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SHORT WAVE LISTENER



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SEPTEMBER 1947
VOLUME I · NUMBER 10

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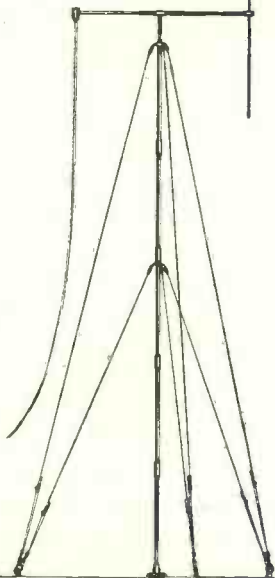
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A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME I

SEPTEMBER 1947

NUMBER 10

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EDITORIAL

Atlantic City

Just as we went to press with this issue, information reached us as to the major frequency bands proposed at the International Telecommunications Conference for amateur transmitters in the European Region. These are not yet definite allocations, but they do represent the agreed proposals of the responsible Working Committee. They are as follows:—

- 1.7 mc 1800-2000 kc, shared, with 10 watts power limitation.
- 3.5 mc 3500-3800 kc, shared with certain other services.
- 7 mc 7000-7100 kc, exclusive to amateurs.
7100-7150 kc, shared with S/W BC.
- 14 mc Not yet finally decided, but a cut of anything from 50 to 300 kc seems inevitable, to accommodate S/W BC.
- 21 mc 21000-21450 kc, exclusive to amateurs.
- 28 mc 28000-29700 kc, exclusive to amateurs.

Amateur frequencies above 30 mc are still under discussion, but as explained in the June issue of the *Short Wave Magazine*, an unrestricted British amateur allocation anywhere in the 30-100 mc area is unlikely. On the other hand, a whole range of possible international VHF allocations for amateurs (but not necessarily applying to G's) is now being considered. These are: 50-54, 70-72.8, 144-148, 166-170, 220-225, 240-260, 385-400 mc, and so on.

At Atlantic City, main support for amateur claims came, as expected, from the American countries, with strong opposition from France and the Balkan nations. Russia has been surprisingly co-operative (Soviet amateurs provide an organised communication system within their own country), China has been helpful, and our own GPO delegation worked hard in the amateur interest. But the party is not over yet.

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HUM AND INSTABILITY

SOME NOTES ON THEIR CURE IN HOME-BUILT RECEIVERS

by

B. M. SCUDAMORE

A POINT of interest to numerous constructors of short wave receivers is undoubtedly the elimination of capacity effects and general instability, also the curing of AC hum both from a home constructed mains supply unit and in the set itself. This article deals with each of these evils and suggests ways and means of overcoming the usual difficulties.

First, it must be borne in mind that the troubles can be divided into two main sub-divisions as arising from either

- (i) the power supply, or
- (ii) the receiver itself,

and it is proposed to discuss each of these broad divisions.

The Power Supply

The usual mains supply unit—if constructed with sufficient care—should present no difficulty. It is, however, most annoying to have a persistent hum present in a short wave receiver produced from a home-built mains unit, especially when headphones are used for any considerable period. The AC ripple can usually be eliminated by the use of extra filter con-

densers and chokes. Electrolytic composite condensers are very compact and useful for this purpose.

Tunable Hum

Should a "tunable hum" be present in the receiver it is almost certain to be the result of RF getting back into the power supply. The insertion of any number of condensers and LF chokes in the output supply will *not* cure this sort of trouble. A "tunable hum" can be distinguished by the fact that it only appears at certain receiver frequencies, and when the set is in oscillation. It is quite probable that no hum can be heard when the set is out of oscillation; but as soon as the detector is brought over the point of oscillation a very heavy hum starts.

The usual method of dealing with this sort of thing is to insert small condensers—about $.001 \mu\text{F}$ —between the plates and filament of the rectifier valve. Fig. 1 illustrates a typical full wave valve rectifier circuit embodying the points described above.

Instability

So far as *instability* in the power supply is concerned, this is usually brought about by bad regulation in the mains transformer, and it is much better to use a rather higher rated transformer with adequate smoothing

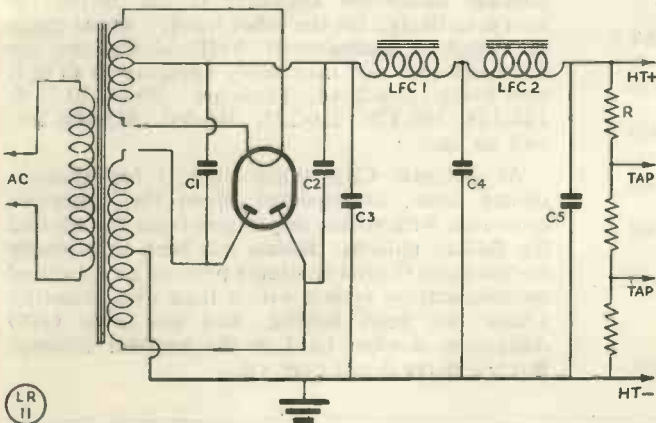


Fig. 1. Rectifier circuit with condenser input on the smoothing side. The "tunable hum" eliminators are condensers C1 and C2 which should be rated in excess of the transformer peak voltage.

TABLE OF VALUES

Fig. 1

C1, C2	$.001 \mu\text{F}$.
C3	$2 \mu\text{F}$.
C4	$4 \mu\text{F}$.
C5	$8 \mu\text{F}$.
LFC	30 Hy chokes.
R	Tapped bleeder resistor; 15-20,000 ohms, 5-watt, tapped as required.

and regulation than push to the limit a smaller rated component. In this respect it should be noted that choke input to the filter will always give better regulation (Fig. 2) than the more usually employed condenser input as shown in Fig. 1. With the insertion of a choke before the first condenser the voltage is dropped considerably—hence the need for a higher rated transformer when using choke input.

A badly regulated voltage supply to a superhet receiver will cause variation in the oscillator frequency and the incoming signals will appear watery and unsteady. Look to the power supply and see that it is well regulated and capable of providing the voltage and current required to run the equipment in use—and above all keep something in hand. The leads from power supply to receiver should be of good quality, and in some cases the use of separate leads for HT and LT, as distinct from the usual 4-way connectors, may eliminate the last traces of hum. Finally, house the power supply in an earthed metal cabinet or case both in the interests of safety and hum elimination!

The Receiver

The troubles arising in the receiver are more complex, but those caused by hum can be quite simply dealt with, provided one or two simple rules are obeyed. First, the filament supply. This, in the case of AC heated valves, should be centre-tapped to earth with a resistance—say, 50 ohms (25 ohms either side of centre)—to give an accurate centre on the filament supply as in some cases the centre tap provided on a mains transformer does not coincide with the true electrical centre and hum is thereby introduced. It is best to do this centre tapping to both the HF and detector stages—soldering the resistance on to the actual valve-base pins. To assist the “humdinger” effect, and stability, small tubular condensers should also be connected from each filament pin to earth—on the HF and detector stages—again as

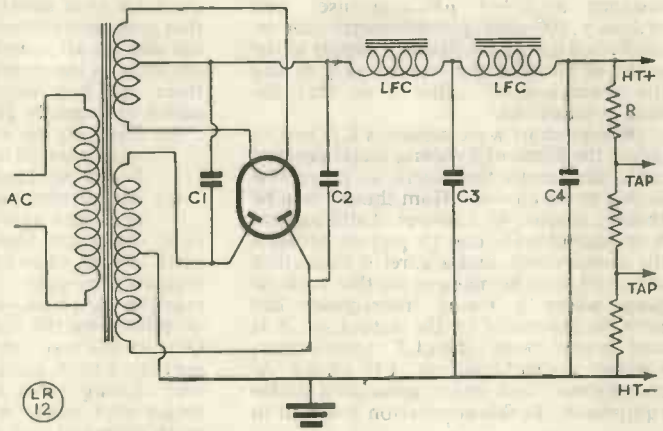


Fig. 2. Power supply unit with choke input; C1 and C2 are as in Fig. 1. In this case, C3 and C4 are each 8 μ F.

close to the valve as possible (Fig. 3). The by-passing of the filament by condensers is most important in obtaining stability as interstage trouble is often caused through the filament circuit. It is not necessary to by-pass the LF valves in this manner—the HF and detector stages will prove sufficient. In some cases, there may not be room to do the by-passing near the actual valve itself and in this

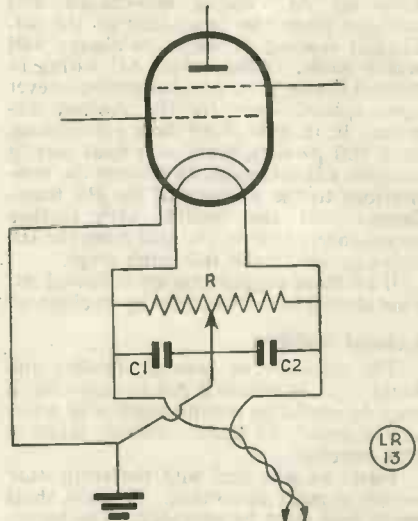


Fig. 3. Standard “hum-dinger” arrangement; the parts should be mounted as near to the valve holder as possible. R is 50 ohms, and C1, C2 each .01 μ F

instance a $1 + 1 \mu\text{F}$ condenser and ordinary 300-ohm potentiometer can be connected across the filament supply at the point of entry to the receiver (Fig 4) and the potentiometer adjusted so that the hum is tuned out.

In most short wave receivers it is best to shield the filament by using metal-covered cable and earth the shield at every few inches to the chassis. Hum should then be entirely absent. If, however, it still persists it is undoubtedly due to pickup between the components, and a careful inspection of the set must be made to see that in those cases where a mains transformer has been incorporated in the actual set it is well away from the LF transformer, volume control, output LF choke or transformer, and other associated audio equipment. In this connection it is well to

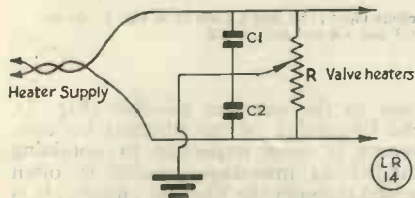


Fig. 4. Remote "hum-dinger" with adjustable potentiometer. The centre tap of R (300 ohms) should be set such that the hum is balanced out; $C1, C2$, are $1 \mu\text{F}$.

keep all AC wiring sub-chassis and shielded from the remainder of the set. Careful spacing of wiring is always well worth while. Always run AC wiring in twisted flex or close parallel wiring—never open spaced—even for the shortest distance. If, in spite of all these precautions, hum still persists, then, as a final cure, it may be advantageous to reverse the connections to the primary of the HF transformer and also shield, with earthed metal-covered cable, the lead from the HF valve anode to the following stage.

If all these suggestions are followed AC hum should be conspicuous by its absence!

General Stability

The question of general stability and hand capacity effects is not so easy—but it may be useful to remind readers of a few of the usual and more common faults in this direction.

First, we will deal with the earth itself—this is most important. A good short earth lead must be provided. The household hot water system is useless! If a direct and short connection to earth is not

available then select a cold water supply that goes direct to earth and one that does not wander all round the house. So far as anything in the receiver itself is concerned there are two usual methods—each of which are equally good:

- (a) Earthing bar of thick copper wire or strip inserted down the centre of base board or chassis, or
- (b) An earthing point or pillar provided near each valve.

It is important that the connections to earth of each valve and its associated components (by-pass condensers, etc.) be taken to *one* point—either on the earth bar or pillar—by the shortest possible route. Only in this way can stray RF currents be prevented from circulating in the receiver and causing valve interaction. Do not forget that where a metal cabinet is at earth potential and a tuning condenser is mounted direct on the panel, on its earth potential side, it is also essential to take a wire direct to the earth point of the appropriate valve—do not rely on the chassis as your earth. Mounting of tuning condensers back from the main front panel is to be advocated, using one of the several insulated bracket mountings and insulated couplers available for this purpose.

In most instances it is best to use an LF choke or transformer output system from the receiver to headphones and, where—in spite of this—capacity effects are still present in the 'phone leads an HF choke inserted in either lead will probably cure the trouble (Fig. 5). All RF leads in a receiver must be as short as possible, and grid condensers, and leaks, should be soldered direct on to the appropriate valve



An old piece of copper pipe does the job OK.

base pins ; also, keep the HF side of the receiver well removed, and screened, from the LF section.

For those who use a straight receiver without an HF stage it is suggested that the addition of such a stage would prove a great advantage and well worth while, for the HF amplification acts as a "buffer" stage between aerial and detector grid, thereby providing a constant load on the detector grid, and such troubles as those caused by aerial swing, dead spots, etc., are greatly minimised.

For those who do not employ an RF stage, its adoption should be considered before otherwise beginning to clean up the receiver to obtain that communications superhet stability and freedom from hum which we all desire but in many cases find most difficult to obtain.

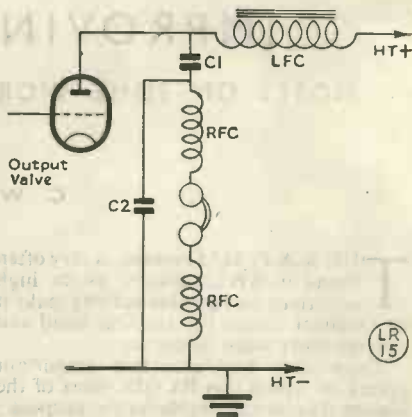


Fig. 5. Receiver stability can often be greatly improved, particularly on the higher frequencies, with this arrangement. RFC are both short-wave RF chokes, C1 is the usual feed condenser (0.1 to 2 μ F), and C2 is 0.001 μ F; LFC is the normal output Choke.

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slow-motion coupling fitted to the spindle in front of the panel, and a large diameter knob complete the job. This arrangement gives 180° spread on 14 mc.

Trimming

The oscillator trimmers will have to be adjusted to restore the dial calibration. Do this with the band-spread condenser at minimum capacity. Then peak the RF and mixer circuits with the AVC off, using the "magic eye." Make quite sure that you fully understand what you are doing before attempting this, and in any case note the position of a trimmer before moving it—so that it can always be restored as before. A signal generator is not essential for this operation provided that good steady signals can be found near both ends of each band. Of course, if most of the listening is done on the amateur bands, then the set can be trimmed on those bands to advantage.

IF Gain Control

To add an independent IF gain control both preserves the symmetry of the frontal appearance and serves a useful purpose. (The manual volume control on the Rx controls the bias on RF and IF valves *simultaneously*, which is a disadvantage.) A 10,000 ohm potentiometer, R in Fig. 1, is connected as an ordinary variable resistor in the cathode lead of one of the IF valves, as shown in the diagram. (Preferably the first, but the second is more easily accessible and does not necessitate such long leads.) This makes it possible to control the bias on that valve separately. RF voltage is by-passed by condenser C (0.2 μ F). There should be no oscillation at full gain; if any "birdies" appear check the by-pass condensers and increase the capacity if necessary.

It is well to note that the chassis is positive with respect to HT—, and any connection between them shorts the bias resistor.

Another RF Stage

The only method of overcoming the high noise level of the 1155 is to increase the pre-mixer amplification. The main source of receiver hiss is the mixer, and further amplification after it only aggravates matters. Fortunately, when the DF valves (VR 99's) are removed, there is room for a further stage of RF amplification; see Fig. 2.

First, take out one of the octal holders; the space is used for a standard 4-pin base for the coil. Leave the other holder in position for a KTW61, but strip the

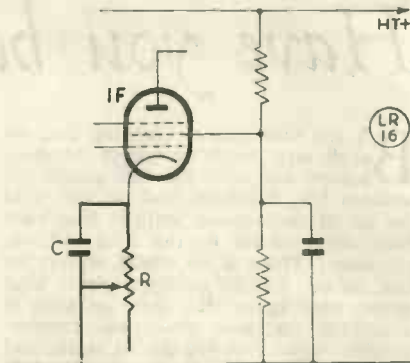


Fig. 1. Adding an IF gain control, as explained in the text. The new connections are shown in bold lines. C is 0.2 μ F and R a 10,000-ohm potentiometer.

wiring. Note, however that the wiring to the heaters and decoupling condensers may be left as it is (most convenient!) except that it is best to take the screen decoupling condenser C2 straight to the cathode of the valve, instead of to the chassis. The "switch speed" switch on the front panel is removed to make room for a .00016 μ F short wave variable condenser. If the big 4 μ F HT decoupling condenser is in the way, there is no reason why it should not be replaced by one of the small cardboard electrolytic type. The RF choke and decoupling components may be mounted beneath the chassis, and HT is conveniently on tap at the terminal on the 4 μ F condenser referred to above. Once again, do not forget that the earth connection is made to the chassis, and *not* to HT—.

An ordinary 4-pin plug-in coil for the band required may be used for L1/L2, and it should be possible to wind one at home which will cover both the 7 and 14 mc amateur bands. On the lower frequencies, the extra RF stage is not necessary; and to save coil changing or the losses of a coil switching assembly, provision can be made to plug the aerial straight in to what will now be the 2nd RF amplifier. For this purpose the 4-way "from loop aerial" Jones socket is used, as shown in the diagram.

An output stage to work a speaker, and a power pack have been built for this receiver, but it is not proposed to give details here as circuits are available which cover this ground.

One small point; it is very easy to fit a couple of pilot lamps for the dial, as the connections for them may be taken from the chassis and from the "magic eye."

Have you heard?

BY the time you are reading this, we shall very nearly be out of the slack season and into the full activity of autumn DX, Contests, and the return to the air of those many stations that have been attracted off by the rival outdoor pleasures. There is no closed season for DX, as our faithful correspondents have shown once again. But there certainly is a definite slackness about the summer months—what with hot shacks, static, and a severe falling-off in conditions at certain times of day.

The Calls Heard lists make very interesting reading this month, particularly in view of the two 14 mc SLP's, one in the evening and one in the morning. Study the two sets of lists carefully and you will be forced to conclude that by listening from 1800-2000 GMT and again, twelve hours later, from 0600-0800 GMT, one can hear the world on 14 mc. The evening honours were held by stations like AR8AB, VS2BU and VS2BV, VK2AGU and VU2AN, all of whom would doubtless

AMATEUR BAND COMMENTARY

which, let us say, includes not a single HK station, whereas those on either side of you log three or four, then you are probably justified in believing that your aerial system is poor for that direction. If, however, you have logged one or two of them, and the others still have three or four, it is more reasonable to assume that you have just been missing the weak ones—either because your equipment is not up to it, or because you, yourself, are not expert in the art of identifying weak signals.

Perhaps some of the more hardened "Calls Heard addicts" would like to tell us, in due course, what they make of it all. One thing is certain, and that is that the SLP's are immensely popular (even among

BY THE DX SCRIBE

be thrilled to know how consistently they were being heard in all parts of this country on that particular evening. Then, in the morning, there were VR6AA, ZL4FO (this station appeared in every single 'phone list!), with VP4TU and HK3GB doing pretty well.

This leads us on to rather a fundamental sort of question: "What is the purpose of publishing lists of Calls Heard?" From the purely Editorial point of view the answer is simple—"Because readers like them, want them and ask for them." But we wish to get a little farther than that, and find out just what *use* readers make of them. Personally, your Scribe finds Calls Heard lists very instructive in showing just what kind of DX is on the air at a particular time, and also in showing which listeners (either by virtue of their receiver or of their receiving ability) can really pick out the weak stuff and identify it correctly. From the listener's own point of view, it should be most illuminating to compare one's own list with other people's and then to try to find reasons for the differences. If *you*, for instance, have sent in an SLP list

those who don't send in lists) and that the interest in general lists of enormous length is falling off.

As instead many readers have been asking, this month, for a system of "Zoned" listening, we are tentatively introducing it herewith.

Calls Heard—Zoned Listening

Next month we shall not print any "general" lists for the 14 mc band. Send your general ones, if you like, for 7, 3-5, 1-7 and 28 mc, but *not* for 14. This is what we want you to do:—Will those whose listening time is in the evening (say from 2000-2300 GMT), cover the following zones only: 22-32, 37, 38 and 39. Those who listen in the morning, at any time from 0600 to mid-day, please cover Zones 1, 2, 3, 6, and 29-32.

That will give everybody plenty of scope; send your lists headed with the listening times, and with the stations listed under the heading of each Zone concerned. Like this: DX Searcher, 13 Haywire Road, Superville, Blos. *Period* 2100-2300 *Zone* 22: VU2AN, 2GB, 7TT. *Zone* 24:



G3BFC, of Ferndown, Dorset, on 7 and 14 mc with CW ; he uses an R.1155 receiver. A full description of the station will be appearing in the "Short Wave Magazine."

CR9AG, VS6AB. Zone 25: J3AAD, 4AAK, 8ABL. And so on.

This will at least be a start towards a system of "zoned listening," and the concentration effected by it should help many listeners who are not well up in HAZ to fill some of their gaps.

HAZ

Talking of the list, notice that there are four "top-scorers" this month, N. A. Phelps and K. Callow having been joined by those two old-stagers O. A. Good and L. N. Goldsbrough. And we prophesy that it won't be long before we have a dozen or more up there on the top line. The top score for the "Phone Only" list is now 36 Zones, held by A. H. Onslow, A. J. Slater and R. A. Hawley ; last month no one claimed more than 35. We doubt whether anyone will ever hit the 40 mark for 'phone, not because of any great increase in difficulty, but because we can't imagine finding a 'phone station operating in the frozen wastes of Zone 19 ! However, we live and learn, and if someone can think up a way of sending a microphone and modulator to UAØKQA (where is *he* now, by the way ?) he will doubtless oblige.

Only one more remark before we pass

on to the correspondence, and that is that we still receive such a volume of lists of Calls Heard that it is impossible to squeeze them all into the allotted space, so please don't be disappointed if yours does not appear. (Of course, if it didn't conform to the rules, or was written with a blunt twig, or arrived in late, you have only yourself to blame. Otherwise, blame your Scribe, but sympathise with him too ! You have never been confronted with a pile of Calls Heard lists some six inches thick, to be lashed into understandable form before being sent to the printers.)

The Month's Listening

Conditions have been good, considering the time of year, especially for Oceania and the Far East, and many readers have picked up that elusive Zone 23 by hearing C8YR. A. E. Hardman (Manchester) says that after C8YR called CQ, there were stations from every part of the world calling him at once. Another interesting comment from him is that his log for Sunday morning, July 20, shows just *one* station—VR6AA on 'phone—who was roaring in on a dead band. A.E.H. asks if there are any active stations in Zone 39. Well, we heard both VQ8AD and VQ8AE a month or so back, and

someone has recently worked an FB8 in Madagascar, but they seem pretty elusive. The VQ8's were coming in on 14020 at about 1800 GMT.

D. F. Willies (Holt) queries the call of MD1A, who says he is in Benghazi. We have no doubt that he is genuine, as the "MD" series was due to be extended to cover Tripoli. MD2A is in Tripoli, and there should be some stations in Bardia and Tobruk on by now. But we haven't

received their full QTH's as yet. SHF1 and SHFIX have also been heard by D.F.W. and many others.

A letter from the Rev. D. D. White (Toller, Dorset) gives the information that JCFA (logged by several readers) is a M.E.F. broadcasting unit. D.D.W. puts in a claim for 33 Zones and 79 Countries, all heard between July 2 and August 2! He received two more Zones just outside this period, but didn't claim them. And

then he asks whether KG6AV/VK9 (New Britain) counts as a different country from VK9 (New Guinea). From the official country list we gather that it does *not*, and that W3EKK/VK9 (Admiralty Islands) is also lumped in under the main heading of VK9. D.D.W.'s interesting letter gives us the idea that a month-by-month HAZ Contest might be rather fun—and we won't forget that.

Bob Craig (Llanely), who is ex-VU2AP, also puts in a HAZ claim which places him on the ladder, and a nice list of Calls Heard which, unfortunately, was squeezed out at the last moment. He, and several others, wants to know *where* SHFIX (ss. *Albatross*) has got to by now. This is a tricky business, because, even if we knew (which we don't at present) by the time we published it we should be all wrong. But we are trying to get a complete itinerary. And we are mildly ticked off by Bob for referring to HSISS as a new station, because VU2AP worked him last November, and he had been on for two months before that!

D. L. Courtier-Dutton (Herne Bay), who sends in a good HAZ claim as well as some Calls Heard, is a fourteen-year-old, and is probably the youngest SWL on our roll. If any of you old stagers are younger than 14, let's hear from you! Otherwise,

Listener	Post-war Zones Heard	Post-war Countries Heard	All Time Zones	All Time Countries
'Phone and CW				
N. A. Phelps (London, N.10)	40	172	40	179
O. A. Good (Oswestry)	40	160	40	160
L. N. Goldsbrough (Wirral)	40	151	40	164
K. Callow (Mansfield) ..	40	111	40	111
C. S. S. Lyon (Liverpool)	39	142	39	142
A. E. Hardman (Manchester)	39	138	40	163
T. Burton (Birmingham)	39	137	40	180
M. H. Preston (London, S.W.17)	38	174	38	184
A. Baldwin (London, E.11)	38	147	38	147
G. Curtis (S. Harrow) ..	38	137	38	137
R. A. Hawley (Goostrey) ..	38	124	39	126
W. J. C. Pinnell (Sidcup)	38	117	38	117
A. Frost (Thornton Heath)	37	125	37	125
G. P. Watts (Norwich) ..	37	124	37	132
Dr. T. B. Williamson (St. Albans)	37	116	38	131
M. D. Lipscombe (Seaford)	37	104	37	115
D. Heaton (Bradford) ..	36	126	37	130
A. H. Onslow (Hove) ..	36	120	36	120
H. Owen (Tafo, Gold Coast)	36	119	36	119
F. A. Herridge (London, S.W.12)	36	109	36	109
B. Cage (Ipswich) ..	35	98	35	111
L. Tombs (Swindon) ..	35	94	35	94
R. Twidale (Scunthorpe)	34	97	34	97
Rev. D. D. White (Toller)	33	79	33	85
F. W. Jones (Birmingham)	32	79	32	79
B. Hayes (Bletchley) ..	31	56	31	56
'Phone Only				
A. J. Slater (Southwick)	36	135	37	141
A. H. Onslow (Hove) ..	36	125	36	125
R. A. Hawley (Goostrey)	36	117	36	132
M. Harrison (Darlington)	35	126	35	126
C. G. Tilly (Bristol)	35	119	36	141
G. P. Watts (Norwich) ..	35	118	35	126
L. N. Goldsbrough (Wirral)	35	116	35	129
D. L. McLean (Yeovil) ..	35	112	35	124
D. W. Bruce (Eltham) ..	35	109	35	109
D. L. Courtier-Dutton (Herne Bay)	35	105	35	105
M. D. Lipscombe (Seaford)	35	101	35	112
G. Hare (Leadenham) ..	34	104	34	106
O. A. Good (Oswestry)	34	96	34	96
L. Tombs (Swindon) ..	34	90	34	90
W. B. Harrald (S.E.21)	33	81	33	81
N. A. Phelps (London, N.10)	33	75	35	94
C. S. S. Lyon (Liverpool)	32	98	32	98
R. S. Craig (Llanely) ..	31	76	34	83

look out—this youngster is well up on the 'Phone-only list with 35 Zones heard.

R. A. Hawley (Goo-strey) has been cheated of his Maritime Mobiles because of conditions on 28 mc, but he heard D4AVF/Mobile/Air, bound from Liberia for Frankfurt, and also TFE9 in flight south of Iceland.

I. E. Alfrey (London, W.4) comments on the short-skip conditions during the past month. At times he found G2WW (Penzance) the loudest signal on 14 mc, with G2FNS (Sheffield) at S9 *plus*, and GW3AX (Swansea) very strong. But the VK's were arriving at the same time.

C. S. S. Lyon (Liverpool) comments on the Swan Island ambiguity mentioned last month, and says that the QTH of W5LMT/KS4 is "Swan Island, West Indies, *via* Tampa, Fla.," so he assumes, probably correctly, that KS4 is the Swan Island off the Honduras coast and not the one near Bermuda.



A. Levi's station at 33 Old Cavehill Road, Belfast.
The receiver is a Hallcrafters "Sky Challenger."

From Overseas

Here is some advice on "How to QSL," straight from the DX man's angle. It comes from L12CL (now probably an MB2...) in the course of a long and interesting letter on conditions out there." We will quote *verbatim*: "While we appreciate SWL reports that serve a useful purpose we regret that financial limitations will henceforth prevent us from sending confirmation cards to SWL's who (i) send a report containing no useful information (many send RST, date and time only !); (ii) do not include call of station worked, thus enabling full confirmation; (iii) do not report on our

stations over a period. So please let us have a report covering at least *eight* different days, with full information on conditions prevailing, type of rig, and calls of stations worked."

As L12CL is the Signals Officer responsible for licensing the stations out there, his remarks apply to all of them. At the time he wrote, the three active ones were his own L12CL, L12BO and L12JC, all at El Adem.

D. W. Bruce (London, S.E.9) reports that his best piece of DX during the month

was J4AAS (H.M.S. *Sussex* in Kure Harbour, Japan), who was S9 for 45 minutes at 1735 GMT: Other good stuff included ST2AM, AR8AB, W6WCN/KG6, CR4HT, MD6DS and XZ2AG.

A. H. Onslow (Hove) is well on the way to claiming "Heard All States" complete with verification, and only wants a card from Delaware, having collected from Arizona, Colorado and Montana last month. (Your Scribe has a very nice double-sized card from W3DPA, with "Delaware" in huge letters on one half!)

E. W. Musgrave (Chadderton) has heard the mysterious DF3AA during the month but still can't shed any light on his whereabouts. E.W.M. is in digs. and uses five feet of wire slung across the room each night and removed each morning—you can't keep a good SWL down!

W. B. Harrald (London, S.E.21) forwards CICH's QSL, which bears a map of China marked out in districts. It seems to indicate that all C5's and C8's are in Zone 23, with the possibility of certain C6's and C7's also being there, as the Zone boundary on the WAZ map does not coincide exactly with the boundaries of the provinces and Call Areas. W.B.H. also confirms our decision about Swan Island, and adds that Nottingham Island

is in the Hudson Strait, between Baffin Island and Quebec, and is therefore in Zone 2.

J. O. Roberts (S.W.11) in the course of an interesting letter, has some amusing comments on the "game called QSY." As he describes it "A calls B, works for a while, and then says 'You are QRM'd, can you QSY?' So B moves, lands on C, who, finding himself QRM'd, does a QSY on to someone else, and they all move. If they had all stayed put they wouldn't have been any worse off. And seeing that A is 50 miles from B, the right band was 1.7 mc anyway, not 7." We could hardly agree more!

M. Harrison (Darlington) mentions an interesting effect he has noticed. He says that whenever 14 mc has been dead and is recovering (or, conversely, is about to go dead) he hears VQ4ERR or VQ4JBC. Seems as if the transition period produces skip just right for them—assuming that they are always on the air. E. W. B. Aldworth (Ashford, Kent) comments on the frequent short-skip effect and mentions some queer new ones, including XXA (logged by several others), LKCO, and TAIT, who says "QSL via THA." He takes a poor view of the removal of VK7 (Tasmania) from the list of countries, but

DX FORECAST FOR AUGUST/SEPTEMBER (ALL TIMES GMT)

	7 mc	14 mc	28 mc
NORTH AMERICA			
East and Central	2300-0600	1800-0700	Erratic
West Coast	0500-0600	{ 1700-2200 0300-0700	Unlikely
CENTRAL AND SOUTH AMERICA	2300-0600	2000-0800	1400-2000
AFRICA :			
North of Cancer	1400-0900	All day	0800-2000
South of Cancer	1900-0600	1600-2300	0700-2000
ASIA :			
West of 75 deg. E.	2000-0300	0700-2200	0800-2000
East of 75 deg. E.	2000-0500	1300-2100	1000-1800
OCEANIA :			
VK, ZL, ZK, ZM, VR, etc. ..	0400-0800	{ 0600-1000 2000-0100	1000-1300
PK, KA, KB6, KG6, KM6 ..	?	1300-2000	0900-1300

NOTE.—The times given above are the most likely periods during which signals may be expected from the parts of the world indicated. Under unusual conditions, signals may be heard outside these times.

we think it is quite right and proper. It is only one of the states of Australia, and has no Government, Parliament or postage stamps of its own. (Of course the cases of G, GM and GW are open to question on those grounds!) But GD (Isle of Man) can be justified on the grounds of its own Parliament.

A. J. Slater (Southwick) has "gone 100 per cent. 'phone" and transferred himself from the general HAZ list to the 'phone one, losing one Zone thereby. But he has heard C8YR, KG6AV/VK9, VR6AA, W6WCN/KG6, J5AAL, J9ANL, XZ2AG and all sorts of nice stuff, including ZK1AA for a special treat! A.J.S. has put up some new aerials, and is anxiously awaiting the SLP lists to see how his logs compare with the others. (We said they were useful!) He also mentions that he heard MD1A say he was in Benghazi, but once he slipped and called himself "ZS2AL"—so it seems this particular MD1A was a pirate. On this subject, a letter from ZC1AL to A. Levi (Belfast) states that ZC1RJ is, or was, a pirate, too.

And this DF3AA bloke, who, according to some readers, is in the French Zone of Germany, was heard by B. J. Randall (Herne Bay) to tell G8NY that he was in "North Morocco." Take your choice!

O. A. Good (Oswestry), who has attained the dizzy height of 40Z since last month, says he has had QSL's during the month from W6VTO/C1, EL3A, OIX7, OY3IGO, VE8AW, VK4OS (Papua), VQ4JBC, and ZD4AB. He mentions that W6UFA/5 is rather an interesting station to hear, as he is stationed at Los Alamos, New Mexico, the site of the first atom-bomb test.

G. J. Rawlinson (Enfield) says he used to receive 75 per cent. return on his reports before the war, but now he gets about 16 per cent. He has heard 110 countries, but only 63 have been verified as yet (but even that is pretty good going).

N. S. Beckett (Lowestoft) has also got C1CH's card with the Chinese provinces shown on it, and he mentions that he has had a verification from ZA1CB—not a card, but a small stencilled message in French, sent by the broadcasting station at Tirana. He reminds us that we will probably have to find out which of the VU stations are in Pakistan, if we want another new country!

F. A. Herridge (London, S.W.12), a great 28-mc devotee, has put up a 66-foot aerial running East and West and finds it better all round than his original dipole. He has also cured his last drop of hum by

careful screening of mains leads and the box containing his mains unit.

N. A. Phelps (London, N.10), who heads the general HAZ List, breaks into the 'Phone Only list with a start of 33Z and 75C. His post-war total has now reached the terrific figure of 172. He queries the QTH of PK6HA, and we happen to know that one—he is on Biak Island, which is just off the coast of Dutch New Guinea. He gives useful tips for the "HAS" enthusiasts: W7HIJ Wyoming, W7JRX, 7JHS and 7TCQ all Arizona. He also gives W6ICV as Utah, but this can't be right as Utah is in the 7th district now. We happen to know that W7DTB is in Lewiston, Utah—and W7FRM in Lewiston, Idaho, just to confuse you! But their cards are side by side on your Scribe's wall, and you can't argue with that.

L. N. Goldsbrough (Wirral) is naturally elated because the ever-helpful and active C8YR has given him his 40th Zone. But he mentions sadly that there are "dubious features" about ZD8A, EA7A, CR8AC and FL8AE, and would like to know if anyone can verify any of these. He would also like elucidation on the MD prefix position, because, as he rightly says, at present "MD5" can mean Canal Zone, Dodecanese or Transjordan. MD6 appears to be Iraq, MD1 Cyrenaica and MD2 Libya. We were only able to print half of his terrific 14 mc Calls Heard list but admired it all just the same!

W. J. C. Pinnell (Sidcup), quite an old hand, has just disclosed that he is only fifteen! He increased his Zone score to 38 after hearing W6WCN/KG6, and queries EA7A and the various HV



I get ham radio for breakfast, dinner and tea now, Doctor

DX QTH'S

EK1AS	RCA Telecommunications, Tangier International Zone.
EP2BU	P.O. Box 7, Schiras, Persia.
FT4AC	M. Deschot, 99 Rue d'Isly, Tunis.
I4LL	P.O. Box 83N, Cagliari, Sardinia.
KA6FA	Box 392, Ilo-Ilo, Panay Island, Philippines.
KZ5AP	Box 293, Gatun, Canal Zone.
KZ5DX	France Field, US Army, Canal Zone.
KZ5NB	US Submarine Base, Balboa, Canal Zone.
MD6DS	No. 6 Forces Broadcasting Unit, Basra, British Forces in Iraq.
NY4ZQ	Navy 115, c/o F.P.O., N.Y.C., U.S.A.
PK1RI	Box 190, Batavia, Java.
PK6AX	VERON, Box 400, Rotterdam, Holland. (Station on Celebes.)
PZ1OY	Box 637, Paramaribo, Surinam.
SV1AH	P.O. Box 255, Athens.
SV1TA	59 Anakreonitos Street, Kallithea, Athens.
TF3HG	Box 5, Reykjavik, Iceland.
TF3MB	Box 1080, Reykjavik, Iceland.
T12JE	Box 454, San Jose, Costa Rica.
VE8OG	c/o AOC 11 Group RCAF, Stevenson Field, Winnipeg, Canada.
VP4TT	73 AACG Group, APO 869, c/o P.M., Miami, Fla.
VS6AC	367 Signals Unit, RAF, Hong Kong.
VU2KM	HQ 2 Coy., Southern Command Sig. Regt., Bombay 5.
W5FFW	H. E. Davis, 1419 West Archer Street, Tulsa 6, Oklahoma.
W6UFA/5	Box 1663, Santa Fe, New Mexico.
W6WCN/KG6	Naval Air Station, Kobler, Navy 957, c/o Fleet P.O., San Francisco. (Station on Salpan Island).
XAMC	P.O. Box 5485, Dallas, Texas. (Station in Trieste.)
XZ2AG	64th Brigade Sigs., Maymyo, Burma.
XZ2KM	379 Dalhousie Street, Rangoon, Burma.
ZC1AL	c/o P.O., MAFRAQ, The Arab Legion, Transjordan.

stations that have been heard. We imagine that any *genuine* HV could be counted as a country; and so can EA7A if he is all right. And finally W.J.C.P. mentions that XAMC is in Trieste, and IIAHK, I AHL and I EH are all in Sardinia.

S. A. Miles (Reading) queries LNHAU/Airborne and AI9IA, and adds I4LL to the Sardinian list. R. Twidale (Scunthorpe) has been having a good time with Central and South Americans, and also

heard XZ2AG operating from a *tank* 250 miles north of Rangoon. Nice calls in his month's log are HC2KJ, HH2CW, KZ5NB, ST2KA and ZC6DD.

Set Listening Periods, August

August 30, 2000-2200 GMT—14 mc phone and CW.

August 31, 1400-1700 GMT—28 mc phone and CW.

We hope that before long we shall be able to announce a 21 mc SLP, as the new amateur band 21000-21450 kc appears now to be a reasonable certainty. It should be very interesting indeed—one on which to go out for a single-band HAZ!

Logs, Calls Heard lists, and all correspondence for this month, please, by first post on September 3, addressed to the DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1. Please keep those HAZ Claims separate from everything else, and put them on a post-card if possible. Good Listening!

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SWL STATIONS

No. 4

ILLUSTRATED is the receiving equipment operated by G. P. Watts, 62 Belmore Road, Thorpe, Norwich. The main receiver is a Hallicrafters Sky Champion, with which excellent results are obtained on 14 mc. The receiver has been "meccano-cally" ganged to the preselector above, the gearing and fulcrum points being so arranged as to keep both units in gang over the complete band, by the operation of the single receiver control. Removal of the driving band at once puts the gearing device out of mesh, gravitation causing the long guide-bar to swing slightly to the left; this movement allows

the receiver to be operated independently.

The Eddystone 5/10 Converter unit, with its separate power-pack, is used in conjunction with the Hallicrafters for 28 mc reception. To the left can be seen the domestic Bush receiver which, says the XYL, "has less knobs to manipulate." The QSL cards in use depict a view of Norwich Cathedral.

G.P.W. first became interested in short wave reception in 1937. Present post-war results are 37 Zones with 124 Countries heard, of which 118 are on 'phone. 68 countries have so far been verified, representing 30 Zones.

CALLS HEARD

Please arrange all logs strictly in the form given here. Note, in particular, that the prefixes must be in alphabetical order, and that the number but not the prefix must be repeated with each callign (e.g., WIAZ, 1BCR, 1COL, 2DY, 2EF, etc.). The calligns, after the number, must also be in alphabetical order. Where listening has been on more than one band, a separate list should be sent for each band, under the appropriate heading. In other words, study the layout of the lists below, and make yours exactly like them.

SET LISTENING PERIODS

14 mc 'Phone

July 26, 1800-2000 GMT

N. S. Beckett, 26 Grosvenor Road, Lowestoft.

AR8AB, MD5DL, UA1KBA, VQ2HC, 4ERR, VU2AN. (Receiver: 5-valve superhet.)

B. Cage, 331 Landseer Road, Ipswich.

AR8AB, MD5KB, VK2AGU, VU2AN, 2BQ. (Receiver: 0-V-1.)

A. J. Slater, 72 Underdown Road, Southwick, Sussex.

AR8AB, EA9AI, MD5BL, 6DS, OQ5BW, VK2AGU, VS2BU, 2BV, VU2AJ, 2AN, 2BQ, XZ2AG, ZS6DW, 6LF. (Receiver: SX24.)

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

AR8AB, CT1UU, EA9AI, MD1A, 1F, UA1KBA, 3CA, VK2AGU, VS2BU, 2BV, VU2BQ. (Receiver: 0-V-1.)

A. Frost, 18 Beechwood Avenue, Thornton Heath, Surrey.

EA9AI, MD5BL, 6DS, UA1KBA, 3CA, 3EA, VK2AGU, VQ4ERR, VS2BV, 2BU, VU2AN, 2BK, 2BQ, 6YOC/Shanghai, ZS6GW. (Receiver: Eddystone 504.)

A. H. Onslow, 10 Egmont Road, Hove.

AR8AB, EA9AI, MD5BL, OQ5BW, VK2AGU, VQ2HC, VS2BU, 2BV, VU2AN, 2BQ, ZS6DW.

John E. Tindle, 97 Mill Hill Road, Acton, London, W.3.

AR8AB, MD5BL, 5DW, PY1FR, 8UA, SHF1X, TRIP, VK2AGU, VQ4ERR, VS2BV, 2BU, VU2AN, XXA. (Receiver: 0-V-2.)

E. A. Parkinson, 8 Hawthorn Drive, Rodley, Leeds.

MD1F, 5BL, 6DS, 9AD, UA1KBA, 3CA, VS2BU, 2BV, VU2AN, 2BQ, WØCKR, ZS6AJ.

D. Heaton, 1 Jer Lane, Horton Bank Top, Bradford, Yorkshire.

J2AHA, 8AAA (Korea), OQ5BW, UA3CA, VK2AGU, VQ4ERR, VS2BU, 2BV, VU2AN, 2BQ, ZS6LF.

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

J2AAC, MD5BA, 5BL, OQ5BW, WYOT/C6, WØCKR, ØKSP, VK2AGU, VS2BB, 2BG, 2BV, VU2AN, 2BQ, ZS6AJ. (Receiver: Eddystone 504.)

SWL, 54 Pinderfields Road, Wakefield, Yorks.

MB9AA, MD5DL, OQ5BW, SHF1, UA1KBA, 3CA, VQ4ERR, VS2BU, VU2AN, 2BQ, ZS6AJ. (Receiver: 9-valve superhet.)

G. P. Watts, 62 Belmore Road, Thorpe, Norfolk, Norfolk.

AR8AB, EA9AI, MD1F, 5BL, OQ5BW, UA1KBA, 3AX, 3EA, VK2AGU, VQ2D, VS2BV, VU2AN, 2BQ, 2DS, ZC6FK, ZS6AJ, 6DW, 6LF. (Receiver: Hallicrafters S20.)

E. W. B. Aldworth, Longberry, Bethersden, Ashford, Kent.

AR8AB, OQ5BW, UA1KBA, VK2AGU, VQ2HC, 4ERR, VS2BU, 2BV, VU2AN, 2BQ, ZS6AJ.

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

AR8AB, CN8BV, EA9AI, MD5BL, 6DS, OQ5BW, VK2AGU, VS2BU, 2BV, VU2AN, 2BQ. (Receiver: V55R.)

A. E. Hardman, 14 Burtinshaw Street, Cross Lane, Gorton, Manchester, 18.

AR8AB, MD1F, 5BL, 6DS, OQ5BW, UA1KBA, 3CA, VK2AGU, VS2BV, VU2AN, 2BQ, ZS6LF. (Receiver: 1-V-1.)

N. S. Mackenzie, Garry, King Street, Castle Douglas, Kirkcudbrightshire, Scotland.

OQ5BW, SHF1X (Swedish Deep Sea Expedition), UA1KBA, VK2AGU, VQ2HC, VS2BU, VU2AN, 2BQ, WØPYS, ZS6BW, 6LF. (Receiver: V55R.)

14 mc 'Phone and CW

July 27, 0600-0800 GMT

L. N. Goldsbrough, 246 Chester Road, Whitby, Wirral, Cheshire.

'Phone: HK3GB, LU2AS, PY2PB, VK2AKP, 4ZB, 7FP, VR6AA, W5JFP/4, ZL4FO.

CW: FA3JQ, VK2NU, 2PU, 2SD, 2TR, 2ZF, 3AMP, 3BZ, 3CN, 3DN, 3EK, 3LN, 7NC, ZL1BQ, 2GO, 2KY, 3CX, 4GA. (Receiver: Battery 1-v-2.)

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

'Phone: MD5BL, VK3AJB, 3LA, 3YH, VR6AA, ZL4FO.

CW: FA8HQ, HP4Q, VK2EO, 2HW, 3AMP, 3VJ. (Receiver: V55R.)

N. S. Beckett, 26 Grosvenor Road, Lowestoft.

'Phone: HK1AG, 3AO, 3GB, 4AB, VK4ZB, VP4TV, VR6AA, ZL4FO.

CW: FA8HQ, VP2AA, VK3SM, 3UH, 5FM, Y05WZ. (Receiver: 5-valve Superhet.)

N. A. Phelps, 17 Lesaside Mansions, Fortis Green, London, N.10

CW: FQ3AT, KS4C, OA4BG, UB5BD, UI8AB, VP2AA, VK2ATF, 2EV, 2VA, 2ZF, 3AMP, 3AQN, 3AXE, 3DN, 3DZ, 3EG, 3EK, 3FH, 3LG, 3NC, 3PA, 3VJ, 3XK, 4AF, 4EL, 5AJ, 5DQ, 5FM, 5HN, 5HZ, 5RX, 7JH, 7JP, 7NC, W6EYR, Y05WZ, ZL2AO, 2GO, 2GA, 2KY, 3AB, 3CX, 3IS, 4CK, 4GA, 4GL.

'Phone: HK3AO, 3BB, VP4TV, VK2AGU, 3AJD, 3JE, 4ZB, 7NC, ZL4FO. (Receiver: 1-V-1.)

B. Cage, 331 Landseer Road, Ipswich.

'Phone: HK3AO, VE2OG, VK2AGJ, 2AKR, 3AJB, 3BH, 3YH, 7NC, VP4TU, 4TV, VR6AA, ZL4AO, 4FO. (Receiver: 0-V-1.)

B. G. Wells, 36 Norfolk Square, London, W.2.

CW: KS4AC, VK2EO, 2FY, 2HW, 2VQ, 3AMP, 3CN, 3CX, 3LN, 5RX, VP2AA, ZL3CX, 4CK. (Receiver: Home-built superhet.)

N. S. Mackenzie, Garry, King St., Castle Douglas, K'Bright, Scotland.

'Phone: HK3AU, 3DA, VK2AKR, 3AJB, 3JE, 3JW, 3YH, 4ZB, 7MC, VP4TU, ZL2RC, 4AA, 4FO. (Rx: V55R.)

L. Toombs, 31 Little Avenue, Swindon.

'Phone: HK3AO, 3JB, VE8OG, VK3AJB, 3JE, 7NC, VR6AA, ZL4FO. (Receiver: 10-valve superhet.)

G. Curtis, 45 Holyrood Avenue, S. Harrow, Middx.

CW: CT1JS, FA3JY, MD5DA, VK2BA, 2EV, 2FG, 2GT, 3AMP, 3HU, 3LN, 4ER, 5DO, VP2AA, YOSWZ, ZL2FA, 3CX, 3IS, 4GL. (Receiver: Battery 1-V-1.)

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

'Phone: CN8AO, HK3AO, 3BI, 3DA, 3DD, 3GD, VK2AGJ, 2AGU, 2AKR, 2TE, 3AJB, 3BH, 3BN, 3JE, 3MC, 3ND, 3PS, 3YH, 4AB, 5WG, 7NC, 7TR, VP4TU, 4TV, VR6AA, ZL1FI, 2BE, 2GX, 4FO. (Receiver: 0-V-1.)

O. R. F. Mason, 13 Chestnut Grove, Southend-on-Sea, Essex.

'Phone: HK3AO, 3BB, LU3AS, VE8OD, VK2CI, 2TE, 2AGJ, 2AKR, 3JE, 3WZ, 3YH, 3AJB, 7NC, VR6AA, YV5AB, ZL4FO. (Receiver: R1155/4.)

A. Frost, 18 Beechwood Avenue, Thornton Heath, Surrey.

'Phone: CO2UP, HK3AO, 3DA, 3GB, VK2ADR, 2ADS, 2AGJ, 2AKF, 3AJB, 3BH, 3CI, 3HS, 3JE, 3JW, 3XU, 3YH, 4ZB, 7NC, VP4TU, VR6AA, W5JMP/4, ZL4FO.

CW: CE1JS, FA8HO, UA3HI, 3ID, UB5BD, UH8AF, VK2PU, 3AMP, 3CX, 3ER, 3LN, 3VJ, 4HZ, 5RL, 7NC, ZL2FA, 2GS, 3GR, 3IS, 4CK, 4GL. (Receiver: Eddy-stone 504.)

A. J. Slater, 72 Underdown Road, Southwick, Sussex.

'Phone: HC1JW, HK1AG, 3AO, 3GB, MD5BL, VK2AKF, 2CI, 2ZX, 3ADR, 3AJB, 3HF, 3JE, 3ND, 3UP, 3YH, 4ZB, 5FM, 5WB, 6DF, 7NC, VP4TU, 4TV, VR6AA, YNIHT, ZL4AO, 4FO. (Receiver: SX24. 0600-0645 GMT.)

A. H. Onslow, 10 Egmont Road, Hove.

'Phone: CO2UP, HK3AO, KH6GF, LU4AS, MD5BL, VE8OG, VK2AGJ, 2AGU, 2AKF, 2FA, 2NG, 2OQ, 3AJB, 3BH, 3HS, 3JE, 3JW, 3UP, 3XG, 3XU, 3YH, 4ZB, 5FN, 5WB, 7NC, VP4TU, 4TV, VR6AA, ZL4AO, 4FO.

E. W. B. Aldworth, Longberry, Bethersden, Kent.

'Phone: HK3AO, 3GB, VE8OG, VK3YH, 7NT, VR6AA, ZL4FO. (Receiver: 0-V-2.)

John E. Tindle, 97 Mill Hill Road, Acton, London, W.3.

'Phone: CO2UP, HK3GB, VK2AGJ, 2AGU, 2AKR, 3AGJ, 3FS, 3MC, 3ND, 7NC, VP4TU, VR6AA, ZL4FO.

CW: VK2ZF, YOSWZ. (Receiver: 0-V-2.)

M. Harrison, 36 Southend Avenue, Darlington, Co. Durham.

HK3AO, 3BI, 3GB, LU2AS, PY2PB, VK2AGJ, 2AGU, 2DW, 3AJB, 3BH, 7NC, YV5AB, ZL4AB, 4FO. (Receiver: Invicta 30.)

F. Gollin, 69 Abbey Street, Old Lenton, Nottingham.

'Phone: HK1AG, 3AO, 3DL, 3GB, MD5DL, VK2AG, 2CI, 3AJB, 3JE, 7NC, 7MB, VP4TU, 4TV, ZL2BE, 4FO. (Receiver: 7-valve superhet.)

G. P. Watts, 62 Belmore Road, Thorpe, Norwich, Norfolk.

'Phone: CN8BA, HK1AG, 3AO, 3DA, 3GB, 4AB, MD5BL, VE8OG, VK2AGJ, 3AJB, 3AJV, 3CI, 3JE, 3JW, 3MC, 3ND, 7NC, VP4TU, 4TV, VR6AA, ZL2BE, 4FO.

CW: FA8HQ, VK3AMP, YOSWZ (?), ZL4DL. (Receiver: Hall-crafter S20.)

D. L. Courtier-Dutton, Tlev-Tara, Hilltop Road, Herne Bay.

'Phone: CO2UP, HA4AB, HK3GB, VK2AG, 2AKF, 2AKR, 2FA, 2GQ, 2TE, 3MC, 3YH, ZL2BE, 4FO, VP4TU, VR6AA. (Receiver: 1-V-2.)

I. E. Alfrey, 45 Russhall Avenue, Chiswick, London, W.4.

'Phone: HA4AB, HK3GB, VE5JV, VK2AGJ, 2AGU, 2AKF, 3AJB, 3JE, 3MC, 3YH, VP4TU, 4TV, ZL4FO. (Receiver: V55R.)

E. A. Parkinson, 8 Hawthorn Drive, Rodley, Leeds.

CO2UP, HK3GB, MD9AD, VK2AKR, VP4TU, ZL4FO.

A. E. Hardman, 14 Burtinshaw Street, Cross Lane, Gorton, Manchester, 18.

'Phone: CO2UP, HK3AO, VK2AKR, 2CI, 2RU, 3AJB, 3YH, 4ZB, 7NC, VP4TU, 4TZ, ZL2BE, 4AO, 4FO.

CW: VK2BA, 2HW, 3AMP, 3EG, 7NC, ZL2AJ, 3CX, 4CK, 4GA. (Receiver: 1-V-1.)

GENERAL

14 mc

L. N. Goldsbrough, 246 Chester Road, Whitby, Wirral, Cheshire.

'Phone: Zone 3: VE7AIE, 7AJN, 7EF, 7ZZ, W6CVK, 6EUJ, 6EUO, 6FBZ, 6PK, 6WJZ, 7DMZ, 7ESK, 7GC, 7HIA, 7HRV, 7HTH, 7HTV, 7JJOE, 7UP. Zone 4: VE4GD, 4HF, W5A0H, 5KJB, 0CUN, 0GFO, 0UJS, 0UKF, 0ZEA. Zone 5: VO1D. Zone 6: XE1A, 1AC, 1BC, 1CQ, 1CX, 1GC, 1LA, 3S. Zone 7: TG9LK, T12AB, 2EV, 2JE, 2MF, 2OA, 2RC, YNIHB, YS3PL, Zone

8: CO2DQ, 2JD, 2LY. Zone 9: HK3BI, 3EO, 3GB, YV5AB, 5AG. Zone 10: OA4AE, 4AL, 4M. Zone 11: PYIACJ, 1GY, 1MK, 2CK, 2LM, 2OV, 2PB, 4AY, 4BI, 4CT, 4GI, 4IO, 4RA, 7AD, 7AX, 7AY. Zone 13: CX3BL, LU2AS, 3EB, 4BH, 4ON, 4HI, 6AJ, 6BB, 6CC, 7CK, 8AK. (Zone 14, 15, 16 heard.) Zone 20: AR8AB, SV1WP, ZC1AL. Zone 22: V57RF, VU2BK, 2BQ. Zone 24: C1CH. Zone 26: ZL2AA. Zone 28: VS1AN. Zone 30: VK2AGU, 2AKR, 2AML, 2NO, 2XG, 3AGU, 3XG, 4ZB, 7PP, 7TR. Zone 32: VR6AA, ZL4FO. Zone 33: CN8AB, 8BA, 8MA, EK1AD, 1AS, FA8OF, FT4AI. Zone 34: MD1B, 5BL, 5HI, 5PC, TR1P. Zone 35: EL5A. Zone 36: VQZHC. Zone 37: VQ4ERR. Zone 38: ZS1DY, 2AF, 6DP, 6DW, 6LF, 6LS. Zone 40: OX3GG, 7B. (Receiver: 1-V-2. June 30-July 29.)

N. A. Phelps, 17 Leaside Mansions, Fortis Green, N.10.

CW: CR7AL, 7BC, EQ3AX, J3AAH, 4AAK, G3BMJ/V57, K54AC, 4AE, OY7NL, PK6HA, UA3BD/UZ, UH8AA, 8AF, 8KAA, U8AA, 8AB, U8AC, 8AD, UL7BS, VP2AA, 3JM, VK9OU, VU7JU, W5LMT/K54, W6ODD/VP4, 2D2KC, 4AI, 4AL, 6DT, 2E1S, 2H, ZS3D, 3F. (Receiver: 1-V-1.)

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

'Phone: CN8EE, CT2AB, EK1AD, 1AS, FA8CF, HH2CW, HK3AR, 3BF, 3BI, 3BJ, 3DD, 3EO, 4EB, KZ5NB, MD5AM, 5PC, OA4M, TG9JK, 9MP, 9RV, T12AY, 2EV, 2FE, 2RC, TR1P, VE4GE, 4RP, 7AIE, 7AJN, VK2ABC, 2AGU, 2AHA, 2ALA, 2AML, 2DO, 2FJ, 2NG, 2SV, 3HG, 3IK, 3MC, 3YH, 3ZL, 4KH, 6MW, VP4TT, 4TU, 9T, VR6AA, VU2BQ, W5HCH, 5HUT, 5KJB, 5MA, 6BZE, 61CS, 61KQ, 6NO, 6NWQ, 6PDB, 6PF, 6RO, 6SSG, 6WUI, 7ADH, 7BVO, 7ESK, 7GC, 7GUI, 7HIA, 7HRV, 7HSZ, 7HTB, 0JHX, 0JWF, 0LBF, 0NNI, 0TGN, 0ZEA, XE1AC, 1BC, 1CQ, 1I, YNIHB, ZL2FF, 2GX, 4FO. (Receiver: Sky Champion S20. June 29-July 16.)

B. G. Wells, 36 Norfolk Square, London, W.2.

CW: CE1JS, CN8BK, KZ5AZ, VK2ZC, 3EK, 4EL, W5ASG, 0DJW, 0LHS, 0OER, ZL2GO, 4GA. (Receiver: Home-bull superhet. July 22, 0615-0715 GMT)

A. J. Slater, 72 Underdown Road, Southwick, Sussex.

'Phone: AR8AB, CR4HT, EL5A, HC1JW, HH2CW, 5PA, H12K, J2AAJ, 2ACW, 3WGT, 4AA, 5AAJ, 5AAL, 9ABE, 9ANL, KAIABM, 1AI, 7GC, KP4CK, KZ5NB, K6GAG, 6AV/VK9, KH6CF, MD6DS, NY4ZQ, OQ5BW, 5CA, OX3GG, 7B, ST2AM, TG9JK, 9MG, 9RV,

CALLS HEARD—(contd.)

VE4IF, 4RP, 7AIE, 7AJN, 7EF, 7ZZ, VK4HZ, 4ZB, 5FM, 5WB, 6DF, 7NC, 7TR, 9NK, VP4TE, 4TT, 4TU, 4TV, 5AL, 5RS, 9F, 9T, VQ2AG, 2HC, 4ERR, 4RAW, VR6AA, VS1BG, 2BO, 2BU, 2BV, 7IF, 7PW, VU2AJ, 2AN, 2BQ, 2QT, 2RX, W6JIM/CI, 6WCN/KG6, 7ANN/CI, XZ2AA, 2AG, YIG6, YN1HB, 1HT, YS3PL, ZAI6C, ZCIAL, 1RJ, 6AB, ZD6DT, ZK1AA, ZL2GX, 4AO, 4FO, ZS6BV, 6DW, 6LF. (Receiver: S.X.24. 0515-0615 GMT and occasionally 1600-0001.)

M. Harrison, 36 Southend Avenue, Darlington, Co. Durham.

'Phone: AR8AB, CN8AM, 8BH, 8MB, EK1AD, EL5B, FA3FB, 8DX, MD5PC, 6GF, OQ5BW, SHF1X, TR1P, VK2AGU, 3WX, VO1AC, 1Y, 2AF, 2AN, 2AQ, 2P, VQ2HC, VU2AF, 2BQ, 2DG, VS2BU, XZ2AG, ZB1AE, ZC6AV, 6DD, 6WP, ZS2AF. (Receiver: Invicta 30. 1915-2000 GMT)

F. W. Hardstone, 43 Shrubbery Road, Streatham, S.W.16.

'Phone: CE2BQ, CN8BA, 8BV, CO2HY, 8NP, CT1UU, FT4AI, HA4AB, HH2CW, HK3BI, 3EO, LU1JC, 4BH, 4HI, 4XA, 6CB, 7BU, 8AK, 8UA, PY1FR, 2CK, 2OV, 4AI, 7AY, SV1GY, TI2RC, UA1AB, 1BA, VE2BG, 2BV, 2SA, 2SE, VK3YH, VU2BQ, XZ2AG, YV5ABT, ZB1AE, ZC6DD, ZL4FO. (Receiver: V55R. July 3-27.)

J. M. Graham, 2 Kelvinside Terrace West, Glasgow, N.W.

'Phone: C7BQ, 8YR, J2AAG, 2HEW, 2JCQ, 2PLP, 2WGD, 5AAJ, 5AAL, 9CRP, KG6AA/VK9, 6AG, KH6FF, VK2ABD, 2AJC, 2TI, 2VA, 3IG, 3SB, 4HG, 4KO, 6HS, VR6AA, VS2BU, VU2BQ, W3JRF/KG6, 6VTO/Shanghai, ZL1CD, 2GO. (July 3-24, 0600-0630 and 1800-1830 GMT.)

Rev. D. D. White, Toller, Dorchester, Dorset.

'Phone: C1CH, CO8MP, CN8BA, 8BK, 8BS, CT2AB, CN8AM, EK1AD, AS, EL5A, FA8DX, JCFA, HCH1B, 1KW, 3AA, 3BI, DW, 3EO, 3GB, KA1AI, KG6AV/VK9, KH6BX, 6GF, 6HO, LI2BO, LU4BH, 4BT, 4EB, 5AD, 6AJ, MD2A, 5PC, 6DS, 9KM, OA3GG, OQ5CA, VE7AIE, 7XR, 8OG, VC2AQ, 4Q, VK1AS, 2AGU, 2AHA, 2ALP, 7TM, 9MK, VQ2HC, 4ERR, VR6AA, VS2BO, VU2BQ, 2RV, XE2HY, YV1AB, 1HB, 5AB, 5AG, 5AQ, ZCIAL, 6DD, ZD6DT, ZL4FO, ZS6CT.

CW: EK1AA, EL5A, EP2DS, FA8RA, FT4AC, KL7HE, KZ5DX, LU9AX, FT3EA, 3MB, UA9CC, UG6AB, ZS6FN. (Receiver: V55R. July 2 to August 2.)

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

'Phone: AR8AB, CR4HT, J2PAL, 4AA, 9ABE, 9ABX, KA1ABM, 1HR, LI2BO, MDIA, 1F, 5AA, 5BL, 5DC, 5HJ, 5KB, 5PC, 6DS, ST2AM, VP4TE, 4TU, 4TV, 5EL, 5RS, 9F, 9T, VQ2HC, 4ERR, 4RAW, VR6AA, VS1AN, 1BU, 2BJ, 2BU, 2BV, 7RF, VU2AN, 2AQ, 2BK, 2BQ, 2DG, 2RV, W6YTO/CI, 6WCN/KG6, XZ2AG, ZCIAL, 1RJ, 6CX, 6DD, 6TX, ZE11B, ZS2AF, 2CI, 6DW, 6LF. (Receiver: 0-V-1. 0500-0600 and 1600-2000 GMT, July 3-29.)

Dr. T. B. Williamson, Hill End Hospital, St. Albans, Herts.

'Phone: AR8AB, EL5A, KA1ABA, 1HR, MD5BL, 6DS, PK3AH, VK3NM, VR6AA, VS1AL, VU2DG, 2RV, W6MLA, 6SD, 7HRV, 7VT, ZL4FO, ZS6DW.

CW: HA1BK, 16USA, J5AAL, MD5AP, 5EV, UA1KU, 2KA, 3DS, 6JA, 6KJA, 9CC, ØKAA, U6D6G, 6BM, UG6AB, UH8AA, 8AF, U8AB, VK3NM, VS1AX, VU2BG, YO5WZ, ZC6SX, ZD4AL, ZL3DJ, 4CK, ZS1GC, 2BZ. (Receiver: 2-V-2.)

28 mc

J. M. Graham, 2 Kelvinside Terrace West, Glasgow, N.W.

'Phone: CE3AG, CX4CS, EL2A, F3HL, 8ME, 8XT, HB9BZ, 9CV, I1SM, LU2DR, 3DH, 4EB, 4EC, PY2BH, 2CK, PZ1A, SUIHF, VP4TK, 6LN, VQ3EDD, 4ERR, VR6AA, VS9AB, ZC6WP, ZE1JB, 1JM, 1JX, 1JZ, ZS1P, 1T, 5Q, 6EG. (July 6, 0830-2000 GMT.)

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

'Phone: CR9AG (0957), KP4ES (1510), LU3DH (1725), MD5DC (1443), PZ1M (2125), SUIHF (1009), VP4TZ (2150), VS9AB (1441), VU2BF (0956). (July 6, Times DBST. Receiver: 0-V-1.)

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

'Phone: CE3AB, CX4CS, D4AAZ, 4ATH, EL2A, I1SM, KP4CD, 4ES, LU3DH, 4EC, OK1VA, OQ5AR, PY2CK, 2HV, 2QK, 7DD, 7QG, SUIHF, VP4TK,

6JC, VS9AB, WØWNB/MM, XADT, ZC6JF, ZD2KC, ZE1JM, ZS1T, 5BY, 5Q, 6DW. (June 29-August 13, 1000-1400 and 1500-1900 GMT. Receiver: Sky Champion S20.)

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

'Phone: CX1DB, D4APN, F3OO, 8QO, 9DN, HB9CZ, 11HV, 1VS, LU3DH, OK1VA, PY1JY, SUIHF, VS9AB, W2QQY/MM, WØWZM/MM, ZC6PF, 6HB, 6F, ZS1P.

CW: D4UKW, F3DN, 6KC, 8CT, 8HO, HB9FP, 1IGD, 1NT, 1ON, OKIAMX, 1AW, 3DG, OZ7CH, 7G, VK5NR, W8QOH/MM, ZD4AB, ZS5U, 6BJ. (June 24-July 28, 0710-2105 GMT. Receiver: 0-V-0.)

L. N. Goldsbrough, 246 Chester Road, Whitby, Wirral, Cheshire.

'Phone: CE3AG, CX4CS, EL2A, HK3DW, KP4ES, PY1GY, 2CK, 7QG, 7OD, VP6JB, VQ4ERR, VS9AB. (July 5-6. Receiver: 7-valve superhet.)

L. Tombs, 31 Little Avenue, Swindon.

'Phone: CX4CS, LU2DM, 3DH, 4UC, 6BI, PY2DS, 7BC, SUIHF, 1WF, VQ1MF, 2WP, 3EDD, VS9AB, W1PPH/MM, 4JQT/MM, ZB2A, ZCAF, 6FP, 6HB, 6F, ZS1P, 1T, 5G. (July 1-31. Receiver: 10-valve superhet.)

1.7 mc

L. Tombs, 31 Little Avenue, Swindon.

'Phone: G2FZK, 2HHN, 3ADD, 3AZT, 3BJJ, 3NC, 3RQ, 4GR, 5LO, 5RP, 5UH, 5WA, 5KT, 6HG, 6HN, 6KJ, 8DX, 8QJ, 8VP, 8WV, GW3ALE, 5BI, 6GW. (Sundays in July. Receiver: 10-valve superhet.)

A. H. Learmond, 11 Princes Street, Innerleithen, Peeblesshire, Scotland.

C2BJT, 2PWQ, 2FIX, 2KO, 2KS, 2NY, 2OO, 2RH, 3ACP, 3ADQ, 3AUH, 3OB, 3YB, 5JO, 5MV, 5SV, 5XF, 5YN, 6FC, 6HC, 6UJ, 8CT, 8IC, 8NG, 8QJ, CM6SR, CW2BC, 2HIN, 3CO, 6BW. (Receiver: SH5.)

The Editor Wants

- ★ Photographs of SWL stations, with brief descriptive notes.
- ★ Short articles on practical problems connected with DX reception.
- ★ Photographs of short wave broadcast stations the world over.

Material accepted in the categories mentioned above will be paid for at good rates. Cards and photographs can be returned if required, as the block-making process involves no damage.



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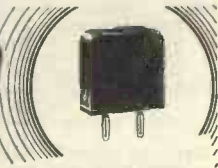
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PSE QSL

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.

- CX2AX** Calle Luis Lamas 1238, Pocitos, Montevideo, Uruguay, S. America. *Phone on 14157, 14170, and 14180 kc, operating 2300-0130 BST.
- D2DM** Linden W/O's Mess, HQ Mil. Govt., Hansestadt, Hamburg, 609 HQ, CCG, B.A.O.R. All reports from anywhere on 7 and 14 mc transmissions will be QSL'd.
- E14N** Maln Street, Clarecastle, Co. Clare, Eire. Operating CW at LF ends 3-5 and 14 mc bands, VFO-controlled, 2200-0100 BST.
- G12BGM** Model School House, Londonderry, N. Ireland. SWL reports on transmissions on any band will be confirmed if correct.
- G2CZH** 140 Seymour Avenue, Morden Park, Morden, Surrey, CW operation at irregular times on 1773, 7014, 7050 and 7074 kc; all useful reports will be QSL'd if s.a.c. enclosed.
- G2CZM** 25 Gernaln Street, Chesham, Bucks. *Phone and CW on 1902 kc, operating weekdays 1900-2200 BST and Sundays 1000-2200 BST.
- G2DFX** 5 North Parade Terrace, Monmouth. Operating 1930-2100 BST daily on 3-5 mc band, and 1130-1300 DST on 1-7 mc on Sundays.
- G2DHY** 63 Lewisham Hill, Lewisham, London, S.E.13. *Phone and CW on various frequencies in 3-5, 7 and 14 mc bands, operating 1900-2100 BST daily; 100 per cent. QSL station.
- G2DOM** 10 Raphael Avenue, Tilbury, Essex. Reports wanted on CW transmissions on 1-7, 3-5, 7 and 14 mc bands, operating periods irregular; 100 per cent. QSL station.
- G2FFO** 41 Scott Park Road, Burnley, Lancs. Operating *phone and CW on 14 and 28 mc bands, VFO-controlled, during periods 1100-1200 and 1600-2200 BST daily, and at week-ends.
- G3ADP** 96 Woodhouse Road, Kettlegh, Yorks. *Phone and CW on 7, 14 and 28 mc bands, operating 1900 BST onwards on weekdays, and Saturdays after 2300 BST.
- GM3ANO** 167 Perth Road, Cowdenbeath, Fife. CW on 7050, 14100 and 28040 kc, operating periods irregular.
- G3AVL** 43 Pendennis Street, Anfield, Liverpool, 6. SWL reports from anywhere on 1-7 and 3-5 mc transmissions; reports from distances over 1,000 miles on 14 and 28 mc working. Operating CW only, and on most evenings.
- G3AYT** 43 Donald Avenue, Hyde, Cheshire. Reports wanted from anywhere on 14 mc VFO-controlled *phone and CW; crystal frequency 14316 kc operating on Sundays 1600-2200 BST.
- G3BNI** 9 Morden Road, Chadwell Heath, Essex. Operating on 1725, 7132 and 14264 kc, CW only, during weekday periods, 1900-2300 BST and Saturdays and Sundays 0900-2300 BST. All reports will be acknowledged.
- G3CEI** 25 Belltrees Grove, Streatham, London, S.W.16. Reports requested on 14 mc *phone and CW transmissions, VFO-controlled; any distance. Operating periods irregular. All correct reports will be acknowledged.
- G3LS** 28 The Cliff, Seaton Carew, West Hartlepool, Co. Durham. On 7 mc CW on various frequencies during periods 0700-1200 and 1500-2300 BST daily.
- G4FU** 56 Mannheim Road, Toller Lane, Bradford, Yorks. CW and *phone on 14144 kc, operating 0300-0500 BST daily, 100 per cent. QSL station.
- G4RX** 134 High Street, Barnet, Herts. Reports wanted on 28024 kc CW from anywhere outside 50-mile radius of London. Variable operating periods.
- G5KC** 123 Kingsway West, Acomb, York. QRP experiments with *phone and CW on 1-7 and 3-5 mc bands, operating most evenings. Reports requested from any direction over 50 miles distant.
- G5MR** South Lawn, Admiralty Road, Felpham, Bognor Regis, Sussex. Operating *phone and CW on 59056 kc, evenings 2130-2300 BST. Reports also wanted from over 2,000 miles on 14 and 28 mc CW and *phone transmissions; operating periods irregular.
- G8JC** Brookhill Farm, Ladywood, Droitwich, Worcs. Working CW on 7011, 7033 and 7171 kc; SWL reports particularly requested from East Coast, the South-East and North and South Wales. Reports should cover at least six transmissions heard over a period. Operating most days at various times.
- J9ABX** APO 331, Unit 3, c/o Postmaster, San Francisco, Calif. Operating *phone on 14156-14205 kc during period 0001-0400 BST, and on 28300-28550 kc during period 1000-1800 BST daily.
- KZ5NB** U.S. Submarine Base, Balboa, Panama Canal Zone, U.S.A. *Phone working on 14206, 14256, 28712 and 28800 kc; operating periods irregular.
- MB9AD** S.S.M. R. Macey, 12 Wireless Sadr., R. Sigs., B.T.A., C.M.F. Operating *phone and CW on 3-5, 7 and 14 mc bands, during periods 1630-0030 BST, and 0500-0730 BST.
- OK1HI** J. Hyska, Praha XIX, Cechova 31, Czechoslovakia. Operating CW on 1-7, 3-5, 7, 14 and 28 mc, VFO-controlled, and also on crystal frequencies 7090, 7100, 7110 and 7130 kc, during periods 1700-2359 BST daily and on Sunday mornings.
- PA0NN** P. Th. A. M. Hoogenbosch, Willemstraat 29, Eindhoven, Holland. VFO-controlled CW and *phone on 3-5, 5, 7, 14 and 28 mc, operating most evenings.
- PY2OE** Rua Marechal Floriano Pelxoto 729, Itu, Sao Paulo, Brazil. VFO-controlled 14 and 28 mc CW. Operating 1000-1100 and 2200-2300 BST, daily.
- PY4BI** G. Ferreira, Pca Dr Senra, s/n, Pedro Leopoldo, Minas Gerais, Brazil. Operating 14 mc *phone, from 0630 BST daily.
- SM3XA** QSL via SM3WB, Marielundsvagen 5, Ostersund, Sweden. *Phone and CW on 3-5, 7 and 14 mc, operating periods irregular.
- VE1RR** H.M.C.S. Electrical School, H.M.C.S. Stadacona, Halifax, Nova Scotia, Canada. CW and *phone on 14 mc, operating 0300-0600 BST.
- VP2GE** P.O. Box 65, St. Georges, Grenada, B.W.I. VFO-controlled *phone on 14 and 28 mc bands; no set operating periods.
- V56AN** Top Floor, 227 Nathan Road, Kowloon, Hong-Kong. CW on various frequencies in 7, 14 and 28 mc bands, also *phone on 28 mc. Operating periods 1300-1700 BST.
- VU2BV** Cpl. J. E. Priddy, I.S.C. School, Mhow, India Command. CC *phone and CW on various frequencies in 14 and 28 mc bands, operating periods 1900-2300 BST on 14 mc, and 0800-2000 BST on 28 mc. SWL reports specially welcomed and all will be QSL'd.
- W1EXH** 53 Chadwick Street, Roxbury 19, Mass., U.S.A. CW and *phone on 7, 14 and 28 mc, from frequencies 7180, 7194 and 14128 kc; operating periods 1900-2359 BST on weekdays, and 1400-0100 BST on Sundays.
- W5KTD** Box 38, Ruston, Louisiana, U.S.A. CW on 14020 and 28040 kc, and *phone on 28688 kc, operating all day over week-ends.
- W61DY** Box 27, Moretto Road, Martinez, Calif., U.S.A. *Phone in 14203-14215 kc band, 1500-1900 BST, and in 28503-28700 kc band during period 0400-0700 BST.
- ZL3BV** P.O. Box 57, Greymouth, New Zealand. Working *phone on 3900, 14220 and 28200-28450 kc; no set operating periods.

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CRY FROM THE HEART I

On p.269 of our last issue ("SWL Stations—No. 3") we published a description of the outfit operated by W. J. Cain, Stranraer. He writes to tell us that since its appearance, he has been inundated with requests for details of his modifications to the R.1155. As W. J. C. is away on holiday, he asks us to say that there may be some delay in replying to readers' letters, but that he will carry on the good work on his return, when all queries will be dealt with in rotation. Fair enough, W. J. C. I

★ ★ ★

NEXT ISSUE—W2IXY

In our next issue, dated October and due out on September 18, there will be an exclusive illustrated article by Mrs. Dorothy Hall, W2IXY, specially commissioned for the *Short Wave Listener*. W2IXY will cover, from the Amateur Radio point of view, her impressions and experiences during her visit to Europe. Look out for this—it will be good!

★ ★ ★

ZONE MAP REPRINT

The first printing of our Zone Map having unexpectedly become exhausted before the new DX season has got under way, a reprint has been put in hand, and copies will be available very shortly. It is without doubt essential to every SWL seriously interested in DX.

The Zones areas are delineated in red, and the complete Zone List is printed down the sides of the Map. It also gives time in GMT and the bearing and distance of all parts of the world relative to the British Isles.

The *Short Wave Magazine* Great Circle Zone Map : In two colours, size 21-in. by 35-in., on heavy paper for wall mounting, price 3s. 9d. post free. Order from the Circulation Manager, The *Short Wave Magazine*, Ltd., 49 Victoria Street, London, S.W.1.

All times given in this article are GMT, except where stated. Add one hour for BST.

DX broadcast

World-wide reception of Short Wave programmes

My primary task is to commiserate with all those valiant readers who attempted to log our special broadcast from Indo-China on July 6. Unfortunately for us all, conditions were such that Radio Saigon on 11780 kc was only barely audible just prior to the beginning of the programme; and after 1525, the Moscow transmitter RW96, using the same frequency, completely dominated the band with an S9 *plus* signal. So that was that. Sorry, but the circumstances were beyond our control!

GENERAL COMMENTS

Australia

Radio Australia has made several alterations in schedules recently. For the afternoon session broadcast to the British Isles, VLC9 has been replaced by VLC4, 15320 kc (19.59 m). A new frequency is used for the 1745 daily transmission, namely VLC8 on 7280 kc (41.2 m), and VLB is also in operation on 9540 kc (31.45 m) in addition to VLA8. Reports on reception of the 41-metre channel would be particularly appreciated by Radio Australia. Another broadcast to the U.S.A. is made over VLA7, 17800 kc (16.85 m) daily from 2359 to 0115, and simultaneously to countries in South America via VLA10, 17840 kc (16.82 m).

Asia

I have received from Asharq-Al-Adna, the Near East Arab Broadcasting station at Jaffa in Palestine, some details of their transmitter. It is situated at Beit Jala, 3000 feet above sea level, and operates with a power of 7.5 kW. Frequencies in use are 6790 kc (44.18 m), 6170 kc (48.62 m), 6135 kc (48.90 m) and 3320 kc (90.36 m).

Soon after receiving word from our most regular correspondent D. O. French (Norwich) that an English speaking station in Palestine was now on the air in the 41-metre band, I was able to log it amidst much QRM on July 18, from 2000 to 2100. The wave length was given as 41.27 m, and the writer's frequency reading was 7265 kc. Station directions were given at quarter-hour intervals; they read: "You are

tuned to the Forces Broadcasting Service, Jerusalem." Dance music formed the greater part of the programme, and included a quarter hour of South American rhythm.

At intervals the announcer made this statement: "We would welcome reception reports on this test transmission. Please send your reports to: No. 1 Forces Broadcasting Unit, Jerusalem, Palestine."

In Iran, EPB, Teheran, 15100 kc, is now heard daily at 1215 with World and Home news in English. The second part of the fifteen-minute transmission consists of the playing of an assortment of gramophone records: Tabriz, Azerbaijan, has been active on 12180 kc with English vocals in a well-known fox-trot at 1755, and closing with a national air at 1900, but later on Sundays.

TAP, Ankara, Turkey, can be heard at 2030 on Sundays with a fifteen-minute "Post Bag in English."

In the Far East, the comparatively new Philippine broadcaster KZPI in Manila, operating on 9710 kc (30.9 m) is on the air daily from 2159 to 1605, with a late extension on Saturdays.

Its power, 250 watts, is, however, comparatively small. In the unsettled island of Java, Radio Batavia on 15145 kc (19.81 m) is reported to be in session from 1400 to 1500 each day.

Africa

Cape Town has recently been logged anew by the writer. Try at 2100 on 5882 kc, when you should hear the mellow tones of Johannesburg's City Hall clock striking eleven. Radio Mozambique furnishes us with a revised list of transmitters and new schedules; these will be found in the Tabulated Schedules section at the end of this article. The transmission on 4915 kc

(CR7BV) was well received here at 2000 on July 13.

OTC2 (9745 kc) and OTC5 (17745 kc), Leopoldville, Belgian Congo, are on the air regularly with English programmes.

That for Great Britain and British Forces in Africa commences at 2030 with a bulletin of world news in English, which is followed by a programme review; that for the United States and Canada extends from 0200 to 0400. On July 6, OTC2 was

Monthly Comment by

R. H. GREENLAND, B.Sc.

heard with first hand news of the reception being accorded to Prince Charles on his visit to the Belgian Congo.

The French transmitter FGA7 on 11715 kc (25.61 m) has been logged recently at 1915 with the direction: "Ici Radio Dakar." This Senegalese station continued with a programme of popular French songs.

Since my first report on his signals,

ETAA, Addis Ababa, Ethiopia (15060 kc) has improved in signal strength. At 1957 on July 2, after announcements in Amharic and French it closed with the following pronouncement in English: "We have had the pleasure of offering you a programme of popular music and we hope you have enjoyed it." Two days later, on America's Independence Day, ETA put over a special broadcast at 1930 in honour of the occasion. First, Mr. William

Erholm, on leave from the International Telegraph and Telephone Company of New York City and at present a co-director of radio services in Ethiopia, thanked correspondents for all the nice messages he had received. He was sure that they would be looking forward to receiving a QSL card from another new country, and he hinted at a new amateur 'phone station which he would shortly be

PROGRAMME PERIODS

I. BST 0700-0830.

- 0700 KRHO Honolulu, 17800 kc (16.85 m). The Voice of America in Hawaii, closing with the strains of the U.S. National Anthem.
- 0715 OAX4J Lima, Peru. Latin American dance music. Call at 0722 (In Spanish): "Oh-Ah-Ekis-Ouatro-Yay, Radio Colonial en Lima" on 9330 kc (32.15 m).
- 0730 HVJ Vatican City, 9660 kc (31.06 m). Religious Service.
- 0745 VLA6 Shepparton, Australia, 15200 kc (19.74 m). Australian Radio Reel.
- 0800 VUD8 Delhi, India, 21510 kc (13.95 m). Native orchestral music.
- 0815 Radio Monte Carlo, 6130 kc (48.94 m). Light music.
- 0830 OIX2 Lahti, Finland, 9500 kc (31.58 m). Orchestral music.

II. BST 1300-1400.

- 1300 WLWO Cincinnati, Ohio, 17800 kc (16.85 m). World News.
- 1315 EPB Teheran, Iran, 15100 kc (19.87 m). Home and World News in English.
- 1325 HE12 Schwarsenburg, Switzerland, 6345 kc (47.28 m). Orchestral music; e.g. Grieg's Pianoforte Concerto.
- 1345 Vienna, Austria, 9650 kc (31.09 m). Orchestral Concert.
- 1400 OLR3A Prague, Czechoslovakia, 9550 kc (31.41 m). Celebrity Concert. Vocal and Orchestral.

III. BST 1600-1800.

- 1600 SBT Motala, Sweden, 15155 kc (19.80 m). News in English.
- 1615 Radio Batavia, Java, 15145 kc (19.81 m). Light Music.
- 1630 VLA6 Shepparton, Australia, 15200 kc (19.74 m). Topical Talk, e.g. Shipping and its importance to Australia and her trade.

- 1710 VUD3 Delhi, India, 17760 kc (16.98 m). English programme, e.g. the play "Gaslight."
- 1730 BFEB5 Singapore, 15275 kc (19.64 m). Popular songs, e.g. "The Rose of Tralee" by Kentucky Minstrels or similar party.
- 1745 PMA Batavia, Dutch East Indies, 19345 kc (15.5 m). Talk entitled: "Current Facts about Indonesia."
- 1755 CKCS Sackville, Canada, 15320 kc (19.58 m). Canadian Chronicle.

IV. BST 1830-2030.

- 1830 ETAA Addis Ababa, Ethiopia, 15060 kc (19.92 m). Native music.
- 1900 A.F.N. Frankfurt, Germany, 6080 kc (49.36 m). News in English.
- 1915 FXE Beirut, Syria, 8036 kc (37.34 m). Native music.
- 1930 VLA8 Shepparton, Australia, 11760 kc (25.51 m). News in English.
- 2000 WRUA Boston, Mass., 15350 kc (19.54 m). Talk: e.g. Great Men of America—Simon Bolivar.
- 2010 WRUL Boston, Mass., 15290 kc (19.62 m). World University Series. Talk: e.g. International Population Control.

V. BST 2130-2300.

- 2130 Radio Banfeld, B.A.O.R., 6710 kc (44.71 m). Dance Items.
- 2145 VLG7 Lyndhurst, Australia, 15160 kc (19.79 m). A.B.C. News.
- 2200 SUX Cairo, Egypt, 7865 kc (38.16 m). Dance music.
- 2215 CSW6 Lisbon, Portugal, 11040 kc (27.17 m). Call: "Aqui Lisboa," followed by various musical recordings.
- 2230 VLC9 Shepparton, Australia, 17840 kc (16.82 m). Radio, Australia's Breakfast Session.
- 2245 CSX2 Ponta Delgada, Azores, 4845 kc (61.92 m). Popular music.

putting on the air "in the middle of the 14 mc band."* He concluded with the words "Good luck and God bless you." After a musical interlude, the American Manager of the State Bank of Ethiopia, and his wife, spoke of the great scope for new commercial enterprises in this hitherto undeveloped country. Finally we heard a message from another American whose task it is to facilitate the co-ordination of Ethiopia's air services.

With reference to the station calling itself Radio Cyrenaica, the writer is of the opinion that it is "Radio Pirenaica." It was logged on another frequency, namely 10400 kc, closing with directions in Spanish and the slogan: "Viva la Republica" at 2250. K. V. Palmer (Tankerton, Kent) informs us that this station uses the slogan: "Radio Espana Independiente," and is a clandestine Republican transmitter; he has logged it on 15320 kc at 2030. J. M. Simpson (Aberdare Gdns., N.W.6) gives the call as: "Radio Clandestina" and has logged it on channels in the 19, 22 and 29-metre bands.

South America

Latin Americans were again prominent during the first part of July. Of outstanding interest was the world-wide broadcast of General Peron's speech from Buenos Aires at 2000 on July 6. The President defined Argentina's policy under present day world conditions and embodied in his speech a call for universal good will.

The writer heard this broadcast over LSL, Buenos Aires, on 21160 kc (14.17 m). LRS, Radio Splendide, 9315 kc (32.2 m) subsequently gave translations of the President's message in Italian, French, English, Portuguese and Russian.

LRM, Radio Aconcagua, Mendoza, on 6180 kc has been logged at good strength with call at 0430.

In Uruguay, CXA6, Montevideo, on 9623 kc, may be found with news in Spanish followed by music at 0415. A peculiar clicking noise appears to be used as an interval signal. CXA14, 6055 kc, in Colonia, has been prominent with typical tangos and boleros around 2210; the occasional reference to the location is an aid to identification.

In Chile the most reliable station appears to be CE1180 on 12000 kc. It has been logged closing at 0300 after a final news in Spanish. Another Chilean is CE970 in Valparaiso, 9730 kc, heard with

waltzes, fox-trots and a male announcer around 0340.

Coming northwards, two more Peruvians have been noted. On July 4 at 0215, Latin American music was heard on OAX2A's frequency of 5620 kc. Announcements were given at six minute intervals and the station closed down somewhat abruptly at 0325. OAX2A is located at Trujillo in Peru. OAX4K, Lima, 9765 kc, gave news in Spanish at 0350 and closed after a brief Spanish direction at 0355 on July 12.

HC2RL, Guayaquil, Ecuador, 6635 kc, can still be heard on Wednesday mornings around 0400, perhaps with Strauss's "Roses of the South." The closure is applied at 0615 after Spanish and English announcements and the playing of the Ecuadorian National Anthem.

HCJB, Quito, has now moved to 6230 kc in the early mornings, and has been heard answering listeners' letters in English. J. M. Simpson (London, N.W.6) observes that the 12455 kc and 9960 kc channels are quite good at 2200 when church bells usher in the "Sunset Hour."

He writes: "The entire programme is in English and its evident sincerity, together with the soft and melodious quality of the music is a refreshing contrast to the usual quick-fire programmes of rumbas, tangos and advertisements which are heard from the majority of Latin American stations." J. M. S. has also logged ZFY, British Guiana, 6000 kc, with the B.B.C. News relayed at 2200 and followed by a Children's Hour broadcast at 2210.

In Brazil, PRL7, 9720 kc, still holds the fort. Announcing as "Radio Nacionales," it continues with typical variety programmes at 0300.

Two Colombians are worthy of note. HJDE, Medellin, 6145 kc, announcing as "La Voz de Antioquia" is a massive signal just before closing at 0400; we were not favoured with English announcements, however. HJCAB, 9690 kc, was identified by several vibraphone notes preceding the direction: "Radio Nacional, Bogotá," at 0400, and the station closed with the strains of "Goodnight Sweetheart" at 0425.

The Venezuelan on 5020 kc using the slogan: "Radio Nacional de Venezuela" when logged by the writer appears to be YVVO in Caracas.

As usual there is a Latin American teaser. It is a station heard occasionally on 5855 kc. It was logged at 0245 with classical music and closed down at 0300 with Spanish announcements only, in-

**(DX Scribe, please note!—Ed.)*



Radio Australia has three high-power short wave transmitters, located at Shepparton (Victoria), 120 miles from Melbourne. This is one of the 100 kW RF amplifiers.

cluding a reference to the "National Broadcasting Company." The next morning I caught a reference to the "Cadena Panamericana," thus satisfying myself that this was a station incorporated in the N.B.C.'s Pan-American chain. The call-sign given after a signal gong note, appeared to be that of a Peruvian in the fourth district, and one wonders if it can be either a resurrected OAX4D (it sounded like Oh-Ah-Ekis-Cuatro-Day) which formerly operated from Lima on 5780 kc, or OAX4P in Huancayo, recently reported on an adjacent frequency. What offers?

Central America

In the narrow isthmus joining North to South America there is a goodly assortment of short wave broadcasting stations.

Panama itself has been active again with HP5A, Panama City, 11695 kc, logged with call-sign in Spanish and the slogan "General Electric" at 0345 on July 4. This was followed by a fifteen-minute Spanish news, and at 0405 "La Voz de Panama" closed with the words "Muy Buenos Noches" and a National March.

On July 10, at 0335, HP5H, 6120 kc, also in Panama City, was heard with a commercial programme. It announced as "La Voz del Pueblo."

Guatemala has produced TGQA, 6405 kc, logged at 0405 with the direction "La Voz de Quezaltenango" after a preparatory signal of four vibraphone notes. A comparatively new one, TGOA in Guatemala City, and operating on 6102 kc (49.2 m) is supposed to be on the air daily from 1230 to 0500.

Costa Rica is again in the picture with an old timer, TIPG on 9615 kc. If this is a new country for you, try around 0400.

Vibraphone notes precede the frequent slogan: "La Voz de la Victor" and there is much clapping of hands during commercial programmes (possibly a recording). On July 1, at 0358, the writer heard "The Little Grey Home in the West," and, after a mention of "Costa Rica Radio," a Tschaikovsky fragment. The broadcast terminated at 0458 with the call and direction: "La Voz de la Victor en San José, Costa Rica, America Centrale." TIPG signed off with a national air. Last month I mentioned a mystery

station around 5870 kc. This one, which closes with Big Ben chimes at 0400, may be TIGPH, "Alma Tica," San José, Costa Rica, recently reported on this channel relaying TIX, "La Reina del Aire" from 0300 to 0400.

My log book indicates that this regular programme is introduced as: "L'hora nacional."

Nicaragua stations are still prominent. YNOW, 6850 kc, offers a good musical programme closing at 0500 daily. YNAO in Masaya, 7420 kc, is a newcomer. I have logged it on several occasions after 0215 with Latin American dance music. The direction is given at quarter-hour intervals, being preceded by hour chimes, the ascending notes of the major chord. YNAO has a lady announcer and closes at 0315. YNDG, Leon, 7660 kc, was logged on July 9 with news in Spanish at 0330, this being preceded and followed by excerpts from a Sousa march. It closed as usual with the announcement: "Your station YNDG, Leon, Nicaragua is bringing to a close its commercial programme for to-night. We shall be back on the air to-morrow at 10 o'clock Central Standard Time. Good-night, everybody," and the playing of the "Good Night" song. YNBA, Managua, 8190 kc, was logged the same morning with a Spanish dialogue between a man and woman. It closed at 0408 with the national air.

Three Mexicans of some importance next claim our attention. XENN, Radio Mundial, in Mexico City, is a new station on 11780 kc (25.46 m). It operates from 0300 to 0600 daily. XEQQ was well received on 9680 kc between 0445 and 0530 on July 4. A programme of reverie entitled 'La Voz de la Voz' was first heard, and at 0500, vibraphone notes preceded the quarter-hourly Spanish call, and the slogan 'Radio Anamaris' was noted. Just before 0515 a Master of Ceremonies said: "All's well in Mexico," and at 0531 he announced in English another session of dance music. XEFT, Vera Cruz, 9545 kc, put in a welcome appearance on July 9 between 0430 and 0445. Dance music was heard, and at 0445 several vibraphone notes preceded the Spanish call and the direction: "Radio Central America."

West Indies

Cuban stations are among the ever-presents at this time of the year. The writer has heard COBZ, 9026 kc around 0500. This station is asking for reports but an International Reply Coupon is requested. COBL, 9830 kc, with a

reference to "Radio Cadena Suaritos en la Havana" was a loud signal at 0500 on July 1. Another Cuban has been logged between 0330 and 0400 on 9380 kc; this may be COCH on a somewhat lower frequency than is usual. COBQ, Havana, 9235 kc, was logged with call at 0320, followed by tango music on July 9, and at 0412 on July 12 I logged the call "COCO (Say-Oh-Say-Oh) en Havana" on 8700 kc.

Radio Australia announces that VP4RD, Port-of-Spain, Trinidad, has been heard testing on 9635 kc from 1100 to 1130 daily.

It is understood that the same frequency was also used from 0001 to 0115, and that 6085 kc has been employed for additional tests.

Regular transmissions were scheduled to commence on August 1. Reports, which are particularly requested, should be sent to: Broadcasting House, Port-of-Spain, Trinidad, British West Indies.

North America

In the United States, West coast stations have been logged at good strength in the early mornings. KNBA, using 17780 kc and the slogan: "The Voice of Information and Education" has been noted at 0500. The speaker said: "The time—Zero, five hundred GMT. Here is a summary of world news." At 0610 on July 3, KCBA, 15230 kc, gave sporting news, including Jack Kramer's success at Wimbledon and Stranahan's valiant efforts at Hoylelake. KRHO, Hawaii, was at its best at 0600 on July 4, when it closed with: "This is KRHO, Honolulu, concluding its programme on a frequency of 17.8 megacycles per second with the National Anthem of the United States of America." Thanks to A. W. Gilbert (Fordingbridge), we have received some interesting information from the World Wide Broadcasting Foundation of America, with transmitters working from Scituate, near Boston, Mass. The World Radio University broadcasts are on the air from 1905 to 2200 daily on the following channels: WRUL, 15290 kc (19.62 m) and WRUW, 17750 kc (16.90 m).

CKCS, 15320 kc, in its usual English broadcast at 1630 on July 9 gave the news, somewhat prematurely, of the Royal engagement.

Europe

A. W. Mann (Middlesbrough) has recently received a verification card in respect of OIX7, Finland, on 14 mc. He kindly forwards details of other frequencies in use, namely: OIX1 (6120 kc),



General view of the European aerial system of the Canadian Broadcasting Corporation ; two of the towers are 379 ft. high, one is 217 ft. and the fourth 165 ft. *The aiming and reversing switches for the aerial curtains are remotely controlled from the transmitter building.*

OIX2 (9500 kc), OIX4 (15190 kc) and OIX5 (17800 kc). The address is : The Finnish Broadcasting Company, Helsinki, Finland. The writer has logged OIX2 broadcasting in English to the United States at 0025.

From Radiotjänst, Stockholm, R. E. Hare (Mill Hill, N.W.7) has received a verification card for SBP, and he forwards details relating to other transmitters at Motala (*see* Tabulated Schedules).

He mentions that their slogan is "Sveriges Radio" and the interval signal an old melody from the Dalarne Province.

Arne Skoog, DX Editor of Sweden's biggest newspaper *Dagens Nyheter* and of the programme weekly *Roster i Radio*, informs me that any listener who has sent to him requesting a copy of their latest short wave broadcasting list and with it an International Reply Coupon, will receive the list in due course, in three parts, without further payment. Others requiring these short wave tables must however send at least two IRC's to the following address : RiR, Box 16174, Stockholm 16, Sweden.

In my previous article I gave the wave-

length of the Polish short wave transmitter as listed by the Warsaw authorities. Actually, 6100 kc (49.10 m) is the channel used; I have heard a musical-box interval signal preceding the daily English broadcast from 2050 to 2105.

The Italian Broadcasting System in Rome broadcasts an English programme daily from 1910 to 1940 with the news at 1930. The wave lengths in use are 25.4 m and 31.15 m; the transmitters are located at Busto Arsizio, north of Milan.

Radio Wien (Vienna) transmits on 11785 kc (25.46 m) commencing 0345 and terminating at 2200 each day, and Radio Luxembourg on 6060 kc (49.5 m) can be heard from 1700 to 2200.

For the latter the following additional frequencies will soon be in use: 9527 kc, 11782 kc, and 15350 kc.

KOFA, Salzburg, Austria, 7220 kc, has been heard with American, dance numbers at 0410. J. W. Simpson (London) has logged the British Forces Network station in Germany heard on 6710 kc (44.71 m), together with the ever-present vicious CW QRM.

The writer, who now believes this station to be located in the Ruhr basin, heard it with its final request number: "I'll be Lovin' You Always" at 2155 on July 6. In closing at 2200 the announcer said: "Good night, everybody. Sweet dreams."

Here is some late news! J. Guggenheim (Mt. Carmel, Palestine) has logged the new Radio Batavia transmission in English given at 1430 daily on 15145 kc (19.81 m); this is beamed on Malaya, Australia and New Zealand. A simultaneous transmission on 11440 kc (26.22 m) is beamed on the United States.

The writer listened to the 15145 kc transmission at 1445 on July 25, when the following announcement was made: "We now ask your special attention for an address by H. E. the Lieutenant Governor-General of the Netherlands East Indies, Dr. H. J. Van Mook." The speech was a

TABULATED SCHEDULES

I. Radio Mozambique, Lourenco Marques, Portuguese East Africa.

Transmitter	kc	metres	Sundays	Weekdays
CR7AA	6137	48-87	1600-2000	1600-2000
CR7AB	3490	85-67	1500-2200	1600-2200
CR7BE	9580	31-32	0700-1200	
CR7BJ	9645	31-10	0900-1200	0930-1130 : 1600-2000
CR7BV	4915	61-09	1500-2200	1600-2200

II. Swedish short wave transmitters situated at Motala.

Transmitter	kc	metres	Transmitter	kc	metres
SBT	15155	19-80	SDT2	15665	19-15
SBP	11705	25-63	SDB2	10780	27-83
SBU	9535	31-46	SDT	9442	31-77
SBO	6065	49-46	SDB	5732	52-33

III. Poland. Warsaw III. 6100 kc, 49.18 m.

Daily Schedule	G.M.T.	Programme for Listeners in :
	1600-1850	Poland.
	1900-1915	Jugoslavia.
	1915-1930	Bulgaria.
	1930-2000	Russia.
	2000-2030	Poland.
	2030-2050	France.
	2050-2110	Great Britain.

IV. Allied Forces Network Stations in Germany (Official List).

Zone	Location	kc	metres	Schedule (Daily)
American	Frankfurt	6080	49-34	0300-2100
British	Nordwestdeutscher Rundfunk			
	Hamburg	6115	49-06	0500-2100
Russian	Mitteldeutscher Rundfunk			
	Leipzig	9730	30-83	0300-2200
Russian	Berlin	6070	49-42	0300-2200
French	Sudwestdeutscher Rundfunk			
	Baden-Baden	6320	47-46	0330-2100

general review of events leading up to the beginning of hostilities in Java, and the speaker said that he hoped for a United States of Indonesia in the not too distant future. Radio Batavia can also be heard with another English broadcast, beamed on the British Isles, from 1645 to 1700; the channels used are: PMA, 19345 kc (15.5 m) and PLA, 18600 kc (16.125 m). PMA is normally the better signal of the two.

Not for some time have we heard a short-wave broadcast from Iceland, but on July 20, from 1300 to 1330, we listened to TFJ, Reykjavik, on 12170 kc (24.65 m), when a special transmission was being put over on the occasion of Crown Prince Olaf of Norway's visit to Iceland. Here, at Reykholt, we joined the thousands of Icelanders who, with their President and Government, witnessed the unveiling by the Crown Prince of a statue of Snorri Sturluson, thirteenth-century poet and writer. Beautifully rendered massed choral works were interspersed between the several official speeches. The station was identified by the twice repeated call:

"Utvarp Reykjavik—Utvarp Reykjavik."

Final item for Europe was the important broadcast from HVJ, Vatican City, 9330 kc (31.06 m) at 0630 on July 27, when from the Basilica of St. Peter's, Rome, the Pope was heard in the ceremony of the canonisation of Catherine Labouré.

Listeners are requested to forward their DX Broadcast Calls Heard Lists for August to reach us not later than August 31, and all correspondence intended for comment in the October number should also be in hand before that date.

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SHORT WAVE COILS.—Eddystone 6 pin: 9-14 m, 5/-; 12-26 m, 5/-; 22-47 m, 5/-; 41-94 m, 5/3; 76-170 m, 5/3; 150-325 m, 5/9. Denco: H.F., mixer or oscillator (465 Kcs or 1.6 Mcs I.F.) plug in type, 4/2; TRF type with reaction, 5/-. Ranges: 50-90 Mcs, 30-60 Mcs (tuned 50 pF), 15-40 Mcs, 7-20 Mcs, 2.5-7.3 Mcs, 0.85-2.6 Mcs (tuned 100 pF). Raymart: 4 pin—11-25 m, 4/-; 20-45 m, 4/-; 44-100 m, 4/6. 6 pin—11-25 m, 4/3; 20-45 m, 4/3; 44-100 m, 4/9; 80-180 m, 4/9; 110-250 m, 5/6.

SLOW MOTION DIALS.—Eddystone 10:1 ratio: Full Vision, 19/9; 637, 20/-; 594, 17/6; 597, 13/6; 639, 15/-. "Q-Max" Super 50:1, 66/-; "Q-Max" SMDA, 15/6. Muirhead 50:1, 11/6. Utility W170 100:1, 6/9.

I.F. TRANSFORMERS.—Eddystone 450/465 Kcs, 19/6; Denco Midget: 465 Kcs or 1.6 Mcs, 10/6; standard 1.6 Mcs, 8/10, or with top lead, 9/4.

B.F.O. UNITS.—Denco: 465 Kcs or 1.6 Mcs, 13/9.

H.F. CHOKES.—Eddystone: VHF, 1/9; All wave, 4/-; Denco: VHF, 1/8; SW, 2/3; All wave, 3/4 and 3/10.

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F. W. Hardstone, 43 Shrubbery Road, Streatham, S.W.16.

1.	July 6	1945	OLR2A	Prague	6010 kc, S8
2.	July 6	2100		Andorra	5996 kc, S9
3.	July 7	1700	YHN	Djakakarta	11000 kc, S7
4.	July 7	1800	WRCA	New York	15150 kc, S8
5.	July 8	1700	VUD5	Delhi	15190 kc, S8
6.	July 8	1740	CKCS	Sackville	15320 kc, S8
7.	July 18	1740		Azerbaijan, Iran	12180 kc, S6
8.	July 18	1900	VLA8	Shepparton	11760 kc, S8
9.	July 18	2315	PRL7	Rio de Janeiro	9720 kc, S9
10.	July 18	2320	ZFY	Georgetown	6000 kc, S8
11.	July 19	1910	CR7BV	Lourenço Marques.	4925 kc, S6
12.	July 19	2030	VQ7LO	Nairobi	4860 kc, S6
13.	July 19	2115	OTCS	Leopoldville	9748 kc, S9
14.	July 20	1845	ETAA	Addis Ababa	15060 kc, S8
15.	July 22	2240	CNR3	Rabat	9080 kc, S9
16.	July 22	2300	ZYC8	Radio Tamoio, Brazil	9610 kc, S9
17.	July 26	1815	TAP	Ankara, Turkey	9465 kc, S8
18.	July 26	2020	SUX	Calro	7863 kc, S8
19.	July 26	2025	ZAA	Tirana	7852 kc, S8
20.	July 26	2040	ZYB8	Sao Paulo, Brazil	11765 kc, S8
21.	July 26	2235	HCJB	Quito, Ecuador	12455 kc, S8
22.	July 26	2320	HH3W	Port-au-Prince, Haiti	10135 kc, S6
23.	July 27	0010	VONH	St. Johns	5970 kc, S8
24.	July 27	0020	YV1RX	Maracatbo	4800 kc, S7

Rx. V55R. L/S. Aerial: Inverted-L, E/W Directed.

Dr. T. B. Williamson, M.O.Q., Hill End Hospital, St. Albans, Herts.

1.	July 10	1705	CR7BJ	Lourenço Marques	9645 kc, S6
2.	July 16	1700		Radio Batavia	18600 kc, S7
3.	July 20	0315	HI2T	Ciudad Trujillo	7350 kc, S8
4.	July 20	0330	YV5RU	Caracas	4880 kc, S6
5.	July 20	0415	COCQ	Havana	8825 kc, S7
6.	July 21	0415	TG2	Guatemala City	6620 kc, S6
7.	July 21	0425	OAX4Z	Lima, Peru	5890 kc, S5
8.	July 21	0445	HJCQ	Bogota	4955 kc, S5
9.	July 27	0215	HI1N	Ciudad Trujillo	6245 kc, S6
10.	July 27	0230	COCW	Havana	6325 kc, S7
11.	July 27	0300	HRP1	San Pedro Sula	6350 kc, S5
12.	July 27	0335	HC4EB	Manta, Ecuador	6870 kc, S6
13.	July 27	0355	YNO	Managua	6910 kc, S6

Rx. Battery 2-v-2. Aerial: 100 ft. Inverted-L.

J. Guggenheim, 39 Disraeli Street, Mt. Carmel, Haifa, Palestine.

1.	June 5	1930	CKNC	Sackville, Canada	17820 kc, S8
2.	June 6	1800	OTCS	Leopoldville	17770 kc, S9
3.	June 7	1530	S.E.A.C.	Colombo, Ceylon	17770 kc, S9
4.	June 9	1800	WLWR	Cincinnati, Ohio	15250 kc, S8
5.	June 10	1615	VLG6	Lyndhurst	15230 kc, S9
6.	June 12	1430	PCJ	Huizen	15220 kc, S9
7.	June 13	1730	SBT	Motala	15155 kc, S8
8.	June 17	1700	VUD3	Delhi	15130 kc, S9
9.	June 18	1430		Batavia, Java	15145 kc, S8
10.	June 24	0715	HER5	Schwarzenburg	11865 kc, S9
11.	June 27	0300	COCH	Havana, Cuba	9440 kc, S7

John M. Simpson, 32 Aberdare Gardens, N.W.6.

1.	July 20	1510	VUD7	Delhi, India	15160 kc, S8
2.	July 20	1655		Singapore	15275 kc, S6
3.	July 20	1700	YHM	Djakakarta, Java	11000 kc, S5
4.	July 21	2105		Sofia, Bulgaria	9325 S. kc 8
5.	July 21	0210	VONH	St. Johns, Newfoundland	5970 kc, S5
6.	July 22	1930		Azerbaijan (Tabriz)	12180 kc, S6
7.	July 22	1945		Omdurman, Sudan	13330 kc, S8

I. E. Alfrey, 45 Rusthall Avenue, Chiswick, London. W.4.

1.	July 1	1630		Singapore	15300 kc, S8
2.	July 3	1740		Azerbaijan	12180 kc, S5
3.	July 5	0540	COBZ	Havana	9026 kc, S6
4.	July 8	2015	KOFA	Salzburg	7220 kc, S8
5.	July 10	1700	YHN	Djakakarta	11000 kc, S7-8
6.	July 14	0520	COHI	Santa Clara	6450 kc, S7
7.	July 18	1908	ETA	Addis Ababa	15060 kc, S6-7
8.	July 18	2010	FET1	Valladolid	7005 kc, S8

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SHORT WAVE BROADCAST STATIONS

Revision 11.47-19.85 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 three sections—11 to 24, 24 to 41 and 41 to 128 metres—a list of active stations in one of these sections being given in full 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	Frequency	Wavelength	Callsign	Location
26160	11-47	GSK	Daventry.	15750	19-05	RRRD	Moscow.
21740	13-80	GVT	Daventry.	15595	19-23	FZI	Brazzaville, French Equ.
21710	13-82	GVS	Daventry.				Africa.
21675	13-84	GVR	Daventry.	15515	19-33	HCJB	Quito, Ecuador.
21680	13-84	VLC10	Shepparton, Australia.	15450	19-41	GRD	Daventry.
21650	13-85	WLWS1/2	Cincinnati, Ohio.	15435	19-43	GWE	Daventry.
21640	13-86	GRZ	Daventry.	15420	19-45	GWD	Daventry.
21610	13-88	WNRX	New York.	15380	19-50		Moscow.
		KNBA	Dixon, California.	15350	19-54	XGOA	Nanking, China.
		KNBI	Dixon, California.			WRUA	Boston, Massachusetts.
21600	13-89	VLA9	Shepparton, Australia.	15340	19-56	KNBX	Dixon, California.
		VLB8	Shepparton, Australia.	15330	19-57	WGEA	Schenectady, New York.
21570	13-91	WCRC	New York.			WGE0	Schenectady, New York.
21550	13-92	GSJ	Daventry.			KCBR	Delano, California.
21510	13-95	VUD8	Delhi, India.	15320	19-58	OZH2	Copenhagen, Denmark.
21500	13-95	WOOW	New York.	15315	19-59	HER6	Schwarzenburg, Switzerland.
21470	13-97	GSH	Daventry.			HEU6	Schwarzenburg, Switzerland.
		S.E.A.C.	Colombo, Ceylon.				
21460	13-98	KCBA	Los Angeles, California.	15310	19-60	GSP	Daventry.
19350	15-50	PMA	Batavia, Dutch East Indies.	15300	19-61	GWR	Daventry.
18600	16-12	PLA	Batavia, Dutch East Indies.	15290	19-62	VUD11	Delhi, India.
						WRUL	Boston, Massachusetts.
18160	16-52	WNRA	New York.			KWIX	San Francisco, California.
18080	16-59	GVO	Daventry.	15280	19-63	WNRE	New York.
18025	16-64	GRQ	Daventry.				Moscow.
17955	16-71	WLWL1/2	Cincinnati, Ohio.	15275	19-64		Singapore, Straits Settlements.
17880	16-78	KGEX	San Francisco, California.	15270	19-65	RW96	Moscow.
		WGEX	Schenectady, New York.			WCBN	New York.
17870	16-80	GRF	Daventry.			WCBX	New York.
17860	16-80		Moscow.			WCDA	New York.
17850	16-81	KCBF	Delano, California.	15260	19-66	GSI	Daventry.
17845	16-81	JOAK	Tokio, Japan.	15250	19-66	WLWR1	Cincinnati, Ohio.
17840	16-82	VLC9	Shepparton, Australia.			WBOS	Boston, Massachusetts.
17830	16-83	VUD10	Delhi, India.			KNBX	Dixon, California.
		WCBX	New York.	15240	19-68	TPA2/TPC5	Paris.
17820	16-84	CKNC	Sackville, Canada.			KCBA	Delano, California.
17810	16-85	GSV	Daventry.	15230	19-69	VLG6	Lyndhurst, Australia.
		VLA7	Shepparton, Australia.	15220	19-71	PCJ2	Huizen, Holland.
		VLB7	Shepparton, Australia.	15210	19-72	VLC11	Shepparton, Australia.
17800	16-85	KRHO	Honolulu, Hawaii.			WBOS	Boston, Massachusetts.
		WLWK	Cincinnati, Ohio.			KGEX	San Francisco, California.
17790	16-86	GSQ	Daventry.	15200	19-74	WLWS1	Cincinnati, Ohio.
17784	16-87	HER7	Schwarzenburg Switzerland.			WOOC	New York.
			New York.			VLA6	Shepparton, Australia.
17780	16-87	WNBI	Dixon, California.			VLB6	Shepparton, Australia.
		KNBA	Dixon, California.	15190	19-75	ODK4	Björnberg, Finland.
		KNBI	Hilversum, Holland.	15180	19-77	GSO	Daventry.
17775	16-88	PHI	Leopoldville, Belgian Congo.	15170	19-78	TGWA	Guatemala City.
17770	16-88	OTC5	Leopoldville, Belgian Congo.				Guatemala.
		S.E.A.C.	Colombo, Ceylon.	15160	19-79	VUD7	Delhi, India.
17760	16-90	KWID	San Francisco, California.			VLG7	Lyndhurst, Australia.
			San Francisco, California.	15155	19-80	SBT	Motala, Sweden.
17750	16-90	WRUW	Boston, Massachusetts.	15150	19-80	WRCA	New York.
17745	16-91	OTM6	Leopoldville, Belgian Congo.			WNBI	New York.
			New York.	15145	19-81		Batavia, Dutch East Indies.
17730	16-92	GVQ	Daventry.			JLU3	Tokio, Japan.
17720	16-93	LRA5	Buenos Aires, Argentina.	15140	19-82	GSF	Daventry.
17715	16-94	GRA	Daventry.			WLWL1	Cincinnati, Ohio.
17700	16-95	GVP	Daventry.	15120	19-85	S.E.A.C.	Colombo, Ceylon.
17527	17-11		Brazzaville, French Equ. Africa.			HVJ	Vatican City.
16670	18-00	CNR	Rabat, Morocco.	15110	19-85	GWG	Daventry.

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ALUMINIUM CHASSIS.—Substantially made of bright aluminium, with four sides, 10 in. x 8 in. x 2 1/2 in. 7/-; 12 in. x 9 in. x 2 1/2 in., 7/9; 16 in. x 8 in. x 2 1/2 in., 8/6; 20 in. x 8 in. x 2 1/2 in., 10/6; 22 in. x 10 in. x 2 1/2 in., 13/6.

VIBRATOR POWER PACKS. Input 6 v. 1 1/2 a., output 150 v. 25 m/a. in steel case, with complete smoothing. Size 6 in. x 5 in. x 2 1/2 in., 40/-.

MAINS TRANSFORMERS. Available in "Drop through" or above chassis mounting. Input 200/230/250 v., 50 cycles. Output 350/350, 250 m/a., 4 v. 3-5 a., 6-3 v. 5-7 a., 6-3 v. 1-2 a., 35/-.

ELECTRIC MOTORS. Ex-Govt. Rotary Transformers easily adapted to run as A.C. or D.C. motors for 200/250 v. mains. 5,000 revs. 1/40 h.p. Excellent as sewing machine, fan motors, etc. Price 15/-. Larger model, 5,000 revs. 1/20 h.p., 30/-.

VIBRATOR PACKS. With complete smoothing. 12 v. input, output 150 v., 40 m/a. Contained in neat steel case, and is combined with a single valve amplifier. (No valve supplied). Price, 35/-.

MAINS TRANSFORMERS. Government surplus, super quality. All 230 v. input.

Type 2.—40 v. 2 a. (Excellent for rewinding). 15/-
Type 3.—500-0-500, 150 m/a., 4 v. 2 1/2 a., 4 v. 1 a., 4 v. 5 a., 35/-.

Type 4.—865-0-865 v. Tapped at 760 and 690 v. 500 m/a. Complete with L.T. trans. for rect. heaters 4 v. 3-5a. twice. Price £5.

Type 5.—450-0-450. Tapped at 300 v., 150 m/a., 4 v. 3-5 a., 4 v. 3-5 a., 30/-.

SHORT WAVE CONDENSERS. High-grade Ceramic insulation. Super Midget type. Single-gangs available in 10, 20, 50, 75, 100 p.f. (75 p.f. has double spindle for ganging). Price 2/6.

2-GANG, in 4-8, 9-6, 27-1, 50, 75 p.f. Price 5/-.

2-GANG. Full-size, 160 p.f. Price 5/-.

AIR-DIELECTRIC CERAMIC TRIMMERS, 25, 50, 60 p.f. Price 1/-.

VIBRATOR TRANSFORMERS. Input 12 v. Output 300 v., 100 m/a. with buffer condensers, 17/6. Non-Sync. Vibrator for same, 12/6.

500 MICROAMP METERS. Moving coil, 2 in. diameter, flush mounting, available by the following manufacturers: Met-Vick 500 ohms. Ferranti 79 ohms. Weston 116 ohms. Either type 21/-. Special

quotations for quantities. The following accessories are available to convert the above meter into a multimeter. Five multipliers plus/minus 2 1/2 per cent. to read 10/50/100/250/1,000 v., 7/6 the set. Bridge type meter rectifier, 10/-.

RADIOGRAM CABINETS. Dignified appearance and good workmanship. Size: 3 1/2 in. high, 18 1/2 in. deep, 33 in. wide. French polished, veneered walnut. Price £26. Also available complete with electric motor with auto stop, £30/3/9, or with electric motor, auto stop and magnetic pick-up, £32/13/4. Ditto with Rothermel Crystal Pick-up, £35/2/1, or with 8 record-mixer changer, £45/7/6.

METERS. A huge purchase of military surplus meters allows us to offer the following bargains. All meters are by the best makers and are contained in bakelite cases. Prices are about one-quarter of original cost.

Range.	Diam.	Res.	Fitting.	Type.	Price.
300 v.	3 1/2 in.	15K	Flush	M.I. A.C.	7/6
500 mA.	3 in.	—	Proj.	M.C. D.C.	12/6
250/250	—	—	—	—	—
mic/A.	2 in.	100	Flush	M.C. D.C.	7/6
40 v.	2 in.	8 K	Flush	M.C. D.C.	7/6
2 1/2 a.	2 in.	—	Flush	Thermo. H.F.	7/6
4 a.	2 1/2 in.	—	Port.	H.W. H.F.	3/6
3 KV.	3 1/2 in.	1 meg.	Flush	M.C. D.C.	20/-
20 a.	2 in.	—	Flush	M.C. D.C.	7/6
40 a.	2 in.	—	Flush	M.C. D.C.	7/6
25 a.	3 1/2 in.	—	Flush	M.C. D.C.	7/6
25 a.	3 1/2 in.	—	Proj.	M.C. D.C.	7/6
25 a.	3 1/2 in.	—	Flush	M.I. D.C.	7/6

FERRANTI 1 MILLIAMPER METERS, 3 1/2 in. external diameter, flush mounting, with self-contained Westinghouse bridge rectifier. Scale marked 0-10 volts with fifty divisions, fitted in well-made wooden box 6 x 5 x 5 in. 35/-.

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D/C TO A/C CONVERTERS. Input, 18/24 v. D/C. Output, 230 v. 50 cycles 100 watts, £5. Similar model, output 200 watts, in silence cabinet, £10.

POWER PACKS. Input, 210-240 v. 50 cycles. Output 250 v. 80 m/a. 6-3 v. 3-5 a. Fully smoothed. Contained in substantial screening box, with full wave valve, £2/10/-.

2-VALVE SHORT-WAVE BATTERY KIT. A complete kit of parts for a 2-valve receiver, covering 15-600 meters, including valves, coils, drilled chassis, H.T. and L.T. dry batteries to last approximately 6 to 12 months. A pair of double headphones and full instructions. Price £3/10/-. An extra coil can be supplied, covering 600-1,900 metres at 4/-.

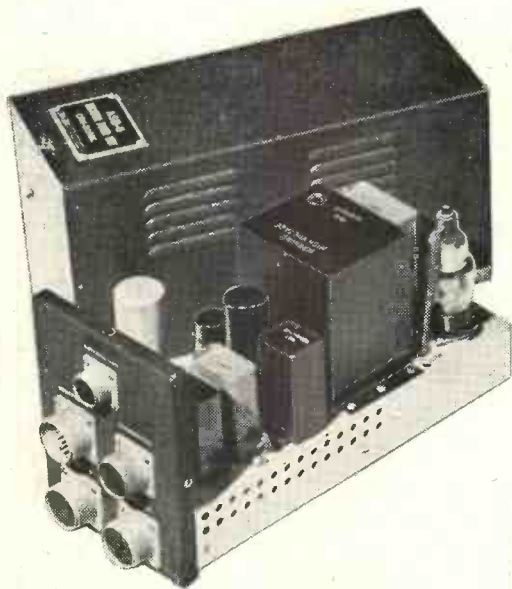
SUPERHET MIDGET RADIO KIT. A complete kit of parts for a 5-valve superhet. Covers 16-50 and 200-557 metres. AC/DC 200-250 v. 6K8, 6K7, 6J7, 25A6, 25Y5. Size: 10 x 6 x 6 in. Completely drilled Chassis. Price, including tax, £8/5/-. An attractive bakelite cabinet can be supplied at 25/- extra.

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