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The SHORT WAVE LISTENER

DEVOTED EXCLUSIVELY TO
SHORT WAVE RECEPTION

NOVEMBER 1947
VOLUME I · NUMBER 12

THE **SHORT WAVE** LISTENER

A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME I **NOVEMBER 1947** NUMBER 12

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EDITORIAL

Progress

This issue sees No. 12 of the *Short Wave Listener*, and we can look back on a year of solid achievement and steady progress.

In the particular case of the *Short Wave Listener*, its success or failure can easily be judged by two infallible tests—the general demand for it as a publication, and the reader-response to its DX news features. The demand at the moment is just twice what we are permitted to print under the existing control on paper, and the reader-response has been increasing steadily ever since the first issue. When one realises that during August, the holiday month, we had the largest mail since the *Short Wave Listener* was established in November last year, it proves not only that there is a great and increasing interest in the practical aspects of our hobby, but also that we are meeting a widespread need and doing much to expand the field both in this country and abroad— for the *Short Wave Listener* now travels to many distant parts overseas.

We do not suppose that the *Short Wave Listener* satisfies all requirements or that it suits every taste. It takes time for any new periodical of such a highly-specialised character to find its true balance and begin to make its contribution to the art. We do feel, however, that thanks to the support and interest of so many readers and the valuable backing of a long list of advertisers, the regular features are now well established and that they do serve a useful purpose. All the signs are that they gain favour with every issue.

It will be our duty, our pleasure and our earnest endeavour to improve the standard, increase the value and widen the scope of the *Short Wave Listener* during the months to come.

AMATEUR TRANSMISSION —FOR THE BEGINNER

A SERIES FOR THE GUIDANCE OF SWL's

PART II

by

THE OLD TIMER

(The first article in this series, appearing in the October issue, dealt with the fundamental business of generating RF energy and the meaning and function of such circuits as CO's, Tritets, FD's, and PA's.—Ed.)

THE all-important matter of transmitting aerials is one which can be studied exhaustively from the purely theoretical point of view or from the practical aspect; and yet, however extensive one's studies on either side, there always seems to be something more to learn. For this reason a surprising number of amateurs seem to be somewhat frightened by the subject, whereas they should really be absorbed and interested.

The theoretical properties of aerials have been dealt with so completely in the many textbooks and handbooks available that it would be waste of space to cover the ground in the same way all over again. It is for me to attempt, therefore, to go through the old familiar facts—just for the record—in a highly condensed form, and then to take up the practical aspects that the textbooks do not usually dwell on at any length.

Being a bit of a rebel myself, I insist on being different right at the start, by *not* proceeding to explain the difference between the Hertz and Marconi types of aerial. We will, in fact, leave names out of it for the present; they all fit in with the greatest of ease later on.

Some Basic Theory

Everyone reading this knows that an alternating current flowing through a wire creates an alternating magnetic field around that wire; and that, if the frequency is sufficiently high, a lot of the energy does not return to the conductor, but is radiated into space. Now the best condition for this radiation occurs when there is a sudden change in the constants of our wire, causing a *reflection* of the alternating current and a condition of *standing waves* on the line. (Think of the old "blind-cord" analogy—the standing-wave condition when you waggle the cord only arises when the cord is of the right length, or your "waggle" is at the right frequency.)

Now if you feed RF into a wire suspended in space, and that wire is of the correct length for the frequency on which you are operating, the wire becomes an efficient *radiator* of energy. This condition arises when the length of the wire in metres is approximately ·475 of the wavelength you are using. Under these conditions the wire is known as a half-wave resonator or *dipole*. Fig. 1 shows such a dipole. Imagine this fed at the centre with RF. This RF travels along the wire in either direction until it meets a tremendous mis-match (i.e. the end of the wire !) which produces a reflection of energy. From this point of view you can look upon the dipole as being terminated in an infinite impedance at either end.

Now this well-known, efficient radiator has a number of characteristics. When it

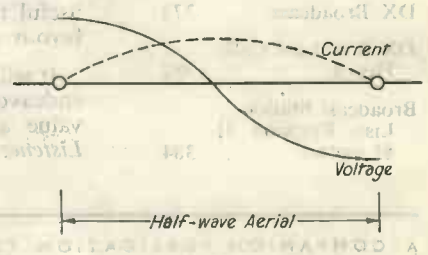


Fig. 1.

is in action with the standing wave of the appropriate frequency on it, the current will be highest at the centre and zero at the ends (see dotted curve in Fig. 1). This is pretty obvious—you can't have current at the ends when there is nowhere for it to flow. The voltage curve is the inverse of this, voltage being highest at the ends and lowest in the centre. You will only need to think these two facts over to come to the conclusion that the dipole has a fairly low impedance at the centre (high current and low voltage) and a very high impedance at the ends (high voltage and no current).

Never forget this basic conception and you will find that your aerial problems incline to solve themselves! Because a dipole has a low impedance at the centre and a high impedance at the ends, it can be fed in a variety of ways. Fig. 2 shows four of them. The first is known as "current feed." In this case (*a*) the dipole is fed at the centre through a concentric line with a surge impedance of 72 ohms, which figure approximates very closely to the impedance at the centre of a dipole in space.

Method (*b*), known as the "Zepp," uses voltage feed at the *end* of the dipole; more of this later. Method (*c*) is sometimes called the "Windom" aerial, but is also known as the "matched-impedance single-wire feed." The single feeder joins the dipole at a critical distance from the centre, where its impedance matches that of the wire, and if it is also correctly terminated at the bottom end, the feeder will not carry standing waves and will therefore not radiate appreciably.

For method (*d*) I have been somewhat perverse and suppressed half the dipole altogether! The actual radiating piece of wire is only a quarter-wave long; it is only half a dipole, but if you regard the earth connection as being its "image," and the tuned circuit as a means of current-feeding this bogus dipole at its centre, you will see how it works. And it may now be revealed (as the Press so often observes) that *this* is what is known as a Marconi aerial, the other three conditions being various forms of Hertz aerial.

The Hertz aerial came into its own with the discovery of the usefulness of short waves; before that, when anything below 300 metres was regarded as "short," it was hardly practicable to sling up a half-wave aerial in the sky—at any rate for amateur purposes. So a quarter-wave, or

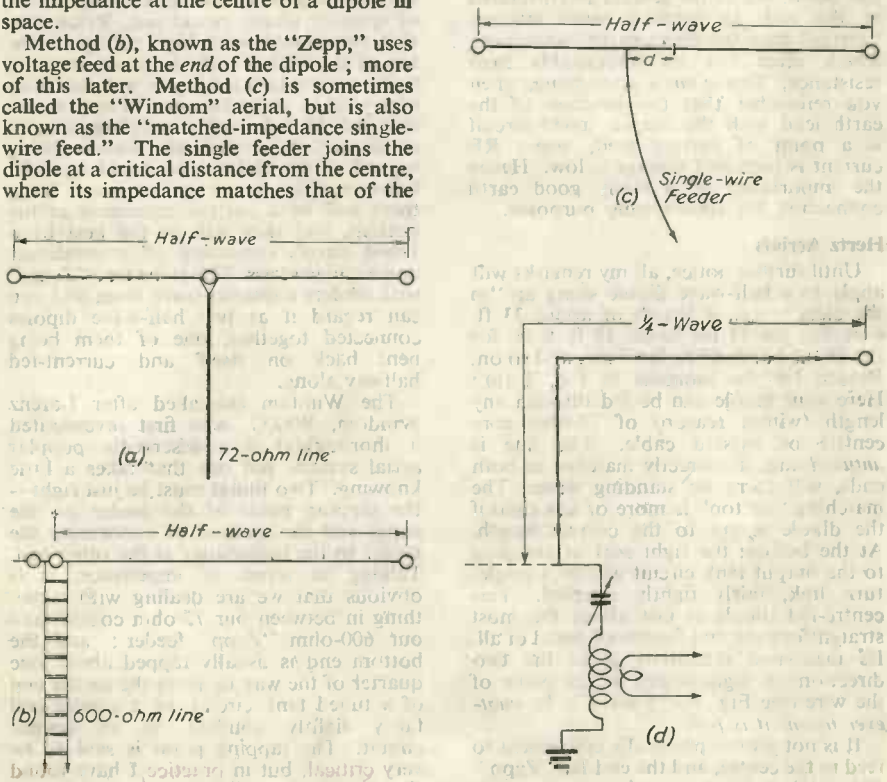


Fig. 2.

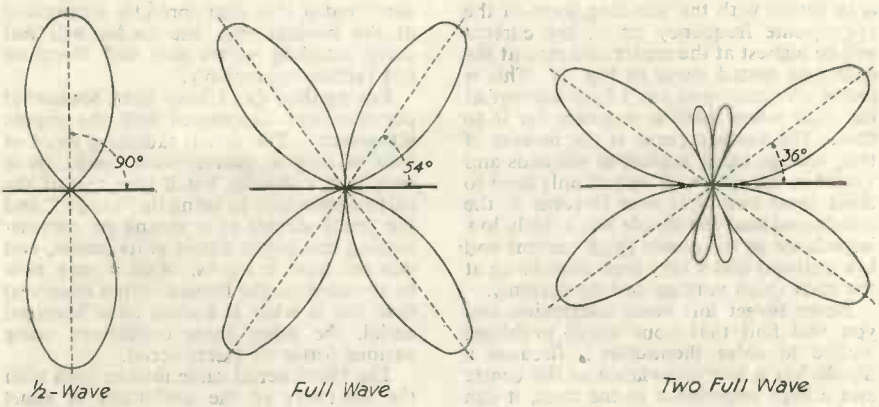


FIG. 3.

even less, was used, and fed Marconi-fashion against an earth or a counterpoise. The latter is merely a length of wire slung low down, but off the ground and insulated at the end, to form a more efficient "image" than the direct earth connection, which often has an undesirably high resistance. This is *not* a good thing, when you remember that the junction of the earth lead with the output tuned circuit is a point of current feed, where RF current is high and voltage is low. Hence the importance of a really good earth connection for transmitting purposes.

Hertz Aerials

Until further notice, all my remarks will apply to a half-wave dipole slung up "in the clear"—*i.e.*, a length of about 33 ft. 6 in. for the 14 mc band, 16 ft. 9 in. for the 28 mc band, 67 ft. for 7 mc, and so on. Return for the moment to Fig. 2 (*a*): Here your dipole can be fed through any length (within reason) of 72-ohm concentric or twisted cable. The line is *untuned* and, if correctly matched at both ends, will carry no standing wave. The matching "up top" is more or less right if the dipole is cut to the correct length. At the bottom the right sort of coupling to the output tank circuit will be a single-turn link, fairly tightly coupled. This centre-fed dipole is just about the most straightforward and foolproof aerial of all. Its maximum directivity is in the two directions at right-angles to the plane of the wire (see Fig. 3—"½-wave"), *by whatever means it is fed.*

It is not always physically convenient to feed in the centre, and the end-fed "Zepp," Fig. 2 (*b*), is a very popular arrangement. In this case, however, the feeders are tuned, and there is a standing-wave on them, but little or no radiation since they are close together and the standing waves, of opposite phase, cancel out. Remember that you always want high voltage at the top of the feeders; if, therefore, they are half a wavelength long, you will also have high voltage at the bottom. In such a case they will be fed from a coupling coil and condenser in parallel, the feeders being tapped on the coil one near each end. If, however, they are a quarter-wave long, there will be a current maximum at the bottom, and they will be fed best by a tuned circuit consisting of a condenser and a coil in series. This is the true "Zepp," with feeders a quarter-wave long, and you can regard it as two half-wave dipoles connected together, one of them being bent back on itself and current-fed halfway along.

The Windom (so-called after Lorenz Windom, W8ZG, who first investigated it thoroughly) is a deservedly popular aerial system, but one that takes a little knowing. Two things must be just right—the tapping point of the feeder on the aerial and the method of connecting the feeder to the transmitter at the other end. Talking in terms of impedance, it is obvious that we are dealing with something in between our 72-ohm coaxial and our 600-ohm "Zepp" feeder; and the bottom end is usually tapped about one quarter of the way up from the earthy end of a tuned tank circuit, or a similar coil fairly tightly coupled to an output circuit. The tapping point is said to be very critical, but in practice I have found that a good deal of latitude is permissible.

Some aerial specialists will disagree violently about this ; some of them think in fractions of an inch. But the fact remains that many of us have used Windoms for a long time, sometimes with the tap as far as two feet from the theoretically correct position, and they have always worked well !

The correct position, according to the textbooks, is 9 ft. 4 in. from the centre of a 67 ft. aerial (for 7 mc) ; 4 ft. 8 in. from the centre of a 33 ft. 6 in. aerial (for 14 mc) and so on in proportion. These figures for length and tapping point apply to a frequency fairly near the LF end of each band, but in practice should cover 7000-7100 kc, or 14000-14100 kc.

A variant of the Windom uses the tap always exactly one-third of the way along the aerial (i.e., about 11 ft. from the centre). To compensate for this mis-match the feeder is of thinner wire than the aerial itself—20-gauge for the feeder and 14-gauge for the aerial. The advantage of this will be apparent shortly, for we are just about to open a paragraph on a new subject.

Harmonic Operation

The average amateur insists on working on more than one waveband, but at the same time doesn't want to put up more than one aerial. The use of a straightforward dipole somewhat curtails one's activities—not only is it directional, but it only remains a dipole on its particular frequency.

Fortunately a half-wave aerial on the 7 mc band becomes a full-wave aerial on 14 mc, and a two-wavelength affair on 28 mc. The directional properties are completely different, but the aerial efficiency remains. Fig. 3 shows the horizontal polar diagrams of half-wave, full-wave and two-wave aerials ; whereas the dipole radiates at right-angles to its own plane, the full-wave aerial has four major lobes, inclined at 54 deg. to the plane of the wire. The two-wave arrangement has four major lobes at 36 deg. to the plane of the wire, and also a bunch of minor lobes at right-angles to it, or nearly so.

Now for an important point. A dipole, used at twice its resonant frequency, becomes a full-wave aerial, but it can no longer be current-fed with coaxial cable. Since it has now become two smaller dipoles placed end to end, the mid-point carries maximum voltage, not maximum current, and so a low-impedance feeder is all wrong.

But any of the forms of voltage-feed will still work. If it is a "Zepp" (Fig. 4a) the top may be any number of half wavelengths long. A given length of feeder, it is true, will want different conditions at its bottom end, because if it is a quarter-wave long at 7 mc it will be a half-wave long at 14 mc ; *i.e.*, the matching of the transmitter to the feeder at the bottom end will be of the current-feed type in the former case and voltage-feed in the latter.

To revert to the Windom type of aerial, we now see the advantage of the tap one-third of the way along. For this will also be one-third of *half* the way along, and one-third of a *quarter* of the way along . . . and so on. Work it out for yourself. What it comes to is this : That whether you use the aerial as a straight dipole, or whether you chop it up into two, four or eight smaller dipoles end-to-end, the tap will always be one-third of the way along one of the units, and so the matching will be more or less right.

Another very straightforward and frequently used way of feeding a longish harmonic aerial is simply to bring one end

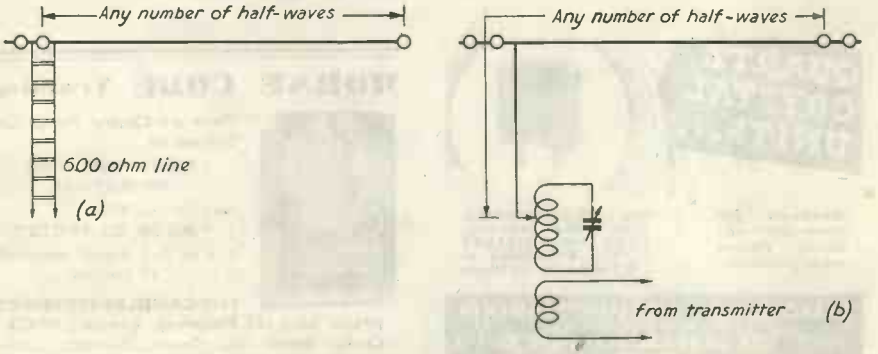


Fig. 4.

into the shack and clip it on a coil coupled to the output tank circuit. Fig. 4 (*b*) shows this ; the length of the aerial, of course, now includes the down-lead, and so the polar diagram will be considerably distorted from the theoretical. This end-fed type of aerial is most efficient when the shack is at the top of a house and the aerial goes straight out of the window without a great change in direction.

Choice of Direction

If you imagine the polar diagram of the full-wave aerial in Fig. 3 superimposed on a Great Circle Map of the world, you will soon see that such an aerial running either North/South or East/West gives a very good general coverage. The same applies to the 2-wave aerial, because most of the DX stations in the world, regarded from the British Isles, lie either NW, NE, SW or SE. So if you want to give yourself good general coverage on 14 mc, choose a 67-ft or 134-ft aerial if you can run it North/South or East/West. If you have to use a 33 ft 6 in. aerial (dipole for 14 mc) you will have to try and run it in the direction most favourable for the parts of the world that you want to work most. NE/SW, for instance, is not a bad direction for such an aerial.

Any of these types of aerial may be run vertically instead of horizontally, in which case they will give all-round coverage. But this rather restricts you to the higher frequencies ; there cannot be many 67-ft verticals about !

Directional Systems

A detailed dissertation on directional aerials is beyond the scope of an article for beginners, but it should be mentioned that a dipole may be made almost uni-directional, instead of bi-directional, by placing a reflector behind it. A theoretically perfect case of this would cut out all back radiation. There are many types of such beams, using driven reflectors, parasitic reflectors, directors and all the various combinations of these systems. But if you aspire to a full understanding of such systems you will be out of the beginner's class and sufficiently versed in aerial theory to be able to study a full text-book on the subject.

One or two practical points in conclusion. The radiating portion of the aerial should be "in the clear" as much as possible, well insulated and suspended by rope—or, if wire must be used, it should be broken into short lengths by means of small insulators. The feeder, of whatever type, should come away from the wire at right-angles for a reasonable distance. The Windom type of feeder should always be free from sharp bends ; the "Zepp" type should curve gracefully rather than be strained into right-angled bends ; and all feeders should be treated as being just as important as the aerial itself.

All the foregoing has necessarily been very sketchy on account of space considerations and because the purpose of this article is to indicate the lines along which to think : it is hoped that it will awaken interest in the subject on the part of some of those readers who have never started studying it. It may also have cleared up one or two points that the text-books have not brought out ; and it may have had the beneficial effect of driving a few readers back to their textbooks in search of fuller information on points only briefly mentioned here.

In a later article in this series I shall have more to say about the bottom end of the feeders ; *i.e.*, the coupling arrangements between transmitters and aerials. For the time being, though, you probably have enough to think over.

NOISE-LIMITER FOR THE R.1155

IMPROVING A POPULAR RECEIVER

by

J. L. KEDGE (G5AS)

MANY amateurs possess an R.1155 receiver for use in conjunction with converters for the 28 and 58 mc bands, the whole equipment functioning on the double super-het principle.

The main receiver provides ample amplification, but it must be admitted that the signal-to-noise level leaves much to be desired.

The writer claims the doubtful distinction of operating in one of the worst districts from the point of view of interference especially when receiving on the 5-metre band.

Before the introduction of a noise-limiter, GDX reception on this band was virtually impossible before 2330 and then most good amateurs had retired to bed. A vicious circle indeed ! Many types of noise-limiting circuits have been described in the past, but their application to the R.1155 receiver has presented many problems, particularly to those who do not possess the receiver theoretical circuit diagrams.

It is hoped that this "two-channel" arrangement will be the answer where

R.1155 UNMODIFIED. FIG. 1

C101	4 μμF.
C6, C11	·0001 μF.
C26, C105	·1 μF.
C8, C9	·001 μF.
C10	·004 μF.
C96	·02 μF.
R20	56,000 ohms.
R21	470,000 ohms.
R22	1,000 ohms.
R26	100,000 ohms.
R67	22,000 ohms.
R8(2)	500,000 ohms.
S	AF Section. Master Selector Switch.

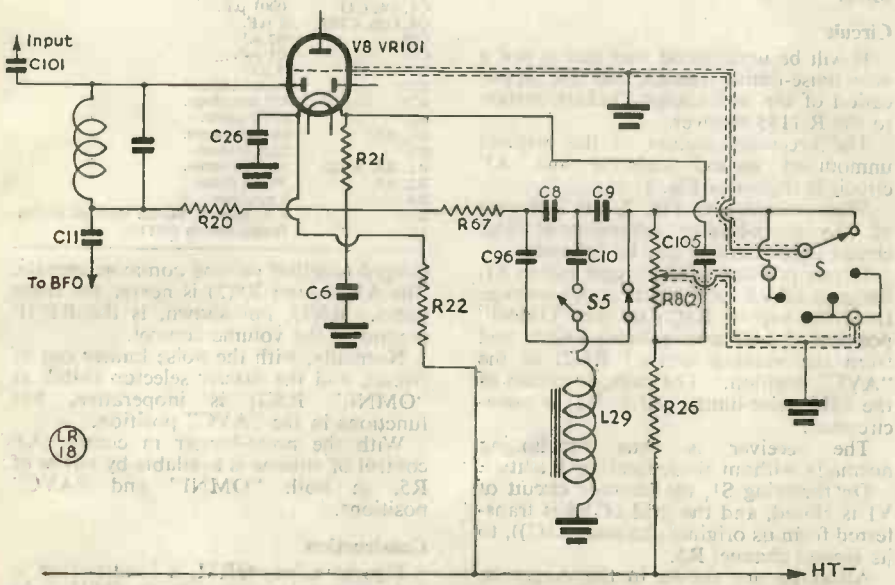


Fig. 1. Circuit of that section of the receiver affected by the modification. *Keying of components is in accordance with official circuit diagram.*

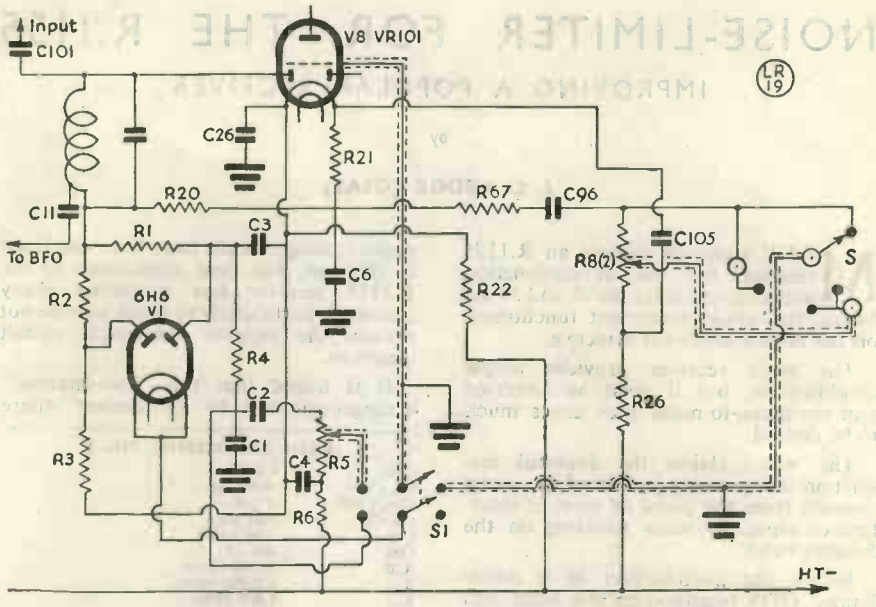


Fig. 2. Modification to original circuit to incorporate the noise-limiter.

there are similar interference problems to solve.

Circuit

It will be understood that this is not a new noise-limiter design, but the application of the well-known Dickert system to the R.1155 receiver.

The necessary section of the original unmodified second detector and AF circuit is shown in Fig. 1.

With reference to Fig. 2, the inclusion of the noise-limiter arrangement and circuit modifications can be followed.

In one position of the toggle switch S1, the grid of V8 receives its audio voltage from the top of R8(2) in the "OMNI" position of the master selector switch, and from the moving arm of R8(2) in the "AVC" position. The cathode circuit of the 6H6 noise-limiter valve, V1, is open-circuited.

The receiver is thus functioning normally without noise-limiting facilities.

On throwing S1, the cathode circuit of V1 is closed, and the grid of V8 is transferred from its original channel (R8(2)), to its second channel R5.

Although not shown in the diagrams, it should be noted that the original volume control is, in fact, two *separate* items ganged together on one common spindle. The AF section R8(2) is nearer the front panel. R8(1), not shown, is the RF/IF section of the volume control.

R.1155 MODIFIED, FIG. 2

C101	4 μμF
C1, C6, C11	·0001 μF.
C4, C26, C105	·1 μF.
C96	·02 μF.
C2	·01 μF.
C3	·5 μF.
R20	56,000 ohms.
R21	470,000 ohms.
R22	1,000 ohms.
R6, R26	100,000 ohms.
R67	22,000 ohms.
R1, R5, R8(2)	500,000 ohms.
R2, R3	70,000 ohms.
R4	1 megohm.
S	A.F. Section, Master Selector Switch.
S1	Toggle Switch DPDT.

Normally, with the noise limiter out of circuit, and the master selector switch at "OMNI," R8(2) is inoperative, but functions in the "AVC" position.

With the noise-limiter in circuit, AF control of volume is available by virtue of R5, in both "OMNI" and "AVC" positions.

Construction

Due to infant QRM, a loudspeaker is not permitted at the writer's QTH. At one time this was regretted, but has since

proved to be a blessing in disguise, as the redundant valve holder of the visual switching valve was ideally situated, adjacent to V8, to accommodate the noise-limiter valve, V1.

Those who have already appropriated this redundant valve-holder for an output pentode valve for loud-speaker use, will have to mount an additional octal valve-holder under the chassis on a suitable mounting strip. There is ample room for this.

Assuming that the redundant chassis valve-holder is available, unsolder all connections to it, except the heater leads.

Next, remove the unwanted panel control, annotated "Meter Balance" and mount R5 in this position.

The writer has found the LF filter circuit—comprising L29, C8, C9, and C10—to be of little value, and the components referred to have been disconnected and the front panel switch S5, annotated "Limiter In," removed.

Mount toggle switch S1 in the vacated position of S5.

All redundant wiring should be taped-up, or removed from the circuit.

Screened wiring should be used in all positions indicated in the diagrams, or hum may result.

Results

With the noise-limiter out of circuit the receiver functions absolutely as designed.

As is usual with all noise-limiting arrangements, some loss of audio gain and speech quality must be expected with the noise-limiter in circuit. This is a minor detail provided 100 per cent. QSO or reception is obtained.

The work involved has been well worth while and the constructional modifications necessary but an evening's task.

It can be stated that other noise-limiting arrangements have been tried with the R.1155, but so far as the writer is concerned, results were inferior with the noise-limiter *out* of circuit.

The present two-channel arrangement solved the problem.

Have you heard?

AMATEUR BAND COMMENTARY

BY THE DX SCRIBE

LAST month I made one or two guarded remarks about the slackness of the holiday season, and added that by now we should be well out of it. Pointless remarks, perhaps—but I am now left in no doubt about their correctness, for this month's post-bag has been the heaviest ever. And as for Calls Heard . . . ! We gave October 1, first post, as the deadline, but by the previous day I had enough Calls Heard lists in front of me to fill the three pages, and by October 1 there were roughly three times too many !

Fortunately, this does not mean that two readers out of every three will be slightly hurt because their list doesn't appear ; many of them sent in more than one, what with the SLP's and the Zoned Listening on 14 and the General Listening on 28 mc. In most cases it was necessary to "ration" them somewhat. But, *please note :* this spate of Calls Heard will mean, in future, that only the best for content and the tidiest lists will stand a chance of getting right through into published form. The weaklings will fall by the wayside every time. This month the general standard was surprisingly and gratifyingly high.

The HAZ Lists

The main list displays another scorer of 40—D. W. Bruce, of Eltham, who, by the way, is 16 years of age. There are several additions to the 39'ers and a general climbing of the ladder is in progress. The 'Phone Only list contains a surprise : M. D. Lipscombe of Seaford has rocketed to the top by being the first to hear 37 Zones on 'phone. UA9CB in Zone 17 was the kind friend who made this possible, and we imagine that there will be some more 37 scorers by next month.

One word in passing ; a single appearance in the HAZ Lists does not keep you there in perpetuity. If you have not reported after three consecutive months your name will automatically be removed to make room for some of the newcomers. So remember to keep us in touch with your progress.

DX of the Month

It was an excellent month for the DX-fancier, for the 28 mc band opened wide once more, and 14 mc remained very active except for a couple of short periods when sunspots interfered with everything. Very few readers take any interest in 7 mc, and fewer still in 3·5 and 1·7 mc. I should like to suggest that more should be done on these last two bands. It makes a complete change, and you can put up some very excellent performances even on 1·7 mc. After all, if you live in London it is probably just as creditable to hear, say, Yorkshire in daylight, using 10 watts, as it is to winkle out VR6AA from the QRM on 14 mc. Let us have more interest in the two top bands, and remember that the term "DX" is relative. We will always be glad to publish lists of Calls Heard for 1·7 and 3·5 mc ; and if you *must* have the competitive element, let's see who receives most countries on 3·5 mc in the coming month. (And if it's of any interest, your Scribe received 25 and worked 18 during the past month.)

News from Letters

Last month's remark that no one except W. J. C. Pinnell (Sidcup) had heard AC4BR has brought forth comment. A. Frost (Thornton Heath) has heard him being called on several occasions. A.F. got up early every morning during September to listen for half-an-hour on 14 mc and comments on the patchiness of conditions. From the 1st to the 7th, VK's and ZL's predominated ; from the 8th to the 11th W6's and W7's had it ; the 12th to the 16th showed lots of ZL's but not many VK's, and so on. These early mornings are always fascinating, and ample compensation for the wrench of getting out of bed a little sooner (until it gets really cold!). Less common ones

MD2C, Tripoli, has an R1155 receiver and runs 22 watts input to a two-stage transmitter. The operator is ex-G3BCY.

from A.F., by the way, included W4IKC/KP4, EA7AV (just Spain, unfortunately), I6ZJ, KL7FC ('phone), ET1JJ and VP3HL.

O. A. Good (Oswestry) is the die-hard who received 37Z and 99C during August. He didn't think that was so good, and had a real blitz in September, with the result that during the month he logged 38Z and 100C (34Z and 67C on 'phone). He found September his best month ever for 14 mc DX. Look at this: five J's, three J8's, two J9's, one J9 on Kwajalein, one KG6, one KL7, two OQ5's, two PK's, 25 VK's, two VS1's, four VS2's, three VS7's, seven VU's and an XZ. All this in addition to the Zones called for in the Zoned Listening list!

O.A.G. found the peak days were the 2nd and 16th. His outstanding 'phones of the month were C1CH, HZ1AB, J5AAJ, J9CRP, VS7IT, XE1AC and XZ2AG. He would like to know who KL2AA is; whether a certain station heard was VP6NH or VP7NH, and whether ET3AJ is genuine or phoney?

While on queries, J. Bradbrook (Iver) would like identification of VT3CY, heard on 14455 kc (!) and said to be "in the Arctic Zone." W. H. Borland (Alexandria) would like to know which zone UAØPA is in, and presents the country-collectors with the information that VU2RS, 2RW and 2WW are all in Pakistan.

G. P. Watts (Norwich) asks which of the MD areas are separate countries. We imagine they come out like this: MD1 and 2 (same as former LI); MD3 (same as I6); MD4 (same as VQ6); MD5; MD6 (same as YI); MD7 (same as ZC4).

D. W. Bruce (Eltham) reached the top of the list with the help of C8YR and VQ8AE in Zones 23 and 39. So he now claims "40 Zones with two valves"—and very nice, too. His "suspects of the month" include YO5J, OX4RD and SHF1Y. Just as some philatelists specialise in the collection of forgeries, so we shall have pirate-collectors on the short waves!

N. S. Beckett (Lowestoft) is another listener who was lucky enough to bag UA9CB on 'phone; he was S9 for 20 minutes. W. J. C. Pinnell (Sidcup) collected his 39th Zone with C1CH, and heard other new ones in the shape of CR7AD, VR5IP, VP8AD and CR4AX. The latter, by the way, has been very active on both 14 and 28 mc, with a somewhat ripply T7 or T8 note, near the LF end. His average QSO lasts about two minutes and the queue is terrific.

P. G. Drake (Newquay) sends a long list of stations heard on his R1155, but unfortunately as they are all "unsorted" and on both sides of the paper, they could not be included as Calls Heard. J. Taylor (Lake, I.O.W.) also included a long list of 28 mc calls in the body of his letter—all

ZONES HEARD LISTING

Listener	Post-war Zones	Post-war Countries
'Phone and CW		
N. A. Phelps (London, N.10)	40	172
O. A. Good (Oswestry)	40	164
K. Callow (Mansfield)	40	163
L. N. Goldsbrough (Wirral)	40	154
D. W. Bruce (Eltham)	40	141
M. H. Preston (London, S.W.17)	39	176
A. Baldwin (London, E.11)	39	152
C. S. S. Lyon (Liverpool)	39	149
A. E. Hardman (Manchester)	39	143
A. W. G. Boulton (Faringdon)	39	140
W. J. C. Pinnell (Sidcup)	39	130
R. A. Hawley (Goostrey)	38	141
G. Curtis (South Harrow)	38	137
A. Frost (Thornton Heath)	38	136
G. P. Watts (Norwich)	37	142
G. V. Haylock (London, S.E.13)	37	130
Dr. T. B. Williamson (St. Albans)	37	116
M. D. Lipscombe (Seaford)	37	115
M. Harrison (Darlington)	36	131
E. J. Logan (Hertford)	36	129
L. Collis (Banstead)	36	128
H. Owen (Tafo, Gold Coast)	36	119
F. A. Herridge (London, S.W.12)	36	110
D. L. Courtier-Dutton (Herne Bay)	35	105
N. S. Beckett (Lowestoft)	35	104
B. Cage (Ipswich)	35	98
R. Twidale (Scunthorpe)	34	97
Rev. D. D. White (Toller)	32	81
B. Hayes (Bletchley)	31	66
'Phone only		
M. D. Lipscombe (Seaford)	37	113
A. J. Slater (Southwick)	36	137
A. H. Onslow (Hove)	36	132
R. A. Hawley (Goostrey)	36	130
D. Heaton (Bradford)	36	130
D. W. Bruce (Eltham)	36	127
C. G. Tilly (Bristol)	36	125
L. Collis (Banstead)	36	120
T. W. Jones (Birmingham)	36	107
O. A. Good (Oswestry)	36	106
G. P. Watts (Norwich)	35	122
L. N. Goldsbrough (Wirral)	35	122
D. L. McLean (Yeovil)	35	120
G. Hare (Leadenham)	35	110
M. C. Pavely (London, S.E.6)	35	108
L. Tombs (Swindon)	35	103
N. S. Beckett (Lowestoft)	35	96
K. Callow (Mansfield)	34	84
C. S. S. Lyon (Liverpool)	35	105
R. S. Craig (Llanelly)	33	93
W. B. Harrald (London, S.E.21)	33	81
L. Shearlaw (Camberley)	32	81
J. Crunden-White (Chorleywood)	31	98
O. R. F. Mason (Southend)	30	59

NOTICE !

If your subscription is due, the renewal slip will have been in the envelope that brought you this issue. Please action as soon as possible so as to ensure your copy for the future.

heard between 1315 and 1700 on September 11. The bulk of them were W4's, which we have to cut out of our DX lists by reason of their terrific numbers.

T. W. Jones (Birmingham) collected Zone 29 with VK6FL, and two new countries—Saudi Arabia and Tanganyika. His best DX stations of the month, for consistency, were VS2BU, VS7IT, VU2RV, XZ2AG and VK2AGU. A. H. Onslow (Hove) has collected six new countries—ZD2KC, CR9AG, J8AAA, HR1MB, PK1MH and VP3LF. He also mentions that ZS6OL (Bechuanaland) is on 28 mc 'phone, but let us make it clear that only the Bechuanaland *Protectorate* is a separate country ; the ZS's in British Bechuanaland are in the Union of South Africa. As yet there has been no trace of a station in the B.P. For those following SHF1X (the schooner *Albatross*), A.H.O. gives the information that her route is Galapagos Is., Hawaii, Marshalls, Carolines, Dutch East Indies, Ceylon, Suez and home. The QSL address is in the list.

G. V. Haylock (London, S.E.13) has heard KX6USN (Bikini Atoll), J9AAK, W3KXO/J (Iwo-Jima), EP1A, TA2RF and FF8BK—all on the interesting side.

Maritime Mobiles

R. A. Hawley (Goostrey) has heard lots of "MM's" at the low end of the American 28 mc 'phone band, and thanks conditions for keeping the W's out of the way! Latest scalps are W1PPH/MM (s.s. *Explorer*), W2LDH/MM (s.s. *Cape Junction*), W2UWC/MM (s.s. *Samuel Grasford*), W4MLV/MM (s.s. *Thomas M. Lee*), W5AXI/MM (Tanker *Fullerton Hills*) and W6YLC/MM (s.s. *Exemplar*). He has a rival MM-fancier in the shape of D. L. McLean (Yeovil), who has heard most of the same ships plus W3NKS/MM (s.s. *Robin Roxley*) and WØWMZ/MM (Tanker *Fort Donaldson*).

D.L.M. brings up the question of counting MM's for new countries. Well, here we must abide by the decision of *CQ* for its WAZ Honour Roll ; this is that no ship, afloat, in harbour or in dry dock shall count as a contact in a *country*. Too bad, but there it is ! Country-counting applies to chunks of dry land and nothing else.

D. M. Tilley (London, N.18) writes to say that although XAMC gives his QTH now as a Box No. in Texas, the call has changed hands and a new operator is on the air as XAMC—so don't forward current reports to the U.S.A.

D. F. Willies (Holt) has a nice bag of DX for the month, including C1YT, who

R. Overshott, 710 Clayton Street, San Francisco, is a keen American SWL with home-built gear.

gave him a new Zone and a new country in one. He also listened quite a lot on 3·5 mc, and comments on the stations D4CN and D1AA on that band. The former sounded like a German ; the latter spoke good English. D.F.W. also heard UQ2BD up there, and hopes he is genuine. (Your Scribe heard LZ1BG on 3·5, but rather doubts his credentials !)

L. Collis (Banstead) has also heard D1AA, but on 7 mc. Another from him is D5AA, who states he is in the French Army of Occupation at Landau. YU4RL, also signing YR4RL, is said to be at Mostar, in the old province of Herzegovina. L.C. comments on the appearance of UA9CB on 'phone, and wonders why no one reached 37 Zones in the 'phone list ; curiosity now satisfied !

K. R. Toms (Boreham Wood) has returned to listening after a few months' absence, and comments : "The 14 mc band certainly has changed in the meantime ; I've never heard such a collection of weird noises all at once." He remarks that the 14 mc SLP found the 'phone band so full of Americans (not eligible for the list) that he had trouble winkling out anything that *was*—and a knowledge of Spanish would have been an advantage.

A. J. Slater (Southwick) has added two countries during the month—the famous J9CRP and VU7JU on Bahrein. Some 28 mc listening produced a spate of S9 'phones from KG6, and both that band and 14 mc yielded good signals from PK, KA, VS1, VS2, VU, J and, of course, KG6. A.J.S. was present, so to speak, at the opening of 28 mc for U.S.A., but was disappointed to find conditions tailing off again later in the month. As a matter of fact there is so much DX in the course of his letter that I find it very difficult to single out anything in particular. This is the main trouble nowadays—there simply is *so much* on the DX bands that only the lucky finding of a station that no one has ever heard before will produce any excitement at all ! Later on, as the sunspot cycle passes its maximum, DX reporting will mean something again ; just at present the routine DX is rather like collecting tram-tickets !

L. N. Goldsbrough (Wirral) comes back into circulation with a long and interesting letter ; he sums up the position early on by saying "I don't think I've heard anything that others won't have heard." He queries I6ZJ, CR4AX and CR4DO. Don't know the latter gentleman, but the other two are all right.

So L.N.G. then proceeds to talk about the Zones, and a few ambiguities among them. As he says, Zone 2 can only be sorted out with a call-book, an atlas and a lot of patience, since not *all* the VO6 signals come from Labrador. For Zone 29 he points out, rightly, that North Australia is no longer VK8, but VK5, which means that some VK5's are in Zone 29 and some

in Zone 30. (VK5NR is in Zone 29.) L.N.G. would very much like to see a *monthly* Zone competition, and he remarks that this shouldn't mean giving up too much space to tables, because the lower limit of the existing one could easily be raised. In September L.N.G. heard 34Z and 104C. Finally, he makes the suggestion that the "Zoned Listening" lists should be cleaned up by listing 'phone and CW together, but printing the 'phone call-signs in capitals and the CW in small type. This *is* a good suggestion, but, from the point of view of the slave who gets the lists licked into shape before they go to the printers (your Scribe himself !) a rather frightening one. Come down here some time, L.N.G., and see the lists for yourself—they're not all like yours, by any means ! But I have an open mind and will keep on thinking.

C. S. S. Lyon (Liverpool) reports an exciting month. On 14 mc alone he heard 36Z and 110C ; during the first 13 days he heard 33Z ! But he spared some time for listening on 3·5 mc as well (W4JNL on 'phone), and even 7 mc (ZL4GA on CW at 0700, RST 579). Pirates ! C.S.S.L. brings up this vexed subject and queries a lot of SV's, ZC1AR, ZC6JY, D1AA, SC2AD and TA3L. What a bunch ! But he managed to find YA3B, who, I believe, is genuine, as well as FM8AD, ZS3D, FQ3AT, ZD4AM and a lot of VS7 stations. As a parting kick, C.S.S.L. says : "Heard FW3KC the other day, and thought of the Wallis and Futuna Islands until I realised he might be W3KCF. He was ! So that UW5JB may be W5JBU."

B. Needham (London, W.11) sends in his first Calls Heard lists from a pre-fab surrounded by high buildings, where he has his gear in the coal-shed (a converted Anderson shelter). Not, as he says, an ideal situation, but he has been hearing things just the same.

K. Callow (Mansfield) has just returned to the fold after a month in hospital, and has promptly jumped his country total up to 163 by way of celebration. He has verifications from 98 of them now, including a card from ZD8A (QTH in list). The only band K.C. uses is 14 mc, so when he starts getting round to the others we may expect a further batch of new countries.

R. S. Craig (New Malden), having moved from Llanelly when just short of his 100C, has found conditions very interesting and comments on the wealth of DX during the first three or four days of September. J. M. Graham (Glasgow) has done a lot of work on 28 mc and also started "collecting" Maritime Mobiles ; he also logged the *Albatross* (SHF1X) off the coast of Panama.

E. A. Parkinson (Leeds) likes the Zone Listening idea and is also very joyful about the liveliness of 28 mc again. He hopes to get up a 40-foot *vertical* aerial with a screened feeder, which should reduce some of his local QRM and lengthen his logs. He reports hearing CR9AG and CR9AM both calling CQ unsuccessfully—they ended up by working each other. (Now that's a case in which a SWL report woul surely be rewarded with a QSL !)

M. Harrison (Darlington) is brushing up his Morse and has therefore broken into the general list. Curious ones in his report include SM8SW (SM5SW/MM, *en route* for U.S.A.) ; GCVV on 7 mc 'phone, said to be a ship in the Clyde ; and our

DX QTH

FM8AD	E. Midas, Lycee Schoelcher, Fort-de-France, Martinique.
HZ1AB	161 AACS Sqdn., 791 AAFBU, APO 616, c/o PM, N.Y.C.
J8AAM	APO 235, c/o PM, San Francisco, California.
J8ACS	AACS, APO 712, c/o PM, San Francisco.
J9AAW	125 Signal Service Co., APO 331, c/o PM, San Francisco.
MD1B	HQ Royal Signals, Benghazi, MELF 6.
SHF1X	Professor Hans Pettersen, Research Laboratory of Electronics, Gothenburg, Sweden.
ST2MP	c/o Posts and Telegraphs, Khartoum, Sudan.
TA3SO	QSL to WØSO, c/o TWA, Kansas City, Kansas.
TF3EA	Box 1080, Reykjavik, Iceland.
VP6LN	Box 133, Barbados, B.W.I.
VR2AR	RNZAF, Waucala Bay, Suva, Fiji.
VS1CE	G. R. A. Wright, British Far Eastern Broadcasting Service, PO Box 434, Singapore.
VS7GM VS7IT	Royal Naval Air Station, Trincomalee, Ceylon.
VU7AB	Box 370, Oil Coy., Bahrein Island, Persian Gulf.
XAMC	Signal Service Coy., APO 209, US Army, Trieste.
XZ2HP	S/L H. Pain (*ex-ZB2A*), Officers' Mess, RAF Mingaladon, Burma.
YV3AL	Box 18, Barquisimeto, Venezuela.
ZD1WB	Post Office, Waterloo Airport Freetown, Sierra Leone.
ZD4AL	West Africa Signal Regt., Accra, Gold Coast.
ZM6AF	Box 90, Apia, Samoa.

friend YO5J. He also remarks on mis-read calls and says he heard VE2GE during the SLP; he wonders how many of the logs will contain VP2GE!

Now here is someone else who has actually *logged* AC4BR—K. W. May (Southampton) heard him twice during August, at 2200 on the 12th and at 2115 on the 15th. He was calling "CQ ZL" on one of these occasions. But we still have no news of his authenticity or otherwise.

Calls Heard, SLP lists and other logs that couldn't be used for various reasons (including lateness of arrival) were received from many other listeners, some of them newcomers to this feature. I hope they will not be discouraged over their failure to appear, but please *do* watch the date, and read the instructions about Calls Heard. After all, through this coming season we are bound to receive more lists than the allotted space will take, so it is quite natural that the tidiest and best-prepared will be those that go to the printers! Make them look like the final lists—even to the detailed points of putting the name and address at the heading *without* "SLP," or "14 mc" or anything else between that and the list itself. Details of receiver and listening times at the *bottom*, please.

In connection with the HAZ list, you will note that the decision has been taken to let bygones be bygones and to list only post-war scores. This simplifies the list from every point of view and makes it possible to squeeze in a few extra figures from time to time, such as scores during the current month only! (We're gradually working round to that, it seems.)

At all events, whether officially laid on or not, let us have a friendly contest for the month of *October*, and when your next logs come in, state (if you are keen on it) the number of Zones and Countries heard during the period October 1-31. We will have an official month's contest later on and announce it beforehand.

Set Listening Periods, October

October 25, 1800-2000 GMT—
28 mc 'phone and CW.
October 26, 0800-1000 GMT—
14 mc 'phone and CW.

Zoned Listening

Your 14 mc lists of Calls Heard for the month, at whatever time of day you have listened, are this time to be kept to some of the less usual Zones, as follows: Zones 1, 8, 23, 24, 25, 26, 27, 28, 29, 31, 39 and 40. Rather a tough assignment, but all the lists should be pretty interesting! So now go ahead and find out the best times at which to collect those zones.

Deadline for all logs, letters, HAZ claims and so on is first post on November 5; address them all to the DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1. Good luck and good listening.

DX FORECAST FOR OCTOBER/NOVEMBER (ALL TIMES GMT)

	7 mc	14 mc	28 mc
NORTH AMERICA			
East and Central	2300-0700	1300-0900	1200-2100
West Coast	0500-0700	0500-0800 1600-1800	1500-1900
CENTRAL AND SOUTH AMERICA	2300-0600	2200-0400	0900-1700
AFRICA			
North of Cancer	All day	All day	0800-2200
South of Cancer	1900-0300	1600-2300	0800-2200
ASIA			
West of 75 deg. E.	1800-0800	0700-2300	0800-2000
East of 75 deg. E.	2200-0700	1300-1900	1000-1700
OCEANIA			
VK, ZL, ZK, ZM, etc.	0400-0800	0600-1200 1800-2300	0800-1400
PK, KA, KG6, etc.	2100-0600	1300-2300	0900-1400

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

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 callsign (e.g., W1AZ, 1BCR, 1CQL, 2DY, 2EF, etc.). The callsigns, 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

Sept. 27, 2100-2300 GMT

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

CE1AO, CO1AN, 2LA, 2MA, CR7BC, CX2CL, HK1FQ, HZ1AB, LU2AS, 4BH, 6AJ, 9MC, NY4CM, OX3GC, 3GG, TI2OA, 2RC, VO2AT, W6ZCY, ØYRX, YV1AN, 5AB, ZC6JG. (2200-2300 *GMT. Receiver :* 0-*V*-1).

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

'Phone : CN8AB, 8BA, CO2MA, CX2CL, HK1FQ, 1GF, 3FO, HZ1AB, LU2AS, 4CN, 8UA, 9MC, OA4AI, OQ5CA, OX3GC, TI2OA, 2RC, YV1AN, 5AB, 5ABQ.

K. R. Toms, 42 Hillside Avenue, Boreham Wood, Herts.

'Phone : CE1AO, CO2MA, HK1FQ, 3DD, LU4BH, 4CN, 5HG, 6HJ, TI2OA, 2RC, WØFYF, YV1AM, 5AB, 5ABQ. (*Receiver : Philips P.C.R.*)

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

CE1AO, CO2MA, 7BP, CX2CL, HZ1AB, HK1AN, 1FQ, 1KF, 3BJ, LU3CT, 4AS, 4BH, 4CN, 4DC, 4HB, 6AJ, 9MC, NY4AB, OQ5CR, OX3GG, PY2ET, 7AX, 7QG, TI2RC, YV5AB, ZC6JG.

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

AR8AB, CO2LA, 2MA, 7BP, CX2CL, HK1FQ, LU4BH, 6AH, 6AJ, OX3GG, PY2ET, 7AD, 7AV, TI2OA, 2RC, WØYRX, YV1AN, 5AB, 5 ABQ, ZC6JF, 6JL. (*Receiver: 5-valve Superhet.*)

K. Brent, 84 Swingate Lane, London, S.E.18.

CX2CO, HK1FQ, HZ1AB, LU4BH, TI2OA, 2RC, YV1AN, 5AB, ZC6JG. (*Receiver : Battery* 0-*V*-2.)

B. Needham, 31 Bomore Road, Kensington, London, W.11.

CO7VP, HK1FQ, HZ1AB, NY4CM, LU6AJ, OA4AI, OX3GG, PY5ABQ, TI2OA, 2RC, VP3LF, YV1AN, 5AB, ZC6JG. (*Receiver : R*208).

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

CO2MA, CN8AB, 8BA. 8BT, CX2CL, HK1FQ, LU2AS, 4BH, 4CN, 6AJ, 8UA, OX3GC, TI2RC, YV1AN, 5AB, (2130-2230 *only, Receiver :* 1-*V*-2.)

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

'Phone : AR8AB, CO2VB, HK1FQ, HZ1AB, OX3GG, PK1MH, PY4BI, 7AD, 7AS, 7QG, 7VP, 8AG, TF3EA, TI2RC, UA1AA, VO2AP, 2AT, VQ4ERR, XZ2AG, ZC6JG. (*Receiver : 10-valve Superhet.*)

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

'Phone : AR8AB, CN8BV, HI8WF, HK1FQ, 3FD, HZ1AB, LU1CN, 4BH, 4CN, 6AJ, NY4CM, TI2OA, 2RC, WØPXE, YV1AD, 1AN, 5AB, 5ABQ, ZC6JG. (*Receiver : Hallicrafters S.*20.)

T. W. Jones, 56 Cuckoo Road, Nechells, Birmingham.

'Phone : CN8AB, 8BV, CO2MA, CX2CL, HK1FQ, 3BI, HZ1AB, LU1JC, 4BH, 4CN, 6AJ, 7BH, 8UA, PY7AX, TI2RC, WØFYF, ØLTH, ØPXE, YV1AN, 5AB, 5ABQ, ZC6JD. (*Receiver : V55R.*)

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

CE1AO, CO1AM, 2MA, 7VP, CX2CL, HK1AN, 1FQ, 1GF, 3FD, 3FO, HZ1AB, LU1JC, 3AS, 3BH, 4BH, 4CN, 6AJ, 9MC, NY4AB, 4CM, OA4AI, PY2YU, 7AF, TI2OA, 2RC, VP3LF, XE3RE, YV1AN, 5AB. (*Receiver : AR88LF.*)

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

CN8AB, 8BA, 8BV, CO2MA, CX2AX, 2CL, HI8AN, HK1FQ, 1GF, 3FD, LU2AS, 4CN, 6AJ, OA4AI, OQ5CA, OX3GC, 3GG, PY7AD, TI2OA, 2RC, VO2AT, YV1AC, 1AN, 5AB, 5ABQ, 5ABT, ZC6JV. (*Receiver : R.*1155.)

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

'Phone : AR8AB, CO2LA, 2MA, 7VP, CX2CL, HI8AN, HK1FQ, 3FD, HZ1AB, LU1JC, 3PA, 4BH, 4CN, 4DC, 4BH, 5AV, 6AJ, 6LE, OA4AI, OQ5CA, PY2JQ, 7AX, TI2RC, WØFYF, ØLFU, ØYRX, YV1AN, 5AB, 5ABQ, ZC6JG. (*Receiver : SX* 24.)

J. Bradbrook, Chartwell House, Syke Cluan, Iver, Bucks.

CO2MA, CX2CL, HI8WF, LU4BH, 4CN, 6AJ, 9MC, NY4CM, OX3GC, TI2RC, YV1AN, 5AB. (*Receiver : SX* 28.)

D. Garrard, 17 Hill House Road, Ipswich, Suffolk.

'Phone : CE1AC, CO2MA, 7VP, CX2CL, HI8WF, HK1FQ, 1GS, 1SQ, 3FD, 3FC, HZ1AB, LU2AN, 4BH, 5HC, 7CN, OX3SF, TI2CA, 2RC, YV1AB, 1AD, 1AN, ZC6JG. (*Receiver : BC*-342-*N.*)

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

'Phone : CE1AO, CO2MA, 7VP, CX2CL, HK1FQ, 3FD, 3FO, HZ1AB, LU4BH, 6AJ, 8UA, NY4AB, PY7AT, TI2RC, YV1AN, 5AB, 5ABQ, ZC6JG. (*Receiver : Eddystone* 504.)

L. Collis, 6 Brighton Road, Banstead, Surrey.

CE1AO, CO1AM, 2MA, 7VP, CX2CL, HI8AN, HK1GE, 1GF, 3FD, HZ1AB, LU2AS, 4BH, 4CN, 5HG, 6AJ, 8UA, 9MC, NY4AB, OX3GC, 3GG, PY2ET, TI2OA, 2RC, VO2AT, YV1AN, 5AB, 5ABQ, 5ABT, ZC6JG.

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

CO1AM, 2MA, CX2CL, HI8AN, HK1FQ, HZ1AB, LU4CN, 4BH, 6AJ, 8UA, OX3GG, PY7AD, TI2RC, WØJED, YV1AN, 5AB, ZC6JG. (*Receiver : V55R.*)

28 mc

Sept. 28, 1600-1800 GMT

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

'Phone : W4FRD, 6DGU, 6DQ, 6DWS, 6EZB, 6LRN, 6MI, 6MYS, 6POZ, 6RYO, 6TL, 6USM, 6VFF. (*Period* 1700-1725 *only. Receiver* 0-*V*-1.)

B. Needham, 31 Bomore Road, Kensington, London, W.11.

'Phone : MD5AF, 5TS, OQ5BA, PZ1J, ST2MP, W5ALA, 5DAS, 5GJS, 5GUG, 5CWR, 5KBP, 5LTP, 5LUD, 5MPG, 5MWL, 5MZN, 5OJ, 6AGT, 6DQ, 6EPZ, 6MLA, 6VJQ, ZD4AL, ZS1BV, 6LF, 6NE. (*Receiver :* R208.)

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

'*Phone*: CE3DW, CN8BK, 8BV, HH5PA, OQ5BA, PY1JP, PZ1A, 1J, VE8AG, VO2AQ, VP4TAX, W2SXM/MM, 2VJW/MM, 5AC, 5ALA, 5AMK, 5BNQ, 5DAM, 5DIS, 5EGU, 5EUI, 5FOY, 5GWR, 5IBT, 5KBP, 5LAO, 5LFW, 5LM, 5LWV, 5MLU, 5MPX, 5MTA, 6AGT, 6AQP, 6ASZ, 6DCT, 6DGU, 6DQ, 6EPZ, 6FJS, 6GLR, 6GTL, 6JC, 6JRA, 6LKC, 6LWC, 6MBD, 6M1, 6MLA, 6MYS, 6NV, 6OB, 6ODW, 6OL, 6OPM, 6OZS, 6PCK, 6PDW, 6POZ, 6QGS, 6RYP, 6SA, 6SHV, 6SKZ, 6USM, 6VCB, 6VJQ, 6VRR, 6VUY, 6WCJ, 6WNH, 6WTJ, 6YLC/MM, 6YJA, 6YNT, 6YQY, 6YRJ, 6ZGQ, 6ZSY, 6ZWY, 7PEY, ZD4AL, ZS1BV, 1P, 1T. (*Receiver : Marconi CR*100.)

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

'*Phone*: HH5PA, OW5BA, PY7CP, PZ1J, ST2MP, VO1S, VQ3EDD, W5ALA, 5BNQ, 5CNK, 5GWR, 5IMB, 5KBP, 5KIV, 5LWV, 5NJS, 6AQP, 6ASZ, 6BJA, 6DGU, 6DQ, 6FJS, 6FQV, 6GLR, 6JC, 6JRA, 6LRN, 6LVQ, 6MI, 6MLA, 6MYS, 6NV, 6OB, 6ODW, 6OL, 6OPM, 6POZ, 6PRB, 6SHP, 6SHV, 6SKZ, 6SXM, 6TIK, 6UGT, 6UHA, 6VDJ, 6VPS, 6VUY, 6WAX, 6WMU, 6YNN, 6ZEX, 6ZGQ, 6ZXN, 7JIW, 7KNO, 7KWD, 7LVG, 7PEY, 7QNC (all Arizona), W6VKV/I6, ZS1BV, 1P, 1T, 5Q, 6BV. (*Receiver : Battery* 1-*V*-1.)

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

'*Phone*: CE3DW, CO8JB, CX1DB, LU3DH, MD5AF, NY4CM, OQ5BA, 5BL, PY1AEB, 2AJ, PZ1FM, 1J, ST2MP, SU1HF, VO2D, VP4TAX, VQ2EDD, 3EYE, W2VJW/MM, 5ABN, 5CNK, 5DAM, 5GAA/6, 5GJS, 5GWR, 5LUD, 5LWV, 5MWL, 5OJ, 6EJH, 6EZB, 6GLR, 6GTL, 6JRA, 6MYS, 6OWV, 6PDW, 6SKZ, 6VJQ, 6VKV/I6, 6WTJ, 6WNH, 6ZWY, 7KAE, YV4AM, ZC6JP, ZD4AL, ZS1BV, 1FD, 1P, 1T, 4AF, 6BG, 6BV, 6FD, 6NE. (*Receiver : SX* 24.)

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

'*Phone*: CO2JJ, CX1DB, HC2OA, HH5PA, LU1AW, 3BQ, OQ5BA, PY1AEB, 1JP, 7AS, 7CT, PZ1FM, 1J, VP3HL, 4TAX, VQ3EDD, W2SXM/MM, 5ABL, 5APN, 5BNQ, 5JAU, 5LUD, 5OJ, 6DGU, 6DQ, 6EJQ, 6JRA, 6QZA, 6VKV/I6, 6VMF, 6WTJ, ZS6BV. (*Receiver: Eddystone* 504)

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

CE3DW, CX1DB, CO2JJ, 2JM, 2JA, 2OM, 2RM, HH5PA, LU1AW, MD5TS, NY4CM, 4LM, OQ5BA, 5BL, PZ1FM, PY5AQ, ST2MP, VQ3EDD, W5ALA, 5GUG, 5IMB, 5LWV, 5OJ, 6EZW, 6LWC, 6OD, 6RYA, W2SXM/MM, 6VKV/I6, ZD4AL, ZS1BV, 1FD, 1T, 5DA, 6BG, 6BV. (*Receiver : AR88LF.*)

A. M. M. Payne, Hawksfield, 5 Bradmore Way, Brookmans Park, Herts.

'*Phone* : OQ5BA, W2SXM/MM, 5CNK, 5CPW, 5DAM, 5DNQ, 5ER, 5FDI, 5GWR, 5IMB, 5MPG, 5MZM, 5NJF, 5OJ, 5PLU, 6GU, 6JRA, 6LD, 6LYT, 6MBD, 6MY, 6ODW, 6OL, 6OQP, 6POZ, 6VEU, 6VFF, 6WG, 6WMA, 6WWI, 6XFM, 7KNO, ZD4AL, ZS1BV, 1JX, 1P, 6NE. (*Receiver : 9-valve Superhet.*)

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

'*Phone* : CE3DW, CO8JB, CX1DB, HK3DW, 4CO, LU1AW, 3DH, MD5GW, OA4AN, OQ5BA, 5BL, PY1AEB, 7AX, PZ1FM, 1J, UA6LA, VO2D, VP3HL, 3LF, 4TAX, VQ3EDD, 3PYE, W2SXF/MM, 5IMB, 6VKV/I6, YV4AM, ZD4AL, ZS1BV, 1P, 1T, 5DA, 5HF, 5Q, 5U, 6BV, 6FD, 6NE. (*Receiver : Hallicrafters S.*20.)

Rev. A. Cumming, Lacy Hey, Canford Cliffs, Dorset.

'*Phone* : CO8IB, HK1DB, LU3DH, 3JC. OQ5BA, PY1AEB, PZ1FM, 1J, ST2MP, SU1HF, VO2D, VP4TAX, W2VJW/MM (Turkey), W5ALA, 5BNQ, 5DAS, 5FDI, 5FRD, 5GWR, 5JYM, 5KBP, 5NMV, 5OJ, 5OZ, 6OPM, 6PRB, 6VKV/I6, 6XYK, 6JIW, 7KAE, ZS1BV, 1P, 1T. (*Receiver : Eddystone* 504.)

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

'*Phone* : CO2JA, LU1AW, 3DH, OQ5BA, VO2M, 2Z, 4A, VP4TAX, VQ3EDD, W5ABW, 5DAM, 5MAW, 5OJ, 6AGM, 6CHV, 6FZZ, 6GGU, 6MGU, 6NV, 6OB, 6OL, 6OPM, 6OUL, 6PIC, 6QZA, 6SV, 6TIR, 6VCB, 6VOP, 6VZB, 6WTJ, 7PEY, ZS1BB, 6BD.

CW : LU2DS, W5, 5BLU, 5COK, 5LXO, 5OJ, 6FSN, 6LXU, 6MI, 7PEY.

M. D. Lipscombe, 83 Stafford Road, Seaford.

HC2OA, LU3DH, PY2AJ, ST2MP, W5EGU, 5FVI, 5FSQ, 5MKG, 5MPG, 5MTA, 5OJ, 6AOT, 6ASZ, 6BJA, 6DAJ, 6EZB, 6NWY, 6UUA, 6WNH, ZD4AL, ZS1P. (*Receiver : 3-valve Converter plus R*1155 *modified.*)

A. H. Onslow, 10 Egmont Road, Hove, 4.

CE1AO, CO2JJ, CO2MA, HK3DW 3HD, LU3DH, MD5DW, 5TS, NY4AB, 4LF, OQ5AR, 5BA, 5BL, PY5AQ, PZ1J, ST2MP, SU1HF, UA6LA, VO2T, VP3HL, 4TH, VQ3EDD, W5FRD, 5GWR, 51MB, 5KBU, 5LJ1, 6BFF, 6FFT, 6MLA, 6MYS, 6POZ, 6QJ, ZD4AL, ZS1P, 1T, 4AF, 5Q, 6BG, 6BV, 6FD, 6NE, W6VKV/I6, W2IDZ/MM.

J. Bradbrook, Chartwell House, Syke Cluan, Iver, Bucks.

'*Phone*: CO2CM, LU1AW, 3DH, NY4AB, OQ5BN, OX3GC, PY2AJ, PZ1FM, 1J, ST2MP, VO2D, VP3AK, 3HL, 3OJ, 4TAX, VQ3EDD, 5PA, W6VKV/I6, ZD4AL, ZS1BV, 1P, 1T, 6BV, 6IK. (*Receiver : SX* 28.)

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

'*Phone* : KP4DR, NY4LM, OQ5BA, ST2MP, SU1HF, VP3HL, VQ3EDD, VU7AB, W2VJW/MM, 5AAT, 5ABN, 5BFX, 5BLU, 5BY, 5GUG, 5JJT, 5JWR, 5KBP, 5KC, 5KL, 5KYJ, 5LM, 5LPD, 5MEJ, 5MKG, 5MMK, 5MOP, XZ2YT, ZD4AL, ZS6EJ. (*Receiver :* 10 *valve Superhet.*)

G. de Cramayel, Elysée 18, Lausanne, Switzerland.

CO2OM, HK5DW, KP4CN, LU1AW, 3DH, MD5GW, 5TS, OQ5BA, 5BL, SU1HF, VP3HL, VQ3EDD, ZC6JP, W6VKV/I6.

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

'*Phone* : CO2JA, HH5PA, KZ5OJ, LU3DH, PZ1J, ST2MP, SU1HF, VO2D, VQ3EDD, W5ALA, 5BNQ, 5GJS, 5GWR, 5HGO, 5JUT, 5KKI, 5LAC, 5MBI, 5MGE, 5OJ, 6ASZ, 6CHV, 6DGU, 6EZB, 6JRA, 6GTL, 6LWC, 6LWV, 6LYP, 6MLA, 6MYS, 6NV, 6NPX, 6OB, 6ODW, 6OL, 6PEZ, 6POW, 6POZ, 6PRV, 6RYO, 6SA, 6KZ, 6SXM, 6TIK, 6VDJ, 6VDV, 6VJQ, 6WTJ, 6YOY, 6YZF, 7KNO, 7LVG, 7PEY, ZD4AL, ZS1BV, 1P, 1T. (*Receiver : Eddystone* 504.)

ZONED LISTENING

14 mc

B. Needham, 31 Bomore Road, Kensington, London, W.11.

1900-2100 *GMT.*

'*Phone* : *Zone* 7 : NY4CM, TI2OA, 2RC. *Zone* 8 : CO7VP, HH2CW. *Zone* 9 : HK1FQ, VP4TAE, YV1AL, 1AN, 5AB, 5ABQ. *Zone* 10 : HC2OA, OA4AI. *Zone* 11 : PY1AKR, 1MK, 1PZ, 2AC, 4BI, 4IE, 7AD, 7AF, 7QG. *Zone* 12 : CE1GP. *Zone* 13 : CX1VD, 2AX, 2CL, 2CO, LU1DC, 1JC, 4BH, 6AJ. (*September* 1-28 : *Receiver : R*208.)

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

Period 0630-0830 *GMT*

Zone 1 : KL7BD, 7GQ, 7GR, 7KV, 7LL, VE8AW. *Zone* 30 : VK2ALO, 2BA, 2CL, 2DA, 2DI, 2EO, 2JJ, 2OI, 2ON, 2PL, 2PU, 2RK, 2VA, 2WU, 3BZ, 3CN, 3DD, 3DQ, 3EO, 3HT, 3JE, 3KB, 3LD, 3LG, 3MC

CALLS HEARD—(*contd.*)

3MR, 3NC, 3VJ, 3XK, 3XQ, 3ZR, 4EL, 4ER, 4ES, 4GJ, 4JU, 4PK, 5CN, 5FL, 5FM, 5JE, 5JS, 7JH, 7NC, 7RK. *Zone* 31 : KH6GF, 6IJ. *Zone* 32 : VR5PL, ZL1BQ, 1DI, 1DR, 1IE, 1IH, 1LZ, 1NL, 1QM, 2AJ, 2BV, 2GL, 2GS, 2JK, 2FP, 2LB, 2QM, 2US, 3AB, 3AH, 3CX, 3GE, 3GU, 3HC, 3KR, 4AG, 4AM, 4CK, 4DC, 4HW, 4JQ.

Period 1900-2200 *GMT*

Zone 8 : KP4DH, 4KD. *Zone* 11 : PY1DD, 1FH, 2OE. *Zone* 13 : LU1ZA, 4BH, 5DB, CX1FY, 4CZ. *Zone* 33 : CN8MI, FT4AF, FA8HQ, 8IH, 9IP. *Zone* 35 : ZD4AP. *Zone* 36 : CR6AI, OQ5AV. *Zone* 37 : CR7BC, I6ZJ. *Zone* 38 : ZS1CZ, 2CL, 2X, 5YF, ZS3F. (*Receiver : Hallicrafters S.*20.)

W. H. Borland, Oakbank, Alexandria, Dumbartonshire.

1700-2300 *GMT*

'Phone : *Zone* 7 : TI2OA, 2RC, YN1HT. *Zone* 8 : CO1AN, 7VP, HH2CW, H 8WF.

CW : CM7AA, KP4DH, 4DO, KV4AB.

'Phone : *Zone* 9 : VP4CAE, YV5AB, 5AVQ.

CW : HK3CX, PZ1FM, VP4TO, 4TW.

'Phone : *Zone* 11 : PY4BI, 4CT, 7AD, 7AX, 7AY, 8AJ.

CW : PY1AIF, 1BS, 1DS, 1GJ, 1HX, 1JQ, 2AC, 6AT.

'Phone : *Zone* 12 : CE1AD

CW : CE3OZ.

'Phone : *Zone* 13 : CX1VD, 2CN, 2CO, LU1JC, 4BH, 6AJ.

CW : CX4CL, LU1ZA, 3EL, 3EQ, 5DB, 6DJK, 7BH, 8EE, 8EN.

'Phone : *Zone* 33 : CN8BV, 8ET, 8MZ, EK1AD.

CW : CN8BF, 8BH, 8BK, 8MI, EK1AA, 1AR, FA8BG, 8CF, 8IH, FT4AN.

'Phone : *Zone* 34 : MD2C, 5RH.

CW : MD1D, 1E, 2A, 5AA, 5AB, 5AK, 5DA, 5SB. *Zone* 35 : CR4AX, EL3A, ZD4AI, 4AM. *Zone* 36 : CR6AI, FQ3AT, OQ5AV, VQ2BK, 2MC.

Phone : *Zone* 37 : VQ4ERR.

CW : CR7BC, I1AHC/I6, I6ZJ, VQ4KTH, 5JTW. *Zone* 38 : ZE2JN, ZS1CZ, 1FQ, 1GK, 1M, 1UN, 2AG, 2F, 3D, 3F, 6CB, 6GL, 6HW, 6IU, 6KG, 6KK. (*Receiver: R*1116*A.*)

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

1900-2300 *GMT*

'Phone : *Zone* 9 : HK1FQ, VP4TJ, YV3AL, 5ABT. *Zone* 11 : PY1FR, 2HV, 2LM, 4BI, 4CT, 7AD, 7AX, 7AY, 7DM, 7IE, 7QG, 9AE. *Zone* 12 : CE2BQ. *Zone* 13 : CX1VD, 2CL, 4CS, LU4BH, 4CN, 7BH. *Zone* 34 : MD2C. *Zone* 37 : VQ4ERR.

1100-1300 *GMT*

'Phone : *Zone* 30 : VK2AGU, 2AML, 2IQ. *Zone* 32 : ZL2GX. (*Receiver : Eddystone* 504.)

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

0630-0730 *GMT*

'Phone : *Zone* 3 : VE7ZM, W6CVK, 6TUT, 6PXH, 6UZF, 6VFR, 7GC, 8YEZ/W7.9GUW/W7. *Zone* 6 : XE1PC.

CW : *Zone* 3 : W6RW, 7DXZ.

1830-2200 *GMT*

'Phone : *Zone* 9 : HK1FQ, 3DD, VP4TAE, 4TD, 4TJ, YV1AN, 3AL, 5AB, 5AP. *Zone* 11 : PY1FK, 1FX, 1HP, 1AFH, 1AKR, 2AJ, 2HV, 4BI, 4BK, 4IE, 7AD, 7DD, 7QG, 9AE. *Zone* 12 : CE3AT. *Zone* 13 : CX1VD, 2AX, 2BC, 2CL, LU1BQ, 1JC, 2AG, 2ER, 4BH, 4CN, 4XA, 5AD, 6AJ, 7BH, 9LA. *Zone* 33 : CN8AB, 8AM, 8BT, 8MB, 8MZ, EA9AI, EK1AD, FT4AI. *Zone* 34 : MD1A, 2B, 2C, 5RH, TR1P. *Zone* 35 : EL5B. *Zone* 36 : ZS6FN.

CW : *Zone* 11 : PY1BS. *Zone* 13 : LU1JA, 8AE. *Zone* 33 : FA8HQ, 9IR. *Zone* 34 : MD5KW. (*Receiver: Eddystone* 504.)

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

0600-0730 *GMT*

'Phone : *Zone* 3 : VE7AIE, 7AJN, 7VP, 7ZZ, W6ASZ, 6CHV, 6GMF/7, 6IDY, 6ITA, 6JUW, 6LSO, 6MBD, 6PBL, 6PDB, 6RO, 6VFR, 6WNH, 7ADH, 7CHZ, 7DL, 7DZL, 7EYS, 7GDE, 7HIA, 7HTB, 7JVU. *Zone* 6 : XE1AC, 1CQ, 1LA, 2GZ, 2IV, 3D. *Zone* 29 : VK2GU, 4KH. *Zone* 32 : ZL4FO.

CW : *Zone* 3 : W6OMD. *Zone* 29 : VK5FL. (*Receiver : R*1155.)

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

0600-1000 *GMT. Sept.* 1-17, 23-29.

'Phone : *Zone* 1 : KL7LF.

CW : KL7BD, 7GR, 7UM.

'Phone : *Zone* 3 : W6AOE, 6ASZ, 6BVM, 6CBR, 6IDY, 6JUW, 6LS, 6PO, 6SA, 6TT, 6VFR, 6WNH, 6HTY/7, 7ADH, 7BVO, 7DET, 7EYS, 7GC, 7HTB, 7JVU, 7VT, 8YEZ/7. *Zone* 6 : XE1AC, 1BC, 1BW, 1CQ, 1FU. *Zone* 29 : VK6VD. *Zone* 30 : VK2AGJ, 2AHA, 2RV, 2TC, 2TE, 3BF, 3HG, 3IG, 3KR, 3ND, 3TM, 3XD, 3XN, 7TR.

CW : VK2BA, 2CL, 2DA, 2OI, 2WU, 2YC, 3AJB, 3BZ, 3CN, 3EK, 3EO, 3FH, 3HG, 3JE, 3MC, 3NC, 3PN, 3RP, 4EL, 4VR, 4ZB, 5DQ, 5FL, 5JS, 5MO, 5RX, 7LZ.

'Phone : *Zone* 31 : KH6AW, 6GF, 6KA.

CW : KH6IJ, 6IV, KP6AA (1400 *GMT.*)

'Phone : *Zone* 32 : ZL2FF, 2GX, 4FO, 4GA.

CW : ZK1AB, ZL1BQ, 1BY, 1DI, 1LZ, 2BU, 2CF, 2FA, 2GL, 2LB, 2QM, 3AH, 3BJ, 3CX, 3GE, 3GU, 3HC, 3IC, 3IS, 3KR, 4CK, 4GA, ZM6AF.

T. W. Jones, 56 Cuckoo Road, Nechells, Birmingham.

Morning Period.

'Phone : *Zone* 1 : KL7FC. *Zone* 3 : VE7ZN, W6AOE, 6BUT, 6CVK, 6DI, 6FTU, 6KSE, 6MBD, 6PDB, 6PBL, 6PM, 6RCD, 6RO, 6RSF, 6VFR, 6WNH, 7BVO, 7DL. *Zone* 6 : XE1AC, 1BC, 1BW, 1CQ, 2GZ. *Zone* 30 : VK2GU, 2TE, 4KH. *Zone* 31 : KH6KA. *Zone* 32 : VR6AA.

GENERAL

27 mc

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

'Phone : KP4CD, 4CM, W2HI, 2MM, 4CPP, 4FWH, 4SXP. 5BEB, 5BUZ, 5CPP, 5KZP, 5LWU. (*Receiver : AR*88LF.)

3·5 mc

D. F. Willies, The Wilderness, Grove Road, Holt, Norfolk.

'Phone : D1AA, 2DB, 2DV, 2GJ, 2KW, 4CN, LX1BT, ON4BW, 4EDB, 4JW, 4KD, 4OT, 4PLA, 4ZT, OZ1AJ, 2CN, 3FM, 4LV, 6AA, 7JC, 7KW, 9B, PAØAD, ØAG, ØBM, ØCA, ØCFM, ØCT, ØDE, ØDF, ØEDO, ØGI, ØID, ØIMK, ØJA, ØLI, ØME, ØNJ, ØOE, ØPB, ØPN, ØPR, ØPWX, ØQP, ØQR, ØSH, ØSL, ØTW, ØVF, ØVG, ØVH, ØWD, ØWF, ØWH, ØXZ, ØZA, ØZY.

CW : OK1TG, OZ9DQ, PAØKI, ØYA.

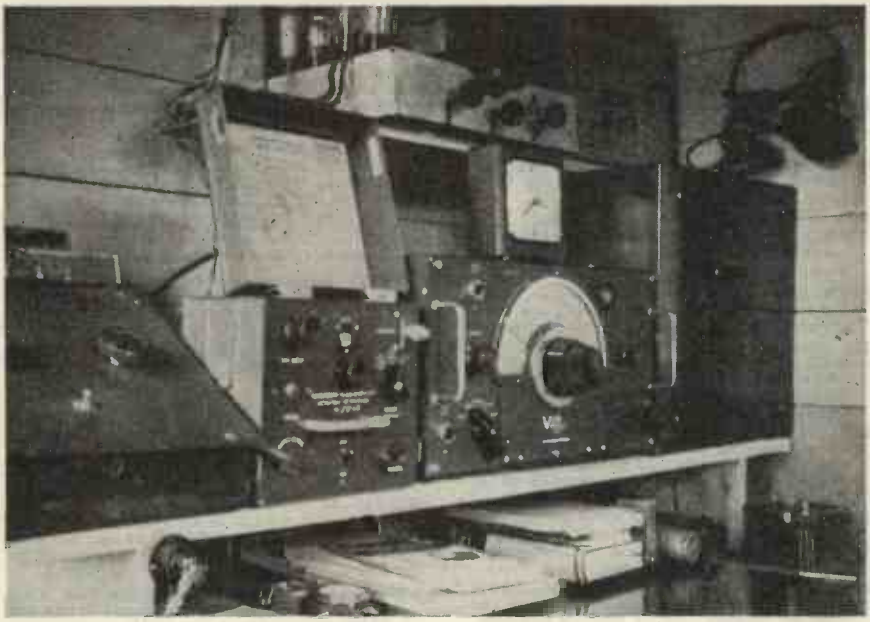
1·7 mc

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

G2AAW, 2AHH, 2BDQ, 2DGB, 2FLK, 2IK, 2JM, 2KO, 2KS, 2NV, 2XL, 3AJN, 3AOW, 3AZT, 3MT, 3NJ, 3PU, 3TS, 4GJ, 5UH, 5XB, 6HN, 6SØ, 8UL, GW2BG, 3BAZ, 4FW, 5BI. (*Receiver : AR*88*LF.*)

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

G2ABR, 2CBA, 2CFC, 2FLK, 2JG, 2KO, 2NY, 2OO, 3ADQ, 3AGP, 3AIL, 3BA, 3BJJ, 3FDO, 3FJ, 3NJ, 3OJ, 4FB, 4GJ, 6AB, 6DV, 6FT, 8OJ, 8QJ, GD3ABB, 5CZ, GM2DVV, 2HDH. (*Receiver : R*1224*A.* Sept. 14-28)



SWL STATIONS No. 5

THIS is the outfit operated by J. Drylie, 14 Erskine Street Cottages, Alloa, Clackmannanshire, Scotland, who has his own shack out in the garden.

He is, however, very limited for aerial space and all his reception is necessarily on a 7-foot vertical rod, mounted at the apex of the shack roof. Furthermore, he is without "main juice," so everything has to be run from batteries.

At the left in the photograph is a home-built amplifier for audio reproduction and experiments ; next along the line is the ex-Government wavemeter, then the main receiver which is a V55R. The vibrator pack for this is mounted on the top shelf in the right-hand corner ; it was converted from a mobile amplifier, the biggest difficulty being the suppression of RF, which was rather troublesome until a good deal of work had been put in to obtain thorough screening.

To the left of the vibrapack is a 7-valve superhet used as a stand-by receiver and for experimental work.

J.D. first became interested in short-wave listening in October of last year ; now, to quote his own words " Every spare minute of my time is spent in the shack, the bug having bitten me well and truly! "

Readers will be interested in this short description of yet another Scottish SWL station and will join with us in congratulating J.D. on the manner in which he has been able to overcome what for many people would have been formidable difficulties.

THE 1·7 MC CLUB CONTEST

The second annual *Short Wave Magazine* 1·7 mc Club Transmitting Contest is announced in "Month with the Clubs" in the October issue. Last year's affair was a great success, when 20 Clubs entered ; G2YS (Coventry), G3LP (Cheltenham) and G3AFT (Grafton, London) emerged as the first three. The period of the Contest is November 15-23, CW in the 1715-2000 kc band, and as before, Club stations competing will identify themselves by signing "CQ MCC" (Magazine Club Contest). Since there are many more Clubs active and with their own callsigns than at this time last year, an even larger entry is expected. The November issue of the *Short Wave Magazine*, due on November 5, will carry a list of Clubs known to be competing.

THE F.O.C. CONTEST FOR SWL'S

On p. 275 of the August issue of the *Short Wave Listener* we announced the SWL section of the F.O.C. Contest, starting on November 1. There has since been a slight change in the rules—the code-group identification system has been dropped, so that to claim points SWL's need log QSO details only. Look over the rules again, and get ready for what should be a very interesting and stimulating affair for all SWL's who can read Morse.

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.

D4AOP *c/o W2DWA, 139 Orchard Street, Bloomfield, New Jersey, U.S.A.* 'Phone on 14 and 28 mc bands. 100 per cent. QSL station.

F3CW 51 *Rue Eugene Caron, Courbevoie, Seine, France.* CW on 3565, 7103, 14050 and 28100 kc, operating 3·5 mc after 2000 GMT; other bands during mornings, afternoons and week-ends.

G2CKN *Ringfield House, Hurworth-on-Tees, Darlington, Co. Durham.* CW on 7015 and 7034, operating over week-ends and most evenings.

G2F1 *Signals Section,* 146 *Squadron, A.T.C., Dock Road, Northwich, Cheshire.* Operating CW on 5708 kc, during period 1930-2100 on Tuesdays and Thursdays, Sundays 1000-1200. 100 per cent. QSL for efficient reports.

G2IN 114 *Cambridge Road, Churchtown, Southport, Lancs.* Operating 'phone on 28 mc, 1100-1200 and after 1600 GMT daily and all day on Sundays, VFO-controlled. Reports also wanted on 58 mc 'phone.

G3AHF 16 *Alfred Street, Northwich, Cheshire.* Reports wanted on 7 and 3·5 mc CW, operating evenings 2000-2359 clock-time, except Tuesdays and Thursdays; also on at week-ends.

G3AHF/A *Address as above.* CW operation on 3·5 and 7 mc, 2100-2230 clock time on Tuesday and Thursday evenings, and on Sundays 1000-1200. (146 Squadron A.T.C., Northwich.)

G3AQN *Box* 2, *Oswestry, Salop.* Reports on 7 mc 'phone and CW from outside U.K., and on 14 mc 'phone and CW from all parts; operating periods irregular.

G3AVJ 68 *Almonds Green, West Derby, Liverpool,* 12. Operating on 7013 and 14026 kc, also VFO-controlled; reports wanted from outside U.K. and particularly from South America on 14 mc signals.

G3AZL 20 *Green Court Avenue, Croydon, Surrey,* CW on 3550, 7017, 7100, 14034, 14200 and 28068 kc, operating after 1800 GMT and during week-ends from 0800 GMT. Reports only wanted from DX for bands.

GW3BAZ 5 *Llantarnam Road, Gabalfa, Cardiff, South Wales.* VFO-controlled CW on 1·7 and 3·5 mc bands, operating 1800-2300 on week-days and 1000-1400 on Sundays, clock time.

G3BKE 40 *Angers Hill Road, Blackpool, Lancs.* CW on 7019 kc, during periods 0600-0730 and 1745-1830, clock time.

G3BRA *Norham House, Norham-on-Tweed, Northumberland.* Operating CW on 1·7, 3·5, 7, 14 and 28 mc bands, at various times mornings and evenings.

G3CED 17 *Ethel Road, Broadstairs, Kent.* Operating CW on 3·5 mc, 0545-0630 daily, and most evenings, also over week-ends.

G3CFJ 15 *Hillcrest Road, Yeovil, Somerset.* CW on 1·7, 3·5 and 7 mc. 100 per cent. QSL for correct reports.

G5WA *Nanpantan, Windmill Road, Minchinhampton, Stroud, Glos.* CW on 14016 and 14080 kc.

I1OJ *Via Giulia di Gallese* 4, *Rome, Italy.* VFO-controlled CW on 7, 14 and 28 mc bands.

I1WC *Ponte a Moriano, Lucca, Italy.* CW on 14020 and 14070 kc, and 'phone on 14200 kc, operating 0800-1000, 1400-1800 and 2300-0400 GMT daily.

MB9AD 12 *Wireless Squadron, Royal Signals, B.T. Austria.* Reports wanted on 14 mc 'phone and CW.

VE2AL 14 *Dufferin Road, Hampstead, Quebec, Canada.* Operating CW at irregular periods on various frequencies in 7 and 14 mc bands.

W1JAK 1686 *State Street, New Haven, Connecticut, U.S.A.* 'Phone on 14 and 28 mc bands; also operating QRP mobile with 13 watts near 29000 kc.

W1NMH 99 *Mauran Street, Cranston, Rhode Island, U.S.A.* Operating 'phone on 28650 and 29000 kc during period 1200-1800 GMT daily.

W2AEY 338 *Elmora Avenue, Elizabeth* 3, *New Jersey, U.S.A.* VFO-controlled CW on 14 mc, during periods 1330-1800 and 2300-0100 GMT daily.

W2CLL 76 *Fuller Road, Albany* 3, *New York, U.S.A.* Working CW on 7009, 7024, 14018 and 14048 kc, 2300-0500 GMT daily.

W2CYS *Box* 14, *Freehold, New Jersey, U.S.A.* VFO-controlled 14 mc 'phone and CW, also 'phone on 28500 kc.

W2FEA 104 *North Munn Avenue, Newark* 6, *New Jersey, U.S.A.* CW on 3·5, 7 and 28 mc bands; operating 0500-0700 GMT on 3·5 mc, and 1700 GMT onwards on 28 mc. VFO-controlled on 7 mc.

W2MAK 29 *West* 130*th Street, New York City, U.S.A.* VFO-controlled 'phone and CW on 7 and 14 mc, operating from 2300 GMT.

W2PQM 436 *West* 204*th Street, New York City, U.S.A.* Operating CW on 14128 kc, 2100-2359 GMT. 100 per cent. QSL station.

W2QOD 907 *St. Marks Avenue, Brooklyn* 13, *New York, U.S.A.* CW on 14010, 14055, 14125 and 14150 kc, operating periods irregular.

W3ANO 125 *North Madison, Allentown, Penna., U.S.A.* Operating CW on 14150 kc spot, also VFO-controlled, 1800-2359 GMT.

W3IKX 5709 *Ethelbert Avenue, Baltimore* 15, *Maryland, U.S.A.* 'Phone on 14250, 14275 and 14298 kc, 1800-2359 GMT daily, 0001-0230 GMT at week-ends.

W3JYS 8208 *Queen Anne's Drive, Silver Spring, Maryland, U.S.A.* 'Phone and CW at LF ends 7, 14 and 28 mc bands; operating periods irregular.

W4FIN 1043 *Oglethorpe Avenue, S/W, Atlanta, Georgia, U.S.A.* CW and 'phone on various frequencies in 3·5, 7, 14 and 28 mc bands.

W4GTS *as for W4FIN above.*

W4IYT 4860 *South-West* 5*th Street, Miami, Florida, U.S.A.* Operating CW at LF end of 14 mc band, during period 0001-0830 GMT daily.

W5FIV 907 *North-West* 15*th Street, Fort Worth, Texas, U.S.A.* Operating CW on 14005, 14072, 14146, 28010 and 28144 kc, during period 0500-0900 GMT daily.

W6NDT 2760 *Easy Avenue, Longbeach* 10, *California, U.S.A.* VFO-controlled CW on 7 and 14 mc bands, operating after 1400 GMT on week-days, and 0200-0600 GMT at week-ends.

W8BF 20470 *Lorain Road, Cleveland* 16, *Ohio, U.S.A.* Reports wanted on 14 mc 'phone.

ZD4AM *H. Owen, West African Cacao Research Institute, Tafo, Gold Coast.* Critical reports wanted on VFO-controlled 14 mc CW, operating during early evenings.

ZS2AZ *Box* 32, *East London, South Africa.* Reports on 'phone on 14100, 14338 and 28200 kc, operating periods irregular.

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

DX broadcast

World-wide reception of Short Wave programmes

Twelve months have elapsed since the first number of the *Short Wave Listener* appeared in print. At that time I proposed that we should make a short-wave world cruise together; now, I venture to suggest that the number of countries we have missed on our tour has been very few indeed. On our east-west track we have journeyed from Australia to Hong Kong, Malaya, Burma and India to Iran, a brief hop to Ethiopia, the Sudan and Morocco.

A halt was made at the Azores before reaching Jamaica, the United States and Hawaii. On our north-south trip we have listened to programmes emanating from Iceland, Newfoundland, Canada, and in all the Central and South American countries, some of the outstanding South African broadcasts during the Royal visit, and a glimpse of the South Pole during Admiral Byrd's most recent expedition. Truly, the short waves have an abundance to offer !

Due to space considerations it has not always been possible to name all my correspondents individually in this feature, so may I now take this opportunity of thanking you collectively for your welcome assistance. Without your help this monthly comment would be very sketchy indeed, so please keep up the good work and join the band of enthusiasts who, by their united efforts, contribute to the benefit of every one of our readers interested in short wave broadcasting.

Last month's list of Calls Heard in the DX Broadcast section had of necessity to be omitted, but I am asking the Editor to give more space to this feature in this number. Generally speaking, the standard has improved, but please remember to state the date, time, type of receiver and the aerial system in use.

Once again may I remind you of the special broadcast from Sweden for the benefit of readers of the *Short Wave Listener*. This will be on Sunday, October 26, from 1600 to 1700, with a repeat performance on Monday, October 27, from 0200 to 0300.

Both transmissions will be radiated over SDB2 on 10780 kc (27·83 m) and SBT on 15155 kc (19·80 m.).

GENERAL COMMENTS

Australasia

There is quite a batch of interesting news from down under.

R. Burr (Loughborough) reports VLR2 on 6150 kc logged with an S9 signal at 2050, and carrying the National programme. J. H. Simpson (London, N.W.6) has heard VLQ3, Brisbane, on 9660 kc at 2030. VLG6, Lyndhurst, on 15240 kc, has been well received by J. H. Saunders (Torquay) at 0530, and "Sparks" (London, S.E.25) informs us that another Lyndhurst station can sometimes be found on 15230 kc, namely, VLH5.

The majority of the programmes directed to the British Isles have their origin in transmitters located at Shepparton. Recently we listened to an interesting talk on this community, from 0745 to 0800 one morning, after which came the hour chimes for five o'clock from the Melbourne Post Office. Shepparton, which is a town in the state of Victoria, lies about one hundred miles from Melbourne, and takes its name from the shepherds who were primarily associated with the district. In the '70's there was dry farming here, but the Golborn river has since been utilised to provide well ordered thirty-acre fruit farms with water. With a population of eight thousand, Shepparton now claims to have the largest canning factory in the British Commonwealth.

Dr. T. B. Williamson (St. Albans) reports an unusual Australian station which he logged recently. This is VLW7 in Perth, Western Australia, heard at 0005 on 9520 kc.

Here are some of the daily broadcasts

now operated by Radio Australia. The first transmission extends from 0300 to 0400, and is intended for Allied Forces in Japan. Normally, VLB5 (21540 kc), VLC9 (17840 kc) and VLG6 (15240 kc) are in use ; on Saturdays and Sundays the broadcast commences one hour earlier, and VLA9 (21600 kc) operates in addition. On Saturdays too, the special sports broadcast can be yeard from 0330 to 0730 through VLB5 and VLG6.

VLA6 is again used for a special broadcast to Siam from 0630 to 0650.

The morning transmission to the British Isles extends from 0700 to 0830, with a news bulletin at 0730, and is operated by VLA6 and VLC9 (off at 0745), and except on Saturdays, VLB10 (11740 kc). From 0745 to 0845 a second French transmission, this time to New Caledonia, comes out over VLC4 (15320 kc) and VLG3 (11710 kc). The General Forces

Monthly Comment by R. H. GREENLAND, B.Sc.

North America and South Africa share a programme from 0430 to 0545 daily over VLA5 (15320 kc) and VLC7 (11840 kc) for America, and VLG6 (15240 kc) for Africa. A French language broadcast, 0600-0645, is directed to Europe over VLC9 and to Tahiti over VLG6. On Saturdays, however, the latter is served by VLA6 (15200 kc). On Wednesdays only, broadcast is given from 0830 to 1200 over VLA6 and VLB10 (VLC4 from 0855). An alternative programme for Asia operates over VLG10 (11760 kc) until 1200, at which time a new two-hour transmission is made to Asia over VLB10, VCL4, VLA6 and VLG10. The eastern coast of North America is served by VLB (9540 kc) and VLC7 (11840 kc) from 1300

PROGRAMME PERIODS

I. BST 0700-0830.

0700	KGEX	San Francisco, 17780 kc (16·87 m). Armed Forces Radio Service programme to Mid-Pacific.
0730	KWID	San Francisco, 11900 kc (25 21 m). Armed Forces Radio Service broadcast to South Pacific.
0800 (Sats.)	VLG6	Lyndhurst, Australia, 15230 kc (19·69 m). Sports commentary.
0815	TPA2	Paris, France, 15240 kc (19·68 m). Broadcast in French. Close with "Marseillaise" at 0830.
0830	VLA6	Shepparton, Australia, 15200 kc (19·74 m). News in English.

II. BST 1300-1400.

1315	OIX4	Bjorneborg, Finland, 15190 kc (19·75 m). News in English.
1330	EQB	Teheran, Iran, 15100 kc (19·87 m). Native music.

III. BST 1600-1800.

1600	XGOY	Chungking, China, 11915 kc (25·18 m). News in English.
1615	SBT	Motala, Sweden, 15155 kc (19·80 m). Topical talk in English.
1630	VUD10	Delhi, India, 17830 kc (16·83 m). News in English.
1730		Moscow, 9740 kc (30·80 m). English programme.
1745 (Sats.)	VQ7LO	Nairobi, Kenya Colony, 4860 kc (61·73 m). Serial play.
1750		Singapore, Malaya, 9690 kc (30·96 m). News in English.
1800	ZOH	Colombo, Ceylon, 4900 kc (61·22 m). Dance music, closing announcements, "God Save the King."
1800 (Sun.)	VQ7LO	Nairobi, Kenya Colony, 4860 kc (61·73 m). Programme summary for forthcoming week.

IV. BST 1830-2030.

1830 (Suns.)	SEAC	Colombo, Ceylon, 17770 kc (16·88 m). Broadcast to British Isles, 1830-2030 BST.
1900	CKCS	Sackville, Canada, 15320 kc (19·58 m). La Voix du Canada.
1945 (Suns.)	VQ7LO	Nairobi, Kenya Colony, 4860 kc (61·73 m). Epilogue. No subsequent announcements.
2000 (Suns.)	SEAC	Colombo, Ceylon, 15120 kc (19·85 m). Broadcast to British Isles, 1830-2030 BST.
2030		Roumania, Radio Romania Libere, 6220 kc (48·23 m). Broadcast in English.

V. BST 2100-2300.

2100 (Suns.)		Tangier, Radio International, 6200 kc (48·38 m). Broadcast in English.
2130	VLA8	Shepparton, Australia, 11760 kc (25·51 m). Broadcast to British Isles ; News from Melbourne News Room.
2135		Sofia, Bulgaria, 9345 kc (32·06 m). News in English.
2145	FZI	Brazzaville, French Equatorial Africa, 9980 kc (30 05 m). News in English.
2150	WRUL	Boston, Massachusetts, 15290 kc (19·62 m). World Wide Broadcasting Corporation's Topical talk on current news.
2200	VLG7	Lyndhurst, Australia, 15160 kc (19 79 m). Time Signal for 7 o'clock AEST. Kookaburra call in ABC National Service. Bugle Call, followed by Daily Dozen conducted by Major Hatfield.
2215		Leopoldville, Belgian Congo, 11645 kc (25·76 m). Broadcast to British Isles. Dance music.
2230	CSW6	Lisbon, Portugal, 11040 kc (27·17 m). Variety (orchestral and vocal).
2245	ZYC8	Rio de Janeiro, Brazil, 9610 kc (31·22 m). Variety programme. Announcements in Portuguese only, with mention of Radio Tamoio in Rio de Janeiro.

to 1415, and the American west coast from 1500 to 1615 over VLA8 (11760 kc) and VLB9 (9615 kc). The latter broadcast is carried simultaneously to South Africa from 1515 to 1615 by VLG4 (11840) and VLC (15200 kc).

The afternoon transmission to the British Isles extends from 1400 to 1500 over VLG10 (11760 kc) and VLA6 (15200 kc) till 1445, and by VLC7 (11810 kc) from 1430 to 1500. In the evening the British Isles is served by VLC11 (15210 kc) and VLA8 (11760 kc) from 2000 to 2130, and we then have a fourth programme over VLG7 (15160 kc) from 2200 to 2315. The final broadcast by Radio Australia is a Forces programme over VLA6 from 2115 to 2315, and a similar broadcast is made simultaneously from 2145 to 2315 to North America over VLB7 (17800 kc) and to South America over VLC9 (17840 kc).

Noumea is the capital of the French colony of New Caledonia, one of the largest islands in the entire Pacific area. It boasts of a short wave broadcasting transmitter in FK8AA, which operates on 6208 kc, and can sometimes be logged just before the close down at 1000. The full daily schedule is : 0800-1000 ; 0100-0200.

From New Zealand I have received word that all the technical equipment is not yet to hand, so that no definite date can be given for the opening of the short-wave service there. My informant is Mr. James Shelley, Director of the National Broadcasting Service, so you can accept this news as being official. However, Graham Hutchins, Radio Australia's DX editor, informs me in a letter dated September 11 that tests were carried out on 9540 kc and 11780 kc during the last week in August. The daily tests were from 0900 to 1000 and 2YB's programme was relayed. The New Zealand authorities have installed two ten-kilowatt transmitters and have half-wave stacked arrays, beamed on Australia, already erected. Work on additional aerials to cover the Pacific area is now in progress ; the four frequencies allotted so far are : 6080 kc, 9540 kc, 11780 kc and 15280 kc. All communications to New Zealand in connection with these transmissions should be addressed to : The Director, National Broadcasting Service, P.O. Box 3045, Wellington, C.1, New Zealand.

Asia

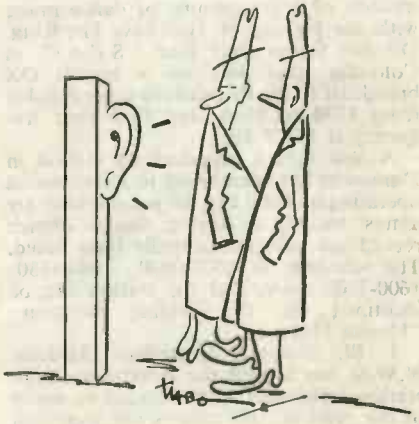
There is short-wave activity at Hollandia in Dutch New Guinea, where there is a post with the prepossessing name of : "The Jungle Broadcasting Station." Working on 7200 kc, it is known to close each day at 1130 with the playing of : "The End of A Perfect Day."

Further west is the island of Celebes, from which, on September 7, at 1330, I. Guggenheim (Haifa, Palestine) logged an English programme entitled : "Rendezvous in London" on 9357 kc. This is the direction he heard at 1400 on that date : "You are tuned to the Macassar Radio Station in the capital of East Indonesia. The time is ten o'clock Macassar Time." The call-sign used for this transmitter is YFA4.

In the Philippine Islands the number of short wave broadcasters has grown apace. KZRH, Manila, has been putting in a good signal on 9630 kc until it signs off at 1600. Another Manila station, KZRM, after a long interval, has returned to the air on 9570 kc ; the schedule is not known, but it has been heard at 1000. A third broadcaster boasting the name : "The Voice of America in Manila" was heard testing on 11840 kc between 1000 and 1200 on September 1.

Next comes KZFM, 9515 kc, announcing as : "The People's Station KZFM in Manila on 710 kc in the Broadcast band and 9515 kc in the Short Wave band." Finally there is KZRC, The Voice of CEBU, on 6130 kc. The programme can be heard with news at 1230 followed by variety until 1500.

In Hanoi, Indo-China, there are at least two different short-wave broadcasting services. The first is Radio France, which formerly operated on 9465 kc, the second is : The Voice of Viet Nam, heard on 12020 kc. Radio France in Hanoi recently



It must be one of those listening posts. . .

changed its frequency to 6048 kc, and was logged with news in English at 1205.

Its schedule is 1100 to 1300. Radio Viet Nam's transmissions are of poor quality, but it may be possible to differentiate between the English news at 1200 and the French at 1215.

In Malaya, the British Far Eastern Broadcasting Service in Singapore has been operating on a new frequency of 9690 kc.

As from September 28, the following new schedules came into effect. Orange: 0530-0630 (11735 kc), 0800-1700 (6770 kc): Purple: 0530-0630 (15300 kc), 0800-1700 (9690 kc, Experimental). Singapore has also been recorded on 4825 kc at 1530.

An old timer in VUB2, Bombay, on 4880 kc was heard on September 24, with various musical items after 1700. The closing announcement was given in English by a lady at 1730, the final item being the striking of eleven by the studio clock. The signal is normally quite good, peaking to S8 prior to the close down. Of outstanding interest was the broadcast from VUM2, Madras (4920 kc) on September 27. In St. George's Cathedral, Madras, nine Bishops were consecrated in the new United Church of South India, comprising a union of hitherto Anglican dioceses with Methodists and the South India United Church of Congregationalists, Presbyterians and Lutherans.

Excerpts from the ceremony were rebroadcast between 1630 and 1700. VUM2 then closed down after station directions in English and the half-hour studio clock chimes. Simultaneously, ZOH, Colombo, Ceylon (4900 kc) terminated its transmission of a programme of dance music with the playing of God Save The King. Do not forget that Radio S.E.A.C. in Colombo also puts out a special DX broadcast to the British Isles every Sunday from 1730 to 1930, and that your frequency is 15120 kc.

A new Syrian broadcasting station in Damascus has been heard in recent weeks operating on 6000 kc; the programmes are almost entirely in Arabic, though French recordings have occasionally been noted. The schedule is 0500-0530, 1040-1130, 1600-2100 daily, and the station can be identified by the Arabic direction: "Houna Damash."

J. M. Simpson (Aberdare Gardens, N.W.6) has logged the Azerbaijan, Iran station which has so far eluded so many of our readers. He reports fair reception from 1845 to 2000. F. W. Hardstone (Streatham, S.W.16) reports hearing it on 12180 kc at 1740. I have now received a registered letter from Mr. Safa Haieri, Director-General of the Department of Labour, Propaganda and Radio of Azerbiajan: the letter is written both in English and in Persian script, and confirms my reception of several broadcasts from Tabriz. It indicates, however, that the frequency of 12180 kc is not now in use. Radio Tabriz broadcasts music and news daily during each of two separate transmissions; the first commences at 1000 and closes at 1200 on a frequency of 11960 kc, the other runs from 1430 to 1800 on 6090 kc. The news in English is given at 1130, on 11960 kc only. The daily schedule for Tabriz is included in the Tabulated Schedules section.

Africa

Little has been heard of the South African broadcasting stations during the summer season. The Pietermaritzburg transmitter on 4878 kc is now on the air with a power of 1500 watts. The daily schedule is: 0445-0630, 0815-1210, 1400-2105. From Equatorial Africa, the Belgian National transmitters at Leopoldville in the Congo basin, have been most prominent, however. Normally, OTC5 in the 16-metre band is worth following, and latterly a new transmitter on 11645 has been logged at good strength during the period 2030-2140. The writer found this one with dance music at 2115 on September 21, during its daily English programme to the British Isles.

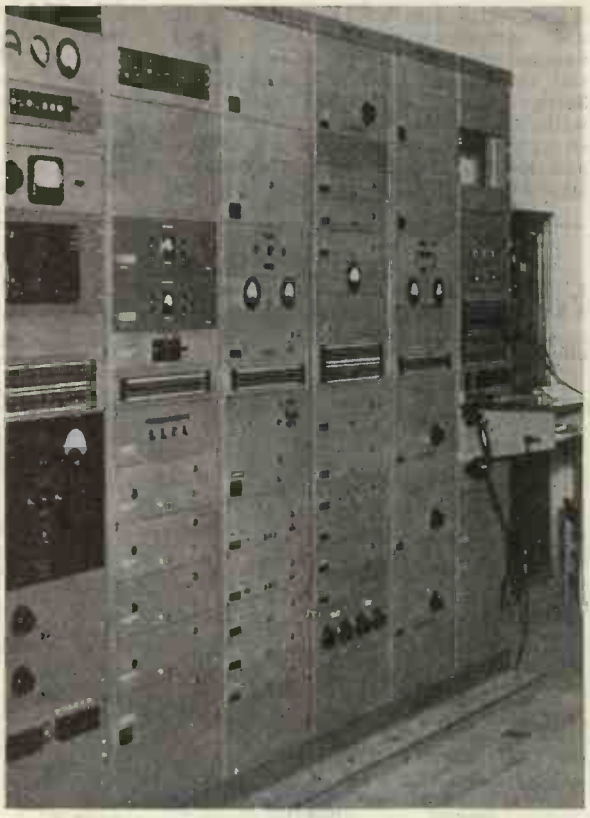
VQ7LO, Nairobi, Kenya, has been a good signal during the early evenings on 4860 kc. F. W. Hardstone (London, S.W.16) reports it S6 at 2030. On Saturdays there is a serial play at 1650, and on Sundays VQ7LO presents an Epiloque at 1850, just before the close down. I. E. Alfrey (London, W.4) has received a verification from Nairobi, giving the frequency as 4885 kc. The stated schedules are: Daily: 1000-1100 (11 on Saturdays), Tuesday and Thursdays; 1230-1330 and 1500-1900, Wednesdays and Saturdays: 1500-2000.

Radio International in Tangier on 6200 kc still caters for the French, Spanish, Arab, and English speaking populations of North Africa. The schedule is 0000-0030 and 1800-2300. On September 28, the writer noted an English broadcast commencing at 2000 (Sunday).

South America

Several Brazilian stations have gained some prominence this month. Arne Skoog

(Danderyd, Sweden) reports that the best heard South American is a new Brazil transmitter in Rio de Janeiro, using the call sign ZYC2. On a frequency of 9220 kc it broadcasts in the Portuguese language only from 2300 to 0030. A. Baldwin (London, E.11) reports PRA8, Recife, Brazil, on 6015 kc with local news in Portuguese at 2220. This is followed by an interval signal consisting of a fanfare of trumpets followed by chimes, and there is further news at 2300. Dr. T. B. Williamson (St. Albans) has recently logged ZYC8, Rio de Janeiro (9610 kc) at 2230, ZYB7, Sao Paulo (6095 kc) at 2335, and ZYB8 (11765 kc) in the same city at 2230. T.B.W. must also be congratulated on logging CP15 in La Paz, Bolivia's capital, one night at 2330. CP15 was heard on 5870 kc, though the latest official list gives CP15 as Radio-el-Condor on 6120 kc. It is the most powerful of Bolivia's short-wave broadcasters with a power of one kilowatt.



The speech input equipment for the Australian short-wave service operated from Shepparton.

"The Voice of the Andes" is Ecuador's most reliable broadcaster. J. H. Saunders (Torquay) reports HCJB on 6220 kc between 0500 and 0600. The official list gives the frequency of 6280 kc to be in use between midnight and 0400. "Sparks" (London, S.E.25) informs me that their 19-metre band channel is now 15117 kc. HC2RL, Guayaquil (6635 kc) was logged by the writer, with semi-classical music just before the close down at 0415 on September 24. Remember that this one is only heard in this country at this early hour on Wednesday mornings. OAX4Z, Lima, Peru (5890 kc) was an excellent signal the same morning at 0420. It closed down after a very brief Spanish direction at 0425. The daily schedule for this station is 2130-0425.

In Central America, YSU in the city of San Salvador is easily the best received broadcaster; you will find it on a frequency of 6250 kc, but not after 0500 daily. The only British possession in Central America has a short wave station which is seldom heard here, though it has been logged quite recently in North America. It is ZIK2, located at Belize, the capital of British Honudras, and it operates on a frequency of 10600 kc.

According to D. O. French (Norwich) the new Trinidad station was due on the air with regular broadcasts commencing at 1100 on September 1 on the 9625 kc channel. Other frequencies allotted are 6085 kc and 12950 kc. Has anyone yet heard it?

North America

Several of our readers have been receiving Pacific coast stations of the United States at good strength. A. Baldwin made

a good catch with KW1K on 7230 kc at 0545 with dance music and the station announcement : "The Voice of Education snd Information, Armed Forces Radio Service." I. E. Alfrey has received his well-earned KRHO verification card, and in reply to his reports on KGEI, KNBX and KCBR, a letter from Los Angeles signed by Major C. A. Frink, Signal Corps Chief, Short Wave Operations, which states that as the programmes are run solely for the listening pleasure of the Armed Forces of the U.S.A., they regret that they cannot verify any reports.

D. O. French reports less satisfactory reception of the Canadians CKNC and CKCS ; E. G. Cressey (Wisbech, Cambs.) kindly forward the August-September

TABULATED SCHEDULES

I. Radio Luxembourg (Experimental). 5 kW power. Daily.

0410-0510	15350 kc	19·54 m.
0510-0530	6090 kc	49·30 m.
1000-1040	15350 kc	19·54 m.
1040-1100	9527 kc	31·49 m.
1700-1740	15350 kc	19·54 m.
1740-1800	9527 kc	31·49 m.
1900-2130	6090 kc	49·30 m.

II. Ankara, Turkey.

(a) TAP. 9465 kc (31·69 m). 1500-2030.

News at the following times :

1500	Hindustani.
1515	Persian.
1530	Arabic.
1630	German.
1645	English.
1700	French.
1715	Greek.
1730	Roumanian.
1745	Hungarian.
1800	Serbo-Croat.
1815	Bulgarian.

(b) TAQ. 15195 kc (19·75 m).

Schedule :	Sunday	0900-1030.
	Monday to Friday	0930-1015.
	Saturday	1030-1130.

III. Radio Tabriz, Azerbaijan, Iran.

Daily Programme (except Fridays).

Transmission I. 11960 kc (25·13 m).

1000	National Hymn of Iran, programme summary, news in Persian.
1030	The day's review of the Iranian Press.
1045	Instrumental music.
1100	News in Russian.
1115	News in French.
1130	News in English.
1145	Recorded music in Arabic.
1200	Sign off.

Transmission II. 6090 kc (49·26 m).

1430	National Hymn of Iran and the news in Persian.
1445	Native music.
1515	Speech.
1530	Instrumental music.
1545	Recorded music in Arabic.
1600	Iranian music—instrumental and voice.
1630	News in Persian and recorded Western music.
1700	News at dictation speed.
1715	Orchestral music.
1745	Western dance music (recorded).
1800	Iranian National Hymn. Sign off.

Fridays

Transmission I. 11960 kc (25·13 m).

0630	Iranian National Hymn, programme announcements, Iranian music.
0700	Speech.
0715	Native orchestra.
0745	Solo instrumental music.
0800	Listeners' Hour.
0900	Orchestral music.
0930	Theatrical performance.
1100	News in Persian.
1120	Sign off.

Transmission II.

On Friday, same as on other days, excepting the period 1530-1730, when a theatrical performance is usually broadcast.

IV. United States of America Pacific Coast transmitters.

Station	GMT	Freq.	Beam
KCBA Delano	0315-0845	15150	Alaska (AFRS)
	0900-1500	9650	Hawaii/Australia
	0900-1430	15330	Guam/Phil. (AFRS)
KCBF Delano	0315-0845	11810	Alaska (AFRS)
	0900-1400	9700	Japan/Korea (AFRS)
KCBR Delano	0000-0500	15130	S. America
	0900-1500	9750	Phil./E. Indies
KGEI S. Francisco	0530-1030	15130	Mid Pacific (AFRS)
	1045-1430	9530	Guam./Phil. (AFRS)
KGEX S. Francisco	0000-0500	17880	S. America
	0530-0845	17780	Mid Pacific (AFRS)
	0900-1500	11730	Phil./E. Indies
KNBA Dixon	0000-0500	21460	S. America
*	0745-0845	9650	Hawaii/Australia (UN)
KNBI Dixon *	0745-0845	15250	China (UN)
	0900-1500	11790	China/S.E. Asia
KNBX Dixon	0530-0845	15330	S.Pacific (AFRS)
	0900-1500	9490	Japan/China
KWID San Francisco	0000-0500	17760	S. America
	0530-1130	11900	S. Pacific (AFRS)
	1200-1500	9570	China/S. E. Asia
KWIX San Francisco	0315-0845	9570	Alaska (AFRS)
	0900-1430	11890	Japan/Korea (AFRS)
KRHO * Honolulu	0745-0845	17800	China (UN)
	0900-1500	15250	Phil./S.E. Asia

* — Not Mondays.

number of *This is Canada*, the C.B.C.'s regular schedule of short-wave broadcasts from Canada, which can be obtained by anyone who cares to write to the Canadian Broadcasting Corporation, International Division, P.O. Box 7000, Montreal, Canada.

Europe

Quite a number of listeners have logged the test transmissions from Radio Luxembourg. They are: R. Burr (Loughborough) on 6090 kc at 0532; I. Guggenheim (Haifa) on 15350 kc at 1000; Arne Skoog (Sweden) hears at excellent strength before 1100 on 9527·5 kc.

On September 23, the writer received news in English from Bulgaria between 2030 and 2045 on 9345 kc. I. Guggenheim recently heard a station calling itself "Radio Romania Libere" on 6220 kc at 1800, with music and a talk in Roumanian. The daily schedule for this station is a Russian broadcast at 1830, one in French at 1900, and finally an English transmission from 1930 to 2000.

Nothing further has been heard over the air of my latest European query "Radio Banfeld" or "Radio Barneveld" on 6710 kc, but a helpful D2 in the British Zone of Germany recently suggested over the air that it was apparently a Forces Broadcasting Station situated somewhere in Holland; and, after all, Barneveld is not far from the Zuider Zee. I fear that this one may have gone the way of all mushroom growths, but if anyone does log it again, please remember to drop us a line. Any information will be welcome.

All letters and DX Broadcast Calls Heard for next month should be received at this office not later than November 1, addressed R. H. Greenland, c/o *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

DX BROADCAST—CALLS HEARD

J. H. Saunders, Old Market Inn, Torwood Street, Torquay.

1.	July 31	0500	HCJB	Quito	6220 kc, S8
2.	July 31	0530	VLG6	Lyndhurst	15230 kc, S8
3.	July 31	0600	KCBR	Delano	17780 kc, S8-9

Rx. 1155*A*. *Aerial : External short wire.*

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

1.	August 4	1730	CKCS	Sackville	15320 kc, S8
2.	August 6	0750	KGEI	San Francisco	15130 kc, S5
3.	August 6	0755	KCBA	Los Angeles	15150 kc, S6
4.	August 6	0815	KCBF	Delano	15330 kc, S4
5.	August 7	0658	VLA6	Shepparton	15200 kc, S9
6.	August 7	1320		Moscow	17830 kc, S7
7.	August 9	0700	KCBR	Dixon	11780 kc, S6
8.	August 11	0641	VLB8	Shepparton	21600 kc, S7
9.	August 11	1604	PMA	Batavia	19350 kc, S6
10.	August 11	1700		Singapore	6770 kc, S5
11.	August 12	1700	CKCX	Sackville	15190 kc, S8
12.	August 13	1700	YHN	Djokjakarta	11000 kc, S6
13.	August 15	1950	ETAA	Addis Ababa	15060 kc, S7

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

J. M. Simpson, 32 Aberdare Gardens, London, N.W.6.

1.	August 20	2130	ZRK	Cape Town	5880 kc, S5
2.	August 22	2130	PZH5	Paramaribo	5845 kc, S7
3.	August 22	2030	VLQ3	Brisbane	9660 kc, S7
4.	August 24	2145	ZBY8	Sao Paulo	11765 kc, S7
5.	August 25	2155	ZYC8	Rio de Janeiro	9610 kc, S6
6.	August 25	2200	LRY	Buenos Aires	9445 kc, S6
7.	August 25	2205	LRS	Buenos Aires	9315 kc, S7
8.	August 26	2220	LRX	Buenos Aires	9660 kc, S7
9.	August 27	2145	CXA3	Montevideo	6075 kc, S7
10.	August 27	2150	CR6RA	Luanda, Angola	9470 kc, S6

R. Burr, Woodthorpe, Linkfield Road, Mountsorrel, Loughborough, Leic.

1.	August 26	0532		Luxembourg	6090 kc, S9
2.	August 26	2050	VLR2	Lyndhurst	6150 kc, S9

Rx. Invicta 30. *Aerial : 30 ft. Indoor.*

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

1.	August 27	1700	WOOW	Wayne	21500 kc, S8
2.	August 27	1730	YHN	Djokjakarta	11000 kc, S7
3.	August 27	1800	A.F.N.	Munich	6080 kc, S8
4.	August 27	1830	HER3	Schwarzenburg	6165 kc, S9
5.	August 28	1130		Tabriz, Iran	11940 kc, S9 plus
6.	August 28	1800		Radio Romania Libere	6220 kc, S8
7	August 28	1830	YI2KG	Baghdad	7080 kc, S9
8.	August 28	1845		Damascus	6010 kc, S9
9.	August 28	1850	HVJ	Vatican City	9550 kc, S8
10.	September 7	1330	YFA4	Macassar, Celebes	9357 kc, S8
11.	September 8	0500	HCJB	Quito	12445 kc, S8
12.	September 8	1000		Luxembourg	15350 kc, S9

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

1.	August 16	2005	CNR3	Rabat	9085 kc, S7
2.	August 17	2230	ZYC8	Rio de Janeiro	9610 kc, S8
3.	August 17	2245	CE960	Santiago	9590 kc, S6
4.	August 17	2300	LRX	Buenos Aires	9660 kc, S7
5.	August 17	2305	LRA1	Buenos Aires	9690 kc, S6
6.	August 17	2315	CE970	Valparaiso	9730 kc, S4
7.	August 17	2330	LRY	Buenos Aires	9455 kc, S6
8.	August 17	2335	LRS	Buenos Aires	9315 kc, S7
9.	August 17	2345	FZI	Brazzaville	7000 kc, S5
10.	August 19	2230	ZYB8	Sao Paulo	11765 kc, S8
11.	August 19	2255	LRR	Rosario	11880 kc, S6
12.	August 19	2300	ZPA5	Encarnacion	11945 kc, S7
13.	August 19	2315	HI2A	Santiago, D.R.	6785 kc, S8
14.	August 21	0000	CE1180	Santiago, Chile	12000 kc, S7
15.	August 21	0005	VLW7	Perth	9520 kc, S3/4
16.	August 21	0015	COCQ	Havana	8825 kc, S6
17.	August 21	0030	COKG	Santiago, Cuba	8955 kc. S4
18.	August 21	0045	YNDG	Leon	7660 kc, S4
19.	August 21	0100	YNLAT	Managua	7625 kc, S4

Rx. SH7. Aerial : 100 ft. Inverted-L.

SHORT WAVE BROADCAST STATIONS

Revision 30·99-41·58 Metres

Giving Frequency, Wavelength, Callsign and Location

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

Frequency	Wavelength	Callsign	Location
9680	30·99	VLA3	Shepparton, Australia.
		VLB2	Shepparton, Australia.
		VLC2	Shepparton, Australia.
		XEQQ	Mexico City.
9675	31·01	GWT	Daventry.
9670	31·02	VUD4	Delhi, India.
		WNRX	New York.
9660	31·05	LRX	Buenos Aires, Argentina.
		VLQ3	Brisbane, Queensland
		HVJ	Vatican City.
		HOXC	Panama City.
		GWP	Daventry.
9658	31·06	XGOY	Chungking, China.
9650	31·09	KNBA	Dixon, California.
		KCBA	Delano, California.
		WCBN	New York.
9645	31·10	CR7BJ	Lourenco Marques, Mozambique.
9640	31·12	GVZ	Daventry.
9630	31·15	KZRH	Manila, Philippine Islands.
		CKLO	Sackville, Canada.
		VUD7	Delhi, India.
		VUB2	Bombay, India.
			Rome, Italy.
9625	31·17	GWO	Daventry.
		XGNC	Kalgan, China.
		VP4RD	Port of Spain, Trinidad.
9623	31·18	CXA6	Montevideo, Uruguay.
9620	31·19	TPB24	Paris.
9618	31·19	TIPG	San Jose, Costa Rica.
9615	31·20	VLB9	Shepparton, Australia.
		VLC6	Shepparton, Australia.
9610	31·21		Cape Town, S. Africa.
			Algiers, Algeria.
9600	31·26	GRY	Daventry.
9590	31·28	VUD2	Delhi, India.
		VUD5	Delhi, India.
		PCJ	Hilversum, Holland.
9580	31·32	GSC	Daventry.
		VLH3	Melbourne, Australia.
		CR7BE	Lourenco Marques, Mozambique.
9570	31·35	KWIX	San Francisco, California.
		KWID	San Francisco, California.
		WRUW	Boston, Mass.
9565	31·36	VUM2	Madras, India.
9560	31·38	VUD5	Delhi, India.
9555	31·40	JHKD	Singapore, Malaya.
9550	31·42	OLR3A	Prague, Czechoslovakia.
9545	31·43	XEFT	Vera Cruz, Mexico.
9542	31·44		Rangoon, Burma.
9540	31·45	VLB	Shepparton, Australia.
		VLC5	Shepparton, Australia.
		LKJ	Oslo, Norway.
			Munich, Germany.
9535	31·46	HER4	Schwarzenburg, Switzerland.
		SBU	Motala, Sweden.
9530	31·48	WGEO	Schenectady, New York.
		VUD2	Delhi, India.
		VLR	Lyndhurst, Australia.
9525	31·50	ZBW3	Hong Kong.
		GWJ	Daventry.
9523	31·51		Johannesburg, Transvaal.
9520	31·51	RW96	Moscow.
9510	31·54	GSB	Daventry.
9505	31·56	YUC	Belgrade, Yugoslavia.
9500	31·58	OIX2	Bjorneborg, Finland.
		XEWW	Mexico City.
9490	31·61	KNBI	Dixon, California.
9480	31·64		Moscow.
9470	31·67	CR6RA	Luanda, Angola.
9465	31·69	TAP	Ankara, Turkey.
			Hanoi, Indo-China.
9460	31·71	GRU	Daventry.
9440	31·76	FZI	Brazzaville, French Equatorial Africa.
9437	31·77	COCH	Havana, Cuba.
9425	31·80		Belgrade, Yugoslavia.
9410	31·86	GRI	Daventry.
9380	31·96	OTM2	Leopoldville, Belgian Congo.
9370	31·99		Madrid, Spain.
9362	32·01	COBC	Havana, Cuba.
9345	32·06		Sofia, Bulgaria.
9330	32·15	OAX4J	Lima, Peru.
9315	32·20	LRS	Buenos Aires, Argentina.
9290	32·29	HI2G	Trujillo, Dominican Republic.
9275	32·34	COCX	Havana, Cuba.
9250	32·43		Bucharest, Roumania.
9248	32·47	CR8AA	Macao, Portuguese China.
9235	32·48	COBQ	Havana, Cuba.
9080	33·04	CNR3	Rabat, Morocco.
9026	33·24	COBZ	Havana, Cuba.
8910	33·67		Moscow.
8830	33·77	XRRA	Peiping, China.
8825	34·00	COCQ	Havana, Cuba.
8700	34·48	COCO	Havana, Cuba.
8350	35·93		Managua, Nicaragua.
7190	36·63	YNBA	Managua, Nicaragua.
8036	37·34	FXE	Beirut, Lebanon.
7995	37·52	PMD	Bandoeng, Dutch East Indies.
7865	38·16	SUX	Cairo, Egypt.
7852	38·21	ZAA	Tirana, Albania.
7660	39·16	YNDG	Leon, Nicaragua.
7650	39·22		Moscow.
7615	39·39	YNLAT	Granada, Nicaragua.
7510	39·95		Moscow.
7420	40·43	YNAO	Masaya, Nicaragua.
7410	40·49		Moscow.
7360	40·76	RWG	Moscow.
7350	40·82	HI2T	Trujillo, Dominican Republic.
7330	40·93		Moscow.
7320	40·98	GRJ	Daventry.
7315	41·01	YSO	San Salvador.
7300	41·10		Moscow.
7290	41·16	VUD2	Delhi, India.
		VUD3	Delhi, India.
		VUD5	Delhi, India.
		VUD11	Delhi, India.
			Munich, Germany.
7283	41·19	ZQP	Lusaka, N. Rhodesia.
7280	41·21	VLA	Shepparton, Australia.
		VLC8	Shepparton, Australia.
		GWN	Daventry.
7270	41·27		Moscow.
7260	41·32	GSU	Daventry.
		VUM2	Madras, India.
7250	41·38	PJC1	Willemstad, Curacao.
7240	41·44	VLQ	Brisbane, Queensland.
		VUB2	Bombay, India.
7230	41·49	GSW	Daventry.
7220	41·55	JCKW	Jerusalem, Palestine.
		KOFA	Salzburg, Austria.
7215	41·58	VLQ2	Brisbane, Queensland.
		RW96	Moscow.

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