, D.C. (*Station on Prince Patrick Island.*)
VP2GK	c/o Pan American Airways, Grenada, B.W.I.
VP4CO	APO 869, c/o PM, New York.
VQ4AI	RAF Nairobi, Kenya Colony.
YJ1AA	F. H. Palmer, Vila, New Hebrides, Oceania.
YO3RI	Box 95, Bucharest, Roumania.
YU3A	Box 180. Ljubljana, Yugo Slavia.
ZB2I	E. D. Wills, 9 Naval Hospital Road, Gibraltar.
ZD1FB	Lungi Airport, Freetown, Sierra Leone.
ZD4AE	G. R. Stewart, A.B.A., Ltd., Box 26, Tarkwa, Gold Coast.



FT4AS, Bizerte, Tunis, runs a 6V6 ECO-6L6-807 transmitter, with a pair of 6L6's as modulator, into a 14 mc dipole.

him. It was VQ4CUR on a specially-arranged trip to VQ1, using low-power CW for the Contest period, and quite a nice scoop for the few who heard him. A.P., along with many others, queries "FM1SS," spending most of his time calling CQ and not answering stations who went back to him. The phoniest of phoneys. I should say. Someone says he is in Algeria or French Morocco.

M. Whitaker (Halifax) comments on the way the "rare" States have come in on 28 mc 'phone recently; he picked up Utah, Idaho and Arizona, all at S9-plus. M.W. claims a 7-minute "HAC" on 14 mc 'phone, with ZS6DW, VE8MJ, LA5JB, ZL1PJ and 4X4BL—but I don't see a South American there. Surely we want six continents for HAC, same as WAC?

D. Dadswell (Steyning) and others comment on 4X4CV/Airborne Mobile, heard on 7 mc (1315 on November 8). W. Kyle (Newcastle) logged TA3GVU (S9-plus) on 3·5 mc 'phone, and comments on the excellent state of 7 mc. (These Newcastle fellows seem to have better conditions on 7 mc than we have down South.) D. G. Martin (Cheltenham), referring to 3·5 mc, says he has been hearing the W's and VE's as early as 2215 and as late as 0815, but they all get on top of one another and it's getting as bad as 14 mc.

J. P. Warren (Croydon) finds 14 mc at its best between 1700 and 1800, and asks for earlier SLP's. As it happens, the next one *is* earlier—but not all that early. C. J. Goddard (Coventry) pleads for SLP's in the middle of the month, so that one doesn't have a scramble writing the thing up and posting it off. Trouble is that many readers are somewhat late getting their copies, and we have to allow a reasonable time between publica-

tion date and the date of the SLP, or many would forget it, even after the reminder that we give them the previous month. I, too, should like more time between the SLP and the preparation date for the next "Have You Heard?" but our schedule is tight and we have to stick to it if we are to continue giving you "this month's news in the next issue." As it is now, the DX news in the *Short Wave Listener* is a lot hotter, from the point of view of dates, than any other news of its kind published anywhere in the world (and that is not a "line," but a hard fact). It's a concrete advantage of our tight schedule.

EXASPERATION

K. R. Toms (Boreham Wood) has been off the air for some time and had forgotten some of the exasperating things that go on. He was soon reminded, though, when he "came back" —local stations who call CQ, obviously without listening, right on top of some nice DX; Italians who splash over half the band and punctuate their CQ call with a recital on the tubular bells; a G station who called CQ more than forty times without giving a call-sign. And so on. K.R.T. adds that VK and PY can't be called DX any longer, but that ZS's can be difficult when they are coming over at the same time as W's, and with a high noise-level. No, K.R.T., MC1 and MD2 (or MT2) are *not* separate countries. Yemen *was* separate from Saudi Arabia once, but I think the Powers-that-Be have changed their minds recently.

QUICKIES

J. Honey (Edenbridge) was pleasantly surprised to hear KR6CO and several KG6's pounding through on 28 mc; they *have* been excellent at times. R. C. Kenny (Enfield) suggests that "FL5BB" must have been SL5BB, and "UK5UB" probably UB5UB, who has been heard on 28300. J. H. Austin (Coventry) says that ZC3CQP is in "British Gwadar" (wherever that may be) and says "QSL *via* RSGB." Also that MJ4BAG is on the Farsan Islands in the Red Sea. Both of these are on 28 mc. VT3RF says he is in Kuwait; EQ3SAM is, of course, genuine in Persia.

F. K. Earp (London, S.W.11) has put away converters and superhets and things and is running a 0-V-1, with which he is delighted. He is ready for the SLP but severely ticks me off for choosing Boxing Day. Sorry! F. A. Herridge (London, S.W.12) asks whether anyone has "HAZ" on 28 mc only. He still needs Zones 1, 18, 19, 23 and 39. He tried for 100 countries on the band during the month, but stuck at 34Z and 97C (which still seems pretty good to me!)

K. M. Parry (Sandwich) is another "regular" who is leaving for the R.A.F., but he has just

"... Did I check the crystal ..."

passed his century on 28 mc 'phone, so feels cheerful about things. Good luck to him! R. G. Poppi (Beckenham) has heard UA ØAD and would like to know which Zone? Also has anyone any gen. on VR2AA (14380 'phone)?

B. J. Tyson (Sheffield) would like to know more about KC4BY, heard calling TA3FAS on 28 mc about midday. KC4 is the prefix for Antarctica, but I don't know of any genuine activity down there at present.

STRAY COMMENTS

Every month I receive mild "tickings-off" because I have put someone's claim in as "Phone and CW" when it should have been "Phone Only" (or *vice versa*). Last month I got D. Vincent (Beckenham) wrong in the Zones Heard table. Sorry—but if *you* forget to mark them "Phone Only" I can't just assume that they are. Please watch this point with Calls Heard and Claims—someone forgets it every month. I also receive exasperated letters saying "I sent in a long and interesting list of Calls Heard, but you didn't publish it, although other people got two or three in." Sorry, again; but I have to guess at the correct number to fill our tightly-guarded space, and the printers sometimes find themselves with a few left over. In any case there are always too many before I start weeding them out. But read on, until you come to my little blitz on *that* subject!

One or two people are mystified as to whether the restrictions on Calls Heard apply to the SLP's as well as to the General Lists. We have been a little bit loose on this subject

in the past, because sometimes an SLP has produced very little that would fall in with the rules. For instance, interesting Europeans on 28 mc have been allowed to slip through. The only rule for SLP's, really, is "common sense."

1·7 mc COUNTIES HEARD—1949

Listener	Counties
'PHONE and CW	
G. C. Allen (Thornton Heath)	65
R. A. Hawley (Goostrey)	61
A. Baldwin (London, E.11)	60
L. Singletary (Bicester)	57
D. Webber (Newton Abbot)	52
D. Powell (Wilton)	49
W. Iball (Wigan)	39
J. Bagshaw (Callington)	36
D. Shallcross (Derby)	31
J. C. Beal (Wembley)	23
D. W. Bruce (Eltham)	15
'PHONE ONLY	
R. A. Hawley (Goostrey)	51
J. H. I. Austin (Coventry)	50
W. Eyre (Whaley Bridge)	47
K. L. B. Dalby (Gainsborough)	47
J. H. Woodward (Stoke)	45
D. Garrard (Ipswich)	44
J. H. Roskell (Harrogate)	43
E. Nottingham (York)	39
L. Singletary (Bicester)	37
M. G. Whitaker (Halifax)	29
K. Smeeton (Barnton)	29
A. Levi (Belfast)	29
K. Parvin (Thornton Heath)	28
F. K. Earp (London, S.W.11)	24
H. M. Graham (Harefield)	22
K. G. Harland (Westcliff)	21
G. Musk (Blackpool)	21
J. P. Moore (Solihull)	19
A. L. Higgins (Aberkenfig)	15
O. R. F. Mason (Prittlewell)	13
J. C. Beal (Wembley)	9
R. J. Line (Birmingham)	9
R. J. T. Sands (Margate)	8

CALLS HEARD

It seems a pity that from time to time I should have to occupy space with a blitz on *Calls Heard*. For the last two or three months I have hoped that the high standard reached would have come to stay. But no! This month's selection were the untidiest, trickiest, sloppiest lot I have had to cope with for a long time yet.

And all because readers will *not* take heed of the instructions in that little box at the head of the first page of Calls Heard. Note those last few words: "Make your lists exactly like those below, except that the more space you leave, the better." Now, your lists are not "exactly like those below" if you (*a*) append your name and address somewhere at the bottom of the page; (*b*) put your Calls Heard in the middle of a letter; (*c*) run three or four lists for different bands straight off, some SLP's, some not, and airily sign your name at the bottom with your address at the top. And so on, almost *ad infinitum*.

Small points, you may think, but they make all the difference between sending the printers a neat-looking collection of work and a great untidy bundle with blue-pencil marks, arrows, cryptic signs, re-written addresses and all that.

This time it's deeds, not words! Next month, I propose to reject all lists, no matter who they come from, that don't obey these simple, commonsense requests. This month I have used *all* SLP lists received up to the closing date, but, of course, only a selection of the General lists, because there is always a surfeit of those. Referring to the SLP offerings, the following readers sent in lists that were quite blameless and would always be accepted: T. H. O'Dell, R. A. Hawley, D. W. Waddell, T. E. Botham, K. Parvin, G. Moses, A. Levi. D. E. Bootman, C. Burton, D. W. Bruce and all those who used our Report Forms. So if your name is not one of the above and you didn't use a Report Form, ask yourself what was wrong! And you had better find the answer before next month!

After the powder, the jam, so I should just like to thank the following for *consistently* turning in the nicest lists one could wish to see: D. W. Waddell, K. Parvin, N. S. Beckett, W. J. C. Pinnell, D. W. Bruce, H. M. Graham, J. Neal, F. A. Herridge, O. A. Good. D. L. McLean, J. P. Warren. Lots of others are good, even very good, but these select few never need a mark or an alteration, and your Scribe would like to express his gratitude to them. "So shines a good deed in a naughty world!"

THE 1950 DX TABLES

For next month, of course, our three DX Tables will be unaltered. The Top Band

"Counties Heard" will show the two winners of our little 1949 party—one for 'Phone and the other for 'Phone and CW. After that, as I hinted last month, I shall be running two regular tables and the third will take the form of an occasional monthly competition, which will be different every time.

The two regulars will be (i) a Four-Band DX Table for 1950 and (ii) a list of Zones and Countries heard *Post-War*. This will be set in the order of Zones heard, not Countries, as it has been each month during 1949. It will also be split for 'Phone Only, and 'Phone and CW.

I am introducing a little innovation, however, in the Four-Band Table. As you can show your *total* number of countries in the other one, I am going to make the fifth column of the Four-Band Table a "Total *Points*" column, showing the figure representing the Four-Band figures added together. This, for most of the time, will be used to decide the order of merit. Many readers have suggested this, as a spur to those who just hear one or two countries on one particular band and then flog the others to death. So, to make your "Total Points" column look good, you will have to do the best you can on *all* bands ; and a little patience devoted to looking for, say, a GC on 3·5 mc will put your score up by one just as surely as will a ZD9 on 14 mc. But more of this next month.

And now I should like to thank all those readers who have sent their greetings for Christmas and the New Year. They are very much appreciated, and your Scribe will be thinking of you at approximately 1300 hrs. on Christmas Day ! I promise to lift a glass to you all on that occasion, when I will *not* be anywhere near the receiver.

All the very best of wishes to you this Christmas. May your Christmas festivities be long and merry, and may your New Year start with Zone 23 and continue to be full of the choicest DX.

SET LISTENING PERIODS

December 26, 1500-1600 GMT—28 mc CW and 'Phone (for 0-V-0 and 0-V-1 Receivers only).

December 27, 1900-2000 GMT—14 mc 'Phone (for all comers).

January 21, 1700-1800 *GMT—14 mc 'Phone.*

January 28, 1700-1800 *GMT—14 mc CW.*

The two advance dates for January fall in with the BERU 'Phone and CW Contests. Note that January 21 date *now*, in case you receive your February copy a day or so late.

Deadline for the February issue, with the summing-up of all 1949 results, is first post on January 4. Address everything to *DX Scribe*, *Short Wave Listener*, 49 Victoria Street, London, S.W.1. Good Hunting, Merry Christmas, and terrific DX in 1950.

ZONES HEARD (NOVEMBER)

Listener	Zones	Countries
'PHONE and CW		
A. H. Edgar (Newcastle)	40	127
D.W. Bruce (Eltham) ..	38	133
R. A. Hawley (Goostrey)	35	103
O. A. Good (Oswestry)..	34	120
F. A. Herridge (London, S.W.12)	34	97 (28 mc only)
J. Neal (Birmingham) ..	31	82
P. Bysh (London, N.8) ..	16	40
'PHONE ONLY		
W. E. Bachell (Prittlewell)	37	109
D. Vincent (Beckenham)	37	101
R. G. Poppi (Beckenham)	36	107
A. W. Tideswell (Stoke-on-Trent)	36	92
D. W. Bruce (Eltham) ..	35	117
R. A. Hawley (Goostrey)	34	100
K. Parvin (Thornton Heath)	33	108
F. K. Earp (London, S.W.11)	32	102
J. P. Warren (Croydon)	32	76
O. A. Good (Oswestry) ..	31	99
R.G. Goulding(Wrexham)	31	81
J. M. Graham (Glasgow)	29	86
M. Whitaker (Halifax)..	29	83
H. M. Graham (Harefield)	24	68
D. J. Williams (Pontyberem)	24	64
D. Dadswell (Steyning)..	22	61
A. Levi (Belfast) ..	22	55
D. K. Cocking (Farnborough)	20	38
A.L. Higgins (Aberkenfig)	18	42
G. Murray (Newcastle)..	17	40
P. Bysh (London, N.8) ..	15	37

BC RECEIVING LICENCES

The G.P.O. reports that there were 12,124,250 broadcast receiving licences current in Great Britain and Northern Ireland as at the end of October last—188,350 of these were in respect of TV receivers. The authorities are still after unlicensed receivers—are *you* one of the twelve million ?

CALLS HEARD

SET LISTENING PERIODS

14 mc

Nov. 26, 1800-1900 GMT

L. Cunningham, 16 Sandymount Road, Wath-on-Dearne, Yorks.

'PHONE: EK1AD, FA8ZZ, PY6DJ, VO1T, 3V8AP. (*Rx: S.*640.)

R. G. Poppi, 274 Kent House Road, Beckenham, Kent.

'PHONE: CN8MB, FA8BE, 8ZZ, EK1AD, PY7GR, 7WH, SVØAJ, 3V8AP. (*Rx: S*640.)

B. Davies, 73 Eden Road, Beckenham, Kent.

'PHONE: CN8AB, 8AI, EK1AD, PY1IK, 6CC, 6DJ, VP4CO. (*Rx: S.*640.)

H. Froggatt, 9 Knoll Street, New-Mills, nr. Stockport, Cheshire.

CW: CN8AG, 8BF, 8MZ, EA9L, EK1FP, FA8DA, HZ1HZ, TF3EA, VE7AA, VO6EP, 6X, ZS2A, 2EN.

T. H. O'Dell, 203 Hawes Lane, West Wickham, Kent.

'PHONE: EK1AD, PY6VK, SVØAG. (*Rx : R*1116.A.)

P. Bysh, BM/GSWL, London, W.C.1.

CW: TF3EA, 3MB. (*Rx : SX.*24. 6 *miles North of London.*)

R. A. Hawley, Torview, Brookfield Crescent, Goostrey, Cheshire.

PHONE: 3V8AP, EK1AD, HZ1KE, PY6DJ, SVØAJ, VO1K, VP4CO, YV5CE, ZC1AZ.
CW: CN8MZ, KH6IJ, TF3AB, 3EA, VO6EP. (*Rx :* AR-88 and *S.*504.)

D. W. Waddell, 53 Orchard Road, Hitchin, Herts.

CW: CN8AG, EA9AI, KH6IJ, 6MG, KP4KD, KV4AA, TF3AB, 3EA, 3MB, VE4RO, 7AA, VO6EP, W5CKY, 6AY, 6CEM, 6EFM, 6SC, 7MEM, ZS2A. (*Rx : S.*640.)

W. E. Bachell, 24 Hill Road, Prittlewell, Essex.

'PHONE: CR5UP, CT3AK, EK1AD, FA8ZZ, HH3LA, PY4BU, 6DG, 7EZ, SVØAJ, VP9G, ZC1AZ, 3V8AP. (*Rx : Hambander.*)

Please note the following simple rules for sending in lists of Calls Heard :

28 and 14 mc : No Europeans. No USA except W6 & W7 No VE except VE5, 6, 7 & 8. 7 mc : No Europeans.

Arrange logs in the form given here, with (*a*) prefixes in alphabetical order, but not repeated ; (*b*) numbers in numerical order *and repeated* as part of the call-sign ; (*c*) call-signs in alphabetical order. For example :— VK2GW, 3CP, 4UL, VP1AA, 6CDY, VQ3HJP, 4EJT, W6ENV, 7VY. Please underline each prefix, keep each list to one band, and, in short, make your lists exactly like those below, except that the more space you leave, the better.

T. E. Botham, 4 Victoria Terrace, Walsall, Staffs.

'PHONE: AK2CO, CN8AI, EK1AD, FA8ZZ, PY6DJ, SVØAJ, ZB1BB. ZC1AZ, 3V8AP. (*Rx : 5 valve S.H.*)

K. Parvin, 98 Winterbourne Road, Thornton Heath, Surrey.

'PHONE: CN8AI, 8AQ, 8BA, 8BI, FA8ZZ, KP4JA, PY6CX, 6DJ, 7VU, VO1T. (*Rx :* 640.)

R. W. Finch, 36 Bathurst Road, Ilford, Essex.

CW: KH6MG, VE2CI, 4RO, *'PHONE:* PY6DJ. (*Rx : 2-V-2, home-built.*)

G. Moses, 65 Railton Avenue, Crewe, Cheshire.

'PHONE: EK1AD. HH3DL. HZ1KE, PY2CK, 3V8AP. (*Rx : S.*640.)

A. Levi, 33 Old Cavehill Road, Belfast.

CR7AL, HC2OT, KP4KE, MT2BFC, PY6AG, VK3AKA, 3AQL, 3AS, 3BM, 3HG, 3QW, 3TY, 3WU, 5GD, 5KG, 5LR, 5RN, 5ZR, 6AS, 6FL, 6LM, YV4AM, ZD1FB, ZL4HP, ZS6DW.

K. R. Toms, 5 Arundel Drive, Boreham Wood, Herts.

'PHONE: EK1AD, FA8ZZ, HZ1KE, PY6DJ, VQ2HW, 4NSH, ZS51Q, 3V8AP. (*Rx : Philips PCR*1.)

N. S. Beckett, 48 Beaconsfield Road, Lowestoft.

CW: CN8AM, 8BF, 8MZ, EA9AI, EK1AD, FA8DA, TF3EA, VO6EP, XZ2FK. (*Rx :* 0-*V*-0.)

W. J. C. Pinnell, 40 Melville Road Sidcup, Kent.

'PHONE: CN8AI, 8AQ, 8BA, FA8ZZ, PY7EZ, VO1T, VQ3AA, 3V8AP.

CW: CN8AG, 8BF, 8MZ, EK1FP, KH6IJ, KL7AAS, KP4KD, KV4AA, TF3AB, 3EA, VE7AAD, W6CTL, 6PFD. (*Rx : V55R and converter.*)

C. J. Goddard, Coventry.

CN8MZ, CT1NQ, EK1FP, 1MD, TF3EA, W1BYC, 2BQ, ZS2A, 5YS. (*Rx : Decca AW-*12.)

28 mc

Nov. 27, 1100-1200 GMT

B. Davies, 73 Eden Road, Beckenham, Kent.

'PHONE: CR7IL, FA3JY, 3KC, 9VE, MT2BFC, PY6QM, ST2KR, UA3AF, VK3AQL, 3SQ, 5GD, 5ZR, 6JW, VQ4SC, W3LDH/MM, YV4AM, ZB1AH, 1BA, IFK, ZL4HP. (*Rx : S.*640.)

R. G. Poppi, 274 Kent House Road, Beckenham, Kent.

CE2CC, FA3KC, 9KG, HC2OT, LU9HQ, KP4AY, 4KP, 4JO, PY4UO, 6AG, 6QM, VK3AQL, 3DN, 4KS, 5ZR, 5JP, 6KW, 6MK, 6MO, VQ4SC, YV1PA, 1PF, 4AM, VP4CF, W2JEG/MM, ZB1AK. 1FK, ZL4HP. (*Rx : S*640.)

L. Cunningham, 16 Sandymount Road, Wath-on-Dearne, Yorks.

FA3JY, 3KC, MI3AB, 3SI, MT2BFC, PY6QM, TA3GVU, VK3AQL, 3DN, 3UI, VK5GD, 5ZR, 6HR, W2ZGE/MM, YV5AL, ZC1AZ, ZD1FB, ZL4HP, 3V8AT.

K. Parvin, 98 Winterbourne Road, Thornton Heath, Surrey.

'PHONE: FA3JY, 3KC, HC2OT, HH1SW, KP4JO, LU4CD, MI3AB, MT2BFC, PY4PQ, 4UO, 6QM, ST2KR, VK3AQR, 5GD, 5ZR, VQ4SC, W2LDH/MM, 2ZGE/MM, 5AXI/MM, ZD1FB, ZE1JB, ZL4HP. (*Rx :* 640.)

E. J. Logan, Linten Cottage, 4 Fanshawe Street, Bengeo, Herts.

'*PHONE:* CT1MB, 1PK, FA3JY, 3KC, 9VE, KG6SG, KP4BY, OE7AR, OH2OI, SM5AI, 5ZM, ST2KR, TA3FAS, 3GVU, VE1KC, 1ZT, VK2DN, 3XQ, 5LR, 5ZR, VP4CF, VQ4SC, W1BWJ, 1ITH, 1ONK, 5AXI/MM, ZB1AB, 1AH, 1AJX, 1FK, ZD1FB, ZL4AK, 4HP, 4UNU (nr. Gaza). (*Rx : BC*342 and *RF* 32.)

R. A. Hawley, Torview, Brookfield Crescent, Goostrey, Cheshire.

'*PHONE:* CR7IL, FA3JY, 9VE, HC2OT, KP4AY, MI3SI, MT2BFC, PY4UO, 6AG, UA3AF, VK2AP, 3AKA, 3DN, 3QW, 3WO, 3XQ, 5LR, 5ZR, VP4CF, 6SD, VQ4SC, W2LDH/MM, 2ZGE/MM, 3OZA/MM, 5AXI/MM, YV4AM, 1AH, ZD1FB, ZL4HP, ZS2DY. (*Rx : AR*-88 *and S.*504.)

D. W. Waddell, 53 Orchard Road, Hitchin, Herts.

'*PHONE:* CN8AT, FA3JY, 3KC, 9VE, HC1KE, HH1SW, MD2MD, MT2BFC, PY4UO, ST2KR, VK3AQL, 3DN, 5GD, 5RN, 5ZR, 6AS, 6LM, 6MK, VP4CF, VQ4SC, YV5BE, ZB1AH, 1FK, ZE1JV, ZL4HP.
CW: FA8DA, 8ZZ, VK2EO, 2GP, 3HT, 5FH. (*Rx : S.*640.)

D. E. Bootman, 65 Eagle Road, Wembley, Middlesex.

'*PHONE:* CE2CC, FA3JY, 3KC, HH1FW, LU9HQ, MI2SI, 3GH, MT2BFC, PY2JU, 4PQ, 4UO, ST2KR, VK2AMS, 3AQL, 3MB, 3ND, 3NP, 3UI, 3WU, 3WX, 4KS, 5ZR, 6HR, 6KW, VQ4SC, W5AXI/MM, YV4AM, ZB1BA, 1FK, ZC1AZ, ZS2DY. (*Rx : Modified RF*26 *into HRO.*)

W. E. Bachell, 24 Hill Road, Prittlewell, Essex.

FA3KC, 3JY, 9KJ, 9VE, HC2OT, HZ1KE, KP4BY KR6CO, MI3AB, MT2BFC, PY4UO, ST2KR, VK3XQ 4KS, 4RA, 5RN, VQ2SC, YV4AM, ZB1FK, ZE1JB, 2KH, ZL4HP, 3V8AT. (*Rx : Hambander.*)

C. Burton, 168 Aubrey Road, Small Heath, Birmingham, 10.

'*PHONE:* FA3JY, 3KC, MT2BFC, PY4UO, 6QM, VK3AUL, 3UI, 5ZR. (*Rx : S.*640.)

J. H. Woodward, 6 Council Houses, Rode Heath, Stoke-on-Trent, Staffs.

'*PHONE:* FA3JY, HC2OT, MT2BFC, PY2UJ, VK3WU, 5ZR, 6LM, VP4CF, VQ4SC, VS7RF, ZL4HP. (*Rx : S.*640.)

R. W. Finch, 36 Bathurst Road, Ilford, Essex.

CW: CT1MB, FA8DA, HA4SA, OQ5DF, SM5KX, 5UU, UA3CN, UD6AH.

'*PHONE:* CT1QA, OH2OI. ZB1BA. (*Rx : 2-V-2, home-built.*)

D. W. Bruce, 39 Dunkery Road, Eltham, London, S.E.9.

'*PHONE:* CE2CC, FA3JY, 3KC, HC1KE, 20T, HH1SW, KP4AY, 4BY, 4JO, 4KP, LU9HQ, MI3AB, MT2BFC, PY4PQ, 4UO, 6AG, 6QM, UA3AF, VK2AFS, 2AP, 3AQL, 3XQ, 5AE, 5GD, 5LB, 6CF, 6MD, VP4CF, 6LD, 6SD, W2ZGE/MM, 5AXI/MM, YV1BE, 4AM, ZB1AB, 1AJ, 1FK, ZD1FB, ZL1KJ, 3JO, 4AK, 4HP.

CW: OQ5DF, TF3SF. (*Rx : 16-valve double S.H.*).

F. H. Bliss, 12 Elmsleigh Avenue, Harrow, Middx.

'*PHONE:* FA3JY, 3KC, MI3GH 3SI, MT2BFC, PY6AG, VK2AP, 3AQL, ZL4HP. (*Rx : R*208.)

D, Vincent, 22 Upper Elmers End Road, Beckenham, Kent.

'*PHONE:* CE2CC, FA3KC, JY, 8KG, HC2OT, MT2BFC, PY2JU, 4PK, 6QM, UA3AM, VK3WU, 5ZR, VP4CF, W2ZGE/MM, ZB1FK, FB, BA, ZL4AK.

P. Steddon, 3 Lister Gardens, Edmonton, London, N.18.

'*PHONE:* DL4JB, FA3KC, LU4BH, LX1BT, OH2OI, SM5AI, 2M, TA3FAS, W5AXI/MM, ZB1AH, ZD1FB. (*Rx : CR*100.)

E. Nottingham, Lyndhurst, Upper Poppleton, York.

'*PHONE:* FA3JY, MD7HV, MI3SI, PY2KU, 4UO, 6AG, 6QM, TA3GVU, VK2ADX, 3HW, 3WU, 5ZI, 5ZR, 6CF, 6KW, VQ4SC, YV4AM, ZC1AZ, ZD1FB, ZL2KA, 4HP, ZS2DY. (*Rx : Hallicrafters* "5-10".)

583537 A/A Fowler, R.A., "A" Flt., "C" Sqn., Apps' Wing, No. 1 Radio School, R.A.F. Cranwell, near Sleaford, Lincs.

'*PHONE:* CE1CC, FA9KJ,, KP4JO, MT2BFC, PY7IL, VK3CB 3WU, VP6LD, VQ4SC, W5AXI/MM, ZD1FC, 2 RGY, ZE1JB, ZL4AK, ZS2DY.

CW: FA8DA, MP4BAP, PY2AO, VK2EO, 2GW. 2RA, 5FH, VS6CO. (*Rx : AR88LF.*)

D. K. Cocking, Farnborough, Kent.

'*PHONE:* CT1PK, FA3JY, MT2BMC, OH2OI, PY6AG, VK3AQL, VQ4SC, ZB1AJX, ZE1JB, ZL4HP. (*Rx : S.*640.)

E. H. Williams, Tara, Rowlands Avenue, Poole, Dorset.

'*PHONE:* FA3JY, 3KC, KP4AY, MI3SC, PY4UO, 6AG, VK3AQL, 5ZR, ZB1A, 1AH. 1AJ, 1AJX, 1BA, 1FK, ZD1AB, ZD1FB, ZL3JO. (*Rx : AR*88.

R. G. Goulding, 10 Earle Street, Wrexham, Denbighshire.

'*PHONE:* CR7IL, FA3JY, 3KC, KP4AY, MI3GTH, PY2JU, 4UA, 4UO, UA3AF, VK3AQL, 3UI, 5ZR, 6SL, VQ4SC, W5AXI/MM, W2ZGE/MM, ZD1SD, ZE2JK, ZL1KG, 4AP, 4HP, ZS2DY, 6BW. (*Rx : Home-built double superhet plus R.F.*26 *converter.*)

GENERAL

7 mc

A. H. Edgar, 15 Dene Terrace, South Gosforth, Newcastle-on-Tyne, 3.

CW: AP2K, CE3AU, 7CL, CN8RC, CO2BO, EL2F, HZ1FE, KJ6BG, KL7EE, KS6ET, LU2KR, PZ3JD, TA3GVU, UA9KCA, ØKED, UF6KS, UL7AC, VE7QU, VK2EJ, 3DL, 7IV, VP7CC, 9J, VQ2JU, VS9AL, VU2DR, W6OIJ, XE1EF, YJ1AA, ZD1BF, ZS1AI, 6KK. (*Rx : S.*640.)

W. Kyle, 9 Dene Terrace, South Gosforth, Newcastle-on-Tyne, 3.

CW: C1ST, CN8MZ, FA8BD, 9DC, KP4CF, 4KF, 4SU, KV4TN, KZ5DE, 5DL, UA3CU, 3DI, 3DL, 3KM, 4CC, UB5AF, 5BT, 5DA, 5DO, 5KA, UR2AF, VK3NB W8JI. (*Rx : R*109 *into BC*453.)

N. S. Beckett, 48 Beaconsfield Road, Lowestoft.

CW: CN8BF, CZ2AC, EA6AF, EK1AO, FA3KW, 8BG, 8DA, 9RZ, 9VN, FE8AB, PY2AI, TF5TP, UF6AC, 6AK, 4X4CP, ZB1AJX, ZL1FF, 3JD, ZS2A, 5YF.

'*PHONE:* LU9BH, PY2BO. (*Rx : 0-V-*0.)

H. M. Graham, 28 Park Lane, Harefield, Middx.

'*PHONE:* AR8BC, CE3HL, CO3AA, CT3AK, EA8AE. 9AI, FF8MH, FQ8SN, HC7KD, HH3DL, HK7HE, HP1GD, HR2RF, KP4JM, MD2AC, MI3LV, OX3WJ, TI2OE, VK7AZ, VP3MCB, 4TO, 6IS, 9S, VQ4SC, VS7BR, VU2ET, ZSZ1BV.

J. St. Leger, c/o 35 Trelawney Road, Camborne, Cornwall.

CW: CE7AA, CR6AQ, 6AW, 7RF, DU1HR, FK8AC, FN8WI, HZ1PC, KL7GG, KV4AA, KZ5BE, PZ1QM, VP8AP, VQ3SS, VS7PG, 9AL, VU2AJ, 2AV, 2LJ, ZE2JN, 2KY. (*Rx : 0-V-*1.)

D. J. Williams, Cwmllethryd, Pontyberem, Carms.

'*PHONE:* AR8BC, CR5UP, 6EI, HI6VC, HZ1KE, KL7ZM, MD2AC, VK2OR, VQ4AI, 4SC, 8AX, VS9BE, YV5AB, ZB1BA, ZS1GG, 5IQ, 3V8AA. (*Rx: 5-valve Superhet.*)

I. E. Alfrey, 45 Rusthall Avenue, Bedford Park, Chiswick, W.4.

'*PHONE:* CO8MP, CX2CL, EA8AE, EA9AI, HC1FG, HI6EC, HR2RS, HZ1KE, LU6CK, MT2E OX3WJ, OY3IGO, PY7VA, TA3TVU, VE8MC, VK7AZ, VO6AW, VP3MCB, VP4DO, VP9II, VU2DH, W7MBX, YV5AO, ZL2BE, ZS1BV. (*Rx: V55R.*)

E. J. Logan, Linten Cottage, 4 Fanshawe Street, Bengeo, Hertford.

AR8BC, CR6AI, EL5B, 9A, FM8AD, HI6EC, HR2RF, OA4AI, OQ5DD, PY8RG, VE8MJ, VP3HAG, 3HL, 3LF, 3MCB, VP5BG, VS7BR, 9BR, ZX2KN, 2SY. (*Rx: BC.342.J.*)

H. Froggatt, 9 Knoll Street, New Mills, near Stockport.

'*PHONE:* EK1DI, FA9WU, PY2CK, 4BU, 4XI, SVØAJ, VO6B, VP9WW, 4X4AA.

CW: CR4AD, FF8GP, FY8AC, KP4CC, 4KD, 4SU, 4IO, 4KA, LU6DJL, PY1HX, 1FX, 1DH, 1AHL, PY2OE, 2AVY, 2WB, 2AQ, PY7LN, 7WS, PZ1Z, VO6X, VK3RW, 5RX, VP6CDI, 8AK, 8AO, ZB1BD, ZC1AR, ZD4AM, ZS6SQ, 6AM, 6BV. (*Rx: R1155A.*)

14 mc

J. Neal, 27 Sladefield Road, Ward End, Birmingham, 8.

CW: CE7AA, CO8AZ, CX1BZ, EA9AI, FF8MH, FM8AD, KG6DI, KH6ES, KL7UM, KP4DN, 4HF, KZ5IP, 5WZ, OA4AP, OQ5BQ, 5VD, PZ1QM, UA9KCA, UP2KBC, VK6GA, VP5AR, 6CDI, VQ1CUR, 2HW, 3SS, 4AR, 5ALT, VU2BK, ZD2LMF, 9AA. (*Rx: S.640 and S.680.*)

K. R. Toms, 5 Arundel Drive, Boreham Woods, Herts.

'*PHONE:* CR6AI, CT3AC, CX2CO, HZ1KE, KL7ZM, KR6TX, LU6AJ, OQ5DZ, PZ1WK, VE8MJ, VP4CO, 4TW, VQ2HW, 4ASC, 4NSH, W7DTB, 7FPY, ZL3GU, 4AA, 4HP, ZS1FE, 1GV, 5GK, 5IQ, 6FD. (*Rx: Philips P.C.R.1.*)

T. E. Botham, 4 Victoria Terrace, Walsall, Staffs.

'*PHONE:* CO3AA, 6BD, 7RQ, CR6AI, CT3AC, HR2RM, KL7ZM, MD2KP, VE8MJ, 8RG, VK7AZ, VO6B, 6EP, VP9F, VQ4SC, VU2ET, YN4CB, YS1GS, ZC1AZ, 6DZ, ZE2JZ, ZP5BL, ZS1GK, 6FD, 6JS. (*Rx: 5 valve S.H.*)

D. K. Cocking, Old Meadow, Farnborough Park, Kent.

'*PHONE:* CX2CO, HZ1KE, KP4JA, VK2ACX, 5RN, VV2DH, ZL2BE, ZS1BV. (*Rx: S.640.*)

G. Moses, 65 Railton Avenue, Crewe, Cheshire.

'*PHONE:* CE2CC, CR5UP, 6AI, FQ8SN, HI6EC, HR2RF, HZ1KE, VE8MJ, VQ2HW, 8AX, VS7BR, YV1AI, 4AA, 5AB, 5AV, 5CE. (*Rx: S.640.*)

D. Dadswell, Hills Farm, Ashurst, Steyning, Sussex.

'*PHONE:* AR8AB, CO3AA, CR6AI, CT3AK, FF3CN, HI6EC, HZ1KE, KP4JF, VE8MJ, VK7AZ, VP3MCB, VQ4AB, 4SC, ZC1AR, ZS1BV, 6FD. (*Rx: Cossor 3v. Battery.*)

D. E. Tomkinson, 3 Montpelier Terrace, Brighton, Sussex.

'*PHONE:* AR8BC, FA9KI, PY4LZ, 6DJ, VK3NG, VO1L, VP9II, VQ4SC, YV5AB. (*Rx: AR88.*)

28 mc

F. A. Herridge, 95 Ramsden Road, Balham, London, S.W.12.

'*PHONE:* KG6ET, KR6BV, PK3WH. 4KS, VK2AP, 2EQ, 3AQL, 3PG, 5AD, 5AS, 5BF, 5ZR, 6GA, W2EJV/PK3, ZL3DS, 3LE.

CW: CR9AG, PK1BA, 1UF, VK3NM, 3ZB, 5LD, 6WT, VS6BO.

R. A. Hawley, Torview, Brookfield Crescent, Goostrey, Cheshire.

'*PHONE:* AR8UN, EL2A, HC1KP, 1OY, HK4DF, HZ1AB, TI2FV, VK5AS, 5BF, 6DD, 6DV, VP4LL, 4TO, 6SD, 9G, VQ4HK, 4SC, YS2AG, YV4AM, W2LDH/MM, 2ZGE/MM, 2ZXM/MM, 2WWL/MM, 3OZA/MM, 3KIF/MM, 3NCV/MM, 4IUT/MM, 5AXI/MM, 5OTF/MM, 6YYT/MM, ZL2BE. (*Rx: AR88 and S.504.*)

O. A. Good, 1 Western Drive, Oswestry, Shropshire.

'*PHONE:* CR5UP, 7IL, 7IW, EQ3SAM, ET3AF, KG6SF, MP4BAE, OA4AN, 4AT, VK5AE, 5AS, 5BV, 6DD, 6FL, W7KOP (Wyoming), 3OZA/MM (Ned. W. Indies), YS2AG, ZP5BL, ZS3G, 3O, 4BL, 4N. (*Rx: S.640.*)

B. J. Tyson, 139, Westwick Road, Sheffield, 8, Yorks.

'*PHONE:* FA3KA, FF8FP, KC4BY, MI3SI, MT2BFC, PY4RJ, ST2AM, TA3FAS, VP6SD, VQ4SC, ZB1E, 1FK, 2A, ZC1AZ, 6DZ, ZD1AA, 1FB, ZS1AX, 6BW. (*Rx: S.640.*)

D. L. McLean, 9 Cedar Grove, Yeovil, Somerset.

'*PHONE:* AR8AB, 8MR, CR5UP, EQ3SAM, ET3AF, FF3CN, 8FP, HH1SW, 2W, HR1RL, JA2AK, 2KK, KG6FAA, 6GA, 6SF, KR6CC, MD7HV, MP4BAE, PK3WH, 4DA, PZ1QM, VS7PS, ZD1FB, 1PW, 2LMF, 4AH, ZP3AW, 5BL, 9FA. (*Rx: AR88LF and converter into S20.*)

P. Bysh, BM/GSWL, London, W.C.1. QTH 6 miles N. London.

'*PHONE:* CO2EH, CX5AO, FA9VE, KP4DU, LU3BH, MP4BAE, PY7GI, 7QD, 7VB, ST2AM, TA3FAS, TI2EV, VP6YB, YS1RR, 3V8AP. (*Rx: SX 24.*)

R. G. Goulding, 10 Earle Street, Wrexham, Denbighshire.

'*PHONE:* CR5UP, 7IL, 7IW, CT3AK, ET3AF, FF7FP, HC2OT, KG6GA, 6SF, KR6EK, OX3GE, PK3XE, 4DA, ST2KR, TF3SF, TI2ZZ, VK5AE, 5ZR, 6CF, VQ2WP, 5ALT, W7KSA, YS1RR, ZL3DS, 3GQ, ZP5BL. (*Rx: Home-built double superhet plus R.F.26 converter.*)

J. P. Warren, 14 Francis Road, West Croydon, Surrey.

'*PHONE:* CO2JL, 7RQ, ET3AF, HC1OY, 2OT, KG6AD, 6FX, KR6CO, KZ5CS, MD7HV, MP4BAE, ST2KR, VE6EB, VK5AE, VP4TZ, 6SD, VS9AH, YN1HB, YS2AG, YV4AM, ZD1PW, ZL2AIQ, 3JO, 3LE, 4FO. (*Rx: R.208.*)

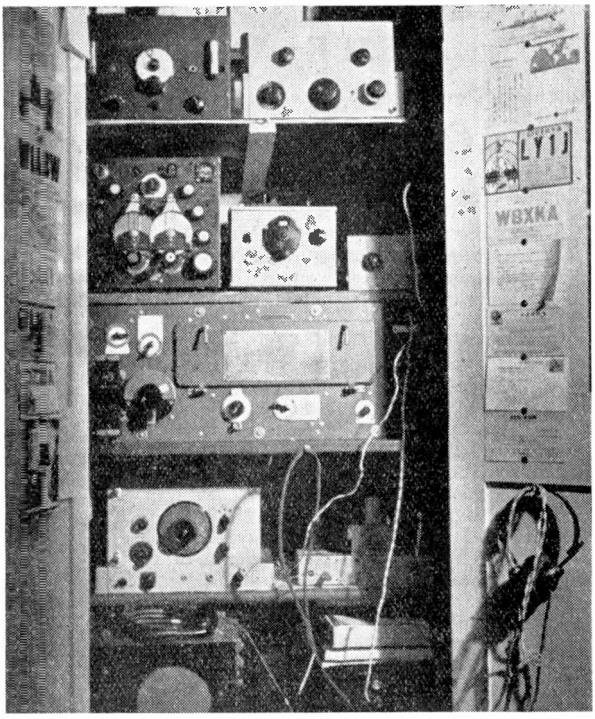
F. L. Copping, 25 Newfield Road, Marlow, Bucks.

'*PHONE:* AP2J,CE2CC, CR5UP, 7AD, F9QU/FM8, KG6FX, 6SF, KR6BV, 6CF, 6CO, MD7HV, OA4BV, PJ5CE, PK3WH, PZ1OY, TF3SV, VE8SI, VK5SF, 6FW, VP5RS, VS7RF, 9AJ, W6MNC, 7UPR, YN4NW, ZD1PW, 2LMF, ZL3JA, 3JO, ZP3AW, ZS9F. (*Rx: A.R.88D.*)

D. E. Tomkinson, 3 Montpelier Terrace, Brighton, Sussex.

'*PHONE:* AR8AB, CN8EA, ET3AF, FF8FP, HP1OY, KP4AF, 4AZ, KR6AF, 6CO, MI3SI, OA4AM, PY5QB, 6CN, ST2KR, VQ4CJG, ZC6DZ, ZS1CI, 5JF, 6OY. (*Rx: AR.88.*)

SWL Stations NO. 28



OUR description this month is of the station operated by F. W. Hattemore at 75 Parchment Street, Winchester, Hants, who has a formidable array of receiving gear.

Active since 1934, F.W.H. has recently turned his attention to the S/W BC bands—and on occasion even listens to DX on medium frequencies ; an outstanding feat was the reception of the Buenos Aires broadcaster on that band during August of this year.

The main receivers are an ex-Naval B.13, covering 15 kc to 22 mc in ten bands, and the well-known ex-F.A.A. R.1116A, designed for reception over the range 142 kc-20 mc in seven bands. Above these two receivers in the rack are two home-built jobs—on the left a battery 0-V-1 (150 kc-32 mc) and to its right an AC-operated 0-V-2 for 10·5 kc-30 mc in 14 bands. Both these receivers are fitted with bandspread and use plug-in coils.

Other gear includes a two-stage preselector for the HF bands, a crystal frequency meter and an audio amplifier using 6SJ7-6J5-6A3. On the lower rack are a modified TR9 covering all amateur frequencies and two 1355 receivers for TV reception.

Equipment not shown in the photograph consists of an Eddystone two-metre converter, an RF24 and an RF25 for 27-32 mc reception (modified), and an RF26 unit previously operated on the old 5-metre band.

Though VHF results have been poor, F.W.H. has heard (and has verified) much DX on all the other frequencies, and has a large accumulation of QSL cards. His ultimate object is a transmitting licence and the R.A.E. having been successfully surmounted, F.W.H. is now busy catching up on the Morse, for which purpose he finds the VLF's below 100 kc very useful—hence that 0-V-2 tuning from 10·5 kc. Readers will join us in wishing F.W.H. the best of luck with his licence—he will certainly be very well equipped on the receiving side, in every sense.

THE VHF END

by **A. A. MAWSE**

Receiving Contest Results— Some Individual Reports— Conditions Generally Dull— Tables and Calls Heard

WITH conditions at such a low ebb it is not surprising that there are so few entries for the Two Metre Receiving Contest. Though the fact must not be disguised that it is disappointing to notice several of our well-known VHF Rx men did not compete. A contest under the conditions which existed does become an endurance test, especially to those situated far from the main centres of activity, and it is easy to understand anyone giving up in disgust after hours of listening just to receiver noise ! And that was the case in many parts of the country.

Unlike November, 1948, when a persistent fog produced a really big duct, the weather was far from suitable for VHF DX propagation and only occasional weak and very variable signals were heard from stations much over 50 or 60 miles distant. G2XC tells your conductor that the best contact made by the Tx men was between G2CIW (Romford, Essex) and G5BY (Bolt Tail, Devon), the distance being 205 miles. That such DX could be worked may seem almost incredible to some readers who failed to hear anything but locals and it says much for the efficiency of the equipment at both G2CIW and G5BY.

Winner of our Receiving Contest was A. L. Mynett (Wembley). His best DX was G2IQ (Sheffield) at 138 miles. Congratulations A.L.M., on a very fine performance ! He used a stacked array consisting of four 3-element Yagis, ½-wave apart, and at a mean height of 29 feet. A Q-bar matching system connects them to a 30-foot length of 300-ohm line, which feeds into a converter consisting of 6J6 RF, p/p 6AG5's and CV102 mixer, using a 955 local oscillator in a Clapp circuit on 10 mc, followed by EF54 doublers and triplers. A.L.M. himself describes his result as poor and considers another 20 feet of aerial height essential.

R. Rew (Birmingham) was not in a particularly favourable geographical location so far as activity was concerned and his log only shows points claimed for four stations under 25 miles. His best DX was G2AJ (Biggin Hill) at 115 miles. R.R.'s aerial was a 6-element close-spaced Yagi in the roof space. A three-fold driven element fed into 80-ohm coax. The Rx was CV66 GGT followed by 6AK5 as RF stages, 9001 mixer and 9002 oscillator into a communications receiver on 12·5 mc. R.R. found conditions slightly better on the second day of the Contest, when G2AJ, G3BLP, G5WP, G6NB and G6XM were heard throughout the day, but QSB made them difficult to copy.

J. U. Burke (N.W. London) logged G2XC (Portsmouth) at 62 miles for his best DX during the Contest, all his reception being on 'phone. He has a much modified BC624A, and a four-element beam T-matched into 300-ohm line. A neutralised pre-amplifier is being started.

TWO-METRE RECEIVING CONTEST
***November* 12-13**

Position	Competitor	Location	Points
1	A. L. Mynett	Wembley	74
2	R. Rew	Birmingham	49
3	J. U. Burke	N.W. London	38
4	P. Finn	Denham	19
5	M. McBrayne	Westcliff	3

P. Finn agrees that conditions were rather bad, and that anyone who was unable to read CW probably had a lean time of it. M. McBrayne found the Contest of great help to him, in that the high level of activity provided a useful test for the efficiency of equipment. M. McB. would have reached a much higher score had his ability to read Morse been greater. Points were missed from at least 14 stations from that cause ! He has some high ground between Westcliff and London and that seems to screen him effectively. His Rx is an EF50 local oscillator on 69 mc doubling to 138 mc ; mixer and RF stages are broad band EF54's. Aerial is a wide-spaced 4-element in the loft.

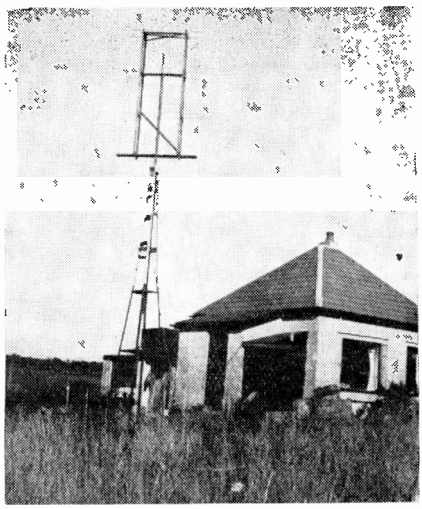
We should like to take this opportunity of

thanking all those who were keen enough to send in their Contest logs for what was obviously (from the SWL point of view) a disappointing event due to the very poor conditions on the band during the Contest period. The activity was there right enough, as the Transmitting Contest results to be reported in the January *Short Wave Magazine* will show.

It is also quite evident that a much greater number of SWL's could have derived more enjoyment and useful experience from this Contest (in spite of the conditions) had they been able to read Morse. Indeed, it can be said that much of the value and interest of VHF listening is lost unless one can read the code. So *verb. sap.*, as they say !

Correction !

In the last issue, in a moment of mental aberration on the part of the Editor, it was incorrectly stated that the reception of FA8IH by G6UH was a "world record." This is not, unfortunately, the case—see *Short Wave Magazine*, pp. 770-771, December issue —and the Editor accepts responsibility for the inaccurate report in this space.



J. R. Wordsworth, Wembury, S. Devon, has been listening on Two ever since the band opened. This is the 16-element 145 mc rotary beam now in use.

Other News

A newcomer to this column is R. V. E. Babst (Middlesbrough) who is really an "old-timer" so far as short wave listening goes, having started back in the KDKA days. Your A.A.M. started somewhere about the same time ! He has a Type 27 unit modified for two metres, although, so far, the local police and taxis have been the only signals heard. With the absence of local 2-metre transmitters it is not so easy for R.V.B. accurately to calibrate his converter and to be quite sure where the band is.

E. Wicks (Bournemouth) writes to assure us he is still active, and has been busy on aerial tests as well as visiting local VHF stations. Like many others, he has been awaiting a "November fog," so far in vain. He regrets the tendency of everyone to close down during TV hours. The answer seems to be that most of the VHF Tx operators in and around London are also keen televiewers, and with

TWO-METRE CALLS HEARD

J. E. Harman, 10 Royal Sussex Crescent, Eastbourne.

F3DC, 8AA, 8LO, 8NW, 9LX, 9MX, G2AJ, 2CIW, 2CPL, 2FPP, 2FZR, 2KG, 2UJ, 2XC, 2XS, 3AEX, 3ANB, 3BTL, 3CQ, 3CWW, 3DAH, 3FD, 3FIJ, 3FXA, 3GW, 3VM, 3WW, 4MW, 5BD, 5MR, 5UD, 6DH, 6NB, 6PG, 6VC, 8KZ, PAØIK, ØPN. (*September 2 to November 27.*)

A. E. Wright, 92 Druid Street, Hinckley, Leicestershire.

G2AOK/A, 2ATK, 2FNW, 3ABA, 3APY, 3BHE, 3BKQ, 3DJQ, 4RK, 6CI, 6SN, 8QY. (*Modified RF27 into AR88, 3-element beam.*)

E. A. Lomax, 28 Welbeck Road, Heaton, Bolton, Lancs.

G2ABA, 2DCI, 2DCT, 2JZ, 2OI, 3AGS, 3AHT, 3ASC, 3AYT, 3BKQ, 3BY, 3CHY, 3CSC, 3CXD, 3CXY, 3DA, 3ELT, 3HCJ, 3TZP, 4LU, 5CP, 5KX, 5MB, 5RW, 5TP, 5VN/P, 6DP, 6LC, 6TL, 8SB, GM3OL, GW2ADZ. (*G2IQ type 6J6 converter into AR88, 10-metre folded dipole.*)

A. L. Mynett, 29 Sunleigh Road, Alperton, Wembley.

G2AHP, 2AJ, 2CIW, 2HDY, 2IQ, 2KG, 2MV, 2NH, 2XC, 2XS, 2YC, 3ABH, 3BLP, 3BOB, 3BWS, 3CGQ, 3CNF, 3CWW, 3DAH, 3DCC, 3GBO, 4DC, 4HT, 4RO, 4ZU, 5DF, 5KH, 5LI, 5LQ, 5MA, 5MI, 5PY, 5RP, 5TP, 5WP, 6CB, 6LX, 6NB, 6PG, 6UN, 6VC, 6VX, 6XM, 6YP, 8KZ, 8IP, 8SM. (*During Contest.*)

J. U. Burke, 43 Avenue Mansions, Finchley Road, London, N.W.3.

G2AJ, 2CIW, 2MV, 2NH, 2XC, 2YC, 3BLP, 3CNF, 3CWW, 3FD, 4DC, 4HT, 4RO, 4ZU, 5DF, 5KH, 5LI, 5MA, 5RP, 5TP, 5UD, 5WP, 6JK, 6NB, 6NF, 6OH, 6YP, 8IP, 8KZ, 8SM, 8WV. (*During Contest.*)

R. Rew, 14 Shrublands Avenue, Quinton, Birmingham, 32.

G2AJ, 2AOK/A, 2ATK, 2HX, 2OI, 3ABA, 3AHT, 3BHE, 3BLP, 3CXD, 3ENS, 4LU, 5BM, 5JU, 5ML, 5RP, 5TP, 5WP, 6NB, 6XM, 8SB, 8WV. (*During Contest.*)

A. W. Blandford, 1 Biggin Avenue, Mitcham, Surrey.

'*PHONE:* G2IC, 2YC, 3QK, 3RI, 4KG, 4SW, 5LI, 5PY, 6LL. (*Rx : Mod. RF27 into 1155, 4 e.c.s. beam.*)

E. Wicks, 6 Riversdale Road, Bournemouth.

'*PHONE:* F8OL, 8LO, G2XC, 2BMZ, 2DSW, 2NS, 3ABH, 3EJL, 3RI, 3CGE, 3ARL, 3FAN, 5PB, 5SP, 6XM, 8IL, PAØUN. (*Rx : Mod. RF26 into Hambander. Aerial: Dipole, 17 ft. high. Between November 1-21 at 1830-1930.*)

VHF LISTENERS' CLUB

Second List of Active Members

R. V. E. Babst (Middlesbrough)
J. U. Burke (London, N.W.3)
J. E. Harman (Eastbourne)
A. L. Mynett (Wembley)
E. Wicks (Bournemouth)

the spread of TV to the Midlands it would appear that the position will get worse. Actual TVI is not at all a major problem, as most 2-metre transmitters even in fringe areas can be operated without trouble to television receivers.

Another newcomer to this column, and again an old-timer (even on VHF) is J. Hart (Brighton). He was active on 5 metres back in 1931 and recalls to your conductor the way in which in those days we used to remove the bases from valves in order to make them oscillate on such a high frequency as 60 mc. Now he has an 1147B which he hopes to use for a start on 2 metres and he would be glad of any hints on the conversion of this receiver. A. W. Blandford (Mitcham) found Contest conditions so poor that he did not think an entry worth while. This was in part due to inability to read CW. The only date on which he heard DX was November 4, although G2XC has been heard occasionally. He is now busy preparing for 420 mc.

In Lancashire, E. A. Lomax (Bolton) also has been finding things very poor. He comments that the deepest gloom was over the Contest weekend. His best DX during November was G5TP (Henley) at 160 miles. GM3OL has also been heard, with a 1,000-foot hill as an obstruction on the path. A. E. Wright (Hinckley, Leics.) was away from home during the Contest week-end, but has an 8-element beam ready for erection. Like most of us he has noticed a decline in activity. On the Sussex coast at Eastbourne, J. E. Harman has likewise found the two-metre band deserted most of the time, although he operates from 1900 GMT to midnight regularly. He has a new beam to test out, but the lack of signals has not helped. However, the few locals he has heard have increased in strength and car ignition noise is more apparent.

Congratulations

Mention must be made of the successful *debut* on two metres of G3GBO, who is none other than our old friend D. T. Bradford (Denham). He has already made a large number of contacts, but we are sure he would appreciate reports from any members of the VHF Listeners' Club who may hear his signals. Also, we were pleased to note that G3FMO (Chard, Somerset) is the callsign of G. Elliott, who used to send us regular reports of 5-metre activity when he was at Gosport a year or so ago. Congratulations to both of them and good luck on the air.

TWO METRES

COUNTIES HEARD

Starting Figure, 10

P. J. Towgood (Bournemouth)	33
D. T. Bradford (Denham)	25
R. Rew (Birmingham)	24
W. H. Pierce (Reigate)	22
G. E. Magrow (Dawlish)	22
A. L. Mynett (Wembley)	20
A. W. Blandford (Mitcham)	16
R. M. James (Chatham)	12

In Conclusion

Your conductor would like to wish you a Happy Christmas and the best of good luck in 1950. May all your dreams of two-metre DX come true, and may the lists of Calls Heard on both Two and Seventy ever increase in size. Next month's reports should be addressed as usual to A. A. Mawse, *Short Wave Listener*, 49 Victoria Street, London, S.W.1, to arrive by January 5.

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

DX *broadcast*

MONTHLY COMMENT BY R. H. GREENLAND, B.Sc.

This is the season of the year I would like to offer my heart-felt greetings to all my radio friends, with the added wish that for everyone the New Year will bring in even better DX than before.

North America

R. Iball (Langold, Notts.) heard Edmonton, Alberta, on October 3, between 0525 and 0615, when it closed with the words: "This is the Canadian Broadcasting Corporation": at 0600 there was mention of the Yukon, and a news and weather forecast for the North-West Territory was given. R.I.'s friend, R. O. Lyttle (North Bay, Ontario) quotes from his verification just received: "The North-West Territories and Yukon Radio System: call-sign VED: frequency 8265 kc: power 5 kW. Transmitter is a TH41, manufactured by the Marconi Company of Canada for the Army, and the aerial is a rhombic directed (theoretically) on the N.W.T. It relays the Trans-Canadian Network of the CBC and is piped to the station (VED) through the facilitics of the local station CBX in Edmonton: the system retransmits on 8265 kc for the benefit of isolated settlements in the N.W.T. and Yukon, where, under normal conditions, BC stations are seldom heard."

The schedule appears to be 1200 to 0615 or later, and they verify by letter, the address being: Headquarters, NWT and Yukon Radio System, Royal Canadian Signals, Edmonton, Alberta, Canada.

The writer has since heard this station on several occasions. On November 1, at 0613, the announcer said: "That is the News from Vancouver," and on November 10, in the weather forecast after the News, the speaker said: "The outlook for Remembrance Day is cloudy with light rain." On this occasion VED continued with music until 0645.

Since writing the preceding paragraph we have received our letter-verification for VED from Colonel H. D. W. Wethey of the Canadian Army. He writes: "Actually, this line of endeavour (*i.e.* radio broadcasting) is a little outside the sphere of the system, our normal function being wireless telegraphy in the areas indicated. However, we do maintain small, low-powered broadcast transmitters at some of our Northern stations. Included amongst these are: Aklavik; Hay River; Norman Wells (all in North-West Territory); Dawson City and Whitehorse (Yukon Territory); and Brochet (Manitoba). It is considered extremely likely that the warrant officers in charge of any of these stations mentioned would be pleased to hear from you."

R. O. Lyttle also mentions KRO2, Honolulu, 15,620 kc, heard relaying the programme "Hawaii Calling", and WABC, 11,830 kc, a new transmitter relaying the Voice of America to Russia. J. T. W. Blyth (Leigh, Lancs.) gives us the latest CBC schedules. R. Patrick (Finsbury Park, N.4) heard CKLO, 9,630 kc and CHOL, 11,730 kc, broadcasting to Britain, and his latest letter from CHNX, Halifax, 6,130 kc, includes the following: "By the early part of October practically all of the big Network Shows will have returned to the air, and our schedule will then offer a much wider variety of entertainment." Both J. C. Catch (South Shields) and R. O. Lyttle have heard CBLX, 15,090 kc with its French programme around 2030, and M. Milne (South Woodford, E.18) logged CBNX, Saint Johns, 5,970 kc at 2220 with News, Shipping Information and a Weather Forecast.

In the United States, R. G. York (West Croydon) reports KGEX, 11,730 kc and KCBR, 15,130 kc at 0500, and J. C. Catch KNBX, 11,790 kc with the feature: "Reporters At Work" at 0915. J. C. C. also logged KRHO, Honolulu, 17,800 kc with "Press Opinion" at 2215, and we heard KNBI, San Francisco, 6060 kc closing with "The Star Spangled Banner" at 1445.

Central America and West Indies

R. Iball spotted TGLA, Guatemala City, 6,295 kc at 0330 with frequent reference to "La Centro-Americana Compania," and TGZA, Zacapa, 6,660 kc regularly heard with tango music around 0345. R. O. Lyttle mentions a new one in TIFC, Costa Rica, 9,645 kc, describing itself as "The Lighthouse of the Carribean"; reports were requested,

TABULATED SCHEDULES

I. All India Radio External Services Transmissions.

1500-1540 GMT	VUD5,	17830 kc (100 kW).
	VUD11,	15130 kc (20 kW).
1900-2000 GMT	VUD5,	11710 kc (100 kW).
	VUD7,	9620 kc (100 kW).
	VUD10,	15290 kc (20 kW).
	VUD11,	11760 kc (20 kW).

II. Paris-Inter.

1800-1945, 6145 kc. 1645-1730, 9680 kc. 1615-1715, 15350 kc.
0800-0845, 1200-1230, 1330-1350, 17850 kc.
0600-0715, 1800-2315, 6200 kc.

III. Radio Italiana, Rome. (Transmitters at Busto Arsizio.)

0030-0155, 1000-1030	11810 kc, 15120 kc.
1330-1800	11810 kc, 15120 kc.
1805-2200	11810 kc, 9630 kc.
2210-0025	11810 kc, 15120 kc.

IV. Hungarian Radio Broadcasts from Budapest.

6247 kc and 9820 kc.
English : 2130 ; Russian : 1730 ; French : 1800 ; German : 1920 and 2030.

V. Belgian National Broadcasting Service.
P.O. Box 505, Leopoldsville, Belgian Congo.

Frequency : 9767 kc. Power : 50 kW.

1930-2030	English :	1930. Opening announcement and News.
		1945. Amongst Friends. Replies to Letters.
		1952. Music.
		2020. Talk or special feature.
		2027. News Headlines.

VI. Station GMT, Royal Observatory, Leith Hill, nr. Dorking. Carrier frequency : 2 mc. Power of transmitter : 250 watts. Aerial : Inverted-L, 70 feet in length.

Schedule : Weekdays only : 0955-1030.
0955-1000. Short station announcement.
1000-1015. 2 mc. radiated, unmodulated.
1015-1026. Modulation at 1000 cycles.
1026-1030. Voice announcement and Close Down.

to be sent to P.O. Box 1307 in San Jose. Swedish *DX* informs us that the power is limited, being no more than 350 watts, and that the Spanish slogan is : "Faro del Caribo." A station with only 5 kc separation is HOJA, Chitre, on 9,640 kc : the schedule is : 0100-0200, and the direction : "Radio Provincias, Chitre, Republica de Panama."

P. E. Woolmer (Grantham) gives the following details about Honduras broadcasters. HRA, La Voz de Honduras, Tegucigalpa, 5,915 kc has a power of 2 kW and there are daily programmes in Spanish from 2300 to 0400 ; HRD2, La Voz de Atlantida, La Ceiba, 9,235 kc (0·2 kW) operates 1800-2000 and 0100-0500 daily. HRQ, La Voz de Suyapa, San Pedro Sula, 6,125 kc and HRP1, El Eco de Honduras, 6,351 kc both use 500 watts. The Mexican station XEHX on 10,120 kc is said to be broadcasting a missionary service in English each Sunday at 2130.

R. G. York logged COHI, 6,450 kc, signing off at 0600 and J. C. Catch heard COCY, 11,746 kc with slogan : "R. H. C. (Erray-Atchay-Say) Cadena Azul" at 2225. R. Iball mentions COCH, 9,435 kc with the announcement : "Say-Emmay-Say-Atchay y Say-Oh-Say-Atchay" (CMCH and COCH) at 0530 ; a Camaguey station was carrying the same programme. R. I. also logged COBL, 9,835 kc with chimes at 0500 and the direction : "Say-Emmay-Say-Ellay y Say-Oh-Bay-Ellay (CMCL and COBL), La Cadena Suaritos, Habana, Cuba." R. Patrick heard COCQ, 8,825 kc with a musical programme at 0001 on November 10.

J. C. Catch has to his credit HI2L, Trujillo, 9,525 kc with call : "La Voz del Tropico" at 2230, and HI1R, La Voz de Fundacion, San Cristobal, 6,433 kc at 2215. R. Iball mentions HI2T, Trujillo, 9,735 kc, S9 with popular music at 2215, and HI2A, Santiago, 9,680 kc with rumbas at 2200. According to R. O. Lyttle, HI1N, 6,040 kc has an English lesson at 2200. R. T. Blackmore (Exeter) offers HI2T, heard with call : "La Voz de Dominicana" followed by a series of gong notes at 2300 on October 30.

J. T. W. Blyth has a recent verification for ex-HH3W, 10,130 kc, Port au Prince, Haiti, power 1,400 watts. It is headed : "Broadcast Station 4VRW-4VW, formerly HH3W-HHW." Their schedule is : Weekdays : 1100-1330, 1700-1800, 2300-0300 ; Sundays : 1700-2200 ; we noted this one with dance music and French announcements at 0050 recently.

ZQI, 3,480 kc, has just sent P. E. Woolmer its verification card, which gives the schedule as : 2100-2230 (4,950 kc) and 0030-0300 (3,480 kc). Using a power of 1·2 kW, all transmissions open with the playing of Elgar's "Land of Hope and Glory," and the address

General view of the Klipheuvel station building, one of South Africa's commercial outlets.

is : The Government Broadcasting Station, 2 Seaview Avenue, Halfway Tree, Kingston, Jamaica, B.W.I. Arne Skoog (Stockholm) informs us that Radio Martinique, Fort-de-France, Martinique, is now using two channels, 8,185 kc and 12,905 kc from 2230 onwards. Lastly, C. P. Turner (Crewe) says that Radio Trinidad, 9,630 kc has been coming in well after 2350 ; he heard "The Lifebuoy Toilet Soap Show" at 0030 on October 9. He received a reply within thirteen days of sending in his report ! There is a map of the island of Trinidad depicted on the card.

Europe

The translation of a letter from Benito Sintes, Director of Emisora Radio Menorca, reads as follows : "Our transmitter is an amateur station which we have placed at the service of the young people of Menorca for their entertainment, and therefore, its characteristics are simple and straightforward ; the power in the aerial is 80 to 100 watts, and the frequency is 7,550 kc."

We have a first-day verification from Norway for the Short Wave Transmitters of the Norwegian Technical University and of the Students' Society in Trondheim ; they have been using 7,240 kc and 6,815 kc with 400 watts output from 2200 onwards. On October 22, they favoured us with this English announcement : "You are listening to a programme by the Students' Society in Trondheim, Norway" : it consisted mainly of students' choruses. J. C. Catch heard LLP, Oslo, 21,670 kc, with an English-Norwegian programme at 1300, and P. E. Woolmer noted LKQ, 11,735 kc and LKV, 15,170 kc (both S9) with a "Mailbox" feature in a broadcast at 1930. P. E. W. logged Mitteldeutscher Rundfunk, 9,740 kc at 1345 ; its address is : Sender Leipzig, Springerstrasse 24, Leipzig, Germany (Russian Zone).

R. Patrick says he is included in a new radio programme : "Your Questions Answered," conducted by Geoffrey Everitt from Radio Luxembourg every Tuesday evening at 2300 ; any SWL requiring any information about broadcasting stations in general should send in his query to : "Your Questions Answered," 36 Davies Street. London, W.1. The reply will be given on Tuesdays at 2300 over 6,090 kc and also on 1,293 metres.

P. Fry (Chandlers Ford, Hants) picked up KZCA, Salzburg, 9,535 kc at 1300, and R. Iball at 1430 with the direction : "This is the Blue Danube Network serving Linz, Salzburg and Vienna." More recent information indicates that KZCA has now vacated this channel !

In the South-East, Radio Scutari, Albania, 8,216 kc, has been heard by K. C. Catch at 1830 with a choral concert, and P. E. Woolmer offers Prague at 2145 on 6,010 kc with an

English broadcast ; the address is : Czechoslovak Broadcasting Corporation, Praha XII, Stalinova 12, Czechoslovakia. P. E. W. also has a verification from Radio Belgrade which gives English talks at 0615 over 9,505 kc and at 1615 over 6,130 kc.

From R. Patrick comes news of the Radio Broadcasting Station of the Armed Forces, Central Greece on 6,745 kc ; the schedule is : 0430-0830, 0930-1230, 1700-2100. On November 19, they were heard with an excellent recording of the "Hallelujah Chorus" at 0510.

Both R. P. Wyman (Feltham, Middx.) and R. A. Savill (Sevenoaks, Kent) have heard Budapest, 9,820 kc and 6,247 kc, the first-named with an English programme at 2130, the other with dance music at 2000. R. A. S. also mentions CS2MK, 11,030 kc and CS2ML, 11,040 kc with recordings of organ music by Reginald Dixon at 2020, and he asks if these Lisbon broadcasters verify. He says that Paris Inter. on 6,200 kc is one of the best stations for entertainment value, being normally logged at R5, S8-9.

J. Brooker (Crawley, Sussex) likes to listen to "Sweden Today" given in English over SBP, 11,705 kc and SBT, 15,155 kc daily at 1315 ; and R. Patrick has PCJ's free map of the world giving all the main short-wave stations. Listeners and reporters who would like a copy should write, asking for one, to : "PCJ, Radio Nederland, P.O. Box 137, Hilversum, Holland." R.P. has just received a letter from a friend in Holland, and we quote : "Money subscribed by Catholics all over Holland is being used to build a new 100 kW transmitter for the Vatican. The new transmitter is being built by the Phillips factory in Hilversum, and should be in operation in 1950." A recent broadcast from Warsaw, also, stated that "The Voice of Poland" intends to make itself heard in the four corners of the world with a new 200 kW transmitter. R. Patrick has, in addition, been logging the Royal Observatory station on 2 mc, at 1026—further details elsewhere.

Radio Espana, Madrid, 9,358 kc usually gives an interesting talk at 2035 ; recently, we heard about the Spanish salmon breeding stations and the hydraulic lifts which are operated automatically to enable the fish to make their passage upstream.

Finally, we heard an exciting running commentary of a Rugby football match featuring H.M.S. *Theseus* on 5,900 kc around 1410 on November 19, and at the close at 1420 heard the words : "Theseus, Portland closing down." Did any of our readers spot this one?

On this topic, Lt.-Cdr. D. A. Forrest, R.N., Communications Officer, H.M.S. *Theseus*, writes that this match was the Home Fleet rugger final between *Theseus* and *Cleopatra*, played at Portland. As H.M.S. *Theseus* is in dry dock, it was decided to attempt a running commentary on the match, through the ship's entertainment broadcast system. A low-power battery transmitter on 6,770 kc was set up on the touchline ; H.M.S. *Vengeance*, berthed about 1½ miles away, picked up this signal and retransmitted the commentary on 5,880 kc, using her 400-watt set. H.M.S. *Theseus* received this signal, and it was broadcast through her PA system to the ship's company. The 5,880 kc transmitter on *Vengeance* was the signal reported by listeners. (*We hope there will not be a Court Martial!—Ed.*)

We are pleased to receive a report per A. M. Levi from the Short Wave Listening Section of the 86th Belfast Scout Group. They have received a letter from CR6RG of the Companhia de Diamantes de Angola, in reply to the first report from Ireland. Our congratulations ! The frequency used is 8,242 kc, the power is 300 watts and the schedule : Weekdays : 1830-1930 ; Sundays : 1100-1200, 1830-1930.

Please send your notes for next month to reach us not later than January 15, 1950 ; the address is : R. H. Greenland, *The Short Wave Listener*, 49 Victoria Street, London, S.W.1. With you again on January 19.

SHORT WAVE BROADCAST STATIONS

Revision 36·63-47·17 Metres

Giving Frequency, Wavelength, Callsign and Location

These lists appear each month, covering the 11-128 metre section of the wave band within which all the short wave broadcasting services of the world operate. For economy of space, this band is dealt with in five sections, a list of active stations in one of the sections being given in full in every month. Such revision is necessary due to constant changes of frequency, callsign and operating schedules. All stations appearing in our lists are normally receivable in this country and are under regular observation.

Frequency	Wavelength	Callsign	Location
8190	36·63	YNXW	Managua.
8170	36·72		Haifa.
8150	36·81	YNWW	Granada.
8027	37·37	FXE	Beirut.
8010	37·45	YNS	Teustepe.
8000	37·50	JJOY	Athens.
7950	37·74		Alicante.
7935	37·78	CQM4	Bissau.
		PSL	Rio de Janeiro
7934	37·81	HLKA	Seoul, Korea.
7920	37·88		Sofia.
7860	38·17	SUX	Cairo.
7850	38·22	ZAA	Tirana, Albania.
7784	38·54		Pyengyang, Korea.
7780	38·56	JVE	Tokio, Japan.
7700	38·96	HC1EB	Quito, Ecuador.
		ZM2AP	Apia, Samoa.
7670	39·11		Sofia.
7655	39·19	YNDG	Leon, Nicaragua.
		CE776	Santiago, Chile.
		YNLAT	Granada.
7618	39·38		Mahon, Menorca.
7550	39·74		Silva Porto, Angola.
7520	39·89	EA8AB	Tenerife, Can. Is.
7472	40·15	HC4AZ	Riobamba.
7460	40·21	TGDA	Quezaltenango.
7448	40·28	FG8HA	Guadeloupe.
7445	40·30	ZRB	Waterkloof.
7413	40·47	YNAO	Masaya.
7385	40·62		Sanaa, Yemen.
7380	40·68		Tananarive.
7360	40·76		Moscow
7350	40·82	HC2AN	Guayaquil.
7340	40·87	V3USE	Mauritius.
			Moscow.
7325	40·96	GRJ	London.
7314	41·02	YSO	San Salvador.
7300	41·10	ZOY	Accra, Gold Coast.
			Athens.
7295	41·12	YD13	Soerabaya, Java.
			Mauritius.
7294	41·13		Moscow.
7290	41·15		Hamburg.
			London.
7285	41·18	JKJ	Nazaki, Japan.
7280	41·21	GWN	London.
		VLT5	Port Moresby.
			Paris.
7275	41·24		Damascus.
		VUD8	Delhi.
7270	41·27	RW97	Moscow.
		YDB3	Batavia, Java.
7260	41·32	GSU	London.
		VUM2	Madras.
		VUM3	Madras.
			Paris.
7257	41·34	JKH	Yamata, Japan.
7250	41·38	PJC2	Willemstad.
			Munich.
7245	41·41		Vienna.
7240	41·44	VUD10	Delhi.
		VUB2	Bombay.
		VUB3	Bombay.
			Trondheim.
7230	41·49	GSW	London.
7225	41·52	VUD10	Delhi.
7223	41·53		Taipeh, Formosa.
7220	41·55	ZQP	Lusaka, N.Rh.
			Singapore.
7215	41·58	RW96	Moscow.
7210	41·61	GWL	London.
		VUC2	Calcutta

Frequency	Wavelength	Callsign	Location
7210	41·61	VUC3	Calcutta.
		LLS	Tromso.
7200	41·67	GWZ	London.
			Moscow.
			Singapore.
7195	41·70	OQ2AZ	Elizabethville.
7190	41·42	FBS	Mombasa.
7185	41·75	GRK	London.
7177	41·79	CR6AA	Lobito, Angola.
7170	41·84		St. Denis, Reunion.
7165	41·87		Moscow.
7164	41·88	CR6RE	Malanje, Angola.
7155	41·93	EDV	Madrid.
		CR7IB	Beira.
7153	41·94	BEF6	Chungking.
7150	41·96	GRT	London.
7135	42·05	FET22	Oviedo
7130	42·08	CR6RN	Benguela, Angola.
7125	42·10	VQ6MI	Hargeisa, Br. Som'd.
7120	42·13	GRM	London.
7115	42·16	EAJ3	Qunca, Spain.
7105	42·22		Bangkok, Siam.
7102	42·24	YNET	Masaya, Nicaragua.
7100	42·25		Harbin, Manchuria.
7092	42·30	YI5KG	Baghdad, Iraq.
7077	42·33		Mauritius.
7062	42·48		Baghdad.
7059	42·50	EA9AA	Melilla, Sp. Morocco.
7054	42·53	CR6RF	Bonguela, Angola.
7045	42·58	FET15	Cordoba, Spain.
7037	42·63	EAJ3	Valencia, Spain.
7022	42·72	EAJ9	Malaga, Spain.
7010	42·80	CR6RS	Benguela, Angola.
7006	42·83	FET1	Valladolid, Spain.
7003	42·85		Ljubliana, Yugoslavia.
7000	42·86	HC1VT	Ambato, Ecuador.
			Brazzaville.
6980	42·98	FO8AA	Papeete, Tahiti.
6963	43·08	YNEQ	Managua, Nicaragua.
6917	43·37	FZK6	Dakar, Senegal.
6900	43·48	TGBC	Mazantenango.
6877	43·62	YNWW	Grande, Nicaragua.
6870	43·67	HC4EB	Manta, Ecuador.
6860	43·73	TGRB	Guatemala City.
6850	43·80	YNOW	Managua, Nicaragua.
6830	43·82		Tel Aviv, Israel.
6825	43·86	RAD	Tashkent.
6790	44·18		Limassol, Cyprus.
6770	44·31	CP49	La Paz, Bolivia.
6758	44·39	YNVP	Managua, Nicaragua.
6745	44·48		Larissa, Greece.
6725	44·61	4X4EA	Tel Aviv, Israel.
6716	44·67	YNCNM	Managua.
6715	44·68	CP22	Potosi, Bolivia.
6710	44·71	OAX4G	Lima, Peru.
6672	44·97	HBQ	Geneva.
6660	45·04	TGZA	Zacapa, Guatemala.
6635	45·21	HC2RL	Guayaquil, Ecuador.
6630	45·25	HIT	Trujillo, D.R.
6620	45·32	TG2	Guatemala City.
6560	45·73	HC2VP	Guayaquil.
6550	45·80	YNBH	Managua, Nicaragua.
6511	46·07	CP4O	Cochambamba, Bolivia.
6464	46·41	YNZZ	Managua, Nicaragua.
6450	46·51	COHI	Santa Clara, Cuba.
6442	46·57	TGWB	Guatemala City.
6433	46·66	HI1R	San Cristobal.
6407	46·82	4UM	Port au Prince, Haiti.
6400	46·87	TGQA	Quezaltenango.
6390	46·95	HI9B	Santiago, D.R.
6374	47·07	CS2MA	Lisbon.
6360	47·17	CSX	Lisbon.

SMALL ADVERTISEMENTS

CHARGES : *Readers'*, 2d. per word, minimum charge 3s. Box Nos. 1s. 6d. extra. *Trade*, 6d. per word, minimum charge 7s. All advertisements must be of radio interest only. Add 25% extra for Bold Face (heavy type) announcements. Copy date for next issue, January 6, addressed Advertisement Manager, *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

QSL CARDS AND LOG BOOKS, APPROVED G.P.O. SAMPLES FREE. ATKINSON BROS., PRINTERS, ELLAND, YORKS.

WANTED. Copy of *Short Wave Listener*, March 1949 issue, to complete binding. Please reply to, 227 West Barnes Lane, New Malden, Surrey.

WANTED. R103 Manual (not R103a or Canadian versions). State price and condition. Smith, 40 Woodville Road, London, E.18.

COMMERCIAL Communication Superhet, 8 octal valves ; 3 calibrated ranges 1·4 to 23 mc, BFO, adapted 230v AC stabilised supply, separate speaker, 'phones, spare valves, instruction book. £15 plus 15/- carriage. RF26 converter (B'ham TV), RF27 converter modified 25 to 33 mc, both calibration charts, £1 each. G3APU, 144 Middlemore Road, Birmingham 31.

B2 Instruction Book wanted with circuits to buy or hire. Sufficient time to copy. Write, Berry, 12 Talbot Avenue, Edgerton, Huddersfield.

S-METER for Eddystone S640, perfect condition, £4. 12A8GT valve wanted. Tyson, 139 Westwick Road, Sheffield 8, Yorks.

FOR Sale. 1116A with valves, speaker, output, 1116A less valves, Universal Avo Type E, 1191A Wavemeter, *Short Wave Listener* from December, 1946. Offers to Box No. 024.

SEE THE WORLD in a well-paid and interesting job. Enrol now for one of our Marine and Air Radio Officers' courses of instruction. Constant personal supervision and attention by our expert instructors with recent operational experience. Apply for FREE literature, giving full particulars, E.M.I. INSTITUTES, Dept. S.W.L. 10, Pembridge Square, Notting Hill Gate, London, W.2.

DEVALUATION. For Sale, Eddystone "640" 'Phones, speaker, "S" meter, instruction book. Excellent condition, £22. Murdoch, 88 Moor Lane, Wilmslow, Cheshire.

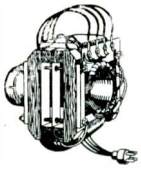
WANTED, instructional manual for HRO Senior. Matching speaker, 'phones and coil (G) 175-400 kc. also required for the HRO. Please oblige. H. L. Watson, 41 Warton Road, Basingstoke.

WANTED, medium wave, ·52-1·5 mc. CBY (or CCT) 46145 Receiver, similar in appearance to 453, Q Fiver. Good price for good condition, also 6SR7 or 6SR7 GT. Gibbons, 5 Garston Drive, Watford.

FOR Sale. R1155 sets brand new, £8 or. offers. Box No. 667.

S640 as new—£22. Perfect condition. 1133 (Tx/Rx/Amplifier) aircraft freq., £6. B2 Tx with coils, £5/10/-. Set of B2 coils, 7/6 ; 7010 xtals. 5/- ; 813, 25/- ; pair 811, 15/-. or nearest offers.—Box No. 668.

PARTS FOR MAGNETIC T.V.



FRAME AND LINE COIL ASSEMBLY. Perfectly made by a very famous maker, for standard type magnetic tubes, 9 in., 10 in., 12 in. or 15 in., we have a limited number only, the price is **16/6**, and cannot be repeated once these are cleared, so please act quickly.

PERMANENT MAGNETIC FOCUSING UNITS. No current drain—for all makes of tubes—patented method of adjusting the gap, giving really clean pictures and even focus of whole of the tube free. Price **16/6** each.

P.M. FOCUSING for clear pictures

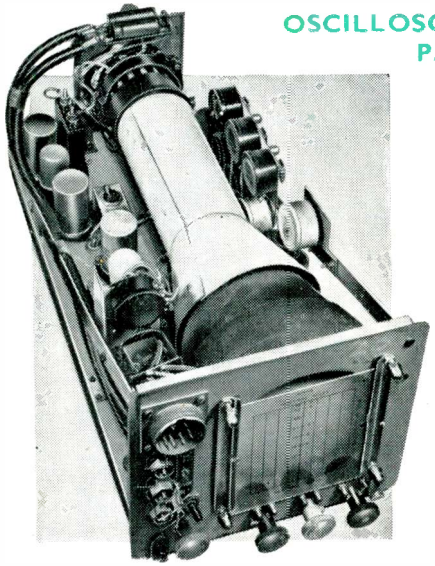
R.F. E. H. T. Non-Lethal

R.F. E.H.T. We were so pleased with the quality of this unit that we have taken up the entire output of the manufacturer, the voltage can be adjusted to make it suitable for working 9 in., 12 in., or 15 in. tubes, the unique design and vacuum impregnation combine to give a trouble-free unit which will give years of satisfactory service, and, of course, the big point about the R.F. E.H.T. is that it is not lethal, the size is only 4½ × 3¾ × 4 in., price, complete ready to operate, **65/-**.

£16 FOR A MAGNETIC TELEVISOR (and H.P. terms if you wish), this we think you will agree a remarkably low price, even though the tube is not included, but the quality of the picture has not suffered, this was demonstrated to thousands of people at Radiolympia. We will demonstrate to you if you call. Full constructional data for novice or expert, **5/-**. Explanatory leaflet free.

MISCELLANEOUS ITEMS

Blocking Osc. Transformer, **6/6**. 9 ft. dural. tube for aerial, **4/6**. ·1 mfd. 2·5 kV., **2/6**. ·1 mfd. 5 kV., **4/9**. ·02 8 kV, **3/9**. ·1 7 kV, **13/6**. Vision Receiver strip (type 194), **45/-**. Varley E.H.T. Transformer, 4 kV, **67/6**. 2·5 kV, **27/6**. B7G Valve Holder, **1/3**. EF50 Valve Holder, **6d.** Chokes, 200 mA. 10 henry, **10/-**. 200 mA 3 henry, **6/-**. 80 mA 10 henry, **4/6**. 80 ohm. feeder, thin, **10d.** per yd.; Thick, **8d.** per yd. Plastic 8 kV Sleeving, **3/-** doz. yd.

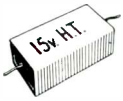


OSCILLOSCOPE PARTS

TYPE 6 INDICATOR. As specified for the "Wireless World" oscilloscope (reprint of data **9d.**). Also for the "Inexpensive Televisor" (booklet **1/6**), and the Mark I Televisor (constructors envelope, **2/6**). These indicators are brand new, packed and sealed in manufacturer's original crates, they contain VCR97 Cathode Ray Tube, 4 EF50 valves, 3 other valves, and hundreds of useful components, including wire wound pots. Price is only **£4/10/-**, plus carriage and packing, **7/6**.

SPECIALS

PARTS FOR PERSONAL RECEIVERS

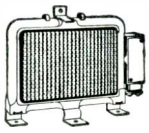


New ex-W.D. chassis containing three B7G Valve Holders, resistors and other spares with valves type 1S4, and 2 1T4's, **29/6**, complete with diagram of a midget receiver.

H.T. BATTERY UNITS, 15 volts, but measure only 1¾ in. × 2¾ in. × ¾ in., **1/3** each; 10 for **10/-**. **L.T. UNITS, 3d.** each; **2/6** dozen. **MIDGET .0005 TUNING CONDENSER, 4/6 each. MIDGET P.M. SPEAKER,** 2½ in., **10/6.**

SHORTED TURNS COIL TESTER. You know that it is almost an impossibility to test for shorted turns in I.F. Transformers, Coils, L.T. Transformers, etc., with an ordinary ohmmeter. Our mains operated shorted turns coil tester will reveal these faults in a second. For one month only we are offering these to you at the remarkably low price of **£5/10/-** each.

THE "SPEE-DEE" SIGNAL TRACER. A small metal case a few inches square, a flex terminating in a probe, a twin lead for connecting to either A.C. or D.C. mains, no switching, no tubing controls, and there you have the "SPEE-DEE" Signal Tracer. H.F., I.F., or L.F. checks—makes no difference; note frequency change is automatic. The fault is in the no-note stage. Yes, it's as simple as that. Price, with directions, **£4**, leaflet free.



ELECTRIC HEATERS

Heavy cast framework totally encloses the elements, so these are 100% safe even in confined spaces, just right for your radio den, garage, office, shop, etc. 900 watt (general) model, **23/6**, plus 4/6, 250 watt (personal) model keeps legs and body warm for less than a farthing per hour, **23/3**, plus **4/6**. 500 watt (medium) model, **23/6**, plus 4/6.

HOUSE TELEPHONES

Desk or Wall Mounting

Suitable for intercommunication between offices, workshops, stores, garages, big houses, kitchens, etc. Each station consists of normal size Bakelite handsets and desk or wall mounting cabinet with built-in selector switch, buzzer and push. All stations can communicate with one another independently. Each installation is absolutely complete and internally wired. 3-station installation complete with 50 yards 5-core cable, **£6/10/-**. 4-station installation, complete with 50 yards 6-core cable, **£8/10/-**. 2-station installation, complete with 25 yards 4-core cable, **£3/17/6.**

ELECTRON PRECISION EQUIPMENT

4 Electron House, Windmill Hill, Ruislip Manor, Middlesex

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