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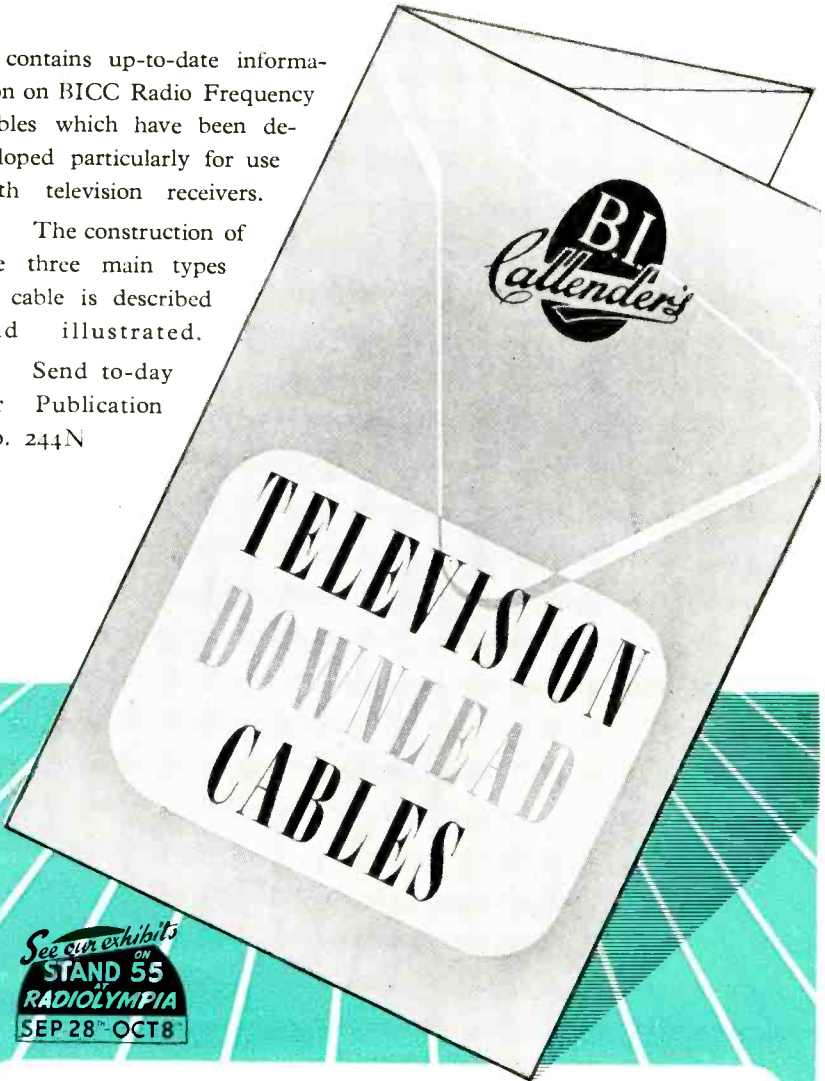
OCTOBER 1949
VOLUME 3 · NUMBER 11

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THE **SHORT WAVE** LISTENER

A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME 3

OCTOBER 1949

NUMBER 35

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EDITORIAL

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for articles of short wave listener
interest.

Exhibition

The exhibition season is now open and well under way. In the field of radio we have the great show which has come to be known as Radiolympia commencing at Olympia on September 28 and open till October 8. Following this is the Amateur Radio Exhibition at the Royal Hotel, Woburn Place, London, W.C.1, during the period November 23-26, at which we shall have a Stand.

There is nowadays a large technically minded public for these well-organised and extremely interesting exhibitions. Thus, spectacle is not by any means the only attraction, either at the Radio Exhibition, the Motor Show or the Engineering Exhibition. A great many people go to them not just to look, but also to learn and to criticise. There was at one time a danger that Radiolympia would degenerate into a mere display of imitation "period furniture," concealing wireless receivers of which the custodians on the stands knew less than nothing. In other words, it seemed that the Show would lose its purely technical appeal.

But the exhibition to open at the end of this month will include many displays which, while being of considerable interest in the radio engineering sense, have no apparent connection with ordinary broadcast reception. This is as it should be. The whole science of radio has developed at such a pace and to such an extent that few qualified engineers have more than a vague working knowledge of applications outside their own immediate sphere of activity. Even the very largest manufacturing concerns are unable to cater for the whole field—indeed, many are developing markets of their own for applications on which they have done the original research.

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A COMPANION PUBLICATION TO "THE SHORT WAVE MAGAZINE"—
THE JOURNAL FOR THE RADIO EXPERIMENTER AND TRANSMITTING AMATEUR

Receiving Single Sideband

Principles of SSB, and How to Adjust the Receiver

by H. C. WOODHEAD (G2NX)

(The single-sideband method of telephony transmission is attracting the attention of keen phone men on both sides of the Atlantic; as more stations become equipped for SSB, receiving techniques will demand corresponding attention. This article explains how SSB phone can be taken on a communications receiver of standard type, and the modifications called for to give the best possible results.—Ed.)

THE modulating system where only one sideband is transmitted, instead of the more usual two-sidebands-and-carrier, is likely to come into increasing use by amateurs in the future. It is already being tried in the United States to a limited extent, and it may therefore be of interest to SWL's to know how to recognise this form of transmission and how best to adjust the receiver for it.

It can be stated at the outset that Single Sideband transmission can be received quite satisfactorily on the normal communications type receiver provided that it is equipped with a BFO and also that its first oscillator has a fair degree of stability. If no BFO is provided some form of oscillator at the incoming frequency can be substituted, such as the output of a BC.221 or similar wavemeter, injected into the input to the receiver.

SSB signals will generally be recognised as a muffled sound resembling speech but quite unintelligible if the degree of suppression of the carrier and the unwanted sideband is good. If a fair trace of carrier is present, the speech may be partly intelligible but will sound distorted, like very bad over-modulation.

The form of signal being received is shown in Fig. 1b in which it is compared with the normal form of Double Sideband transmission at (a). The latter consists of two sidebands and a carrier and occupies a bandwidth equal to twice that of the audio frequencies being transmitted. Each sideband contains frequencies which differ from the carrier (above and below) by the corresponding audio frequencies which

are being transmitted. Thus, for example, a 1,000 cycle tone is transmitted by a carrier and two side frequencies, one 1,000 cycles above the carrier and one 1,000 cycles below it. The normal DSB signal can be resolved into its original components by the simple process of rectification. In the case of SSB with the carrier suppressed, however, a 1,000 cycle tone would be transmitted by a single radio frequency differing from the non-existing carrier by 1,000 cycles as shown at Fig. 1c. It will be clear that rectification of this would produce only DC and to obtain the original 1,000 cycles the carrier must be reinserted at the receiving end so that the beat note of 1,000 cycles may be obtained. This can be done at the incoming signal frequency by means of an oscillating wavemeter or similar signal generator, but more conveniently at the intermediate frequency of the receiver by employing the BFO.

If some degree of carrier is being transmitted the adjustment of the receiver is fairly simple. The AVC should be switched off and the receiver tuned to the point where the muffled sounds appear to be loudest. The BFO is then switched on and an audio tone will be heard which is the difference, at the intermediate frequency, between the carrier and the local BFO. When this tone has been reduced to zero beat by adjustment of the BFO tune, the transmission will become intelligible.

If the carrier is completely suppressed at the transmitter the adjustment is a little more difficult but the transmitting operator is almost certain to give a preliminary call on DSB or else to reinsert the carrier for the benefit of the station to which he is working, and this will provide the opportunity for setting the reinserted carrier.

Finding the Tune Position

Alternatively it will be found, when the BFO is switched on and no carrier is indicated by any beat note, that the form of muffled speech changes with the setting of the BFO. Once one has become accustomed to this change it can be used as a clue to the correct setting for the reinserted carrier.

Careful search will reveal a position where the speech, although unintelligible,

sounds very guttural—rather like a gramophone record that is running down. A change in one direction or the other from this position will produce speech that sounds “tinny”—like a gramophone record running overspeed. Further search will reveal a point between these two conditions where the sounds are neither guttural nor tinny and at this point intelligible speech will be heard. The setting is not easy to find in this way until one becomes experienced, for it must be exact to within a very few *cycles*, giving what one would call “needle sharp” tuning.

If there is any appreciable frequency drift of the receiver first oscillator (or the BFO, for that matter) it will be necessary to follow the drift continuously by compensating on the BFO tune. It is more likely that any drift will be in the receiver first oscillator than anywhere else since the transmitter is almost certain to have taken special precautions to maintain a stable frequency.

When receiving SSB signals it may be found that even when the carrier is reinserted at the correct frequency there appears to be some distortion which might be likened to over-modulation on DSB. It is important to realise that this is very likely to be produced in the receiver. There can be no such thing as percentage modulation on an SSB signal as received but if the reinserted carrier is too low in level all the indications of over-modulation will be observed. The remedy is to increase the level of the reinserted carrier or, what is perhaps easier, decrease the level of the sideband by turning down the manual gain control of the receiver. Always start with the manual gain set to give the minimum audio signal consistent with comfort. Commercial receivers vary somewhat in the amount of BFO that is mixed in the second detector and in some cases it may be desirable to increase it for SSB reception.

Reports

Single sideband reception depends so much on exact settings of the receiver that it is useless to send in any detailed report until one has achieved some experience in receiver adjustment. Similarly, it is no good giving a report of frequency drift unless the signal is being compared against a frequency standard of known stability. The transmitting station is most likely to be interested in comparative reports of apparent signal strength and fading (straight and selective) against

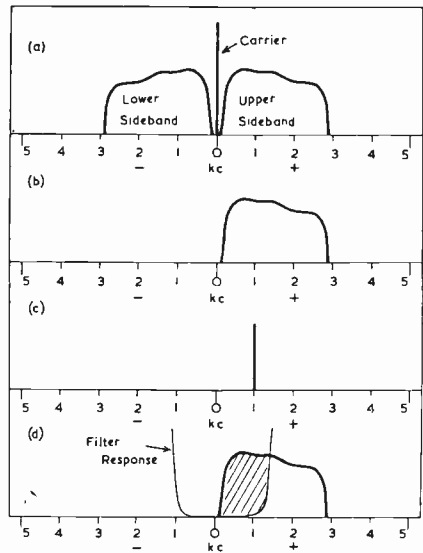


Fig. 1. Frequency Spectra of types of telephony transmission related to Carrier Frequency. (a) Double Sideband, DSB; (b) Single Sideband Suppressed Carrier, SSBSC; (c) SSB with single 1,000-cycle tone; (d) Frequency restriction produced by a mistuned receiver (see text).

other DSB signals following a similar path. The most useful report would be expressed in signal-to-noise ratio.

The theoretical advantages of SSB over DSB are an increased signal for the same power transmitted, more freedom from selective fading, better signal-to-noise ratio and reduced bandwidth. Any information on these points will always be of great interest to the transmitting station.

It is possible that if a narrow filter is available in the receiver some estimate of the strength of the unwanted sideband may be obtained.

Use of a Crystal Filter

If the receiver has a crystal filter or some other provision for narrow-band reception (say about 2,000 cycles wide) it may be used with advantage on SSB to reduce the QRM and improve the signal-to-noise ratio. The system, since it employs a band of only 2,000 to 3,000 cycles, is not being used to the best advantage for the reception of DSB on a normal receiver which has a band-width of some 6,000 cycles, over the whole of which it can pick up noise.

To get the best out of the system it

would be preferable to construct a special demodulator unit for SSB reception. This should have a restricted band-width of 2,000 to 3,000 cycles and terminate in the type of balanced demodulator shown in Fig. 2. It would be used at the end of the IF chain in place of the normal second detector. The diodes D1, D2, D3 and D4 can be 6H6's, Westectors or crystal valves, whichever is most convenient. T1 is the output transformer from the last IF stage and its secondary winding will depend to some extent on the impedance of the type of diodes to be used, as will also the primary winding of the audio frequency T3 and the secondary of the RF transformer T2. C1 and C2 are the normal components in the last IF anode. C4 and C5 are used to obtain the centre point of the bridge output and may be of the order of .0005 to .001 μ F for an IF of 465 kc. Ch1 and Ch2 are desirable to prevent any RF from being passed to the audio stages and V2 is the first audio amplifier.

When using a receiver with restricted response, care must be taken that the limits of this response are set to coincide with the outer edges of the band being received, otherwise some of the band will

be cut off as indicated in Fig. 1d. It should also be remembered that any frequency drift of the first oscillator will be manifested by restriction of the band as shown in Fig. 1d, and translation of the frequencies transmitted as well. The alignment of the signal within the pass-band of the receiver can only be set by the First Oscillator, that is the main tune; and the point for correct frequency, that is zero beat with any pilot carrier, by the BFO setting.

In this respect the circumstances are no different from those existing when a receiver is being used with its crystal gate to receive a CW signal and to discriminate against an interfering station. In this case the shape of the crystal filter response is decided by the phasing control; the setting of that response in the RF spectrum is decided only by the main receiver tune while the resulting audio beat note will be controlled by the BFO setting without affecting the other settings, but will also be altered by the main tune setting.

These points will be quite well known to those who are skilled in the use of a crystal-gate receiver and if they are borne in mind there will be no great difficulty in the reception of SSB signals.

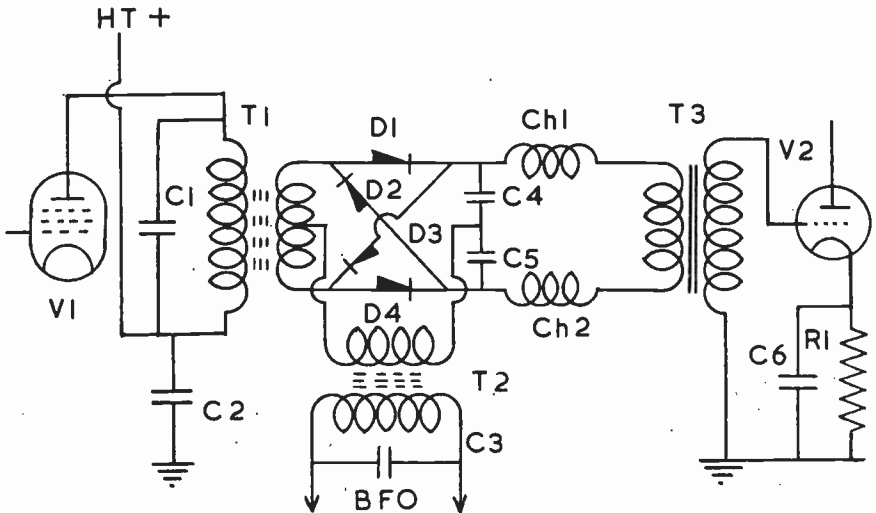


Fig. 2. Balanced demodulator for the reception of SSB transmissions, discussed and explained in the text.

Please mention the Short Wave Listener when writing to Advertisers

THE RADIO AMATEURS' EXAMINATION

BELOW is the Paper set for the Radio Amateurs' Examination held in May last, which is reprinted here for the information of all interested in the R.A.E.—and in particular those who expect to sit in May, 1950.

This year's comments by the Examiner are: "The general standard . . . both technically and the manner in which the questions were answered, was fairly high . . . The fact that a large number of candidates did not attempt Question 3 accounted for the slight percentage increase of failures this year as compared with 1948 . . ."

The total number of candidates was no less than 898, compared with 700 exactly

in 1948. Of this total, 636 candidates were successful. In 1948, 528 passed out of the 700, giving a failure figure of about 24 per cent., compared with 29 per cent. this time.

We give the R.A.E. and preparations for it special attention in the *Short Wave Listener* and many readers have been good enough to say they have been greatly helped by our detailed treatment of each question after the Paper has been published here. This is to assist those who intend sitting the forthcoming Examination and, as in previous years, the March-April-May (1950) issues of the *Short Wave Listener* will deal in full with the questions set out below.

CITY AND GUILDS OF LONDON INSTITUTE

DEPARTMENT OF TECHNOLOGY

1949

54.—RADIO AMATEURS' EXAMINATION

Wednesday, May 11th, 7 to 10 p.m.

All questions should be attempted. Use should be made of diagrams where applicable. The maximum possible marks obtainable is affixed to each question.

- What steps should be taken in the design of a transmitter to minimize the risk of interference to broadcast and television reception?
Indicate what special precautions can be taken to reduce radiation of harmonics. (20 marks.)
- What type of message may be exchanged with other amateur stations? For what purposes is the use of the station prohibited? (15 marks.)
- An alternating voltage of 10 volts at a frequency of $\frac{5}{\pi}$ Mc/s is applied to a circuit of the following elements in series:—
(i) a capacitance of 100 pico-farads,
(ii) a non-inductive resistor of 10 ohms.
(a) What value of inductance in series is required to tune the circuit to resonance?
(b) At resonance, what is the current in the circuit? (15 marks.)
- Discuss the advantages and disadvantages of a tuned radio-frequency and a superheterodyne receiver for amateur reception on the 14 Mc/s band. (10 marks.)
- State the essential difference in the operation of a triode valve as a detector and as an amplifier. Explain the meaning of the terms "amplification factor" and "impedance" of a valve. (10 marks.)
- Describe three methods commonly used for coupling transmitters to aerials and discuss the relative merits of each type of coupling. (10 marks.)
- Describe a method of obtaining the high-tension supply for an amateur transmitter from alternating current mains. Include particulars of the smoothing circuit. Illustrate your reply with a diagram. (10 marks.)
- What do you understand by "over-modulation"? Describe a simple modulation meter and explain how it is used to indicate depth of modulation. (10 marks.)

IT was a pity that with such an excellent month of DX to choose from we should have picked the wrong day for the SLP. The 14 mc period must have struck a pretty bad spell of conditions, for it brought in only about a dozen lists. As for the 7 mc CW session the following morning—well, hardly anyone took any notice of that at all. So I am afraid that on this occasion we must write them off as belonging to the genus *flop*.

Nothing of great interest was heard by the valiant few who followed the Saturday evening period, although other evenings at that same time have been producing some very nice DX. And, after perusing the lists, I still haven't decided whether one particular station was ZD1BB, ZD1BD, ZB1BB or ZB1BD! My own bet is very strongly on ZD1BD, but how so many people could have turned him

Have
you
heard
?

whole thing looks a mess); Lists much too small and cramped (making it impossible, in some cases, even to underline the prefixes).

Even some lists on the

callsigns in block letters, and in such a way that there is no ambiguity about I and 1; 5 and S and Z; Y and V, and so on. Remember that to the printer who has to set Calls Heard, the copy is a meaningless jumble of letters and figures which does not "read" and is therefore all the harder to follow.

And all this is not a dig at the newcomers; several whose lists appear for the first time this month sent in very nice-looking specimens. Some of the old hands are far from blameless, and one or two of them are absolutely shocking. Next month my middle name will be "Ruthless." All untidy lists, whoever they may come from, are going in the WPB; we shall still have more than enough to fill our three pages.

This month I received about 150 lists. Some 64 of these were sent to the printers. Of the "rejects" about 50 were due to untidiness and the

AMATEUR BAND COMMENTARY *by the DX Scribe*

into a Maltese I don't know.

CALLS HEARD BLITZ

Much as I regret having to take up your valuable space "binding" about Calls Heard, it is really necessary this month. In spite of appeals for the last two months, this particular collection has been about the worst of the lot. Several potentially interesting lists have had to be scrapped for the simple reason that by the time I had finished operating on them they just were not fit to send to the printer. The commonest faults are these: No name and address (so I have to copy it from the accompanying letter); Frequency-band not mentioned (so I have to be psychic); Figures in call-sign not repeated, as asked for at the top of the Calls Heard pages (and by the time I have tried to squeeze them in the

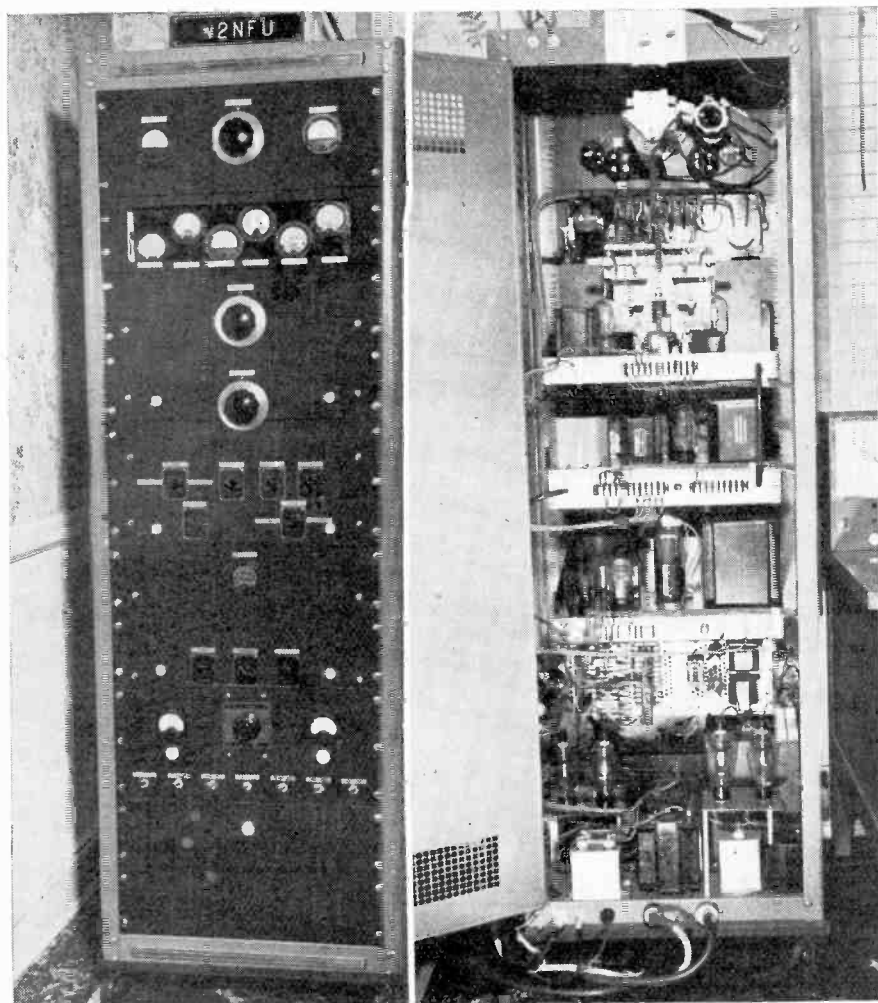
standard Report Forms arrive with (believe it or not) four or five call-signs in each square. The squares are meant to give space for *one* call-sign of a respectable size! Then there are the vertical experts; one or two tidy vertical lists are not too bad, but some of them just look like a string of figures waiting for adding up—not in any kind of order. And there are others with remarks in brackets and all sorts of miscellaneous comments mixed up with the calls.

Please may I boil down all my advice to the shortest possible space: Make your lists look as much as possible like those that you see in print—but *bigger* and well spread out. Even to having your name and address *at the top* and the type of receiver *underneath*, and with nothing else except the frequency band concerned. Write the

other 30 or so, most reluctantly, were discarded because there wasn't space. So I chose lists from people who already figured on another band. In other words, if you sent lists for both 28 mc and 14 mc, you will probably find only one of them in print.

DX OF THE MONTH

And so, with that off my chest, to business. It has been a very good month, with a re-awakening of 28 mc listening in a big way. The Four-Band lists showed this unmistakably; the 28 mc column, in nearly all cases, produced the biggest increase. There were quite a few days when the band was wide open for all districts of U.S.A. and Canada; on the majority of days in the month the South Africans and South Americans were there in force; and on several occasions Asia and



The outfit at W2NFU, Forest Hills, Long Island, New York. A full description of his rig would run over a great deal more than the rest of this page!

Australasia romped in. The VS1's were particularly good on some afternoons.

So let us take the 28 mc news from readers first. R. A. Hawley (Goostrey) devotes the whole of his letter to the band, and says that his best bit of DX was W2WWL/MM, heard at S9-plus when in harbour at Batavia (1715). Other Far East stations were VS1DZ and KG6GA. Since

then R.A.H. has found the band open for W, ZS and OQ5; many other MM's have also been heard. He suggests that it would be interesting if we could publish their positions when logged on certain dates, so that listeners could keep track of them.

F. K. Earp (London, S.W.11) mentions plenty of South Americans and South Africans, together with a

"tremendous patch" of short-skip Europeans which gave him new countries. A. H. Edgar (Newcastle) says "The Yanks have arrived!"—but he also heard CX2HJ (CW) and KS4AI, KH6WR, VK5JV, VK6LN and ZS7JC (all phone). The last call sounds a bit queer, though.

D. L. McLean (Yeovil) thought the East/West openings good but unpredictable,

FOUR-BAND DX

Listener	28 mc	14 mc	7 mc	3.5 mc	Total
J. H. I. Austin (Coventry)	21	54	39	7	56
A. Bannister (Manchester)	128	143	22	20	160 (P)
R. L. Bastin (Coventry)	58	97	18	20	109 (P)
M. E. Bazley (Birmingham)	128	218	49	19	222
J. C. Beal (Wembley)	44	135	33	17	136
N. S. Beckett (Lowestoft)	49	155	62	27	162
D. W. Bruce (Eltham)	151	201	69	34	210
P. Butler (Portsmouth)	85	130	38	19	142
P. Bysh (London, N.8)	65	88	18	14	102 (P)
A. T. Cheesley (London, W.C.2)	73	103	13	9	114 (P)
F. K. Earp (London, S.W.11)	105	141	31	27	156 (P)
F. Finn (Coventry)	21	24	19	7	30
R. A. Fowler (Cranwell)	76	136	27	21	148
C. J. Goddard (Coventry)	3	106	26	14	106
O. A. Good (Oswestry)	113	200	14	8	201
H. M. Graham (Harefield)	56	118	18	19	125 (P)
J. L. Hall (Croydon)	7	202	127	56	205
K. G. Harland (Westcliff)	39	60	10	14	80 (P)
M. Harrison (Darlington)	5	160	76	30	162
R. A. Hawley (Goostrey)	129	151	29	19	183
F. A. Herridge (London, S.W.12)	126	96	37	16	152
A. L. Higgins (Aberkenfig)	55	98	13	15	107
B. Hummerstone (Harrow)	45	95	18	16	99 (P)
D. Kendall (Potters Bar)	126	136	24	29	155 (P)
P. G. Lucy (East Barnet)	91	103	21	23	124 (P)
D. G. Martin (Cheltenham)	85	113	15	17	137 (P)
O. R. Mason (Prittlewell)	3	74	15	11	75 (P)
D. L. McLean (Yeovil)	143	143	19	18	164 (P)
G. Musk (Blackpool)	16	92	12	14	95 (P)
C. A. Naylor (Appley Bdge.)	92	64	15	12	107 (P)
A. M. Norden (London, N.W.11)	3	118	18	15	119 (P)
E. A. Parkinson (Leeds)	107	121	13	15	138 (P)
K. M. Parry (Sandwich)	68	95	12	6	110 (P)
K. Parvin (Thornton Heath)	112	141	22	28	149 (P)
W. J. C. Pinnell (Sidcup)	116	176	76	29	184
C. S. Poole (Ipswich)	68	96	20	24	116 (P)
D. Powell (Wilton)	71	125	59	28	136
A. W. Robertson (Cranford)	83	144	22	20	155
K. Smeeton (Barnton)	92	128	22	22	139 (P)
A. Studley (Harrow)	51	131	53	37	134
L. Tombs (Swindon)	115	110	17	21	136
J. P. Warren (Croydon)	28	110	9	8	114 (P)
M. G. Whitaker (Halifax)	88	119	22	27	135 (P)

(P) Signifies 'Phone Only'

but he found the Far East signals, such as VS1AY, 1DZ, 1DX, and PK4DA, 4KS. Other good stuff included ZD6DT, HZ1KE, KG6's and four ZP's—all phone.

G. Moses (Crewe) suggests that present conditions presage as big a dogfight as ever when the season really starts. He adds that he is hearing so many ZS1, 2, 4, 5 and 6 that they must now be classed with PY's and LU's as "non-DX." He would like to know more about AF2AIR, passing traffic to a W4; "AF" is a prefix allocated to the USA, so one imagines that the USAAF has something to do with this station—but where?

A long list from D. Kendall (Potters Bar) includes the Far East chaps already mentioned, some VQ5's, ZD2S, ZD4AH, HC2JR, HP1WM, T12EV, CM9AC and CO7RQ. Also shown are 61 ZS's, 10 OQ5's and much other useful DX, not forgetting KG6DF. Then D. Powell (Wilton) says "no real DX but have heard FQ8SN, HC1KX, VS7's and 9's, ZE1JB, 2KH and ZC1AZ"—all in the early evening.

R. Bastin (Coventry) collected South Americans such as HC1FG, HC1OY and CX5AP; he is still looking for a Chinese station on the band. K. M. Parry (Sandwich) mentions VK5AE, who is in Darwin, North Australia, and therefore in Zone 29. He and other VK5's in the North will be found rolling in when no other VK's are even audible; it was the same last year and the year before.

K. Parvin (Thornton Heath) heard all W districts on the evening of August 25, and contributes one unusual one—ZL4HP coming across in the evenings. The same station is mentioned by W. S. Hall (Oxford), who adds that August 28 would have been a remarkably good day for Ten even in the "high DX season," let alone the summer. A. Bannister (Manchester) comments on the good VS1 and

PK4 signals, but missed someone who might have been a KP6, speaking too fast for identification.

O. A. Good (Oswestry) also caught the good day (August 28) and heard KG6, North Australia, and other DX. D. W. Bruce (Eltham) says his best were VK9GW, HP1WM, KV4AI, VQ5DES, and lots of VS1's and KG6's. He, too, heard ZL4HP in the evening. D. G. Martin (Cheltenham) suffers from ignition QRM, having a "Halt" sign just outside! But he seems to have heard most of what has been going.

The list from W. J. C. Pinnell (Sidcup) includes CR7AH, ET3AF, KG6's, PK4's, VS1's and 7's, plus FE8AB, VQ5ALT and XZ2FK on CW. Most of the available 28 mc DX has been logged by one listener or another, and the remainder of those reporting on the band—all with some of the aforementioned stations—are H. M. Graham (Harefield), J. C. Beal (Wembley), M. G. Whitaker (Halifax), R. A. Fowler (Cranwell), A. L. Higgins (Aberkenfig), B. J. Vincent (Welling), J. H. Woodward (Stoke-on-Trent), F. W. Hardstone (London, S.W.16) and C. S. Pollington (Chichester).

DX ON TWENTY

And so to the 14 mc band, which, as usual, attracts more listeners than any of the others and produces a mixed bag of DX all the time. Quite a lot of people seem to have been hearing AC4AA, who is anywhere but in Tibet! One of them is K. Twibell (Workop), reporting for the first time. He also queries LF3F, who is probably a genuine Norwegian station of the genus that uses the LF prefix. LB's, LF's, LH's and LJ's are all semi-official Norwegian stations using the amateur bands.

A popular one on 14 mc phone has been VK1ADS on Macquarie Island, who counts as yet another country. (VK1VU on Heard Island is another). F. K. Earp mentions VK1ADS, together with HS1SS, FE8AB and FO8AD—all phone. Another station that has caused much joy among listeners is F9QU/FM8—genuinely on Martinique. R. G. Goulding (Wrexham) mentions him, but he didn't hear the suffix, so was a bit puzzled.

L. H. Waine (Yeovil) had an all-night session which produced KZ5AA, HK3FA, T12AB, CO6AV, UL7AB and scores of W's plus VE8NY—all this on CW. Since then the band has yielded VP4TR, ZP6AB, VQ8AX, PZ1QM, EA8AL—to mention only a few. Two queries from L.H.W.: Does OZ1AX (Island of Bornholm) count as a country? No! And are the UA9's in Sverdlovsk in Zone 17 or 18? The answer is 18. This same L.H.W. has wrested the QRP record away from D. W. Bruce by producing a card from VQ4FCA, who owns up to only 3 watts on 28 mc CW.

A. H. Edgar (Newcastle) found conditions a lot better than last month, and logged C8FP (Zone 23), FO8WK, lots of Russian districts, HR1RF, HZ1KG, PK2SU, HL2RS and KW6BY—all on CW. Best on phone were HS1SS, AP1D, VQ2JD and some VS7's and 8's. D. L. McLean's "super-DX" on 14 mc included HP1BR, KP6AA, YK1AC and VK1ADS (all phone). He has found things very good for VK but not for ZL. D.L.M. mentions that the following phones are all known to be operating on 14 mc: VR1C (14370), VR2BA, VR3C, FN8AD, and VK1ADS, who will be there for the next seven months.

The said FN8AD has been heard by quite a few listeners, including two who logged

him during the SLP! One of these was C. J. Goddard (Coventry), who then turned to CW and lists KG6FA, VS7NX, HE1EA at various times during the month. He also found a station signing IIBCB/TR—probably using the highly unofficial prefix for Libya! D. S. Kendall (Potters Bar) collected some new countries and heard F9QU/FM8, HS1SS, CR6AI, PJ5KO, ET3AM, FQ8SN, KG4AF, YN4CB—all rather nice.

An unusual one in the list from K. Smeeton (Barnton) is VP1CW. K.S. also mentions some very strong VK signals in the mornings and says that on one occasion ZL4HP was so colossal that he "sank" a DL4! R. W. Finch (Ilford) heard HC1FG saying that he

had been off DX work owing to handling traffic in the earthquake emergency. Others singled out for mention are VE5RW (0626) and KL7ZL (0630). R.W.F. suggests that we might run a competition for short-time "HAC's"—with a maximum time of 30 minutes, set like an SLP. It's a good scheme, and one I hope to try, but the HAC's might not always come off at all!

DX from K. Parvin includes HS1SS, ZP5BL and 7AD and VK1ADS several times. Odd ones were CR5UP and YS3PL/F8. W. S. Hall was surprised to log six HC's on phone, seven TI's, also YN and YS—but his high-spot was VK1ADS. He also found W9FKT/Aircraft Mobile, 200

miles S. of Newfoundland. During the month he rolled in, altogether, 118 countries in 35 zones, and hopes this means a good DX season to come.

A. Bannister (Manchester) says that the PY's at night are almost as trying as the I's were by day a little while ago. He wants a PY-filter! A.B. remarks that TG now seems to be pretty rare as a country, whereas YN crops up quite frequently. He heard K2AIR, an aircraft over New Jersey.

O. A. Good's description of 14 mc this month is "patchy," though he winkled out some good ones. For instance, FM8AD (phone at 2135), HS1SS (14200 phone at 1835), W6NZN/KW6 (14225 phone at 1630). On

1.7 mc COUNTIES HEARD—1949

Listener	Counties	Listener	Counties
'PHONE and CW		'PHONE ONLY	
G. C. Allen (Thornton Heath)	62	R. A. Hawley (Goostrey)	50
A. Baldwin (London, E.11)	60	J. H. I. Austin (Coventry)	49
R. A. Hawley (Goostrey)	57	A. Hart (Ilkeston)	49
D. Webber (Newton Abbot)	52	W. Eyre (Whaley Bridge)	47
D. Powell (Wilton)	49	K. L. B. Dalby (Gainsborough)	45
L. Singletary (Bicester)	45	J. H. Woodward (Stoke)	43
R. S. Stott (Upminster)	44	J. H. Roskell (Harrogate)	43
F. Finn (Coventry)	40	E. Nottingham (York)	37
M. Davies (Carmarthen)	40	R. S. Stott (Upminster)	34
D. Shallcross (Derby)	31	D. Garrard (Ipswich)	33
W. Iball (Wigan)	25	K. Parvin (Thornton Heath)	28
M. E. Bazley (Birmingham)	19	K. Smeeton (Barnton)	27
D. W. Bruce (Eltham)	15	M. G. Whitaker (Halifax)	26
		F. K. Earp (London, S.W.11)	22
		H. M. Graham (Harefield)	21
		G. Musk (Blackpool)	21
		O. R. F. Mason (Prittlewell)	11
		R. Line (Birmingham)	9
		R. J. T. Sands (Harrogate)	8
		A. L. Higgins (Aberkenfig)	7

the CW side there were KM6AO (0805 and 0945), VP8AK (1925), VP8AI (2140), VQ8AX (1720), ZS9J (1855). HI6EC, logged five times, was heard to say that only himself and HI8WF are active in that country.

D. W. Bruce was a little disappointed with the "shortage of zones," although he heard 36 of them during the month. He logged most of the DX that was going, and HE1IL gave him a new country. D.W.B. has been playing with noise limiters and has also built himself a new receiver—a ten-valve job starting off with EF50's.

G. W. Norris (Stowmarket) heard VK1ADS in a three-way with XE1A and F8NT—R5 and S7/8 for an hour. He says "QSL via VK3ADS in Melbourne"—but you'll have to wait a long time, even if he finds it possible to cope with SWL cards at all. H. M. Graham (Harefield) found himself a new country with VP7NQ, who doesn't seem to be mentioned by any others. Also F9QU/FM8 and (naturally) VK1ADS.

J. C. Beal (Wembley) found night-time conditions falling off on the band—heralding the winter season, of course. His best of the month was VP8AP (CW at 2110).

Other reports of 14 mc DX come from C. S. Pollington, A. L. Higgins, R. A. Fowler, J. Morse (Oldbury), J. Neal (Birmingham), D. G. Martin, A. T. Cheesley (London), T. E. Botham (Walsall) and D. K. Cocking (Farnborough). Letters and Calls Heard were received too late for inclusion from B. L. Stedman (Hawthurst) and J. Bartlam (Stockport).

FORTY METRES

This band is waking up in a big way but still doesn't attract a lot of attention. A. Baldwin (London, E.11) mentions PY2AD, 20W, 7WS, HZ1KE, UA6KEA and



Calls Heard

UR2AH. J. Hall (Croydon), the 7 mc specialist, has now put his total up to 127, new ones this month being VP4TAQ, EL5B, HB1JJ/HE and EA6AF. He also heard lots of VK's at 0630 on August 14. D. Powell (Wilton) heard KL7WZ (RST 599) at 0020 on August 14, and would like news of XPAØIP on CW.

W. S. Hall has found many ZL's around 0700. W. Kyle (Newcastle) heard ZS6MR (0500) and TF1AR (1500)—both CW. A. Studley (Harrow) scooped up HB1JJ/HE, EA8BC and that mysterious pirate SP1V! R. A. Fowler (Cranwell) heard ZC6PR (CW, 1544) but has his doubts about him.

DX ON 3.5 MC

A few faithfuls have continued to follow this band,

but have not heard anything more exciting than Americans. D. Powell kept looking for the LU's, without result, but was rewarded by hearing VK5KO (RST 239) at 2100 on August 7. W. Kyle suggests checking on WWV on 5 mc, as a slight clue as to whether to expect Americans on the 3-8-4-0 mc phone band. He finds their best times between 0200 and 0500 GMT. Round about 2300 he has heard FA9KI and OX3IA. And W.K. adds that WWV also comes in on 2.5 mc occasionally, which should indicate the possibility of W's on the 1.7 mc band before long.

D. S. Kendall has found static trying on Eighty, but he says when it abates there will be some long DX lists about the place. Finally, J. Hall reports hearing HZ1KE (569,

ZONES HEARD (AUGUST)

Listener	Zones	Countries
'PHONE and CW		
O. A. Good (Oswestry)	37	113
A. H. Edgar (Newcastle)	37	106
D. W. Bruce (Eltham)	36	128
M. Harrison (Darlington)	36	118
J. C. Beal (Wembley)	34	99
L. M. Davis (Cranwell)	33	90
R. A. Hawley (Goostrey)	32	91
J. Neal (Birmingham)	31	89
C. J. Goddard (Coventry)	31	65
R. A. Fowler (Cranwell)	28	69
B. W. Sutton (Liverpool)	27	64
'PHONE ONLY		
D. S. Kendall (Potters Bar)	35	116
R. G. Poppi (Beckenham)	35	104
D. W. Bruce (Eltham)	33	106
K. Parvin (Thornton Heath)	33	99
J. C. Beal (Wembley)	33	83
O. A. Good (Oswestry)	32	86
R. A. Hawley (Goostrey)	31	86
F. K. Earp (London, S.W.11)	31	76
B. Davies (Beckenham)	31	73
A. Bannister (Manchester)	30	89
A. T. Cheesley (London, E.10)	30	82
D. Vincent (Beckenham)	30	65
W. J. Barwick (Romford)	30	62
K. Smeeton (Barnton)	29	77
M. G. Whitaker (Hallifax)	29	77
P. Bysh (London, N.8)	29	58
K. M. Parry (Sandwich)	28	68
L. M. Davis (Cranwell)	27	78
T. E. Botham (Walsall)	27	63
C. S. Pollington (Chichester)	25	38
R. G. Goulding (Wrexham)	24	51
H. M. Graham (Harefield)	23	62
R. A. Fowler (Cranwell)	23	56
A. L. Higgins (Aberkenfig)	22	52
R. Marshall (Uppingham)	20	52
G. Murray (Newcastle)	18	46
D. Cocking (Farnborough)	14	36
F. W. Durham (Harrow)	14	27
O. R. F. Mason (Prittlewell)	13	20

0230 on 3515 kc). He has heard VK5KO several times, and also PY7WS.

QUERY DEPARTMENT

A very formidable array of queries this month makes it essential to compress them somewhat. So here are the chief bothers: Are CR7QT, NY4M, ZC6UNJ and KS4AI genuine? The last two certainly are. Where and what are Q8U, XV2DN and VQ7 (14 mc CW) and is VR5IQ genuine? Any gen on AJ3F, AIR and F7AH? Likewise on ZC3CN, ZC7AA and ZC8AC?

Now here is A. Bannister with the suggestion that AJ3F and AIR are TA3FAS and a DL4, talking "official business." He queries A8ABC (14320).

R. Marshall (Uppingham) queries MI3AB and UR2KAA; answers are Eritrea and Estonia. B. J. Vincent (Welling) asks whether AR8 and YK are two countries. Yes, they are—it was AR1 that was replaced by YK. He also wonders whether there has been another station on Pitcairn since VR6AA, VR6AB and VR6AY have both been reported at odd times, but not frequently or reliably. B.J.V. also asks whether one must have the whole call-sign to "claim" a country, as he heard a ZP8 but didn't get the call. Not good enough, B.J.V.—you'll have to identify him.

A. T. Cheesley (London) wonders whether anyone has a QSL from TF, since a lot of TF stations are not what they seem. He asks whether I was correct in saying that Sardinia didn't count as a country. As far as I can recollect, I have never said such a thing. Sardinia, with its own prefix IS, is a separate country. It was Sicily that the recent hoo-hah was about.

D. K. Cocking (Farnborough) asks where "G 2 Lucky Dog" is? The Call

Have you a Zone Map?

Book says Preston, but D.K.C. thinks he has been much too strong on 14 mc. Piracy rife, maybe. Also D.K.C. asks whether there is any "value" in a QSL card with practically nothing on it except the other fellow's call-sign (a VK in his case). All right as wall-paper . . .

D. S. Kendall suggests that people reporting MF2EE have been misled by the Scottish accent of MF2AA . . . Could be! He also clears the KA1AI mystery. The DU prefix is allotted to Philippines citizens; 1AI is the Clark Field Amateur Radio Club station, whose licence has not yet expired, and he is allowed to use his old call and prefix. D.S.K. also mentions the AJ3F business, and says all these stations with "A" calls seem to be military stations in the Mediterranean area. He adds AJ2A (SVØ) AJ1K (MD2AC), AE3US, A8ABC (Airborne) and WAR. He corrects a statement made last month about VK4SI/VR4, saying it should be

VK4SI/VR1. Doesn't matter much, because VK4EL, who runs the VK4 QSL Bureau, tells me that this VK4SI/Anything is just a pirate.

GENERAL SHORTS

Phonetics run riot (according to more than one reader) when you hear "Explosives Killed One Mad Doctor in Tangier." This shocker is meant to be EK1MD, but why the heck can't he say so? Miss Ena Woods (Sutton) is a newcomer, and wants an article explaining call-signs and the system on which they are worked. This shall be done!

B. P. Middleton (London, S.W.) is a 13-year-old and therefore probably our youngest reader. He began listening in May this year and has so far logged 40 countries. He would like to know who EC3AM is. IS1AYN, another query from him, is in Sardinia.

T. Spencer (Slimbridge) became interested in SWL after reading a back number of this paper, and is already roping

the stuff in. N. Hixson (Bournemouth) is yet another newcomer, more or less tied to the domestic receiver and the early mornings and the odd few minutes "when the family can't think of something they want to hear." Pause for a minute and sympathise with the many SWL's who suffer in this way! M. Harrison (Darlington) queries EAØEXP and LUCA/MM—two funny ones. He has a "bind" about lists of Calls Heard that are too long. So has G. W. Norris (Stowmarket), who wants all the PY's and LU's cut out. As he says, they should be audible on a crystal set. H. Macdonald (Radlett) wants the QTH of CS7VP, about which I haven't a clue.

J. Neal (Birmingham) asks entrants for the Monthly Zones Heard table to include the number of hours' listening that their claim represents. If enough of them will do it this coming month to justify a third column I will certainly include it.

THE TOP BAND

The Counties Heard ladder is practically static at present, and the band has not been too easy this summer, what with QRN, weakish signals and lack of activity. W. J. C. Pinnell (Sidcup) was on a holiday in Germany, and while over there he logged 33 counties on the Top Band, the best being G2FNW (Rutland) and GC2BMU (Alderney). G. C. Allen (Thornton Heath), the Top Man of the Phone and CW list, also listened while on holiday (in Lincolnshire). He heard 34 counties, also with GC2BMU as the best. G.C.A. can already produce QSL's from 54 counties—nice going!

G. Ayton (Stockton-on-Tees) sent a Calls Heard list for 1.7 mc which, unfortunately, we couldn't squeeze in. Finally J. H. Woodward (Stoke on Trent) says he has

DX QTH's

EA8TM	Tomas Morales, Box 8, Laguna, Tenerife, Canaries.
F9QU/FM8	Charles Bernicot, c/o C.G.T., Fort de France, Martinique.
JA2MY	APO 503, c/o PM, San Francisco.
KG6FH	Box 100, Guam, Marianas (ex-J9SIR).
KG6GA	US Coast Guard Depot, Navy 926, c/o FPO, San Francisco.
MD7WE	c/o RAF Nicosia, Cyprus.
MI3GH MI3SC	} APO 843, c/o PM, New York.
PK5HL		Box 21, Banjarmasin, Dutch Borneo.
PK5RU	Box 25, Banjarmasin.
PZ1QM	Box 679, Paramaribo, Surinam.
TI2CG	c/o US Embassy, San Jose, Costa Rica.
VP4CO	APO 869, c/o PM, Miami, Florida.
VQ3AA	S. H. W. Tanner, c/o Traffic Dept., East African Railways, Dodoma, Tanganyika.
VQ3AD	c/o C.I.R., Arusha, Tanganyika.
VS1DZ	GHQ Signal Regt., Singapore.
YN4NW	Box 51, Bluefields, Nicaragua.
ZD2S	G. Sherwood, c/o WAAC, Ikeja Airport, Lagos.
ZD4AC	J. C. Breakell, Box 933, Accra, Gold Coast.

found the band very poor lately and can't raise his total for the present. On the other hand, A. Hart (Ilkeston) has pushed up from 45 to 49 counties (all phone) with Ayr, Caernarvon, Fife and Flint for the new ones, which brackets him equal second in the list.

On the SLP dates in October the CQ DX Contest will be in full swing, so there should be loads of DX Phone about. But more of that next month. Meanwhile, may I remind you about that Calls

SET LISTENING PERIODS

September 24, 2100-2200
GMT—14 mc Phone.

September 25, 1500-1600
GMT—28 mc CW and
Phone.

October 29, 2200-2300 GMT
—14 mc Phone (No
U.S.A.)

October 30, 1600-1700 GMT
—28 mc Phone (No
U.S.A.)

Heard Blitz once more? And (another small Blitz!) please don't stake your various

claims in the middle of long letters. Put them on a post-card or a separate small piece of paper—it helps me so much when compiling the lists.

Next month's deadline will be first post on October 4. This gives plenty of time after the SLP's, so please get in earlier still if you can. Address everything to DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1. Until then, Good Hunting, as usual—or even better than usual. May you hear it all.

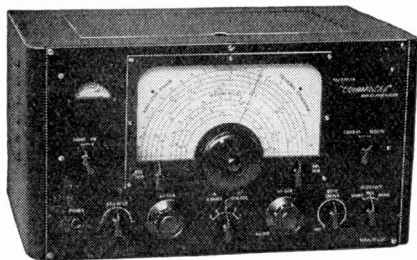
SOME USEFUL SUGGESTIONS

We can supply the *DX Operating Manual* (2s. 8d. post free), the *DX Zone Map* (6s. post free) and the *Principles of Short Wave Reception* (1s. 8d. post free), all of which in their several ways are sources of essential information on the practice of short wave radio. A large number of the queries we receive would be answered by one or other of these publications. Order on the Circulation Manager, Short Wave Magazine, Ltd., 49 Victoria Street, London, S.W.1.

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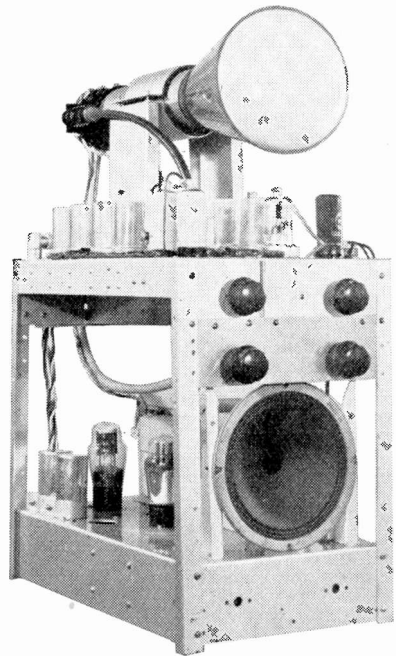
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CALLS HEARD

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

28 and 14 mc : No Europeans. No USA except W6 & W7

No VE except VES, 6, 7 & 8.

7 mc : No Europeans.

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

SET LISTENING PERIODS

14 mc

Aug. 21, 1700-1800 GMT

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

CW : CN8BQ, HZ1KE, VK6DX, VQ4AR, 4KRL, ZS1BK, 5FE, 6DO, 6RI, 6WY. (Rx : R.1155A.)

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

*PHONE : AR8BC, CR6AI, EA8BD, MF2AC, OX3MC, SVØWI, VE1GF, 2GQ, VS7BR, W9RUK, ZB1BB, 2AA, ZE1JX. (Rx : 504 and AR-88.)

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

CT1AC, 1PM, EA3ZQ, 3VT, MD2AC, OE5KM, SVØWI, VE1AA, W8NS, 9RUK, ZB1BB, 3V8AQ.

C. J. Goodard, Handcross Grove, Green Lane, Coventry.

*PHONE : FN8AD, I1YJ, MB9BL, OK1AQ, ZD1BB, 4X4AG, VU2DU.

G. Moses, 65 Railton Avenue, Crewe, Cheshire, OX3MC, VQ4IMS, ZB1BB, 2A, ZE1JX. (Rx : S.640.)

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

OX3MG, VS7BR. (Rx : S.640.)

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

AR8AC, EA8AE, MD2AC, OX3MC, SVØWI, VS7BR, ZB1BB, 2A, ZE1JX, ZS6DJ. (Rx : 640.)

G. W. Norris, 69 Hillside, Stowmarket, Suffolk.

AR8BC, CR6AI, MD2AC, PK4DA, YK1AA, ZB1BB, 2A, ZE1JX, ZS6PH. (Rx : 1155.)

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

*PHONE : PK4AL, VK5BN, 5VM, VQ4IMS, VS7BR, VU2DU, W1CSR, 1LBJ, 1PKW, 4MRH, ZB1BB, 2A, ZCICD, ZD1BD, ZE1JX, ZL4HP, ZS6Q, 4X4AR. Rx : (2 stage preselector, modified RF 24 unit, into Hallicrafters S40A.)

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

*PHONE : AR8BC, CN8MI, CR6AI, EA8AE, FA9ML, OQ5RU, OX3MC, PY7DO, ZB2A, ZD1BD, ZE1JX, 4X4AG. (Rx : AR88LF.)

K. L. B. Dalby, Green Lane, Lea, Gainsborough, Lincs.

*PHONE : EA8BC, OX3BD, 3MC, VS2BS, ZB1BB, ZE1JX. (Rx : H.R.O.)

L. N. Davis, 'A' Flt. 'C' Sqdn. Apps. Wing, R.A.F., Cranwell.

*PHONE : EA8CT, FN8AD, OX3MC, VU2DU, ZB2A, ZS6DW. (Rx : AR88LF.)

GENERAL

3.5 mc

W. S. Hall, 49 Sidney Gardens, Otford, Kent.

*PHONE : VE1IK, 1NO, W1AW, 2LV, 2NRN, 4MR, 4PC, 8REZ.

CW : VE3IB, W1RC, 2C1X, 2WIK, 4NNN, 8DDE.

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

*PHONE : PY4ZI, VQ2BL, 2BV, 2CA, VE2JAM, W2AIF, 2ENL,

2FAS, 2LAR, 2WN, 3BCC, 3EDA, ØMI.

CW : FA6KI, OX3IA.

7 mc

J. L. Hall, 2 Coombe Court, St. Peter's Road, Croydon.

CW : AR8BF, CX1FB, EA6AF, EL5B, HB1JJ/HE, TA3FF, T12AM, UL7KAA, VE8SG, VK2ZC, 3PG, 4AP, 7KB, 7LZ, VP4TAQ, 5RS, 6SJ, ZC6PR, ZL1AJ, 2JD, 2LB, 2NT, 4CS, 4FT.

W. S. Hall, 49 Sidney Gardens, Otford, Kent.

CW : CE3BM, CM2QZ, KL7YZ, KP4KD, W6J, ZL2JD, 3JA, 3LL, 4DU, 4HI, 4KX.

T. A. Studley, 274 Kings Road, Harrow.

CO5FL, 5WN, 8FH, EA8BC, HB1JJ/HE, KP4KF, SP1V, T12AM, UA1AL, UC2AF, UQ2AL, W5NPI, 9GEM, 9LM, YV5AL, ZL1VZ, 2AAR. (Rx : 1-V-2.)

28 mc

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

AR8AB, ET3AF, KP6AH, MI3SC, OQ5AO, 5CH, 5CQ, 5HL, VQ4CJG, 4IMS, 4RF, 5PBD, VS9AH, ZC6UN, 6UNJ, ZE2JK, 2KH. (Rx : S.640.)

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

*PHONE : ET3AF, KG6EZ, 6GA, OQ5CH, 5LL, VK5AE, ZD2S, ZE1JB, 1JO, ZS1BV, 2DY, 2IW, 3Z, 6FU, 6IH, 6JZ, 6MU, 6TE, 6U.

CW : FE8AB. (Rx : S.640. August 28.)

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

*PHONE : AR8AB, CE2CC, EL2A, FQ8SN, HC2OL, JA2CL, KG6AE, 6GA, LU7AA, MI3AB, OQ5RU, 5VD, PK4KS, PY2CK, T12EV, VK4HP, 5AE, 5ALD, 6DD, 9GW, VQ2DH, 4AC, 5DES, VS1AY, 1AX, 1DZ, 7FS, 9AH, VU2CQ, 2WR, ZD2S, ZE1JO, 2KH, ZL3DS, ZS1B, 1FL, 1FT, 2DY, 3D, 6DW, 6EK, 6FQ, 6JF, 6KK, 6LW, 6ME, 6MF, 6TP, 6XK, 6Z. (Rx : Modified RF 24 unit into a B2 Rx.)

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

*PHONE : EL2A, KH6WR, KS4AI, MI3SC, OQ5CL, ST1AZ, VK5JV, 6NL, VP3BNQ, 3CW,

VQ2DH, 4SC, 5ALT, VS9AH, W7KVX, ZCIAS, ZE1JD, 2KH, ZS1ST, 2CI, 6JF, 6KQ, 7JC, 9OR, CW: CX2HJ. (Rx: S.640.)

J. Honey, Redhill Cottages, Four Elms, Edenbridge.

AR8AB, CX3CA, 4CS, 5AB, FA3JY, KP4RV, K6AG, MF2EE, MT2FU, OA4PI, SV0AJ, TA3FAS, 3GVU, VK7RK, VO2N, VP3CW, VS7PS, 9AH, VU2JP, W2LDH/MM, W3NE/MM, W5AXI/MM, W6XYT/MM, ZCIAZ. (Rx: S.640.)

J. P. Moore, Solihull, Warwickshire.

CR7QT, HC1OY, 2FG, 2JR, 2KJ, JA2MY, KG6GA, 6FC, KP4DU, 4IQ, 4KE, KS4AI, PK4DA, 4KS, 5HC, VK5AE, 5AS, 6HC, 6WU, V51CW, 1DX, 1DZ, 3HC, XE1PM, XZ2KM.

K. M. Parry, 6 St. Bart's Road, Sandwich, Kent.

'PHONE: CE1AH, CM9AC, FQ8SN, HC1FG, 1OY, HK1DF, HP2RO, KG6EZ, 6GA, KZ5AM, M13SC, OA4BI, 4Y, T12EV, VK5AE, VP4TZ, 6JC, 9G, VQ4IMS, VS7PS, 7RF, 9AH, ZE1JB, 2JA, ZD5DS. (Rx: R208.)

W. J. Barwick, 8 Kingston Road, Romford, Essex.

'PHONE: AR8AB, CM9AC, CX4CS, ET3AF, KP4DU, KZ5CS, M13AB, OQ5AO, PK4DA, VK5AS, 6AQ, VP3CW, 4TZ, 6CDI, 9G, VQ2JM, VS1DZ, 7PW, 9AH, VU2DM, W6FCS, ZCIAZ, ZD2S, ZL4HP, ZP9FA.

A. Bannister, 58 Demesne Road, Whalley Range, Manchester, 16.

'PHONE: HC1KX, KG6GA, M13SC, PK4DA, 4KS, VK5AD, VQ5PBD, VS1AS, 1AY, 1CS, DZ, 9AH, YN4SDA, ZD4AH. (Rx: Modified P2Z.)

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

'PHONE: EA8CO, EL2A, 6A, ET3AF, HP2RO, KG6DF, 6GA, OA4AN, PK4DA, TA3GVU, T12EV, VK6DD, 6KW, 6NL, 9GW, VO2N, VP3CW, 9G, VQ5PBD, VS1DZ, 7PS, VU2CQ, VY1AU, ZD2S, ZL4HP, ZP6CA, 8AB, ZS3O, 3Z. (Rx: S.640.)

P. Bysh, 118 Campsbourne Road, London, N.8.

'PHONE: AR8AB, CE2CC, 2CT, CX2KL, 4CS, EL6A, LU1BU, 5BO, OA4BV, OQ5AO, 5CH, 5CK, 5LL, PY2JU, 2LM, T12EV, VS7RF, 9AH, ZD2S, ZE1JO, 2JA, 2JK, 2KH, ZS6IH, 6QJ. (Rx: SX-24.)

C. S. Pollington, 8 Cleveland Road, Chichester, Sussex.

'PHONE: AR8AB, ET3AF, JA2CL, 2CK, KG6FI, 6GA, KP4DU, M13SC, OA5CH, PK4KS, VK6GD, 6WH, VQ4NJ, 4RF,

5PBD, VS1DZ, 9AH, W6AOR, 6CZV, 6LI, 6PCK, ZC6UNJ, ZE1JB, ZS6IH. (Rx: AR88LF.)

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

'PHONE: CE2CC, 3IP, 5BH, CX4CS, 5AP, EL2A, KG6GA, M13SD, OA4BI, 4BV, VK6DD, VP3CW, 6SDI, VQ2DT, VS1DZ, 9AH, VU2CQ, W2IBZ/MM, 2WVW/MM, 3NE/MM, 5AXI/MM, 5HQ/PM, ZE1JO, 2JA, 2KH, ZP2BA, ZS3O. (Rx: 504 and AR-88.)

B. J. Vincent, 140 Westbrooke Road, Welling, Kent.

AR8AB, 8MR, CM9AC, CX4CS, EL2A, LU9AG, OQ5AO, 5RI, 5VD, PK4KS, 4DA, PY2CK, 4RJ, T12EV, VQ2DH, VS1DZ, VS9AH, W6FHW, YV1AV, ZE1JO, 2JK, ZD2S, ZS5GU, 6JF. (Rx: Mod. RFU.24 into R1224A.)

J. Roxburgh, The Cottages, Broomlands, Kelso.

CX4CS, MT2FU, PY2AGG, 2AJ, VS7PS, ZE1JB, 2JA, 2KH, ZS2DY, 2ET, 2EW, 2IW, 6BW, 6EK, 6FT, 6JF, 6LA, 6LF, 6NB, 6Z, 4X4AA, 4AB. (Rx: S.640.)

D. S. Kendall, 40 Aberdale Gardens, Potters Bar, Middlesex.

'PHONE: AR8AB, CM9AC, CO7RO, EL2A, ET3AF, FQ8SN, HC2JR, HP1WM, M13AB, 3SC, PK4DA, 4KS, T12EV, VK5AE, 6HL, VP6CDI, 6JC, VQ2DH, 2HW, 4IMS, 4NJ, 4RF, 4SC, 5EDS, 5PBD, VS1BS, 1DZ, 9AH, ZCIAZ, 6UNJ, ZD2S, 4AH, ZL3LE, ZP5BL. (Rx: 14 valve superhet.)

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

'PHONE: CX2CL, 3AA, KP4IV, LU5BQ, M13SC, OQ5VD, PY2CK, VK3AQ, 3KX, 5JM, 6DD, 6HI, VP6SD, VQ4IMS, 4RF, VS9AH, W5HQ/PM, ZCIAZ, ZD2S, ZS1DH, 1X, 2FJ, 6JT, 6LW, 6ME. (Rx: S.640.)

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

'PHONE: AR8AB, 8MR, EL2A, HZ1KE, KG6EZ, 6GA, KZ5CP, M13AB, 3SC, PK4DA, 4KS, VK5AE, 6CF, 6DD, 6DF, 6HR, 6SW, 6WU, VS1AY, 1DX, 1DZ, 7PW, 9AH, VU2CQ, 2JP, W7LHM, ZD6DT, ZP2AC, 5BL, 6AC, 7FA. (Rx: AR88LF.)

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

'PHONE: CX4CS, FA3KC, HC1OY, 2KJ, LU4DD, MT2FU, OQ5CH, PY2LM, 2QB, 4MX, 4RJ, VQ4RF, VS9AH, W6CHJ, 6DCP, 6GPN, 6NB, 6OZH, 6RIA, 6WNH, 6WTJ, 6YPZ, ZE1JA, ZS1CN, 1GR, 6CY, 6IH, 6KD, 6MN, 6NX, 6Q. (Rx: Double superhet RF26 Converter.)

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

'PHONE: C2WC, CE2CC, CX3AF, 4CS, EL6A, HP1OY, 1WM, LU2AP, 3DH, 4QD, OQ5BA, 5CH, PY1A, 1GQ, 2CK, VQ4CUR, 4NSH, VP6JC, CS9AH, ZP7FA, ZS2IW, 6BW, 6FU, 6HK, 6KP, 6MT, 6NM, 6RA. (Rx: AR88D.)

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

'PHONE: AR8BM, CX4CS, EK1MD, EL2A, LU5CD, M13AB, OQ5AO, PK4DA, PY4YL, VQ4IMS, VS7PS, ZE1JL, 2KH, ZS1DH, 2DY, 5Z, 6OA.

CW: UA9KSB. (Rx: S.640 and AR88LF.)

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

'PHONE: CE3AH, 3IP, CX4CS, EK1AD, EL2A, HC1OY, KP4BU, LU3BQ, 4DJF, 5DL, 8DA, 9AG, OA4BR, 4DI, OQ5LL, PY1AMS, 1GQ, 2AG, 2AK, PY2CK, 2CR, 2JU, 3CR, 4CA, 4PQ, 7HI, VP6EI, ZS5A, 6IH, 6TE. (Rx: AR88.)

M. G. Whitaker, Stile-House, Shelf, nr. Halifax, Yorks.

'PHONE: AR8AB, CX4CS, FQ8SN, JA2MY, KG6GA, LU3EQ, 4DD, 4DP, M13SC, OA4BR, PK4DA, 4KS, VP4TZ, VS1AY, 1CW, 1DX, 1DZ, 7PS, 7PW, 9AH, VU2BH, ZA3D, ZCIAZ, ZD2S, ZE2KH, ZS3Z. (Rx: Battery 0-V-1.)

P. G. Lucy, 11 Hereford Avenue, East Barnet, Herts.

'PHONE: CX4CS, EL2A, ET3AF, FQ8SN, KG6EB, 6EZ, 6GA, LU7UB, 9AG, OA1D, T12EV, VK3AQL, 5AE, 5AS, 5ND, 6DD, 6DW, 6FW, 6WU, 9GW, VP6JC, VS7RS, 7RR, 9AH, VU2CQ, 2LJ, W6KZH, 6WXZ, YN1HB, 4SD, YV1AV. (Rx: RFU24 and R1155A.)

14 mc

H. Macdonald, 24 Park Road, Radlett.

'PHONE: CN8MB, CO6BD, CS7VP, HH2HS, IS1BV, KP4PI, LU4DJ, M13SC, OQ5GZ, OX3FE, PY5AQ, SV0WF, TA3FAS, UA3DC, VK3BZ, VP4TH, 9WW, VQ4NSH, 4X4AA.

P. Bysh, 118 Campsbourne Road, Hornsey, N.8.

CO2VW, CX2CO, HC1FG, HK3IR, 5EM, LU6AJ, M13SC, OQ5DZ, T12HP, 2RC, 2TG, VE7CN, 7PM, 8MI, VK2NS, 3VA, 5RN, VP3HAG, VQ4CRE, 4ERR, 4NSH, VS1AX, XE1WW, YV3AL, ZL2GX, 3LT, ZP3BA. (Rx: SX 24.)

W. S. Kyle, 40 Albany Road,
Leighton Buzzard,
CX2CL, CP1AD, EK1DL, 1MD,
FA9WU, HC1FG, 2KM, KA1AI,
LU6AJ, OE7WX, PY6GN, 7OG,
7EE, SV5UN, VK7KB, VP3NB,
VP9F, VQ4IMS.

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

'PHONE: CO2DQ, EA9AI,
HG1FG, KP4DI, LU6AJ, MD2AC,
M13AB, MT2E, OA4C, OX3BD,
TA3FAS, VK1ADS, 2RM, 2WC,
3AWN, 4KS, 4WG, 5AJ, 5RN,
VQ4CUR, XE1A, 1WW, YN4CB,
YV1BJ, ZL4HP. (Rx: R208.)

F. K. Earp, London, S.W.11.

'PHONE: CESAB, FE8AB,
F08AD, HI6EC, HP1DR, HS1SS,
OA4M, OX3BD, 3MC, T2CG,
2CU, 2HP, 2OEC, 2RC, VE8MV,
VK1ADS, VS7DR, XE1AC,
YS1GM, ZD1BD, ZL1CD, 2NQ.
(Rx: RF24—5 valve superhet.)

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

'PHONE: F9QU/FM8, KG4AW,
KR6BL, VE8NJ, XZ2SY,
CW: AP2N, CR4NL, GM3ANO/
V56, UA0KFD, VP1AA, VQ3AK,
8AF, 8AX, XZ2EM, 2FK.

R. Marshall, The Knoll, Uppingham,
Rutland.

'PHONE: AR8EG, CX1UD,
2CO, LU4CN, N13AB, OA3BD,
OX3GE, 3MC, PY1DC, 2AN,
2CH, TA3BDU, 3FAS, TI2TO,
VK2WL, 3AWN, 4HF, VP4CO,
4TZ, 6CDI, 9F, VQ2JD, 4CUR,
VS9SH, XE1AC, ZL4CP, 4HP,
ZS1GG, 2PA, 6Q, 4X4CR, 4VA.
(Rx: R1155.)

M. H. Dunna, Kersey Towers, 58
Tomline Road, Felixstowe,
Suffolk.

'PHONE: EK1AD, 1DL,
MD2B, OX3BD, 3MC, PY6EL,
7AD, 7QG, TA3FAS, VQ4CUR,
4NSH, ZB1BB. (Rx: Bush
broadcast receiver.)

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

'PHONE: OA4M, TA3AFS,
TI2HP, 2TG, VK3AWN, W61KQ,
XE1AC, ZL4HP.
CW: CO2BM, CX3CS, LU7EF,
PY6DU. (Rx: R1155A.)

S. G. Beard, 8 Whitethorn Avenue,
Coudson, Surrey.

'PHONE: HC2KJ, HK1FE,
HP1LL, KG6AD, VK1ADS
(Macquarie Is.), 7AJ, VQ2JD,
VS2BS, 7BR, YS2AG, ZD1BD,
ZS1GG, ZL4HP. (Rx: B.C.348.)

J. H. Britton, 2 Chatterton Square,
Redcliffe, Bristol, 1.

CN8BV, 8EI, CO6BD, CX2AX,
FA3DS, 8AB, 9WD, LU3BY, 4DJJ,

5AB, 6AJ, 6HA, 7HJ, OX3BD,
3WG, PY1ACO, 2AC, 2AK, 2CK,
4EJ, 4RJ, 4RQ, 4XI, 5UH, 6CO,
SV0WI, TA3FAS, UA3DC, 6SF,
VP4PZ, 4TAR, 9F, VQ4CUR,
4NSH, XE1CO, ZD1BD, ZL4HP,
ZS6Q, 4X4CR. (Rx: 0-V-0.)

B. W. Sutton, 117 Utting Avenue
East, Liverpool 11.

CN8EI, EK1MD, ILS, KA1AI,
MO2AC, PK1APK, PY2CK, 6CO,
ZD2A, 4AB. (Rx: 0-V-1.)

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

'PHONE: CE3AT, EA8FG,
F9QE/FM8, FQ8SN, HC1KW,
HK1AF, HI6EC, MI3SC, TI2OH,
VK1ADS, VP4TAR, 7NQ, 9SS,
VQ4ERR, ZD4AD, ZL4HP,
ZS1BV. (Rx: 1-V-1 Mains.)

L. G. Chastey, Rosehill Sanatorium,
Penzance.

'PHONE: EL7A, KP4BI,
HP1BR, M13AB, TI2ES, 2HP,
2RC, 2TG, VO1L, VP3HAG,
4CO, 4TAR, VS1CW, 7BR,
VU2AT, YN4CB. (Rx: 1155.)

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

'PHONE: AR8BC, CE2BQ,
CO2DF, 6BD, 7PM, 7VP, CR6AI,
CX1VD, 2CO, 3CA, EL5A,
HS1SS, HC1FG, HK3IR, KH6GF/
SVO, KP4BI, MP4BAD, OA4CG,
4M, TI2OEC, VE7AAD, 7SO,
VK2AGU, 4HP, 4MW, 4VD, 4WF,
5BN, 5VM, VP3JM, 3JMXP/
5AR, 6CDI, 6IS, 6RS, VQ4NSH,
VS1AX, 7BR, VU2DU, ZD1BD,
ZE1JX, ZL4HP, ZS6Q. (Rx:
Modified RF 24 unit into Halli-
crafters S40A.)

A. T. Cheesley, Air Ministry
A.S.D.P. Alexandra House,
Kingsway, W.C.2.

'PHONE: CR5EF, EA8BC,
HS1SS, HP1JS, HZ2AC, PJ5KO,
VS2BX, 7BR, 9AH, XZ2KN, 2SY,
YS1MS, ZD1BD. (Rx: Ham-
bander—plus preselector and B.C.
453.)

K. Smeeton, 36 Runcorn Road,
Barnton, nr. Northwich, Cheshire.

'PHONE: CR6AI, FQ8SN,
HI6EC, HK4JR, 5EM, HP1BR,
HZ1KE, KA1AI, KH6GF, M13AB,
PK1MH, UB5BG, VE7AAD,
VK1ADS, VP1CW, 4TER, VS7BR,
YK1AC, YN4CD, ZD1BD, 4AD,
ZL1LA, 2GX, 4HP, ZS1GR,
4X4AF. (Rx: Hambander and
1155A.)

K. Twibell, 20 Gildingwells Road,
Woodsetts, Workop, Notts.

'PHONE: AC4AA, AR8BC,
CN8AI, 8BV, 8BW, CX1VD, 3CN,
EK1AD, FA3DS, MD2AC,
OQ5DZ, OX3MC, PK1MH,
PY2AKA, SV0AJ, UN1AH,
VK2MA, 3EA, 4VD, VP6IS,
YK1AC, ZB1AJX, 2A, 2E, ZS6DY.
(Rx: R.107.)

O. R. F. Mason, Greenways,
Fairlawn Gardens, Prittlewell,
Essex.

'PHONE: EK1AD, HC1FG,
KP4DR, LAU/Portable Airborne
(650 miles N/W of Cairo), OQ5RU,
OX3MC, PY7AD, TI2RC, VK2NS,
3YH, VP4CO, VQ4IMS, W6LDZ,
7CHZ, ZD4AD, ZL4HP, ZS3F,
4X4AD. (Rx: R1155A.)

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

CW: CR6AW, FE8AB, FF8GP,
FM8AD, FQ8SN, KG6HI, KV4AA,
KZ5KS, MD4CG, MI3FG, OA4AP,
OQ5GD, ST2RA, UH8KAA,
UJ8KAA, VE8AW, VS7CC,
ZC1AR.

'PHONE: CR6AI, HC1FG,
VP4TB, 5RS, XE1AC, YN1HP,
YS1NS. (Rx: S.640.)

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

'PHONE: AR8BC, CE3AT,
CR6AI, F9QU/FM8, FM8AD,
HC1FG, HH2ES, HI6EC, KA1AI,
OA4P, OQ5VD, TF3MB, TI2AV,
2TG, VE7TM, VP4TB, 6CDI,
9WW, VQ2DT, 4IMS, 4NSH,
4SGC, 4VL, VS9AH, YK1AC,
ZD1BD. (Rx: 5 valve superhet.)

G. Murray, 6 Agricola Road,
Newcastle-on-Tyne 4.

'PHONE: CN8AB, CO8MP,
CX2CO, EK1RW, EL2A, 5B,
FA3DS, KP4BI, LU4BH, MD2B,
M13AB, OX3BD, PY7QG,
TA3FAS, TI6TG, UA6SF,
VK2AVW, 3HW, 3ML, VP4TB,
VP5RS, VP6CDI, VQ4IMS,
4NSH, W6ESI, 4X4AA. (Rx:
1-V-2, all dry.)

J. C. Beal, 24 Woodfield Avenue,
North Wembley, Middlesex.

'PHONE: CR6AI, EL2A,
ET3AM, JA2BS, KA1AI, KG4AW,
KH6GS, MP4BAD, UG6AB,
VS7BR, VU2AT, XZ2SY, ZD4AD,
ZS3Z.

CW: AP2N, CR7AD, FQ8SN,
KZ5CP, UH8KAA, UL7AB,
VP8AP, VS1CV, VS9AL. (Rx:
BC SH6.)

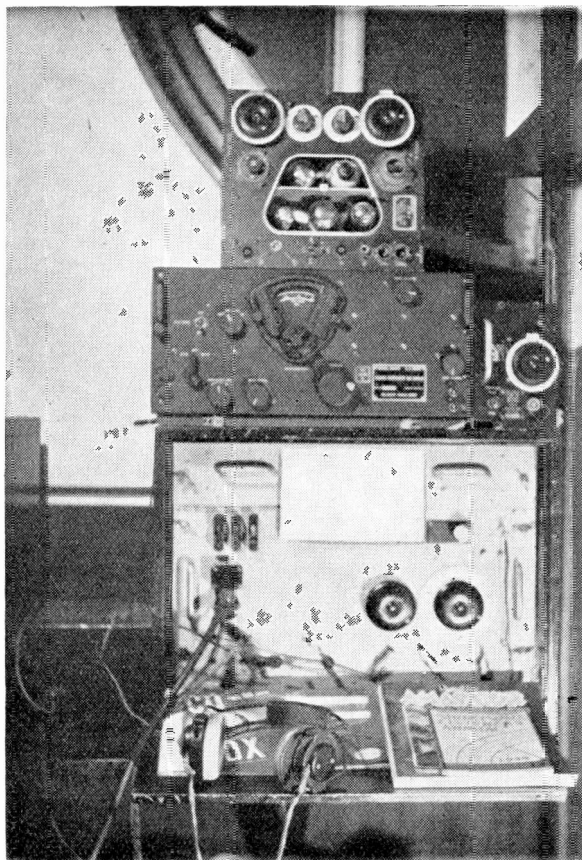
J. Neal, 217 Sladefield Road, Ward
End, Birmingham 8.

CW: AP2N, CR6AF, CX1DZ,
4CZ, FE8AB, HZ1KE, JA2AB,
KH6FQ, KP4CC, 4CU, 4IE, KV4AA,
KZ5CH, 5CP, 5IP, MD4GO,
VP9RR, 9SS, VQ2DH, 4ALF,
4AR, 4CUR, 4ERR, 4KRL,
VS1CV, 1DF, 6AC, 6BI, 7CC,
ZD2RGY, ZP6AB. (Rx: S.640.)

L. N. Davis, 'A' Flt. 'C' Sqdn., Apps.
Wing, R.A.F. Cranwell, Lincs.

'PHONE: AR8AB, CR6AI,
7RE, EA8CT, 8DD, FN8AD,
NC1KW, HS1SS, HZ1KE,
KH6VA, OQ5AD, PJ5KO,
VK4WG, 5MS, VP2VV, 6MO,
VQ4AR, 5IP, VS6CN, 7PS,
VU2DU, ZD2RGY, ZE2JA, 3PH,
ZL2GM, 4HP, ZS6RI, 9J. (Rx:
AR88LF.)

No. 25



SWL STATIONS

THIS station is owned and operated by B. Crayden, 337 Old Street, Shore-ditch, London, E.C.1, which is not only a noisy location but also a DC area.

Equipment on view includes an R.1082 (top) a very good ex-RAF TRF receiver which was standard equipment in bombers during the early part of the war. It has a wide frequency coverage, selected by plug-in coils. In the middle section at the operating position is a BC-348R, and to the right of it an RF-27 Unit, tuning 60-120 mc. Below is the R.208, covering the 10-60 mc range.

Two aerials are in use—one 120 ft.

long across a building 100 ft. high, and running E-W, and the other a 50-footer in the N-S direction.

Though some 80 countries have been heard to date, the collection of QSL's is as yet small, as B.C. only started short wave listening in earnest after leaving the R.A.F. Readers will be very interested to know that as a wireless-operator (aircrew) he was shot down over France in June, 1944, and, baling out, got in touch with British agents operating a suitcase portable transmitter; he was able to assist them with the working of this set, of a type which is now sold as surplus.

For the present, B.C. feels that he has had enough of transmission, and is content to concentrate on the receiving side. After five years on (and in) the air in the Service, we can well understand that—good luck to him!

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.

- DL1AU *Gavtingerstr. 3, Stockdorf, Munich, Germany.* 3-5, 7, 14 and 28 mc CW, 1800-0200 GMT.
- DL1BD *Feldmochtingerstrasse 30, Munich 54, Germany.* 3-5, 7 and 14 mc CW, 1630-1830 GMT.
- DL1BG *Heckerstrasse 31, Karlsruhe, Germany.* ORK and QSB of 28 mc 'phone and CW.
- DL1BT *Vellchenstr. 5, Karlsruhe, Germany.* Speech quality of 3-5, 7, 14 and 28 mc 'phone, and CW, operating 1900-2100 GMT.
- DL1CX *Friedrichstr. 2, Esslingen/N, Germany.* Operating 3-5, 7, 14 and 28 mc 'phone and CW.
- DL1HA *Alt-Schwanheim 44, Frankfurt/Main, Germany.* Operating 3-5, and 7 mc 'phone and CW.
- DL1OY *Hochstr. 19, Marl near Recklinghausen, Germany.* 3-5, 7, 14 and 28 mc 'phone and CW, 0500-0700 and 1900-2300 GMT.
- DL2MO/MB9AG *c/o Army Post Office, Klagenfurt, British Troops in Austria.* Operating 14 and 28 mc 'phone, 1700-2359 GMT.
- DL3BV *Hirtenweg 14, Wennigsen/D, Germany.* 3-5, 7, 14, 28 and 144 mc 'phone and CW, operating 2100-2359 GMT.
- DL4MV *Rhein/Main Air Force Base, Frankfurt, Germany.* 3-5, 7 and 14 mc CW, also 28 mc 'phone, operating 2200-0300 GMT.
- EA3BM *Carmen 30, Badalona, Spain.* Modulation of 14325 kc 'phone, 2000-2200 GMT.
- EA3JG *Wifredo 97, Badalona, Spain.* Quality and modulation, 14282 kc 'phone, 2000-2300 GMT.
- FQ8SN *M. Montblanc, SCKN, Brazzaville, French Equatorial Africa.* 14-397 and 28 mc 'phone.
- G2BP *73 Skinner Street, Chatham, Kent.* 7055 kc CW, 0600-0700 and 2030-2130 GMT and weekends.
- GC2CNC *c/o 39 Don Street, Jersey, Chan. Islands.* Operating 1918 kc CW, after 2200 GMT.
- G2DHV *63 Lewisham Hill, London, S.E.13.* Reports on 1-8, 3-5, 7 and 14 mc 'phone and CW.
- G2DUD *8 Hall Grove, Cheddle, Cheshire.* 1800 and 1807 kc 'phone and CW, 2100-2200 GMT, weekends 0900-1200 GMT. Reports over 20 miles.
- GW3AUJ *Post Office, Onllwyn, Neath, Glam.* 7 mc 'phone, VFO, at 0730, 1230 and 1800-1900 GMT.
- GM3BCD *Lynnwood House, Hawick, Roxburghshire.* Operating 1-7, 14 and 28 mc 'phone and CW.
- G3CAC *28 Mackenzie Road, Beckenham, Kent.* 3-5, 7 and 14 mc CW, VFO, 1800 GMT and weekends.
- G3DLD *Upways, Viewlands Rise, Chevin End, Menston-in-Wharfedale, Yorks.* Any reports.
- G3ERI *The Bungalow, Kingsley Fields, Nanwich, Cheshire.* QRP 7 and 14 mc CW transmissions.
- G3FNZ *J. A. Lambert, C/MX 868580, Hawke Block, L Division, R.N. Barracks, Chatham.* Reports on 7125 and 7250 kc CW, operating weekends.
- G3GEX *54 Elm Drive, N. Harrow, Middlesex.* Comparative reports from outside Europe, VFO-controlled 7 mc CW. Give approx. frequency.
- G4RD } *Silvermere, Harbour Way, Chidham, West*
G4RD } *Sussex.* 1-7, 3-5 and 7 mc 'phone.
- G1SDX *Rockport, Craikavadi, Co. Down, N. Ireland.* 1-7 and 3-5 mc CW, 7 mc 'phone, at 2130 GMT.
- G5ML *28 Cannon Park Road, Coventry, Warks.* 145-02 and 145-358 mc 'phone and CW, operating 1700-1900 and 2100-2130 GMT.
- HB9IP *Stolzeistr. 29, Zurich 6, Switzerland.* 3-5, 7, 14 and 28 mc 'phone and CW, operating 0430-0600 and 2000-2200 GMT.
- KL7UV *C. B. Case, C.A.A., Bethel, Alaska.* 7, 14 and 28 mc 'phone and CW, VFO, 0200-1700 GMT.
- OA4DA *15 de Enero 512, San Antonio, Miraflores, Peru.* Operating 28 mc 'phone, 1200-2359 GMT.
- ON4JX *11 Rue des Ecoles, Rebecq, Belgium.* 3-5 and 7 mc CW, operating 1930-2359 GMT.
- ON4LB *16 Villa des Ondes, Cibly-lez-Mons, Ht., Belgium.* VFO-controlled 14 and 28 mc CW, operating 0600-0900 and 2200-2359 GMT.
- PA0IV *52 Harlingerstraatweg, Leeuwarden, Netherlands.* 7 mc 'phone and CW operation.
- PA0TA *Spoorstraat 31, Goor, Netherlands.* 3-5, 7 and 14 mc CW, 1145-1230 and 1830-2000 GMT.
- PA0ZG *Hoofdweg 107, II, Amsterdam, Netherlands.* 3-5 and 7 mc CW, operating 1900-2200 GMT.
- PY4FI *P.O. Box 163, Juiz de Fora, Minas Gerais, Brazil.* 7004, 7015, 7065, 14008, 14030 and 14130 kc CW, operating 2200-0100 GMT.
- PY5RC *Avenida Argolo 12, Sao Bento do Sul, Santa Catarina, Brazil.* 28 and VFO-controlled 14-126 mc 'phone, operating 2100-2200 GMT.
- SM3APK *Radhugatan 24, Ostersund, Sweden.* 7 mc CW operation, during period 1800-2200 GMT.
- SM7AGG *Vikingsbergsvagen 19, Malmo 9, Sweden.* 7, 14 and 28 mc 'phone and CW.
- VE1JK *Box 103, Pugwash, Nova Scotia, Canada.* 3-5 mc 'phone operation at 1500 GMT.
- VE8MJ *Hudson's Bay Coy., Lake Harbour, Baffin Island, East Arctic Patrol, Ottawa, Ontario, Canada.* 14 mc CW, VFO, 1600-2300 GMT.
- VK2VC *53 Glencoe Street, Sutherland, N.S.W., Australia.* 14 mc CW operation, 0500-0900 GMT.
- VO2JH *c/o N.A.R.A., Box 660, St. John's, Newfoundland.* 7, 14 and 28 mc CW operation.
- VS1CS *335 Thomson Road, Singapore, Malaya.* 14080, 14200, 14280, 14320, 28408, and 29644 kc 'phone and CW, operating 1400-1800 GMT.
- W2DB1 *24 Cedar Drive, Farmingdale, L.I., N.Y., U.S.A.* 14008, 28560 and 29048 kc CW, and QRP 'phone, operating 1200-2359 GMT.
- W2PWI *H. F. Condon, RFD.3, New Berlin, N.Y., U.S.A.* 7, 14 and 28 mc CW, VFO, 1500-2300 GMT.
- W4DPE *C. Haston, RFD.3, Box 85, Sparta, Tenn., U.S.A.* CW operation all bands.
- WSASG *W. Hall, Widener, Ark, U.S.A.* Comparative reports, 14 mc 'phone and CW, 0400-0700 GMT.
- WSLXO *519 E. Quincy St., San Antonio, Tex., U.S.A.* 28027 kc CW, 1700-1800 GMT, QSB and QRM.
- W6KSU *17 Sunset Lane, Antioch, Calif., U.S.A.* 28 mc 'phone operation, 1800-2100 GMT.
- W6OKL *820 1/2 Millwood Avenue, Venice, Calif., U.S.A.* Note and keying of 14 mc CW, 0500-0800 GMT.
- W8EKK *Box 120, Massillon, Ohio, U.S.A.* 14 mc 'phone and CW, VFO, 2200-0500 GMT.
- W8NWU *704 Amity, Muskegon, Mich., U.S.A.* 14000-14150 kc CW, VFO, 0100-0700 GMT.
- W0P8H *1440 8th Avenue, Marion, Iowa, U.S.A.* 14 and 28-30 mc 'phone and CW operation.
- W0ZXV *4648 Chown Avenue S., Minneapolis, Minn., U.S.A.* 14200-14300 kc 'phone, 0400-0700 GMT.
- YK1AB *5 Sahlie Sabki 9th Street, Damascus, Syria.* 14020, 14060, 14240, 14280 and 14368 kc 'phone and CW, 0400-0600 and 1700-2100 GMT.
- ZL1TJ *A. Jellyman, Huapal R.D., Kumeu, Auckland, New Zealand.* 28134 and 14200-14400 kc 'phone, operating 0700-0900 GMT.
- ZL4FP *R. Lowry, Awarua Radio Station, Invercargill, New Zealand.* 7 and 14 mc 'phone and CW, 3-5 mc 'phone, 0430-0900 GMT. Details Wx.
- ZS1FK *81 Queen Victoria Road, Claremont, Cape, South Africa.* 14 mc CW, VFO, 1630-1930 GMT.
- ZS9J *P.O. Box 4, Victoria Falls, S. Rhodesia.* Operating 14-080 kc and 28 mc CW, evenings and weekends, from Chobe, Bechuanaland.

The VHF End

Seventy Centimetre News—
More About Aerials—
Contest Arrangements—
Individual Reports—
The Band Plan—Calls Heard

by **A. A. MAWSE**

BEST effort of the month is undoubtedly that of R. Rew (Birmingham) who built most of the equipment for station G3BUR/P, operating on 70 cm, at Walton Hill, Worcestershire, on August 21. Readers will be mainly interested in the Rx and aerial side of the station, although R. R. also had much to do with the transmitter as well. The aerial system consisted of 24 half-waves stacked in pairs and backed by reflectors at $\frac{1}{4}$ -wave spacing. The receiver was R. R.'s modified ASB8. Under hot weather conditions, with high humidity and haze which limited visibility to not much more than ten miles, a number of good contacts were made. Best of these was with G3MY/P on Burbage Moor, Yorkshire, the distance being around 67 miles, and the report S9. The full score is given in this month's VHF Calls Heard and constitutes the first list of 420 mc calls to appear in these columns. R. Rew, himself, tuned in most of them. Our heartiest congratulations to him and to the other operators at G3BUR/P.

They hope to be active again on September 10-11 and October 8-9, when the *Short Wave Magazine* 70 cm activity period and contest take place. On the latter date the scene of operations for G3BUR/P will be on a high building in the centre of Birmingham and will enable a comparison to be made between two very different types of location.

Two Metres

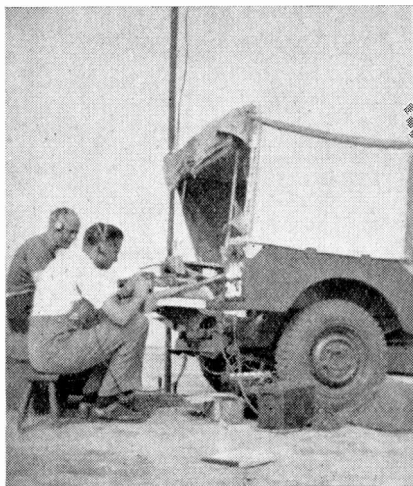
August produced one of those very occasional super evenings, such as some of us experienced last November. This time it was Monday, August 22. The phenomenon seemed to be at its best along the South Coast, where stations such as G2BMZ and G6WT in Torquay were heard exchanging S9 reports, plus enormous numbers of dB, with G2AVR, G2QV and G3EBW in the Hastings area. But even in the London district conditions

were exceptional and stations down the South Coast from Portsmouth to Devon were all coming in very strongly.

Other evenings have in general been reasonably good with signals up to 150 miles audible on most occasions.

Aerials

Last month's notes on aerials have aroused some interest, but one point should be made clear. The angle of the lobes (maximum radiation) in the vertical polar diagram of an aerial is decided by the height of the aerial and the nature of the ground, and is unaffected to any marked degree by the design of the aerial or aerial array. This is especially true of the lower lobes of an aerial several wavelengths high, and when statements are made that a stacked array lowers the angle of radiation this does not mean that the lobes are positioned differently. The effect of stacking is to put more power into the lower lobes at the expense of the higher ones and this means that at *all* low angles the radiation is increased. A 16-element stack, as normally used on two metres with 4 pairs of dipoles arranged vertically and backed by reflectors, has a forward gain of about 15 dB over a dipole. A 4-element Yagi of good design has a gain of 8 to 10 dB, so that the stack wins by an S-point or so, and under poor conditions this may make all the difference between readability and non-readability of a signal.



SWL Rew, one of our keenest VHF listeners and high in the achievement tables, sorting them out on the 420 mc receiver at G3BUR/P on August 21

Stacking two Yagis will give an increase of 2 or 3 dB.

Another characteristic of these beams is their horizontal directivity, the Yagi being much sharper than the stack. This makes searching rather trickier but has the advantage of reducing local QRM. Whichever type of beam you use its performance is ruined if the feeder is mismatched or of poor quality. Some coaxial cables have an advertised attenuation of 6 dB per 100 ft. at 50 mc. At 144 mc this means around 12 dB, and the same sort of figures apply to low-impedance twin feeder. It is rather silly to build a beam to give 8 dB gain and then throw away 12 dB in the feeder. What is more, any slight mismatch will cause an alarming increase in the losses on a feeder that is already attenuating the signal, and 3 or 4 S-points can quite easily be lost. 300-ohm ribbon is much better, being about 1 dB per 100 ft. at 50 mc, while open line is better still and is to be recommended for a high aerial or if the feeder is required to be very long.

L. W. Ross (Almondbury) describes an unorthodox beam he is using on 2 metres. This consists of the aerial proper and a reflector with 3 directors arranged in a vertical plane in front of them. Most unusual feature, however, is the dimensions. He gives the aerial proper as 49 in.,

TWO METRE DX

G. E. Magrow (Dawlish)	G3DAH	210 miles
D. T. Bradford (Denham)	G6WT	153 miles
A. F. Hayton (Palmer's Green)	G5BD	116 miles

Note: All claims for this table must be for distances over 100 miles and accompanied by a QSL card to verify.

reflector 52 and directors 46 in. These figures are *much* longer than half-waves and would seem to be more suitable for 114 than 144 mc! L.W.R. claims good results with it in spite of these abnormal sizes. On 420 mc he has a close-spaced 3-element vertical beam, end-fed from 70-ohm coaxial cable through a $\frac{1}{4}$ -wave transformer.

P. J. Towgood (Bournemouth), acting on a suggestion from G3EJL, has removed the fold from his folded dipole and now feeds the driven element directly in the centre with 52-ohm cable. Results have shown a marked improvement and it does begin to look as though folded dipoles are not the ideal way of feeding two-metre beams. Main trouble is that it is difficult

VHF CALLS HEARD

Seventy Centimetres

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

G2HNA/P (27), 3APY/P (49),
3EMY (6), 3ENS/P (42), 3LN (6),
3MY/P (67), 5BM/P (34), 8JJ/P (3),
8QX (22). (Heard on Walton Hill,
near Birmingham, August 21, with
ASB8 and 48-element beam. Figures
in brackets are miles.)

Two Metres

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

DL4XS, F8GH, 8LO, 8NW, 8OL,
9DI, 9MX, G2AJ, 2AVR, 2BMZ,
2CIW, 2CPL, 2FPP, 2FZR, 2KG,
2MV, 2PU, 2QV, 2UJ, 2WJ, 2XC,
2XS, 2XV, 3ANB, 3BTL, 3CNW,
3DAH, 3DEP, 3EBW, 3EJL, 3FIJ,
3GW, 3VM, 3WW, 5IG, 5MR,
5RO, 5JO, 6DH, 6LX/P, 6PG,
6WT, ON4FG, 4MVD, PA0AD,
ØHA, ØIKS, ØPN, ØUN. (From
April 17.)

D. T. Bradford, 9 Oxford Gardens,
Denham, Bucks.

G2ABN, 2AJ, 2CIW, 2FPP,
2HDY, 2KG, 2MR, 2MV, 2NH,

2WJ, 2XC, 2YC, G3AEX, 3ATV,
3BLP, 3BN, 3CVO, 3CWW,
3DCC, 3DEP, 3FP, 3NR, 3WW,
G4CI, 4HT, 4OO, G5BC, 5DT,
5IB, 5KH, 5MA, 5NF, 5VM,
5WP, 5YM, 6JK, 6LX, 6LX/P,
6NB, 6OH, 6OT, 6PG, 6UH,
6VC, 6VX, 6YP, G8GX, 8IP,
8KZ, 8SY.

G. E. Magrow, Sherwood, Exeter
Road, Dawlish, Devon.

*PHONE and CW: G2AJ, 2ANT,
2AVR, 2BMZ, 2CIW, 2DGO,
2HDY, 2KG, 2MV, 2NH, 2QV,
2WJ, 2XC, 3AAK/A, 3ABH,
3AEX, 3AUS, 3AVF, 3AVF/P
3BLP, 3CFR, 3DAH, 3DEP,
3EBW, 3EJL, 3LV, 3RI, 4CI, 4DC,
4GR, 4OZ, 5BY, 5MA, 6NB, 6UH,
6VX, 6WT, 8IP, 8JB, 8WV,
GW2ADZ. Rx: 6AK5 Pre-
selector to Eddystone Converter to
B.C.342N. Aerial: 6-element c.s.
rotary beam.

P. J. Towgood, 6 Guildhall Road,
Southbourne, Bournemouth,
Hants.

*PHONE and CW: 25-50 miles:
G2DRF, 2DSW, 2XC, 3CGE,
3EJL, 3LV, 3RI, 6DT, 8LY.
50-100 miles: G2ANT, 2AVR,
2BMZ, 2DGO, 2HDY, 2MV, 2QV,

3AAK/A, 3AUS, 3AVF, 3CWW,
3EBW, 3EHY, 4GR, 5BM, 5BY,
5MA, 5TP, 5XA, 6HC, 6JK, 6NB,
6UH, 6VX, 6WT, 8IP, 8KZ, 8QX.

100-150 miles: G2AJ, 2HCG, 2RI,
3ABA, 3BKQ, 3GW, 4RK, 6LX/P,
8SY.

150-200 miles: G2IQ, 2OI, 2XS,
3CXD, 3DA, 3DRG, 3VM, 4LU,
GW2ADZ.

200-250 miles: G3CUJ. (Rx: *Mod. RF27, xtal controlled 9 mc converter, into 1.6 mc IF/AF amp. Aerial: 4 element c.s. beam, 22 ft. high, fed by co-ax.*)

L. A. Whitmill, 762 Kenton Lane,
Harrow Weald, Middlesex.

G2ABN, 2AGV, 2AJ, 2ANT,
2BN, 2CIW, 2FPP, 2IQ, 2NH,
2WJ, 2XC, 2XV, 2YC, 2ZV, 3AEX,
3BOB, 3BKQ, 3BLP, 3BUZ,
3CWW, 3CVO, 3DEP, 3FD, 3FP,
3OK, 3RI, 4AU, 4CI, 4DC, 4HT,
4KD, 4OO, 5BC, 5BD, 5CD, 5DT,
5KH, 5MA, 5RD, 5TP, 5WP, 5XA,
5YM, 6CB, 6HG, 6JK, 6LR, 6NB,
6NB/A, 6NF, 6OH, 6VX, 6WT,
6YP, 8IP, 8GX, 8KZ, 8SY, 8TB.
(Rx: RF27 into S640 long wire
aerial and 3-element beam. August 1-
31.)

to calculate, or measure, the radiation resistance of a beam at these frequencies, and unless this resistance can be determined the calculations for the folded dipole cannot be worked out. This may be the cause of the markedly inferior performance of most Yagis compared with the stacked arrays, mismatches being much smaller on the latter, as well as the feed lines in general being less lossy.

The Zone Plan

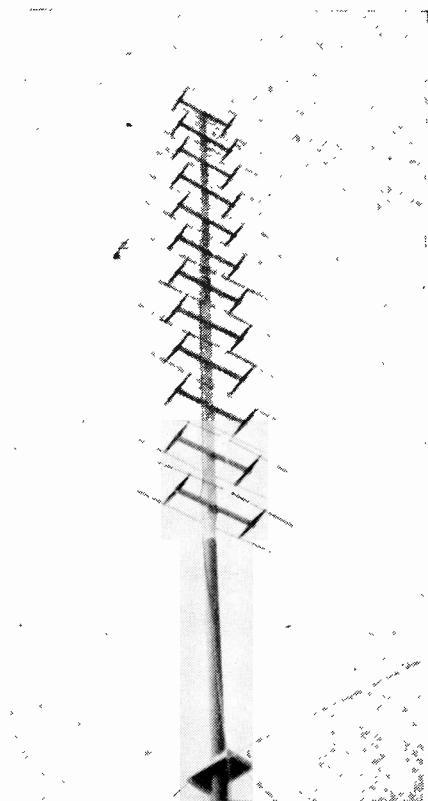
With effect from October 1, the two-metre stations are hoping to try out a Band Plan in order to assist in operating a very wide band, at the same time reducing unnecessary QRM. Details of this Plan are given in the accompanying table. Its introduction will, of course, mean that many of the frequencies quoted in the Frequency List which many of you received recently will be wrong, but it is hoped to compile a new list at an early date.

Contests

Our Second Annual VHF Contest will take place on November 12 and 13, on the two-metre band. Full rules will be published next month, but they will be similar to last year's, except that reception of Continental stations will be permitted this time. This Contest is in conjunction with the *Short Wave Magazine* event during the same week-end, so there should be plenty of activity.

Station News

J. E. Harman (Eastbourne) in a location badly screened by the Downs in many directions, sends in an interesting list of calls heard. He has made the most of his one open direction, over the sea, and has logged numerous F, ON and PA signals. The Rx is an Eddystone converter into HQ120X, with a 6J6 pre-amplifier; a 4-element close spaced beam is in the roof-space. A. L. Mynett (Wembley) finds G3DAH at Herne Bay his most consistent signal from beyond the horizon, with G3DEP (Ryde) and G2IQ (Sheffield) as "runner up." He has a crystal-controlled converter feeding into an IF unit tuning 12.7 to 14.7 mc. The RF section of the converter is a neutralised 6J6 followed by a push-push 6AG5 into a push-push CV102 crystal diode mixer. In order to avoid IF break-through, which has been giving much trouble, a new Rx line-up is under way. The local oscillator volts are obtained by a combination of crystal and VFO. The two are fed into a balanced modulator (such as is employed in sup-



When G3BUR went portable on 420 mc on August 21, this was the aerial array—24 $\frac{1}{2}$ -wave elements stacked in pairs, with a similar system of reflectors.

pressed carrier transmission) using a 6J6 which eliminates the main crystal frequency and reduces the chances of IF interference. The lower sideband is then multiplied and fed into the CV102 mixer. The RF and oscillator tuning are of the permeability type; the IF unit is a double superhet. For aeriels, A. L. M. has been using a Quad, but a stacked array of four three-element beams is under construction.

P. J. Towgood (Bournemouth) comments on the stability of his RF27, which is sufficiently good for him to calibrate it, but he has ideas for a 6J6 converter. He was lucky enough to hear G6LX/P in Rutland and has logged much other good stuff. M. Taylor (Tooting) has now passed his R.A.E. and so will not be sending reports for some time. Best of luck, M. T., and here's hoping to hear you on Two

The Two-Metre Zone Plan

Effective October 1, 1949

ZONE A	144.0 to 144.2 mc
All Scotland.	
ZONE C	144.2 to 144.4 mc
All England from Lancs and Yorks northward.	
ZONE D	145.8 to 146 mc
All Ireland.	
ZONE E	144.4 to 144.65 mc
Cheshire, Derby, Notts, Lincs, Rutland, Leics, Warwick, Staffs.	
ZONE F	145.65 to 145.8 mc
Flint, Denbigh, Shrops. Worcs. Hereford, Monmouth, and westwards.	
ZONE G	144.65 to 144.85 mc
Northants, Bucks, Herts, Beds, Hunts, Cambs, Norfolk, Suffolk.	
ZONE H	145.25 to 145.5 mc
Dorset, Wilts, Glos, Oxon, Berks, Hants.	
ZONE I	145.5 to 145.65 mc
Cornwall, Devon, Somerset.	
ZONE J	144.85 to 145.25 mc
London, Essex, Middlesex, Surrey, Kent and Sussex.	

before long! L. A. Whitmill (Harrow Weald) has put up a 3-element beam, but only at 15 ft. Even at that height results are good.

D. T. Bradford (Denham, Nr. Uxbridge), one of our leading SWL operators on VHF, has been attending to the "outside arrangements" as well as coping with numerous enquiries regarding RF27 modification. D. T. B.'s aerial system now consists of two 3-element Yagis stacked, at $\frac{1}{2}$ -wave separation, with 0.25 wave spacing reflector-radiator and 0.3 radiator-director; this array is fed through 300-ohm line with Q-bar matching. At the moment, he is not too happy about the performance of this beam—but he is another to have heard G6LX/P in Rutland and has now pushed up to 19 counties.

For 420 mc, D. T. B. has a four-element

wide-spaced Yagi mounted above the two-metre job—but as yet no receiver for 70 centimetres.

The Frequency Lists

As the number of Frequency Lists available was limited it was decided to issue these only to VHF Listeners' Club members *who were known to be active on two metres*. And that raises another point. Quite a number of Club members have not written for a very long time and as it is useless keeping the names of people no longer interested, the list is being revised. If you wish your name to be kept on the Club list, please notify the Secretary during the next few weeks. It is hoped to issue another Circular shortly with the names and addresses of all club members. This should enable local "get-togethers" to be arranged.

In Conclusion

The latest date for next month's VHF news and lists of Calls Heard is October 6 and the address is A. A. Mawse, *Short Wave Listener*, 49 Victoria Street, S.W.1. BCNU on October 20.

Two Metres

Counties Heard

Starting Figure, 10

P. J. Towgood (Bournemouth)	.. ..	28
R. Rew (Birmingham)	.. ..	24
W. H. Pierce (Reigate)	.. ..	22
G. E. Magrow (Dawlish)	.. ..	22
D. T. Bradford (Denham)	.. ..	19
A. L. Mynett (Wembley)	.. ..	17
A. W. Blandford (Mitcham)	.. ..	16
R. M. James (Chatham)	.. ..	12

DON'T MISS THIS BOYS, IT'S GOOD!

230v AC Mains Transformers, 150.0-150v at 100 Mills, size $3\frac{1}{2}'' \times 3\frac{1}{2}'' \times 4\frac{1}{2}''$. Fitted with ceramic terminals. Another 150.0-150v 0.10-20-30-40v at 70 Mills, size $2\frac{1}{2}'' \times 3\frac{1}{2}'' \times 3\frac{1}{2}''$, 4/- each. No heaters at this price. 4/- plus 1/- post. Brand new TR1196 6-valve superhet receiver, 4.3 to 6.7 Mc/s, easily converted to any frequency. Contains 2 460 Kcs I.F. Transformers, 2 EF39, 2 EF36, EBC33, and EK32, 25/-, 2/6 post, with conversion details 1/- extra. Less valves 7/-, 2/- post. A bargain buy that cannot last much longer. Get it now.

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

DX broadcast

ZL3, Wellington, 11780 kc, continues to be heard well in the early mornings. V. R. Dutton (Staple Hill, Bristol) logged it at 0500 with a pips time signal and the direction: "This is Wellington. The time is 5 p.m. and here is the Children's Hour." On July 24, the writer heard it at 0715 with a relay from Station 1YZ, Rotorua, where the Maori community contributed a special programme for their fellows in the Cook Islands: tribal dances intermingled with intermittent native cries were not the least impressive part of the broadcast.

C. Costello (Wellington, N.Z.) informs us that during the recent cricket Test Matches in this country, ZL2, 9780 kc, was relaying the commentaries and actually opened up at 0945 each day. We believe that this transmitter also carried Rugby Union commentaries from South Africa at 1400 on Saturdays during the recent All-Blacks tour.

Radio Tahiti is reported on 12075 kc from 0415 to 0500 daily with News in French and popular musical recordings. Radio Noumea, New Caledonia, besides operating on 6005 kc, is now using 3410 kc with a power of 100 watts and the slogan: "Radio Electrica" from 0700 to 1000 each day.

All times given in this article are GMT except where stated

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

R. T. Blackmore (Exeter) has been logging VLG10, Lyndhurst, 11760 kc, 2210-2225, with the feature: "Magazine Of The Week."

R. A. Savill (Sevenoaks, Kent) found Radio Australia at its best at this time with a choir recital from St. Patrick's Cathedral, Melbourne over VLG6, 15230 kc. VLB6, 15200 kc, was also audible (S9) at 2200 with chimes from the Melbourne Post Office clock, followed by a piano duet by Arthur Young and Reginald Forsyth, but VLC11, 15210 kc, also S9, closed down at this hour. V. R. Dutton heard Radio Australia on both 15190 kc and 11760 kc opening up its transmission to the Forces in Japan at 0830; he has received a copy of their Mail Bag programme of July 4 in which they answered his letter! Finally, a Croydon reader wonders how many listeners to XEWW, 9500 kc, closing at 0600, then heard VL13, Sydney, on the same frequency relaying a BBC News; he claims that this station is audible until 0815.

AFRICA

This continent has had much to offer recently. Firstly, J. C. Catch (South Shields) has received a verification by registered air-mail from J. Tavares Paulo, Director of Companhia de Diamantes de

Angola, in respect of Radio Diamang, CR6RG. The following details are given: Radio Diamang exists solely for the entertainment and spread of culture among the personnel of the Angola Diamond Company, and programmes are organised by the Staff itself through its Club, the Caso de Pessoa. The locally constructed transmitter operates on 8242 kc with a power of 300 watts to a half-wave Zepp with Collins coupling; the RF circuit is a crystal oscillator and modulation is Push-Pull, 6L6, Class B Modulation on filament of valves RK28. The schedule is: Nightly, 1830-1930, and Sundays, 1100-1200 in addition.

We are happy to renew acquaintances with Miss M. I. Ballingall (Ballater, Aberdeenshire), late of Singapore, who has produced some valuable information regarding "Gold Coast Broadcasting" which some of our readers have heard towards the close of each year.

The details are actually supplied by John Kenyon, who directs the programmes at Accra, Gold Coast Colony. He writes: "We are well heard over Gold Coast—we rediffuse and transmit also. We transmit and are picked up by 16 or so rediffusion stations throughout the Gold Coast; they in turn rediffuse

TABULATED SCHEDULES

I. South African Broadcasting Corporation. P.O. Box 8606, Johannesburg. Short Wave Broadcasting Transmitters.**"A" Programme—English; "B" Programme—Afrikaans.****(a) Transvaal Division. (Johannesburg Programme.)**

Johannesburg. No. 3. B.5 kw.	3450 kc.	Not operating.
	4895 kc.	1550-2105 (Daily).
	6007 kc.	0445-0630 (Weekdays).
		0555-0610 (Sundays).
	9523 kc.	0815-1210, 1400-1540
		(Weekdays).
		0815-1540 (Sundays).
	11710 kc.	Not operating.
No. 4. A.1 kw.	4800 kc.	0445-0630, 1620-2105
		(Weekdays).
		0555-0610, 1600-2105
		(Sundays).
	9870 kc.	0815-1210, 1400-1610
		(Weekdays).
		0815-1550 (Sundays).
No. 5. A. O.2 kw.	4373 kc.	All sessions.

(b) Cape Town Division. (Capetown Programme.) (A and B Programmes exchange stations 1820 to 2000 Wednesdays.)

Cape Town. No. 3. B. 5 kw.	5880 kc.	1700-2105 (Daily).
		0445-0630 (Weekdays).
		0555-0610 (Sundays).
	9610 kc.	0815-1210, 1400-1645
		(Weekdays).
		0815-1545 (Sundays).

(c) Natal Division. (Durban Programme.)

Pietermaritzburg. No. 2. B. 0.2 kw.	4878 kc.	All sessions.
Usual session times : Weekdays : 0445-0630, 0815-1210, 1400-2105.		
Sundays : 0555-0615, 0900-2105 A, 0800 or 0830-2105 B.		

II. Spanish Broadcasting Stations.

- (1) Radio Nacional de Espana, Madrid, 9368 kc. 40 kw.; 15636 kc.
 - (a) 9368 kc : 1730 Polish, 1800 French, 1830 Roumanian, 1845 Italian, 1900 Portuguese, 1920 Russian, 2000 English, 2030 Spanish, 2100 Hungarian, 2115 German, 2130 Arabic, 2200 Close—2230 Philippines Service, 2345 to 0300 American Service.
 - (b) 15636 kc : 1300-1400 (Spanish—National Relay).
- (2) Radio Falange de Alicante, 7940 kc. 1.2 kw. 1300-1430, 1900-2300.
- (3) La Voz de la Falange, Madrid, 7380 kc, 0.2 kw. 2100-2330.
- (4) Radio Club Tenerife (Canary Islands). EA8AB, 7267 kc, 0.5 kw. 2300-0000.
- (5) Radio Seu, Madrid, Edvio, 7117 kc, 1 kw. 2000-0000. (Sometimes 7191 kc or 7141 kc.)
- (6) Radio Mediterraneo de Valencia, 7037 kc, 0.1 kw, 1200-1500, 1900-2300.
- (7) Radio Nacional de Espana en Malaga, EAJ9, 7025 kc, 0.2 kw. 1700-0000.
- (8) Radio Falange de Valladolid, FET1, 7006 kc, 1 kw. 1230-1430, 2000-2230; to 2300 Fridays, to 2330 Sundays.
- (9) Radio Tetuan (Spanish Morocco), 6067 kc, 1.5 kw. Weekdays : 0730-0800; 1330-1500; 1800-2300. Sundays : 1330-1500; 1930-2300.
- (10) Radio Minorca, Mahon, Minorca, Balearic Islands, 7550 kc. Opens 1915.

in their locality.—Then outside, we get picked up along West Africa, and often in America and other parts further afield. Gold Coast time, incidentally, is the same as U.K. time. We have two transmitters : SWB8 (1.8 kW) and SWB11 (5 kW). Our wave-lengths are 61.04 m. (4915 kc) and 31.2 m. (9640 kc)." Gold Coast programmes are normally given at 1030-1130 (0640 kc) and 1528-1755 (4915 kc). All correspondence should be addressed to the Senior Programmes Officer, P.O. Box 745, Accra.

J. C. Catch has heard FIA6, Douala, French Cameroons, using 9145 kc : it was identified at 2000 with the direction : "Ici Radio Douala," then came music and at 2010 a News in French, and it closed down with the Marche Lorraine at 2015. J.C.C. mentions OTM2, Radio Congo-Belge, Leopoldville, as having changed frequency to 9400 kc, but OTH, heard 1800-1830 daily, still operates on 9210 kc.

CR4AA, Radio Clube do Cabo Verde, Praia, on 5880 kc, can be heard from 2030 to 2200 daily.

It is announced by the Central African Broadcasting Corporation in Lusaka, Northern Rhodesia, that owing to severe disturbances, transmissions over ZQP on 9700 kc have had to be discontinued, but the 7220 kc outlet is still in use from 1530 to 1700 daily. In Southern Rhodesia, Salisbury has been testing on a new channel of 3303 kc at 2000; any communications should be addressed to the Chief Engineer at the station.

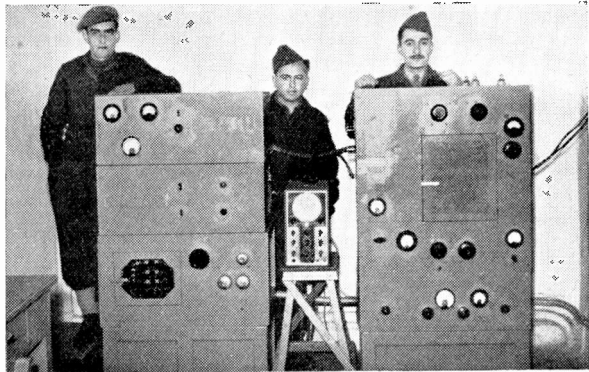
J. C. Catch logged FIQA, Tananarive, Madagascar, on 7375 kc from 1800 to 1845, with a News in French at 1815, and our Croydon correspondent logged a station opening with the French Anthem on 7170 kc at 0300. This he believes is Saint Denis, Reunion.

Monsieur P. Poirer, Chief of Radio Saint-Denis, in reply to a Swedish listener's report, suggests that his receiver and aerial must be particularly sensitive! Radio Saint-Denis operates with only two 200-watt transmitters on 4800 kc and 7170 kc, and is on the air daily, 0300-0330 and 1345-1430. Reception reports are greatly appreciated.

In Mozambique, CR7AB, 3490 kc, was logged by E. W. Jordi (South Kensington, S.W.7) with Portuguese News at 1825, and at 1831, three gong notes and the slogan: "Radio Clube de Mozambique."

CR7BM is also reported to be relaying the Portuguese Service on 3440 kc in parallel with 4820 kc. J. C. Catch has again logged ZNB, Mafeking, 5897 kc, with a programme of light music, 1715-1800, and an announcement of poor readability at 1750. For the Rugby Union football matches between the Springboks and All-Blacks from 1325 to 1500 on Saturdays, ZRB, Waterkloof, on 9110 kc and 6210 kc, has been in use; also ZUD on 8695 kc. J. T. W. Blyth (Leigh, Lancs) is now the proud possessor of the South African Broadcasting Corporation's verifications for ZUJ1 and ZUJ2: Cape Town on 5880 kc has recently been heard by the writer with the Pretoria Clock chimes at 2100, and a few minutes later the direction: "This is Cape Town calling on 51 metres. Goodnight, Everybody!"

J. T. W. Blyth mentions Radio International, Tangier, 6200 kc and a power of 1 kW, which has sent him a fine card with the schedule: 1300-1600; 1900-2400 daily. From Croydon we are told that Algiers has been operating at 0700 on 6160 kc, and that Rabat, French Morocco, is on 7433 kc and 7585 kc—at least, the programmes of these two are the same as Rabat medium-wave on 601 kc. J. C. Catch



Transmitter at the Larissa Broadcasting Station, Greece. On the right is the engineer, amateur SVIMP. This equipment provides programmes for our Forces in the area.

logged Omdurman, 5937 kc, at 1800 on a Friday with light operatic music; we ourselves have found that their Friday broadcast in English now commences at 1700 and concludes at 1730, both on 5937 kc and 9746 kc.

Lastly comes P. E. Wolmer's (Grantham) report that CSX2, Ponta Delgada, Azores, 4845 kc, is one of the most consistent singles from this continent, and particularly from 2200 to 2300.

ASIA

Our Croydon correspondent says that with a little careful tuning, the two Japanese broadcasters JBD3, Osaka, 15225 kc, and JBD4, Osaka, 15235 kc, can be logged as late as 0900 some mornings.

He also heard Radio Dacca, Pakistan, on its new outlet of 15335 kc as early as 0135. C. Costello has their card for APD1, 15270 kc; it depicts a luscious green crescent and star on a white background. The Lahore transmitter on 11740 kc is now reported to be active with News in English at 0200, 0710, 1200, 1445 and 1630, but we have to admit that we have not landed this one yet!

In the island of Formosa, China, Radio Taiwan, BCAF, 11680 kc, is in operation 0255-0500, 0830-1430, 2200-2300. C. Costello reminds us that the French-speaking station on 7210 kc is definitely Hue, for its frequent clear direction is: "Ici Radio Hue" (pronounced 'way'); it broadcasts a limited number of Victor Sylvester recordings and the schedule is: 2300-0100, 0300-0600, and 1000-1530. The Director is R. Steenbrugge, and the address is: Box 65, Hue, Annam, French Indo-China. The Republican station in Java is again on 11640 kc from 1130 to 1400, with News in English at 1300. Several reporters mention the Dutch Indonesian broadcasts.

V. R. Dutton logged PLF2, 19345 kc, at 1635 with a talk in Dutch, and R. T. Blackmore has received a card for PLB4. YDE, 11770 kc, is reported at S 7-8 by a Croydon reader who writes: "It is most unusual to hear it like this, but during ionospheric disturbances, such a station in the Southern hemisphere is apt to come in strongly, and such has been the case this last week." The new 100 kW Radio Indonesia transmitter

YDC was expected to be in operation this September with an aerial system of twenty-four doublets without reflectors; it is located at Kebjoran, in Java. By July 1, 1950, rhombics will be ready for the 11795 kc and possibly 6045 kc outlets.

J. C. Catch logged the "Voice of America" station in Manila on 15330 kc between 1300 and 1400; News in English at 1300 was followed by the call at 1315: "This is Manila operating on 11890 kc short-wave, and 960 kc medium-wave." A new Philippine station is DZH6, operating on 6030 kc at 1000, and owned by the Far East Broadcasting Company. DZH3, now on 9450 kc, relays DZPI.

Yet another Thai broadcaster is reported, this time on 7005 kc from 0900 to 1200. An English-Siamese lesson is given, 1030-1100, and general announcements are in Thai, English and Chinese. The time is given by a pips signal, it does not broadcast on Sundays, and the call may be HSP.

V. R. Dutton found Singapore on 11880 kc and 9690 kc with recordings at 1615, and the call at 1630: "This is the British Far Eastern Broadcasting Service", after which it closed down.

Our latest letter from Singapore shows that the former channel serves South-East Asia, and the latter comprises Eastern India in addition. R. T. Blackmore did well to hold Radio Ceylon, Colombo, 15120 kc, 1550-1745 recently. The programmes were mainly from the BBC transcription service and were directed to the Far East and to the Indian sub-continent: a simultaneous broadcast was transmitted over 21620 kc, and both closed down at 1705. V. R. Dutton heard Delhi, 21595 kc and 17830 kc, broadcasting request recordings at 0825, and

on 17830 kc at 1330, the News in English came over at a steady S9.

R. Iball (Langold, Notts.) reports that Kol Yisrael, Tel-Aviv, has been silent on its 9000 kc outlet, though, according to P. E. Woolmer, the English News has been well received at 1930 (note the new time!) on 6830 kc and 8117 kc. The facts are that an Overseas service beamed to North America will soon be inaugurated, and will have a power of 7.5 kW until the new 50-kilowatt transmitter now under construction is completed. Tests have been made on 9000 kc and 11820 kc, and they may use also 11935 kc, 15415 kc, 17880 kc and 21465 kc; reports, which are welcome, should be sent to Kol Yisrael, Technical Dept., Hakiryra, Israel. The Home service will continue as before with English News at 1100 and 1930.

J. C. Catch has logged what he believes to be Sanaa, Yemen, on 7390 kc at 1745 with light music followed by News in an Eastern tongue. Both E. W. Jordi and V. R. Dutton report Beirut, 8036 kc, with Arabic programme after 1800 or French request records between 1915 and 2015; V. R. D. heard the following direction at 2015: "Ici Radio Liban, la station de la Societe de Radio-diffusion Libanaise," and the frequency was given as 8036 kc or 37.24 metres. He also noted this announcement from EPB, Teheran, Iran, 15100 kc at 1900: "This is Radio Teheran on a wave-length of 304 metres on the medium-wave band and on the short waves on 19 metres. Here is the News in English." E. W. Jordi refers to RAD, Tashkent, 6825 kc, with News in English, 1701-1715; and to the "Forces Broadcasting Service, Middle East" (no other identification given) on 4775 kc, with light music between 2120 and 2300 on August 12.

We suggest this may be Benghazi, North Africa, which was formerly heard on this channel. J. C. Catch gives ZJM4, Limassol, Cyprus, 6135 kc, logged with its usual Arabic programme around 1930.

NORTH AMERICA

R. A. Savill has received six separate QSL cards for the Voice of America stations; the face of each bears the V.O.A. symbol and is red, white and blue. R.A.S. writes: "I have spent some time listening to the broadcasts in Russian by Voice of America stations and have found here, at least, it is possible to hear practically all that is said on many of the transmissions, although, of course, it is most uncomfortable listening.—On July 10, 1949, WCBN was about the hardest hit on 15270 kc at 1800, while at the same time, WNRE, 15280 kc, was much less troubled, at times the jamming being almost negligible. It seemed, however, that in this case the jamming signal was just off WNRE's frequency."

V. R. Dutton heard KNBX, San Francisco, 11790 kc, at 0900 opening its Far Eastern service in English, with the News at 0905; and on 15710 kc at 2100, he heard the following: "These are stations WFK38 and WFK95. We now begin a point-to-point relay."

This Transatlantic relay included a News in English. V. R. D. has also been successful in logging WBNB, New York, medium-wave on 285 metres—this at 0310 on August 1; he heard a weather forecast for New York City, the call and time given as "11.13 p.m." and a News bulletin. J. C. Catch heard KRHH, Honolulu, Hawaiian Islands, 17800 kc, at 0900 on August 1 with opening announcements, and KRHO in parallel on 15250 kc was also audible; his verification card just received

from KRHO arrived just ten months after mailing his report!

In Canada, CHNX, 6130 kc, was logged by V. R. Dutton at 2345 on July 30, when he heard the words: "This is the Maritime Broadcasting Service, Station CHNX." From 2315 they were broadcasting a thriller play relayed from the CBC. We heard this one at 0301 on July 29 with World and Home News in English, and the rider: "This was another sweltering heat for Eastern Canada."

Before leaving the air at 0315 with the National Anthem, the announcer said: "This is M.B.C., Radio station CHNX, P.O. Box 400, Halifax, Nova Scotia, Canada. We are now closing down."

R. A. Savill spotted the French-speaking Canadian CBX, 15090 kc at 2215; he says that CKCX, 15190 kc, is S9 after 1600 most days and CKCS, 15320 kc, likewise in the evenings, and CKRP, 21605 kc, has been logged S7 at 1400. On July 24 at 0405, the writer heard a recording of the Davis Cup match between Sedgman (Australia) and Macken (Canada) over CHOL on 11720 kc.

SOUTH AMERICA

Our roving reporter, R. Patrick (Morecambe) has, like several of us, received Radio El-Mundo's verification card, which states that the owners are Editorial Haynes, Ltd., publishers of the newspaper *El Mundo*, and that the broadcasting plant is the largest in South America; their transmitters are LRI (50 kW), 1070 kc; LRX (7 kW), 9660 kc; and LRX1 (6 kW), 6120 kc. We ourselves have received from Abel O. Figun of Servicio Radiofonico Internacional, Buenos Aires, a letter explaining that the aim of their overseas service is to let people know what the present Argentina is, its development, the customs of its

inhabitants, its work and expectations, its historical, scientific and artistic background, and all facts leading to a better understanding with other countries and to a sharing of cultural ideals. Enclosed was a small blue pennant with the embroidered letters LRY (9545 kc) and Radio Belgrano in white—a most novel verification-souvenir. LRS, Radio Splendid, 11880 kc, is also used for this service, and V. R. Dutton has logged this one at S9 at 2233 with the News in English. R. A. Savill has verifications from all of these stations.

J. C. Catch offers OAX4J, Radio Colonial, Lima, Peru, 9337 kc, logged at 0530 on August 1 with typical Peruvian music and a lady announcer; they closed down before 0600. From Ecuador he has had a verification within 14 days from HC4EB, Radio Manta, 6870 kc, logged with Spanish News at 0100 on July 18. HClAC, Quito, has recently moved to 6190 kc; and HClGP, Radio Amazonico, Quito, is on 7700 kc, relaying the programme of medium-wave HC1GB. In Colombia, HJCH, La Voz de la Victor, Bogota, 4896 kc was logged, with call preceded by a gong at 2245; and HJEX, Cali, 6054 kc, produced an S8 signal when giving its slogan: "Radio Pacifico" and Spanish songs at 0100 (J. C. Catch). HJCW, Bogota, 4945 kc. put in an appearance with classical music at 0330 on August 11, after YVMQ had left the air.

On August 11 at 0150 we heard YVMO, Barquisimeto, 4890 kc, giving its slogan: "Radio Occidental" during a commercial programme; it closed down at 0230. YVMQ, Radio Barquisimeto, 4940 kc, closed with the Venezuelan National Air at 0325. Our verification from Radio Monagas, Maturin, 3470 kc, one of the stations in the Cadena Oriental Venezolana

de Radio (Eastern Venezuela Radio Network) does not quote the new call-sign YVRA, but that received for our report of June 6 from Radio Carora, 3340 kc, gives the letters YVMU in bold print. PZH5, Paramaribo, Surinam, 5757 kc, was clearly audible with News in Dutch on August 11 at 0205, then closed down immediately afterwards.

A Croydon correspondent notes that ZYC9, Radio Tope, Brazil, has been operating on 15376 kc since June 16, and that ZYB9, Sao Paulo, 15155 kc, sometimes announces as: "Radio Nacional, Rio de Janeiro": ZYK2, Recife, 15145 kc, has been logged at the unusual hour of 1200. We listened to ZYK3, 9565 kc, with its English feature "Brazil Calling" from 2030 to 2100 on July 24. The concluding words were: "Brazil Calling! Radio Jornal de Commercio in Recife, Pernambuco, Brazil. Wishing you all the Best of Luck, and so Good Night from Brazil." With its S9 plus signal you should certainly be able to qualify for their promised verification card! R. A. Savill says that Radio Tope, 15370 kc, gives Spanish comments interspersed with "quite a bit of cock-crowing", and he notes that PSF, Rio de Janeiro, 14690 kc, was peaking to S9 when closing at 2300 on July 29. ZYC8, Radio Tamoio, Rio, 9610 kc, is R. Iball's choice, with slogan, dance music and an S8 signal at 2115 on August 4. Finally a correction: the true call-sign of Radiodifusora do Amazonas, Rua Joaquim Sarmiento 100, Manaus, on 4955 kc, is ZYS8.

CENTRAL AMERICA

R. Iball heard TGZA, Zacapa, Guatemala, 6660 kc, with rhythm music at 0345 on July 20; it closed at 0400 with a brief marimba selection. In Nicaragua he logged YNVP,

6758 kc, with slogan: "La Voz de Nicaragua" at 0345, and YNQ, 6950 kc, with vocal trio and guitar accompaniment at 0330. YNOW, 6840 kc, provided orchestral and organ music at 0330, and at 0400 came descending chimes followed by the direction: "La Voz de America Centrale." In Honduras, E. W. Jordi spotted HRN, 5880 kc, with Spanish News, 0002-0015; this station had the reputation for not verifying, but the writer was successful in obtaining their card of pre-war days. J. C. Catch adds that theirs is a lady announcer. He also offers TIPG, San Jose, Costa Rica, 9618 kc, logged at 0415 on August 1, with electric organ music and closing at 0430 after call: "La Voz de la Victor"; also, HP5A, Panama City, 11695 kc, logged at 2323 with direction: "Cadena Panamena de Radiodiffusion." In Mexico, ZEOL, Radio Mil, 6012 kc, was heard by the writer on July 21, with News at 0455 and closing with direction at 0500 and March at 0503.

West Indians include Radio Trinidad, VP4RD of the Trinidad Broadcasting Company, Ltd., Port-of-Spain. P. E. Woolmer gives the frequency as 9630 kc and the power 500 watts; the Week-day schedule is: 1000-1300, 1530-1800, 2000-0300, and that for Sundays: 1000-1800, 2000-0300. V. R. Dutton

heard VP4RD at 2345 with direction: "This is Radio Trinidad" followed by the News. J. T. W. Blyth has received a verification from Haiti on 5945 kc. The call-sign is still given as HH2S and the power is 300 watts. We heard the 10135 kc transmitter at 0200 on August 11 with French announcements and light music following; we are still uncertain as to whether the call-letters are HH3W or 4VRW.

In Cuba, J. C. Catch logged COJK, La Voz de El Camagueyana, 8665 kc, with chimes and call at 0115 on July 31, and R. Iball noted COBC, Radio Progreso, 9360 kc, with rumba music and direction at 0345.

V. R. Dutton says that HI4T, San Domingo, 5970 kc, was S7 with direction: "La Voz Dominicana" at 0400 on July 31.

EUROPE

R. Patrick has heard the new Balearic Islands station "Emisora Radio Minorca", 7545 kc, on a 1900-2100 schedule. The writer believes them to open up on occasions at 1830 and to close at 2130 or even 2200 on Saturdays. J. C. Catch found Radio Nacional de Espana, Madrid, on 15624 kc with mainly martial music at 1700 and closing at 1720. For R. Iball, EAQ on 9348 kc, with slogan

after gong note, was very strong at 1210, and he heard Radio Seu, Madrid, with station direction on yet another frequency of 7185 kc at 2045 on July 23; he also found Radio Monte Carlo S9 at 1740 on August 10, on its 9780 kc channel. R. Patrick has spotted their English Sunday broadcasts, namely: the religious feature "Bringing Christ To The Nations" at 0800, the evening symphony concert at 2030, and the light music programme from 2100 to 2200. R. T. Blackmore says that suggestions and requests for favourite recordings should be sent to: "Monte Carlo Calling!", Radio Monte Carlo, Principality of Monaco.

The Greek "Radio Macronesio" now broadcasts over 7105 kc, and a new Greek State transmitter at Chios on 6540 kc is on the air daily from 1700 to 2000 or after. P. E. Woolmer hears the Larissa station of the B Army Corps (453 Signals Bn.) of the Greek Army over 6745 kc. English programmes are stated to be on Sundays, Tuesdays and Fridays, 1930-2000, and this month we include a photograph of their 500-watt transmitter, once an amateur station!

All news for next month should reach us by October 15; the address is: R. H. Greenland, *The Short Wave Listener*, 49 Victoria St., London, S.W.1.

GETTING A LICENCE

This is the title of a reprint pamphlet, of which a few copies are still available, intended to give the essential information on how to set about getting a British amateur transmitting licence. It can be obtained from us free on request, enclosing a stamped addressed envelope.

LEARNING MORSE

Not unnaturally, many SWL's at first fight shy of tackling the Morse Code. But nobody we have known has ever regretted having mastered the Code, which opens up a whole new world of interest—and not only on the amateur bands. Apart from that, proficiency in Morse is an achievement which is satisfying in itself. The Code is much easier to learn than many people suppose, and a large proportion of active operators are entirely self-taught.

BARNES RAD-ELEC. CO.,

12 Pipers Row, Wolverhampton (Central)
Specials this Month. Block condensers, 450v 8+8+8 mfd, 10/6; 32 mfd 650v block, 11/-, or 20/- pair; morse keys, 2/6; small mike with switch, 3/-; round 6-pin and 4-pin female plugs for R1355, etc., 3/- pair; 10-pin Jones, for SCR522, 3/3; R1116 all-wave battery superhets, £11, tested (leaflet 3d.); special transformers for B.C.624, etc., 6.3-0-6.3v at 3 amp, 350-0-350 at 80 ma 5v 2 amp, 35/-; 5v 5 amp, 23/-; 6.3v 14 amp, 25/-; E.H.T. for Inexpensive Televisor, 2.500v 2.0-2 and 4v 1 amp, 41/-; 250-0-250v 80 ma, 6.3v 6 amp, 5v 2.5 amp, 35/- All 230/250v 50 cycles and post paid.
Meters. 5 kv 3" Electrostatic, 52/-; 2.5 kv 2½" M.C., 38/-; deep 3.5 kv 3", at 42/-. Huge new catalogue in preparation for mailing list (3d.). See S.W. Mag. for other bargains.

SHORT WAVE BROADCAST STATIONS

Revision 19-70-25-46 Metres

Giving Frequency, Wavelength, Callsign and Location

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

Frequency	Wave-length	Callsign	Location	Frequency	Wave-length	Callsign	Location
15230	19-70	VLG6	Lyndhurst.	12000	25-00	CEI180	Santiago, Chile.
		VLH5	Melbourne.				Damascus, Syria.
15220	19-71	PCJ	Hilversum.	11970	25-06	FZI	Brazzaville.
15210	19-72	GWU	Davenport.	11960	25-08		Tiflis, USSR.
		WBOS	Boston.	11955	25-09	GVY	Davenport.
		VLC11	Shepparton.	11950	25-10		Tabriz, Iran.
15200	19-74	VLG11	Lyndhurst.	11945	25-12	ZPA6	Encarnacion.
		GWD	Davenport.				Moscow.
		WRUA	Boston.	11930	25-15	GVX	Davenport.
		VLA6	Shepparton.	11915	25-17	LRA	Buenos Aires.
		VLB6	Shepparton.	11913	25-18	BEF7	Chungking, China.
		VLC	Shepparton.	11900	25-21	RIF	Moscow.
		VLG11	Lyndhurst.			KWID	San Francisco.
15195	19-74	TAQ	Ankara, Turkey.			CXA10	Montevideo.
15190	19-75	OIX4	Bjornborg.			CEI190	Valdivia, Chile.
15180	19-76	GSO	Davenport.			OQ2AB	Elizabethville.
15175	19-77	BEF8	Chungking, China.				Bucharest.
15170	19-78	LKV	Oslo, Norway.	11898	25-21		Dakar, Senegal.
		TGWA	Guatemala City.	11890	25-23	GWV	Davenport.
		OQ2AA	Leopoldville.			WNRX	New York.
		RW100	Moscow.			RXH	Moscow.
15165	19-78	OZH	Copenhagen.				Manila, P.I.
		ZYN7	Fortaleza, Brazil.	11885	25-24		Paris.
			Lisbon.				Moscow.
15160	19-79	VUD7	Delhi.	11880	25-25	VLH4	Melbourne.
			Moscow.				Singapore.
15156	19-80	ZYB9	Sao Paulo.			LRX	Buenos Aires.
15155	19-80	SBT	Stockholm.			XEHH	Mexico City.
15150	19-80	WRCA	New York.			BEA5	Nanking, China.
15145	19-81	ZYK2	Pernambuco.	11875	25-26	RW111	Moscow.
		YDC	Batavia.	11872	25-26	ZPA3	Asuncion.
15140	19-82	GSF	Davenport.	11870	25-27	WOOW	New York.
15130	19-83	WOOC	New York.			VUD9	Delhi.
		KCBR	Los Angeles.				Munich.
		KRHO	Honolulu, Hawaii.	11868	25-28	BEB5	Shanghai.
		VUD10	Delhi.	11865	25-38	HER5	Berne.
15125	19-83		Rome.	11860	25-30	GSE	Davenport.
15120	19-84	HED7	Berne.			KWIX	San Francisco.
		HVJ	Vatican City.	11850	25-32	LLK	Oslo, Norway.
			Colombo, Ceylon.			ORY	Brussels.
			Moscow.			VUD4	Delhi.
15115	19-85	HCJB	Quito, Ecuador.			CEI185	Santiago, Chile.
15110	19-85	GWG	Davenport.				Benghazi.
		CS2MR	Lisbon.	11845	25-33	RW96	Moscow.
15105	19-86	BEA3	Nanking, China.				Paris.
15100	19-87	EPB	Teheran, Iran.	11840	25-34	GWQ	Davenport.
		CS2MQ	Lisbon.			OLR4A	Prague.
			Paris.			CS2MM	Lisbon.
15095	19-87	HVJ	Vatican City.			LR52	Buenos Aires.
15090	19-88	CBLX	Montreal.			DUH4	Manila, P.I.
15070	19-91	GWG	Davenport.	11835	25-35	CXA19	Montevideo.
15040	19-95	RKI	Moscow.				Algiers.
15000	20-00	WWV	Washington, D.C.	11830	25-36	RW96	Moscow.
		WWVH	Maui, Hawaii.			WCRC	New York.
14850	20-20	LPS	Ushuaia.			VUD10	Delhi.
14800	20-27	WER44	New York.			VLW3	Perth, W.A.
14690	20-33	PSF	Rio de Janeiro.	11825	25-37	ZYK3	Pernambuco.
13470	22-27	WWH53	Tangier.	11822	25-38	XEBR	Hermosillo, Mexico.
13400	22-39	RRR2	Moscow.	11820	25-38	GSN	Davenport.
13020	23-04	RRRE	Moscow.	11815	25-39	HEU5	Berne.
12875	23-30	CS2W1	Parede.	11810	25-40	KCBF	San Francisco.
12749	23-53	CS2MP	Lisbon.			VLC7	Shepparton.
12455	24-08	HCJB	Quito, Ecuador.				Rome.
12260	24-47	RW96	Moscow.	11800	25-42	GWH	Davenport.
12235	24-52	TFJ	Reykjavik, Iceland.				Moscow.
12170	24-65	RW98	Moscow.	11790	25-45	WRUL	Boston.
12115	24-76	RW105	Moscow.			WRUS	Boston.
12110	24-77	RW112	Moscow.			KNBX	San Francisco.
12095	24-80	GRF	Davenport.			VUD5	Delhi.
12080	24-83	RDE	Moscow.			GWV	Davenport.
12060	24-89	RNE	Moscow.	11785	25-46		Vienna, Austria.
12040	24-92	GRV	Davenport.	11782	25-46	XENN	Mexico City.

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SALE. Receiver 1224A, 5-valve superhet in A1 condition, £4/7/6 with accumulator. Passenger carriage paid.—Box No. 018.

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SIGNAL Generator, Type I-72-J (USA). Range 100 kc-32 mc. As new £10/10/0.—C. Biggerstaff, 11 Kirby Close, Stoneleigh, Surrey.

RADIOVISION 10/20 Expander, AC mains, perfect condition, match V55R, £7. Or exchange Pre-selector, AC, preferably Radiovision.—Box No. 019.

SALE. R.1116A, 8-valve double superhet, 15-2,500 metres, battery operation, 120v HT, 2v LT, battery socket modified to take 3-pin plug, 'phones jack provided, £6.—Key, 64 Ogilvie Terrace, Edinburgh 11

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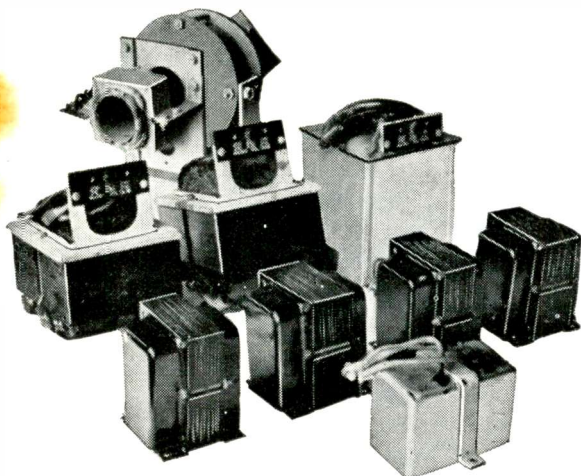
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MAGNETIC T.V. PARTS

SALE OF RADIO SPARES



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The three main parts are: (a) The tube assembly which consists of a frame on which are mounted the focus coil and the line and frame deflection coils. This is suitable for a 9, 10 or 12in. magnetic Cathode Ray Tube. (b) The E.H.T. Transformer to give 4 kV and (c) the very efficient line output transformer. The price for this set of three parts is £3 10s. 0d., and we will forward without extra charge the circuit diagram of the Televisor which was originally designed around these parts. The interesting feature about this Televisor is that it uses mostly easily obtained H.F. pentodes. We will supply the circuit data separately at 2/6 per copy. Of course you don't have to stick to the circuit as supplied; any conventional circuit will do equally well.

If you are starting from scratch, the other parts for the original circuit are available as per the above illustration, and at similar keen prices:

- Fully shrouded chokes 9 henry 120 mA—2 required. Price 7/8 each.
- Fully shrouded chokes 17 henry 80 mA—2 required. Price 8/6 each.
- Mains Transformer—350-0-350 at 120 mA, 4v at 10 amp, 4v at 2 amp—1 required. Price 17/6.
- Mains Transformer—400-0-400 at 80 mA, 4v at 6 amp, 4v at 2 amp, 2v at 2 amp—1 required. Price 15/-.

We will supply any of the above parts separately at prices as shown or you can have the complete outfit of the nine parts as illustrated for 26 10s. 0d., carriage paid

THIS MONTH'S SNIP



American receiver data published during the war by the Champion Electric Company. These manuals were originally sold at 12/6 each, and even at that they were considered good value for money, for they really comprise volumes of service sheets. They give circuit diagrams, component values, alignment data, and practical layouts of all the popular American receivers which have been imported to this country. Contents are as follows:—

- 1—Sparton-Emerson.
- 2—Crosley-Belmont Pt. 1.
- 3—Crosley-Belmont Pt. 2.
- 4—R.C.A. Victor-Go-Admiral.
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MAINS TRANSFORMER. 260-0-260 at 60/70 mA, 6.3v at 3 amp, 5v at 2 amp otherwise as PF2 above, 13/9. Order List No. PF3.

MAINS TRANSFORMER. 260-0-260 at 60-70 mA, 4v at 4 amp, 4v at 2 amp otherwise as PF2, 13/9. Order List No. PF4.

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AMPHENOL INTERNATIONAL octa valve holder, 6d. each. Order List No. PE10.

MIDGET TUNING CONDENSER. 2-gang .00035 fitted with trimmers, and complete with Perspex dust cover. These condensers made by "PLESSEY" are of the type used for tuning personnel receivers, 8/8, plus 8d. postage. Order List No. PF6.

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16 mfd. 450v	2/8
8 x 8 mfd. 450v	3/4
8 x 16 mfd. 450v	3/4
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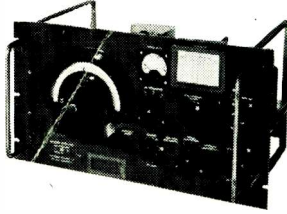
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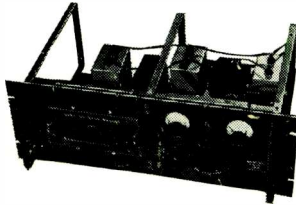
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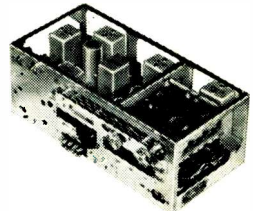
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