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SHORT WAVE LISTENER



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DECEMBER 1948
VOLUME 3 · NUMBER 1

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VOLUME 3

DECEMBER 1948

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EDITORIAL

Forward

This is the first issue commencing the third year of publication of the *Short Wave Listener*, and on such an occasion we are happy to be able to address a wide circle of readers.

Those—and they are many—who have followed the fortunes of the *Short Wave Listener* from the beginning will notice that with this issue we have made another attempt to squeeze more into our allowable spread of pages. The two longest news features are presented in a fresh setting, and we hope that their readers will like the style.

After due consideration, it was decided that no other changes were called for in either scope or range of contents. So far as we are able to judge—reader response, circulation demand and advertising support are the indications on which we rely—the *Short Wave Listener* is succeeding in pleasing most of its readers for most of the time. We do not imagine that we satisfy everyone with the whole of the contents of each issue. Indeed, we would be happy to know that every reader found something to interest him in each issue. More than that is too much to expect, either of reader or publisher!

Having cast the *Short Wave Listener* in its present character, there is no intention of trying any wild experiments or journalistic stunts. Nearly 18 months ago, we investigated the possibilities for a separate periodical devoted to television; it was an exhaustive survey, covering production, potential circulation, possible advertising support and range of contents. As a result, it was considered that such a periodical would have little general appeal and the Television Supplement of the *Radio Times* seems to provide all that 99 per cent. of viewers want to know about television.

And so, we look forward to another year of service to our readers, during which we hope once again to earn their support and approval for our efforts in the *Short Wave Listener*.

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

Two-Metre Converter

Construction and Tuning Procedure

Part II

Described by

E. J. WILLIAMS, B.Sc. (G2XC)

(The first part of this very useful article appeared in our November issue, giving the circuit and general RF layout. This is a tested design, and by following it closely, readers interested in VHF operation will not only get results on 145 mc, but will also learn a good deal about the general problem of receiver design at these frequencies.—Ed.)

THE heater and screen by-pass condensers must be wired as close to the valve terminals as possible and the anode connection threaded through a hole in the screen on which the 6AK5 is mounted to the stand-off insulator, shown in Fig. 2. RFC1 is made of 20 SWG enamelled copper wire, 40 turns being wound on an ordinary lead pencil and then slipped off to make a self-supporting choke. The lower end of RFC1 at its junction with R2 and R3 is by-passed immediately by C5 to the fixing screw for the 6AK5 base.

The RF and mixer tuning condensers are made from Raymart 15 μF variables which have 3 stator and 3 moving plates. Two of the stator plates are removed. Alternatively, a 5 μF variable condenser could be used. The size of the RF compartment is, of course, decided by the physical dimensions of the tuning condenser itself. The bias-isolating condenser C1, being part of the tuned circuit, must not materially increase the inductance of the circuit by its size, and should therefore be as physically small as possible.

The 954 mixer is mounted with grid uppermost and as close as possible to the stator terminal of the tuning condenser C7. All by-pass condensers C8, C9 and C10 are connected to one earthing point—the moving plate terminal of C7. The output inductance L5 is tuned to 4 mc and any coil-and-condenser combination which resonates at this frequency will be suitable. In the original converter, an iron-dust core coil made from one half of an IF

transformer taken from an RAF R1147B was used; 31 turns of wire were wound on, just filling the former, and the parallel condenser increased to 100 μF . The former diameter is $\frac{1}{2}$ -in. and its length $\frac{3}{8}$ -in. Whatever form this output circuit takes it should be screened to avoid direct pick-up of strong local signals at the output frequency. The output circuit is placed under the chassis and the connection to the main receiver made by screened cable.

The 9002 oscillator is mounted horizontally as shown in Figs. 2 and 4. The tuning coil L4 must be mounted as rigidly as possible. The $\frac{1}{8}$ -in. tubing used assists with this, and if wire is employed the gauge should not be smaller than 14.

The base connections and layout are given in Fig. 5 and this must be carefully followed if the oscillator frequency is to be the desired 141 mc. The oscillation stability of the 9002 will to a large extent decide the performance of the converter and it cannot be stressed too strongly that *rigid construction is essential*. The heater choke RFC3 is made exactly as RFC1, while RFC2 is an Eddystone Type 1011. A good slow motion dial is a necessity.

Coil sizes are :

- L1—two-turn coupling coil at earthy end of L2, coupling adjusted for optimum results.
- L2—two-turn coil formed from $3\frac{1}{2}$ -in. 16 SWG wire: ends of wire spaced $\frac{1}{2}$ -in. to fit condenser terminals.
- L3—as L2
- L4—two-turn coil of $\frac{1}{8}$ -in. copper tubing, diameter of coil $\frac{1}{2}$ -in., spaced to fit C14.

Initial Tuning Procedure

Output from the converter is on 4 mc and is taken to the aerial input of a communications receiver. Other output frequencies may be obtained by suitable modification of the inductance values.

Initial tuning is required to ensure

- (a) that 9002 oscillator can be tuned to 140-142 mc.
- (b) that converter output frequency is 4 mc.

(c) that RF and mixer circuits are aligned and cover 144-146 mc band.

No special equipment is required and the procedure is as follows. The oscillator frequency can be adjusted by the method outlined by A. A. Mawse in the *Short Wave Listener* (September and October, 1948). This method depends on the generation of harmonics by the oscillator in the main receiver, which if suitably tuned will beat with the VHF oscillations. Strong local VHF oscillations, such as from the converter oscillator, can therefore be tuned in on the main receiver.

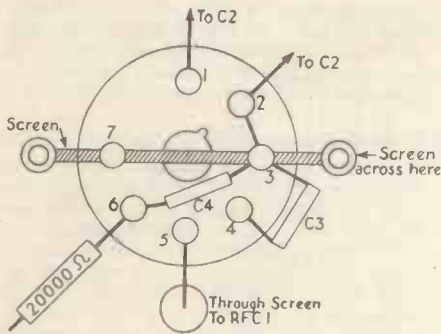


Fig. 3 Base connections to the 6AK5 RF stage (bottom view).

Connect the converter to the receiver and with both switched on, tune the latter from 25.5 to 29.6 mc. If the 9002 is oscillating at a frequency between 130 and 150 mc it can be tuned in on the main receiver somewhere in this range of 25.5 to 29.6 mc provided the receiver has an IF of 465 kc and has its oscillator on the HF side of signal frequency. If the 9002 is on 141 mc its oscillations will be tunable at 27.8 mc. The converter oscillator should therefore be adjusted to produce a response at this frequency. It should be noted that all image responses are to the LF side of the correct tuning position. In addition to 141 mc, signals of frequency 112.6 and 169.1 mc can be tuned in at 27.8 mc and it is therefore necessary to check that the oscillations are on 141 mc and not one of these other frequencies. This can be done by tuning in the VHF oscillations at other points on the receiver. These are as follows :

Frequency	Tunable at
112.6 mc	18.4 and 22.1 mc
141 mc	19.75 and 23.1 mc
169.1 mc	20.7 and 23.75 mc

Should the frequency prove to be wrong the coil L4 must be suitably adjusted. These figures do not apply if the IF of the receiver is far different from 465 kc or if its oscillator is on the LF side. The writer will be glad to assist in any unusual case.

Having obtained the correct oscillator frequency, tune the main receiver to 4 mc and adjust the output circuit tuning to give maximum background noise. This is best done with the RF gain well up.

Leaving the oscillator on 141 mc, loosen ganging coupler between RF and mixer

tuning condenser and tune mixer only for maximum background noise. If the coil is of correct size two tuning positions will be found, one with the condenser near maximum and one near minimum capacity. These two positions correspond to 4 mc above and below 141 mc. The desired setting is of course that near minimum capacity. If only one setting is found, a slightly larger or smaller coil is required. Lengthening or shortening the wire in the coil by $\frac{1}{4}$ -in. will probably suffice to give the correct response. If no noise peak is obtainable the correct size coil must be found by trial. It is, of course, desirable to check that the mixer valve is taking current if prolonged tests produce no result.

Having obtained the correct tuning for the mixer, leave mixer tuning condenser set to 145 mc and tune RF stage for further peak in background noise. It is desirable to arrange both RF and mixer tuning condensers to be at same capacity if tracking is to be maintained, and the coils L2 and L3 should be adjusted to bring the condensers into step. The coupler should then be tightened, and background noise should now peak quite markedly as the RF and mixer circuits are tuned through 145 mc. The 145-146 mc band will be found to occupy about 25 degrees on the oscillator tuning, while direct tuning of the RF and mixer is easy. There should be little or no hand capacity on the tuning controls. On the original converter, there was no noticeable detuning when controls were handled and only a just detectable change of beat note when the panel right by the oscillator tuning coil was touched.

If instability is encountered when the RF and mixer circuits are aligned, ensure

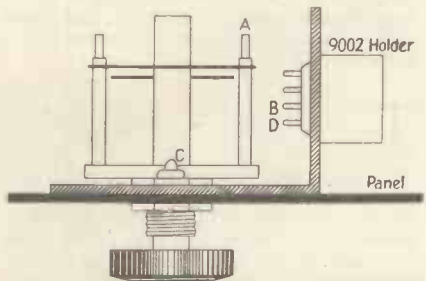


Fig. 4. The mounting of the oscillator stage, as a single unit, on the panel. Grid condenser and grid resistor connect between A and B ; cathode RF choke between C and D ; the 5 $\mu\mu$ F oscillator condenser and tuning coil connect between A and C. The valve should be mounted horizontally to allow easy wiring.

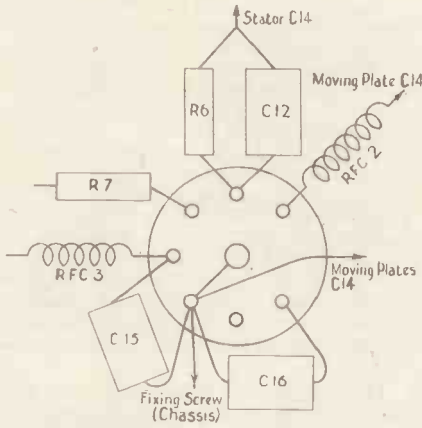


Fig. 5. Base connections for the 9002 oscillator valve.

that all connections are well made. During the initial testing of the converter two occasions on which some instability of the

RF stage occurred were traced to a badly soldered joint in the first instance, and in the second instance to the nuts and bolts securing the screen on which the 6AK5 is mounted being only-finger tight.

General Comments

The use of a 3- or 4-element beam with this converter is recommended, but even with a half-wave dipole useful results can be obtained. Car ignition should be prominent if the set is operated near a main road, although perhaps not quite as loud as on 5 metres. Present activity peaks are in the early and late evening periods. During spells of good tropospheric conditions, S9 signals from up to a hundred miles or so should be heard, but during poor conditions the signals will be markedly weaker. Good conditions are most likely in fine settled weather.

Several possible modifications to the receiver (which might be improvements) will undoubtedly occur to many readers, but it is suggested that the circuit be given a trial as it stands before changes are made.

Audio Selectivity

Peaked CW Filter for Noise Suppression

by H. E. SMITH (6G6UH)

(Here is a simple filter arrangement for the output side of the receiver, which will peak up CW signals and attenuate very noticeably audio disturbances outside the acceptance of the filter.—Ed.)

THE filter described here is not in any way suggested as an alternative or substitute for any of the usual types of Noise Limiters, but rather as an additional unit for use when receiving CW only. When employed in this manner, it will be found particularly effective in reducing car ignition and similar forms of "pulse" interference; to such a degree, indeed, that even the weakest CW signal may be copied with comparative ease.

As will be seen from the circuit (Fig. 1) the filter was designed to operate in a low impedance mode; but it was found, by

modifying the value of C2 to $1 \mu\text{F}$ and feeding in and out at about 2,000 ohms, to produce the peaky response shown in Fig. 3. On test, this filter has proved to be one of the most effective noise suppressors yet tried.

Making the Coils

The efficiency of the filter depends mainly on the Q of the coils. The two coils used are identical, and are made up as follows: A $1\frac{1}{2}$ -in. length of $\frac{3}{8}$ -in. paxolin tube, with $\frac{1}{16}$ -in. walls, is fitted with cheeks, held in position with Durofix. (See Fig. 2.) Two small holes are drilled in one cheek for start and finish of the winding. Wind on, in layers, 500 turns of 36/47 DSC Litz wire. It is recommended that a Litz burner be used to clean the ends of the wire, as it is important that the soldered joint should contain all the strands. The whole of the space inside the former should now be filled with either a dust-iron plunger or strips of mu-metal, packed tightly (Fig. 2).

The coils can be mounted on a block of fibre or paxolin strip, together with the condensers, to form the complete unit. But care must be taken to ensure that there is the minimum of coupling between the coils. Any good quality condensers will

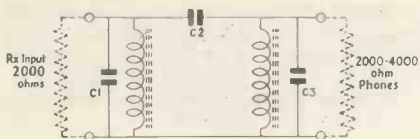


Fig. 1. Circuit of the CW peak filter.

TABLE OF VALUES
 Fig. 1. The CW Peak Filter
 C1, C3 = 2.2 μ F (see text)
 C2 = 1 μ F
 Coils = (see text)

be suitable, and in the writer's case, TCC 2 μ F 400-volt working paper condensers were used for C1 and C3, with an additional 0.2 μ F tubular type in parallel. A TCC 1 μ F 400-volt working was used for C2.

Operation

If the circuit and coil constants have been adhered to, the filter will resonate very sharply between 1.2 kc and 1.5 kc. The peak will easily be found by varying the receiver beat frequency control on a signal. As the insertion loss is something greater than 20 dB, the AF control will need to be increased when the filter is in circuit. The best place for the filter is directly in the 'phone leads, and the receiver output should be arranged to be

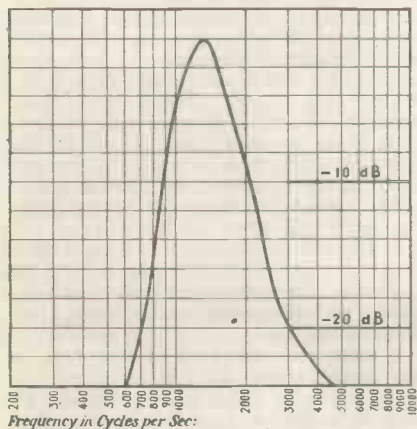


Fig. 3. The audio selectivity curve to be expected with this filter ; in effect, it holds CW signals pitched in the range 1200-1500 cycles, the receiver BFO being adjusted to bring the beat-note into this region of audibility.

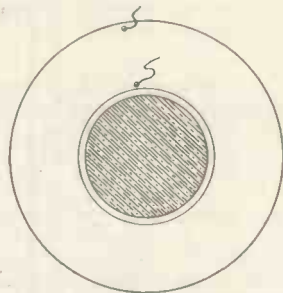
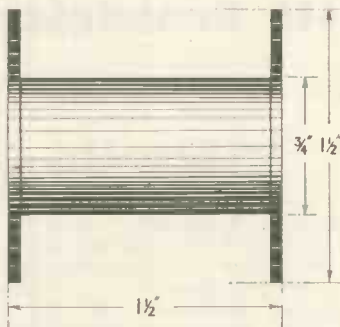


Fig. 2. The bobbin on which each choke is wound ; full details are given in the text.

as near 2,000 ohms as possible. A pair of 2,000-ohm 'phones should be used for best results, but on test only a very small deviation from the curve was noted when 4,000-ohm 'phones were employed.

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VHF Broadcasting

Trans-Atlantic FM Development

by R. H. GREENLAND, B.Sc.

In Canada and the U.S.A. particularly, commercial broadcasting interests are looking to the VHF's to provide a new field for development. On these frequencies, a transmitting technique can be employed which has certain advantages for local-programme services. Similar possibilities, as a long-term project, are being investigated in this country by our own BBC.—Ed.)

MANY of our readers will, no doubt, be thinking of acquiring additional receivers or converters capable of picking up signals in the new amateur 144 mc band, now in operation. Those generally interested in very high frequency transmissions may have heard, too, of possible developments in this country with frequency-modulated broadcasting stations.

In essence, the advantages of frequency modulated systems—as distinct from those employing amplitude modulation—include immunity to static of all kinds, freedom from fading and interference, and last but not least, high fidelity reproduction. In addition, frequency-modulated signals are known to cover approximately the same area by night as by day.

It is the United States of America where the most rapid strides have already been made in the sphere of frequency-modulated broadcasting. The number of FM stations there has, since the beginning of the year, increased with amazing rapidity, and though the initial rush has apparently exhausted itself, there are still new stations coming on the air daily. It has in fact been estimated by the FM Association in America that new FM stations would go on the air at the average rate of 50 a month in 1948!

The large proportion of these stations operate on a wave-length of the order of 3 metres, i.e., on frequencies ranging between 88 and 108 mc. According to theory, frequency-modulated signals should not reach much beyond the horizon, yet in practice this limit has often been exceeded, and on certain occasions extraordinary DX reception has been reported.

In the United States there are at present at least 430 commercial VHF stations within the frequency band already stated,

together with some 38 non-commercial FM transmitters in the same band. Something like 560 more FM stations not yet on the air have been authorised by the Federal Communications Commission, and more applications are pending.

Station Categories

Stations are divided into two classes. Class A comprises those designed to serve small communities other than city areas and they are limited to an effective radiated power of one kilowatt and an average aerial height of 250 ft. Class B stations are designed to serve a metropolitan district and its surrounding rural area, and operate with correspondingly higher power and greater maximum aerial height. In the New York metropolitan area alone, the allocation plan allows for 20 Class B stations for service on a constant day-and-night basis, and 13 Class A channels to serve local interests. It can be noted that a Class A station should cover a radius of 13½ miles, whereas a Class B station with an effective power of 160 kW and an aerial height of 1,580 ft. is expected to cover up to 100 miles. This type of Class B transmitter is designed for rural coverage, as, for instance, KRNT, under construction at Des Moines, Iowa.

Some Results

In actual practice, WKIL, Kankakee, Illinois (100.7 mc), and WCSI, Columbus, Indiana (93.7 mc), were both heard near St. Louis, Missouri, some 250 miles distant. WCBS (101.1 mc) and WGYN (97.9 mc), New York City, have been logged at places more than 200 miles distant, and others providing similar long-distance reception are WGHF (101.9 mc), New York City, WTRI (102.7 mc), Troy, N.Y., and WGFN (99.5 mc), Schenectady, N.Y.

Here we can give some details of the activities of one such broadcasting station. KSUI is the frequency-modulated transmitter owned and operated by the State University of Iowa in Iowa City. It operates on a frequency of 91.7 mc, with a radiated power of 17 kilowatts. It is essentially an educational station, and, having no commercial commitments, its programmes are in no way sponsored.

In addition to the United States, Canada has issued some 44 FM broadcasting licences, and there are at least 11 stations on the air in provinces extending from New Brunswick on the east coast to British Columbia on the west. The effective power of these stations is within the 250-3,000 watts range. Five are under

the Canadian Broadcasting Corporation, the others are privately owned, but all are working on frequencies between 93 and 106 mc.

Though, at the moment, it seems extremely unlikely that reception of any of these American frequency-modulated stations will be recorded in this country, there are always surprises in radio, and if any listener should succeed in hearing the signals, there is little doubt that reports of such will be received with enthusiasm by the broadcasting station concerned and, indeed, by a world-wide audience of scientists and others interested in research in the realm of electronics.



While you're about it, why not put up a few Christmas decorations

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WHAT a month it has been! Both for DX conditions, and for the volume of Calls Heard and Correspondence, it has been the most successful that I remember. The subject of Calls Heard is rather sad, in a way, but that is discussed later.

Notable events during the month have been the two week-ends devoted to the CQ Contest; the very welcome appearance of C8KY during one of our SLP's; and the intrusion of call-signs like 4X4AA, which give everyone a headache when trying to put things in alphabetical order!

Of course, C8KY has let your Scribe in for a lot of work, too. When Zone 23 suddenly comes up in an SLP the immediate result is a large-scale shuffling round of the "Zones Heard" lists, and that is

Have
you
heard
?

and says he is in the Arab Legion at Nablus, Palestine—QSL via W2AIS. (Sounds a bit like the former ZC6UN, but this is not confirmed as yet.)

between 2230 and 0830 on 3.5 mc. Surprise No. 3—The welter of Central Americans on 7 mc as early as 2300, including CO, HH, TI, KP4, VP9. I knew they were good in the small hours, but it takes the Contest standard of activity to bring them out so early.

The 28 mc band was probably the most interesting in many ways. After about 1400, of course, it was simply swamped out with the W's, but before that (talking now of CW) one could hear all continents coming in at once. In fact a one-minute HAC was comparatively commonplace. Good representatives of their parts of the world were VK4AP and 4EL, VS6AE, VQ4IMS, PY2AC, VO2R and, of course, plenty of Europeans. I heard all that bunch, literally on top of each other at one time, so by

AMATEUR BAND COMMENTARY *by the DX Scribe*

just what has happened. The SLP listeners were sharply divided into two categories—those who heard C8KY and those who didn't! But he must have been a very good signal, from what they say who heard him.

These new "4X4" stations are using the prefix 4X, which has been officially allotted to Palestine. This reminds us that provision was made at Atlantic City for amateur stations to be allotted a prefix of such a shape, doubtless because there is a distinct possibility of running out of the alphabetical ones. But very soon after the cancellation of all ZC6 calls and the substitution of 4X4AA, 4X4AB and so on, up comes ZC8PM. He is apparently quite genuine,

THE DX BANDS

It is becoming increasingly obvious that we have four DX bands now—a state of affairs for which to be very thankful. I spent two very hectic weekends during the CQ Contest covering all four of these bands, and discovered a lot of interesting things—chiefly, I admit, through being out of bed at times when I am normally in it.

Here are a few comments, for what they are worth. Surprise No. 1—on checking the log I find that I heard W6's at the following times on 14 mc: 1430, 1600, 2000, 2100, 2300, 0100, 0200, 0430, 0600, 0800, 1000 and 1130. If that's not "round the clock" I don't know what is. Surprise No. 2—W1's and 2's coming in at all times

concentration a "simultaneous" HAC could have been managed.

By the time the W's arrived, however, although the DX may still have been there it disappeared down to the third or fourth layer. This, fortunately, doesn't yet happen on the 'phone band, although when the USA 'phone area is crammed full, the DX 'phone section tends to be busy with Canadians. But in spite of that fact, there is no doubt that when it is open "ten" is our most successful DX band at present. There is no limit to what one can hear on 'phone, and in the mornings such DX as Iwojima, KX6, KG6, C3 and the other rare Asiatic spots can be heard only on the 28 mc band.

CALLS HEARD

Passing now to the sad subject, I am confronted with a reproachful-looking pile of Calls Heard forms on my desk! This month their volume was such that we could not even squeeze in all the SLP lists! Had we done so there would have been no room at all for General Lists. As it is, only a very few of the latter will find their way into print, so your Scribe had the onerous task of picking out what he considered the best from each band.

It is therefore obvious that we have got to put some sort of control scheme into effect. Half of it is being done at this end, because, from now on, I shall not let loose two SLP's to bring in such a volume of lengthy lists. One on 14 or 28 mc and one on 7, 3.5 or 1.7 mc will generally be the order of the day.

As well as that I shall have to ask you not to send in *more than one General list each*. Do your logging for the month, but please send a general list for *one band only*, picking out the most interesting band from your own point of view.

It's a great shame that we can't just go ahead and print every list that arrives, but for the moment, with our various limitations and the demands of other Sections, we must keep Calls Heard to three pages. No amount of pressure on the Editor will persuade him that more than that can be spared while we are limited to a total of 32 pages for the whole paper. So if you took infinite trouble about sending in lists this past month, and not one of them appears, don't be too downcast—I have looked through them all and found some of them enormously



The rig at W5RG, Dallas, Texas, who runs only 18 watts to an 807 final, on which he has worked nearly 70 countries.

interesting, but there they have had to stay.

DX OF THE MONTH

Now I have had my say, we had better turn it over to the readers as usual. First let me settle the two queries that appear most frequently: the 4X prefix is the State of Israel, but whether it counts as a separate country from the old ZC6 of Palestine, we don't yet know. Secondly, MP4BAB is genuine; he is not in Saudi Arabia but in

Trucial Oman, at the same QTH as the former VS9GT, and his QSL address, as given on his own card, is RAF Sharjah, British Forces in Iraq.

Several queries from O. A. Good (Oswestry): (1) Does EA8 count as two countries, Rio de Oro and Canary Islands? The answer seems to be that Rio de Oro and the Canary Islands are two separate countries, but the former should be EA7; on the other hand several EA7's

ZONES HEARD LISTING

Listener	1948		Post-War	
	Zones	Countries	Zones	Countries
'PHONE and CW				
M. H. Preston (London, S.W.12)	40	201	40	210
N. A. Phelps (London, N.10)	40	193	40	205
A. Baldwin (London, N.11)	40	190	40	194
D. W. Bruce (Eltham)	40	188	40	200
M. E. Bazley (Birmingham)	40	181	40	182
O. A. Good (Oswestry)	40	167	40	190
C. S. S. Lyon (Liverpool)	40	164	40	182
W. J. C. Pinnell (Sidcup)	40	153	40	167
L. N. Goldsbrough (Wirral)	39	159	40	182
R. A. Hawley (Goostrey)	39	158	39	178
T. W. Jones (Birmingham)	39	146	39	160
F. N. Baskerville (Southport)	39	132	39	132
G. P. Watts (Norwich)	38	135	40	164
A. W. Robertson (Cranford)	36	128	37	145
F. W. Lindley (Dundee)	35	131	35	131
A. Studley (Harrow)	35	128	35	128
D. W. E. Powell (Wilton)	35	112	36	123
J. E. Hosking (London, S.W.11)	35	94	35	109
N. A. S. Fitch (London, E.10)	34	127	35	134
D. I. Cruse (Sidcup)	34	107	34	107
J. G. P. Butler (Portsmouth)	33	116	35	124
'PHONE ONLY				
E. J. Logan (Hertford)	39	145	39	169
D. W. Bruce (Eltham)	38	146	38	164
B. Needham (London, W.11)	38	144	38	147
R. A. Hawley (Goostrey)	38	138	38	164
D. L. McLean (Yeovil)	37	137	37	151
A. Bannister (Manchester)	37	134	37	142
D. Kendall (Potters Bar)	37	133	37	137
J. M. Graham (Glasgow)	37	131	37	131
E. Nottingham (York)	37	123	37	123
R. S. Craig (London, S.E.1)	37	113	37	135
O. A. Good (Oswestry)	36	129	37	142
L. N. Goldsbrough (Wirral)	36	128	37	149
G. Braithwaite (Belfast)	36	126	36	135
A. Levi (Belfast)	36	122	36	135
R. Baldwin (London, E.17)	35	124	35	124
T. W. W. Dearlove (Frimley Green)	35	124	35	124
F. L. Rogers (London, N.W.1)	35	123	35	123
Capt. J. B. Lievens (Suez Canal Zone)	35	122	35	127
G. P. Watts (Norwich)	35	117	36	140
W. T. Higgins (Camborne)	35	114	35	114
K. R. Toms (Boreham Wood)	35	95	35	108
F. K. Earp (London, S.W.11)	34	128	34	128
C. S. S. Lyon (Liverpool)	34	126	35	140
K. Parvin (Thornton Heath)	34	117	34	117
A. W. Robertson (Cranford)	34	114	35	129
D. G. Martin (Cheltenham)	34	113	35	116
D. W. E. Powell (Wilton)	34	102	35	110
A. R. Wybrow (London, S.E.22)	34	102	34	102
T. W. Jones (Birmingham)	34	93	36	126
J. R. Cooling (Manchester)	34	93	34	101
N. A. S. Fitch (London, E.10)	33	109	34	120
L. Shearlaw (Camberley)	33	106	36	128
B. C. Cage (Ipswich)	33	90	35	120
L. Corder (Hadhleigh)	32	116	33	120
H. M. Graham (Harrold)	32	99	32	100

are just ordinary Spanish stations. So sort them out—never mind the prefix, it's the location that counts! (2) Does Novaya Zemlya (SM8SU) count as a country? The answer here is certainly Yes. (3) Does VK3QR (Norfolk Island) count as a country? This one hasn't been ratified as yet, but it will, since they have been issuing their own stamps for some time. (4) Does "Oman" count separately from "Trucial Oman"? Off my own bat I will say No.

O.A.G. heard VP8AP giving his Latitude and Longitude, which seem to put him in the South Shetlands. If this is so, he's yet another country.

N. A. S. Fitch (London, E.10) wants to know why he doesn't hear KX6, ZK1, VR2 and "all that juicy stuff." I think the answer is that those stations involve more waste of time than almost any others; they come through rarely and you have to be on the spot at the right time. For instance, the only times I have heard ZM6 and VR2 have been on 14 mc during the month of September, and usually between 0900 and 1030 in the morning. On a Sunday they might well be swamped. Those who can listen at such times on weekdays have probably heard them. N.A.S.F. makes several suggestions for conserving our valuable space, including the omission of the 'Phone Only lists, thus encouraging people to take up CW more seriously. I am scratching my head over that one—don't all speak at once!

J. L. Hall (London, S.W.16) sends a marvellous list of 7 mc Calls Heard and has obviously been specialising on that band. He has unearthed VK's, ZL's,



In this group are all the active VP's, with VP6CDI (ex-G2CDD) seated second from right. It seems a warm, sunny spot!

VE7's, W7's, KL7's and J's. The latter include J2HYS at 2115, 7040 kc. Let's have some more listening on this band.

N. A. Phelps (London, N.10) has had QSL's from RV2/FO8 and from MD4BPC—both QTH's in list. He also heard YS1PB on 14 mc CW (first YS ever heard on CW) and asks whether CR8AQ is genuine. On the latter score, I heard a station sending so "muddily" that he might have been CR6, 7, 8 or 9; but I eventually resolved him as CR6AQ and proved correct.

T. W. Jones (Birmingham) has been active on 7 mc with ZL's, UA9's, KL7HI, CT3AB, VP3AA, and also heard XZ2JB for another zone on 14 mc.

D. W. Bruce (Eltham) reports, on 14 mc, W7LZJ/

C6, AR1RJ (Damascus), LAT/Airborne over India, VP8AP, KM6AJ, ZD1PW, CP3FB and NY4JG. On 28 mc the best were C8KY, W2WMV/C9, ZP7FA, VP3ACS, VP2AC, HR1MB and HI6EC. According to D. W. B., VP8AP is in the South Orkneys, but he would like the full QTH, and also those of HH2BL, VP2GJ, ZD1PW, VS7BJ and W7LZJ/C6, if anyone has them.

E. J. Logan (Hertford), who is already the top-scorer in the 'Phone list by having heard 39 Zones, now says he has heard his 40th, although he is not claiming it as yet; but he did hear UAØPA call CQ five times without a reply. There is an ambiguity about UAØPA's Zone, as you will remember, because on the map he is in Zone 23; but for the purposes of the

record he seems to be Zone 18 all right, which is E. J. L.'s missing one. So HAZ on 'phone is possible—but definitely not easy!

OVERSEAS NOTES

We have heard direct from Germany that the new D2 QSL Bureau address is: E. G. Styles, D2GU, PW/DP Branch, 120 HQ CCG (BE), Brunswick, BAOR 11. From the same source we are told that the official "DL" amateur licences for German nationals have all been settled, and that it is the German authorities themselves who are holding the matter up. So all the DA and DK and DM pirates have come out again. They were more than somewhat of a nuisance in the CQ Contest, too. Obviously they couldn't enter, and equally obviously stations

DX QTH's

AR1RJ	Box 35, Damascus, Syria.
AR8BM	Box 1119, Beirut, Lebanon.
C3ET C3KC	} Box 193, Canton, South China.
C700	
EA8CO	C. Olias, Apartado Postal, Las Palmas, Canary Isles.
HC7KD	Box 340, Quito, Ecuador.
HP1LR	Herman Luria, Box 91, Panama City.
HR1MB	M. G. Brashear, c/o U.S. Embassy, Tegucigalpa, Honduras.
J7ABN	APO 468, c/o PM, San Francisco.
MD4BPC	SQMS W. H. Caunter, c/o PO, Hargeisha, Brit. Somaliland.
MD4TH	Box 336, Mogadiscio, Somalia.
OA4CJ	J. W. Spack (W9BJN), Panagra, Lima, Peru.
RV2/FO8	R. d'Assignies, Raivavae Island, via Tahiti.
VE8MA	Eureka Sound, Ellesmere Island, NWT, Canada.
VP8AK	J. W. Knox, c/o PM, Port Stanley, Falklands (<i>Stn. in South Shetlands</i>).
VP8AP	c/o F.I.D.S., Port Stanley, Falklands.
W8OZG/C1	Box 501, Tsingtao, China.
ZD1SW	Box 99, Freetown, Sierra Leone.
ZLIMP	D. Mitchell (ex-GW6AA), Bank of N.Z., Queen Street, Auckland.
ZS6TP	Ex-VS1AK, Box 6406, Johannesburg.
4X4AA	J. Baer (ex-ZC6LA), Box 4150, Tel-Aviv, Israel.

working them couldn't claim points for the contact. But did they pile up on the bands!

Direct from 4X4AA (ex-ZC6LA) we hear that amateur licences in Israel can only be granted by the PMG "after the war" and that the present series has been authorised by the Chief Signals Officer. 4AA, 4AB and 4AC are ex-ZC6LA, 6LB and 6LC respectively—QSL via the former. 4X4AA works on 7, 14 and 28 mc with 850 watts input.

THE "K" CONTEST

The suggestion of a contest for a "letter of the month" led me, you will remember, to ask everyone to log stations whose calls began with "K" during October. We have had a total of five replies to this, which is a sufficient answer! Two listeners, G.

Cole (London, N.21) and J. M. Graham (Glasgow) both heard five on the 28-mc band; their catches were, in each case, KG6, KZ5, KH6, KL7, and KP4, all on 28 mc 'phone. N. A. Phelps (London, N.10) elected to listen on 7 mc CW, from which he gleaned six: K3, KH6, KP4, KS4, KV4 and KZ5. All three are the winners!

Now for the news from O. A. Good (Oswestry), whose queries have already been aired. He received a huge bunch of QSL's recently and now has 39 Zones confirmed (36 on 'phone). Can anyone cap this? Zone 23 is unconfirmed, but C8KY may come across with a card if he's feeling happy. Events of the month were the way the ZL's came in, the arrival of three VK6's on 'phone, and the number of MI3/MD3 stations heard on

October 14 (four of them, all on 14 mc between 1800 and 2000). C3EA (Formosa) has also been received frequently on 14 mc 'phone—incidentally he is now putting in a beautiful signal on about 29.4 mc in the mornings.

J. M. Graham (Glasgow) has found it a "super" month for 28 mc with the exception of the blackout which lasted for about six days. He logged crowds of Central and South Americans, from KP4, LU, PY, CE, CO, HK, HC, HH, HI, PZ and YN; Africa and Asia were also well represented. His choice of "super-DX" is FF8FP, HH7HB, HR1MB, TG9CH, VP3TR, W2WMV/C9, W7KMV/Iwo, YSIAC—all 28 mc 'phone.

D. H. Simpson (Whitley Bay) has returned to the fold and provides one for Puzzle Corner—CA2ZZ (14 mc 'phone). He, like many others, agrees with last month's remarks about keeping listening as a part-time hobby and not a full-time obsession. As he says, if you can forget radio for a week you return to it with renewed enthusiasm. Conversely, he found that he spent a lot of time accumulating "junk" and then found that the urge to build had departed and he let it all go again! Now, after a slack period, he wishes he had it back... Take it easy, boys, and keep calm!

E. H. Williams (Poole) is a record-holder for this feature, being in his 75th year! He sent in some SLP lists, which, unfortunately, were among those crowded out. But I am delighted to know that we now cater here for listeners of all ages from 14 to 74; and in the light of the previous paragraph, I might add that if you still want to

be a listener at 74 you had better take that warning seriously.

A. M. Nordi (London, N.W.11) seems to be the only reader to have logged VK1AD, the Australian Antarctic Expedition on Heard Island. He also acquired his 100th country on 14 mc 'phone by logging VP5TJ. D. G. Martin (Cheltenham) has rolled in new countries on 28 mc with HL1BB, HZ1AB, VP2AC and VQ5PBD. On 14 mc he has found ZD1BD and ZD1SW very consistent.

D. L. McLean (Yeovil) classes as his "super-DX" C8KY, HP1LA, HR1MB, MD4JG, VQ8AE, VS6AE, W2WMV/C9, W7KMV/Iwo, ZC1AZ and YS1AC—all on 28 mc 'phone. He also says definitely that VK5RN is in Zone 30 and that the ?? 90W station mentioned last month was probably C9OW (Manchuria). He asks if Syria and Lebanon count as separate countries—and they certainly do.

D. Cocking (Farnborough) asks "When are Asiatics heard?" I should say that at present the peak times for them are 1400-1800 on 14 mc and 1000-1300 on 28 mc. Certainly, there was nothing wrong with the signals from HL1AB, VS6AE, C3EA and W7KMV/Iwo this very morning at 1030 (all 28 mc). On 14 one often hears the elusive C station during the afternoon, and the J's sometimes much later. Activity in VU and AP seems to be at a very low level.

K. Smeeton (Northwich) says he heard AG2AA announcing his QTH as Trieste, which should confuse things even more! He also heard EA8CO (Canary Isles), HH3DL, HK4AD, ZD1BD and 1SW,



PAØRL operates this outfit on 3.5 and 14 mc, with a 6V6-807 arrangement running up to 50 watts on CW and 35 on 'phone

ZD2RGY, ZD4AB and ZS4H—all 14 mc.

R. A. Hawley (Goostrey), along with several others, favours a "Counties Heard" competition on the Top Band. Since the general opinion is very much against a 1949 Marathon I have a feeling that we shall have to run a little friendly contest of some sort each month, and that such a test as "Counties Heard" would

be rather fun. So brush up your "long-wave" receivers, not to mention your Morse, and we will have a top-band listening contest on CW and 'Phone. R. A. H., also, talks about Trieste, and points out that British Services use MF2, Americans AG and Italian natives II. Ah, well . . .

F. W. Lindley (Dundee) contributes TU2LO for the Rogues' Gallery (14 mc

CW)—not a clue! A. Bannister (Manchester) has spent 90 per cent. of his time on 28 mc, and logged AC4AT who, he says, really sounded like DX. He has been hotting up the receiver and is now trying to force himself to use it instead of trying still further hotting-up! On 14 mc he logged VP7X (phone) and wonders whether he was another W who went to the Bahamas specially for the Contest.

T. W. W. Dearlove (Frimley Green) says that VE8PN and 8PO use the same transmitter—on Baffin Island and 300 miles inside the Arctic Circle. Three of the four men there are amateur transmitters! T.W.W.D. is beginning to find the "MM's" very interesting; I recommend it, too, as a very fascinating pursuit. But I suggest that they should be left out of Calls Heard, because they might be anywhere at the time when they were heard and their mere call-sign doesn't convey much information.

Bob Craig (London, S.E.1) sticks to his principles of keeping listening

as a hobby, and says he doesn't call 7 mc a DX band because he *sleeps* at nights! (Of course one might say that if everyone did this there wouldn't be any DX bands.) He listened through the Contest, and marvelled at the way G stations would call CQ while, all around, the DX stations were also CQ-ing. And as for the four G's who had a cross-town rag-chew on 28 mc during the Sunday morning . . . words fail him. (I can think of suitable words all right!)

B. J. Tyson (Sheffield) spent most of his time listening on 1.7 mc and sent in a nice list of Calls Heard. Such is fate—it was most probably squeezed out! Very sorry, B. J. T., but thanks all the same. Somehow we will straighten this business out and ensure that everyone gets a look in some of the time.

And now I must apologise to all those readers who have not had their letters covered; most of them have mentioned plenty of good DX, but DX which has already been discussed in the other remarks. So many thanks and ack-

nowledgments to them all. Regarding Calls Heard, special thanks to readers Williams, Kendall, Garrard, Graham, Bannister, Earp, Martin, Norden, Ross, Robinson, Baldwin, Studley, McBey, and Tyson, all of whom sent lists absolutely at the top of the form but which still couldn't be accommodated due to the space factor.

SET LISTENING PERIODS

November 27, 1500-1700
GMT—28 mc CW and
'Phone (no USA).

November 28, 0700-0800
GMT—3.5 mc CW and
'Phone (no Europe).

December 26, 1100-1200
GMT—28 mc 'Phone.

December 27, 2000-2200
GMT—14 mc 'Phone
and CW.

Closing date for next month will be December 1, first post. Tight squeeze again, but it can't be helped. Address everything to DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1—and please ration yourself to one SLP list and one General list, not for the same wave-band. Good Hunting and 73.

A REPORT APPRECIATED

In "Pse QSL" in our issue for February, there appeared the call of W5CNK. In response to this, he writes us that he has received a "number of very complete reports" which have "helped a lot." He singles out particularly the series-report from SWL D. Parker (Huddersfield) and in fact sends us the original of it as an example of what a good SWL report should be. D. P. reported W5CNK as received on five separate occasions, and the column headings of this report include date, time, weather, calling/working, approximate frequency, 'phone RS, QSB, stations logged from the same area, and other continents heard. W5CNK has asked us to airmail this report back to him, and for our part we are glad to give space to such an appreciative comment, also hoping that this note will be found helpful by other SWL's.

IMPORTANT—

AMATEUR LICENCE QUALIFICATIONS

Technical and Morse qualifications obtained by service in certain trades or specialist duties in the Armed Forces during or since the War are at present accepted by the Post Office as giving exemption from parts of the amateur licence examination.

The G.P.O. now gives notice that with effect from January 1, 1949, these qualifications will only be accepted for such exemptions if applicants have obtained their experience (by service in one of the specified trades) within two years of their application for a licence.

In effect, this means that if you apply for an amateur transmitting licence after January 1 next, you cannot rely on your Service experience for exemption if your release date is prior to January 1, 1947. So get that application in now!

Please mention the Short Wave Listener when writing to Advertisers

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 VE5, 6, 7 & 8.

7 mc : No Europeans.

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

SET LISTENING PERIODS

28 mc

October 31, 0900-1100 GMT

L. Tombs, 31 Little Avenue, Swindon.

'PHONE: AR8BM, C1CH, 8KY, CN8EI, LU4BC, PY2JO, 6AG, ST2AM, VK2ACE, 2ALO, 2AZO, 2LK, 3GG, 3HT, 3JZ, 4TE, 5AJ, VU2BF, VS7PS, W01AX/MM, 5OCN/MM, YR5C, ZB1AB, 1FK, 2A, ZC1CL, ZL3LE, 4X4AA, 4AD. (Rx: 12 valve superhet.)

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

'PHONE: AR8BM, C1CH, 8KY, KP4EZ, 4FP, PY1IK, 2JO, PZ1RM, ST2AM, VK2ACE, 2AHF, 2AZO, 2JZ, VQ2DH, 4CUR, 4ERR, 4SC, VU2BF, W5OCN/MM, ZB1AK, 1AM, 1FK, 2A, ZC1CL, ZD4AH, ZL3LC, ZS1EO, 4X4AA, 4AD. (Rx: V55R with Labgear Preselector/Converter.)

R. W. Norfolk, St. Mary's Hospital, Tattingstone, Nr. Ipswich.

'PHONE: AP2R, AR8AB, 8BC, CO2LW, 2OM, CN8AB, 8EK, 8EN, CT1AS, 1QA, EK1MD, FA3GZ, 3JY, 8CF, 9OW, FT2FU, HA1KH, HC2KQ, 2OL, HK3CU, IS1AYN, KA6BM, KH6GS, KP4AZ, 4BM, 4FM, 4OC, MF2AA, M13CD, OK2XF, 5AB, OQ5CF, PY1KZ, 6AG, 7DA, 7QB, PZ1WK, ST2MP, SV0WD, UB5KBA, VE6EB, 6KV, 7ZM, VK2NY, 3LZ, 5RN, 6KW, 7AZ, VO2GS, VP2AT, 4TH, 4TO, 6CD, 6YB, VQ4NSH, 5PBD, W6AAN, 6NZV, W7ITN, 7KHB, 7PEY, ZC6KF, 6XY, ZD4ABL, ZE1JL, 2JK, ZL2BT, 4GA, ZS2CI, 5JW, 5NX, 6JW, 6Q. (Rx: Sky Champoln.)

E. G. Dommert, 38 Yonder Street, Ottery St. Mary, Devon.

AR8AB, 8BM, C1CH, 4KS, CN8EI, 8EQ, FA3JY, 8CF, 8IH, J9AMZ, LU4BC, 6ES, OQ5BA, PY1IK, 2CK, 2JO, 6AG, PZ1RM, ST2AM, VK2ACE, 2AFS, 2AIU, 2ALQ, 2KG, 2JZ, 2LK, 2TE, 3GG, 3KW, 3KL, 6NL, VQ4KTH, VS7PS, VU2BF, W5OCN/MM, YR5C, ZB2A, ZC1CL, ZL2LV, 3DS, 3LC, 3LE, 4X4AA, 4AD. (Rx: RME69.)

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

'PHONE: AP2R, 4F, C1AN, 1CH, 8KY, J9ACH, OQ5BA, ST2AM, VK6RU, VS6AE, 7PS, VU2BF, ZD4AB, 4AH. (Rx: Hambander with Preselector.)

B. C. Cage, 331 Landseer Road, Ipswich.

AR8BM, FA8CF, KP4AZ, 4FP, LU6ES, OQ5BH, PY2JO, VK2WB, VQ2DH, 4CUR, 4ERR, 4SC, VS7PS, W5OCN/MM, ZB1AK, 1AM, 2A, ZC1CL, ZL3LC, 3LE. (Rx: 0-V-1.)

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

'PHONE: AR8BM, C8KY, CN8EI, FA8CF, 8IS, OQ5BH, 5HL, PY6AG, ST2AM, VK2ASN, 2TV, 2ZW, 3GG, VQ2DH, 4CUR, 4ERR, 4SC, 8AE, VS7PS, W5OCN/MM, YR5C, ZB1AK, 1FK, 2A, ZC1CL, ZD4AH, ZE1JO, ZL3LC, 3LE, 4X4AA, 4AD. Rx: Eddystone 504 and 640.)

P. Nelson, 65 Menlove Avenue, Liverpool, 18.

'PHONE: AR8BM, FA8CF, OQ5HL, PY6AG, VQ2DH, VS7PS, W5OCN/MM (Gulf of Oman), ZB1FK. (Rx: Eddystone 504.)

R. S. Craig, 38 Grance Walk, Bermondsey, S.E.1.

'PHONE: AR8AB, 8BM, C1CH, 8KY, CN8EI, FA8CF, J9ACY, 9AZA, KP4AZ, LU4BC, OQ5BH, PY1IK, 2CK, 6AG,

ST2AM, VK2TV, 2WB, 3QW, 2AFS, VQ4CUR, VS7PS, VU2BF, W4FKM/Shanghai, W5OCN/MM, YR5C, ZB2A, 1AM, 1FK, ZC1CL, ZE1JO, ZL2DS, 2KQ, 3AE, 3FS, 3JO, 3LC, 3LE, 4BT, (Rx: 3x28.)

N. A. S. Fitch, 79 Murchison Road, London, E.10.

'PHONE: AR8AB, 8BM, KP4FP, OQ5BH, 5BQ, PY6AG, VK2AHS, 3GG, 6RU, VQ4ERR, VS7PS, VU2BF, W5OCN/MM, YR5C, ZC1CL, ZD4AH, ZL3JO, 3LC, 4X4AA, 4AC, 4AD. (Rx: Mains 1-V-1.)

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

'PHONE: C1CH, 7SP, 8KY, CN8EI, FA3JY, J9ACH, KP4AZ, 4FB, LU4BC, 6ES, PY1IK, 2JO, 6AG, VK2ACD, 2AFC, 2AFH, 2AZ, 2WB, 3GG, 3OF, 6RU, VQ4SC, VU2BF, W5OCN/MM, ZB1AK, 1AM, 1FK, ZCIAZ, 1CL, ZD4AB, ZL4AB, ZL3JO, 3LC, 3LE. (Rx: 1-V-2 TRF.)

T. W. W. Dearlove, Lattices, 138 Coleford Bridge Road, Frimley Green, Surrey.

'PHONE: AR8AB, 8BM, C1CH, 8KY, CN8EI, FA8CF, KP4EZ, LU6ES, OQ5BH, PY1CK, 1IK, 2JO, 6AG, ST2AM, VK2JV, 2TE, VQ2DH, 4KTH, 4SC, VS7PS, VU2BF, W5OCN/MM, YR5C, ZB1AK, 1AM, 1FK, 2A, ZC1CL, ZE1JO, ZL3LC, 3LE, ZS6BV, 6CT, 4X4AA, 4AD. (Rx: CR100)

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

'PHONE: AR8AB, 8BM, C1CH, 8KY, CN8EI, FA3JY, HZ1AB, KP4AZ, 4EZ, 4FP, LU4BC, PY1IK, 2CK, 2JO, 6AG, ST2AM, VK2ACE, 2AFN, 2AP, 2LG, 2RH, 2TV, 2WB, 2WE, 2YL, 2ZW, 3BZ, 3GG, 3JY, 3OF, 3QW, VQ2DH, 4KTH, 4SC, VU2BS, W3NCV/MM, 5OCN/MM, YR5C, ZB1AK, 1AM, 1FK, 1KH, 2A, ZC1CL, ZD4AB, ZE1JO, ZL3JO, 3LC, 4BM, 4X4AA, 4AC, 4AD. (Rx: R208.)

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

'PHONE: AR8AB, 8BM, C1CH, 8KY, CN8AB, 8EL, FA3JY, 8IH, J2AAA, KP4AZ, PY6AG, PZ1RM, VK2ACE, 2AFE, 2AKR, 2ALQ, 2ASN, 2TE, 2WB, 2WV, 2ZW, 3GG, VQ4SC, VS7PS, VU2BF, W5OCN/MM, YR5C, ZB1AK, 1AM, 1FK, 2A, ZC1CL, ZD4AH, ZL3LC, 3LE, ZS6JB, 4X4AA, 4AD. (Rx: 14 valve home-built superhet.)

Arthur Levi, 33 Old Cavehill Road, Belfast.

'PHONE: AR8BM, C8KY, FA8CF, J9ACA, OQ5BH, 5HL, PY6AG, VK2AFS, 2TE, 3GG, 3HW, VQ2DH, VS7PS, VU2BF,

W2NYJ/MM, 50CN/MM, ZB1AK, 1FK, 2A, ZC1CL, ZD4AH, ZS1EO, 1T, 6JI, 6BV, 4X4AA, 4AD. (Rx: Eddystone 504.)

F. W. Lindley, 22 Panmure Terrace, Barabhill, Angus.

*PHONE: AR8BM, FA3JY, 8CF, IS1AEW, LU4BC, PY1IK, 2JO, PZ1RM, ST2AM, VK2AIU, 2LG, 2TE, VQ2GI, 4ERR, VS7PS, W2NYJ/MM, ZB2A, ZC1CL, ZE1JA, ZS6CT, 4X4AA, 4AD. (Rx: EF54/EF50 Converter.)

R. E. Smith, 1 Holly Cottages, Gustard Wood, Wheathampstead, Herts.

*PHONE: AR8BM, C1CH, CN8EL, CT1AS, 1LP, 1QA, KP4EZ, LU6ES, OQ5BH, ST2AM, VK2WV, VQ2DH, 4CUR, 4SC, 6NL, VS1CL, 7PS, VU2BF, ZB1AM, 1AK, 1FK, 1SK, ZB2A, ZC1CL, 1CO, ZD4AB, ZE1JO, ZS6LY, 4X4AA, 4AD. (Rx: Eddystone 640.)

A. W. Robertson, 149 Firs Drive, Cranford, Middlesex.

*PHONE: FA3JY, KP4EZ, 4FP, LU6CN, OQ5CL, PY1IK, 6AG, PZ1RZ, ST2AM, VK2ACE, 2RH, -VS7PS, VU2BF, W5OCN/MM, YR5C, ZB1AK, 1AM, 1FK, 2A, ZC1CL, 6XY, ZL3AZ, 3CL, 4X4AA, 4AD. (Rx: 0-V-1.)

W. J. Wills, 17 Alfred House, London, E.9.

*PHONE: CN8EI, CT1AS, 1QA, 1SQ, F81H, LU3BR, 4BC, 6ES, OQ5BH, PY6AG, PZ1RM, VQ2DH, 4SC, ZB1FK, 2A, ZC1CL, ZS6CT. (Rx: Eddystone 504.)

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

*PHONE: AR8AB, 8BM, C1CH, 8KY, CN8EI, F8FCF, ZJRLK, KP4FP, OQ5BH, PY1IK, 6AG, PZ1RM, ST2AM, VK2AFE, 2AFS, 2AZO, 2SV, 3BZ, 3EE, VQ4SC, VS7PS, VU2BF, W3NKS/MM, 50CN/MM, Q1AX/MM, ZC1CL, ZD4AH, ZL3LC, 3LE, 4X4AA, 4AD. (Rx: RCA AR88LF.)

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

*PHONE: AR8AB, 8BM, C1CH, J9AZA, ST2AM, VK2ASN, 3QK, 6NL, VQ2DH, 4SC, VS7PS, VU2BF, ZB1AK, 1AM, 1E, 1FK, 1S, 2A, ZC1CL, ZL2LC, 3LE, 4X4AA, 4AD. (Rx: Hambander.)

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

*PHONE: AR8BM, C1CN, 8KY, CN8EI, F8FCS, J9AN, 9APL, LU2BR, OQ5BH, 5BQ, 5HL, PY1IC, 1IK, 2CK, 2JO, 6AG, PZ1RM, ST2AM, VK2JW, 3ZW, VQ2DH, 4CUR, 4KTH, 4SC, 5WCP, W5OCN/MM, ZB1AK, 1AM, 1FK, ZC1CL, ZD1AH, 4AH, ZE1JO, ZL1H, 3AW, 3DS, 3IO, 3LC, 3LE, ZS2ET, 6BV, 6CT, 6JI, 6OY. (Rx: Eddystone 640.)

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

*PHONE: AR8BM, C1CH, 8KY, F8FCF, J9ACH, KP4EZ, OQ5BH, 5BQ, PY1IK, 6AG, PZ1RM, ST2AM, VK2ACE, 2DI, 3AJS, 3GG, VQ2DH, 4SC, VS7PS, VU2BF, ZC1CL, ZD4AH, ZE1JO, ZL3LC, 3LE, ZS6CT, 4X4AA, 4AD. (Rx: Hallcrafters S.20 and converter.)

E. Nottingham, Lyndhurst, Upper Poppleton, York.

*PHONE: AR8BM, C1CH, 8KY, CN8EI, FA3JY, 8CF, OQ5BH, 5BQ, 5HL, PY1IK, 6AG, ST2AM, VK2ASN, 2TE, 2WB, 2ZW, 6RU, VQ2DH, 4CUR, VS7PS, ZC1CL, ZL3JO, 3LC, 3LE, ZS6BV. (Rx: Hallcrafters 5-10.)

D. H. Simpson, 39 Marina Drive, West Monkseaton, Whitley Bay, Northumberland.

*PHONE: CN8BB, BV, CT2AB, HK1DZ, LU7FS, MD1A, OX3BC, PY4IK, 6AG, 7QG, TI2OH, TRIP, VE8PO, VO2FL, VP2GB, W7DV, 7ESK, YV3AL, 5AB, ZD1BD. (Rx: R.1155.)

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

*PHONE: CN8BB, CT3MN, OX3GG, PY4BU, 4IK, 6AG, 7QG, VO2FL, 4Q, YV5AB, 5ABW, ZD1BD. (Rx: R.1116A.)

C. A. Wharton, 14 Vicars Terrace, Harehills, Leeds, 8.

*PHONE: CN8AM, CT3MN, PY4IK, 6AG, 6EO, 7QG, VO2FL, 4Q. (Rx: Philips P.C.R.1.)

T. S. Strevens, 70 Thirmerere Avenue, Reading, Berks.

*PHONE: OX3BC, PY6AG, 7QG, VE6FK, 7GQ, 8PO, VO4O, 6AG, W6SA, 7DV, YV5AB. (Rx: R1082.)

T. W. W. Dearlove, Lattices, Coleford Bridge Road, Frimley Green, Surrey.

*PHONE: CT3MN, HK1DZ, KP4ES, LU4CN, OX3GG, PY4CB, 6AG, TI2OH, VE6FK, 8PN, 8PO, VO2FL, 4Q, 6AG, VP2GB, W7ESK, YV3AL, 5AB, ZD1BD. (Rx: CR100.)

E. Nottingham, Lyndhurst, Upper Poppleton, York.

*PHONE: CN8BB, 8EM, HK1DZ, KP4ES, LU7FS, OX3BC, 3GG, PY4CB, 4IK, 6AG, 6CO, 7QG, TI2OA, VE6FK, 8BN, 8PO, VO2FL, 6AG, VP2GB, 9AA, W6SA, 7DV, 7ESK, YV3AL, 5AB, ZD1BD. (Rx: Eddystone 640.)

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

*PHONE: CN8BB, CO2QB, HK1DZ, 1FW, 3IR, KP4ES, LU4CN, PY2AC, 4BU, 4IK, 6AG, 7QG, TI2OH, VE6FK, 8PN, 8PO, VO2FL, 4Q, 6AG, VP2GB, W6SA, 7ESK, YV3AL, 5AB, ZD1BD. (Rx: Hallcrafters S.20.)

B. Dalby, Marshlea, Green Lane, Lea, Gainsborough, Lincs.

*PHONE: CT2AB, 3MN, HK1DZ, 1FQ, KP4EF, OX3BC, 3GG, PY6AG, 6CO, 7QG, TI2OA, VE6FK, 6QC, 8PM, 8PO, VO2FL, 4Q, 4QM, 6AG, W6SA, 7DV, 7HTB, YV5AB, YS1GM, ZB1BD. (Rx: Eddystone 640.)

D. W. E. Powell, Loughrigg, Shaftesbury Road, Wilton.

*PHONE: CT3MN, HK1DZ, OX3GG, PY6CO, TI2OH, VE6TM, VO4Q, 6AG, YV5AB, ZC1AZ, ZS2CI, 6AJ. (Rx: 0-V-1.)

14 mc

October 30, 2000-2200 GMT

Rev. A. Cumming, 77 High Street, Lymington, Hants.

*PHONE: CT3MN, CX2AR, FA3JY, HK1DZ, MD1A, OX3GC, 3GG, PY4BU, 6AG, 7QG, VE8PN, 8PO, VK3LM, VO2FL, 4Q, 6AD, VP2GB, VQ4SC, YV3AL, 5AB, 5ABW, ZD1BD. (Rx: BC 348 R.)

L. Tombs, 31 Little Avenue, Swindon.

*PHONE: EK1AD, HK1DZ, MD1A, OX3BC, 3GG, PY4IK, 6AG, 7AD, 7QG, VK3XG, VO2FL, 2MD, 6AL, ZC6XY, ZD1BD, 4X4AA, 4AD. (Rx: 12 valve superhet.)

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

*PHONE: CN8BB, CO2LB, CX2CL, HK1DZ, KP4ES, OX3BC, 3GG, PY6AG, TI2OH, VE6FK, 8PN, 8PO, VO2FL, 4Q, 6AG, W7DV, YV3AL, 5AB, ZD1BD. CW: CO2BM, CR6AI, HK3FF, KX6AF, VO1B. (Rx: V55R with Preselctor/Converter.)

P. Nelson, 65 Menlove Avenue, Liverpool, 18.

*PHONE: CT3MN, KP4ES, PY7QG, TI2OH, VE6FK, 8PO, VO4Q, YV1AU, 3AL. (Rx: Eddystone 504.)

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

*PHONE: CN8EM, CT3MN, HK1BZ, 1DZ, KP4ES, OX3BC, PY4IK, 6AG, 7QG, TI2OH, VE6FK, 8MO, VO2FL, 4Q, 6AG, YP9AA, W7FV, YV1AQ, 1AU, 3AL, 4BH, 5AB. (Rx: Eddystone 504 and 640.)

W. J. Willis, 17 Alfred House,
London, E.9.

PHONE: CN8BB, CT3MN,
OX3GG, PY4CB, 41K, 6AG, 7EO,
7QG, YV5AB.

CW: PY1ACG, 11I, ZS2CR, 6KT.
(*Rx:* Eddystone 504.)

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

CW: CM8AZ, CO2BM, CR6AI,
6AQ, HK3FF, KP4KD, KV4AK,
KZ5XJ, LU1KB, 3HS, 6BJ, 6DJX,
7DJF, 8EN, 9AF, 9EV, 9KK,
M13AB, PY1ACG, 1BG, 1DH, 11I,
1SH, TF3SF, VE6AZ, 7AX, 8MA,
8MS, 8PS, VP8AJ, 8AK, W5LHP.
6AY, 6VAW, 7AMX, ØCDV,
ØGKJ, ØIJW, ØLRR, ZB2F,
ZS1BK, 4GC. (*Rx:* 1-V-2 TRF.)

R. E. Smith, 1 Holly Cottages,
Gustard Wood, Wheatthamstead,
Herts.

PHONE: CN8BB, CT3MN,
EP2AB, HK1DZ, ØX3BC, PY41K,
6EG, 7QG, VE6TM, 8BN, 8PO,
VØ4Q, VP9AA, 9GB, W7DO,
YB1BQ, YV5AP. (*Rx:* Eddystone
640.)

J. D. Boatwright, 37 Granf Street,
Norwich, Norfolk.

PHONE: CN8BB, 8BZ, CT2AB,
3MN, ET6AB, FT4AI, HK1BZ,
MD1A, ØX3BC, PY7QG, T12OH,
WHTB, YV3AL, 5AB, ZB1BD,
ZD1BB. (*Rx:* Hallicrafters S.40.)

D. W. Waddell, 25 Hillfield Place,
Nantwich, Cheshire.

PHONE: CT3MN, PY6AG,
T12OH, VE8PO, VØ2FL, 6AG,
YV5AB, ZD1BD.

CW: CO2BM, PY11I, TF3EA,
3ZM, VE8MA, 8MS, VØ2BR.
(*Rx:* Modified R.1155A.)

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

PHONE: CM2SB, HK1DZ,
ØX3BC, 3BG, 3GG, PY41K, 6AG,
6CO, 7QG, VE6GM, 8PN, VØ2FL,
2MD, 4Q, W7ESK, YV1AZ, 5AB,
ZC1BG. (*Rx:* R208.)

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

PHONE: CN8BB, HK1DZ,
LU2BB, 5BO, 5CK, 7FS, PY4BO,
6AG, 6CO, 7QG, TG9AF, T12OH,
VP9AA, YV1AQ, 5AB, 5ABW,
5ACD.

CW: CM2SW, 8AZ, KV4AK,
LU7DJF, PY11I, 1SH, ZS1GC.
(*Rx:* 1-V-2 TRF.)

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

PHONE: CN8BB, HK1DZ,
3IR, KP4EF, ØX3BC, PY6AG,
T12OA, 2OH, VE6FK, 8PO,
VØ2FL, 4Q, 6AG, VP2GB, VP9AA,
1N7EFK, 7FV, 7HTB, ØKGG,
YV1AQ, 1AU, 3AL, 5AB, 5ACD,
ZD1BD. (*Rx:* BC-342-N.)

N. A. S. Fitch, 79 Murchison Road,
London, E.10.

PHONE: CN8BB, CO2MA,
CT3MN, HK1DZ, LU7BH, 7FS,
PY4BU, 7QG, VØ2FL, 4Q,
VP2GB, YV5AB, 5ACD, ZD1BD.

CW: CO2BM, LU9CK. (*Rx:*
Mains 1-V-1.)

GENERAL

14 mc

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

PHONE: AP4AZ, CX2CO,
ØØ5CF, ØX3GG, PY4BU, 7QG,
VE8MI, VK2US, 2XG, 5RN, 7AZ,
VØ2FL, 4Q, VP4TH, VØ4ERR,
VU2BF, YR5C, ZC6JL, ZL4AO,
(*Rx:* Pilot SH.5. 0710-0815 and
1855 to 2205 GMT.)

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

PHONE: HC1JW, 2KQ, 2OL,
KH6BM, 6IJ, W4DGW/KJ6,
KL7CM, PY8GL (Amazonas),
VE8BC 8MA, 8MB, 8MI, 8RA,
VK4FH, 4JU, 4KS, 4UL, 5NP,
5RN, 6DD, 6MW, 7AZ, XE1AC,
1CQ, ZD1BD, ZLICD, 1DL, 1MR,
2BE, 2BT, 2GX, 3CV, 3JQ, 3MH,
4GA. (*Rx:* Mod. R.1155, 2RF, 10
hours, 0700-0900 GMT.)

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

PHONE: CN8BC, 8BQ,
CO2LB, CT2AB, 3MN, CX1BY,
3AL, ET3AB, FT4AT, HC1JW,
HK1DZ, 1FQ, 6ES, H.M.S.
Glasgow, KP4AZ, 4CJ, LU4AA,
6DV, 7EQ, 9AG, 9LA, MD1A,
1L, M13DC, ØØ5CF, ØX3BC,
PY2ARK, 4BS, 4LZ, ST2AG, 2GE,
T12MV, U43KAA, 6KØB, VK2US,
5RN, VOIF, 2BN, VP2GB, 4TH,
VQ4NSH, XE1AC, YV1AJ, 5ABT,
5ABW, ZC6LA, 6UNN, ZD1BD.
(*Rx:* Murphy A122. 21.30-23.30.)

D. G. Martin, 65A Winchcomb
Street, Cheltenham, Glos.

PHONE: AP4B, AR1R,
8BC, CN8BB, 8BV, CX2AX,
EK1AD, FA8WH, HK1DZ, M1B,
MD2B, MT2E, ØX3BC, 3GG,
PY2CK, 41K, 6AG, 7QG, ST2GU,
TA3FAS, VE8MI, 8PO, VK2AGW,
2AHA, 2AHJ, 2ALO, 2AWN,
2BN; 2DN, 2FH, 2HK, 2IC, 2SV,
2TC, 2US, 3HF, 3LN, 3SV, 4FH,
4KS, 4MW, 5RN, VØ2BN,
VP6FO, VQ4NSH, YR5C, YV4BH,
ZC6LA, 6XY, ZD1BD, 1SW,
ZL2BT, ZS3S, 6AJ, 4X4AD. (*Rx:*
Eddystone 640.)

7 mc

J. L. Hall, 47 Norbury Crescent,
Norbury, London, S.W.16.

PHONE: HC1FG, XE1AV.
CW: CT3AB, CX1FD, FA8BG,
8ZZ, 9IP, 9RZ, J2HYS, KL7PB,

KP4CC, 4HU, 4KD, KS4AH,
KV4AA, KZ5CN, LU1EP, MC1A,
MD1B, ØX3J, T12AM, 2EXO,
UA9WB, 9KAB, 9KCA, 9KWA,
9KWB, U18KAA, 8KBA, UL7BS,
VE6KS, 7EW, 7HC, 7JB, 7RU,
7ZM, 8MD, VK2YN, 3MC,
VP6CDI, W6CJU, 61BD, 6LM,
6OA, 6RM, 6ZDT, 7FRU, 7HZS,
7IGE, 7JO, 7KAB, 7KWC, 7LIN,
ZB1AT, 1Q, ZC6RE, ZL1HY,
1MG, 2ACV, 2MM, 2QI, 3FP,
3GU, 4HI. (*Rx:* R 107.)

D. W. E. Powell, Loughrigg,
Shaftesbury Road, Wilton.

CW: CO2BU, FA8BG, 9IO,
KP4CC, PY4ACP, UA9KC,
U18AA, VE1DG, 1UD, W1BFX,
1RBT, 1UUV, 1WL, 1WU, 2EIX,
2RRI, 2ZV, 3NVJ, 4BOG, 4ERP,
5NNH, 8DA. (*Rx:* 0-V-1.)

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

CW: CM8XW, CN8EN, CT3AB,
ØX3J, T12EXO, VE7VC, VK2BC,
VØ1R, W6AK, 6RM, 7LTV,
9KFO, ZCAAC, ZL2OC, 2QI, 3FP,
3GU. (*Rx:* Hambander with Pre-
selector.)

28 mc

G. Cole, 6 Devonshire Gardens,
London, N.21.

PHONE: AP2M, 2R, AR8AB,
CR9AG, FF8FP, HK4AR, 4EB,
4VS, HL1AX, 1AY, 1BM, J2AZA,
2HYS, 2RJG, 2RLX, 3KBE,
9AMZ, KG6DO, 6DW, 6EZ, 6EL,
KL7AJ/P, KP4CI, 4EB, 4HN,
LU9KD, MD4JG, M13SC, ØØ5RH,
PZ1RM, ST2AM, 2MP, TG9SV,
VK6HL, 7AZ, VP5EM, VQ2JC,
4ASC, W2WMMV/C9, 5AXI/MM,
5EYP/KG6, YSIK, ZCIAZ,
6XY, ZD4AH, ZE1JO, 2JA,
ZL1GL, 1MD, 2BN, 2UJ, 3BH,
3JL, ZS3G, 5MX. (*Rx:* 0-V-0,
Ø800-0900 and 1600-1700.)

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

PHONE: AP2F, 2R, AR8AB,
8BM, CE3AT, 3HN CR9AG,
CX2CL, 3BL, HC2OT, HK3AB,
4DF, 5MO, HL1AY, HR1MD,
HZ1AB, KP4BO, 4HE, LU2BI,
3DH, 4BC, 4BJ, 5BM, ØA4BG,
ØQ5AB, 5BH, 5HL, 5LL, PY1FR,
1GQ, 1IK, 2JJ, 5AQ, 6AG, ST2AM,
2MP, TG9AM, VE7ZM, VK2ACE,
2AFS, 2ALO, 2ASN, 2AZO, 2EQ,
2TV, 2TY, 3AJE, 3AQL, 3GG,
5BH, 6BK, 6WU, VO1F, VP2AC,
6CD, VQ2DH, 4CUR, 4SC, 5WCP,
ZC1CL, 6UN, 6XY, ZP7FA,
ZS1B, 1FD, 1KH, 6CT. (*Rx:*
Eddystone 504. 10 hours. 0900-
2130 hrs. GMT.)

D. C. Barton, 13 Brangwyn Drive,
Withdean, Brighton 6, Sussex.

PHONE: AP2F, 4I, AR8AB,
EL7A, HL1AE, J2HYS, 2RJG,
4FA, 5LQK, KP4DP, ST2AM,
2MP, VU2GB, ZD6SY. (*Rx:*
Eddystone 640.)

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.

- C700 P.O. Box 52, Pelping, China.** Reports on 14 and 28 mc CW, operating 1500-2300 GMT.
- CE3CB Ave. Euclides 1350, San Miguel, Santiago, Chile.** CW operation, all bands, 2300-0500 GMT.
- D2LJ Capt. C. G. Stephenson, No. 1 Wireless Regt., B.A.O.R.3.** 7000 kc CW, 1500-1800 GMT; 14020 kc CW, 1800-2000 GMT; 3550 kc CW, 2000-2300 GMT.
- D2LM No. 1 Wireless Regt., R. Signals, B.A.O.R.3.** Operating 3-5, 7 and 14 mc CW and 'phone.
- F8KU 37 rue Mollere, Lyon, Rhone, France.** CW and 'phone all bands 3-5 to 144 mc, 2000 GMT.
- F9KQ 8 rue des Minimes, Montmerle-sur-Saone, Ain, France.** CW and 'phone all bands 3-5 to 144 mc, operating 0500-0700, 1100-1300 and 2000-2300 GMT. Give details of modulation.
- G2CKQ 91 St. George's Road, Cheltenham, Glos.** QSL's all accurate reports on 1845, 28018, 59000 and 145500 kc CW.
- G3BNE 116 Haverstock Hill, London, N.W.3.** 145350 kc CW and 'phone, 1830-2230 GMT, and week-ends.
- G3DJL 412 Apsley Lane, Apsley, Nottingham.** 3520, 7007, 0715 and 7024 kc CW, 2000-2300 GMT.
- GW3DVG 46 Barn Street, Haverfordwest, Pems., Wales.** 7010, 7015, 14020 and 14030 kc CW, 1900-2359 GMT.
- G3DYN 37 Ash Road, Gravesend, Kent.** Reports on 14 and 28 mc CW transmissions.
- GM3DZB Gordon Castle Farm, Fochabers, Morayshire, Scotland.** 7004 and 14008 kc CW, 1700-0100 GMT.
- GW3ECH 28 Rectory Road, Trecewn, Pems., Wales** VFO controlled CW, 58-5-60 mc and 145-6 mc.
- G3EKP 2 Church Terrace, Darwen, Lancs.** QSL's all reports on 1-7, 3-5, 7 and 14 mc CW.
- GW3GL Grenada, Conway, N. Wales.** Reports on 14 mc and VFO-controlled 1-7, 3-5 and 7 mc CW and 'phone, at 1330-1440 and 2030-2300 GMT.
- G4AP 72 Goddard Avenue, Swindon, Wilts.** 145-3 mc CW and 'phone, 2000-2300 GMT, and week-ends.
- G4RO 7 Blakemere Road, Welwyn Garden City, Herts.** 58820, 59368 and 145386 kc CW and 'phone, 1800-1930 and 2115-2330 GMT. 58 mc over 50 miles.
- IIA1F Via A. Volta 28, La Spezia, Italy.** Give exact frequency, and note of any key-clicks. 14080 kc CW, at 0700, 1200-1300 and 2000 GMT.
- IIAXE Via N. De Rin 2, Trieste.** 14258, 28516 and 56400 kc 'phone, 1400-1700 and 1900-2000 GMT.
- J4LGB c/o 15 Railway Terrace, Craven Arms, Shropshire, England.** 14020, 14030, 14050 and 14110 kc CW, operating 1500-2200 GMT.
- KH61J Lihue, Kauai, Hawaii.** QSL's via Bureaus all reports on VFO-controlled 14 mc CW and 'phone, operating 0500-0900 GMT.
- KP4AC 1533 Antonsanti Street, Santurce, Puerto Rico.** 28880 kc 'phone, 1330-1730 GMT. Quote times of reception of KP4 signals in England.
- LUSCK Galvan 3074, Buenos Aires, Argentina.** Operating 50106 kc 'phone, 0001-0300 GMT.
- M1B Geom Mario Graziani, Repubblica di San Marino.** Operating 7 and 14 mc CW and 'phone.
- OA4BV 994 Chiclayo, Miraflores, Lima, Peru.** Quality and modulation depth of 28180 and 28216 kc 'phone, 1300-1700 GMT and 'week-ends.
- OH2TT Odd. A. Vatanen, Tikkurila, Helsinki, Finland.** 14 mc 'phone, after 2000 GMT.
- OK1RN 579 Manesova ulice, Hradec Kralove, Czechoslovakia.** 3-5, 14 and 56 mc CW and 'phone.
- OK1ZB Osadni 4, Praha 14, Czechoslovakia.** CW and 'phone all bands 1-7 to 112 mc, operating 0200-0700, 1700-1800 and 2000-2300 GMT.
- PA0CT 149 Thomas a Kempisstraat, Zwolle, Netherlands.** Modulation and QSB of 3600-3610 kc 'phone, 1800-1900 and 2100-2200 GMT.
- PA0HPE Oude Delft 12a, Delft, Netherlands.** Comparative reports and details of modulation, 'phone operation at week-ends on all bands.
- PA0TV Enterweg 166, Ryssen, Netherlands.** QSL's all reports on 3-5 mc 'phone, 1900-2300 GMT.
- PA0USA Groote Markt 49, Groningen, Netherlands.** QSL's all reports on narrow band FM, 3-5 and 7 mc CW and 'phone, at 1200 and 1800-2359 GMT.
- PA0WQ Diepenbrocklaan 21, Arnhem, Netherlands.** Comparative reports and details of modulation, 'phone operation at week-ends on all bands.
- PY4ABN Av. Rio Branco 1916, Juiz de Fora, Minas Gerais, Brazil.** 3820 kc 'phone, 2200-1100 GMT.
- PY4PI Rio Branco 3151, Juiz de Fora, Minas Gerais, Brazil.** 14152 and 14193 kc 'phone, 2200-2359 GMT.
- PY5QG Rua Sao Pedro 360, Joinville, Santa Catarina, Brazil.** 3-5, 7 and 14 mc CW and 'phone, operating 0001-0200 GMT.
- VE3AFY 150 Dowling Avenue, Toronto 3, Ontario, Canada.** 28 mc CW, VFO-control, 1100-1700 GMT.
- VE5CA P.O. Box 394, Kinistino, Saskatchewan, Canada.** 14201, 14257 and 14305 kc 'phone.
- VE6MC 11206 100th Avenue, Edmonton, Alberta, Canada.** VFO-controlled 3-5, 7 and 14 mc CW.
- VK2PG 12 Pearl Street, Newtown, Sydney, Australia.** VFO-controlled 14 mc CW, 0600 GMT.
- VK3AWN 258 Barker Street, Castlemaine, Victoria, Australia.** VFO-controlled 14 and 28 mc CW and 'phone, 0600-0900 and 1700-2000 GMT.
- VK3KT c/o Army School of Signals, Balcombe, Victoria, Australia.** Operating 14 mc CW, 0600-1200 GMT Monday, Tuesday and Thursday.
- VK3QW 14 Waverley Street, Sandringham, Melbourne, Australia.** VFO-controlled 28 mc 'phone, 0900-1300 GMT, Sundays 0100-1300 GMT.
- VK3ZB 26 Lucas Street, South Caulfield, Melbourne, Australia.** 28 mc CW and 'phone, operating 0600-0800 GMT and at 1800 GMT.
- W2IOP 1 Ike Place, Woodmere, L.I., N.Y., U.S.A.** VFO-controlled 3-5, 7, 14 and 28 mc CW and 'phone. Reports on unusual conditions and DX.
- W4CQW 412 Harrison Street, Portsmouth, Virginia, U.S.A.** 3850-4000, 14250 and 14296 kc 'phone, operating 2200-0500 GMT.
- W4LHK P.O. Box 416, China Grove, N. Carolina, U.S.A.** Operating CW and 'phone on 7150, 14150, 14228, 28600 and 28900 kc.
- W5OKP P.O. Box 1729, Meridian, Mississippi, U.S.A.** Reports on 27300, 27406, 28500 and 28528 kc 'phone, operating 1430-2000 BST.
- W6UYX 956 Hilldale Avenue, Berkeley 8, California, U.S.A.** 14 and 28 mc 'phone, operating 1400-1600 and 0200-0700 GMT.
- W7HAK 2312 East Diamond Avenue, Spokane, Washington, U.S.A.** Comparative reports with other W7's on 28660 and 28724 kc 'phone, 1900-2100 GMT.
- W7FTE 516 12th Street, Rawlins, Wyoming, U.S.A.** 28840, 28992 and 29120 kc 'phone, 1800-1900 GMT.
- W7LE 707 12th Street, Rawlins, Wyoming, U.S.A.** VFO-controlled 14 mc 'phone, 0200-0600 GMT.
- W9EDW 603 Spring Street, Aurora, Illinois, U.S.A.** 3970 and 14300 kc 'phone, 0700-1000 GMT.
- ZLAGA 10 Gilfillan Street, Dunedin, New Zealand.** 3503, 3528, 28024 and 28224 kc 'phone and CW, also 14012 and 14112 kc CW, 0600-0800 GMT.

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We would draw the attention of readers, once again, to the value of our Small Advertisement section as a medium for advertising for all those items which one is always wanting, or of which one wishes to dispose. The charges are very moderate and good coverage is assured. We can also accept further small Trade advertising in this section.

DO YOU READ IT?

If you aspire to a transmitting licence, or indeed are in any way interested in the practice of Amateur Radio, you should read our parent *Short Wave Magazine*. Now in its sixth year of publication, and one of the world's leading Amateur Radio periodicals, it covers the whole field and each month provides 72 pages, profusely illustrated, of informative reading of vital interest to every amateur. The price is 2s., or 20s. by direct subscription for a year of twelve issues. Write the Circulation Manager, *Short Wave Magazine*, Ltd., 49 Victoria Street, London, S.W.1.

GUIDE TO BROADCASTING STATIONS

This is the fourth, and completely revised, edition of a most useful booklet for the SW BC station listener. In addition to nearly 300 European medium- and long-wave stations, no less than 1,100 of the world's SW broadcasters are listed in tabular form, both geographically and in order of frequency. Other data in *Guide to Broadcasting Stations* include the new international call signs to be brought into force in January next, world time constants, wavelength frequency conversion table, and details of European TV, FM and special service stations.

Guide to Broadcasting Stations, Fourth Edition, published by Iliffe & Sons, Ltd., Books Department, Dorset House, Stamford Street, London, S.E.1. price 1s. 1d. post free.

AMATEUR RADIO EXHIBITION

The Second Annual Amateur Radio Exhibition, sponsored by the Radio Society of Great Britain, will open at the Royal Hotel, Woburn Place, London, W.C.1., at 2.30 p.m. on Wednesday, November 17, closing at 9 p.m. on Saturday evening, November 20. A total of 27 firms will be exhibiting, and the Short Wave Magazine, Ltd. will be on Stand 5, where we hope to meet many of our readers. Admission to the Exhibition will be by catalogue, price 1s. at the door. A good show, of great interest to every amateur, is assured and nobody within reach of Londona duriaq the period November 17-20 should miss it.

NO MORE REPORTS, PSE!

VK3JE, of Cheltenham, Victoria, asks us to note that he does not require any further SWL reports for the time being.

The ideal Christmas present to get the full benefit of the information in the "S.W. Listener" is our famous Tested R1116 Standard 2-v Battery 8-valve, double "superhet" communication receiver, price £10 (collected), or plus £1 for case, delivery etc. Send 3d. for detailed leaflet of this 15-2500m set. Huge new bargain lists in preparation; are you on our mailing list? Also three-colour signal lights with screened 2ft lead and panel, ideal child's signals for railway, 3/9. Thousands of components in stock and television gear for callers.

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The VHF End

CC Converters for 145 mc—G. E. Magrow's New 58 mc Tropospheric Record : F8YZ, 457 miles—Individual Reports—Conditions

by A. A. MAWSE

WITH 145 mc still the main VHF topic we make no apology for starting these notes once again with some comments on receivers for that band. While still maintaining that a crystal-controlled converter is a luxury we realise that some people like luxuries, so a few ideas on that type of converter may not be amiss.

If crystal control is used for the converter oscillator then the tuning must be done on the main receiver. Thus, if crystal controlled oscillations on 140 mc are injected into the converter mixer, then the main Rx must be tuned from 5 to 6 mc to cover the 145 to 146 mc band. Unless a broad band RF-and-mixer circuit is used, it will of course be necessary to tune those stages in the converter too, but such tuning is not likely to be sharp enough to need any elaborate control. The 140 mc frequency can conveniently be obtained from a crystal on 8750 kc followed by doubler stages to multiply by 16. The first valve in the oscillator chain can act as a tritet, while a double triode (6J6 or similar) will provide two of the doublers in one envelope, thus making only 3 valves necessary. It may even be possible to quadruple in one stage and so reduce the number of valves to two. A word of warning is desirable here. Certain surplus "service" crystals are marked with frequencies of a high order, such as 70 mc, but this *may* be the frequency which was obtained from the crystal *after* a chain of multiplier stages—so do not take it for granted that you can get to 140 mc from a "70 mc" crystal and one doubler!

When using the CC converter, it is essential that the main Rx should be free of break-through in the band over which it is to be tuned, *i.e.* 5 to 6 mc in the case above. If your receiver will take in signals, even weak ones, with the aerial disconnected, you had better give up the idea of a CC converter. Make the test at a

time of day when the frequency you have chosen is most likely to produce loud and numerous signals, which would be after dark in the case of 5 to 6 mc. Additionally, an inadequately screened main receiver will produce a number of S9 *plus* carriers in the band when the converter is connected and switched on. This is due to harmonics of the main Rx oscillator entering the converter. Four or five of these may be found between 5 and 6 mc. Choice of a higher band for the main Rx tuning will result in less numerous signals of this type, but remember that you cannot shift your converter oscillator frequency; so, if a 2-metre signal comes in under one of these harmonics you can do nothing about it, except of course by improving the Rx screening.

If you can overcome all these snags, you will undoubtedly achieve a receiving set-up for 145 mc which will be a pleasure to operate. If a signal fades out you need not worry about drift; just leave the Rx alone and you can be confident that when the signal peaks up again your tuning will still be dead right. In addition, you can measure the frequencies of all transmissions against your crystal and so provide a useful service for the Tx people. If the mains volts go up or down, again you need not worry, your tuning won't alter, and you will really be able to tell the difference between the T9 and the nearby, but not quite, T9 signals. Further, you can put your hand inside the set and make adjustments and the signal will stay tuned in—but all these pleasures are dependent on the elimination of the troubles listed above, and that may not be so easy.

But, if you prefer, or are compelled, to use a tunable converter, then (as we have remarked in the past few months) a good and reasonably stable oscillator is obtainable at 140 mc without crystal control. A certain amount of drift during the warming-up period is probably inevitable, but after that initial period, provided the HT and LT volts remain steady, no drift of any consequence should be noticed. The listener is at an advantage here compared with the Tx man, who switches off his receiver while he is actually transmitting and so varies the valve temperatures.

Conditions

Conditions on all VHF bands during October were generally poor. It has been difficult to assess accurately how poor they were, due to the very low level of transmitter activity on both 5 and 2

metres. The bright spot of the month, at least on the south coast, was according to G. E. Magrow (Dawlish), a fine 5-metre tropospheric opening to France on October 23 and 24. He found conditions splendid on the Saturday night with F8GH (Glatigny) and F8YZ (Nancy—at 457 miles) outstanding signals. The condition lasted through the Sunday until about 1730 hours. At times the Frenchmen were good S9 signals. The complete list of F's heard by G. E. M. totals up to ten stations, many of them at excellent distances. At the same time G's were noticeably absent, except for the south coast stations and GC8OK of Guernsey. During the opening a narrow ridge of high pressure lay across SW England to France as far as the German border, and this was undoubtedly the cause of the excellent conditions. G. E. M.'s near neighbour, G3HW/A, worked F8YZ during the same period for a new British tropospheric record. The previous record was held by G2XC for a contact with PAØWL at 370 miles. Congratulations to G. E. M. on sharing with G3HW the distinction of receiving tropospheric signals at such a distance.

Six Metres

Readers will, no doubt, have learned with interest of the reception of Alexandra Palace in South Africa by ZS1P on October 23, and this serves to remind us that this is the season for long distance 50 mc (6-metre) work. A number of G stations have been permitted to work on 50-54 mc until the end of the year and are hoping for some transatlantic contacts during the next few weeks. Peak date last year was November 22, so things may be really good just as you are reading this. Best time of day for W's is afternoon, but there may be some choice eastern DX in the mornings. Those who have TV might note that if the afternoon transmission from A.P. is spoilt by a herring-bone pattern, it is probably due to signals from W-land and indicates a high MUF. A spot of listening then on 50 mc may bring some reward.

Individual Reports

P. Bagshaw (Sheffield) has got going on 145, and has logged G2IQ, G2MA and G3APY, all fairly local to him. He has a much modified R1147B with a rotating dipole in the roof. He suspects his Rx sensitivity, as it does not pick up car-ignition as well as does his 30 mc receiver. Our own experience is that car interference

is less on 2 than on 5 metres, but probably about the same as 10 metres. Peak frequency for car noise is generally taken to be around 45 mc. R. Rew (Birmingham) is under way with his 2-metre rig and is contemplating getting an ASB8 going on 70 cms. He has found five metres very quiet lately. G. E. Magrow has started on the "G2XC Converter" and is impatiently awaiting this issue for Part 2 of the article. M. Taylor (Tooting) has also found five metres rather devoid of signals, with the exception of G2AOL and G2BRR, active almost nightly; he has also heard G3HW/A at over 150 miles. M. T. is having some difficulty in locating the 2-metre band as his communications Rx only tunes the amateur bands and hence cannot be used in the method we outlined recently. Provided the demand is not too heavy we are willing to help out in cases of real difficulty by calibrating absorption wavemeters for you, but please write first before sending any apparatus and we will let you know what and when to send.

W. H. Pierce (Reigate Hill) says that his 2-metre calls heard list would be a repetition of last month's—we thought it a very good one, at that—and remarks that his only outstanding 145 mc DX this time has been G8WV (N. Bucks) and G8QX (Malvern); W. H. P. says that the most consistent 2-metre semi-DX signal with him is G2NM of Bosham, Sussex, G2AJ and G8KZ being the most powerful. Nothing worth recording has been heard on Reigate Hill from North or South-West on 145 mc, nor has anything noteworthy been found on 5 or 6 metres. So during this dull period W. H. P. has been busy getting a receiver ready for 420 mc!

W. A. Kane (Ballywalter, Co. Down) is a new correspondent, who has been active for some time on 58 mc with a rotary beam and a Type 26 converter; so far, he has only heard the locals. He was hoping to do better in the Contest.

VHF Listeners' Club

We should like to remind you that membership of the VHF Listeners' Club is open to those who will undertake to support and encourage all forms of VHF activity. An attractive certificate is now issued to every member, and anyone belonging to the VHF L.C. who has not yet received his is requested to inform us immediately. Club Circulars are sent out about once every two months, with extra items of news which we cannot

squeeze into these columns. The first circular was issued in October.

Achievement Tables

As there are not many alterations to the Counties Table we are holding it over until next month; but in order that we may then give both the Counties and Countries Tables with the latest positions will all those who wish to figure in them please let us have their latest scores in due time. Several correspondents who have appeared in these Tables have not written for some months and they will be dropped if we do not get a letter or card from them. Remember, you can enter the Counties Table with 10 counties heard on five metres, and the Countries with three.

Calls Heard

With only a few lists are to hand this month, they are being held out; but may we remind you that the calls should be set out *exactly* as they appear in these columns. Preferably, use the official *Short Wave Listener* Calls Heard forms, which can be obtained on request, and then set out the calls in alphabetical and numerical order. The country prefix (G, F and so on) is only given for the first call in the series, thus G2ZZ, 7XY, 9BF

and not G2ZZ, G7XY, G9BF. Also, do not try to squeeze in RST and mileage in the square with the call sign. The same applies to the date! Mileage can go at the head of each group of calls, and the period of reception at the end of the list. If you do keep to these simple rules the chances are your lists will get into print—which is what we want, too!

420 mc

A few transmitters are now operating in the band 420 to 460 mc, mainly around 435 mc. Amongst those known to be active are G2IQ, G3APY, G5BY, and G6LK. It is certain that reports will be appreciated by any of them, so let them (and us) know if you do hear them.

In Conclusion

We hope that we shall be getting a good SWL entry for the Contest, which will be over by the time you read this. Rules in full are on p.375 of the November issue. And send in an entry even if you think you did not do too well! It is never a disgrace to be bottom of the table. Closing date for Contest entries is November 22, and for next month's story is December 3; the address, as usual, is A. A. Mawse, *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

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Though stocks are about exhausted—the *DX Operating Manual* (all you want to know about hearing or working DX), price 2s. 8d. post free—the Great Circle Zone Map (full information on the geographical location of the Zones, with a prefix list for each, and much other useful information), in colours, price 6s. post free—*Principles of Short Wave Reception* (the beginners' guide, with practical articles on the construction of receivers), price 1s. 8d. post free—And annual subscriptions to the *Short Wave Magazine*, 20s., and the *Short Wave Listener*, 16s., a year of twelve issues.

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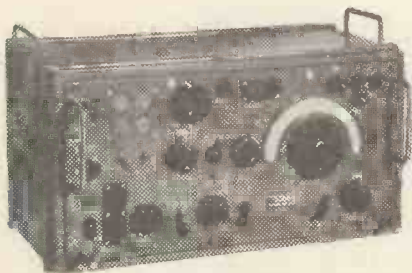
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Monthly Comment by R. H. GREENLAND, B.Sc.

DX broadcast

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

Once again Christmas is upon us, and we take this opportunity of wishing all our readers, both known and unknown, the compliments of the season—and may this Christmas holiday be filled with DX in abundance and plenty of new interest!

We heard recently from our old friend Miss Margaret Ballingall, correspondent of the British Far Eastern Broadcasting Service in Singapore; she will shortly be leaving for the United Kingdom and will be replaced by Mrs. Newbould. We wish both of them good fortune, Miss Ballingall in her retirement and Mrs. Newbould in her new venture. All reports for this service should be sent to: The Thomson Road Studios, P.O. Box 434, Singapore.

EUROPE

J. P. Burden (Portsmouth) reports reception of "The Forces Broadcasting Service, Cyprus," heard with a trumpet fanfare at 0300 on September 4 when signing on; the frequency is 7220 kc. During daylight hours reception is most difficult through interference from GWL. J. P. B. has now received an air-mail verification from Leslie A. W. Diamond, A.I.L. (GR), Chief Announcer, Forces Broadcasting Station, Lokatamia, Cyprus; it gives the following most instructive information: As from September 27, the station changed to the following

schedule: 0330-0530; 0830-2000 (Sundays: 0330-2000). There is no official call sign, the power is just under 1 kW and the aerial is a half-wave dipole. The morning transmission closes with "London Bridge" and the evening one with the "Goodnight Waltz." Thank you, J. P. B. ! The writer logged this station when it was signing on at 0330 on October 26. A lady made the opening announcement: "This is your Forces Broadcasting Service, Cyprus." The wave-length was quoted as 41.55 m. (7220 kc), and there followed the feature "Musical Clock" before the News from London at 0400. The signal strength was found to be 18 dB over S9!

Dr. T. B. Williamson (Harpden) has logged Radio Luxembourg on a measured frequency of 5858 kc in the early evenings, and the writer, too, has heard it on the same channel, but agrees with T. B. W. that it does not seem to be a fundamental transmission. T. B. W.'s researches show that the channel does not correspond to any harmonic nor to interaction with the receiver IF stage. The frequency does correspond however, to the difference between the long-wave and short-wave frequencies! T. B. W. queries: "Is this a

case of the old Luxembourg effect?" R. Patrick (Newcastle-upon-Tyne) has had a letter from Radio Luxembourg's London office, informing him that as from October 15, the short-wave transmission on 6090 kc has been beamed on the British Isles (this for a short experimental period) and reports will be welcome. They can be sent direct to the station or to: Frank Lee, Radio Luxembourg London Office, 36 Davies Street, London, W.1.

Thanks to the Swedish DX'ers, we learn that the Forces Broadcasting Station, Middle East H.Q., has completed its move from Palestine to Malta, and will be back on the air again soon with its 7.5 kW transmitter beamed to cover Cyprus, Suez Canal Zone, Cyrenaica and Tripolitania. We wonder if this one has any relationship with the Cyprus organisation?

W. F. Kehler (Husum Nordsee, Schleswig-Holstein) has given us the exact frequencies of the German short-wave outlets, most of which relay their

All times given in this article are GMT except where stated

corresponding medium-wave station programmes. They are tabulated elsewhere. Dr. Williamson tells us that KJOY, Athens, is a new one on 8020 kc, heard only on Fridays, 1830-1930, with a typical American programme for U.S. Forces in that area.

AUSTRALASIA

Radio Australia has changed to the new summer schedule. New frequencies for the British Isles are: VLC9, 17840 kc (0700-0745); VLA11, 9580 kc (0700-0815); VLC9, 17840 kc (2000-2155). D. Lucy (East Barnet, Herts) asks for the location of VLSA; we think he means VLA5, which is situated at Shepparton, Victoria. However, send your reports to: Radio Australia, 475 Collins Street, Melbourne, C.I.

Radio Australia now has daily transmissions in German from 1700 to 1830 daily over VLC8, 7240 kc; VLB2, 9650 kc; and VLA8, 11760 kc. "English by Radio" in this Service is given on Tuesdays and Thursdays.

R. Patrick says that the evening transmission in English over VLB2, 9630 kc, at 2100 has been received at S9 most days; every Sunday at 2100 there is the Overseas Listeners' Mailbag programme which, says R. P., is most interesting.

AFRICA

Arne Skogg (Stockholm) informs us that in British East Africa there is a new broadcasting station at Mombasa, operated by the Forces Broadcasting Service. The announced frequency is 7220 kc, but it has been measured as 7190 kc. Transmissions appear to be: (1) 0359-0500; (2) 1500-1900, the latter signing off with the "Goodnight Melody." From the same source we

learn that Egypt has a new transmitter on 6210 kc from 1930. The direction at 2000 is: "Hona Iskanderiyah," indicating that either the transmitter is located at Alexandria or the programme emanates from that city. J. P. Burden mentions that Rabat's 9080 kc outlet has been replaced by transmissions on 6005 kc, on which it may be heard at S9 until after 2300. J. P. B. gives the following two low-frequency outlets for Radio Mozambique at Lourenco Marques around 1800: (1) CR7BV, 4822 kc (sometimes 4830 kc)—the writer measured it as 4825 kc—Portuguese programmes only. (2) CR7BU, 4932 kc—English programmes 1700-1800.

Dr. Williamson has heard FIA, Douala, French Cameroons, on 9150 kc with French news at 1900, and on 11765 kc with talk in French and musical recordings, 1530-1550. He still receives Johannesburg, 4800 kc, with a religious service at 1800 on Sundays, and Pietermaritzburg, 4876 kc, with an Afrikaans programme at 1815. E. Strangeway (Malton) logged Johannesburg III, 4895 kc, between 1700 and 1735 recently, and heard News in English followed by a weather forecast, then a programme in Afrikaans, with a clear station direction at 1730.

In Angola there is a new radio station operated by the Radio Club de Bie at Silva Porto. Using the 7550 kc channel, it is on the air from 1700 to 1800. R. Patrick logged the Radio Club de Benguela, 8090 kc, with an S7-8 signal at 2200; male and female announcers were employed. R. Iball (Langold) says that OTC2, 9767 kc, run a DX programme every Wednesday at 1930, and that on the

first Wednesday of each month they give a worthwhile propagation (radio conditions) forecast.

W. A. Rowston (Grimsby) is the lucky possessor of a verification from the Press Department of the Imperial Ethiopian Government. The English programme schedule of Radio Addis Ababa is given elsewhere with amended times; their letter says: 6.45-7.30 p.m. daily, which appears to be the local time. Can anyone confirm this? Reception on their present frequency of 9620 kc at this time is very difficult! At Ponta Delgada in the Azores, CSX has reverted to its winter schedule, which is: 2000-2100 (11090 kc); 2200-2400 (4845 kc). Dr. Williamson heard the Cape Verde Islands on a measured frequency of 5912 kc from 2100 until 2200 when it closed. Only twice was the direction given: "Radio Club do Praia, Emissora CR4AA." An interval signal of guitar music is given every fifteen minutes.

ASIA

Korea—HLKA has put in a surprising S9 signal on 7933 kc on occasions during October. On the 5th the pre-opening Oriental tune was heard, followed by a march or national air. A time-signal of three short and one long shrill blast marked the hour at 2100, then came the call: "KBC—(a gong sounding the musical notes *doh, m², soh*)—HLKA, Seoul, Korea." The musical items which followed included a Schubert pot-pourri, and the next evening there was an English lesson for Korean listeners. C. J. Fern (Hawaii) tells us that the new Oriental station on 7780 kc is a North Korean transmitter located at Pingyang; the daily schedule



General view of the Canadian Broadcasting Corporation's International Service transmitter hall at Sackville, New Brunswick. The transmitters themselves are ranged round the walls on the upper level and are controlled from the operating console in the foreground.

is : 2055-2300 ; 0255-0430 ; 0755-1400 ; and irregularly, 1400-1600.

The writer has heard this one regularly when it opens up at 2055 ; three ascending vibraphone notes precede the station call in Korean given at 2100 and 2200, and "Ave Maria" has been one of the musical items noted.

China—XMPA, Nanking, 12220 kc, which belongs to the Chinese Army Radio Service, has been quite well received here in the afternoons around 1400.

On October 26, musical items were heard 1330-1345, when the call-letters were given, then came a Sousa march and News in Chinese read by a woman.

At 1400, after a fanfare, a News in English from the Central Broadcasting Administration was read, first the headlines, then the details. News in Mandarin at dictation speed came at 1445, and before the Chinese National Anthem at the close at 1500, the call-letters were repeated and

the gong notes *soh, doh, me* preceded the final direction.

Dr. T. B. Williamson gives XGSW, Nanking, now on 17760 kc from 1230 to 1400, and XGIO is the official station of the Ministry of Information on 8430 kc from 1200 to 1300 and 1500 to 1600. XNAR on 7098 kc operates daily 1100-1500, and prior to the English News at 1300 announces : "This is the new Chinese station in the Middle Interior on 42 metres, 7100 kc." After the

TABULATED SCHEDULES

I. Radio New Zealand, Wellington. Short Wave Division of the New Zealand Broadcasting Service.

Stations : ZL3, 11780 kc. ZL4, 15280 kc

Daily Schedule : 0700-0900.

Typical Programme :

0657 Call of Kiwi, followed by Anthem and Station Announcements.
0701 Musical Comedy Theatre.
0730 Play.
0745 Farm Topics.
0800 Voices in Harmony.
0830 New Zealand News.
0835 Evening Stars.
0900 Close Down.

II. Radio Addis Ababa. Voice of The Press Department, Imperial Ethiopian Government. Postal Address : Radio Addis Ababa, 83 Patriots Road, Addis Ababa, Ethiopia.

Frequency 9620 kc.

Daily Schedule : Broadcast in Amharic — 1100-1145.
Broadcast in Arabic — 1445-1545.
Broadcast in English — 1545-81630.

English Programme :

1545-1630 Monday : Light Music and Religious Feature.
Tuesday : Oratorio.
Wednesday : Song and Dance Music presented by Roy Starbuck.
Thursday : Reading from English Literature.
Friday : Violin Concerto.
Saturday : Music from U.S.A. Records, News by Dave Talbot.
Sunday : Hymns You Love to Hear. Gospel Half-Hour (1600-1630) by the Missionary Community in Addis Ababa.

III. Commercial Short Wave Broadcasting Stations in Manila, Philippine Islands.

KZMB	6000 kc.	2100-1600	Manila Broadcasting Company.
KZRH	9640 kc.	2058-1600	Manila Broadcasting Company.
KZFI	9502 kc.	2129-1605	Philippine Broadcasting Company.
KZOK	9695 kc.	2129-1705	Philippine Broadcasting Company.
KZFM	6170 kc.	2100-1600	Philippine Government.
KZFM	9620 kc.	2100-1600	Philippine Government.
KZFM	11840 kc.	2100-1600	Philippine Government.

IV. German Short Wave Broadcasting Stations.

6080 kc.	85 kW	Munich III.	0400-1600 ; 1600-2200 ; 2200-2300	Daily
6160 kc.	1 kW	Radio Munchen (Munich)	0500-2400	Sats. and Suns.
			0500-1315 ; 1430-2400	Mon to Fri.
6180 kc.	10 kW	Radio Stuttgart	0900-2300	Sats. and Suns.
			0900-1400 ; 1500-2300	Mon. to Fri.
6190 kc.	1 kW	Radio Frankfurt	0530-2305	Sats. and Suns.
			0500-0845 ; 1015-1415 ; 1500-2305	Mon. to Fri.
			1500-2400	Tues. and Thurs.
6321 kc.	1 kW	Sudwestfunk, Baden-Baden	0500-2315	Sundays.
			0500-0750 ; 1045-0100	Saturdays.
			0500-0750 ; 1045-1330 ; 1600-2305	Mon. to Fri.
7250 kc.	85 kW	Munich IV	1600-2200	Daily.
7290 kc.	25 kW	Nordwestdeutscher Rundfunk, Hamburg	0500-2330	Sundays.
			0500-0100	Saturdays.
			0500-0900 ; 0930-2330	Mon. to Fri.
7615 kc.	100 kW	Russian Armed Forces Station "Volga" in Berlin.	0500-2300	Daily.
9730 kc.	12 kW	Mitteldeutscher Rundfunk, Leipzig (Russian Zone).	0500-2400	Sundays.
			0400-0900 ; 1100-0200	Saturdays.
			0400-0900 ; 1100-2315	Mon. to Fri.
11870 kc	85 kW	Munich I.	1600-2200	Daily.

news at 1310 the direction is: "This is the new Chinese station in Liberated Manchuria."

C. J. Fern (Kauai, Hawaii) informs us that the Pakistan experimental transmitter on 6062 kc is heard only weakly in Hawaii around 1500; the full schedule is: 0200-0400; 0700-0830; 1200-1730, with English news at 0230, 0800 and 1530.

India—J. C. Catch (South Shields) has received a letter from station VU7MC, Akash-Vani, Mysore, in which they state that VU7MC now operates on 6026 kc during the following periods: 0130-0340; 0830-0940; 1200-1640. VUB2, Bombay, 4880 kc, was excellent at 1615 on October 23 with a talk on Films, according to E. Strangeway. Two days previous, VUM2, Madras, 4920 kc, was also good when the writer heard a talk in English on the opportunities for research in the universities of the North American Continent. Dr. T. B. Williamson has heard VUD2 at the same time on 4960 kc and mentions that ZOH, Colombo, 4900 kc, closes at 1700 with the rapid announcement: "You have been listening to Colombo, Ceylon. The time is now 10.30 p.m. and we are closing down till 6.30 tomorrow morning." P. A. Finn (Iver, Bucks) informs us that daily test transmissions are now being made by All-India Radio, Frequencies are 15130 kc, 11760 kc, 9680 kc, and 9565 kc, and the time 1900-2000; the address for reports is: A.I.R. External Service, Broadcasting House, New Delhi, India. Dr. Williamson heard Hyderabad, VUV, on 6210 kc with Oriental music at 1710 recently.

R. G. York (West Croydon) on a Sunday afternoon logged signals from Singapore on the four frequencies, 15300 kc, 6770 kc, 11760 kc and 9690 kc. The 25-metre band channel has now been changed to 11850 kc.

J. P. Burden has logged Radio Saigon, Indo-China, 11780 kc, signing on at 2300 with the *Marseillaise*, and followed by light music, a programme summary at 2315 and a News bulletin (all in French) at 2318. Signal strength has peaked at S9 around 2320!

The writer has heard Col-Yisrael, Tel-Aviv, Palestine, on an adjusted frequency of 6817 kc, giving the English News at a new time, namely 1915. This was on October 14, and the reader was a woman.

On October 10, EPB, Teheran, Iran, 15100 kc, was a good signal when, at 1845, an interesting English talk on the town of Shustar and its associations with Omar and Tamerlaine was heard. In Iraq, Baghdad No. 1, 7092 kc, signs on at 0330, when you will probably hear weird Oriental music: Baghdad No. 2 7062 kc, is heard here usually around 1630 with news in Kurdish. With reference to ZNP18, Amman, Transjordan, 19210 kc, R. G. York logged it on October 16 at 1430 with a test transmission. During that particular broadcast they thanked R. Iball (Langold, Notts) for his recent reception report! Well done, R. I.!

LATIN AMERICA

Brazil—Without a doubt, Station PYN7, Fortaleza, on 15165 kc has been the star turn here. An international programme, so-called, is broadcast Mondays to Fridays between 1900 and 2100, and various

languages are used, including English. Popular Brazilian dance tunes, including the carioca and tango, are a feature, and the promoters particularly ask for reports and suggestions for future programmes. The full address is: Ceara Radio Club, P.O. Box 222, Fortaleza, Ceara, Brazil. (All letters to foreign countries require a 3d. stamp.) PYN7 has been reported on by F. H. Weston (Little Hadham, Herts), W. A. Rowston and R. G. York.

At the same time you may spot LRU (reported by some as LRX), Buenos Aires, Argentina, with the direction: "Ellay Erray Oo" at 2030. Both Dr. Williamson and R. Iball also mention this one. The former says that it closes at 2105 with impressive chimes and the announcement: "Radio El Mundo, Estacion onda corta LRU en 15290 kc." The latter mentions ZPA5, 11945 kc, with direction: "Radio Encarnacion" at 2200. It appeared to be relaying LRA3, Radio Belgrano Argentina, not an unusual practice.

We are indebted to J. G. Cottrell (London, E.C.3), radio officer of *s.s. Laban Howes*, who has visited Manaos, which we wrongly reported in our September number to be at the mouth of the Amazon. We should have remembered that it is a river port actually 950 miles up river, on the Rio Negro, a tributary of the Amazon. The broadcasting station at Manaos is PRF6, 4895 kc.

Ecuador—Dr. Williamson has unearthed yet another Ecuadorean in HC1GQ on 9190 kc, using the slogan: "Radio Nariz del Diablo," and my own mail-bag contains a letter from the Director of HCJB, stating

that test transmissions in English are now being carried out every Thursday, 2000-2100, on a frequency of 17890 kc. Other languages are used on Tuesdays, Wednesdays and Fridays at the same time. Senders of reports on these transmissions are promised a souvenir, in the form of an Ecuadorean harmonica, for their pains!!

Colombia—J. P. Burden tells us that the new "Emisora Nueva Mundo" in Bogota has two short-wave outlets; they are HJKF, 9520 kc, and HJKB, 6000 kc. J.P.B. reports that signal strengths peak to S9 between 0001 and 0345, and that on one occasion an excellent recording of Beethoven's Pastoral Symphony by the New York Philharmonic Orchestra was heard. Dr. Williamson remarks that HJKJ, Bogota, has replaced HJCD on 6160 kc, and that HJAR, Manizales, 4935 kc, is well heard with Latin rhythm at 0530.

Venezuela—Here we have a new one, according to J. P. Burden. It is YV5RE on 5060 kc, reported to be the most powerful of all Venezuelan signals, with signal strength S9 plus from 2300 onwards. The slogan is: "Radio Cultura, YV5RC, mil cien kilociclos y YV5RE, mil sesenta kilociclos." T. B. W. thinks this is the former YV5RD, Caracas, the Radio Cultura station on 3570 kc. J. P. B. also hears YV6RK, La Voz del Tigre, on 3330 kc, with a Spanish news bulletin at 0115.

Central America—YSLK is a new San Salvador broadcaster on 9540 kc, and a very good signal it is, according to C. J. Fern. The announced schedule is: 1400-1500; 1700-2000; 2300-0500. He also reports CE776, Santiago, Chile,

another new one on 7655 kc, signing off at 0600.

On October 8, from 0330 to 0400, HRA, Tegucigalpa, 5940 kc, presented a relay from the "BBC de Londres." R. Iball, at the same time of day has heard HOLA, Colon, Panama, 9505 kc, with a musical request programme in which they say: "Phone 1044 and if we have it, we'll play it." The direction at 0400 is clear enough: "Radio Atlantica HOL and HOLA, located at Colon, Republic of Panama. This programme is heard Monday through Saturday, 10 to 11; your announcer, Lucky Jordan. We close till 7 o'clock tomorrow morning."

WEST INDIES

Jamaica — According to J. P. Burden, all old outlets of ZQI have now been replaced by a new channel of 6070 kc. The daily schedule is: 2100-2230 and 0030-0300. (\$9 after 0130.)

Trinidad—R. Patrick heard Radio Trinidad, 9625 kc, at 2345, broadcasting racing news from England. On October 2 at 2245 it was giving a feature entitled: "Radio Magazine."

Cuba and Porto Rico—Dr. Williamson gives COBA, Havana, as a new station operating on 9965 kc, and he has logged an unidentified signal on 4785 kc at 0605. The latter frequency is that used by the new Puerto Rico transmitter.

NORTH AMERICA

Canada—J. P. Burden says that CBFO, 9630 kc, has replaced CBLX, 15090 kc, from 0001 to 0400; the latter now closes at 2345,



This is a fine photograph of K2UN, the United Nations Amateur Radio Club Station at Lake Success, New York. The equipment is all controlled from the operating console in the foreground. 1st left, the Tx control panel; 2nd left, the panoramic adaptor, which enables the operator to see on its 3-in. screen signals from stations 100 kc either side of the station being worked; next, the National HRO7 receiver; on the extreme right is the beam direction indicator. Behind the console are the K2UN transmitters—one to cover 3-5 and 7 mc, and the other for 14 and 28 mc. The aerial system for the HF communication bands is a rotary beam array which can put a signal all round the world.

whilst the former is paralleled by CBFW, 6090 kc. Incidentally, on October 10, the writer heard a religious service from a church in Montreal over CBLX from 1600 to 1700.

Newfoundland—R. G. York logged VONH, Saint Johns, 5970 kc, with a Lever Brothers sponsored programme at 2300 on Oct. 1.

United States—Don Connery, of the World Wide Broadcasting Foundation, is now presenting every Monday to Friday, 2030-2045, a feature entitled: "America and You," over 17755 kc, 15350 kc and 11740 kc. It should be enjoyable! Have you heard

WRUX, Boston, on 25600 kc at 1740? Signals are excellent.

E. Strangeway asks for the postal address of "The Voice of America" station in Manila, Philippine Islands. We suggest you send reports to: Listener Relations Branch, O.I.C., 250 West 57th Street, New York 19, N.Y., U.S.A.—but we cannot guarantee that you will get a verification.

And so, until next month. The date line for all correspondence for that number is November 26. Address all letters to: R. H. Greenland, *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

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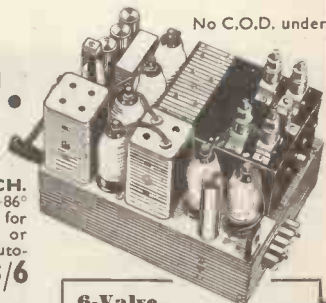
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SHORT WAVE BROADCAST STATIONS

Revision 44-51-49-67 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 these sections being given in full every month. Such revision is necessary due to constant changes of frequency, callsign and operating schedules. All stations appearing in our lists are normally receivable in this country and are under regular observation.

Fre- quency	Wave Length	Callsign	Location	Fre- quency	Wave- Length	Callsign	Location
6740	44-51	HJ3C	La Romana	6158	48-78	OAX1A	Chiclayo.
6715	44-68	OAX1A	Chiclayo.	6155	58-74	EQB	Teheran.
6710	44-71	OAX4G	Lima.			CS2WD	Lisbon.
6670	44-97	TGBC	Mazantenango				Vienna.
6660	45-05	TGZA	Zacapa.	6153	48-75	TIRH	San Jose.
			Soerakarta, Java.	6152	48-76	CE615	Santiago, Chile.
6635	45-21	HC2RL	Guayaquil.	6150	48-78	YSPB	San Salvador.
6630	45-25	HIT	Trujillo.			CKRO	Winnipeg.
6620	45-32	TG2	Guatemala City.			YV1RG	Cabimas.
6540	45-87	YNBH	Managua.			VLR2	Lyndhurst.
6500	46-15		Haifa, Palestine.			GRW	Daventry.
6498	46-17		Prichtina.				Belgrade.
6496	46-18	OBX4B	Cerro de Pasco.	6145	48-82	HJDE	Medellin.
6470	46-37	XGNC	Chin-Cha-Chi	6140	48-86	XGOY	Chungking.
6464	46-41	YNZZ	Managua.			HOQZ	Panama City.
6450	46-51	COHI	Santa Clara.				Moscow.
6440	46-58	TGWB	Guatemala City.	6135	48-90		Singapore.
6433	46-55	HI1R	San Cristobal.	6130	48-94	RW96	Moscow.
6405	46-84	TGQA	Quezaltenango.			KZBU	Cebu City, P.I.
6395	46-91	XPRA	Kunming.			COCD	Havana.
6390	46-95	HI9B	Santiago, D.R.			HS8PD	Bangkok.
6385	46-99		Managua.			CHNX	Halifax, N.S.
6374	47-07	CS2MA	Lisbon.	6125	48-98	GWA	Daventry.
6351	47-23	HRP1	San Pedro Sula.	6122	49-00	HP5H	Panama City.
6350	47-24	OAX4H	Lima.	6120	49-02	OIX1	Helsingfors.
6345	47-28	HE1Z	Schwarzenburg.			LRX1	Buenos Aires.
6335	47-36	TGTA	Guatemala City.			KNBI	San Francisco.
6333	47-37	OAX6E	Arequipa.			XEUZ	Mexico City.
6325	47-43	COCW	Havana.				Salisbury, S.R.
		TGNA	Guatemala City.	6115	49-06	HI1Z	Trujillo.
6321	47-46		Baden-Baden.				Hamburg.
6295	47-66	OTM2	Leopoldville.	6110	49-10	GSL	Daventry.
		TGLA	Refalulou.			VUD3	Delhi
6280	47-77		Korce, Albania.				Moscow.
6276	47-80	ZPA1	Asuncion.	6105	49-14	ZYN6	Fortaleza, Brazil.
6272	47-83	YSR	San Salvador			WLKS	Kure, Japan.
6255	47-96	TGRA	Guatemala City.			HJFK	Percira.
6250	48-00	YSUA	San Salvador.			TGOA	Tabriz, Iran
		CE625	Santiago, Chile.	6100	49-18		Guatemala City.
6240	48-08	HJCF	Bogota				Belgrade.
6235	48-12	HRD2	La Celba.	6095	49-22	ZRJ	Johannesburg.
6230	48-15	TGJA	Guatemala City.			ZYB7	Sao Paulo.
6225	48-19	HJFB	Manizales.	6090	49-26	CBFW	Montreal.
6220	48-23	CE622	Santiago, Chile.			ZNS2	Nassau, Bahamas.
		OAX4M	Minaflores.			XRRR	Peip'ng.
6215	48-25		Warsaw.				Luxembourg.
6210	48-31	ZRB	Pretoria.				Moscow.
		HC1AC	Quito.	6085	49-30		Rome.
6204	48-36	YV6RD	Bollvar.	6080	49-34	WLWSI	Cincinnati
6200	48-39	HJCT	Bogota.	6077	49-36	HIIG	Trujillo.
			Paris.	6075	49-38	CXA3	Montevideo.
			Tangier.			SEAC	Colombo.
6197	48-41	OAX1B	Piura.	6070	49-42	CFRX	Toronto.
6190	48-47	HVJ	Vatican City.	6067	49-44	EA9AH	Tetuan.
6188	48-48	TGX1	Guatemala City	6065	49-46	SBO	Motala.
6185	48-53	LLI	Frederikstad.			LR51	Buenos Aires.
		XECC	Puebla.	6060	49-50	XGOA	Nanking.
6180	48-54	GRO	Daventry.			KNBA	San Francisco.
		LRM	Mendoza.			FIQA	Tananarivo.
			Stuttgart.			HORT	Panama City
			Puerto Plata.				Moscow.
6175	48-58	HI9T	Mexico City.	6055	49-55	CXA14	Colonla.
		XEXA	Panama City.	6054	49-56	HJFA	Percira.
6170	48-62	CXA21	Montevideo.	6050	49-59	GSA	Daventry.
		KCBA	Los Angeles.			OAX6A	Arequipa.
		ZJM5	Limassol, Cyprus.			HI1N	Trujillo.
6165	48-66	GWK	Daventry.				Moscow.
		HER3	Schwarzenburg.	6045	49-63	XETW	Tampico.
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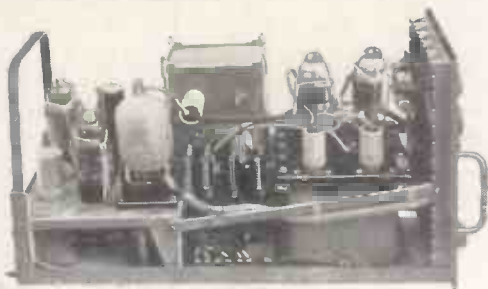
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