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of the

SHORT WAVE LISTENER

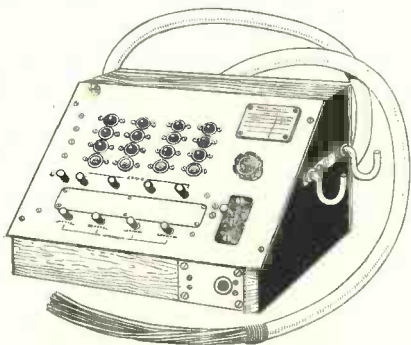


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AUGUST 1947
VOLUME I · NUMBER 9

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A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME I

AUGUST 1947

NUMBER 9

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EDITORIAL

Contests

In Amateur Radio, as in so many other recrea-
tional pursuits, there is ample scope for the com-
petitive element. This has long been recognised by
the award of distinctions of various kinds in
connection, particularly, with DX working.

On the strictly SWL side, however, not so much
has been done, and though there are certain
certificates offered for receiving prowess, they are
of a marathon character rather than directly
competitive over a defined period. It is not easy to
devise an SWL contest which is at once an interest-
ing event and fair to all participants. Any real
competition involving DX reception must call for
QSL cards to confirm the log—and QSL cards are
becoming harder and harder to obtain, and in any
case take a long time in the getting.

The fairest way of running an SWL contest is to
tie it up to what is primarily a transmitting event,
then accepting logging of the transmitting stations
(whose logs will cross-check one another) as proof
of reception. In another direction, competitive
interest might be aroused by calling for the best
station description, or the best example of an
entirely home-constructed installation.

We are quite prepared to organise SWL contests
of this kind (or on other lines suggested by readers,
if considered practicable) provided a fair degree of
support is likely to be forthcoming.

If you have any ideas for an SWL contest, or
would be prepared to take part in them, please
write and let us know your views. We have a few
schemes of our own on the ice, but would like first
of all to have a reader reaction to these comments.

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HIGH GAIN REGENERATIVE DETECTOR

USING THE EF50 IN A CATHODE-TAP CIRCUIT

by

L. MILLER

(The EF50 is becoming more and more popular for short-wave working, and many designs are now featured round it. If you are interested in experimenting with your 1-V-1 or 0-V-1, try this arrangement.—Ed.)

SOME time ago there appeared an excellent article in this magazine on the EF50 valve ("Try These Circuits," by Justin Cooper, *Short Wave Listener*, December, 1946).

The present writer has recently carried out some experiments using the EF50 as a high-gain regenerative detector, and it is felt that the results obtained may be of interest.

First, it should be pointed out that the present-day high-slope RF pentodes, such as the EF50, 6AC7, and SP41 were designed solely for RF amplification at high frequencies, and the high slope plus small inter-electrode capacities of these valves enable a reasonable gain to be obtained. When a high-slope valve is used at medium or intermediate radio frequencies it is extremely difficult to keep the valve stable, unless the gain is deliberately lowered by over-biasing (if the valve has variable- μ characteristics) or by working it with a low screen voltage. It will then probably be found that the overall gain of the stage is no more than if a 6K7 type of valve were used, so there is usually no point in using an expensive, high-slope valve under these conditions.

As Leaky Grid Detector

When using a high-gain valve as a grid-leak detector it must be emphasised that a grid detector is virtually a diode detector and audio frequency amplifier combined; so we should be operating a high-gain valve as an audio frequency amplifier, and instability, in the form of motor-boating (oscillation at an audio frequency), hum and microphony are liable to be experienced, as the actual stage gain may be even greater than when the valve is used at medium radio frequencies. The main reason for this is that the inter-electrode capacities of the valve have no effective damping on the associated circuits.

However, the amateur is always interested in getting something for nothing,

and with this idea in view the writer hooked up an EF50 as a regenerative detector using a high anode load of 25 megohms.

High Gain Obtainable

The gain obtained was well up to expectations, and due to the very low input capacity of the valve itself, oscillation was very easy to obtain, even on 60 mc and upwards, using the cathode-tap method of feedback, as suggested in Mr. Justin Cooper's article.

Using a separate reaction winding in the anode lead, results were not so satisfactory on the higher frequencies, and some difficulty was experienced in obtaining oscillation.

As the cathode-tap method of regeneration is easier from the constructional point of view, it was decided not to spend any further time with anode couplings. No doubt it is quite possible to secure oscillation readily with a separate reaction winding when this is very tightly coupled to the grid coil, but as this must increase the self-capacity of the tuned circuit, it was decided to leave well alone.

Microphony at High Audio Gain

The greatest source of trouble turned out to be that of microphony. Several EF50's were tried, and in every case it was not possible to walk across the room without causing the detector to ring in the speaker.

It should in fairness be stated that the EF50's in the author's possession are ex-Government, and it is not known if they are of English or American origin, or whether or not they had in fact been rejected for the specific job for which they were originally assigned.

The aluminium can was suspected of being the cause of the microphony and this was removed from one of the valves. The microphony disappeared entirely, and it was now possible to flick the valve

whilst in a near-oscillating condition, and only a slight momentary ring was heard in the speaker.

Accordingly, two more EF50's were stripped of their cans, with the same result.

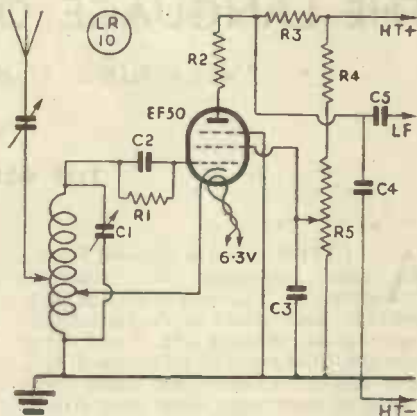
Removing The Case

It is a very simple job to remove the casing. The overiapping section round the periphery of the base is bent back with a pair of pliers (the aluminium is of a very light gauge) and the valve lifts out. Unfortunately the metal base, complete with locating spigot, also comes away from the valve proper; but the constructor need not be perturbed at the prospect of facing nine equally spaced pins, as the two heater pins can easily be seen, and of course these correspond to Nos. 1 and 9, the valve being placed in the socket with these heater pins either side of the locating recess on the socket.

Also, on the valves in the author's possession, there is a small indent in the glass base exactly between pins 1 and 9, so no difficulty should be experienced in inserting the valve correctly in the socket.

Cathode Tap

The method of arriving at the correct cathode tap position has often been explained. Perhaps the most satisfactory way is first to connect the cathode to earth and tune in a powerful signal, with the screen potentiometer adjusted somewhere around half way. Then re-adjust the screen potentiometer for maximum signal strength. Several positions for the cathode lead along the coil (starting from the 'earthy' end) can now be tried, the final and correct position being where the circuit just "spills over." In the case of the 30 and 60 mc coils, this should be adjusted for each half or even quarter turn, but on the lower frequencies the correct position is not so critical. Reaction is then



L. Miller's circuit for the EF50 as a cathode-tap detector. High values are chosen for the SG potentiometer to enable ordinary composition-type variable resistors to be used. This gives smooth variation of voltage, and produces very sweet reaction.

EF50 CATHODE TAP DETECTOR

- C1 Tuning condenser as normally used.
- C2 .0001 μ F.
- C3, C5 .001 μ F.
- C4 .0003 μ F.
- R1 2 megohms.
- R2 20,000 ohms.
- R3, R5 0.25 megohm (R5, potentiometer).
- R4 1 megohm.

of course controlled by the screen potentiometer.

The advantages of using a high-slope valve as a reacting detector are chiefly ease of oscillation at high frequencies, enabling a tighter aerial coupling to be used, and high gain audio frequency amplification.

The circuit and values as used by the author are given with this article.

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THE LANGUAGE OF AMATEUR RADIO

EXPLAINING SOME OF THE TERMS

by

THE OLD TIMER

A LETTER recently received from a reader contains the following sentence: "As soon as my wife picks up a radio book to look at, she immediately begins to ask 'What is QSL?' and 'What does DX QSO mean?' Of course I have been able to answer, but many newcomers to short wave radio must still be mystified by some of it." Our correspondent is perfectly correct, and we hasten to adopt his suggestion for an article on the subject.

This was covered before, in a way ("Amateur Use of Codes" *Short Wave Listener*, p. 26, November 1946), but the former article dealt more with the RST system of reporting, and the matter of prefixes and call-signs. Amateur "jargon" is a rather different matter, somewhat controlled by the most frequently used "Q" signals, but otherwise quite peculiar to Amateur Radio.

The elusive "DX" is perhaps the worst term to explain. From its origin it really means "distance"—just that and nothing more—but it has grown up to mean "long-distance work of an interesting character," or even "communication with rarely-heard countries." So you just take your choice and interpret as you think fit! If you work between Great Britain and New York with 150 watts on 14 mc, that is not DX nowadays; do it with 10 watts, though, and it is. Do it on 1.7 mc (or, better still, 58 mc) and it is really super DX. Likewise, work a frequently heard medium-distance country like, say, the Belgian Congo, and that is hardly DX (if you use 150 watts); but collect a CR5 in Portuguese Guinea at roughly the same distance, and you have a nice piece of DX to talk about.

It doesn't really make sense, but the use of "DX" like this is quite traditional, and nothing will alter it now.

What are the very first mysterious phrases that a brand-new short-wave listener would hear on the amateur bands? We imagine that "DX" comes first of all; after that he would probably be troubled by "QSO" and "QSL." "QSO" is the

official "Q" signal meaning "I am in contact with . . ." So when you sit down at the operating position at G3XYL and establish contact with G3XYZ, you are QSO G3XYZ. In other words you are "having a QSO." It would be less trouble to say that you were "having a contact" with him, but there, again, tradition steps in. If you had a nice chat with New Zealand this morning, then you "had a good QSO with ZL" and that's that! So a "QSO" is really a typical "chat *via* Amateur Radio," and if it were pronounceable it would make a very useful dictionary word one day.

QSL'ing a QSO

As for the "QSL" . . . It's another long story. "QSL" really means "please acknowledge," but to an amateur it means "Please confirm this QSO with one of those nice coloured cards that I can pin up on the wall of the shack." The very first QSL cards, as they are now universally called, were rather like ethereal visiting cards, but as "please acknowledge" would perhaps have seemed a little formal, the ingenious inventor put on them "Pse QSL"; that little phrase has now been in existence for more than 25 years and causes amateur transmitters more heart-aches, more expense, more trouble and more pleasure than most other things they deal with.

A QSL is the perfect follow-through to a good QSO. It consolidates it and links one with the other fellow. If the QSO was "a nice piece of DX," then the card will be required as proof, when the proud DX-er claims one of the many certificates of merit for which one can work. And this brings us to another set of cryptic remarks.

Once upon a time the hallmark of an efficient transmitter was the letters "WAC" upon his QSL card. "WAC" means "Worked All Continents," and within the meaning of the act South America and North America count separately. The others, of course, are Europe, Asia, Africa and Oceania. By about 1935 a "WAC" became so easy that it ceased to mean

much ; in 1926 one toiled for it for months or even years. "WAZ" means "Worked All Zones," the said Zones being forty arbitrary areas into which the world has been divided to make things a little more difficult and interesting.

"WAS" means "Worked All States (of USA)."

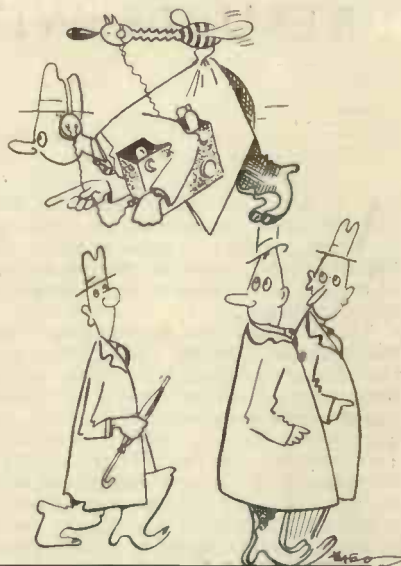
One realises that the term "CQ" is probably the very first of the cryptograms that a new listener will hear. "CQ" means simply "General call to all stations." So an amateur calling CQ is intimating that he is simply broadcasting a call, and will be glad of a reply from anyone who happens to hear it and also to feel like replying to it. "CQ DX" means he is not interested in nearby or easy QSO's ; and the various directional CQ's like "CQ Asia" or "CQ Bombay" are self-explanatory.

Before the war British amateurs were not allowed to call CQ, so they called "Test," which, as everyone in the world knew, meant exactly the same thing ! We wish they used it now ; we shouldn't waste so much time listening to a weak and watery CQ call and finding it was a British amateur sixty miles away.

Reporting Codes

The reports you will hear are usually exchanged on the RST system, which you will have to know if you do any postal reporting yourself. R stands for "readability" (scale 1-5) ; S for "strength" (also 1-5) ; and T for "tone," with a scale of 1-9, with an X added if the transmission has the characteristic stability suggesting crystal control. On 'phone the T is omitted, and although there is an "F" code (quality reports on a scale of 1-9) it is very seldom used. One 'phone station working another will usually report signals as "R5 and S7" (or whatever the appropriate figures are), although some misguided individuals who live in the past may still be heard using "Q5 and R7" which means the same thing but is somewhat confusing.

As for descriptions of gear, unless you know your valve types you will not make much sense out of it except to the extent that a CO is a crystal oscillator, a VFO a variable frequency oscillator, an FD a frequency doubler, a BA a buffer amplifier and a PA or "final," a final power amplifier. So when one station informs another that his layout (or "rig") consists of a 6V6 CO, two 6L6 FD's and push-pull 807's in the final, modulated by two TZ 40's, you know almost enough about it to draw the circuit diagram and build one yourself !



Now I know what he means by that short-wave bug. . . .

Descriptions of aerial systems (or "antennas") are rather more tricky and would take up an article on their own. Terms like "three-element rotary beams," or "half-wave doublets fed with co-ax," or just plain "Zepps" are all descriptive of clearly-defined and well-known aerial systems. The "Rx" is, of course, the receiver and the "Tx" the transmitter.

Finally, for the present, "QRM" means interference and "QRN" means static. So if a station is being "QRM'ed" he is simply suffering from the phenomenon we all know too well, and being buried under another station or stations.

We will probably return to the subject in greater detail on some other occasion.

BOOK FOR THE SWL

The "Principles of Short Wave Reception," a 32-page booklet reprinted from articles appearing in early issues of the *Short Wave Magazine*, is now available at 1s. 6d. from bookstalls, or 1s. 8d. post free from us at 49 Victoria Street, London, S.W.1.

Some of the chapter headings are: Fundamental Principles and Simple Circuits; Constructional Information for Two Receivers, including Aerial Design and Coupling; The Superheterodyne, and Notes on Communications Receiver Design; Short Wave Converters, and Adapting B.C. Receivers for SW Reception.

The treatment is essentially practical, and much data given on the construction of several different types of receiver, covering the bands down to 60 mc.

RESULTS WITH THE MCR-1

by

R. J. PACKMAN

AS there are many Type MCR-1, miniature communication receivers, now coming into amateur hands, the following brief report on the capabilities of this set will probably be of interest to many readers.

The set under test was used with the mains unit on 230v AC and reception was remarkably free from hum. The volume obtained on many of the SW broadcast stations was sufficient to overload the headphones, but was insufficient to work a loudspeaker. As many listeners dislike headphones, the receiver was tested with an additional amplifying stage from a broadcast receiver. The results were excellent, so that it would be advantageous to build a small LF amplifier unit, particularly if the set is to be used for ordinary broadcast listening as well as for DX hunting.

The sensitivity is quite good, although the noise level is rather high when the gain control is set near the maximum to bring in weak stations. However, sensitivity is retained over the full frequency range of each of the coil units, e.g., the stated maximum frequency is 15 mc at 170 deg. on the 0-180 dial, but the 19-metre band can be received using the full dial range. The maximum error in the dial calibration on the highest frequency was about 100 kc.

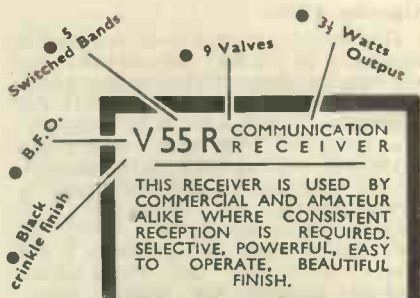
Selectivity is fair only, and the tuning of the SW stations is rather tricky at first, due to an insufficiency of slow-motion on the main tuning control.

The 20, 40 and 80-metre amateur bands were well received, but as there is a gap in

the total frequency coverage (15,000 to 100 kc) of from 2,500 to 1,600 kc, the 160-metre band cannot be received.

The MCR-1 should prove quite an interesting set for the newcomer to short-wave listening once he has mastered the high-g geared tuning, and its usefulness is increased by the fact that the set has a BFO control enabling CW to be received.

During a particular listening period recently a large number of amateur and broadcast stations on the short wave bands were logged using an indoor aerial. A good outside aerial would improve the receiver considerably, and all who contemplate the purchase of this very useful, well designed and well constructed receiver are urged to give the set a chance by providing it with a good aerial.



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GUIDE TO BROADCASTING STATIONS

With reference to the note on p. 256 of our last Issue, the publishers have now produced the 2nd Edition of their useful little *Broadcasting Stations of the World*. This is a revision covering all known broadcasters, listed in two groups—Long and Medium Wave Europeans, and Short Wave Stations of the World. There are about 250 stations in the former group and nearly 900 of the latter in the band 4-8-27-0 mc.

Broadcasting Stations of the World, size 4 1/2 x 5 1/2 in., 48 pp. with paper cover, price 1s.1d. post free of Iliffe & Sons, Ltd., Books & Reprints Dept., Dorset House, Stamford Street, London, S.E.1.

FREQUENCY FINDING

DIRECT READING CALIBRATION CHART

by

C. W. BROWN

YOU are probably familiar with the method of calibrating a vernier or bandspread dial by means of a graph, plotting frequency against dial readings. This is, of course, an excellent idea; but working with a graph is rather cumbersome and there is the possibility of making an error. So why not a direct reading chart? The one described here has proved a great success. It has these advantages over the graph:

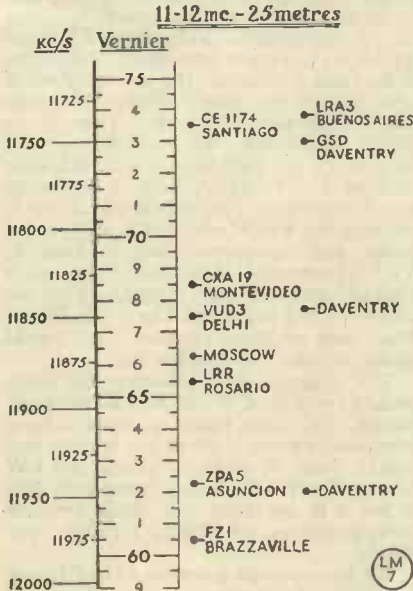
- (a) Direct comparison between dial reading and frequency,
- (b) Station call signs may be marked on the chart itself—they make good landmarks.

Take a sheet of graph paper and let us construct a chart for, say, the 25-metre (11-12mc) band.

About two inches from the left-hand edge of the paper, mark vertically a scale to represent that part of your bandspread dial which covers the whole of the band. Allow two degrees per line (you may have

to vary the scale to suit your particular bandspread condenser). In my case, the dial readings are from 60 to 75 degrees (see diagram). Now, immediately to the left of, and adjoining this scale, mark in the frequency in kc at 25 kc intervals, from your graph. This frequency scale, of course, may not coincide with the lines on your paper; use a ruler. Leave plenty of space to the right of the scales for the call-signs. It is unnecessary to calibrate in smaller intervals than 25 kc; the frequency can be easily found to the nearest 5 or 10 kc by inspection.

Now we can convert our dial readings to kc really at a glance; and if we construct a chart for each band, we shall be armed with an ideal means of checking the frequency of that unknown signal.



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Have you heard?

AS we suggested last month, there obviously need be no seasonal falling-off in DX activity while the sunspot cycle continues to favour us. June was, if anything, a more interesting and exciting month than May, and the post-bag, in spite of the rival claims of fine weather and outdoor sport, is heavier than ever.

It is particularly good to find new listeners reporting DX together with the best of the hardened enthusiasts. Some of them, in fact, are obviously going to give the old hands a run for their money.

The 14 mc band continues to carry the bulk of the DX traffic; 28 mc has never been really dead, but the average listener seems to tire of South Africa and South America when there is so much good hunting available on 14 mc. And, of course, this HAZ affair has influenced the competitive aspect of short-wave listening

BY THE DX SCRIBE

considerably. (Note, too, how some of the country totals have soared since last month.)

14 mc DX

Several new countries have appeared, such as French Equatorial Africa (FQ3AT), Rio de Oro (EA7A), Baker Island (KB6AA), Siam (HS1SS), and Syria (AR8AB). The last-named, according to N. S. Beckett (Lowestoft), is in Beirut and was much in evidence during the 14 mc SLP. ZC1AL (Transjordan), though hardly a new station on the band, has provided many listeners with a new country. KC4USA (Little America) has been heard by D. L. McLean (Yeovil), although this may have been some time back. He asks which Zone he is in, and there we are temporarily stumped, although we are practically sure it is Zone 13.

Several readers have worked themselves into a mild frenzy over the MB9 stations, particularly MB9AJ, so that we are sorry to have to report that they are the old OE9's, the MB prefix having been allotted to Forces in Austria.

VR6AA has been putting in consistently good signals from Pitcairn all the month, both on 'phone and CW. The story is too well known now to be repeated in full, but VR6AA is Nelson Dyett,

AMATEUR BAND COMMENTARY

ZL2FR, who also operated W6RWQ/VR6 last month.

D. Heaton (Bradford) and others report a station signing DF3AA and calling CQ on 'phone. Can anyone elucidate, please? Probably by next month we shall know all about him unless he is one of the more ephemeral brands of pirate.

T. Burton (Birmingham), who headed the HAZ list before we made it clear that it was post-war only, has come back with a new claim of 39Z. He suggests that we should try to clarify the position regarding Zones 18 and 19. All we can do at the

moment is to state that UAØKAA is in Zone 18 and UAØKQA in Zone 19. Add to this the fact that the various UA's giving their QTH as Irkutsk are 18, and those in Yakutsk 19, and you have about all the information available. T.B. also quotes the Labrador ambiguity; Labrador is in Zone 2, whereas the list for Zone 5 says "all VO stations." Those VO's who are in Labrador (they all appear to be VO6's, although not *all* VO6's are necessarily in Labrador!) are definitely in Zone 2. The VE8A stations in Yukon and North West Territory are in Zone 1, whereas the VE8M and VE8N stations on Baffin and thereabouts are in Zone 2. VK7 (Tasmania) does *not* count as a separate country any longer. (Yes, we know the old argument about the Isle of Man, and we don't consider that should count anyway, but there it is.)

T.B. suggests that someone has overlooked the Isle of Wight and Runnymede Island, and then leads on to a subject which has caused a lot of ink to flow this month—that of separate 'phone and CW listings for HAZ. From henceforth this is not T.B. speaking, but about a dozen correspondents, all filtered through your Scribe.

We have started a separate HAZ listing for 'Phone Only this time, in response to

many requests for it. If you appear in the "Phone and CW" list, there is no reason why you should not send a separate claim for 'phone only. But opinions are sharply divided on the subject. Briefly, they amount to this: The 'Phone-Only man says: "As it is more difficult to receive all Zones on 'phone than on CW, it is just as creditable to appear in the 'phone list with 36 as to be in the general list with 40."

The all-round man comes back to this by saying, "If you appear in the 'phone list with 36, then you must be good, but . . .

if you weren't too lazy to learn the code, you would probably have 39 or even 40 to your credit. Or conversely, if the man with 39 or 40 hadn't taken the trouble to learn the code he would still be down among the 35 or 36's."

The only answer to this controversy is to list the protagonists of both camps! At present the top score for 'Phone Only is 35—unless, of course, some of those appearing in the general list should be credited with 'Phone Only and have not said so.

Top Scorer

N. A. Phelps (London, N.10) still heads the main list with 40Z and 163C, post-war—a terrific performance by any standard. Interesting countries recently heard by him include Madagascar (FB3AC), South West Africa (ZS3F), Corsica (F8EX/FC) and VR3CP, who is a completely new one on us, as is ON4JO/FL. N.A.P. also reports that between 0700 on June 26 and that time on June 27 (actual listening time 5½ hours) he heard 83 countries in 34 Zones. The missing Zones were 1, 2, 19, 23, 26 and 39. M. H. Preston (London, S.W.17) also holds another sort of record with 174C heard post-war and 184C all-time—these are staggering figures.

I. E. Alfrey (Chiswick) suggests that it makes interesting listening, by way of a change, to go out for Empire stations only. He has sent in a list of 14 mc Calls Heard which follows this principle. We



G2DDM of Romiley, Cheshire, is a 25-watter operating CW on 14 and 28 mc. *He is ex-G4HU and a former radio officer in the M.N. The receiver is an Eddystone 504.*

still hope to get down to our original suggestion of "Zoned Listening," probably during an SLP, but have not yet worked out how much latitude to allow. I.E.A. has logged VP5RS in Jamaica twice during the month.

L. Collis (Banstead) mentions that YS1JR has difficulty in getting cards from Europe and wants his QTH published in a magazine over here. He appears in this month's list.

D. L. McLean (Yeovil) offers the following useful tips for those who are still chasing HAS (Heard All States): W7GC is in Nevada, W7JVU Utah, W0UJS and W0ZEA both in Colorado. For those after new countries he mentions that XACL and XAFG are both in Trieste, and on 14 mc 'phone.

D. F. Willies (Holt) reports ZA1A in Tirana, Albania, which we both regard with a certain amount of doubt at present. He also comments on the excellent transmissions nowadays from VQ4JBC and VQ4ERR. He has done a little 7 mc listening recently, but finds the band constantly full of locals.

L. N. Goldsbrough (Wirral) reports that June has hardly been describable as spectacular, although what he calls "routine DX" has been steady. He has found several good mornings, especially for VK and ZL, but the evenings have been spoilt by short skip on too many occasions. L.N.G., together with several other readers, gives the true story about W6RWQ and VR6AA—surprising how

many garbled accounts have got around. It must be something to do with W6RWQ's terrible modulation during his first few days' operating! At all events, it appears that ZL2FR/VR6AA intends to stay on Pitcairn for quite a while; there's a clue to that, but one that we are not publishing!

M. Harrison (Darlington), who heads the 'Phone HAZ list for the present, says he has heard EK1AA signing FF4AA, and would like to know more about it. Another new one from him is CR5AB, about whom we should all like to know more.

R. A. Hawley (Goostrey) has caught three maritime mobiles during the month—W2LDH/MM, W7FS/MM and W2KVZ/MM. He asks whether

TRIP in Tripoli counts as a separate country; we regret to say that he does not. TINS and the various Libyan stations that have cropped up from time to time all share the honours with him.

M. D. Lipscombe (Seaford) asks for information about C8YR, heard in September and October last year. We can give the glad tidings that this station and C8KY are both in Kansu province, and therefore definitely in Zone 23. M.D.L. has been giving 28 mc a run, and apart from the usual South Americans, has logged ZS, ZC6, SU, EL and a number of Europeans.

A. J. Slater (Southwick) calls attention to a few omissions in the list of prefixes, which we shall hasten to straighten out.

He then mentions some very nice DX rarities, such as YS1JR, PK6XX, CP5EA, AR8AB, VP5RS, VK9NK, (ex-4NK), KG6AV/VK9, and VP5PU (Caicos Islands). W6WCN/KG6, on Saipan, is another unusual one, but a number of readers have reported him, mostly on the same day.

R. E. Bell (Coventry) writes to say that SHFIX is a Swedish research ship, the *Albatros*, on a cruise round the world carrying out stratospheric research. They have a BC-610 (300 watts) and the receiver is an HRO. She will be worth watching.

B. Cage (Ipswich) would like the HAZ list elaborated by a note on the type of receiver used. We feel that detail of this kind would make things rather untidy, but we will certainly follow up the idea by asking the top half-dozen or so to let us have a brief description of their gear.* L. Tombs (Swindon) remarks on LAV/P (airborne), who appears in many of the SLP Calls Heard lists. This aircraft, a Norwegian Sky-master, was flying at 500 feet over the Mediterranean, with LA2UA as operator. He also tells us that D5AA stated that he was in the French Zone of Germany.

* (With good photographs too, if possible.—Ed.)

ZONES HEARD ROLL

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	163	40	172
K. Callow (Mansfield) ..	40	111	40	111
O. A. Good (Oswestry) ..	39	159	39	159
L. N. Goldsbrough (Wirral)	39	149	39	162
T. Burton (Birmingham)	39	137	40	180
C. S. S. Lyon (Liverpool)	39	133	39	133
M. H. Preston (London, S.W.17)	38	174	38	184
A. Baldwin (London, E.11)	38	147	38	147
A. E. Hardman (Manchester)	38	123	39	151
R. A. Hawley (Goostrey)	38	114	39	122
G. P. Watts (Norwich)	37	121	37	129
M. D. Lipscombe (Seaford)	37	104	37	115
A. J. Slater (Southwick)	36	133	37	140
D. Heaton (Bradford) ..	36	122	37	127
A. H. Onslow (Hove) ..	36	120	36	120
H. Owen (Tafo, Gold Coast)	36	119	?	?
A. Frost (Thornton Heath)	36	117	36	117
G. Curtis (S. Harrow) ..	36	106	36	106
F. A. Herridge (London, S.W.12)	35	103	35	103
B. Cage (Ipswich) ..	34	93	34	108
F. W. Jones (Birmingham)	32	79	32	79
B. Hayes (Bletchley) ..	31	56	31	56
'Phone Only				
M. Harrison (Darlington)	35	122	35	122
G. P. Watts (Norwich) ..	35	115	35	123
L. N. Goldsbrough (Wirral)	35	114	35	128
D. L. McLean (Yeovil) ..	35	111	35	123
C. G. Tilly (Bristol) ..	35	109	36	134
M. D. Lipscombe (Seaford)	35	101	35	112
O. A. Good (Oswestry)	34	96	34	96
L. Tombs (Swindon) ..	34	90	34	90
C. S. S. Lyon (Liverpool)	32	95	32	95

Can this possibly be a clue to that DF3AA?

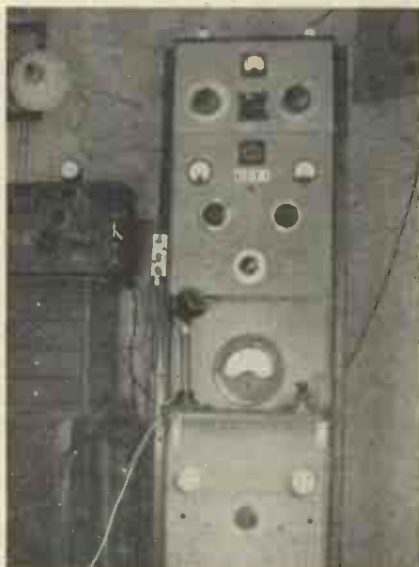
A. Frost (Thornton Heath) brings up the difficult question of China's interior geography. He points out that C6HH, who is in Shensi province, is in Zone 23 if you plot his position from an atlas and transfer it to the Zone map. On the other hand, he is *not* in Kansu. We are trying to straighten these matters out, but for the time being we are assuming that C6HH is in Zone 23. A.F. has done a little listening on 28 mc but has not found it terribly exciting. One of the interesting ones, however, was W7FS/MM, off the Portuguese coast with only 10 watts. On 14 mc 'phone he heard XULP, KG6AG, YN1HB, YS3PL, XE1UE, ZC1RJ and a good crop of VK's and ZL's.

D. W. Bruce (Eltham) has received a card from KP4CE confirming a 3.5 mc report, and has also heard W5 and WØ on that band. He reports 'phone from ST2KA on 14 mc, and thinks he is the only Sudanese station on 'phone.

D. C. Dutton, a 14-year-old correspondent in Herne Bay, uses a home-built 1-V-2 battery receiver, and has heard 35 Zones and 102 countries on 'phone. (He has not sent in the required list of stations, times and dates, so he does not yet appear in the HAZ listing). In the month's DX list he mentions VK7XA, HH2CW, YN1HB, W7ANN/C1, W6WCN/KG6 and ZE1JB (and, needless to add, VR6AA!). Seems to us that Master Dutton will be giving some of the old hands something to think about very shortly.

M. B. Drury (Leeds) boils with indignation over the note last month regarding CN8BA, who asked for QSL's and then said he was receiving so many that only those sending IRC's would be answered. As M.B.D. says, some of these chaps have never, apparently, heard of QSL Bureaux. They don't *have* to reply direct. In some quarters it does seem that the SWL is treated rather as the "poor relation" of Amateur Radio; considering how much good work is done by listeners, and how many of them are the transmitters of the future, this is neither fair nor proper.

F. A. Herridge (Balham), who for a long time adhered faithfully to 28 mc, has now gone up to 14 mc in self-defence, and his total of countries has consequently taken a goodly upward turn. Recent additions have been ZK1AB, UR2KAA, UD6BM, EA7A, CT1DD, KH6IJ, UO5AD and others like them. His little 0-V-0 has given him 79 countries on 28 mc; we will



G2Y1 of Reading, Berks, operates on 1.7 and 3.5 mc. only, the receiver being an ex-American Army BC-342-N.

now see what happens when he gets well dug in on 14.

N. S. Beckett (Lowestoft), referring to unusual calls, mentions XTCV and YTZC; the former has an English accent and the latter sounds foreign. N.S.B. also asks for Zonal identification of VESTV, Nottingham Island. We don't know where this one is, but presume that it is within the boundaries of VE5 proper and therefore in the same Zone. F. Smallwood (Leeds) mentions VR6AA, who, on one occasion, was the only station audible at more than S5 on the receiver. He was heard working with T12EV.

C. S. S. Lyon (Liverpool) has been listening on 7 mc between 0300 and 0600 GMT, and has logged lots of W's in addition to some 'phone from Cuba and ZL1MR. Then he comments on the peculiar 14 mc conditions on June 26 at 1700 GMT, when he logged Newfoundland (VO4Q) and a number of W's on 'phone, finishing up with W5GMR in Louisiana and WØZEA in Colorado! C. S. S. L. has heard what he thinks was CR5SS, but says the Morse was so shocking it might have been CR4SS. He suggests that much has been talked about "group reception" on 28 mc but not enough on 14 mc. He quotes such happenings as reception of VK's (but *all* 2's or perhaps 3's) and the

varying groups in the early mornings, working across USA and finally reaching Hawaii or even Guam.

A terrific omnibus letter from O. A. Good (Oswestry)—the longest ever received by your Scribe!—is full of day-to-day information on the behaviour of 14 mc. There's only one thing wrong with this kind of letter: We should like it to refer to the following month instead of the previous one! Call-signs of interest on the way through include HV1AB (genuine?), KM6AA (Midway Island), UAØKQA (Zone 19!), YA1F (?), ZC6SX, KG6AV/VK9, ZD4AH, KH6DB/KG6, F8EX/FC (Corsica), CR5AB (doubtful?), and, of course, VR6AA cropping up almost daily. We feel that VR6AA has had just about enough publicity now, and may as well be left as one of the phenomena.

O. A. G. remarks that Swan Island is listed in Zone 5, together with Bermuda. He has looked the place up on a map, however, and found it 100 or 150 miles off the Honduras coast. Are there two Swan Islands? And, if so, which one is occupied by these KS4 stations? We should really be glad to know the answer.

Country Prefixes

Here is a short list of amendments to the list of Country Prefixes on p. 241 of last month's issue:—Add ZD7, ZD8, MX, VO (Labrador), XA (Trieste Zone), VP5 (Turks and Caicos Is.). For OE read OE(MB). Delete VK4 (Papua), as this is now VK9.

For next month's SLP's we are using 14 mc only, but including a 'Phone-only period to give the 'phone enthusiasts a chance of some competition among themselves.

Set Listening Periods, July

July 26, 1800-2000 GMT—

14 mc 'phone only.

July 27, 0600-0800 GMT—

14 mc 'phone and CW.

Logs for these periods, Calls Heard lists and all correspondence should be addressed to the DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1, to arrive by first post on August 6 at the latest. HAZ claims, on post-cards, should come before that if possible, but will be accepted and corrected up to that date. Good Hunting!

DX QTH'S

C4CK	Box 163, Kunming, China.
CP1AX	R. Maldonado, Panagra, La Paz, Bolivia.
CR7AD	Luiz Rodriguez, Box 276, Lourenco Marques, Mozambique.
EA7A	Pedro Franco, Box 101, Cabo Yubi, Rio de Oro.
FQ3AT	Base Aeriennne, Fort Lamy, Tchad, French Equatorial Africa.
HH5E	Pan American Airways, Port-au-Prince, Haiti.
HS1SS	U.S. Military Attaché, American Embassy, Bangkok, Siam.
J2AHA	APO 343-2, c/o P'master, San Francisco, Calif.
KG6AV/VK9	APO 246, c/o P'master, San Francisco, Calif.
KZ5AY	PO Box 57, Howard Field, Panama Canal Zone.
MD5AB	Capt. Garbutt, 18 A.F. Signal Rest., M.E.L.F.
OQ5AS	De Mey, Box 9, Usumbura, Ruanda Urundi, Belgian Congo.
ST2KA	Box 300, Khartoum, Sudan.
VP4TAX	5 Saddle Road, Maraval, Port-of-Spain, Trinidad.
VP5PU	APO 845, c/o P'master, Miami, Fla.
VR6AA	Nelson Dyett, Pitcairn Island, S. Pacific (via N.Z.)
VS4VRA	81 Sqn., RAF, Labuan, British North Borneo.
VS6AN	A. P. Rosario, Top Floor, 227 Nathan Road, Kowloon, Hong Kong.
YS1JR	J. Rodriguez, Cojutepecque, El Salvador.
YS3PL	Prudencio Llach, San Salvador, El Salvador.
ZA1F	Radio ZA1F, Tirana, Albania.
ZC1RJ	QSL to 89 Hurstfield Crescent, Hayes, Middx.
ZC6DD	Postal Unit, 3 Brigade, 6th Airborne Divn., M.E.L.F.
ZD6DT	Royal Signals, Zomba, Nyasaland.

QSL direct whenever you can. Do not QSL at all unless you are sure a report will be useful. If you do not know the full QTH of the DX station, consult the foreign QSL Bureau List on p. 244 of the July issue of the "Short Wave Listener."



SWL STATIONS

No. 3

THE interesting installation shown here is operated by W. J. Cain at 14 West End Terrace, Stranraer, Wigtownshire, Scotland.

The main item is the R.1155 receiver, but so modified that, as he says, it now bears little resemblance to the original! W.J.C.'s modifications include an S-meter, band-spread, a noise limiter and circuit alterations to enable HT to be earthed; a new panel has been added and the controls rearranged. The result is a nice-looking receiver which compares very favourably in performance with many high-priced commercial jobs.

Working into the R.1155 is a 10-metre converter with two RF stages, mixer and oscillator (6K7, 6AC7, 6L7 and 6J5). The RF stages are switched for use independently to form a pre-selector for the main receiver, the resulting performance on 20 metres being particularly good.

In addition to this, W.J.C. has in hand a 5-metre converter using EF50's in RF and mixer stages, with an EC52 as oscillator.

A specially designed power unit is a separate item embodying several useful features. It gives three different HT outputs, independently metered, with indicator lamps to show which supply is in use.

With the exception of the much-modified R.1155, all the apparatus is home-built, and readers will agree with us that considerable ingenuity has been displayed in the design of a very interesting receiving station. Indeed, this brief description indicates quite clearly that there is ample scope for original work in connection with the receiving side alone, and W.J.C. will no doubt give many readers ideas along the same lines.

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 call sign (e.g., W1AZ, 1BCR, 1CQL, 2DY, 2EF, etc.). The call signs, 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 PERIOD

14 mc

June 28, 1800-2000 GMT

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

Phone: C4CK, EK1AS, EL5B, MD5TC, TR1P, VS2BV, VU2DG, ZC1RJ, ZS6BV, 6LF.
(Receiver: *Hallcrafters* S20.)

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

Phone: LAV/Airborne, TR1P, VO2D, 6T, VS2BV, VU2AN, 2DX, W6WCN/KG6 (Saipan), ZS6BV.
CW: J4AAK, KL7Y, MD9AH, UB5KAA, UI8AB, UJ8AC, YR5R, 5Q, ZD2K.

J. Crunden-White, Ecclesbourne, Chorleywood, Herts.

Phone: EL5B, FA3JY, KP4AU, VO6H, ZB1AE.
CW: UA9CA. (Receiver: *V55R*.)

D. C. Dutton, Tiev-Tara, Hill Top Road, Herne Bay, Kent.

Phone: C4CK, CR4HT, EL5B, MD5PC, SKK, VU2AN, W6WCN/KG6, ZC1RJ. (Receiver: *1-V-2*.)

L. Tombs, 31 Little Avenue, Swindon, Wilts.

Phone: CR4HP, EK1AS, LAV/P Airborne, TR1P, UA3AX, VO2D, VS1BA, VU2VE, VQ4RAW, ZS6BV, 6LF. (Receiver: *10-valve Superhet*.)

B. Cagg, 331 Landseer Road, Ipswich.

Phone: EL5B, EK1AS, FA3JY, LAV/Airborne, TR1P, ZB1AE, ZC1RJ, ZS6AB, 6LF.

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

Phone: AR8AB, C4CK, CR4HT, CT2AB, EK1AS, EL5B, FA3JY, LAV (Airborne), MD5PC, PY7QG, TR1P, UA3AX, VE1JG, VO2AN, 2D, VU2AN, 2DG, 2RV, W6WCN/KG6 (Saipan), ZC1RJ, ZS6BV, 6ED, 6LF. (Receiver: *SX24*.)

B. Hypher, St. Edmund's College, Ware, Herts.

Phone: EL5B, VU2RV, ZC1RJ. (Receiver: *9-valve Superhet*.)

A. E. Hardman, 14 Burtinshaw Street, Cross Lane, Girton, Cambridge.

CW: CIJC, CN8BK, CR7AL, FA3LX, 8BG, J5AAL, LI2JC, UA6JB, 9CA, UB5KAA, UD6AA, UG6AB, UI8AB, UO5AC, VS1AQ, ZC6DA, ZD2KC, ZS6LW.

B. G. Millward, 64 Somerville Street, Crewe, Cheshire.

Phone: EK1AF, EL5B, FA3JY, LAV/P Airborne, LH2A, TR1T, VO2D, ZB1AE.

Ray A. Hawley, Torview, Brookfield Crescent, Gostrey, Cheshire.

Phone: C4CK, CR4HT, EL5B, FA3JY, J5AAJ, ZC1RJ, ZS6CD, 6LF.

CW: J5AAL, YR5Q. (Receiver: *Eddystone* 504.)

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

Phone: AR8AB, EK1AS, EL5B, FA3JY, LAV/Airborne, TR1P, VU2AN, ZE1JX, ZS6LF.

CW: LI2JC, UI8AB, VS1AQ, ZC6DA, 6SX. (Receiver: *V55R*.)

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

CW: CIJC, CN8BK, FA3LY, J4AAK, 5AAL, KA1ABU, LI2JC, UA9CA, 9CB, UB5KAA, UI8AB, VS1CA, ZC6DA, 6DE, ZS5DZ, 6LW. (1800-1920 only. Receiver: *1-V-2*.)

R. H. McVey, 46 Holcombe Avenue, Elton, Bury, Lancs.

Phone: EK1AS, EL5B, FA3JY, TR1P, VO2AN, 2D, ZS6LF.

C. S. S. Lyon, 15 Ullet Road, Liverpool, 17.

Phone: D5AA (French zone), EL5B, ZS6BV, 6LF.

CW: CIJC, CR7AL, J4AAK, 5AAL, UA1KEB (Amderma, Arctic), 9CA, 9DP, W6GN, YR5Q, ZB2B, ZC6DA, ZS6LW. (Receiver: *0-V-1*.)

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

Phone: AR8AB, CR4HC, FA3HY, OX3GG, TR1P, ZC1RJ, ZS2BB, 6LF. (Receiver: *5-valve Superhet*.)

1.7 mc

June 29, 0900-1100 GMT

Ray A. Hawley, Torview, Brookfield Crescent, Gostrey, Cheshire.

Phone: G2HW, 2NY, 2XW, 3A1L, 3RY, 5SE, 6QT, 6RV, 6YV, 8NL, 8SC.

CW: G2BID, 8KU, 8SC. (Receiver: *Eddystone* 504.)

B. Hypher, St. Edmund's College, Ware, Herts.

Phone: G2DPO, 2DQ, 2HR, 2PRH, 2SA, 2SF, 3ACP, 3AX, 3LM, 3MI, 3TP, 4BY, 4DP, 4FN, 4RO, 5UM, 5XZ, 6FM, 6HU, 6RO, 8VA. (Receiver: *9-valve Superhet*.)

L. Tombs, 31 Little Avenue, Swindon, Wilts.

Phone: G2AOK, 2IK, 5DZ, 5KT, 5LO, GW2BG, 5BI, 8NP. (Receiver: *10-valve Superhet*.)

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

Phone: G2HB, 2WR, 3ACP, 3AGP, 3FJ, 5RB, 6FM, 6HU, 8LG.

CW: G2FFG, 2HS, 2RD, 2SF, 3ARU, 3AXN, 3BAZ, 3BCE, 8KK, 8LG.

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

Phone: G2DQ, 2KT, 2SF, 2BBC, 2BOU, 3FM, 3OA, 3AGP, 4BY, 4CW, 4FN, 5WW, 6CH, 6NU, 6RQ, 8OQ, PS "Golden Eagle" PS "Royal Eagle."

M. D. Lipscomb, 83 Stafford Road, Seaford, Sussex.

Phone: G2ACK, 2AX, 2CYV, 2FTS, 2XQ, 3AAL, 3AEX, 3BDQ, 3BMP, 4BY, 4CW, 4FN, 4OQ, 4BR, 5PB, 5RD, 5RO, 5UM, 6SQ.
CW: G3ARU, 3OA. (Receiver: *R1155 modified*.)

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

G2IK, 2ZG, 3RQ, 3YH, 4GR, 4RD, 5TZ, 6GU, GW3AAA, 4FW, 5BI. (Receiver: *Sky Champion* S20.)

C. W. Spencer, 47 Havelock Street, Loughborough, Leics.

G2ATK, 2CNW, 2FLU, 2AFO, 2FMP, 2HNU, 2DTQ, 3ACR, 3AFS, 3AFP, 3TP, 4OF, 4MK, 6VD, 8RB, 8VA. (Receiver: *0-V-Pen*.)

GENERAL

28 mc

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

'Phone: M5DC, SUIHF, IWS, VS9AB, W4JZN/MM, ZC6FP, 6JF.

CW: PY1DS, W7FS/MM. (Receiver: 0-V-0.)

J. Crunden-White, Ecclesbourne, Chorleywood, Herts.

'Phone: SUIHF, VQ3EDD, 4ERR, VS9AB, ZS1P. (Receiver: V55R with converter.)

Ray A. Hawley, Torriev, Brookfield Crescent, Goostrey, Cheshire.

'Phone: EL5A, SUIHF, VQ2VP, W2KVZ/MM, W2LDM/MM, W7FS/MM, ZC6WP, ZS1T, 2AF, 6CZ.

CW: VK5MP. (June 12-15 1600-1800 GMT. Receiver: Eddystone 504.)

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

'Phone: CT1UU, CX1DB, D4AON, 4APN, 4ATH, F8QD, I1RO, OQ5BA, OZ6AA, PY7DD, SUIHF, VQ3EDD, W7FS/MM, ZC6JF, ZS1P, 1T, 6CZ. (Receiver: VHF converter and Sky Champion S20.)

L. Tombs, 31 Little Avenue, Swindon, Wilts.

'Phone: CT1UU, MD5DC, PZ1G, SUIHF, W3FKE/MM, 5BSY/MM, Y12WM, ZC6FP, (June 1-28.)

14 mc

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

C4CK, 7T5, FK8NQ, J2AMA, 2EAR, 2ROC, 2VFV, OQ5BA, FK6XX, VK2ADT, 2AGU, 2AHA, 2AKR, 2AO, 2CT, 2WD, 2YU, 3BZ, 3UP, 3YH, 6FW, 6HS, 9B0, VP3LF, VQ4ERR, 4JBC, 4KDH, 4RAW, VS1AN, 1AR, 1AX, 3AA, VU2DD, Y16C, ZL2GO, 2GX, 3CV. (1300-1330, 1830-1930 DBST, June 11-20. Receiver: Marconi B28.)

D. O'Hare, Iveagh, Wilton, Cork, Eire.

CW: CR4SS, H11AR, KA1AK, KL7IW, 7JF, KP4CC, KZ5L, OQ5CM, PZ1WK, TF3MB, VK71L, VP9K, VSIWA, W6RKP, XE1A, ZS3F, 6KF.

'Phone: EL5V, TR1P, VP4TE, VQ4EAA.

R. J. Randall, Eddington Villa, Eddington, Herne Bay, Kent.

'Phone: CE1AU, 2BQ, EK1AS, KP4CK, LU4BH, 4DJ, 7DG, O1X7, OX3DG, PY7AD, TRIA, YV5AB, ZB1AE. (Receiver: 6-valve Superhet. June 21-23.)

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

'Phone: C4CK, CE1BE, CN8BA, CO2DQ, 2JV, 2LY, 2UP, CP1AX, CX2AC, 2BC, 2CO, EA9AI, EK1AD, 1AS, EL5A, 5B, F8CF, HC1JW, HK3BA, 3BI, 3DD, 3DW, 3EO, J2YSD, KP4CK, LU1JC, 3PR, 4BH, 7BU, MDSAL, 5TC, NY4ZQ, O44AI, 4BZ, 4M, PY4BI, 7AY, ST2KA, TI2MS, 2OA, 2RC, TR1P, VE4IF, 7EF, VK2ACU, 2AGJ, 2AGU, 2AHA, 2AKR, 2ALD, 2GL, 2II, 3AMP, 3AOG, 3BH, 3BZ, 3HG, 3HS, 3JE, 3KX, 3PH, 3TS, 3VO, 3YH, 4KH, 4KS, 4VD, 6DD, 6DF, 6RU, 7NC, 7TR, 7XA, 9NK, VO2M, 2P, 4Q, VP4TE, 5RS, VQ4ERR, 4JBC, 4RAW, VR6AA, VS1AN, 1BA, 2BV, 7IT, VU2DG, 2RV, 7BR, XE1CQ, Y16C, YN1HB, 1HT, 1LB, YS1JR, 3PL, YV5AB, 5ABE, ZA1A, ZB1AE, 1AE, ZC1AL, 1RJ, 6DD, 6WP, ZLICD, 2BE, 2GX, 3BV, 4FO, ZS2G, 6BV, 6LF. (Receiver: Hallicrafter S20. 0500-0630 GMT and 1800-2000 GMT.)

K. Callow, 40 Elkesley Road, Welbeck Colliery, Mansfield, Notts.

CW: OY3IGO, UAØKQA, UB5KAA, UG3WS, VK3ZC, VO6U. (June 29, 1000-1100 GMT.)

CW: PY1DH, 2AL, VE1PV, 1SJ, 1TF, 3JK, W6WUD. (June 29, 2200-2300 GMT.)

CW: KH6J, KS6J, NY4AC, VE71BB, W6BET, 6CIR, 6GHU, 6KH, 6KRI, 6NNV, 6OJS, 6PUZ, 6RBO, 6RW, 6SAM, 6SN, 6WN, 7AY, ZB2B, ZL1BY. (June 30, 0600-0700 GMT.)

J. Crunden-White, Ecclesbourne, Chorleywood, Herts.

'Phone: CN8AM, 8MA, EL5A, 5B, FA3JY, 8RA, HK3BI, L1IA, LU4BH, O44AI, 4M, OQ5BY, OX7B, PY7AD, TI2OA, 2RC, UA9CA, 9KCA, UB5KAA, UG6AA, VE7AIE, VK2AKR, 3YH, VO6H, VQ4ERR, VR6AA, VS2BV, WSHHC, 6ANN, 6BZE, 6DUB, 6FDN, 6ITH, 7BVO, 7ESK, 7HSZ, 7HTB, Ø1LLF, ØNCG, XE1CQ, YS3PL, ZL4FO. (Receiver: V55R.)

A. Baldwin, 28 Wallwood Road, Leytonstone, London, E.11.

CW: CE3AG, CM7AA, CR6AI, CX4CZ, EK1JF, ET3Y, FA8BG, FO8AW, FT4AN, HC1JW, IGUSA, JZUSA, W8FAY/J5, KA1HR, 6FA, KH6J, KL7JF, KM6DL, KP4CD, 4LY, KS4AE, 6IV, KV4AA, LI2B, 2JC, LU3FG, 4BH, 5KB, 6DJ, 8EE, 8EU, NY4AC, OQ5CM, OX3BF, 3GE, 3GG, PK2LL, PY1BC, 1BS, 1CE, 1GJ, 1II, 1JA, 2AL, SU2DG, TF3MB, UD6BM, UG6RH, 6WD, U8AB, UØSAC, UR2KAA, VE7AA, 7GI, 8OG, VZKAIX, 2QL, 2SA, 2TG, 2VA, 3CT, 4EL, VØ6X, VQ3HIP, 5JTW, VU2RX, W6AOD, 6AOR, 6ERS, 6GE, 6HZI, 6MJG, 6OJU, 6RKP, 6SA, 6SRU, 6UZC, 6WEW,

6WUD, ZC1AL, 6BA, 6DA, 6SX, 6WF, ZD2AC, 2KC, ZE1JE, ZL1AF, 1BY, 3AZ, 3CQ, 3CX, 3FA, 4AE.

'Phone: EA9AI, HK1HJ, LU3AQ, 4BH, TI2GE, 2OA, 2RC, VK2AGU, 2ANN, VO2AQ, 6R, VQ4RAW, VR6AA, W6BZE, 6DR, 6LLO, XE1CQ, 1Y, YN1AQ, 1AV, ZC6FP, ZS2AF.

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

'Phone: CN8BA, 8BH, CT2NN, CX1VD, 2AX, 2CO, EA9AI, EL5A, 5B, HC1JW, HK3SA, J3WGT, KG6AG, LU4BH, 6AJ, MD5AF, NY4ZQ, O4AM, PZ1J, ST2KA, TI2OA, TR1P, UA2AX, VK2AGU, 3VL, 4KS, 6DD, 7NC, 7TR, VP2LA, 4TT, VQ4JBC, VR6AA, VS7IT, VU2DG, W6COF, 6VF, ØWUJ, XE1CQ, Y16C, YN1HB, ZB1AC, 1AE. (June 1-12. Receiver: 0-V-0.)

L. Tombs, 31 Little Avenue, Swindon, Wilts.

'Phone: CN8BA, CO2BK, 2UP, CR4HP, CT1UU, CX2AX, EA9AA, EK1AS, F8CF, 8DX, HH2CW, HK3DD, KH6GF, LU7BU, OX399, 7B, PY1AQ, 1FX, 2CK, 2HV, 4BI, ST2KA, SV1AH, 4AD, TG9JK, TI2IC, 2OA, VE7AJN, VK2AGU, 3YH, VP4TR, VQ2HC, 4ERR, 4RAW, VR6AA, VO2AF, 2AO, 2D, 2G, 2P, 2T, VS1BA, WØFLP, ØUØY, ØZDS, 5AFX, 5ASG, 5HUU, 6EB9, 6IQH, 6LS, 6WH, 6NO, 6RO, 6VHW, 7DL, 7GUI, 7HSZ, XE1BC, 1CQ, 1RU, YN1AT, 1HC, YS3PL, YV5AB, ZA1A, ZB1AE, ZC1L, 1RJ, ZS1U, 6BV, 6LF. (June 1-30. Receiver: 10-valve superhet.)

J. M. Ealey, 13 Gordon Gardens, Swindon, Wilts.

'Phone: CO2JV, 2LY, 2UP, CX2CO, HC2KG, HH2CW, HK1DZ, 3BA, BF, BI, BJ, 3DD, 3DW, 3EO, KP4CK, LU2CX, 2ER, 7BU, NY4ZQ, O44AC, 4AI, 4BF, 4BL, 4M, OX3GG, TI2AT, 2EV, 2FG, 2ØEC, 2RC, VE4IL, VK2AGJ, 2AHA, 2FJ, 2NS, 3AOG, 3BH, 3BZ, 3HS, 3IG, 3PS, 3VO, 3YH, 4KH, 4KO, 5FM, 6DD, 6RU, 7TR, 7KL, 7NC, 7YL, VR6AA, W5CEW, 5DEW, 5ECC, 5UK, 6BZF, 6COF, 6FTU, 6IKQ, 6KYU, 6LS, 6MLY, 6NO, 6RDR, 6TT, 6VYW, 7BVK, 7FLD, XE1AC, 1BC, 1CQ, 1QE, YN1HB, YS3PL, YV1AU, 5AB. (Receiver: 0-V-2.)

Ray A. Hawley, Torriev, Brookfield Crescent, Goostrey, Cheshire.

'Phone: CN8BA, CO2DQ, 2GY, 2UP, EL5B, EK1AS, F8CF, FT4AI, HK1JW, 3DD, 3DI, KH6CD, KP4CE, NY4ZQ, O44B, 4BZ, OX3DD, 3GG, TI2FG, 2OA, 2FA, 2RC, TR1P, VE4NI, 7AJN, 7RV, 7VP, 7BZ, VK2AGU, 2AHA, 2APU, 3BH, 3YH, 4KH, 5BF, 6DD, 6KW, 6RU, 7TR, VQ2AF, 2AS, 2HS, 6R, VP7NK, VR6AA, VU2DG, W5AFX, 5GCT, 5GHP, 5HFF, 5HHT, 5HIP, 5HUP, 5IN,

CALLS HEARD—(contd.)

5JT, 5IRE, 5DFY, 6ALX, 6ANN, 6BM, 6BZF, 6CGO, 6DDB, 6EOU, 6FNK, 6FTH, 6GWR, 6GWY, 6IKQ, 6IQE, 6ITH, 6I2B, 6KTA, 6JDD, 6KUW, 6KYU, 6MLA, 6MIG, 6MLY, 6MAM, 6MBD, 6NAM, 6NO, 6OF, 6PAX, 6PBI, 6PDB, 6RO, 6RPP, 6RVU, 6TT, 6WGN/KGN, 6WNH, 6YL, 6YX, 7BVZ, 7FLD, 7GC, 7GUI, 7HIA, 7HSZ, 7HTB, 7HX, 7JQE, 7JZK, 7GTU, 7GZR, 7OHX, 7QBF, 7ONME, 7ONWW, 7ONCG, 7ONNI, 7OULH, 7OUJS, 7OZEA, 7QZDS, 7XEICQ, 1FU, 1SE, 1V, 2HP, 2HY, 2YNIFF, 1HB, YS3PL, YV5AB, ZB1AB, 1AE, ZC1RJ, 6SX, ZD4AH, 2AX, 2BE, 2GX.
(May 29-June 27, 0515-0700 and 2030-2100 GMT. Receiver: Eddy-stone 504.)

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

'Phone: AR8AB, C1CH, 4CK, 7TS, CE1AG, CP5EA, CRAHT, CT2AB, EA9AI, EK1AD, 1AS, EL4A, 5B, EQ2L, FA3JY, 8CF, 8DX, FT4AE, 4AI, HC1FG, 1JW, HH2CW, 2PB, 5PA, HK3BI, 3DO, J2CAL, 2YSD, 3WGT, 9ABX, 9ANL, KA1ABM, 1CB, KG6AV/VK9, KH6CT, KP4CE, MDSAL, 5PC, OA4AC, 4AI, 4AO, 4BA, 4F, 4M, OQ5BW, 5CA, OX3GG, 7B, PK6XX, ST2KA, TINS, T120A, 2OH, 2RC, 2RU, 4JG, TRIP, VE7AJN, 7HF, VK2ACU, 2AGU, 2AIK, 3EG, 3YH, 4VD, 5CA, 7NC, 7TR, 9NK, VO2AN, 2D, 4S, 6T, VP2LA, 4TE, 5PU, 5RS, VQ4ERR, 4JBC, VR6AA, VS1AN, 2BG, 2BU, VU2AJ, 2AN, 2AV, 2BK, 2DG, 2RV, W5FYU, 5GG, 5HIP, 5HUT, 5IN, 5JDH, 6VTO/C1, 6WCN/KG6 (Saipan), 7ANN/C1, 7BVO, 7DL, 7DMZ, 7DV, 7EWF, 7FLD, 7GC, 7HIA, 7HTB, 7JQE, 7JUV, 7JZK, 9HFZ/J5, 9BRK, 9GZR, 9HRB, 9OEX, 9QBF, 9NCG, 9NME, 9NNI, 9OMG, 9PRK, 9SBE, 9UJS, 9UYC, 9OZEA, XE1CQ, 1FU, 1FU, 1L, 1SB, XULP, XZ2AA, Y12AH, 6C, YN1FF, 1HB, 1HT, YS1JR, 1MK, 3PL, ZC1AL, 1RJ, 6DD, ZL2BE, 2BI, 2GC, 4FO, ZE1JX, ZS1U, 4H, 6BV, 6ED, 6GR, 6LF. (June 1-29, 0515-0615 GMT, and occasionally 1500-0001 GMT. Receiver: SX24.)

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

'Phone: CE1BE, CN8AM, CO2CK, 2KO, 2LY, 2SE, CX1VD, 2AC, 2AX, 2CO, 3CS, EK1AD, 1AS, ELSB, FA8CF, HC1JW, HH2CW, 5PA, HK1CZ, 3BD, 3BF, 3DD, J9ADS, KP4CK, 4DU, LU1JC, 2AS, 2BL, 2ER, 3CK, 4BH, 4CI, 4CN, 4JK, 7BU, 7CR, 8HK, 8UA, NY4AT, 4ZQ, OA4AM, 4BR, OX3CG, 3GG, 3SA, PYGAB, 1AD, 1DD, 1FR, 1GM, 2CK, 2BV, 2RU, 4BI, 4MG, 6AE, 6AJ, 7AD, T12EV, 2FG, 2IC, 2OA, 2OEC, 2RC, 4JG, TRIP, V5GA, 7OT, VK2AGU, 2AGY, 2AKN, 2ASU, 2KH, 3YH, 3XG, VO2D,

2G, 2P, 6K, 6T, VP4TE, 9F, VQ2AR, VR6AA, VS1AN, 2BG, W5HUG, 5KCN, 5UK, 6ASV, 6BZE, 6BZF, 6DI, 6GUM, 6KYU, 6LLQ, 6OIS, 6PM, 6RD, 6RO, 6TT, 7BZO, 7DL, 7GCN, 7HIA, 7QFS, 7QGF, 7QGY, 7QNG, 7QRG, XE1BC, 1BH, 1CA, 1CO, 1T, 1V, 2SM, 3E, XZ2AA, YN1HB, YS3PL, YV1AV, 5AB, 5ABQ, 5ACX, ZC1AL, ZL2GX. (Receiver: 1-V-2.)

B. G. Millward, 64 Somerville St. Crewe, Ches.

C1CH, CO8MP, CN8AB, 8BA, 8MA, CT1UU, CX1UD, 2AC, 2AX, 2CN, EA9AI, EK1AD, 1AF, 1AS, ELSB, 5E, FA3JY, 8CF, 8DX, FT4AI, HH2CW, 5PH, HC1ZAG, HK3BJ, BU, HR1FB, J2AIN, KP4CE, LAV/P Airborne (LA2UA), LU4BH, 7EO, 8EE, OQ5BW, OX3GG, 7B, PY1AC, 1FX, 1XR, 1ACX, 1ADC, 2AB, 2AK, 2AY, 2CK, 2HG, 3AFA, 4BW, 4EJ, 4MG, 4PI, 6AV, 7AD, 7AY, T12EU, UA1AB, 1KBB, 3AK, VE1AX, 1BH, 1CR, 1FG, 1GG, 1NB, 2BE, 2DJ, 2GK, 2GT, 2JB, 3AQ, 3BE, 3HC, VO2D, 2AB, 2AQ, VQ4ERI, 4ERR, 4JBC, VR6AA, VS1AN, W5OHF, 6CP, 6DI, 6NO, 6BZF, 6LLQ, 6PDB, 7EIA, 7ELQ, 7VLK, XE1BC, 1BU, YU5AE, ZA1A, ZB1M, 1AE, 1AC, 2A, ZC1AL, ZS2AF.

H. Crawford, 19 Maskill Street, Fernhill, Bury, Lancs.

CO2CK, ELSA, HK3AB, W6AHP, 6PDB. (June 30, 0030-0430 GMT. Receiver: V55R.)

A. F. Hayton, 69 Munster Gardens, London, N.13.

'Phone: C1CH, ELSB, HC1AD, HP2CA, J2AAR/In flight over Okinawa, 2YXD, 9AAD, 9AAZ, KA1AH, KG6AG, LA2UA/LAV/In flight over Italy, OQ5BK, PK4HB, ST2KA, VP4TE, VQ4ERR, 4JBC, 4RAW, VR6AA, VS1AN, 6G, 7IT, VU2AJ, 2AV, 2BG, 2BK, 2RV, W5EKK/VK9, W6WON/KW6, W6VOT/C1, W7ANN/C1, XE1AC, 1DW, 2HY, XZ2Y, Y16T, YS3PL, ZC1AL, 1RJ, 6AY, 6FP, ZE1KX.

CW: 16USA, KG6AI, KP4KD, UA0KAA, U18AB, UJ8AC, VP4KX. (June 19-28, 2000-2230 BST. Receiver: R1116/A.)

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

'Phone: CE1BE, CO2LY, 2UP, 8MP, CT2AB, EK1AS, HC2BK, 6KE, HH2CW, HI2K, HK3BA, 3BI, 3BS, 3DD, 3EO, 3FO, KP4CK, LU3CR, 4CN, 7BU, 8UA, OA4M, 4AI, 4BF, PY4GJ, T12OA, 2OEC, TRIP, VK2KH, 3YH, 3AGB, 6DF, 7LZ, 7TR, VO2P, VR6AA, W0HX, 0CUN, 0UTS, 5QH, 5BGP, 5DFN, 5HXC, 6RO, 6IKQ, 7JUN, XE1CQ, 1QE, YS3PL, YV1AN, 5AB, 8AF, ZB1AF. (June 22, 0400-0815 GMT.)

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

'Phone: VE7AIE, VK2AGJ, 2AGU, 2AHA, 2AIK, 2AKR, 2AGT, 2ZK, 3BH, 3BZ, 3EZ, 3HG, 3HS, 3IG, 3IH, 3ND, 3SK, 3YH, 4KH, 4VD, 5BF, 6DD, 7TR, 7XA, VO2P, 6T, VP5RS, VR6AA, ZB1AE, 1M, ZL1CD, 2BV, 3GX, 4FO. (June 1-28, 0600-0700 GMT. Receiver: V55R.)

C. S. S. Lyon, 15 Ullet Road, Liverpool, 17.

'Phone: AR8AB (24:19), W7ANN/C1 (24:18), CO6DS (08:21), CR5AB (28:06), HC1JW (02:06), MD5PC (24:21), OA4BZ (09:06), OX3NC (13:02), VK3PH (24:06), VO2AQ (07:12), VR6AA (26:07), W5GMR (26:17), 7EOI (Montana, 04:05), 9ZEA (Colo., 26:16), ZC1RJ (26:19), ZE1JX (24:20).

CW: C1DK (10:18), CR6A1 (05:22), J3AAD (07:12), W8UAY/J5 (24:16), KG6AI (02:18), 6AN (08:08), KH6DB/KG6 (23:16), KL7KE (11:07), KZ5AZ (08:08), 5DX (25:06), KG6AV/VK9 (08:12), VP9K (09:22), VU2CV (07:18), W5GUD (25:18), 6KH (07:16), 7ONG (25:17), ZD4AH (27:18), ZE1J1 (09:18), ZL4H1 (03:05), ZS6J (25:18). (June. Figures in parentheses give date: hour GMT. Receiver: 0-V-1.)

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

'Phone: CN8BA, CR5AB, EA9AI, FA8WH, HC1JW, HK3BI, 3BJ, 3E, OA4AC, 4AI, OX3GG, T12EV, 2OA, 2PA, 2RC, VK2ACU, 2AKA, 2DO, 2II, 3HC, 3IG, 3VO, 3YH, 6DD, 7NC, KG6AV/VK9, VO6R, 6T, VR6AA, W5DQH, 5FRD, 5GHF, 5HUT, 6BXL, 6EBG, 6LS, 6RO, 6WU, 7ESK, 7GC, 7GUI, 7HTB, YN1HB, 1HT, YS3PL, YU5AB, 5ABT, ZL4FO.

CW: FT4AN, HHSE, KH6BM, 6IJ, KL7GT, 7IY, KS4AE, KZ5AY, VE7ZM, 8AW, 8OG, VK2DA, 2SA, 2TG, 2VW, 3ACG, 3CN, 3EK, 3GU, 3MH, 3NC, 3PA, 3RG, 3VJ, 3WB, 3YL, 4RC, 5RX, 7JT, 7OM, VR6AA, W5DJK, 5FNA, 5JSB, 5LGG, 2LHB/6, 6AOV, 6AX, 6PBD, 6COG, 6EAK, 6EJ, 6FMY, 6FVQ, 6GSL, 6HZZ, 6ITA, 6KH, 6KJK, 6MUA, 6PFD, 6RRR, 6RW, 6MI, 6SA, 6TKX, 6WGK, 6YZU, 7DET, 0GTU, XE1BC, ZL1J1, 1MR, 2KY, 2LB, 3CX, 3JA, 4AR, 4CK, 4FO, 4GA. (0645-0800 GMT.)

3.5 mc

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

'Phone: F8BO, 8KF, 9AJ, HH9BB, ON4EDB, 4JW, 4PLA, 4XF, PA0AA, 0AD, 0AG, 0AU, 0BD, 0BX, 0DW, 0FB, 0HL, 0ML, 0NG, 0NN, 0NP, 0PN, 0UH, 0SC. (June 17-27. Receiver: V55R.)



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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.

- CR9AN** A. P. Rosario, c/o C.T.T.C., Macao, S. China. CW on various frequencies in 7, 14 and 28 mc bands; 'phone on 28 mc. Operating 1400-1800 DST.
- E19Q** 16 Manor Street, Waterford, Eire. CW and 'phone on 7 mc with ECO control; operating 0600-1130 DST daily.
- EK1AD** P.O. Box 2, Tangier, Morocco. On every night with 'phone, 14192 and 14250 kc.
- F3NF** La Feuillette, Anney, Haute-Savoie, France. CW on 14020 and 14080 kc, operating 0600-0800, 1400-1500 and 2100-2359 DST.
- F8NC** Monnel City, Saint-Bauzille de Montmel par Sommieres, Gard, France. Operating most evenings with 7 mc CW and 'phone.
- F9CD** Avenue de la Gare, Cavallon, Vau, France. CW on 14 mc during periods 0700-0830, 1300-1400 and 1800-1930 DST.
- G2ADJ** 61b Raleigh Street, Walsall, Staffs. CW and 'phone on 7175 kc, 0600-0845 DST; 3620 kc, 1800-2359; and 14250 kc 1800-2359.
- G2ATM** 37 China Street, Bilwell, Nottingham. CW and 'phone on 1861 kc, 1800-2359 DST; on 3530, 7042, 7092, 14084, 14184 and 14296 kc, 0500-0700 GMT; reports on these frequencies outside U.K. only.
- G2BXP** 177 McKean Road, Oldbury, Birmingham. Operating VFO-controlled 'phone and CW on 7, 14 and 28 mc bands at irregular times. All SWL reports answered.
- G2DHW** 63 Lewisham Hill, London, S.E.13. CW on 14096 and 14196 kc, operating period 1800-2200 DST daily.
- G2FLX** 21 West Street, Wilton, Salisbury, Wilts. VFO-controlled CW in 1805-1835 kc band; all reports answered.
- G2FRZ** 52 Bannerman Avenue, Prestwich, Lancs. CW on 3518, 7012, 7036, 7059, 14024, 14072 and 14118 kc, operating 1800-0200 DST.
- G2NM** Tide Waters, Bosham, Sussex. SWL reports requested on signals heard on all bands 1-7-58 mc; operating periods irregular.
- G2QX** 19 Woodland Avenue, Luton, Beds. 'Phone on 1845 kc and CW on 7084 kc, from 1930 onwards daily.
- G3ACR** 38 Baker Street, Burton-on-Trent, Staffs. 'Phone and CW on 1740 and 1870 kc, 1300 DST and during evenings.
- G1A0B** 3 Alexandra Gardens, Portadown, Co. Armagh, N. Ireland. Operating daily on 3-5, 7 and 14 mc, from 0830, 1300 and 1800 DST, on CW and 'phone. Reports wanted from Vale of Leven, Dumbarton, and overseas. During months July/August will be operating G3A0B/A, when reports will be wanted from anywhere, to: 20 Millburn Road, Burnbrae, Alexandria, Dumbartonshire.
- G3ASC** Power's Radio, Albion Hill, Oswestry, Salop. On most evenings with VFO-controlled 14 mc 'phone; all reports welcomed.
- G3AXZ** 84 Great Portland Street, London, W.1. CW on 3563, 7054, 7126 and 14108 kc, operating 2300-2359 DST.
- G3BZC** 5 Elton Avenue, Manchester, 19. Reports from anywhere on 3-5, 7 and 14 mc CW; operating daily at irregular times, and every Saturday 2000-2359 DST.
- GM3BZP** 37 Craigie Road, Perth, Scotland. QRP CW on 3557 kc, operating evenings only; reports welcomed from anywhere.
- G3DI** 122 Hillmorton Road, Rusby, Warks. 'Phone on various frequencies in 14 and 28 mc bands, operating evenings from 1930-2359 DST, and during some afternoons.
- G3OF** 71 Sincote Avenue, Dunstable, Beds. CW on 14022, 14042, 28044 and 28084 kc, operating 1900-2100 on Mondays, Tuesdays, Wednesdays and Fridays; 1300-1400 and 1700-2100 on Thursdays; and on Sundays at various times when 28 mc band is open.
- G5AU** Box 68, GPO, Warrington, Lancs. Operating CW and 'phone on all bands 1-7-58 mc, during evenings and weekends.
- G5CM** Cottesmore, Gordon Avenue, Bognor Regis, Sussex. VFO-controlled 'phone and CW on 1-7 and 58 mc bands, during period 1600-2230 DST at week-ends.
- G5CU/P** Details as for G5AU above.
- G5GX** 39 Corby Park, North Ferriby, Hull, E. Yorks. Reports particularly wanted on 58608 kc 'phone and CW, operating 2030-2330 DST daily and beaming North 2200-2215 DST.
- G5WC** N. Vaus, Upper Flat, 101 Central Hill, Upper Norwood, London, S.E.19. Operating 'phone and CW on 14 mc band, 1800-2100 GMT; reports wanted from outside Europe only.
- G8VJ** 220 Station Road, Lower Standon, Beds. CW on 14152 and 14386 kc, 1800-2000 GMT, and 'phone on 28772 kc, 1700-1800 GMT, with extra operation at week-ends.
- I1HOE** Via Naviglo Grande 17, Brescia, Italy. CW and 'phone on 7, 14 and 28 mc bands, 1100-1700 DST on Sundays.
- I1KZ** Salita Providenza 14-23B, Genoa, Italy. 'Phone on 14, 28 and 56 mc, operating on Sundays during periods 1300-1400, 1600-1800, 2100-2200 and 0001-0200 DST.
- I1SM** 10 Mozzoni, Varese, Italy. 'Phone on 7032 kc, 1000-1200; 14390 and 14398 kc, 2100 onwards; 28120 and 28450 kc, 1400-1900; all times DST.
- LX1AJ** 71 Grand Rue, Differdange, Luxembourg. 'Phone on 7, 14, 28 and 56 mc, during periods 1400-1700 and 2000-2359 DST.
- OK1AW** Mestec Kralove 9, Czechoslovakia. CW and 'phone on 28 and 56 mc, operating Saturdays and Sundays 1300-2100 DST; frequencies 28000 and 28100, 29-30 mc and 56-60 mc; ICW also used on 5-mc band.
- OK1UY** Horni Cernosec, Masarykova 142, Czechoslovakia. VFO-controlled CW in 3500-3635 kc band, operating 2100-2359 DST.
- ON4AW** Meir 65, Antwerp, Belgium. CW and 'phone on 3-5, 7 and 14 mc, using frequencies 3570, 7010, 7075, 7120 and 7240 kc, doubled to 14 mc; operating after 2300 DST most evenings.
- ON4BW** Kasteelstr. 38, Antwerp, Belgium. CW and 'phone on 7, 14 and 28 mc; operating on 7 and 14 mc from 2200 DST onwards and on 28 mc during afternoons.
- OY3IGO** Thorshaven, Faerarie, Faroe Islands. ECO-controlled 14 mc CW, operating most evenings and Sunday afternoons. Cards are despatched once a month; station will be closed July 10-August 15.
- OZZN** Jagersborggade 15, Copenhagen, Denmark. Operating Mondays, Wednesdays and Saturdays with CW only on 3-5 mc, 2200-0030 DST; 14 mc, 1630-1830 or 1930-2300 DST and on Sundays 0900-1200 DST.
- PY6QM** P.O. Box 57, Aracaju, Brazil. 'Phone on various frequencies in 14 and 28 mc bands, operating during periods 1000-1200, 1730-1740 and 2200-0100 DST.
- VE1MS** Cole Harbour Road, R.R.1, Dartmouth, Halifax, Nova Scotia, Canada. CW on 3559 and 14096 kc, operating periods 1300-1400 and 2300-0200 DST.

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CONTEST FOR SWL'S

In connection with its various autumn activities, the First Class Operators' Club (an independent organisation having the support of the *Short Wave Magazine*, in which the Club's doings are regularly recorded) is running a Contest in which SWL's can take part.

It is essentially a member's CW QSO Party, to be held on 1-7 mc on November 1, 3.5 mc on November 8, and 7 mc on November 15, during the period 1700-1900 clock time on those dates.

All F.O.C. members will sign "FOC" when calling and working and also allot themselves a four-letter code-group for checking and identification purposes. SWL's taking part in the listener side of the Contest (open to all readers of the *Short Wave Listener*, and involving no obligations of any kind) can claim points on the following basis:

- (i) 4 points for logging a QSO between two F.O.C. members,
- (ii) 3 points for a QSO between an F.O.C. member and a non-member.
- (iii) 2 points for logging one side of an F.O.C. member's QSO with some other station not received by the SWL.
- (iv) 1 point for an F.O.C. member heard calling CQ.

Full points will be claimed under (i), (ii) and (iii) above for the logging of RST's passed in the QSO and the appropriate code-groups used by the member stations.

Under (iv), the RST given by the listener and the code-groups as received will count for the point.

The SWL section of this Contest is entirely separate from the main event, and a small prize is offered to the leading listener stations. A reminder respecting this Contest, which should be of great interest to all CW-minded SWL's, will appear in our issue dated November, due out on October 16.

THE READER CIRCLE

Another list appears in this issue of readers who, while being direct subscribers to us for the *Short Wave Listener*, have specifically requested that their QTH's be published. These are the conditions of appearance in "Reader Circle," the idea of the feature being to facilitate contact between readers.

★ ★ ★

DOROTHY HALL, W2IXY

SWL's in particular will be interested to hear of the forthcoming visit of Mrs. Dorothy Hall, W2IXY, to this country and the Continent during the period August 1 to September 4. She was a very well-known operator on the DX bands before the war and many readers will hold W2IXY's card—she never failed to QSL. W2IXY will be staying with friends at Orpington in Kent. Arrangements are in hand for an exclusive article by W2IXY to appear in the *Short Wave Listener*.

★ ★ ★

OBTAINING YOUR COPY

With the expected new stringencies in regard to paper supply, it is almost certain that there will be further difficulties with the distribution of our publications. The best way to make sure of your copy is to place a direct subscription order with us (16s. post free for 12 issues), which guarantees the posting of a copy direct to you each month on publication day, the third Thursday. Write the Circulation Manager, The Short Wave Magazine, Ltd., 49 Victoria Street, London, S.W.1.

★ ★ ★

NEW QSL BUREAU LIST

The latest list of the QSL Bureaux of the World, revised up to June, appeared on p.244 of the July issue. The first was published in December, 1946, and the new list contains more than 20 amendments to it. Even now, there are a number of countries not yet represented.

All times given in this article are GMT, except where stated. Add two hours for DBST.

DX broadcast

World-wide reception of Short Wave programmes

Readers will in future find the Programme Periods Section separated from the General Comments—in the style established in the last issue—and all schedules relating to any multiple radio network will be placed separately from the main narrative.

GENERAL COMMENTS

Australia

How many listeners, I wonder, have been able to hear three distinct programmes broadcast from Australia simultaneously, and all within forty kilocycles of each other? This was possible at 0615 on June 28: here are the details.

VLG6, Lyndhurst, 15240 kc. This station was putting over the usual Saturday sports commentaries. In particular, the writer listened from 0525 until 0635 to the second Rugby Union Test Match between Australia and New Zealand, played on the Sydney cricket ground. And what a thrilling game it was for the 30,000 spectators, with New Zealand running out the winners by 27 points to 14!

VLH5, Melbourne, 15230 kc. Various sporting commentaries were heard, including an exciting Australian Rugby League game in which Essendine beat Melbourne. The station identification was not given until 0730: it ran: "This is the A.B.C. Inter-State Service."

VLB6, Shepparton, 15200 kc. This really massive signal was being radiated to the United Kingdom in the first of the three daily transmissions, commencing with the "Waltzing Matilda" musical box recording at 0612.

Asia

When conditions are favourable for DX reception it is comparatively easy to log both the 19-metre band stations of the British Far Eastern Broadcasting Service in Singapore on 15275 kc and 15300 kc respectively, with the news in English at 1645. On June 1, after the news came the playing of "Land of Hope and Glory," then the next day's programme summary

before the close at 1700. It was stated that the first transmission for the day following would extend from 0600 to 0900, with an English news bulletin at 0830.

It has lately been announced that the B.B.C. has accepted an invitation from the British Government to take over control of this service. New high-powered transmitters will be built in Malaya, thus enabling Far Eastern listeners to hear London news broadcasts relayed under perfect conditions over the new telecommunications system to be established.

Some details are to hand of twelve of the more important Chinese short wave broadcasting stations; these will be found in tabulated form at the conclusion of this article.

Station YHN at Djokjakarta, Indonesia, on 11 mc has been well received recently with its daily English programme from 1630 to 1730. It can easily be identified by a clock slowly striking twelve at 1630, followed by the direction "This is the Voice of Free Indonesia calling from station YHN." J. M. Simpson (London), N.W.6 mentions the mellow clock chimes and the announcement: "2400 hours Indonesian Time" which can be heard at 1630. Details of the programme radiated are given in the Tabulated Schedules Section.

The outstanding broadcast by All-India Radio during June was the announcement of the agreed partition of India. On June 3, H.E. The Viceroy, Lord Louis Mountbatten, was heard at 1330, Pandit Nehru at 1350, Mr. Jinnah at 1410, and Sardar Baldev Singh at 1420.

Delhi stations relaying these speeches, all of which were in English, were VUD5 19 m, VUD11 16 m and a third transmitter in the 13 m band.

Reception of Radio Saigon on 11780 kc has not been too good of late, but on June

14 at 1515, at the conclusion of the news in French, I heard the words: "Ici Radio Saigon," this being followed by a recording of bell music, French announcements, the Marseillaise and close-down.

The Radio S.E.A.C. special broadcast from Colombo, Ceylon, to the United Kingdom is still being heard on Sundays from 1630 to 1830. Frequencies now in use are 15120 kc and 17770 kc.

The writer will be interested to hear if

Monthly Comment by

R. H. GREENLAND, B.Sc.

any reader has logged the Azerbaijan (Iran) station in Tabriz, operating on 12180 kc each evening. Native music can be heard at 1655, clock chimes at 1700, then the station direction: "Azerbaijan, Tabriz" and news in Persian. More native music is followed by a talk (in dialect) at 1733, then a final session of Western dance music before the playing of the national air and close-down at 1800.

Africa

By far the most interesting station of the month has been the erstwhile elusive ETA,

operating from Addis Ababa, capital of the Empire of Ethiopia. Who like the writer can remember hearing the poignant appeals in English made by an Abyssinian princess over ETB before the Italian invasion more than ten years ago? Now you can hear a broadcast from Ethiopia under peaceful conditions if you listen just before 1800 on 15060 kc. Here is what you may expect to receive: Western dance music from 1745 until 1900, then native

music, possibly until 1955. On June 24, for instance, "The Bells of St. Mary's" at 1800 was followed by "The Wearing of the Green." "I'm Headin' for the Last Round Up" is heard quite frequently. The closing announcement in Arabic precedes the terse statement in English: "This is Radio Addis Ababa, Ethiopia. Radio Addis Ababa, Ethiopia, will now sign off. Good Night."

It is understood that ETA uses a power of 7 kW in conjunction with a rhombic aerial system.

Some months ago I gave some details of

PROGRAMME PERIODS

I. DBST 0700-0830.

- 0700 YSU Radio Mil Cincuenta, San Salvador, El Salvador. 6250 kc (48-00 m). Pianoforte music (Beethoven's Moonlight Sonata). Call given frequently in Spanish. Close down at 0715.
- 0715 XEWW Mexico City, 9500 kc (31-58 m). Latin-American dance music.
- 0715 VLG6 Lyndhurst, Australia. 15240 kc (19-68 m).
- Daily "Magazine of the Week," by Harry Reedy (Mondays), in the daily North American and South African Service.
- 0800 VLG6 Lyndhurst, Australia. 15240 kc (19-68 m). Sports Broadcast, including running commentaries of horse racing and football matches.

II. DBST 1300-1400.

- 1300 WNBI New York. 17780 kc (16-87 m). The (Monday) March of Science.
- 1345 LKJ Frederikstad, Norway. 9540 kc (Sunday) (31-45 m). Orchestral Concert.

III. DBST 1600-1800.

- 1600 WLWL1 Cincinnati, Ohio. 17955 kc (16-71 m). (Sunday) National Broadcasting Company Symphony Orchestra.
- 1600 DTYC Munich, Germany. 5302 kc (56-58 m). M, W, F. A quarter-hour programme in English from the Office of Military Government in the United States Zone of Germany.
- 1700 WOOW New York. 21500 kc (13-95 m). American News Letter.
- 1730 CKCX Sackville, New Brunswick, Canada. 15190 kc (19-75 m). Commentaries from United Nations.

IV. DBST 1830-2030.

- 1830 WNRX New York. 21610 kc (13-88 m). Colombia Broadcasting System World News.
- 1900 YHN Djokjakarta, Java. 11000 kc (27-27 m). Second News bulletin in English.
- 1942 SBP Motala, Sweden. 11705 kc (25-63 m). The Swedish Broadcasting Corporation presents the News in English.
- 2010 PHI Huizen, Holland. 11730 kc (25-57 m). Topical talk in English.
- 2015 VQ7LO Nairobi, Kenya. 4860 kc (61-73 m). Local news and weather forecast, followed by a topical talk.
- 2020 HVJ Vatlean City. 5950 kc (50-37 m). Religious talk in English.

V. DBST 2130-2330.

- 2130 Cape Town, South Africa. 5882 kc (51-00 m). Orchestral music.
- 2145 ETA Addis Ababa, Ethiopia. 15060 kc (19-92 m). Dance music. English announcement at 2200.
- 2200 CKNC Sackville, New Brunswick. 17820 kc (16-84 m). Weekly Sports Review by Tom Derbyshire.
- 2200 WBC New York. 15825 kc (18-95 m). (Sunday) "Bringing Christ to the Nation"—A Radio Crusade by Dr. Maier of St. Louis.
- 2230 Radio Spandau, Berlin, Germany. 6710 kc (44-71 m). Forces Request Programme of Music.
- 2245 CKCS Sackville, New Brunswick, Canada. 15320 kc (19-58 m). Tales of Two Cities, both having the same name, one in Canada, the other in the United Kingdom.
- 2315 WCBX New York. 15270 kc (19-65 m). (Saturday) Radio Stamp Club.

the Northern Rhodesia short wave broadcasting station at Lusaka. Now there is news of an additional frequency in use, namely 9705 kc. With a SW8 transmitter using a power of 2½ kilowatts, the broadcasts on this channel are intended to serve Nyasaland and Northern and Southern Rhodesia. The interval signal is a tattoo of drum beats, and directions are made in English. The daily schedule is 1530-1700 (1530-1630 on Sundays).

Other frequencies for local use are 7285 kc and 3914 kc. The broadcasts on 9705 kc are not well received here because of severe interference caused by Mittel-deutscher Rundfunk.

VQ7LO, Nairobi, continues to provide excellent fare on its latest frequency, namely 4865 kc. On June 12, at 2020 we listened with fascination to the story of the man with a cast-iron stomach, who could swallow tintsacks and bits of broken gramophone records without apparent injury. This talk was followed by something more soothing in character, the playing of Beethoven's Symphony No. 1 in C Major. On June 14, VQ7LO appeared to be operating on 4885 kc.

CR7BU, Lourenço Marques, 4925 kc, has again been noted with an excellent English Variety programme on Saturdays at 1900.

South America

Peru and Ecuador are again in the news. Concerning the former, here are some details of stations recently logged.

OAX4G, Radio Lima de Peru, 6420 kc. Heard with call in Spanish at 0400, followed by news in that language and sponsored programmes of dance music from the "Teatro Nacional." Sometimes gives the direction: Radio Lima, en Cadena Azul. Closes with the Ted Lewis "Good Night Melody" at 0447.

OAX4H, Radio Lima, 6368 kc. Logged on June 3 with call at 0445, preceding Latin-American dance numbers; call repeated at 0457, then "Buenos Noches" and signed off with a lengthy fox-trot.

OAX4Q, Radio Victoria, Lima, 6010 kc. Logged on June 11 at 0350 with the call :

Oh-Ah-Ekis-Quatro-Ekis Ee Oh-Ah-Ekis-Quatro-Koo, Radio Victoria de Peru.

OAX4J, Radio Colonial, Lima. 9340 kc. Heard on June 27 at 0330 with a running commentary in Spanish on a pelota game. Call given twice at 0345 : OAX4JyOAX4J. The following morning it was logged with a rumba at 0450 and closed down shortly after 0500.

In Ecuador, HCJB, Quito, has been logged on many occasions during the past month, and on several channels. In the first place, a new frequency has been in use between 0400 and 0500 (midnight in Ecuador); this is 6365 kc. Replies in English to listeners' letters have been given between 0330 and 0345, both on the new frequency and on 12455 kc. The Voice of the Andes has been heard on several mornings on the unusually low frequency of 4107 kc with programmes for home listeners in Spanish. The slogan has been noted at the termination around 0500, also the direction: "Radio Nacional de Ecuador."

HC2ET, Guayaquil, 4715 kc, is often strong at 0300. It always closes down at 0330 after call in Spanish, the direction "Radio Panamericana," a series of ascending and descending chimes, and a March.

Radio Manta, HC4EB, 6870 kc, is most regular in appearance between 0300 and 0400 when it closes. A whistle appears to be used before certain announcements.

HC2RL, Guayaquil, 6635 kc, was logged on June 11 at 0340 with the Toreador Song, and other operatic recordings were a feature until 0415 when the closure was applied, after the playing of the Ecuadorian National Anthem and following station direction. A verification card recently received from Dr. Roberto Levi, Station Director; states that HC2RL, Quinta Piedad, broadcasts twice each week : on Sundays from 2245 to 0045 and on Wednesdays from 0200 to 0400. The full address is : Estacion Radiodifusora HC2RL, "Quinta Piedad" de Maria Piedad Castillo de Levi, Calle Tomás Martínez 307, Guayaquil, Ecuador—or Post Office Box No. 759 in that city.

Bolivia is a most elusive country to log, though there are supposed to be a number of short wave broadcasting stations in existence. On several occasions around 0340 I have received a fair transmission on 5860 kc. There were man and woman announcers, and all the musical programmes consisted of tangos and fox-trots. The chimes of "Big Ben" were given at 0400 when the station closed down, and at this time I heard the slogan "Radio



Cyril prefers the short waves.

International," which is that used by CP22 in Potosi.

In Venezuela, YVIRL, Maracaibo, on 4810 kc, closes down at 0504; and a new one has appeared on 5025 kc, closing at 0405 or even forty minutes earlier. The direction appears to be: Radio Nacional de Venezuela, with La Guaira as the focal point. Perhaps it is YV5RV on a new frequency.

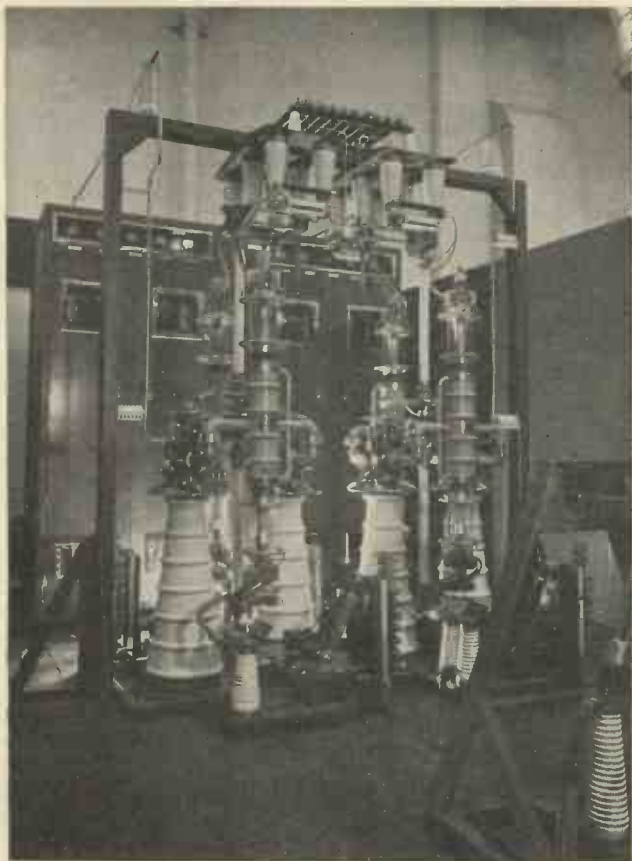
Colombia has numerous stations to entertain you. The writer has noted HJEX, Radio Pacifico, in Cali, 4865 kc, with call at 0405, and an S9 signal from HJCO, Bogota, 4955 kc, at 0415 when four vibraphone notes preceded the direction: "Radio Nacional de Bogota en Colombia" and the playing of the National Hymn.

My final comment on broadcasting stations in the South American continent is that Radio Dienst Suriname, Paramaribo, can still be heard on 5835 kc. My log book entry for 0125 on June 13 indicates that musical items were then being recorded. Then came the announcement in Dutch: "Damen en Herren, goeden nacht en wel te rusten" and the broadcast concluded with the playing of the Dutch National Anthem.

Central America and West Indies

A new Nicaragua station operating on 8350 kc announcing as: "Radio Managua en Nicaragua" appears to have adopted the call letters YNCX1. A varied assortment of music is broadcast between 0300 and 0400, when, after two gong strokes and a direction in Spanish, the station closes down.

I have received from YNQ a verification card depicting on the reverse side an aerial view of Managua, the capital. YNQ



The modulator bay for one of Radio Australia's 100 kW transmitters at Shepparton (VLA. VLB, VLC, 120 miles from Melbourne). Note the long insulator paths that have to be provided against peak voltage flash-over.

operates daily on 6950 kc, and the address is: "Senor Alberto Solis, YNQ 'La Voz de la Victoria,' Managua, Nicaragua."

My best Nicaragua catch was YNDG on 7660 kc at 0225 on June 7 during the broadcasting of a sponsored variety programme. News in Spanish was read from 0225 to 0240, then came a Sousa March and more dance numbers. Vibraphone notes preceded the playing of: "It's Time to Say Good Night" at 0300, then came a Spanish direction and a surprising announcement in English: "Your station YNDG in Léon, Nicaragua, is bringing to a close its commercial programme for tonight. Good Night, everybody!"

The same morning, YNLAT in Granada on 7615 kc was logged with the fox-trot:

"Oh! Johnny!" at 0246, and closed down shortly before 0300.

Two stations in the neighbouring republic of Honduras have been prominent. First, HRN, Tegucigalpa, 5875 kc, can be heard every day with news in Spanish at 0250, to be followed by a programme of typical Latin-America music. The closure is applied promptly at 0400 with the playing of the Ted Lewis Good Night Melody.

On 6350 kc, HRP1 has been excellent on occasions around 0300. At this hour a gong precedes the call: Atchay-Erray-Pay-Oono, the frequency, and location—San Pedro Sula, Honduras, HRP1 signs off at 0330 with Sousa's march "Stars and Stripes."

In Salvador, YSO, La Voz de la Democracia, on 7315 kc, was noted on June 7 at 0330. A series of vibraphone notes preceded the call and the station closed at 0400.

One of Guatemala's newest transmitters has also been logged, namely TGRB, 6860 kc, in Guatemala City. This was on June 21, when from 0405 onwards there was a continuous reading of numbers, presumably of sweep-stake numbers.

The station's slogan "La Voz de la Guardia Civil" was well heard just before the close at 0450. During the broadcast there was a mention of "La Voz de Mazatenango, en la Republica de Guatemala." This is reported to be the slogan of TGLB on 6905 kc.

Curaçao is perhaps the best of West Indians if you are up early enough to log it. On June 13 I recorded PJCI on 7250 kc with the playing of God Save The King! The station call: "Curaçoesche Radio

TABULATED SCHEDULES

I. Chinese Stations

Call sign	Location	Freq. kc	Power watts	Schedules
XGOA	Chungking	9720	1000	2330-0130 : 0430-0530 : 0900-1600
XGOA	Chungking	11835	1000	2330-0130 : 0430-0530 : 0900-1600
XORA	Shanghai	11695	5000	2345-0200 : 0800-1500
XRRR	Peiping	6090	10000	0030-0130 : 1100-1415
XAPU	Taiwan	9680	3000	0355-0620 : 0900-1455
(Formosa)				
XTPA	Canton	11650	1000	0400-0630 : 1000-1430
XLRA	Hankow	6054	1000	0430-0530 : 1030-1445
XLRA	Hankow	12500	1000	0430-0530 : 1030-1445
XPRA	Hankow	6404	5000	0500-1000 : 1130-1630
XPMSA	Kweiyang	7007	10000	2355-0030 : 0530-0700 : 1030-1430
XGUB	Changsha	9750	1000	2400-0200 : 0530-0700 : 1130-1400
XUPB	Amoy	8348	500	0900-1500
XGOL	Soochow	10000	200	0900-1500
XOPD	Hangchow	9552	400	0030-0330 : 0530-0630 : 1000-1430

II. YHN, The Voice of Free Indonesia, Djokjakarta, Java. 11000 kc.

1630	Knightsbridge March, Station announcements.
1633	Music.
1635	News in English.
1643	Music.
1645	Commentary : e.g. "Indonesian Conception of One World."
1650	Music.
1700	News in English. Summary and in Detail.
1712	Dance Music.
1715	Reading of a Magazine Article : e.g. "Indonesian Trades Union Conference Report."
1720	Music.
1727	"It's Time to say Good-Night." Station direction.
1730	Clock Chimes and Close Down.

III. Swiss Broadcasting Corporation.

Station	Freq. kc	Metres
HER3	6165	48-66
HER4	9535	31-46
HER5	11865	25-28
HER6	15305	19-60
HER7	17784	16-87
HEU5	11815	25-39
HEU6	15315	19-59

Vereeniging, Willemstad, Curaçao" was followed by the news in Dutch, and marimba music was presented at 0210. Final directions in Dutch were made at 0225, and PJCI closed down with the playing of: "William of Nassau."

Fifteen minutes before this, HIT, El Hit del Aire, in Trujillo City, was logged with call and Dominican National Anthem before closing at 0215.

North America

In Newfoundland, VONH, 5970 kc, is best heard around 0240, when a weather forecast is read just before the close. The announcement states that the station will operate on the morrow from 10 a.m. (local time), and gives the time then as: "Twelve minutes past eleven o'clock."

CORRESPONDENCE

We welcome readers' correspondence on the subject of short wave broadcast reception. Address R. H. Greenland, B.Sc., c/o "The Short Wave Listener," 49 Victoria Street, S.W.1.

TABULATED SCHEDULES

IV. Canadian Short Wave Broadcasting Stations.

Location	Callsign	Freq. kc	Metres	Power watts
Calgary, Alberta	CFVP	6030	49-75	100
Edmonton, Alberta	VE9AI	6005	49-96	200
Edmonton, Alberta	VE9AI	9540	31-45	200
Halifax, Nova Scotia	CHNX	6130	48-94	500
Vercheres, Quebec	CFCX	6005	49-96	75
Vercheres, Quebec	CBFW	6090	49-26	200
Vercheres, Quebec	CBFR	9520	31-51	7500
Vercheres, Quebec	CBFX	9610	31-22	7500
Vercheres, Quebec	CBFO	9630	31-15	7500
Vercheres, Quebec	CBFY	11705	25-63	7500
Vercheres, Quebec	CBFL	11720	25-60	7500
Vercheres, Quebec	CBFA	11760	25-51	7500
Vercheres, Quebec	CB LX	15090	19-88	7500
Vercheres, Quebec	CBFZ	15190	19-75	7500
Sackville, New Brunswick	CKRZ	6060	49-50	50000
Sackville, New Brunswick	CKOB	6090	49-26	50000
Sackville, New Brunswick	CHAC	6160	48-70	50000
Sackville, New Brunswick	CHLS	9610	31-22	50000
Sackville, New Brunswick	CKLO	9630	31-15	50000
Sackville, New Brunswick	CHMD	9640	31-12	50000
Sackville, New Brunswick	CKXA	11705	25-63	50000
Sackville, New Brunswick	CHOL	11720	25-60	50000
Sackville, New Brunswick	CKRA	11760	25-51	50000
Sackville, New Brunswick	CKEX	11900	25-21	50000
Sackville, New Brunswick	CKLX	15090	19-88	50000
Sackville, New Brunswick	CKCX	15190	19-75	50000
Sackville, New Brunswick	CKCS	15320	19-58	50000
Sackville, New Brunswick	CKNC	17820	16-84	50000
Sackville, New Brunswick	CKRP	21600	13-89	50000
Sackville, New Brunswick	CHLA	21710	13-82	50000
Sydney, Nova Scotia	CJ CX	6010	49-92	1000
Toronto, Ontario	CFRX	6070	49-42	1000
Vancouver, Br. Columbia	CKFX	6080	49-34	100
Vancouver, Br. Columbia	CBRX	6160	48-70	150
Winnipeg, Manitoba	CKRO	6150	48-78	2000
Winnipeg, Manitoba	CKRX	11720	25-60	2000

The sentence: "The Broadcasting Corporation of Newfoundland bids you Good-night" is followed at 0242 by the playing of God Save The King.

Mr. T. C. Fairley of the Canadian Broadcasting Corporation has sent us a detailed list of all the Canadian short wave transmitters at present in existence, and these are given in the Tabulated Schedules above.

Two of our readers report reception of that elusive United States broadcaster KRHO, 17800 kc, in Hawaii, just before it closed down at 0600. Both D. O. French (Norwich) and I. E. Alfrey (Chiswick, W.4) are to be congratulated, for this is no mean achievement.

On June 1, at 0539, the Swedish Broadcasting Corporation gave a special programme for members of the Australian "DX Radio Club." The broadcast was well received here both on SBP (11705 kc) and on SBT (15155 kc), and included a short history of the DX Club, a brief account of broadcasting in Sweden, and a highly entertaining description of the country of Sweden, written by H.R.H. Prince William. He mentioned that the Swedes are a phlegmatic people, full of curiosity. He referred to the rich province of Scania in the south, with its farmhouses and sugar-beet mills.

Further north there are highlands and lakes, and in the central plain of Svealand there stands Stockholm, amid more smiling country and red-painted timber houses. Finally, in the extreme north, there is the wild rugged region of Norrland, the district of the great saw-mills. Here, the nomad Lapps and the reindeer are to be found in the wilder parts.

Czechoslovakia broadcasts catwo programmes in English daily from Prague, namely:

- (1) Over OLR3A on 9550 kc (31-42 m) from 1945-2000.
 (2) Over OLR2A on 6010 kc (49-92 m) from 2145-2200.

From Poland, too, we have received an illustrated booklet entitled: "Radio i Swiat," giving programme details in Polish only. Though the pamphlet indicates that Warsaw III operates on 49-96 m, you will find that this channel is not in use. The daily broadcast in English is heard on 6100 kc, 49-18 m, from 2050 to

CALLS HEARD

Readers are invited to send us their lists of DX broadcast stations heard; the logs should be set out in the form shown on p. 283 of this issue.

2110. A musical box interval signal precedes the transmission.

Again, the Swiss Broadcasting Corporation has an elaborate up-to-date short wave service, with studios and offices in Berne, and five 100 kW transmitters located near Schwarzenburg, a picturesque and prosperous village in the foothills of the Bernese Oberland. "The Swiss Curiosity Shop" is an English programme feature offering you a glimpse of daily life and folklore in Switzerland. (HER5, 11865 kc, 2.28 m—Daily, 2300).

Further details of the transmitters in general service are given in the Tabulated Schedules.

In the United States Zone of Germany, a station operated by the Office of Military Government can be heard on Mondays, Wednesdays and Fridays at 1000 and 1400. This is DTYC, 5302 kc, 56.58 m (announced) in Munich. On June 30, the writer listened to a talk on Germany's educational requirements. This was at 1400.

As we go to press, welcome letters have been received from some of our regular correspondents.

P. W. Muxlow (Grantham) has logged CR7BU on 4925 kc at 1900, with ascending and descending gong notes and the

direction: "Radio Mozambique, Lourenço Marques for Happy Listening in the 60 and 85 metre bands." He thinks the Freetown, Sierra Leone, station on 8125 kc has call-letters ZHV5. Can anyone confirm this?

D. O. French (Norwich) mentions ETA, 15075 kc. The address is: W. H. Erholm, Technical Adviser, Ministry of Posts, Telephones and Telegraphs, Addis Ababa, Ethiopia. Further, CR8AA on 9248 kc (32.47 m) operates from 0930 to 1430, with programmes in Chinese and Portuguese, and an English news at 1250.

The address is: Station CR8AA, Post Office Buildings, Macao, Portuguese China.

R. A. Williamson (Mapperley, Nottingham) has logged a new one on 6710 kc, and from which he has heard daily transmissions from 1900 for one or two hours. I surmise that this is Radio Spandau, a short wave station operated by a British Army Welfare Unit in the British sector of Berlin. Request numbers are broadcast for Services personnel until 2130, then there is half-an-hour of dance music relayed from the British Forces Network in Hamburg, and the station closes down with the National Anthem at 2200.

ELECTRADIX BARGAINS

Here is a small selection from the varied stocks which we can offer you.

Pay us a visit

HEADPHONES. low resistance headphones, ex-G.P.O. with headband and cord for circuit testing and house telephones, bakelite cases and caps, 10/- per pair.

TELEPHONE PARTS for Home Construction. Magnet bells, 5/- . Switch hook and contact, 2/6. Hand magnet generator, 10/- . Transformer and Condenser, 5/- . Bracket Mike, 10/- . Walnut box fitted terminals and connections, 5/6.

COIL ASSEMBLIES. S/W Midget with trimmer on paxolin base, 3/6. Medium and long range midget coil, 6/-, matched pair, 10/-.

SPARK COILS. G.P.O. 1/2" coils, operate from 6/12 volt accumulator, 25/-, spark gap, 3/6.

CABINETS. Walnut cabinets ex-G.P.O., 8" x 6" x 3", fitted terminal coil, 5/-.

ALL METAL CASES, 9" x 9" x 8", with lid and two fasteners and loops for carrying strap, 12/6. Amplifier Covers, metal, 17" x 7" x 7", with perforated ventilation slots at top and sides, 7/6, postage 1/6 extra.

POLE STAY STRAINERS for Aerial Masts, Transmitting and Television, 1/6 ea., postage 6d.

INSULATORS. Swan neck insulators, for gutter fixing, 1/6 each.

MICROPHONES. The Lesdix No. 11a hand mike in moulded bakelite case, carbon inset, 8/6. Transformer for same, 4/6.

PERSPEC Squares, 5 1/2" x 5 1/2", drilled hole in each corner, 2/6 ea.

D.C. MOTORS: 1/100th h.p., shunt protected, 2,000 r.p.m., with 20/1 reduction gear, 35/-, on C.I. base.

TWIN INDOOR BELL WIRE, 19/6 per 100 yards; plastic covered 27/6 per 100 yards.



MICROPHONE INSETS. (G.P.O.) metal clad, 2 1/2" dia., can be used as a home broadcaster and for amplification and detection of sound, 2/6 each. Special high ratio transformer 4/6.

SWITCHES. Dewar key switches, new ex-G.P.O. 8 pole C.O. flush fitting 5/- . Yaxley 8 pole 1-way, 3/6; 3 pole 3-way, 3/6. D.P. C.O. toggle switches, 3/3. 8-way Lucas switches, 3/6.



RELAYS for all purposes. Send for special Leaflet "S.L." 2,000 ohms, from 5/- each. New surplus G.P.O. stocks.

CONDENSERS. Fixed 2 mfd. ex-G.P.O. 250 volt, 1/6 each, 15/- dox. 4 mfd. 1,000 volts, 8/- . 8 mfd. 1,000 volts, 10/6.

METERS. D.C. moving coil micro ammeter 0-500, 2" dia., flush panel type 500 ohms resistance, 60/- . D.C. moving coil milliammeter 0-1 ma, 2 1/2" dia., flush panel, 55/- . Ammeter to match reading 2-5 amp. by Elliott, 55/- . Test prods, black and red with leads, 5/9 per pair.

MOTORS, new 230 volt A.C./D.C. Sewing Machine Motors, 1/20 h.p. high speed, with bracket and belt, ball bearings, square construction, totally enclosed, adjustable Brush Gear, 44/10/- . 1/50 h.p. as above, less bracket, 75/- . 1/27th h.p. 230 volt A.C./D.C. motors, 4,000 r.p.m., round construction with 4-hole base, 75/-.

When ordering, please mention the "S.W.L."

ELECTRADIX RADIOS

214 QUEENSTOWN RD., LONDON, S.W.8.
Telephone MACaulay 2159

DX BROADCAST—CALLS HEARD

P. W. Muxlow, 40 Oxford Street, Grantham, Lincs.

1.	June 20	2200	CE1180	Santiago, Chile	12000	kc, S7
2.	June 20	2100	PRL7	Rio de Janeiro, Brazil	9720	kc, S8
3.	June 15	2030	ZHV3	Freetown, Sierra Leone	8125	kc, S5
4.	June 21	2015	ZAA	Tirana, Albania	7852	kc, S7
5.	June 22	1700	B.F.E.B.S.	Singapore, Malaya	15300	kc, S7
6.	June 24	1900	CR7BU	Lourenço Marques	4925	kc, S6

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

1.	June 3	0605	KCBF	Delano, California	11810	kc, S5
2.	June 5	2029	ZAA	Tirana, Albania	7852	kc, S7
3.	June 6	2030	SUX	Cairo, Egypt	7865	kc, S6
4.	June 9	0700		Los Angeles, Cal.	15150	kc, S3
5.	June 14	0700	VLA6	Shepparton	15200	kc, S9
6.	June 14	0705	VLC9	Shepparton	17840	kc, S3
7.	June 14	0707	VLG6	Lyndhurst	15230	kc, S7
8.	June 15	1545	VLG10	Lyndhurst	11760	kc, S6
9.	June 15	1555	VLB4	Shepparton	11810	kc, S6
10.	June 17	1700	YHN	Djakakarta, Java	11000	kc, S6
11.	June 17	2035	OTC5	Leopoldville	17770	kc, S9
12.	June 17	2100	CNR3	Rabat	9080	kc, S5
13.	June 18	2100		Cape Town	5880	kc, S3
4.	June 19	0600		A.F.N., Munich	6080	kc, S7
15.	June 19	2030	CKCS	Sackville	15320	kc, S8
16.	June 21	2050	FZI	Brazzaville	11791	kc, S7
17.	June 22	0945	VLB8	Shepparton	21600	kc, S8
18.	June 22	2055	FZI	Brazzaville	9440	kc, S8
19.	June 24	0600	COHI	Santa Clara, Cuba	6450	kc, S6
20.	June 24	1630	PMA	Batavia	19350	kc, S5
21.	June 24	1645		Singapore	6770	kc, S3
22.	June 24	1655		Singapore	15300	kc, S6
23.	June 24	1700		Singapore	15275	kc, S6
24.	June 25	1330	CNR	Rabat	16670	kc, S6

Rx. Pye BS6 and Eddystone 504. Aerial: Indoor, 12 ft.

K. V. Palmer, Lamorna, Graystone Road, Tankerton, Kent.

1.	June 21	1255	RW96	Moscow	15270	kc, S9
2.	June 21	1300	PCJ	Huizen	6026	kc, S9
3.	June 21	1938	HER5	Schwarzenburg	11865	kc, S9 plus
4.	June 29	1815	HVJ	Vatican City	9660	kc, S9
5.	June 29	2027	ZAA	Tirana	7852	kc, S2-3
6.	June 29	2028	SUX	Cairo	7863	kc, S5-6
7.	June 29	2030	TAP	Ankara	9465	kc, S9 plus
8.	June 29	2033	OTC2	Leopoldville	9748	kc, S9
9.	June 29	2034	OTC5	Leopoldville	17770	kc, S7
10.	June 29	2036		Radio Cyrenaica	15320	kc, S9
11.	June 29	2039	CKCS	Sackville	15318	kc, S9
12.	June 29	2043	CKNC	Sackville	17820	kc, S9
13.	June 29	2049		Radio Andorra	5996	kc, S9 plus
14.	June 29	2050		A.F.N., Munich	6080	kc, S9 plus
15.	June 29	2053	HER3	Schwarzenburg	6165	kc, S9 plus
16.	June 29	2105	CNR3	Rabat	9080	kc, S9
17.	June 29	2109		Mitteldeutscher Rundfunk	9690	kc, S9 plus
18.	June 29	2310	PRL7	Rio de Janeiro	9720	kc, S8
19.	June 29	2045	FZI	Brazzaville	11970	kc, S7

Rx. Sobell 615 SH6. Aerial: Indoor, 45 ft.

C. W. Brown, 279 Leigham Court Road, Streatham, S.W.16.

1.	June 23	2200	ZYC8	Radio Tamoio, Rio de Janeiro	9610	kc, S8
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J. M. Simpson, 32 Aberdare Gardens, West Hampstead, N.W.6.

1.	June 8	1440	PMA	Batavia, Java	14945	kc, S9
2.	June 8	1450	PMA	Batavia, Java	19350	kc, S8
3.	June 9	2115	LR5	Buenos Aires, Argentina	9315	kc, S4
4.	June 9	2120	CNR3	Rabat, Morocco	9080	kc, S8
5.	June 9	2125	FXE	Beirut, Lebanon	8036	kc, S5
6.	June 9	2215	ZPA5	Encarnacion, Paraguay	11945	kc, S6
7.	June 9	2230	LRR	Rosario, Argentina	11900	kc, S5
8.	June 10	2115		Alicante, Spain	7950	kc, S7
9.	June 10	2230	HCJB	Quito, Ecuador	12455	kc, S7
10.	June 10	2245	HCJB	Quito, Ecuador	9960	kc, S4
11.	June 10	2250	PSH	Rio de Janeiro, Brazil	10220	kc, S5
12.	June 10	2255	LRX	Buenos Aires, Argentina	9660	kc, S8
13.	June 11	0545	CHOL	Sackville, Canada	11720	kc, S8
14.	June 11	0600	CHLS	Sackville, Canada	9610	kc, S8
15.	June 12	2330	ZFY	Georgetown, Br. Guiana	6000	kc, S7

Rx. RAP SH6. L/S. Aerial: "L" 50 ft. long, 6ft. high, outdoor, N/S direction.

THE READER CIRCLE

The object of this feature is to facilitate personal contact between readers. All addresses listed are published only at the request of the reader concerned. For the present, entry in this column is strictly confined to those readers who are obtaining the "Short Wave Listener" on direct subscription from us.

NEW
QTH'S

When applying for your subscription, please state clearly whether you wish your name and address to be entered in the Reader Circle.

Publication will take place in the order in which requests are received, up to the limit of the space allowance which will not normally exceed one page each month.

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H. W. Holmes, 24 Castle Lane, Bedford; B. M. Scudamore, 52 Manton Drive, Luton.

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A. A. Boulton, 20 Cranbourne Terrace, Stockton-on-Tees.

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Scotland:

W. J. Spark, 2 West Forth Street, Cellardyke, Anstruther, Fife; R. L. Holyoak, 491 Clarkston Road, Muircend, Glasgow, S.4.

Shropshire :

K. M. Wicker, 1 Raby Cottages, Sheinton Road, Cressage, Nr. Shrewsbury.

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NOTE TO NEW READERS

Since the *Short Wave Listener* first appeared in November of last year, following are some of the practical articles—as distinct from the regular news features “Have You Heard?” and “DX Broadcast”—which we have published:

- “Use & Abuse of QSL Cards” (Nov. 1946).
- “More About Morse” (November).
- “Amateur Use of Codes” (November).
- “Try These Circuits” (December).
- “Callsigns & The Call-Book” (December).
- “System in Your Listening” (January 1947).
- “Band-Spread for Beginners” (January).
- “Amateur Band Frequency Meter” (January).
- “Band Padding” (February).
- “Circuit Ideas” (February).
- “Simple Valve Voltmeter” (February).
- “Noise Suppression” (February).
- “Improving Receiver Performance” (March/April).
- “Simple Autodyne Converter” (March/April).
- “Travel of a DX Wave” (March/April).
- “Multi-Purpose Heater Transformer” (May).
- “More About Band-Spread” (May).
- “Practical Application of Ionospheric Theory” (May).
- “Self-Calibrating Meter Shunt” (June).
- “The 1-V-1 Receiver” (July).
- “Obtaining Additional LT” (July).

With the exception of No. 1, November 1946, a few back numbers of these issues are available, at 1s. 4d. each post free, from us at 49 Victoria Street, London, S.W.1. March/April was a combined issue covering those two months, due to the fuel cuts stopping periodical production.

COMMUNICATIONS RECEIVERS

We always have a varied stock of good receivers and we list below some ex-Govt. models of which we have fifty or more in stock at the time of preparing this ad. Less plentifully we have many more and some good “Senders.” Why not call and see our selection or failnax this write for our regular lists.

R. 107. 9 valve super Army Set:—1.2-17.5 mc/s bandsread; Audio filter; built-in speaker and power pack for mains or 12 volt. £14 10 0.

R208. 6 valve short wave Army set:—10-60 mc/s built-in speaker and power pack for mains or 6 volts. £12 10 0.

R.103A. 7 valve short wave set for phones 1.7-7.5 mc/s power pack for mains or 6 volt. £6 10 0.

R.109. Short wave receiver for 6 volt car or ordinary H.T. and L.T. batteries, 1.7-7.5 mc/s built-in speaker. £5 5 0.

18 (Walkie-Talkie) this is an excellent battery Rx/Tx for 6-9 mc/s. £4 10 0.

M.C.R.I. Midget battery set for 20-3000 metres, 100 kc/s-15 mc/s complete with special phones. £6. Power pack for mains operation £3.

To pay for insurance, carriage and packing, non-callers must send extra as follows:—R103A, R109, 18, 10/- extra. R107 and R208 £2, but £1 will be refunded on return of packing case. M.C.R.I., 5/-.

LITERATURE. Circuits, wiring diagrams, notes, etc.:—R208—2/3. R1155—2/3. 38—1/6. 18—2/3. R107—2/3. R108—2/3. MCRI—2/9. 58 (Canadian Walkie-Talkie) 3/6. R103A—1/6. R1116—2/3. “Demobbed Valves”—2/6. “Alignment Peaks” e.g. I.F. frequencies of domestic receivers, 7/6. Sender 12—2/3. Other circuits in preparation.

BULL'S “EX-GOVERNMENT” DEPOT

42-46 Windmill Hill, Ruislip Manor, Middlesex

VALLANCE'S SPECIAL BARGAIN OFFER

MINIATURE COMMUNICATION RECEIVERS

Originally made for the Government, these receivers are constructed of the very best materials. All are absolutely new and unused, and guaranteed to be in perfect working order.

The complete equipment consists of the following:—

1. A five-valve superhet designed for C.W. or R.T. operation; uses four 1T4 and one 1R5 valve, size $9\frac{1}{2}'' \times 3\frac{1}{2}'' \times 2\frac{1}{2}''$.
2. Power Supply which will operate on either A.C. or D.C. mains, any voltage from 97 to 250 volts, adjustable to voltage required, size $8\frac{1}{2}'' \times 3\frac{1}{2}'' \times 2\frac{1}{2}''$.
3. One combined 90v. H.T. and 7.5v. L.T. battery, size $7\frac{1}{2}'' \times 3'' \times 2\frac{1}{2}''$.
4. Pair of balanced armature light-weight headphones.
5. Coll packs, size $2\frac{1}{2}'' \times 3\frac{1}{2}'' \times 1''$.
 - (a) Tunes from 100-1,600 kc/s. 1,188-3,000 metres
 - (b) Tunes from 2.5-5 mc/s. 60-120 metres.
 - (c) Tunes from 4.5-8 mc/s. 38-67 metres.
 - (d) Tunes from 8-15 mc/s. 20-38 metres.
6. Aerial and earth wire with paxolin former and a nd earthing clip.

This receiver can be used when out walking, as it can be easily carried in your overcoat pocket. The battery will give approximately 30 hours' continuous use, and 2 to 3 months when used intermittently. The power pack is, of course, operated in the shack to conserve the batteries for outside use. Should you require further batteries we can supply, while stocks last, at 19/3 each, post free. Sufficient power is available for working a smaller loudspeaker, 2" or 3" in diameter, if required.

We have found this receiver amazingly efficient on test, and all Continents can be received at S9 on phones. Backlash and frequency drift are negligible and signal to noise ratio, even when the receiver is mains-operated, leaves nothing to be desired.

Just released by the Government, these sets are exceptional value for money, and cannot be repeated. Limited quantities are available. Buy yours now. Price £11/10/- post free.

We have a comprehensive stock of valves of American metal and glass type, British, etc., A.C., A.C./D.C. Battery. Please send us your requirements. Goods can be despatched against C.W.O. or C.O.D., whichever suits you better.

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G8SX G2HHV, G3ABD, G3AHV, G3BDD

SHORT WAVE BROADCAST STATIONS

Revision 41.6-128.75 Metres

Giving Frequency, Wavelength, Callsign and Location

These lists appear each month, covering the 13-128 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—13 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	Wave-length	Callsign	Location	Frequency	Wave-length	Callsign	Location
7185	41-75	S.E.A.C.	Colombo, Ceylon.	6190	48-50	VUD2 VUD7 WNRI	Delhi, India. Delhi, India. New York.
7177	41-78		Moscow.				Saigon, Indo-China.
7165	41-86		Moscow.				Trujillo, Dominican Republic.
7150	41-94	GRT	Daventry.	6185	48-50	HIL	Frederikstad, Norway.
7126	42-08		Hareisa, British Somaliland.				Mendoza, Argentina.
7120	42-11	GRM	Daventry.	6175	48-60	LRM H9T XEXA	Puerto Plata, D.R. Mexico City.
7100	42-22		Madrid, Spain.	6170	48-62		Suva, Fiji.
7085	42-34	YI2KG	Baghdad, Iraq.	6165	48-66	HER3	Schwarzenburg, Switzerland.
7065	42-42	GRS	Daventry.				San Jose, Costa Rica.
7007	42-81	XPSA	Kwelyang, China.	6160	48-72	TILS	Moscow.
7005	42-76	FET1	Valladolid, Spain.	6155	48-75	XGOY XEEP	Chungking, China. Mexico City.
6980	42-98	FO8AA	Papeete, Tahiti.	6150	48-78	VLR2 VUB2 TIRH	Lyndhurst, Australia. Bombay, India. San Jose, Costa Rica.
6950	43-16	YNO	Managua, Nicaragua.				Belgrade, Yugoslavia.
6917	43-37	FGA	Dakar, Senegal.	6140	48-88		Moscow.
6870	43-67	HC4EB	Manta, Ecuador.	6130	48-90	CHNX VPD2	Hallfax, Nova Scotia. Suva, Fiji.
6860	43-73	TGRB	Guatemala City.				Moscow.
6850	43-80	YNOW	Managua, Nicaragua.	6125	48-94	HS8PD	Bangkok, Siam.
6820	44-00	SUP2	Cairo, Egypt.	6122	49-00		Jaffa, Palestine.
6785	44-21	HIZA	Santiago de los Caballeros, D.R.	6120	49-05	WOOC	Teheran, Iran.
			Baghdad, Iraq.				New York.
6780	44-23	HNF	Singapore, Malaya.	6110	49-13	LRX1	Buenos Aires, Argentina.
6770	44-31	YNPS	Managua, Nicaragua.				Daventry.
6758	44-39	YNCNN	Managua, Nicaragua.	6105	49-15	WLSK	Kure, Japan.
6700	44-77	HC2RL	Guayaquil, Ecuador.	6100	49-20	VUD10	Delhi, India.
6635	45-21	HIT	Trujillo, Dominican Republic.				Warsaw, Poland.
			Guatemala City.	5095	49-22	ZYB7	Sao Paulo, Brazil.
6620	45-32	TG2	Managua, Nicaragua.				Johannesburg, Transvaal.
6548	45-81	YNBH	Monsenor Nouel, D.R.	6090	49-30	LRY1 ZNS2 CBFW XRRA	Buenos Aires, Argentina. Nassau, Bahamas. Vercheres, Canada. Peiping, China.
6485	46-26	HIZT	Granada, Nicaragua.				Moscow.
6465	46-40	YNWW	Santa Clara, Cuba.	6085	49-33	VUM2	Madras, India.
6450	46-51	COHI	San Cristobal, D.R.	6080	49-36	WLWK	Cincinnati, Ohio.
6430	46-65	HIIR	Lima, Peru.				Munich, Germany.
6420	46-73	OAX4G	Quezaltenango, Guatemala.	6075	49-38	S.E.A.C.	Colombo, Ceylon.
6405	46-84	TGQA	Santiago, de los Caballeros, D.R.	6070	49-43	GRR	Daventry.
			Lisbon, Portugal.	6065	49-50	SBO	Motala, Sweden.
6390	46-95	HI9B	Lima, Peru.	6060	49-53	WCBN VUDI1	New York. Delhi, India.
			Quito, Ecuador.	6054	49-55	XLRA	Hankow, China.
6370	47-08	CSX	San Pedro Sula, Honduras.	6050	49-60	GSA	Daventry.
6368	47-11	OAX4H	Berne, Switzerland.	6040	49-67	WRUA	Boston, Mass.
6365	47-13	HCJB	Arequipa, Peru.	6035	49-71		Algiers, Algeria.
6350	47-24	HRP1	Havana, Cuba.				Rangoon, Burma.
			Baden-Baden, Germany.	6030	49-77	IRF XEKW	Rome, Italy. Morelia, Mexico.
6345	47-27	HEI2	Trujillo, Dominican Republic.				Moscow.
6330	47-40	OAX6E	Asuncion, Paraguay.	6026	49-78	PCJ	Huizen, Holland.
6320	47-45	COCW	San Salvador, Salvador.	6025	49-82	ZPI4	Villarica, Paraguay.
6315	47-50	YGR	Managua, Nicaragua.				Brazzaville, French Equatorial Africa.
6312	47-52	HIIZ	Guatemala City.	6020	49-83	XEUW	Vera Cruz, Mexico.
			San Salvador, Salvador.	6015	49-87	PRA8	Pernambuco, Brazil.
6275	47-80	ZPA1	Trujillo, Dominican Republic.	6010	49-90	CJXC	Sydney, Nova Scotia.
6270	47-85	YSR	Bogota, Colombia.				
6255	47-96	YNXW	Manizales, Colombia.				
			Quito, Ecuador.				
6250	48-00	YSU	Noumea, New Caledonia.				
6245	48-05	HIN	Bollvar, Venezuela.				
			Bogota, Colombia.				
6240	48-07	HIJF	Tangier.				
6220	48-23	HIJF	Santiago de los Caballeros, D.R.				
6210	48-32	HCLAC					
6208	48-35	FK8AA					
6205	48-37	YGRD					
6200	48-38	HIJ2					

Fre- quency	Wave- Length	Callsign	Location	Fre- quency	Wave- Length	Callsign	Location
		VUC2	Calcutta, India.	4878	61 50		Pietermaritzburg, Natal.
		VUD3	Delhi, India.	4875	61 54	HJFH	Armenia, Colombia.
		OLR2A	Prague, Czechoslovakia.	4865	61 67	HJEX	Calli, Colombia.
		RW96	Moscow.	4860	61 73	VQ7LO	Nairobi, Kenya.
		XEOI	Mexico City.			VUD3	Delhi, India.
6007	49-94	OAX4Q	Lima, Peru.	4855	61 83	HJCA	Bogota, Colombia.
			Johannesburg,	4850	61 85	HJGF	Bucaramanga, Colombia.
			Transvaal.	4845	61 92	CSX2	Ponta Delgada, Azores.
6005	49-96	HP5K	Colon, Panama.	4840	62 00	YV1RZ	Maracaibo, Venezuela.
6000	50-00	ZFY	Georgetown, British	4830	62 12	YV2RN	San Cristobal, Venezuela.
			Guiana.	4825	62 18	HJED	Calli, Colombia.
		PRI3	Bello Horizonte, Brazil.	4810	62 37	YV1RL	Singapore, Malaya.
		XEBT	Mexico City.	4805	62 45	HJDU	Maracaibo, Venezuela.
5996	50-05		Andorra la Vieja,	4800	62 50	YV1RX	Medellin, Colombia.
			Andorra.	4790	62 63	YV6RU	Maracaibo, Venezuela.
5990	50-10	LRS1	Buenos Aires,	4785	62 70	HJAB	Bolivar, Venezuela.
			Argentina.	4780	62 76	YV4RO	Barranquilla, Colombia.
5970	50-25	VONH	St. Johns, Newfoundland.				Valencia, Venezuela.
5950	50-37	HVJ	Vatican City.	4770	62 90	YV1RY	Singapore, Malaya.
		HH2S	Port-au-Prince, Haiti.	4765	62 97	YV5RV	Coro, Venezuela.
5940	50-50	RV15	Kharbarovsk, U.S.S.R.	4750	63 15	HJ2ET	La Guaira, Venezuela.
5920	50-65		Moscow.	4715	63 63	YV1RV	Maracaibo, Venezuela.
5915	50-72	OAX4V	Lima, Peru.	4700	63 83	ZQI	Guayaquil, Ecuador.
5900	50-85	ZNB	Mafeking, Bechuanaland.	4373	68 60		Kingston, Jamaica.
5895	50-89	OAX4Z	Lima, Peru.	4107	73 04	HCJB	Johannesburg, Transvaal.
5882	51-00		Capc Town, South	3900	76 92	ZQP	Quito, Ecuador.
			Africa.				Lusaka, Northern
5875	51-06	HRN	Tegucigalpa, Honduras.				Rhodesia.
5845	51-32	PZH5	Paramaribo, Suriname.	3800	78-95	ZEB	Bulawayo, Southern
5620	53-38	OAX2A	Trujillo, Peru.				Rhodesia.
5090	58-94		Moscow.	3658	82-01	ZEA	Salisbury, Southern
4990	60-10	YV3RN	Barquisimeto, Venezuela.				Rhodesia.
4970	60-35	YV5RM	Caracas, Venezuela.	3600	83-33		Port Stanley, Falkland
4955	60-55	HJGQ	Bogota, Colombia.				Islands.
4930	60-85	HJAP	Cartagena, Colombia.	3580	83-80	YV3RS	Barquisimeto, Venezuela.
4925	60-91	CR7BU	Lourenco Marques,	3495	85-83	VUD2	Delhi, India.
			Mozambique.	3450	86-97		Johannesburg, Transvaal.
4920	60-97	VUM2	Madras, India.	3425	87-59	VUM2	Madras, India.
4915	61-04	ZOY	Accra, Gold Coast.	3335	89-95	VUD3	Delhi, India.
		YV5RN	Caracas, Venezuela.	3325	90-22		Jaffa, Palestine.
4900	61-22		Colombo, Ceylon.	3305	90-77	VUC2	Calcutta, India.
4895	61-28	HJCH	Bogota, Colombia.	2465	121-70	WLKS	Kure, Japan.
4885	61-40	HJDP	Medellin, Colombia.	2330	128-75	ZQI	Kingston, Jamaica.
4880	61-47	VUB2	Bombay, India.				

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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

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