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The SHORT WAVE LISTENER AND TELEVISION REVIEW

DEVOTED TO
SHORT WAVE RADIO RECEPTION
AND AMATEUR TELEVISION

AUGUST 1950
VOLUME 4 · NUMBER 9

THE SHORT WAVE LISTENER
AND TELEVISION REVIEW

VOLUME 4 | AUGUST 1950 | NUMBER 45

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AUGUST 1950

EDITORIAL

Explanation

With this issue, the cover price of the *Short Wave Listener & Television Review* becomes 1s. 6d.

As most readers will readily appreciate, this step has been forced on us by increased production costs—so much so, that during the last two years the rate of this increase has been such that each issue now costs us nearly twice as much as it did when the *Short Wave Listener* was launched in the November of 1946.

At the same time, it is a fair claim that as a magazine the *Short Wave Listener* has been progressively improved and widened in its scope ; so that under present conditions and having regard to the scale of contents in each issue, we feel that readers will agree that they get good value for money.

Price increases are always distasteful, but the fact is that they are symptomatic of the times in which we live. There is a vast re-orientation of prices and values going on just now which affects us all directly or indirectly. So far as *Short Wave Listener & Television Review* is concerned, the choice for us is to operate on a narrow margin of profit—and a narrow margin is all we have ever expected —or not at all. If rising costs eliminate this margin, then clearly the effort that goes into the production of each issue is no longer worth while.

We therefore feel that the present very small increase is both reasonable and justified—and we would also emphasise that the change in cover price does *not* affect the direct subscriber rate of 16s. for a year of twelve issues, nor the BSWL subscription at 17s. 6d. This means that a large proportion of our regular readers are not touched by the increase at all.

Modification Details for the BC-348

RANGE EXTENSION, CONVERTER FOR TEN-METRE OPERATION, ALIGNMENT DETAILS, SERVICING DATA, VOLTAGE/CURRENT TABLES

PART III

By **W. A. SPARKS (G3DGT)**

(This concludes the detailed modification treatment of the popular and well-known surplus receiver Type BC-348. The June and July issues covered provision of an AC power supply, modifications to the IF section, improvements to the audio end, some possible S-meter connections, and the addition of a noise limiter. The information given in this series of articles is probably the most complete yet to have appeared in print, on its conversion to amateur band operation, for any war-time receiver.—Editor.)

A POPULAR method of extending the range of a communications receiver is by the use of a broad-band converter in which the tuning is done on the main receiver. Once the primary adjustments to the converter section are completed it only remains to be switched in and out as and when required. Such a unit could be built for the ten-metre band and a circuit is shown at Fig. 11, together with component values.

The chassis is so designed as to fit the dynamotor mounting studs on the rear of the 348 receiver. However, the converter can be operated as a separate item with no reduction in performance.

One section only of a 6J6 is used as a grounded-grid RF amplifier and a 6J6 is also employed as a combined mixer-oscillator. Due to the low value of cathode resistance required for the 6J6, care must be taken in obtaining a correct match. The circuit given permits the matching of a wide range of impedances and offers little reduction in

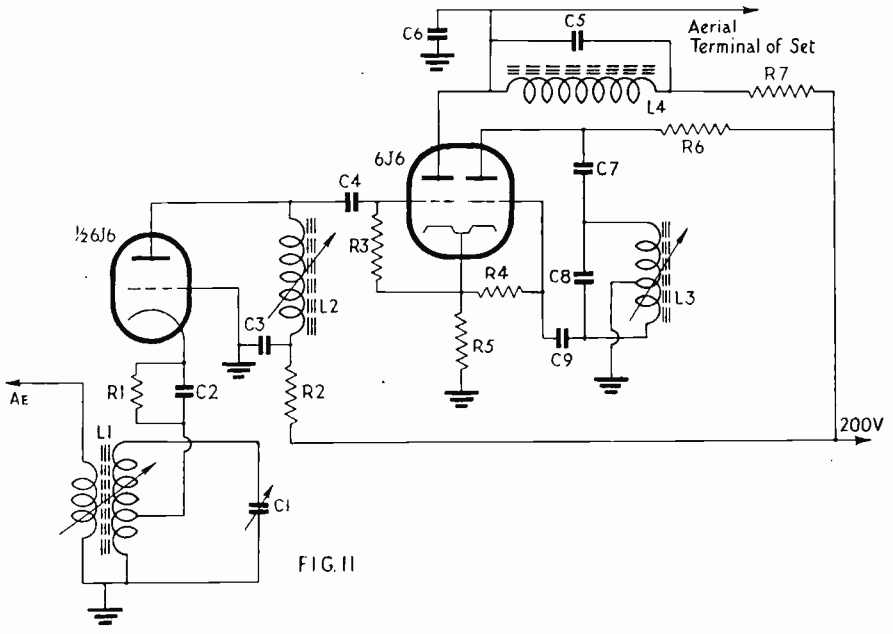


Fig. 11. Circuit for a ten-metre converter for use with the BC-348. Full details are given in the text and a table of values, with coil data, appears on the next page.

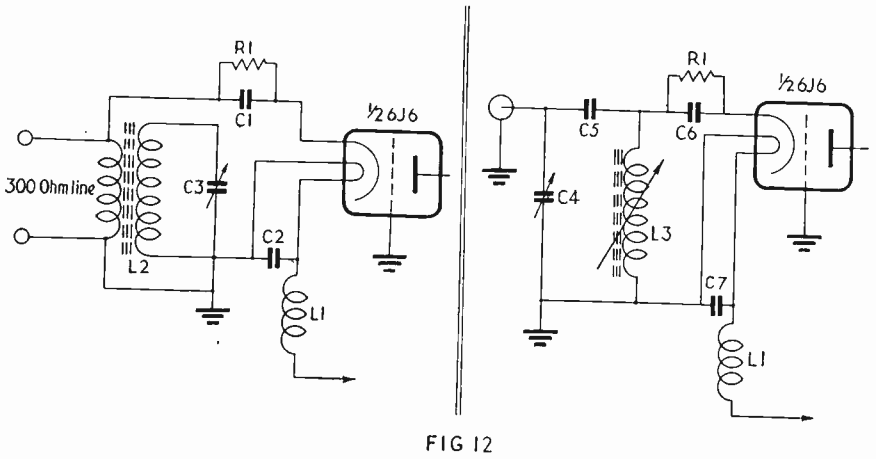


FIG 12

Fig. 12. Alternative input circuit arrangement for the 10-metre converter.

gain over a band-width of approximately three megacycles. The mixer circuit is quite conventional and follows the lines of others discussed by various writers in the *Short Wave Magazine*. The oscillator for the 10-metre convertor is on approximately 22 mc and permits this band to be covered on Range 4 of the 348, from 6-8 mc. Careful screening of the output must be ensured and it is advisable to fit a cover over the aerial terminal of the Rx in order to avoid, when tuning around 29 mc, picking up G3??? who is on 40-metre CW a few doors away. If the exact frequency range is required to be known, the oscillator can be put on to 20 mc and tuning of the receiver will then give the IF as from 8 mc to 9·5 mc—or by putting a " mental 2 " in front of the dial reading, direct calibration can be obtained. This avoids the 40-metre QRM, but does *not* mean that input screening can be dispensed with. In the case of the 20 mc oscillator, tune the output or IF coil to approximately 8·5 mc for most uniform response over the band. If the 22 mc oscillator is used, tune the output coil to 6·5 mc. If the reader is interested in CW reception on 10 metres the best course then is to tune the output coil to the CW end of the band, although only a slight gain in sensitivity will be obtained. The use of this type of converter with a 348 gives the equal in performance to many commercial sets specially designed to cover Ten.

Objections may be raised due to the possibility of beats between the receiver's own local oscillator and the converter, which may give rise to strong interfering signals. This is

TABLE OF VALUES

Fig. 11. Ten-Metre Converter for BC-348

C1	= 5 μμF, ceramic
C2	= 500 μμF, ceramic
C3, C6, C7	= ·002 μF, mica
C4, C9	= 50 μμF, mica
C5	= 15 μμF, mica
C8	= 100 μμF, zero temp. coeff.
R1	= 47 ohms, ½-watt
R2	= 4,700 ohms, ½-watt
R3	= 100,000 ohms, ½-watt
R4	= 47,000 ohms, ½-watt
R5	= 200 ohms, 1-watt
R6	= 1,000 ohms, 2-watt

(For Coils see accompanying Table)

TABLE OF VALUES

Fig. 12. Alternative Input Circuit for Converter

C1, C6	= 500 μμF, mica
C2, C7	= 300 μμF, mica
C3	= 25 μμF, air padder
C4	= 50 μμF, air padder
C5	= 25 μμF, mica
R1	= 100 ohms, ½-watt
L1	= VHF choke
L2	= 28 turns 28 SWG, ⅜-in. diam. slug tuned former, 3-turn coupling coil.
L3	= 6 turns 22 SWG, ⅜-in. diam. slug tuned former

COIL TABLE

TEN-METRE CONVERTER

L1	12 turns No. 24 enamelled, tapped 2 turns from earth end for cathode. 3 turn link, PVC 20 SWG, at earth end
L2	16 turns No. 24 enamelled, closewound
L3	7 turns. No. 16 Bare. Spaced 1 in., Tapped 2 turns from earth end
L4	30 turns No. 28 enamelled, with 5 turn link

All on ⅜-in. dia. slug-tuned formers

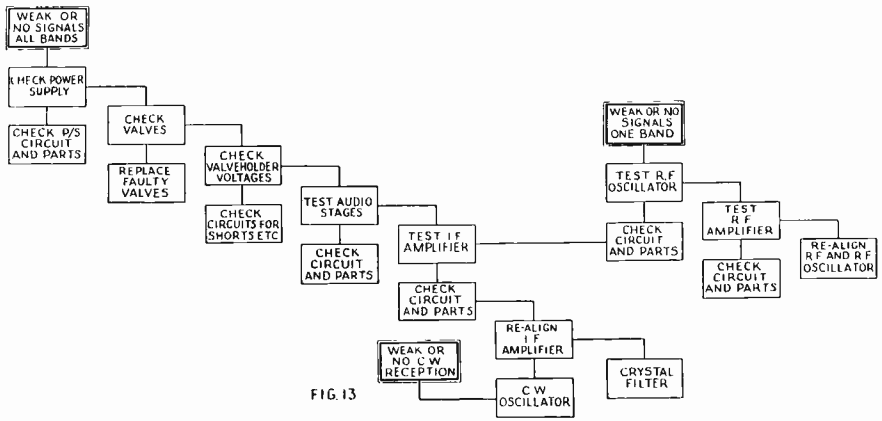


Fig. 13. Block schematic showing complete fault tracing sequence for a BC-348.

only likely to be noticed if the converter is mounted in the same cabinet as the receiver and, if possible, the converter should be mounted in a case of its own, properly earthed.

The suggested input circuit is similar to the famous "R9-er" and the adjustment required closely follows that given by *QST*. Preliminary checks consist of making sure that the oscillator is perking on the frequency chosen; then, with the oscillator working, the slug coil L4 is varied until a maximum in output noise level is obtained on the BC-348 output. L2 is then peaked for maximum noise and the aerial is connected to the input plug on the converter. All the slugs are then retuned for maximum noise, the receiver having been set at that point which has been previously decided as representing 29 mc. The receiver should then be tuned over the whole band and checked for variation in noise level over the band. Stability should be checked by listening to a CW signal of known stability and noting any change in tone. It may be found necessary to introduce a voltage stabilised circuit across the power line (VR150 and VR105 in series), but this is not general.

An alternative input circuit is shown (Fig. 12), and this may prove more satisfactory when using a co-ax feed line; the input impedance on 10 metres may vary from 70 ohms up to about 500 ohms without necessitating any "frigging" with the input, but if a low impedance input is desirable on the HF bands, the alternative circuit is recommended.

SERVICING DETAILS

Fig. 13 shows the suggested method of trouble location in chart form. This is similar to the information already available in the operating handbook for the sets. Table 1 shows the approximate voltages and currents which should be read at the various valveholders. Table 2 gives the similar values with the BFO on. The variations are due to the loading of the screen supply by the BFO circuit.

TABLE 1
(BFO OFF)

STAGE	VALVE	ANODE VOLTS	SCREEN VOLTS	CATHODE VOLTS	HEATER VOLTS	ANODE CURRENT	SCREEN CURRENT
1st RF	6K7	184	70	2·6	6·3	4·1	1·0
2nd RF	6K7	186	86	3·2	6·3	4·8	1·3
MIXER	6J7	215	96	4·8	6·3	0·23	0·08
OSC	6C5	58	—	—	6·3	2·0	—
1st IF	6K7	202	82	2·3	6·3	3·6	1·2
2nd IF	6F7	225	82	3·1	6·3	4·5	1·4
3rd IF	6B8	207	72	21·0	6·3	2·5	0·6
OUTPUT	6K6 or 41	197	207	0·0	6·3	18·0	3·2

TABLE 2

(BFO ON)

STAGE	VALVE	ANODE VOLTS	SCREEN VOLTS	CATHODE VOLTS	HEATER VOLTS	ANODE CURRENT	SCREEN CURRENT
1st RF	6K7	197	37	1·3	6·3	2·0	0·55
2nd RF	6K7	232	65	2·3	6·3	3·7	1·0
MIXER	6J7	204	72	3·4	6·3	0·17	0·06
OSC	6C5	58	—	—	6·3	1·6	—
1st IF	6K7	195	44	1·6	6·3	2·3	0·5
2nd IF	6F7	210	44	1·6	6·3	2·2	0·5
3rd IF	6B8	210	72	21·0	6·3	2·5	0·6
OUTPUT	6K6 or 41	198	210	0·0	6·3	23·5	3·6

Dealing with the servicing, first check the valve sockets voltages, and providing these are correct proceed to work back, checking the audio stage either by the use of an LF oscillator or by introducing a modulated 915 kc signal at the detector diode. From this point work back to the mixer using the 915 kc oscillator An appreciable gain should be noted as each stage is approached and checked.

TABLE 3

ALIGNMENT DETAILS

BAND	RANGE	ALIGN AT
1	0·2-0·5 mc	0·48 mc
2	1·5-3·5 mc	3·3 mc
3	3·5-6·0 mc	5·8 mc
4	6·0-9·5 mc	9·3 mc
5	9·5-13·5 mc	13·3 mc
6	13·5-18 mc	17·8 mc

In order to align the IF amplifier, capacity couple a low level input at 915 kc to the mixer grid and adjust the dust cores for either maximum AVC voltage across a high resistance meter or maximum audio across an output meter, connected to the output transformer across a load of about 4,000 ohms. The originally suggested alignment of the last IF transformer gave a large degree of overcoupling and could only be carried out satisfactorily with a wobbulator and 'scope. However, increased gain and selectivity may be obtained by using the peak as the alignment point. The crystal filter is normally set to pass 1,500 to 2,000 cycles at 20 dB down from resonance. In view of the previous suggestions relative to this filter circuit it is not intended to give the fairly complicated alignment details. Interested readers are referred to the BC-348 instruction manuals, which cover the alignment of all circuits much more thoroughly than the exigencies of space permit in this article. However, the alignment peaks are given for interested readers who are not fortunate enough to possess a handbook ; these details are covered in Table 3.

Television for Beginners

AN OUTLINE OF THE SYSTEM

TUBE MODULATION — THE BRILLIANCE CONTROL — FLUORESCENCE AND AFTERGLOW

PART IV

by **W. N. STEVENS (G3AKA) and L. E. HOWES (G3AYA)**

CONTINUING our discussion on the operation of the cathode ray tube, the next step to discuss is that of modulation. A raster, as has been explained, consists of a uniform light "frame" but in order to produce a picture on the tube face, *i.e.* to modulate the tube, it is necessary to increase the intensity in some places and to black out the spot in others. Therefore, the beam current must be subjected to reduction and increase in its intensity.

The brilliance control, of course, varies the intensity of the spot due to its operation as a variable grid-bias device, but this control merely affects the overall intensity of the raster. Fig. 12 shows the theoretical arrangement for a typical picture tube of the tetrode type. (For a triode tube, the supply to the first anode is simply ignored.)

It will be seen that the grid is maintained at a negative potential in respect to the cathode at all times. By varying the negative potential on the grid, a similar effect to that in normal radio valves is obtained ; that is to say, as the grid becomes more negative (by varying the "brilliance" control) the raster will become more "blacked out," since the electron beam will become less intense. Conversely, by reducing the negative bias, the raster will become more brilliant, since the emission will be greater.

Therefore, the Brilliance Control on a TV receiver is a means of varying the overall intensity of the raster (or picture).

With an ordinary radio valve, which has a fixed grid bias, the signal fed to the grid swings the grid potential around the fixed mean value. This still holds good where the cathode ray tube is concerned and the results are the same. Let us see what happens when an AC input is applied in the form of a sine wave.

Fig. 13 shows the typical operating characteristics of a cathode ray tube of which the grid is maintained at approximately —25 volts in respect to cathode by the setting of the brilliance control. When an AC input, of a sine wave nature, is applied (which in the example of Fig. 13 has a peak-to-peak value of 50 volts) it will give a swing of 25 volts either side of the fixed bias value of 25 volts negative.

It will be seen that on the peak negative half-cycles, the brilliance will be reduced to zero and will be completely blacked out (point "A" in the sketch). After the cross-over at point "B" (the original fixed biasing point) the sine wave begins its positive half-cycle reaching a peak positive value at "C" which should always be (for safety reasons) slightly negative of zero ; that is to say the grid should never be allowed to go positive.

Therefore, from point "A" to "C" the grid is getting more positive, with a proportional increase in the brilliance of the trace, and from point "C" to "A" it will be decreasing in brilliance until it is finally blacked out at point "A."

In normal television practice the grid is usually biased to beam current cut-off and the television waveform operates around this mean value. The demodulated vision signal as applied to the modulation electrode (which, in this case, is the grid) will contain negative sync. pulses and a positive picture waveform. The picture waveform, being positive in varying degree with respect to tube bias, will

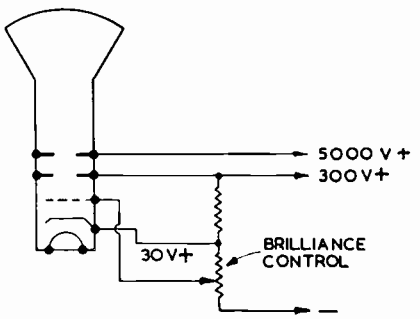


Fig. 12. Showing supply potentials for a typical tetrode cathode ray tube. The 30 volts positive position represents the maximum voltage reached by the cathode when the slider is at the "negative" end of the track.

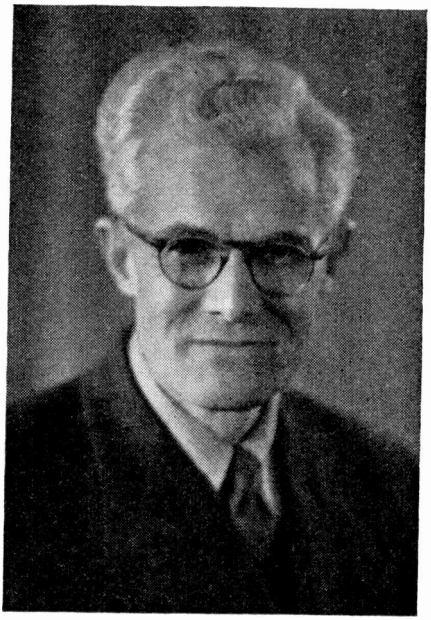
brighten up the trace and thus will reproduce the transmitted picture in its varying intensities from brightest to the darkest. The sync. pulses, though also contained in this wave-form, do not appear on the picture due to the fact that they are beyond cut-off and are often described as being "blacker than black." (See Fig. 14.)

The Fluorescent Screen

The spot, or the picture, which is produced on the face of the cathode ray tube is brought about by fluorescent action of the material which is sprayed thinly on the inner side of the viewing surface.

The nature of the material used depends on the use to which the tube is to be put. The material, usually a chemical powder mixed with an adhesive base, is deposited by spraying evenly and thinly on the inner wall of the cathode ray tube. The electron beam, focused by one of the methods already discussed, bombards this base at high velocity, causing a fluorescent action (and thus a spot of light) to occur.

A selection of materials, often called "phosphors," are used to produce a variety of different fluorescent traces ; this is due to the property of the various compositions to produce a fluorescent action under electron bombardment. In oscilloscope work, it is usual to use a tube with a green fluorescence because this colour approximates to the maximum sensitivity possessed by the human eye. The material used for green fluorescence is zinc silicate.



Many readers will have heard of the exploits of H. Rieder, ZS1P of Capetown, in receiving BBC television from Alexandra Park. The conditions that make this possible are those which gave such good North-South working between G and Z.S when British amateurs were permitted to operat e on the 50 mc (six-metre) band.

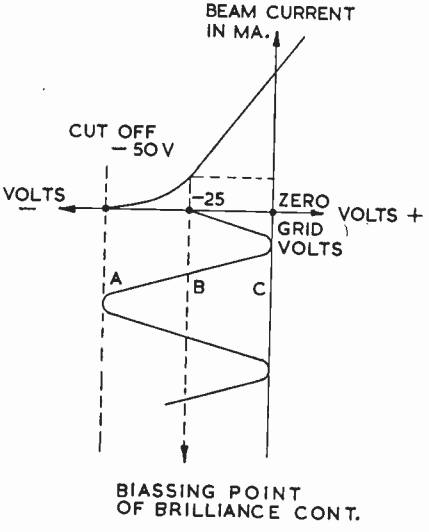


Fig. 13. Typical operating characteristic of a CR tube with a sine wave input. Note the similarity to a normal radio valve.

Blue screens are sometimes seen. These are often employed for photographic work and the base used is composed of either tungstate of cadmium or calcium, as these materials have a very sensitive action which allows for the recording of short-duration phenomena.

In television work, however, the ideal to strive for is a white glow. The nearest approximation is obtained by combining zinc phosphate (which gives a red glow) and cadmium tungstate which emits light-blue and white. The combination of these two chemical constituents gives us a glow which approximates to white. An alternative is copper activated by zinc-cadmium sulphide The adhesive base is often sodium or potassium silicate.

An important factor in television cathode ray tubes is the minimising of the "afterglow"; that is, the tendency for the screen to fluoresce after the spot (*i.e.* the electron beam) has been removed.

Thus, as the spot moves across the screen its previous path (though with less intensity) will remain visible for a period of time depending on the material. Some materials

will give an afterglow of as much as ten seconds, but a tube used for oscilloscope work (usually with a green trace) will have an afterglow of only eight milli-seconds. Tubes used for photographic purposes, with a blue trace, have an afterglow of eight micro-seconds. For work connected with the examination of rapidly fluctuating phenomena (transients) it is desirable to have a screen with a very long afterglow and a fluorescence giving a red or orange trace is used. This will give an afterglow of approximately a quarter of a second.

In television work, tubes with a white fluorescence have an afterglow of around $\frac{1}{25}$-second, which is adequate for normal definition.

Screen Burns

Should the spot be allowed to remain in one position too long, the severe bombardment will reduce the fluorescent property of the chemical at this point resulting in a dark patch around the "burnt" area. The severity of the burn depends on the intensity of the beam, the screen material and the duration of the burning. Thus, in the case of a time base failure the spot may remain stationary in the centre of the screen ; therefore remedial action should be taken immediately.

In recent years, various methods have been used to counteract ion burns on the cathode ray tube. The electron beam contains a proportion of negative ions which produce most of the burning action and therefore the aim is to remove these negative ions. One well-known manufacturer at least has introduced electrical systems to counteract the effect of screen burns.

One of the latest developments in this field has been the introduction of the aluminium backed tube. These tubes are given a thin layer of metal evaporated on to the fluorescent material. Advantages, other than the reduction of screen burns, are that it is possible to operate the tube at a much lower beam current with a consequent reduction in the size of the electron beam. The smaller the electron beam, of course, the larger the number of lines that can be resolved, therefore better contrast and brilliance will result in improved resolution.

(Part V will follow)

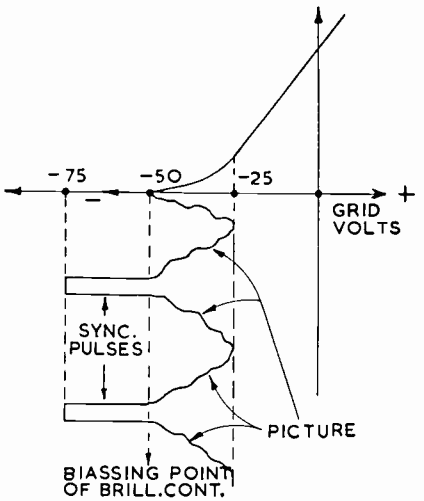
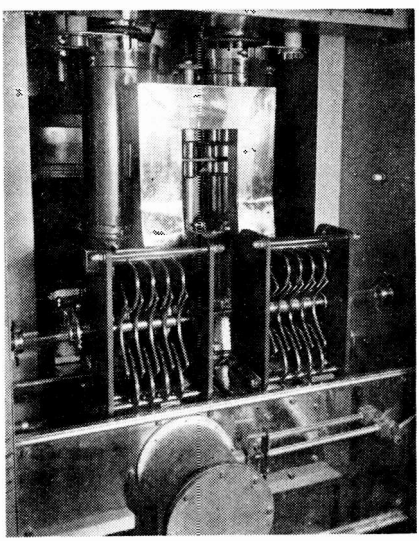


Fig. 14. Characteristics of a CRT with demodulated television waveform input.



Rear view of the modulated output stage of the Sutton Coldfield transmitter, capable of putting 40 kW into the aerial. The massive loop across the condensers together comprise the tuned output stage, the tubular column behind being the tank inductance.

Surplus 45 mc IF Unit Modified for TV

CIRCUIT DIAGRAM AND CONVERSION DETAILS

by **W. N. STEVENS (G3AKA)**

CONSTRUCTORS wishing to convert surplus units for television sound or vision reception could do far worse than investigate the various suitable IF units. Those we have in mind are obtainable either separately, or in conjunction with their respective parent units—these are the 3531, 3547, 3553, or 3583 receivers. The IF strip is quite easily detached, although no difficulty should be experienced in purchasing merely the IF section by itself.

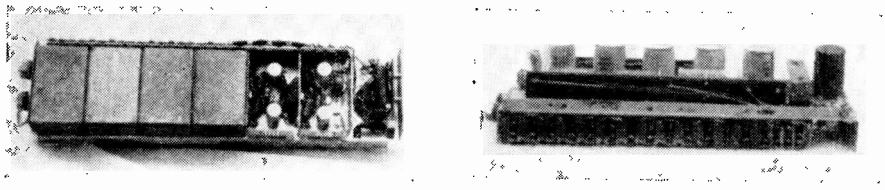
These IF sections, in either of the main units mentioned, are all very similar—the only differences being in a component value here and there. The IF strip under discussion in this article is that which is associated with the R.3531 receiver. The theoretical circuit, unmodified, of Fig. 1 shows the complete IF section which comprises six VR91's (EF50) and one VR92 (EA50). V1-V4 are the four IF stages and it is possible by adjusting the variable cores to cover the frequency range of approximately 41-46 mc ; therefore, this allows for reception of either the Alexandra Palace sound or vision signals. The valve V6 is used as the demodulator and V7, when modified, will become the video frequency amplifier ; incidentally, the diode (V6) is contained in a rectangular screening can between V5 and V7 on the top of the chassis.

On the underside of the chassis, behind the strip accommodating the small condensers and resistors, will be seen six screening cans. These accommodate the various components associated with the six valves V1-V6. The cans are a press fit and are easily removed by levering gently on the accessible side.

When the IF section is removed from the main unit it will be found that R50 going to the suppressor grid and cathode of V7 is left "in the air." This is shown in the theoretical circuit diagram of Fig. 1 ; the reason is because this is the only component which is grounded to the main unit. This point will be dealt with when the modifications are discussed.

Modifying the 45 mc Strip

If a complete unit is obtained, the IF section must first be disconnected. To do this, undo the four bolts holding the two units together and disconnect the leads running into the main unit from the eight-terminal tag board located adjacent to the underside of the V6 can. The resistor connection, already mentioned, from the suppressor grid and cathode of V7 is also broken.



General appearance of the 45 mc IF strip discussed in the text.

Fig. 2 shows the connections to the eight-terminal tag board *after* the necessary modifications have been carried out. Terminal 1 is the HT positive feed and this should not exceed 300 volts DC ; the current requirements are approximately 60-80 mA. Terminals 2 and 3 are joined together and taken to HT positive—in other words to terminal 1—via a 50,000-ohm 3-watt wirewound potentiometer, which will be used as the Contrast control.

The lead going to terminal 4 is broken and a 4,700-ohm 2-watt resistor inserted. This becomes the anode load for the video stage (V7). Terminal 4 can then be connected to HT positive (*i.e.* terminal 1).

Break the connection between R37 and R42 by removing R44. Then take out resistors R42, R51 and R52. These four resistors will

be found mounted on a paxolin board above chassis. This will leave terminals 5 and 6 blank. Terminal 7 is not shown on the theoretical circuit diagram ; this is the LT "live" side of the heater circuit. The required supply is 6·3 volts at 2 amps.

The last terminal, No. 8, was originally used for biasing the suppressor grids of V1, V2 and V3. As the suppressor grids are to be grounded in the modified circuit, pin 4 of the valves mentioned should be taken to chassis directly at the socket of each valve (and *not* by grounding terminal 8). This modification will leave the following components redundant and they should be removed : L1, L2, L3, C12, C21 and C30. It is well to take care when disentangling these items as the grounding of other adjacent components may be disturbed.

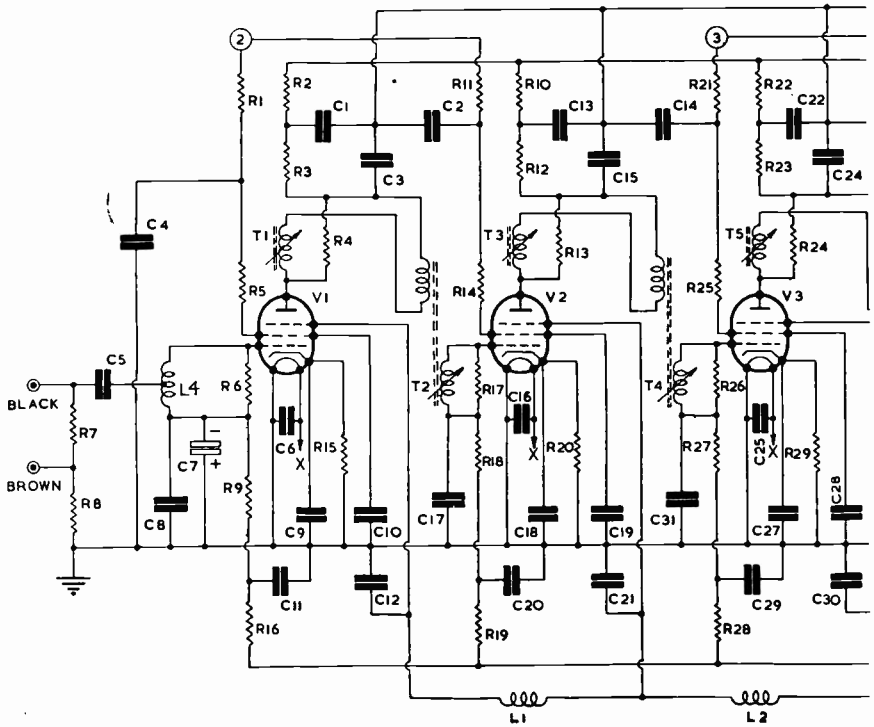
Since no connection exists on the eight-terminal board for HT negative and LT "earthy" connections, terminal 8 (as it is now blank) may be used for this purpose. Simply connect this terminal to chassis, to the nearest

TABLE OF VALUES

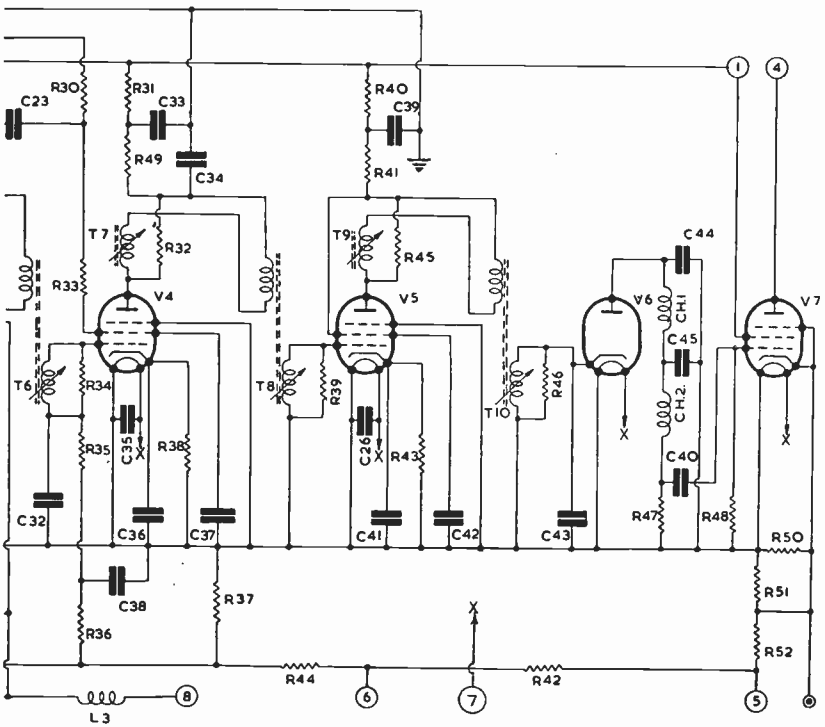
Fig. 1. Circuit of IF section associated with Units R.3531, R.3547, R.3553 and R.3583.

C1 = 0·001 μF
C2 = 0·001 μF
C3 = 0·001 μF
C4 = 0·001 μF
C5 = 0·001 μF
C6 = 0·001 μF
C7 = 10·0 μF
C8 = 0·0 0 μF
C9 = 50μμF
C10 = 0·001 μF
C11 = 0·001 μF
C12 = 20 μμF
C13 = 0·001 μF
C14 = 0·001 μF
C15 = 0·001 μF
C16 = 0·001 μF
C17 = 0·001 μF
C18 = 50 μμF
C19 = 0·001 μF
C20 = 0·001 FF
C21 = 20 μμF
C22 = 0·001 μF
C23 = 0·001 μF
C24 = 0·001 μF
C25 = 0·001 μF
C26 = 0·001μF
C27 = 50 μμF
C28 = 0·001 μF
C29 = 0·001 μF
C30 = 20 μμF
C31 = 0·001 μF
C32 = 0·001 μF
C33 = 0·001 μF

Fig. 1. Theoretical circuit of the unmodified 45 mc IF strip. Details are discussed in the text



C34 = 0·001 μF
C35 = 0·001 μF
C36 = 50 μμF
C37 = 0·001 μF
C38 = 0·001 μF
C39 = 0·001 μF
C40 = 0·1 μF
C41 = 0·001 μF
C42 = 0·001 μF
C43 = 3 μμF
C44 = 5 μμF
C45 = 5 μμF
R1 = 250 ohms
R2 = 250 ohms
R3 = 370 ohms
R4 = 10,000 ohms
R5 = 270 ohms
R6 = 1,000 ohms
R7 = 82 ohms
R8 = 270 ohms
R9 = 270 ohms
R10 = 250 ohms
R11 = 250 ohms
R12 = 270 ohms
R13 = 10,000 ohms
R14 = 270 ohms
R15 = 33 ohms
R16 = 230 ohms
R17 = 10,000 ohms
R18 = 270 ohms
R19 = 250 ohms
R20 = 33 ohms
R21 = 250 ohms
R22 = 250 ohms
R23 = 270 ohms
R24 = 10,000 ohms
R25 = 270 ohms
R26 = 10,000 ohms
R27 = 270 ohms
R28 = 250 ohms
R29 = 33 ohms
R30 = 250 ohms
R31 = 250 ohms
R32 = 10,000 ohms
R33 = 270 ohms
R34 = 10,000 ohms
R35 = 270 ohms
R36 = 250 ohms
R37 = 150 ohms
R38 = 33 ohms
R39 = 10,000 ohms
R40 = 250 ohms
R41 = 270 ohms
R42 = 15,000 ohms
R43 = 220 ohms
R44 = 15,000 ohms
R45 = 15,000 ohms
R46 = 15,000 ohms
R47 = 10,000 ohms
R48 = 100,000 ohms
R49 = 250 ohms
R50 = 270 ohms
R51 = 15,000 ohms
R52 = 33,000 ohms
V1, 2, 3, 4, 5, 7 = EF50 (VR91)
V6 = EA50 (VR92)
L1, 2, 3 = RF chokes
L4 = Input transformer
T1-T10 = 45 mc iron-cored variable inductors
Ch1, Ch2 = Filter chokes



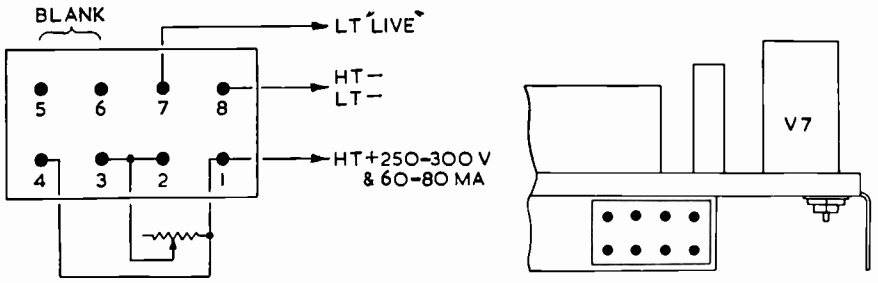


Fig. 2. Showing connections to the 8-terminal tag panel at the rear of the 45 mc IF strip ; the sketch shows the tag pane in relation to the reference numbering.

convenient point on the underside of the unit. This done, all the modifications to the terminal board have been completed and attention can be turned to the video stage.

The Video Stage

The inclusion of an anode load resistor in the V7 stage has already been dealt with. Now, the suppressor grid and cathode connections can be considered. First of all, separate the lead connecting these two electrodes together and then return the suppressor grid (pin 4) to chassis. Next, the cathode (pin 6) can be taken to chassis via a 180-ohm resistor (quarter-watt), with a 0·001 μF condenser in parallel, as in normal practice.

The anode terminal of the video amplifier (pin 3) is taken via a 0·1 μF condenser to the Pye socket alongside the valveholder. This socket, of course, became blank during the course of modifications. The Pye socket constitutes the video output connection, the polarity of which is negative-going sync. pulses and positive picture signal. This, incidentally, is the same characteristic as that obtained from the modified R.3515 as described in the May and July issues of *Short Wave Listener and Television Review*. (It also applies to the R1355 unit when modified.)

The last modifications are connected with the demodulator stage (V6). By removing the choke Ch.2, the connection between V6 and V7 will be broken and the new coupling between these two stages is taken from the junction of Ch.1 and C45 direct to the control grid (pin 7) of V7. Also remove the components R47, R48 and C40. Then, from pin 7 of V7, wire in a 4,700-ohm quarter-watt resistor to chassis.

On the input side there are two Pye sockets, coloured black and brown, suitable for use with unbalanced input. Normally the black socket will be used, but should attenuation be required in localities enjoying high field strength the brown socket can be employed. All that is now necessary is to connect up the power supplies and time bases, switch on, and stagger-tune the ten variable cores in the orthodox manner.

The band-width of the unit when purchased is approximately 4 mc, double sideband, which is of course unsuitable since sound break-through will be experienced. (This assumes that it is tuned to 45 mc.) The attenuation is only 8 dB down on the vision frequency of 41·5 mc instead of the 30-40 dB necessary. All cores must, therefore, be adjusted for single sideband utilising the high frequency side of the carrier. By patient adjustment it is possible to resolve the 3 mc gratings on Test Card C providing that the cathode ray tube is working under correct conditions.

TRANS-ATLANTIC EPIC

The recent crossing of the North Atlantic by the 5-ton British sloop *Vertue XXXV*, with a crew of two only, has rightly been hailed as one of the outstanding maritime feats of our time. The receiver with which the little vessel was fitted was a "Q-Max All-Dry Four," supplied by Berry's (Short Wave), Ltd.

Opening of Lime Grove Studios

BBC's TEMPORARY TV ACCOMMODATION

WHEN, on Sunday May 21, Mrs. Clement Attlee formally opened the studio at Lime Grove for the Children's Programmes the culmination of plans going back to 1947 materialised.

Even before the war, the BBC was seeking a suitable site on which to build permanent studios and ancillary accommodation in London, owing to the inadequacy of the existing facilities at Alexandra Palace. After the war, the search continued and finally, after many fruitless excursions and negotiations concerned with certain film studios and so forth, the Corporation decided in 1947 that the White City Exhibition site was, on the whole, the most favourable of the several sites which had been considered.

There were, of course, many snags. It was learnt that the LCC had already planned to acquire the whole exhibition site for a housing scheme. However, at a meeting between BBC and LCC officials, at which the Corporation's extreme difficulty in finding a large enough site on which to build, *inter alia*, premises for the Television Service were stressed, it was agreed that the BBC should be permitted to acquire approximately 13 acres of the land.

The wheels of legislation grind slowly and it was not until August, 1948, that the BBC were advised that they might now assume the site would be available to them. However, limitations on capital investment under the National Building Programme showed that it would be impracticable to complete sufficient accommodation for TV on the White City site in time to replace Alexandra Palace when the lease of those premises expires in June 1956.

Therefore, in order to bridge the gap, the Corporation acquired the Lime Grove film studios adjacent to the White City for quick conversion and occupation as temporary TV studios until such time as the move to the permanent building at the White City could take place.

Regarding the future White City TV building, the BBC hope to build and occupy the premises progressively and, subject to financial limitations, plan to have the Scenery Block completed by the end of 1952 so that it may serve scenery to the Lime Grove studios until such time as the multi-storey block, large studios, Presentation Suite and the Canteen (all of which would form an operational unit) are built and equipped.

New Pye TV Gear

SUCCESS OF BRITISH EQUIPMENT IN AMERICA

THERE was almost an "unofficial stoppage of work" at Alexandra Palace during a ecent *Picture .Page* programme, when technicians rushed to examine the new equipment wheeled into the studio by Pye engineers.

The transmission set was so compact that Pye designers had managed to condense into little more than a suitcase equipment which normally would have occupied a whole room and the new turret-headed camera was of proportional dimensions.

The new equipment was not at Alexandra Palace for practical use, however, but to feature in that evening's programme while the engineers explained to viewers how they had successfully sold British TV equipment in the United States a few weeks previously. Until then, the American market for a variety of reasons had always been considered impossible for British manufacturers.

Pye Radio solved the problems by building equipment for a complete TV transmitting station working on the American 525-lines 60-frame interlaced system and shipping the whole lot over to the States on the S.S. *America*. Halfway across the Atlantic they uncrated some of this fifteen tons of electronic equipment and, in spite of high seas, made history by staging the first-ever television show afloat—working, naturally, on a closed-circuit. Once, whilst in the Hudson River, they picked up American programmes.

A series of demonstrations in New York and Washington were so successful that all the equipment was left in the U.S.A.—sold. Although TV in America is on a much larger scale of development that in this country, American engineers admitted that "technically Britain has nothing to learn from America"—we are not at all surprised at that ! They were still further impressed by the fact that Pye could deliver many months earlier at prices much lower than the American manufacturers.

Good news for British viewers is that advanced equipment such as was shown on *Picture Page* is also being manufactured for the British 405-line 50-frame system and has been ordered by the BBC for use with the Outside Broadcasting Department.

Q. AND A. SERVICE FOR TV READERS

In order to get closer to the practical problems of readers who are following our TV features in *Short Wave Listener & Television Review*, it has been decided to introduce a new "Question and Answer" service, which will itself appear as one of the TV features. Readers are invited to send in to us any technical or semi-technical queries or problems they may have on the subject of TV reception. A selection of such problems, and the answers we suggest, will appear each month under the "Q. and A." heading. Readers will be identified only by their initials and town location. Send your problems to "TV Q. and A.", *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1. The new feature will appear in print as soon as a sufficient number of problems of general interest have been accumulated.

STATION DESCRIPTION SERIES

Readers sending us the stories for our "SWL Stations" series are reminded that the essential requirements are: A good clear photograph, a fairly full description of the gear, with notes on aerial systems used and any equipment that is home-built, the results achieved in terms of Zones and Countries heard and confirmed, the operator's main interests in SWL activity, and plans for the future. All this can be in your own words—we write the story from the details you give, and pay a fee for it into the bargain.

NEW TRI-COLOUR PICTURE TUBE

Those interested in the development of TV naturally follow the progress of colour television. From America comes another interesting new item—the RCA "Tri-colour Kinescope."

The colour tube, which is a direct-view type, has a screen composed of an orderly array of tiny close-spaced aluminised phosphor "dots" which are arranged in triangular groupings. Each of these groups comprises a green-emitting dot, a red-emitting dot and a blue-emitting dot. Sample tubes, used in a recent demonstration, had 117,000 dots of each colour ; that is 351,000 dots in all.

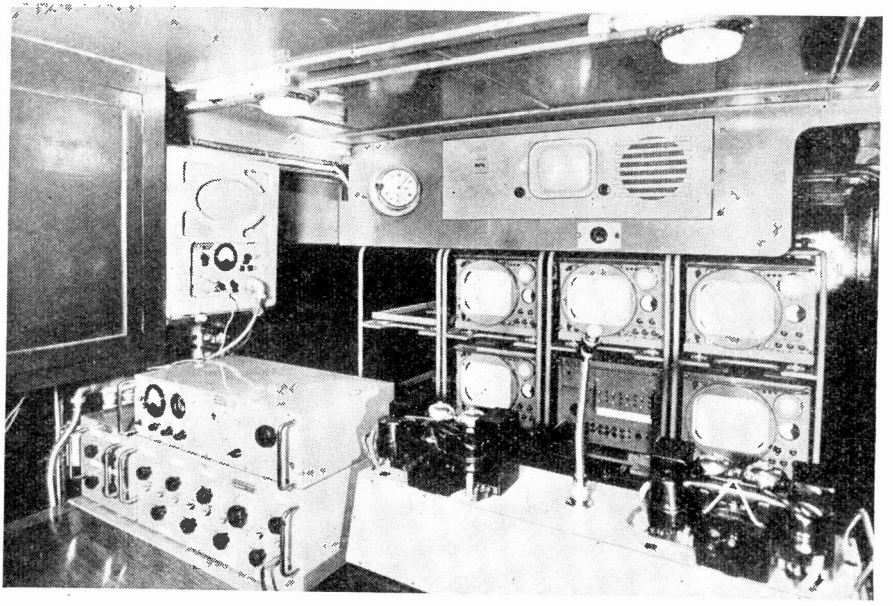
These new tubes can be either single or triple gun in construction. In the three-gun type, an apertured mask containing 117,000 holes is placed between the guns and the screen in such a way that the electrons from any one gun can only impinge on a single-colour phosphor dot no matter which part of the raster is being scanned.

Each hole in the mask (which contains a hole for each of the three-colour dot groups) is so registered that the difference in approach angle of the three oncoming electron beams determines the colour. Therefore, if three primary colour signals were applied to the three electron guns in the tube, three independent pictures in primary colours would be produced. The viewer would see only one picture owing to the close spacing of the phosphor dots giving the impression of superimposition.

The single-gun tube is similar except that the electron beam from the single gun is magnetically rotated. Thus, when the beam is positioned so as to correspond with the blue gun of the three-gun tube only the blue dots will respond to the blue component of the incoming signal. And similarly for red and green. The magnetic convergence coil is rotated synchronously to produce this sequence of events.

THOSE "H" AERIALS

The advent of TV has certainly brought the aerial back again as a somewhat undecorative appendage to houses in many a residential area. We are now at the stage where an "H" bolted to the chimney stack has a social significance—the occupants of the house "have got television," so let the neighbours take note ! It is probably true that in many cases a "piece of wire the same length" up in the roof space would give the same result on the receiver —one cannot help noticing how many of these "H" aerials look in different directions.



Interior of the new Emitron mobile central control van, as recently supplied to the BBC by Emitron Television, Ltd., for use as an O.B. control point. This view is of the presentation at the producer's desk.

Have you heard?

IT all goes to show ! We have just had a month that many impatient people would have thrown away as useless, but those who persevered have been rewarded by much rare but difficult DX. On several occasions the 14 mc band has resembled an empty street when the traffic should have been brisk ; and yet at other times it has been full of choice pieces.

If one dare generalise, I think it is safe to say that it has been well below par in the early mornings, erratic but sometimes surprisingly good at tea-time, and generally quite good late at night. The tea-time session has produced a lot of Far East and other Asiatic stuff, while the late-night business has alternated between (*a*) United States, (*b*) South Americans and (*c*) Central Americans and West Indies. On the latter occasions stations like the YV's and particularly FY8YB and VP6CDI, have been coming over at S9 plus between 11 p.m. and midnight.

SLP'S AND CALLS HEARD

The SLP's were well supported, and it was gratifying to see so much enthusiasm for the Top Band at a time when nothing remotely resembling DX could be expected. Regarding Calls Heard—a larger volume than usual was received, and it may be that the space allotted will not cope with them all. If, therefore, you happen to have sent in a 14 mc General List which does not appear, it has been squeezed out and you must blame the luck of the draw. All lists for other bands should appear.

Next month both the SLP's are for 14 mc Phone, so I think it would be a good idea if you would all try to cut down on your 14 mc General lists and give the other bands a try —even if they are not likely to be terribly exciting.

READERS' NEWS

F. N. Baskerville (Formby), who is a very old stager among SWL's, has returned from various travels and is on the air again. He is hoping to apply for a "ticket," but that's another story. He has found conditions well down on two years ago, particularly for VK and W6, but finds that the VQ3's and VQ4's come in up there like locals at almost any time of day. F. N. B. thinks "the real fun" will be 3·5 mc and 1·7 mc DX next winter. He asks why some stations add their own prefix after their call, e.g., W6CTH/6, KP4RJ/KP4, and so on. These are "fixed portables" still operating in their own territory, and are the equivalent of British stations signing /A after their call.

Finally, F. N. B. assures us from personal experience that Banka Island is twenty minutes by rowing-boat from Soerabaya in *Java*, and is much further from Sumatra. Nevertheless it is licensed from Sumatra with a PK4 prefix.

C. A. Fox (Parkstone) writes for the first time to say how much he appreciates the SLP idea. He likes to be able to check the performance of his converted R25/1196 (plus a 6V6 output stage) against some of the big commercial jobs. And that, of course, is the main purpose of SLP's ; we hope C. A. F. will derive much amusement and profit from them in future.

D. L. McLean (Yeovil) confirms that the best time on 14 mc has been around 1700-1900, the mornings being off colour. He has occasionally found 28 mc quite good at about 2100, with South America and the West Indies coming in well. He says that VR1C is now using phone on 14160, and adds that a Long Island SWL has told him that FW8AA is on phone from Wallis Island around the same frequency. KG6GC and KG6GD operate portable from KC6 most Mondays and Thursdays, 0800-1300 on 14193 kc. Lastly, CS3AA is with the U.S. Forces in the Azores—in spite of the call-sign. Thanks, D. L. M., for a nice bag of news.

One of the supporters of 7 mc (and there are very few of them these days) is J. C. Beal (N. Wembley). He says the band has been "terrific" on quite a few nights; he has logged most W districts, together with VK, KP4, CO and four new countries, thanks to KG4AT, HH2JC, HR1DF and CX1NE—the latter on phone. During an all-night session or two, J. C. B. also found plenty of W's on 3·5 mc—

AMATEUR BAND COMMENTARY ***by the DX Scribe***

both phone and CW. He has not found much on 28 mc, but 14 mc has not been too bad. His log includes ZP7AD, KG4AW, YS2AG and HI6EC (phone) as well as FY8AC, FM7WF, TG9AD, PK4VD and FM8AD (CW).

PHONEY OF THE MONTH?

W. J. C. Pinnell (Sidcup) probably hits the nail on the head when he says "I heard C8YR—at least *a* C8YR." The original owner of the call was said to havé reverted to photography as a hobby a year ago, and it is hard to believe that any Chinese amateurs are active at present. J. Neal (Birmingham) also logged him, as well as C3LT. Let us hope they are OK after all. W. J. C. P., along with many others, queries "BM7KA." "BM," if genuine, would be the prefix for China ; but this BM7KA merchant (I have heard him myself many times) has a typical European note and fist and comes in at all the wrong times of day.

J. Neal also mentions FD3RG and JA2CU and, with a slight catch in his voice, FQ8AA and PK7AB. We know nothing of either at present.

By the way, JAØIJ, queried by a host of people, is on Iwojima, for which JAØ is the new prefix instead of KG6I. I presume that this station would otherwise have been KG6IJ—or did he just make himself a nice call-sign from the name of the place? G. Moses (Crewe) mentions this chap, and also the CS3 already dealt with. He tells us that SV5UN went off the air on June 29 and will be setting up shop in Jerusalem by now. G. M. has found Ten quite amusing, winkling out countries like KZ5 and CX in among the short-skips.

K. M. Parry (Sandwich), on one of his rather infrequent week-end leaves, managed to add VP7NH to his score. He also found VS7, VS2, ZD4, OA4BA, 4BO, 4DE and 4M —all on 14 mc phone. J. P. Warren (West Croydon) found 14 mc full of excellent DX, with nothing on 28 that couldn't be heard on 14. He, too, logged VP7NH, together with

JUNE CONTEST

PHONE ONLY

1.	W. E. Bachell (Prittlewell)	38	109
2.	E. J. Logan (Hertford)	35	93
3.	R. A. Hawley (Goostrey)	31	79

PHONE AND CW

1.	A. H. Edgar (Newcastle)	40	114
2.	J. C. Beal (N. Wembley)	34	106
3.	R. A. Hawley (Goostrey)	33	88

G3EMU has a nice outfit at Canterbury, with the station equipment accommodated in a 5-shelf rack in the living room. Activity is mainly on Top Band phone, with five countries worked so far. The Tx runs Clapp VFO into an 807, and the aerial is 132 ft. long fed through a matching unit.

EQ3FM, CR6AI, PJ5RX and VQ3BVF—all on phone. He tells us that I5ZC is genuine and in Italian Somaliland.

ALL-BAND LISTENING

Really, in spite of the Four-Band Table (which will be at least a Five-Band affair next year) we have very few all-band listeners. One of them, however, is N. S. Beckett (Lowestoft). Here is a precis of his report. **28 mc :** Nothing much but short skip. **14 mc :** Rather better than last month, short skip troublesome, but nice ones heard like FM, KV4, KR6, OA and MS4. **7 mc :** "The worst for years," but good phone from Cuba and South America round about 0500-0700. W's there most of the time, but what of that? **3·5 mc :** Plenty of strong W and VE signals, but spoiled by static at most times. **1·7 mc :** Fading and static, but a good level of activity with no DX better than GI, GM and GW.

N. S. B. says he thinks the Russians *are* licensed for the Top Band and reminds us that UA3DN, in "Pse QSL," asked for reports on his 1·9 mc transmissions. Finally, he would like any gen on VQ1AB, heard on 7 mc at 589, but fading down to nothing.

K. Parvin (Thornton Heath) has wielded 28 mc to some purpose and emerged with SP5ZPZ (a new one for the band) plus HI6E,C VS9AH, ZD4AB and 4AH. He has found 14 mc good for Asia what with HS1SS, PK4,

FOUR-BAND DX

(STARTING JANUARY 1, 1950)

Listener	28 mc (1)	14 mc (2)	7 mc (3)	3·5 mc (4)	Total Countries (5)	Total Score ★
R. S. Stott (Upminster)	126	170	87	42	177	425
J. C. Beal (N. Wembley)	115	161	76	29	168	381
D. W. Waddell (Hitchin)	110	149	72	22	165	353
W. J. C. Pinnell (Sidcup)	110	145	61	22	154	338
N. S. Beckett (Lowestoft)	70	140	74	29	142	313
D. W. Bruce (Eltham)	116	130	38	22	144	306
P. H. Strudwick (London, N.W.11) ..	120	133	22	25	155 (P)	300
L. Singletary (Bicester)	95	123	50	21	142	289
D. S. Kendall (Potters Bar)	114	113	25	27	135 (P)	279
E. J. Logan (Hertford)	125	101	32	20	135 (P)	278
A. Bannister (Manchester)	101	125	30	21	136 (P)	277
R. A. Hawley (Goostrey)	94	124	42	17	139	277
A. M. Norden (London, N.W.11) ..	107	97	23	23	126 (P)	250
M. G. Whitaker (Halifax)	95	94	33	21	128	243
T. Spencer (Slimbridge)	86	106	20	16	125 (P)	228
L. Tombs (Swindon)	87	92	24	15	115 (P)	218
L. Corder (Hadleigh)	81	104	18	15	121 (P)	218
J. P. Warren (W. Croydon)	83	107	11	14	123 (P)	215
E. J. Parish (Watford)	85	93	16	17	121 (P)	211
H. M. Graham (Harefield)	67	94	24	16	112 (P)	201
E. Trebilcock (Australia)	5	118	58	3	124	184
K. M. Parry (Sandwich)	81	90	8	4	120 (P)	183
D. E. Tomkinson (Brighton)	56	83	19	20	103	178
K. Smeeton (Barnton)	39	92	35	12	106	178
R. A. Fowler (Marlow)	59	73	28	16	106	176
D. G. Martin (Cheltenham)	57	61	19	12	93 (P)	149
F. Pilkington (Colwyn Bay)	26	85	23	13	90	147
F. A. Herridge (London, S.W.12)	33	59	38	15	76 (CW)	145
G. Murray (Newcastle)	53	60	15	16	83 (P)	144
J. Cartwright (Letchworth)	47	67	11	16	88 (P)	141
E. A. Parkinson (Leeds)	61	57	11	9	82 (P)	138
A. L. Higgins (Aberkenfig)	33	65	16	17	84 (P)	131
D. K. Cocking (Farnborough)	38	63	16	6	85 (P)	123
G. Musk (Blackpool)	18	77	13	14	82 (P)	122
T. Ward (Ilminster)	20	70	11	10	81 (P)	111
A. O. Frearson (Birmingham)	35	48	15	8	69	106
A. R. Holland (Malvern)	22	65	10	3	75 (P)	100
R. Lamble (Ardingly)	21	35	9	13	62	78
O. R. F. Mason (Prittlewell)	7	32	14	13	39 (P)	66
P. E. Hayes (Hoddesdon)	25	13	3	4	28 (P)	45

★ *Sum of figures in Cols.* 1, 2, 3 *and* 4.

VS1, 2, 6, 7 and 9. A nice phoney with a European accent was ZD9BG ! K. P. thinks FM7WF might be phoney, too, as he has seen it stated that the only ones on Martinique are FM7WE, 8AA and 8AD. For J. Neal's benefit K. P. adds that he has heard three YN's on 28 mc phone this year, four TG's on 14 mc in the last two months, and he finds XE's and VP's "quite common," but admits to a scarcity of ZP's.

O. A. Good, in an abridged version of what I used to call The Oswestry Omnibus, says that he heard CR7AP, HI6EC, OY3IGO, PK4DA, TG9AD, VP7NH and VQ3BVF—all on 14 mc phone. On CW he collected HL1US, KX6BA and PK6LN. QSL's arrived from VP7NK, KG6IE, KG6SC and HP1BR.

WINNER OF THE JUNE CONTEST

A. H. Edgar (Newcastle) had a real and successful crack at the "Zones Heard" Contest for June, and listened for five or six times as many hours as he usually does. From this spell of hard labour he emerged with a score of 40Z and 114C (Phone and CW), which seems pretty creditable considering the general run of conditions. I was just wondering why no one had mentioned AC4RF (I heard him three times in June) when up came A. H. E.'s letter giving him as one of the "pickings." Yet another one I have been receiving has been ZK2AA, who only uses 12 watts ; A. H. E. heard him too.

He collected three new ones (YI3DYN, KV4AA and ZK2AA) in addition to some nice stuff like KJ6AB, FB8KK, KP6AE, TG9AD, VQ8AU and XE2SR. (VQ8AU, by the way, figures in many lists ; he has been so strong at times that a lot of people suspected him, but I think he is genuine. He is *not*, however, on Chagos Island.)

QUEERIES

A short list of funny ones from B. Davies (Beckenham) includes BM7KA (we know him !), VS8V, DO4AAJ, CS3AA (ditto), and FY7YB. Now why that last one ? He is good enough, surely ? H. M. Graham (Harefield) throws in OZVI calling CQ Denmark—sounds like a ship. E. H. Williams (Poole) adds FK8SB, but is not dead sure of the first letter.

A. Bannister (Manchester) was very disappointed to read that HC8GRC began operation on April 21, because he thought he logged him on April 11. Maybe he heard HC9GRC/MM—the expedition getting under way ? He asks whether we all have to delete Newfoundland/Labrador from our totals. The answer, alas, is yes ; the official lists have all been reduced by the subtraction of VO, with effect from April 1, 1949. A. B.'s loggings during the month were OY3IGO and ZA1A for new ones, as well as KP6AA/KH6, ZP2AE and PY1RC (on 7 mc phone).

TOP BAND TOPICS

G. C. Allen (Thornton Heath) passes on the welcome news that TA3FAS is on the band—looking for W's ! If he sticks it out we shall doubtless hear him later in the year. G. C. A. heard SM8ALF on June 18, but he proved to be on a ship about 125 miles West of Scotland, using 10 watts. R. G. Brooker (London, S.E.24) says that the three-way between G6HD, UA3CR and UA3CU was genuine enough, because he has contacted them at other times on 14 mc. M. G. Whitaker (Halifax) says the same—that the three-way was pre-arranged on a sked.

R. Iball (Worksop) has a 0-V-0 specially designed for Top Band listening. He says reception in June was marred by QRN and QRM and asks "When will the CW stations keep to their own territory ?" The truth is that there is no division of the Top Band—not even an unwritten agreement ; it's free for all with the 10-watt limit.

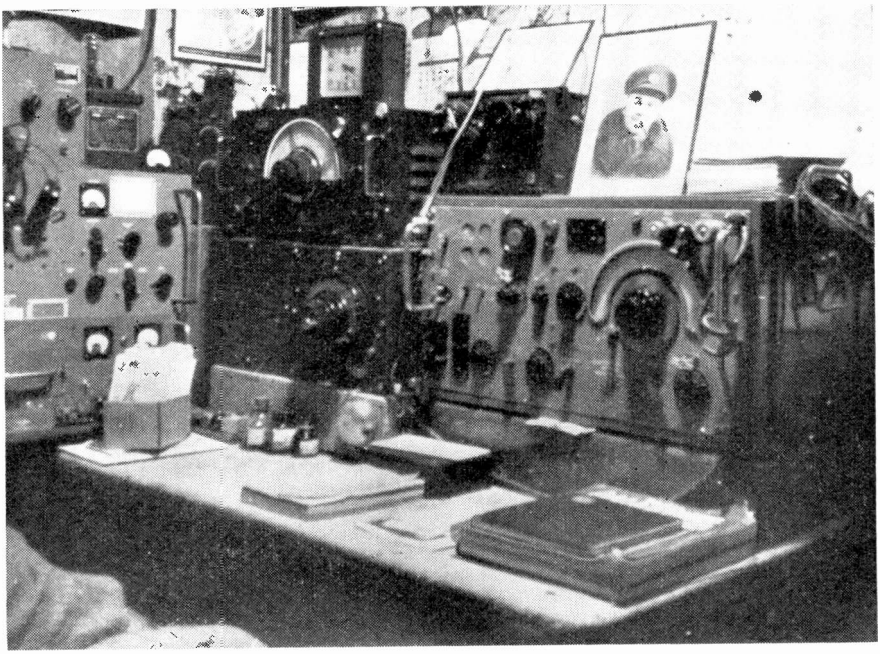
R. A. Fowler (Marlow) is off the air for a while, having been sent off on temporary duty elsewhere. He also swopped his S.640 for a motor-bike, and so joins the 0-V-0 brigade ! He asks me to tell M. G. Whitaker that he is normally stationed at Henlow. He likes B. Giles' suggestion of sending a message of greeting, on a report card, in the other man's language. But see later on that subject.

F. A. Herridge (London, S.W.12) had a Top Band outing during the month and logged 13 new counties and 142 new stations. He finds QSL returns very high indeed—particularly those for CW. And it might just be mentioned here that we have some plans for an interesting Top Band project for the early part of next year.

Back to G. C. Allen again, for his remarks on 14 mc. He is another who heard C8YR, and also mentions HH2ES, ZS3S, VP8AI, VP7NM, KH6HG, HV1A, VU2BC and F9QV/FC. He has heard lots of W7's working VR1C (0530-0600) but not a smell of the VR1 so far.

R. G. Goulding (Wrexham) picks out VE8MB, DU1NL and ZD7AM as the month's best (but I'd like proof of the last-mentioned !). He logged numerous EA8, HC, HK, HP, PK, TI, VP3, YN, YS and YV stations, and would like the Zones of UA9KSB, ØCU and ØFR.

E. J. Logan (Hertford) says he was not able to give much time to listening during the month, but with conditions as they were, he was satisfied in having found 35 Zones and 93 Countries, all on phone. He was beaten



Station of SWL E. Mitchell, Willand, Devon, who is manager for Area 3 in our British Short Wave League organisation. He runs a V5SR with a Radiovision 5/10 Expander unit and also has a range of ex-Govt. receivers including R.1147, R1132, R.107 and a TR9. The present station record is 108 countries confirmed.

only by W. E. Bachell (Prittlewell), who claims 38Z and 109C.

NEW ONE FOR TEN METRES

E. J. L. remarks that he logged the *Mauretania* on 28370 kc, testing while 60 miles E. of Queenstown. This is a new one on me ; what was it, a third harmonic or something ?

P. H. Strudwick (London, N.W.11)heard some JA8's working each other at 1045 GMT (14 mc). He wonders whether they were in Korea ; but I think the JA8 prefix now refers to some part of Japan, with effect from the time that Iwojima became JAØ. P. H. S. also heard HS1SS at 1705—QTH in panel.

A. S. Heather (also N.W.11) writes for the first time and although he is rather depressed by his own results, he consoles himself with the thought of the marvellous "rigs" and "antennas" that some of the other fellows must have. He has an 1155 which has to be hidden during the day because the landlady objects to its appearance ! For results, see Calls Heard.

Another "first-timer" is J. R. Paul (Lymington), who now proposes to get down to some serious listening with his S.640. He has a special interest in the trawler bands, as his father is often on the air from a Salvage Ship. J. R. P.'s total of countries is 75—all heard on the 14 mc band between May 23 and July 1.

INTERNATIONAL REPORTING

Following on the remarks here last month (concerning the idea of a greeting on one's card in the other fellow's language) I have had a long letter from T. E. Smith (Hull), who is a keen Esperantist. He points out that Esperanto is not intended to supersede one's own language, but that it is a little hard for an Italian or a Tibetan to learn English, which still restricts him slightly, when with Esperanto (which is extremely easy to learn compared with English) he can talk to the world.

He adds that there are Esperanto groups all over the world with many interests—social, religious and scientific. Probably the best contact for a radio enthusiast in this country is the British Esperantist Scientific Association, 8 Bentley Park, Welwyn Garden City, Herts. This group is affiliated to the International Scientific Esperantist Association.

UNWELCOME VISITORS

The old grievance of the commercials in the 7 mc band is again aired—by R. W. Finch (Ilford). He says the amateur fraternity takes a far too passive view of intruders. I doubt whether "passive" is the word, but no action can be taken except officially through international channels. On the whole, it is true to state that short-wave broadcasting is regarded (mistakenly, most of us think) as being of far greater importance than the activities of a mere 100,000 amateurs throughout the world. I am inclined to doubt whether a thousand short-wave broadcasting stations, all putting out tendentious propaganda, do anything at all to further the causes of peace or security. The average amateur QSO does more in five minutes with 100 watts than these multi-megawatt affairs can achieve in years. But don't run away with the idea that the amateurs take it all lying down.

R. W. F. also makes the interesting suggestion that each SLP could be turned into an actual competition by picking out the best dozen from your lists and awarding them "points," as quoted in the latest list of prefixes —no prefix to be counted twice. This seems a good idea ; I'll wait a month while you all chew it over and see if we can introduce something of the sort when the DX season really opens again.

QUICKIES

D. K. Cocking (Farnborough) mentions VQ3BDX (a new one) on 14 mc, and has heard MP4BAB and VQ4RF on 28 mc. J. W. Cave (Parkstone) heard CP1AM at S9 on 14 mc at 0455 ; he said he was returning to the States shortly. J. W. C. adds (for O. A. Good's benefit) that OA6's *are* rare birds, and are in the departments of Arequipa and Tacna.

T. G. Spencer (Slimbridge) still finds nice ones on Ten from time to time, such as VQ3AWL, ZB2A and South Americans. M. G. Whitaker, on the same band, mentions ST2KR and ZD2JHP. He would appreciate it if any reader could give him some information on the MCR1.

H. M. Graham found the trying short-skip conditions on 14 mc changing by the end of June, and in one evening logged EQ3SAM, ZD4AD, CE6BU, HH2X and VP4LS. He still finds EA8's numerous. H.M.G. says "It would be nice for the old 14 mc band to lose the Europeans as in days of yore, wouldn't it ? " Well, it does—at times—but we mustn't expect 1946-47 conditions again for at least another five years.

THE GEN FROM VP7

A letter from VP7NM (QTH in list) tells us that the only genuine VP7's are 7NG, 7NH, 7NJ, 7NK, 7NM, 7NN, 7NR and 7NU. VP7NM and 7NU work both CW and phone —all the others phone only.

HK1DZ also writes to tell us of the QSL Bureaux for Colombia. Cards for HK1 should go to Box 134, Barranquilla, who will also look after the HK2's. HK3 cards to

G3GOX, Miss A. B. Walford, of Farway, Devon, has recently been licensed and is running QRP CW on 7 mc. She is a member of the BSWL.

"ZONES HEARD" LISTING
(POST-WAR)

Listener	Zones	Countries
PHONE and CW		
M. E. Bazley (Kidderminster)	40	229
A. H. Edgar (Newcastle	40	215
E. Trebilcock (Australia)	40	214
D. W. Bruce (Eltham)	40	213
O. A. Good (Oswestry)	40	212
R. S. Stott (Upminster)	40	211
R. A. Hawley (Goostrey)	40	196
W. J. C. Pinnel (Sidcup)	40	191
D. W. Waddell (Hitchin)	40	191
J. C. Beal (N. Wembley)	40	183
A. W. G. Boulton (Norwich)	40	172
M. Shortland (Sunderland)	40	167
B. Davies (Beckenham)	40	166
R. A. Fowler (Marlow)	40	162
N. S. Beckett (Lowestoft)	39	178
L. M. Singletary (Bicester)	38	177
R. G. Goulding (Wrexham)	38	147
F. A. Herridge (London, S.W.12)	37	156
K. Smeeton (Barnton)	36	156
G. H. Coulter (Dover)	36	138
C. J. Goddard (Coventry)	35	123
PHONE ONLY		
E. J. Logan (Hertford)	40	198
D. W. Bruce (Eltham)	39	187
K. Parvin (Thornton Heath)	39	165
R. G. Poppi (Beckenham)	39	162
R. A. Hawley (Goostrey)	38	183
A. Bannister (Manchester)	38	174
D. S. Kendall (Potters Bar)	38	170

Listener	Zones	Countries
PHONE ONLY		
L. Tombs (Swindon)	38	154
M. G. Whitaker (Halifax)	38	148
D. Vincent (Beckenham)	38	140
D. L. McLean (Yeovil)	37	175
O. A. Good (Oswestry)	37	173
P. H. Strudwick (London, N.W.11)	37	155
J. M. Graham (Glasgow)	37	154
J. C. Beal (N. Wembley)	37	151
A. M. Norden (London, N.W.11)	37	148
J. P. Warren (W. Croydon)	37	147
G. Moses (Crewe)	37	146
R. J. Line (Birmingham)	37	139
K. M. Parry (Sandwich)	37	137
E. J. Parish (Watford)	36	163
D. G. Martin (Cheltenham)	36	149
R. A. Fowler (Marlow)	36	141
T. E. Botham (Walsall)	36	136
B. W. Sutton (Liverpool)	36	123
D. J. Williams (Pontyberem)	36	116
C. S. Pollington (Chichester)	35	143
H. M. Graham (Harefield)	35	139
A. L. Higgins (Aberkenfig)	35	135
L. B. Bailey (Stockton)	35	123
P. Bysh (London, N.8)	34	129
A. R. Holland (Malvern)	34	117
C. J. Goddard (Coventry)	34	112
A. O. Frearson (Birmingham)	34	110
D. K. Cocking (Farnborough)	34	107
R. Lamble (Ardingly)	34	61
W. C. Askew (Melton Mowbray)	33	122
B. L. Stedman (Hawkhurst)	33	103
G. Musk (Blackpool)	32	112
O. R. F. Mason (Prittlewell)	32	82
G. Murray (Newcastle)	31	103

Liga Colombiana de Radio Aficionados (QTH in the Call Book). HK4's to Box 1173, Medellin, and HK5's and 6's to Radio Club del Valle, Cali, Colombia. The Liga will look after any HK7's or 8's.

Sundry listeners have heard F9QV/FC during the month and wonder, for some reason, whether he is genuine. Well, the real F9QV is undoubtedly in Corsica, but I have no means of telling whether they have heard the *real* one ! P. King (Offaly, Eire) asks for information on the "buzzing noise with a ticking background" that he often hears around 14000 kc. I think it is a set of parasitics from a commercial station just outside the band ; there's one there that sounds like a picture transmitter and it spends at least half its time out of adjustment.

K. Smeeton (Barnton) remarks on the prevalent high noise level on 14 and 28 mc. I think that is surely due to the relatively poor state of the bands. As we all know, the DX stations are there, and they come through with surprising regularity. But everyone has to admit that their strength has gone down considerably during the last few years (I am not talking about the occasional bursts of freak conditions for one part of the world, of course). This drop in strength has taken place gradually and so we are all using our gain controls much further over than we used to. Am I right ? If you don't think so, what's *your* guess ?

A DX PLUM

There should still be time, when you receive this, to find FP8AC for a new one. W6SAI is on a "portable holiday" on St. Pierre-et-Miquelon, where he has been licensed as FP8AC. He will be active, both on phone and CW, on 14 and 7 mc, until the end of July. Best time for him should be late evenings and in the small hours. Bill Orr of W6SAI has got this thing fully organised, even to the

extent of having had his FP8AC cards printed weeks ago. He will be using about 35 watts.

SET LISTENING PERIODS

July 28, 1700-1800 GMT, 14 mc Phone.
July 29, 1700-1800 GMT, 14 mc Phone.
August 26, 1800-1900 *GMT*, 28 *mc Phone and CW.*
August 27, 1100-1200 *GMT*, 1·7 *mc Phone and CW.*

Please note that the latest date for July reports will be **August 1, first post;** it is the calendar again! Address them all, together with your scores and Calls Heard, to DX Scribe, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1. Don't forget to keep your scores on different pieces of paper ; keep your Calls Heard down to the best 25—and don't strain to make up 25 by including easy ones ! Best of listening, and 73.

DX QTH's

CS3AA	c/o APO 406, PM, New York (*Station in Azores*).
HC1SA	Maj. S. A. Stricklen, U.S. Embassy, Quito, Ecuador.
HS1SS	American Air Attache, Bangkok, Siam.
VP3MCB	H. McCombe, Mackenzie City, Rio Demerara, British Guiana.
VP6HM	Box 252, Barbados, British West Indies.
VP7NM	C. N. Albury, Box 362, Nassau, Bahamas.
VR1A	Charles Adams, Betio, Tarawa, Gilbert Is.
VS1BQ	Cpl. J. B. Smith, SHQ Signals, RAF Changi, Singapore.
ZE3JO	M. Geddes, Box 1976, Native Administration Dept., Salisbury, Southern Rhodesia.
ZL1ADF	E. Davenport, Portland, North Auckland, N.Z.

The Grafton Radio Society, one of the several London radio clubs, is also one of the best organised and offers valuable facilities to members. Here is the constructors' group at work on the building of equipment not only for the Club station but also for themselves.

CALLS HEARD

SET LISTENING PERIODS

14 mc

June 24, 2100-2200 GMT

R. W. Finch, 36 Bathurst Road, Ilford.

PHONE: PY8RJ, SVØWL, YV5AB.

CW: KP4AJ, 4LA. (*Rx:* 3-*V*-2 *Mains* (*home-built*)).

R. G. Poppi, 274 Kent House Road, Beckenham, Kent.

PHONE: CN8MI, CT3AK, LU1AV, 2BA, 2BB, 3CO, 6DAS, 7DO, PY1ACT, 4AGR, 4CI, 4HP, 4QL, 7AP, 7BE, 8MI, YV5AB, VQ4RF, ZB2A. (*Rx:* *S*.640.)

N. S. Beckett, 194 Waveney Drive, Lowestoft.

CW: LU1AA, 1AC, 2VP, PY1HW, TA3FAS, VK2APP, 2JE, 2KS, 2SE, VQ4HK, 4KRL, 8AU, YV5BZ. (*Rx:* *Hambander*.)

S. Smith, 40 Stoneleigh Road, Kenilworth, War.

CN8EE, 8EI/M, FA8CC, LU1AAP, MD2FJ, PY7AG, 7BE, 8RJ, SVØWL. (*Rx:* *R*.1084.)

George Mawdsley, 9 Cross Street, Radcliffe, nr. Manchester, Lancs.

PHONE: CN8EE, 8MI, EK1HB, 1WX, LU6FAS, MD2FA, PY4KL, 7AD, 8MI, SVØWL, YV5AB. (*Rx:* *B.C.* 348*L*.)

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

PHONE: CN8EE, CX3AS, EK1HB, KP4HG, LU1AAP, 4CA, 6DAS, MD2JH, PY7AD, 7AU, 7GV, 8AI, VP6CDI, 6SD, YV5CY, 3V8AM. (*Rx:* *S*.750 *and* *S*.640.)

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

CE3CT, CN8AB, 8EE, 8EI (Mobile), CO2MG, FA9KJ, LU1AAP, 2BB, 4DJB, 6DAS, MD2MJ, PY4KL, 6CI, 7DE, 8RJ, SVØWL, TF5TP, VK4KS, VP3LF, 6SD, VS6BI, YO3GH, 5RC, YV5AB, 5BQ. (*Rx:* *Hambander*.)

L. M. Singletary, R.A.F., Bicester, Oxon.

PHONE: CN8EE, 8MI, EA8AV, FA9KJ, LU3AM, 3VP, 6CAS, 7BO, MD2FJ, PY6CI, 7AD, 7BE, VSØWL, VP6SD, YV5AB, 5AY.

CW: CO2BM, CX6AD, KP4AJ, 4HU, 4KD, KV4AA, LU1AA, 1CA, PJ5TR, PY1DC, 3FE, TA3FAS, UG6WD, YV5BZ. (*Rx:* *Hambander*.)

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

CW: FM8AD, KP4AJ, KV4AA, LU1AA, 1CA, 7BN, PJ5TR, PY2AQP, 7WS, VQ4HK, 4KRL. (*Rx:* 640.)

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

PHONE: HK1DZ, LU1AAP, PY1AMJ, 7BE, 7DE, 8MI, SVØWL, YO3GH.

CW: FM1HR, KP4AJ, PY2AVY, PZ1QM, SP1SJ, TI2FG, VQ4KRL, 8AU, YV5BZ. (*Rx:* *S*.504.)

W. T. Botley, 48 Windermere Way, Slough, Bucks.

PHONE: CE3CT, CN8EE, 8MI, LU1AP, 7AK, PY4HF, 6BF, 7AD, 7BE, 7GV, 8MI, 8RJ. (*Rx:* *AR77E*.)

P. H. Strudwick, 159 Hampstead Way, London, N.W.11.

PHONE: CE2CT, CN8EE, CO2AG, HI6EC, HK1DZ, 2QM, KP4JF, LU1AAT, 3CY, MD2FJ, MI3KK, PY2AHS, 2CK, 2RJ, 2SV, 4KP, VE8MJ, VO2O, VP6SD W6UHF, YV5BQ, ZB1AK, 2A, ZC6DL. (*Rx:* *S*.640.)

C. A. Fox, 15 Sandringham Road, Parkstone, Dorset.

CN8EE, HK1DZ, LU1AA, 6DAS, PY7AD, 7BE, 7WS, 8GR, 8MI, VQ4AA, ZB2A. (*Rx:* Conv. *R*25, 1196.)

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

PHONE: CN8EE, FA8CC, LU4CN, 6CAS, MD2AF, 2FJ, PY7BE, SVØWL, VE1CR, 1RA. (*Rx:* *AR*88.)

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 callsign; (*c*) callsigns 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.

1·7 mc

June 25, 1100-1200 GMT

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

PHONE: G2JG, 2KT, 2YH, 3ARU, 3BCM, 3BN, 3BVA, 3DXA, 3EQM, 3FLP, 3FNL, 4CG, 5BS, 6HU.

CW: G2AGO, 3BWQ, 3DSW, 3EAY, 3FYY, 3FZ, 3GDZ, 3LM, 4CM, 6GK, 8LZ. (*Rx:* Modified *R*103*A*.)

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

G2AJU, 2BWP, 2HKU, 2KT, 3ELB, 3ERV, 3ERY, 3FCT, 3FNL, 4BY, 4FN, 4OU, 5BS, 5FN, 6AB, 6CH, 6NU, 6RQ, 6UT. (*Rx:* *Hambander*.)

T. G. Spencer, Cherry Tree Cottage, Slimbridge, Glos.

G2AOK/A, 2IK, 2MM, 3CBH, 3EKD, 3EXW, 3LP, 3YT, 6GU, GW2BG, 3CUT, 5BI. (*Rx:* *Commander*.)

J. Cartwright, 146 Ickneild Way, Letchworth, Herts.

PHONE: G2BFN, 2HK/P, 2NN, 2YH, 2YI, 3BVA, 3EAJ/P, 3EHD, 3FNL, 3HR, 5BS, 5RZ, 6AD, 6HU, 6NB, 6RQ, 6UT, GW2BG. (*Rx:* *H.R.O.*)

G. C. Allen, 24 Wiltshire Road, Thornton Heath, Surrey.

PHONE: G2JG, 3BCM, 3BVA, 3FLP, 5BS.

CW: G2BJW, 2CZU, 3AEZ, 3BWQ, 3EQM, 3FYY, 3FZI, 3GDZ, 3LM, 4CM, 6FO, 6GK, 6HU, 6KJ, 8LZ, 8OD. (*Rx:* *HRO*.)

L. M. Singletary, R.A.F., Bicester, Oxon.

PHONE: G2ALK/A, 2BJW, 2BON, 2FRH, 2YI, 3EHB, 3EHE, 3ERV, 3HM, 3LP, 6AQ, 6KJ, 6NB, 6RQ, 6UT, 8MX.

CW: G2BON, 3AEZ, 3DSW, 3EAY, 3ERV, 3GCD, 3GEB, 3HQ, 3LM, 3NT, 4CM, 6FO, 6GK, 6KJ, 6NB, 8LV, 8LZ, 8OD. (*Rx:* 0-*V*-1.)

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

PHONE: G2KT, 2YH, 2AJU, 2HKU, 3HQ, 3BVA, 3ELB, 3ERY, 3FNL, 4BY, 4FN, 4OU, 5BS, 5FN, 6AB, 6CH, 6FV, 6HU, 6NU, 6RQ, 6UT, 8MX, 8SK, 8TL.

CW: G3ERV, 4FN, 6AB. (*Rx: R*1155/*A* (*Modified*)).

G. Roberts, 4 Kellett Lane, Leeds, 12, Yorks.

PHONE: G2VL, 2HBH, 3CXP, 3EAE, 3FFZ, 3HA, 3WQ, 3YA, 3MQ, 4GJ, 6MC, 6SP, 8OK. (*Rx: SH*5.)

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

PHONE: G2AON, 2HR, 2JG, 2YH, 3ARU, 3BCM, 3BNI, 3BVA, 3ELB, 3EUH, 3FNL, 4FN, 5BS, 6HU, 6NU, 6RQ, 6UT.

CW: G2AGO, 3DSW, 3EAY, 3ERV, 3HQ, 6AB, 6NB, 8LZ, 8OD. (*Rx: R*1224*A*.)

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

PHONE: G3AIL, 3BKS, 3BSA, 5AU, 5SM, 8IZ, 8OK, 8TR.

CW: G2HW, 3DRS, 3EKP, 5PX. (*Rx: S*.504.)

Roger Lamble, Lea House, Ardingly College, Haywards Heath, Sussex.

PHONE: G2KF, 2KG, 3BCS, 3BVA, 3DXA, 3EAD, 4JH, 5BS, 5GN, 5RO, 6NB, 6QB, 6RQ, 8KG. (*Rx: R*103, *Mk. I.*)

P. H. Strudwick, 159 Hampstead Way, London, N.W.11.

PHONE: G2HL, 2HR, 2UP, 2YH, 2YI, 3AHX, 3ARU, 3AXG, 3BFJ, 3BVA, 3DNI, 3EHE, 3EKJ/P, 3FEL, 3FRH, 4FH, 4OU, 5BS, 5SX, 6HU, 6QC, 6NB, 6RQ, 8MX. (*Rx: S*.640.)

GENERAL

1·7 mc

N. S. Beckett, 194 Waveney Drive, Lowestoft.

CW: GI5SJ, 6YW, GM3EQY, 6RI, 8LC, GW3ALV, 3FWJ, 4MZ/P, 8CT, 8WJ/P. (*Rx: Hambander.*)

Robert Iball, 45 School Road, Langold, Worksop, Notts.

PHONE: G2AAS, 2ACV, 2AOH, 2BOJ, 2FKK, 2HOP, 3ALE/A, 3AMH, 3BMT/A, 3CET/A, 3CJS, 3CVE, 3ECW, 3EES, 3ERN, 3ERY, 4OK, 5BB, 5BS, 5XB, 6HN, 6NB, 6OI, GM2BUD, GW3ALV. (*Rx: 6V SH.*)

3·5 mc

J. W. Cave, 12 Hilda Road, Parkstone, Dorset.

PHONE: DL5WX, GC2AAO, LX1DU, PAØVG, UQ2AB, W1CEQ, 3K1, 4EL, 4OPS. (*Rx: Home-built* 1-*V*-0.)

7 mc

N. S. Beckett, 194 Waveney Drive, Lowestoft.

PHONE: CM8OA, CO2XA, 8CM, PY1RC.

CW: CO5PN, HH1W, HK5DH, K5NRS, KP4MD, KV4AL, KZ5RG, W5NBD, 5PYL. (*Rx: Hambander.*)

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

PHONE: CX1NE.

CW: CO7NR, 8FH, HH2JC, HR1DF, KG4AT, KP4CC, 4KF, KZ5BE, PY1AQC, 7WS, VE2AAL, 3VO, VK2AHA, VO1N, W5GND, 9CPM, ØFRI. (*Rx: BC*-224-*B.*)

28 mc

J. Cartwright, 146 Icknield Way, Letchworth, Herts.

PHONE: CE2CC, CX4CS, KV4AQ, OQ5BQ, 5BR, 5CL, VP6HM, VQ4AC, 4ASC, 4ERR, 4HEC, 4REW. (*Rx: HRO.*)

J. W. Cave, 12 Hilda Road, Parkstone, Dorset.

PHONE: AR8AB, 8BB, CE3CZ, CP4DG, CX4CS, FA3KC, LU4CD, 5XE, OX3MC, PY1FR, 2ADT, VP4TO, VQ3AK, 4ERR, W3NKS/MM, 5OTF/MM, ZC6UNJ, ZS1T, 6LW. (*Rx: Home-built* 0-*V*-1.)

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

PHONE: AR8AB CE2CC, 3BE, 3CZ, 3GZ, CX4CS, 5AO, EA8AX, 8RM, HI6EC, KP4AR, 4MG, OQ5BR, SP5ZPZ, VQ4AC, 4BJ, 4ERR, 4REW, 4SGC, 4VL, VS9AH, ZC6UNJ, ZD4AB, 4AH. (*Rx: S*.640.)

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

PHONE: CE2CC, 3CB, CX2CN, 4CS, EA8RM, HC1FG, KZ5DR, 5FA, LU4AL, 7CY, OA4DW, OQ5AB, PY2AVC, 2NX, 4X4CZ. (*Rx: S*.750 *and S*.640.)

A. W. Machin, 147 Usk Road, St. John's Hill, Battersea, London, S.W.11.

PHONE: VS9AH, ZC6UNJ, ZE2KH.

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

PHONE: CX4CS, HC1KV, KP4AA, PY2CC VQ4SC, W5OTF/MM, 6YYT/MM.

P. H. Strudwick, 159 Hampstead Way, London, N.W.11.

PHONE: AR8AB, CE2CC, 3CZ, CR7IV, KP4AR, OQ5AB, 5AO, 5BB, 5BI, 5BQ, 5BR, 5CC, 5CL, 5DG, 5EC, 5OQ, ST2KR, VK6LL, YK1AC, ZA1B, ZD4AH, ZE1JO, 2JE, 2KH, ZP4HW. (*Rx: S*.640.)

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

PHONE: AR8AB, 8BB, CR4AC, HC1SA, 2BX, HI6EC, KZ5CG, MT2E, OQ5EB, 5LL, VP6CL, 6HL, 6HM, 6SD, VQ4ASC, 4CRO, 4ERR, 4RF, 4SGC, ZD4AH, ZE1JO, 2JA, 2KH, 3JD, ZP3AW, ZS6JS, 6LW, 6SG. (*Rx: AR*88.)

E. J. Logan, Linten Cottage, Fanshawe Street, Bengeo, Hertford.

PHONE: AR8PO, CO6AX, CR7IV, CX4CS, 4CV, FA8JO, FD3RG, HC1OY, KP4RM, LU6AJ, MP4BAB, OQ5CC, 5DG, PK3LC, PY2ARK, ST2KR, VP6SD, VQ3AWL, 4SGC, XZ2EM, ZC6UNJ, ZD2JHP, 4AH, ZE3JD. (*Rx: BC*342-J/RFU32.)

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

PHONE: EK1RW, F8PI, 9XM, LU6AJ, OQ5AB, 5BG, 5BR, 5DG, ST2KR, W3NKS/MM, VQ4ERR, ZD4AH, 4AX, ZE2KH, ZS1CI, 6CY, 6OY, 6Q. (*Rx: Hambander.*)

R. W. Finch, 36 Bathurst Road, Ilford.

CW: CO6VV, CT3AV, CX6BT, EA9AT, HK3FF, KZ5AU, VO6B, VP6PV, YV5AE, BJ, ZD4AD.

PHONE: CE3CZ, VP6IS, VQ4RF, YV5AY.

R. J. Riding, Trewartha, Fippersley, Wednesfield, Staffs.

CN8BA, 8EO, CX2CO, EK1AD, 1DC, FA3GZ, 8PJ, KH6AB, LU4BH, 5HFQ, MD2MD, 2PJ, OX3BD, PY1AGM, 5AHS, TF5TP, VP3MCB, 6NO, VQ4VL, W6LQ, 6SA, YV5BX, 5BZ, ZDISS, 3V8BB. (*Rx:* 1-*V*-1.)

14 mc

J. P. Colwill, Hay Common, Launceston, Cornwall.

PHONE: CE3AE, CM9AA, CT3AV, EA8AP, HK1DZ, LU7DX, MD2AF, TA3GE, TI2RC, VE7AFM, 7EF, 7VO

8MB, 8NF, VK3JV, 3MM, VQ4NSH, 4RF, 4VL, VP6MO, W6IDY, 6NO, ZD1SS, 9BJ, 4X4DR. (*Rx : Roberts' P4D.*)

S. Smith, 40 Stoneleigh Road, Kenilworth, Warks.

AE4FK, AR8BS, CN8EI/M, FA3JY, 8FB, 9UP, FF8PM, LU1AAP, 4BH, 6AJ, MD7WE, OE13AA, 13LL, PK4DA, 4DN, SV1CA, VK2ACX, VQ4RF, 4VL, VS6BI, 6BS, 7DR, 7SV, UA4CB, 4X4CR, 4DR, 3V8BB. (*Rx : R.*1084.)

R. G. Poppi, 274 Kent House Road, Beckenham, Kent.

PHONE: AP2N, CP1AP, 6FB, CR6AV, EQ3FM, KG6AD, 6GD, PK4DA, PY9AP, UA9CL, VP1SJC, VS1AD, 1AY, 1AX, 1DZ, 2BS, 2BU, 6BT, 7BR, 7SV. (*Rx : Battery* 1-*V*-1.)

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

PHONE: CE2BQ, 3AT, CS3AA, CX2BC, 3AS, EA9AI, HK1DZ, KG4AW, SV5UN, TF5TP, TG9AD, TI2AB, 2EV, 2VM, VP3HAG, 3MCB, 4TI, 6IC, XE2KW, YV8AD, ZD1SS, ZE4EO, ZP5CM. (*Rx : S.*750 *and S.* 640.)

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

PHONE: CP1BR, EQ1DR, HI6EC, JA8AB, KG6CH, VP3MCB, VS4AC, 6BI, 7SV, XE2SR, XZ2KN, ZP4CJ.

CW: AC4RF, FB8XX, FO8WF, FP8AO, KJ6AB, KP6AE, KV4AA, MS4FM, TG9AD, TI2EN, VQ8AU, YI3DYN, ZK2AA. (*Rx : S.*640.)

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

PHONE: CE2WL, 6BU, CS3AA, CT3AN, 3AV, CX2AF, EA8AP, 8AY, EQ3SAM, FF8PM, HH3DL, HI6EC, HK1DZ, HP1LA, KP4EG, MD2PJ, OX3BD, TF5TP, TI2OH, VP4LS, 6SD, VQ4VL, ZD1AK, ZD4AD, 4X4DR. (*Rx :* 1-*V*-1.)

J. Cartwright, 146 Icknield Way, Letchworth, Herts.

PHONE: CE3HN, CS3AA, EQ3FM, FF8PM, HC1FG, 1FS, HK1AY, HP1BR, 1RK, KP4ES, MD2PJ, OA4BW, TI2IG, VP6FA, 6MO, 6SD, 7NH, VQ4RF, XE1AC, 1HC, 2W, ZD1SS. (*Rx : HRO.*)

D. Pool, 8a Ebsworth Street, Forest Hill, London, S.E.23.

PHONE: AR8BC, CN8DO, CX2CO, EA8AY, EK1RW, FA3AB, FM8AD, FN8AD, HI6EQ, HK1IY, KP4DM, LU6AJ, MD4IM, 7WE, OX3BD, PY1FT, TF3AA, TG4RM, VE8MP (Baffin Is.), VK5RN, VP6SD, VQ4RF, VS1AS, YV5AY, ZD1AJ. (*Rx : Sky Champion.*)

T. G. Spencer, Cherry Tree Cottage, Slimbridge, Glos.

PHONE: AR8BC, CS3AA, HI6EC, HK1DZ, HP1LB, TF5TP, VK7JB, VP3TY, VQ4RF. (*Rx : Commander.*)

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

PHONE: CR7AP, HC1FG, 2JR, HI6EC, HP1BR, 1LA, KG6DI, 6GD, OA4DW, 4M, OY3IGO, PK4DA, TG9AD, VE8NF (Victoria Is., Zone 1), VK6AP, VP3HAG, 7NH, VQ3BVF, YN4CB, YS1MS.

CW: FM7WF, HL1US, KX6BA, PK6LN, UL7AB. (*Rx : S.*640.)

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

PHONE: CS3AA, EQ3FM, FF8PM, HI6EC, HS1SS, HZ1AB, KG6USA, MI3JK, PK4DA, PZ1QM, 1Z, TG5DM, 9AD, UG6AB, VQ3BVF, VS1AD, 1AX, 1CK, 2BS, 6BI, 9AD, YS1FA, 1MS, ZD4AD, ZP5AR. (*Rx : S.*640.)

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

PHONE: AR8SS, CR6AV, EA8AP, EQ2L, MF2AA, TA3FAS TF5TP, UA1KAI, VK2KS, VQ2HW, 3BVF, 4RF, W6AA, ZS6DW, 6Q, 4X4BI. (*Rx :* 0-*V*-1 *Battery.*)

G. Syms, 5 Torquay Grove, Woods Moor, Stockport, Cheshire.

PHONE: CE3AT, CN8EI, EA8HS, EK1JC, FA8PM HI6EC, HK3FJ, HP1JS, HZ1HZ, KP4JF, LU4MG, MI3KV, OX3BD, PJ5FN, TI2TG, VE8MP, VK3SB, VO2W, VP5RS, 6CDI, VQ4AA, VS7SV, YV5AB, ZC6DH, ZP2AE. (*Rx : Eddystone* 400*X.*)

J. R. Paul, Nethercourt, Sway Road, Lymington, Hants.

PHONE: C3HW, EP3FM, FF8PM, HC1FG, HI6EC, HK1AR, HP1EA, KG4AK, KP4JM, KZ5NO, MD7HV, OA7KM, TG9AT, VK2AGW, VO3X, 6VB, VP2CA, 4PI, 9NN, VS6BI, XE1AC, YK1AA, YN4CB, ZD1SS, 4AD. (*Rx : S.*640.)

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

PHONE: CX2CO, HC1RK, HP1EA, 1GD, HZ1KE, OA4AO, 4BA, 4DE, 4M, PZ1Z, TI2RC, VP3MCB, 6AL, 6CDI, 6MI, 6MO, 7NH, VS2CU, 7BR, 7SV, XE1AC, 1CQ, YK1AD, YN4CB, ZD4AD. (*Rx : RF.*24 *into modified R.*208.)

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

CW: FM7WF, 8AD, FY7YB, KG6DI, 6GD, 6HG, KX6BA, PK1RI, 1TC, 3SM, 6LN, PJ5TR, UL7AB, VQ8AU, VS1BJ, 1BX, 6AC, 7NG, 7PM, VU2MD, 2FU, 2RX, 2CJ, 2NG. (*Rx : S.*640.)

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

PHONE: CO6BD, CS3AA, EA8AW, JA2BL, LU5JF, PY8GR, SVØUN, VE7VO, 8MB, 8NF, VK5RN, VP3MCB, 6MO, VQ4SC, W6ABV, 6AD, 6CHJ, 7HTB, ZC6DH, ZL2BE.

CW: UAØPA, VQ3SS, 8AU, YI2UW. (*Rx : S.*504.)

E. S. Conduit, Avalon, Salisbury Road, Blandford, Dorset.

PHONE: CX2CO, CO2MG, HK1DX, 5DV, HP1AP, LU2OC, OX3BD, TI3OE, VE8MP, 7AAD, 8NF, VP3CW, 4NF, 5AY, 6CDI, 7NH, VK3NG, XE2W, YV5BT, 5AB, 5BO, 8AD, ZE2KH, ZD1SS, ZB2A, 4X4CZ. (*Rx : S.*750.)

R. J. Brooker, 77 The Cottages, Rosendale Road, S.E.24.

PHONE: CS3AA, CP1AM, EA6BA, HC2KQ, HK3DA, KG4AK, OQ5BR, OY3IGO, PK4DA, UG6AB, VQ4RF, VS1AX, 6BI, YS1ES, XE1KB, ZD1SS.

CW: UA9KCC, UI8KAA. (*Rx : 4-valve Battery superhet.*)

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

PHONE: CE3GA, CM9AA, CS3AA, FF8MM, HC1TM, HK1CL, 1DZ, 5ED, MI3AB, PK4DA, TA3GVU, TF5TP, TI2TG, VP4TJ, 6SD, 7NH, VQ4RF, VS1AX, 6BI, 7BR, 7SV, YN4CB, YS1FA, 2SA, ZD4AD. (*Rx : 5-valve superhet.*)

F. N. Baskerville, Green Lane, Formby, Lancs.

CW: AP2F, 2N, CRØAA, FF8JB, FK8AC, FM7WF, HP1LL, HR2HZ, JA2CU, 6IRO, KG6GC, KH6ES, 6RR, 6VP, LU1CA, OA4CL, PJ1UF, PK1RI, TG9AD, TI2PZ, VE8AW, 8MY, 8NQ, VQ8AS, 8AU, VR1A, 1C, VS1BJ, 2CO, 6BO, 7GI, 7KR, VU2AT, XE2HN. (*Rx : Home-built 9-valve superhet.*)

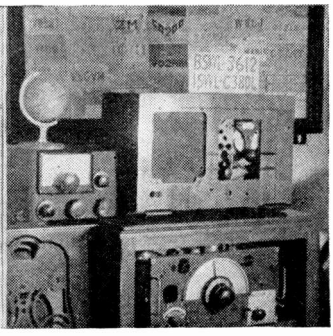
J. P. Warren, 14 Francis Road, West Croydon, Surrey.

PHONE: CE3HW, CR6AI, EA6AS, EQ3FM, HP1GD, KH6IJ, 6OR, M1B, MD7HV, OA4AT, 4DE, PJ5RX, PZ1Z, TG9AD, TI2RC, VE8MP, VQ3BVF, VP3MCB, 7NH, VS7SV, XE1HC, 2NF, YN4CB, ZD1SS, 4AB. (*Rx : R.*208.)

A. W. Machin, 147 Usk Road, St. John's Hill, Battersea, London, S.W.11.

PHONE: AR8BC, CN8MI, EA8AY, FA9WU, JA5AL, OX3GE, OY3IGO, VQ3BVF, 4RF, VS6BI, 7BR, YV5AY, XE2GZ.

CW: ZD7AN.



SWL Stations

NO. 34

THE subject of our story this time is not only an OT, for he is now 63, but also an SWL of long standing. W. Butler, 220 Waterloo Road, Cobridge, Stoke-on-Trent, Staffs., got himself snarled up in DX during those early days when we used to lose sleep listening for KDKA on 60 metres and WGY on the medium-wave BC band. The next step was a short wave adaptor which opened up the bands below 100 metres for W.B. and kept him going till before the war.

With no less than five members of his family serving, it was natural that one of them should introduce him to the R.1155, and in 1947 W.B. once again got going on the short wave bands—with about ten times the enthusiasm and urge he had ever had for it before ! A local amateur transmitter gave him much practical advice and assistance, and the upshot of it all is that W.B. now has a very nice collection of QSL cards ; as at the end of May, he had some 75 countries confirmed in 30 zones, all on phone and mainly on the 14 mc band. His SWL'ing has made him firm friends in many parts of the world, and W.B. sums it all up by saying that for him as an SWL, Amateur Radio is "a clean, wholesome and most friendly hobby, particularly for the stay-at-home family man."

Readers will join us in wishing OT SWL William Butler long years of successful DX on the short wave bands—and we also hope in, say, twelve months from now, that we shall be recounting his experiences and results during the previous year.

RESULTS WITH CONVERSIONS

Readers generally are reminded that they can always help us considerably by letting us know how they have got on with the conversion designs so frequently published in these pages—not only the difficulties and failures (of which we do hear), but of successes, results obtained, particular snags encountered and suggestions generally on the whole subject of conversion data. To some, these articles are not sufficiently detailed, though to others they give an unnecessary degree of detail. On the other hand, we do know that a great many readers follow these designs exactly as published and get entirely satisfactory results —but *we* only hear about it when things go wrong !

Send your comments to The Editor, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.

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.

AG2AB *Sgt. Doty, Hq. 351st Inf. TRUST, APO, 209, c/o P.M., N.Y.C., U.S.A.* 14 and 28 mc phone, 1800-2359 GMT, and weekends.

CO7RQ *Ramon Gonzalez, Punta San Juan, Camaguey, Cuba.* 7000, 14310 and 28350 kc phone.

CT1UU *Travessa Monte Louro 48, Porto, Portugal.* 7, 14 and 28 mc phoné and CW.

DL1IY *Hans Ristau, Ochsenkamp, Husum, Germany* Stability of 7, 14, 28 mc CW, 1830-2030 GMT.

DL2LM *Radio Club, No. 1 Wireless Regt., R. Sigs., B.A.O.R.* 12. 7 and 14 mc CW, 0600-0100 GMT. Details of keying, QSB and condx.

EA1BU *Real 68-1, La Coruna, Spain.* 14 and 28 mc phone and CW, at 1200 and 2300-2359 GMT.

EA4DA *Fuencarral 134, Madrid, Spain.* 7120, 14240, 28480 kc phone, 1400-1500, 1800-2300 GMT.

EA5AE *Calle Dr. Gil y Morte 14, Valencia, Spain.* Reports on 7, 14 and 28 mc phone and CW.

F9ME *113 rue Boutillerie, Amiens, Somme, France.* 3·5, 7 and 14 mc phone and CW, 144·18 mc CW, 0530-0630 and 1700-1830 GMT.

FN8AD, VU2AX *D. S. Seal, Hatkhola, Dayerdhar, Chandernagore, French India.* 14050, 14100, 14120, 14280, 14300, 14361 and 14370 kc phone and CW, 0200-0600, 1100-1400 and 1700-1900 GMT.

GM3EMV *240 Braidcraft Road, Pollok, Glasgow, S.W.3.* 14 mc CW, weekends. Reports outside Europe.

G3ENM *6 Albert Quadrant, Weston-super-Mare, Som.* 3·5 and 7 mc CW, 1800-1930 GMT, Sundays 0900-1100 and 1400-1500 GMT.

G3FHE *Cornerways, The Friary, Old Windsor, Berks.* 3·5, 7, 14 and 28 mc CW, 0515-0545, 1530-1730 and 2030-2130 GMT.

G3FZX *52 Hollam Road, Milton, Southsea, Hants.* 7 and 14 mc CW, 1700-1930 GMT, and weekends.

G3GHA *15 Montrose Avenue, Whitton, Twickenham, Middlesex.* 14 and 28 mc CW, after 1700 GMT, and weekends. Reports from Overseas.

G13GRD *21 London Road, Belfast.* Reports on 1898 kc, 7, 14 and 28 mc QRP CW transmissions.

G6DY *12 Broadshard Lane, Ringwood, Hants.* VFO-controlled 7, 14 and 28 mc phone.

HK1DZ *Galo Dugand R., P.O. Box 59, Barranquilla, Colombian Republic.* 14330, 14345, 14360 and 14390 kc phone, 0900-1100 and 1500-1900 GMT.

I1THW *Via Zecca N.7, Messina, Sicily.* 7 and 14 mc phone and CW, at 0700, 2000 and 2300 GMT.

I1YAW *Via Gambini 27, Trieste.* Modulation of 7, 14 and 28 mc phone, 0800-2300 GMT.

JA2KK *J. Ziglinski, 71st Sig. Serv. Bn., APO. 500, c/o P.M., San Francisco, Calif., U.S.A.* 14 mc phone and CW, 0700-1200 GMT.

KR6CO *O. Fought, APO. 239, c/o P.M., San Francisco, Calif., U.S.A.* Reports on 28 mc phone.

KZ5FL *Box 124, Balboa, Panama Canal Zone.* 28 mc phone, 2130-2300 GMT, weekends 1400-2300 GMT.

LU5DF-LU7DAM, LU8CW-LUØAI *P.O. Box 3347, Buenos Aires, Argentina.* 14 mc phone, 0600-1200 GMT; 28 mc phone, 1100-1900 GMT.

MD2GC *L. Risban, APO. 231, c/o P.M., N.Y.C., U.S.A.* 28176, 28200 kc phone, 1700 GMT and weekends.

OK1MB *Praha XIV, U Krizku 8, Czechoslovakia.* 3·5, 7, 14 and 28 mc phone and CW, 0500-0600, 1130-1230 and 1700-2359 GMT.

ON4IV *Dorp Oost 50, Zwyndrecht, Antwerp, Belgium.* 3·5, 14 and 28 mc CW, at 2000 GMT.

ON4OD *5 Eiensluisstraat, Zeebrugge, Bruges, Belgium.* Reports on 7 and 14 mc CW.

PAØZQ *Oosteinde 144, Voorburg, Holland.* 3·5 mc QRP CW, 144·96 mc phone and CW, 1930 GMT.

PK3JF *Djalan Andjasmoro No. 3, Surabaia, Java, Indonesia.* 28410 kc phone, 1200 GMT onwards

PY2ADT *P.O. Box 261, Marilia, Sao Paulo, Brazil.* Reports on 28·4-28·5 mc phone.

PZ1AL *Costerstraat 84, Paramaribo, Surinam.* Reports on 14 and 28 mc phone and CW.

SM6ADV *Torggatan 17, Vaargaarda, Sweden.* 3·5 and 7 mc CW, afternoons, Sunday 0700-1400 GMT. Give details Rx and antenna.

SM7AOD *Arkelimaestargatan 25, Karlskrona, Sweden.* 14 mc phone and CW, at 2000 GMT.

VE3BYF *473 Scarborough Road, Toronto, Ontario, Canada.* Approx. 14250 and 28325 kc NB. FM phone, 0001-0300 and 1700-1830 GMT.

VE4MF *Box 95, Binscarth, Manitoba, Canada.* 28012, 28048, 28076, 28100 kc CW, 1600-2100 GMT.

VK3XB *24 Parslow Street, Malvern, S.E.4, Victoria, Australia.* 14 mc CW, 0530-1200 and 2030-2100 GMT. Comparative reports with other VK3.

VP1AA *Box 178, Belize, British Honduras.* 14120 kc QRP CW, around 1200 GMT.

VQ4WLH *W. L. Hitchings, Box 30, Eldoret, Kenya.* 14020 and 14070 kc CW, 1800-2030 GMT. Reports especially from N. Wales.

W1BX *50 Union St., Belfast, Maine, U.S.A.* 14088, 28100, 28880 kc phone and CW, 1600-1800 GMT.

W1KUC *73 Warren Street, Revere, Mass., U.S.A.* Reports on 28 mc phone.

W1RWB *J. Wallace, River Road, RFD. 2, Richmond, Maine, U.S.A.* 7·1, 14·1 and 28·8 mc phone and CW, 1700-0500 GMT, quality of modulation.

W3NNX, *1306 E. 36th Street, Baltimore, Md., U.S.A.* 28-30 mc phone, 2100-0030 GMT.

W6FCS *El Toro A.R.C., M.C.A.S., Santa Ana, Calif., U.S.A.* 14 and 28 mc phone and CW, 1600-0100 GMT. Comparative reports.

W8FDP *236 Superior, Youngstown, Ohio, U.S.A.* 28562-29062 kc phone, weekends 1300-2300 GMT.

W9FWV *5404 So. Peoria St., Chicago, Ill., U.S.A.* 14 and 28 mc CW, weekends 0001-0200 GMT.

W9JTY/MM *S.S. Fort Mims, Calif. Oil Co., Post Box 2, Barber, N.J., U.S.A.* 28-29·3 mc phone and CW.

W9TPA *701 Dewey Street, Harvard, Ill., U.S.A.* 28 mc phone, at weekends. Quality, any QRM.

WØAFU *1558 South National, Springfield, 4, Mo., U.S.A.* VFO-controlled 7 and 14 mc CW.

XZ2ST, XZ2TS *39 Sandwith Road, Rangoon, Burma.* 14340-14350, 28620, 28660, 28808 and 29320 kc phone, 1300-1530 GMT. Accurate QSA reports.

XZ2SY *c/o BCM/QSL, London, W.C.1.* 54 mc phone, operating 1300-1500 GMT.

YJ1AA *F. H. Palmer, Port Vila, New Hebrides.* 14397 kc QRP phone, 0600-1000 and 1900-2100 GMT.

ZE2KY *R.A.F. Station, Kumalo, Bulawayo, S. Rhodesia.* 7, 14 and 28 mc phone and CW, 1600-1800 GMT.

ZL1CII *13 Budock Road, Auckland, S.E.5, New Zealand.* 3·5, 7, 14 and 28 mc phone and CW, 0700-0900, and 2200-0200 GMT.

ZL3KA *77 Corson Avenue, Christchurch, New Zealand.* 28 mc phone, 1900-2359 GMT. Comparative reports.

ZL3NQ *6 Braemar Place, Christchurch, New Zealand.* 28 mc phone and CW. Comparative reports with ZL3.

ZS6VX *28a 12th Ave., Parktown North, Johannesburg, S. Africa.* VFO-controlled 14 and 28 mc phone and CW, 1600-2200 GMT.

3V8AV *Goriou, Ghadames, Territoire du Fezzan, Tunisia.* 14 mc phone, 1800-2130 GMT.

4X4DF *A. Bar-Giora, Fphratast, Talpioth, Jerusalem, Israel.* 7 and 14 mc CW, 1900-2200 GMT.

THE VHF END

by **A. A. MAWSE**

New DX Records on Two— Six Countries Heard June 28/29— Increasing SWL Activity on VHF— Calls Heard and Tabulated Results

THE final week of June saw a number of fine openings for DX on 2 metres and this time it was the southerners who seemed to have the best of things. Outstanding days were undoubtedly June 28 and 29, when much Continental DX was heard. DL3FM (Mulheim-Ruhr), DL3NQ (north of Heidelberg), and DL4XS (Wiesbaden) were all logged in London and the South-East. G5BY (Bolt Tail, Devon) was heard working DL3FM to make a new European record of 470 miles. Signals from the German stations were up to S8 at times and reasonably steady.

Less exciting, but nevertheless noteworthy, was the reception of signals from F, ON and PA, often at S9. F3LQ (Lille) using a folded-dipole for aerial was an amazing signal, while PAØEO (Amsterdam) provided some excellent phone on the second night, working as far as G2XC (290 miles). The Belgians were also well represented with ON4HN, ON4IF and ON4YV consistently good. Some of us also heard GW2ADZ as well as numerous G's, and so in all logged the six countries in a few hours.

The foregoing is not, of course, the complete list of stations heard across the Channel and the North Sea. Conditions were also reasonably good for Continental reception on July 2, when PAØPN, PAØUN, PE1PL (Dutch portable), F8GH, F8NW and ON4YV were amongst signals reported as heard in southern England.

With all this DX heard and worked on this side of the Atlantic it is interesting to report that a new American 2-metre record was set up on June 24, when W5VY and W8WXV worked over a path exceeding 1,180 miles. As it is believed some of our transmitting friends occasionally glance through this column it may be added that W8WXV was using 75 watts to an 829B and a corner-reflector aerial, while W5VY had a full kilowatt into a pair of 4-125A's and a 4-over-4 array about 55 feet up.

At the same time the W's have been making serious efforts to overtake British 70 cm. achievements and appear to have got within a few miles of doing it, as W1PBB worked W2QED on June 13 over a 156-mile path. This information from the States is due to the kindness of W2PAU of *CQ*, to whom many thanks.

Around the Stations

A. L. Mynett (Wembley) considered June 4 the best day he has experienced for stations to the west. G5BY was 25 dB over S9 for 1½ hours and was actually cross-modulating G2AHP one mile from A.L.M. G5BY was, in fact, the loudest signal from over 20 miles that A.L.M. has ever heard on 2 metres! When G5BY changed over to 70 cm., his 145 mc transmission was still audible at S9. A.L.M. also was lucky enough to be on during the excellent conditions at the end of the month and heard DL3NQ at 405 miles. He hopes to get the necessary QSL from the DL to put in a claim for the "DX Table." On 70 cm. G2DD (5 miles), G5DT (7 miles) and G6LK (30 miles) have been heard. Third harmonic from G3BLP at 17 miles is always RST 559. On 2 metres the "Stations Heard" score is 253.

E. A. Lomax (Bolton) found that June had its moments, but lacked the excitement of May. The North however did not get its quota of the good things this time. G5BY was heard at S9 asking for 70 cm. tests. E.A.L. himself is preparing for that band by modifying a

BEST TEN OF THE MONTH
***(June* 1950)**

Operator	Location	Total Miles	Best DX (Miles)
A. L. MYNETT	Wembley	2,151	405
E. A. LOMAX	Bolton	1,928	230
A. W. BLANDFORD	Mitcham	1,129	180

For this monthly table send details of the best ten DX signals heard on two metres. Signals may be logged once per day (0600 to 0600). Give date, time and details of all signals.

Some Two-Metre Frequencies
(Measured by R. Rew)

G2ATK	144·641	G3VM	144·303
G2FWW	145·489	G5BY	145·506
G3BMY	145·139	G5VN/P	144·539
G3CXD	144·616	G6SN	145·165
G3DUP	144·986	G8KL	144·586
G3EHY	145·261	G8SB	144·264
GW2ADZ	144·303		

Accuracy claimed is plus or minus 2 kc.

BC788 as a converter. Later he hopes to tackle the G5BY type circuit, as he has acquired a R89/ARN5. Nothing was heard of the DL's on Two in spite of a steady watch. Indisposition during part of the month restricted listening activities somewhat. E.A.L. comments on the difficulty he experiences in extracting QSL's from certain of the transmitting folk, especially some of the "county climbers."

L. A. Whitmill (Harrow Weald)—to whom apologies for mis-spelling his name on recent occasions—found conditions very good in general. His station score has risen to 173 and G6LX/P in Hereford and G8KZ/P in Rutland gave him two more counties. He was on holiday during the June 28 and 29 Continental opening.

R. Rew (Birmingham) has been making some frequency checks on the two-metre band to an accuracy of plus or minus 2 kc. A list of some of these is printed this month as it may help others to locate the DX. His receiver is a CV66, 6AK5, 9001 and 9002 line-up and the beam is a 6-element close-spaced type in the roof space.

L. W. Ross, who used to write to us from the west country, has migrated to Kenya, where he finds the VHF situation not too brilliant, although some of the VQ3 and VQ4 stations are considering starting on 2 metres. L.W.R. is located about 6,500 feet up on the southern slope of Mt. Kenya and almost on the Equator. No doubt the DX Scribe will be hearing from him, but your conductor lives in hopes that a VHF report will come along one day !

L. B. Bailey (Stockton-on-Tees) wants a 6J6 pre-amplifier circuit for his converted RF27 unit. He has heard G3DMK and G5XT on Two and has great hopes for the future.

J. E. Harman (Eastbourne) has now got a G2IQ-type converter working and is impressed with its improved signal-to-noise ratio compared with his previous Rx. He

TWO-METRE CALLS HEARD

R. L. Bastin, 101 Aldermans Green Road, Coventry.

Phone and CW: **0-50 miles :** G2AOK/A, 2ATK/P, 2BFT, 2FWW, 2HCG, 3ABA/P, 3BPW, 3DUP, 4NB, 4RK, 5JU, 5ML, 5SK, 6CI, 6SN, 8QK, 8QY.

50-100 miles : G3AMT, 3CZV/P, 5RP/P, 6JK/P, 6NB/P, 6XM.

100 to 150 miles : G3BLP, 8KZ/P. (*June* 1 *to July* 2. *EF*54, *EF*54, 955 *osc.*, 27 *Unit converter into BC*342-*N at* 9·8 *mc. SWL* 4-*ele. beam.*)

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

DL3FM, 3FM/P, 3NQ, 4XS/3KE, F3DC, 8AA, 8GH, 8KI, 8LO, 8LQ, 8NW, 8OB, 8OL, 8QL, 8JR, 9AE, 9DI, 9MX, G2AJ, 2AOL, 2AVO/A, 2CIW, 2CPL, 2FJD/A, 2KF, 2MV, 2NH, 2UJ, 2WS/P, 2XC, 2XV, 2XV/P, 3AFV, 3AXL, 3BLP, 3CGQ, 3CQL, 3DAH, 3DGN, 3FIJ, 3GBO, 3GHI, 3GSE, 3WW, 4HT, 4IB/P, 4MW, 5BY, 5LK, 5MP/P, 5MR, 5UD, 6LL, 6LO/A, 6LX/P, 6NB, 6WU, 6VX, 8KG, 8SY, 8TB, ON4BZ, 4HC, 4HN, 4IF, 4XB, 4YV, PAØAJA, ØCB, ØHRL, ØLDG, ØOD, ØPN, ØPU, PE1PL. (*June* 1 *to July* 4. *SWL* 4-*ele. wide-spaced beam. G2IQ converter.*)

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

G2ATK, 2FWW, 3BMY, 3CXD, 3DUP, 3EHY, 3VM, 5BY, 5VN/P, 6SN, 8KL, 8SB, GW2ADZ. (*June* 4, 18, 21 *and* 25. *Rx : CV*66-6*AK*5-9001-9002 *converter into comm. Rx on* 12·5 *mc.* 6-*ele. beam in roof.*)

E. A. Lomax, 28 Welbeck Road, Bolton, Lancs.

G2AJ, 2BUJ, 2FZU, 2HCD, 2MV, 2OI, 3ABA, 3AHT, 3AOO, 3ATZ, 3AYT, 3BLP, 3BW, 3CGQ, 3CHY, 3CSC, 3CXD, 3DA, 3DCI, 3DMU, 3DUP, 3ENS, 3EHY, 3FMI, 3GMX, 3WW, 4HT, 4LU, 4MW, 5BM, 5BY, 5JU, 5TP, 5RW, 5VN/A, 5VN/P, 5WP, 6NB, 6TL, 6VX, 6XM, 8KZ, 8SB, 8SY, GW2ADZ, 5SA. (*Rx : 6J6 into AR*88 *on* 10 *mc. Aerial City Slicker* 40 *feet high. QTH* 650 *feet a.s.l.*)

R. A. John, Norton Lodge, West Cross, Swansea, Glam.

G2AJ, 2AOK/A, 2BUJ, 3ABH, 3EHY, 3EJL, 3RI, 5MA, 5WP, 6XM, 8DM/A, 8IL, GW2DUR, 3FSP, 5SA, 8SU. (6*AK*5 *RF*, 6*AK*5 *Mixer*, *EC*52 *osc*, 28 *mc IF.* 3-*ele. beam.*)

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

G2DSW, 2DTO, 2FB/P, 2HDZ, 2KF, 2NH, 2XC, 2YC, 3ABA/P, 3AHB/P, 3AIU, 3BCU, 3BNC, 3BPM, 3CGQ, 3EBW, 3EHY, 3FAN, 3FXG, 3GBO, 3SM, 4CI/P, 4HT, 4IB/P, 4MW, 5BY, 5KH, 5LK, 5LN, 5MA/P, 5TP, 6JK, 6JP, 6KB, 6LX/P, 6PR, 6SC, 6WT, 6XM, 6XM/P, 8KG, 8KZ/P. (6*J6 preselector into RF*27 *into S*640. 3-*ele. beam* 28 *ft. high. May* 29-*July* 2.)

A. L. Mynett, 29 Sunleigh Road, Alperton, Wembley, Middx.

50-100 miles : G2AOK/A, 2ATK, 2DSW, 2FNW, 2HCG, 2RI, 2XC, 2XS, 2XV, 3ABH, 3AVO/A, 3BHS, 3BK, 3DAH, 3DEP, 3DUP, 3EJL, 3ENS, 3FAN, 3RI, 3WW, 4MW, 5MR, 5SK, 5UD, 8DM/A, 8IL, 8SY.

100-150 miles : G2CPL, 2IQ, 3EEZ, 3EHY, 5RW, GW3EJM.

150-200 miles : F3LQ, 8GH, G2BMZ, 3AHT, 5BY, 6WT, GW2ADZ, PAØPN.

200-250 miles : ON4HN, 4IF, 4YV.

400-450 miles : DL3NQ. (6*J6 converter. Aerial : Two* 3-*ele. very wide-spaced Yagis stacked, at* 35 *ft.* 100 *ft. a.s.l. May* 29-*June* 29.)

has managed to persuade a couple of local Tx men to erect the *Short Wave Listener* wide-spaced four-element beam and according to J.E.H. they like it very much. One of them made some tests on the positions of the feed points and came to within a ¼-inch of the measurements given in the original description. J.E.H. has heard several DL's and at long last G2XC and G5BY have been received through a 400-foot hill.

P. J. Towgood (Bournemouth) has managed to hear signals from PA. On June 29 he logged PAØPN, PAØAJA and F8GH. In addition, G5RW was pulled in on May 31 to give P.J.T. a new county—Derbyshire. June 11 was, he considers, the best day for northern signals, G3BW being logged, in addition to several stations in Lancashire.

R. Bastin (Coventry) thought activity much higher during June, and this, he says, made the band sound a lot better. He has scrapped his 6J6 pre-amplifier and is building a CV66 GGT stage on the front of his existing converter. He also has the *Short Wave Listener* beam working satisfactorily and finds it much superior to the 67-foot wire. A portable expedition to the South Coast is contemplated with a view to hearing some Continental DX. Well, if the mountain won't go to Mahomed . . . !

A. W. Blandford (Mitcham) has thoughts much different from R.B. on the subject of activity, for he comments that his log is very poor this month due to inactivity. A.W.B. must have been unfortunate in his listening times (or maybe it is his inability to read CW ?) for whenever your conductor has been able to listen during the past month there has been plenty doing and nearly always some DX coming through. G4CG has been heard well on 70 cm. by A.W.B., whose station total on 2 metres is 190.

From down in the West, R. A. John (Swansea) puts in a nice two-metre calls heard list, and has overheard G5BY-G8DM/A and G3EHY-GW5SA fixing 70 cm. schedules. R. A. J. would like to get into touch with A. L. Mynett on the subject of piston-tuned circuits for Seventycems.

General

The news that there is so much Continental activity on two metres should serve to encourage still more readers to become active on this band. It is now entirely possible to hear at least *eight countries* from almost any part of England. DL, F, G, GM, GW, ON and PA stations are not to be reckoned as impossibilities, and there is known to be 144 mc activity in Italy, Poland and the Scandinavian countries. Almost everywhere the transmissions are crystal-controlled and CW as well as phone is used. In fact the Continental transmissions heard on two metres in recent weeks are vastly superior to many that were received from the same countries on the old five-metre band.

Let us know how many countries you have heard on Two, and if it seems worth while a "Countries Heard" table can be started.

Finally—

In conclusion, your conductor would like to ask for the co-operation of all correspondents in sending their monthly reports in *good time.* Writing too early is, of course, asking for trouble, as such a procedure almost always results in a sudden spell of amazingly good conditions and broken records which necessitate a second letter—but it does cause your A.A.M. to have a most hectic week-end if the mail arrives a day later than that given in this column as "the latest." It really is the latest ! So for next month's reports please send them to reach A. A. Mawse, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1, **by August 3,** at the very latest. Only news of outstanding importance can be accepted after that date.

TWO-METRE DX

G. E. Magrow (Dawlish)	**PAØUW**	**387 miles**
R. Hastie (Hayes)	**F3DC**	**221 miles**
R. A. John (Swansea)	**G3BLP**	**168 miles**
A. F. Hayton (Palmers Green)	**G5BD**	**116 miles**
R. L. Bastin (Coventry)	**G3EHY**	**108 miles**

Note: All claims for this Table must be accompanied by QSL card to verify and must be for distances in excess of 100 miles.

TWO-METRE COUNTIES HEARD

***Starting Figure,* 10**

P. J. Towgood (Bournemouth)	36
A. L. Mynett (Wembley)	35
R. Rew (Birmingham)	30
L. A. Whitmill (Harrow Weald)	28
A. W. Blandford (Mitcham)	26
R. L. Bastin (Coventry)	13

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

DX *broadcast*

MONTHLY COMMENT BY R. H. GREENLAND, B.Sc.

Spanish Broadcasting is represented in this country by K. M. Dobeson (BM/EABC, London, W.C.1), who asks for more detailed reception reports, particularly in regard to the actual programme details. This is what he writes : "I should like very much to appeal through your columns for reports giving not only reception conditions, but mostly for criticisms of the programme content and style, and suggestions for improvement. I am referring to the English language broadcasts from Radio Nacional de Espana, Madrid, on 9368 kc at 2015 and 2300 GMT. We receive plenty of ordinary reports and a great variety of questions, but relatively few *complete* reports. I read a considerable number of reports, and some of them are very good, particularly on reception conditions. A very large proportion of them are quite useless from the station's point of view, giving little information of use to engineers, announcers and programme arrangers, and unfortunately, being sometimes illegible !

"If listeners want a high proportion of verifications and, at the same time, to feel that they really are of assistance—as many are—they should send complete reports, giving slogan of station, frequency, time, reception conditions in code or in plain language—often the latter is preferred—and a criticism of the programme content and, in addition, if possible, some suggestions for improving the programmes.

"Although I am concerned here only with Spanish stations, my remarks apply to all stations, of course. Radio Nacional de Espana, Madrid, is at the moment planning increased schedules and improved programmes and I can assure listeners that their criticisms and suggestions will be welcome. Four 100-kW short wave stations will be inaugurated next October at Arganda, the site of the existing 120-kW and 40-kW stations.

"Test schedules will be announced later. An English language version of the monthly bulletin sent free to listeners by Radio Nacional de Espana is now sent to listeners who request it in place of the Spanish edition."

Thus K. M. B.. and, of course, as he says, his remarks and suggestions apply equally to reporting any S/W BC Station.

A. Yeomans (Desborough, Northants) noted Radio Espana at S9 at 2100 on May 21, and C. Findley (Countesthorpe, Leics.) heard them at 2025 on June 9 with an interesting commentary on the Corpus Christi procession and celebrations at Toledo.

We welcome a newcomer to the fold, I. Griffiths, of Tessy House, Hughes Hallett Street, Qui-si-Sana, Sliema, Malta G.C. ; he says that EAJ3, Radio Mediterraneo, Valencia, 7037 kc is a fine signal around 1915. I. G. writes : "I would like to correspond with as many BC SWL's as possible in any part of the world. Malta seems to be a dead loss for SWL's. I have not met one here yet ! "

Radio Sweden has sent to the Rev. S. W. Bowen (Llanllechid, North Wales) a card verification giving some radio facts, a map and the music of their interval signal, comprising "the first notes of a song attributed to the Swedish 18th century composer and poet, Carl Mikael Bellman." From Radio Nederland, too, he has received a photograph of PCJ's rotating beam aerial, which can be directed to any part of the world. A. W. Gilbert (Fordingbridge, Hants) sends us the times of the Czechoslovak English language sessions ; they are : 1115-1130 (11840 kc), 1915-1945 (9550 kc), 2030-2045 (9550 kc). 2215-2230 (11840 kc and 9550 kc). He also says that Budapest's English News is now at 2100 over 9820 kc and 6247 kc. The Hungarian Broadcasting Corporation has sent the Rev. S. W. Bowen a photograph of the Statue of Liberty on Gellert Hill ; their address is : Brody Sandor- utca 7, Budapest VIII., Hungary. S. Neeld (Walton-on-Thames) forwards schedules for "Polskie Radio" and "Radio United Nations," which we publish elsewhere.

Copenhagen is reported by P. E. Woolmer (Grantham) to be using 15165 kc to Latin America from 0001 to 0010, and to the Far East from 1000 to 1100. This country is supposed to have a special programme on the air every second Tuesday in the month,

ALL TIMES GIVEN IN THIS ARTICLE ARE GMT EXCEPT WHERE STATED

The imposing building that houses the studios, offices and control equipment for Radio Ankara, Turkey.

entitled : "Denmark Calling World Listeners," which includes DX News. The times are : 0303-0330 and 1020-1050 over OZF, 9520 kc and OZH, 15165 kc. P. E. W. also gives the following times for Finnish broadcasts : 9550 kc, 15190 kc, 17800 kc (0300-0500, 1200-1300) ; 15190 kc, 17800 kc (1300-1310, 1645-1745, 2100-2200) ; 6120 kc (0430-0610, 0850-1210, 1500-2100).

From farther south, in Germany, R. A. Savill (Sevenoaks, Kent) has received a verification card with composite photographs of the station from Radio Frankfurt, 6190 kc ; the address is : Hessischer Rundfunk, Frankfurt-am-Main 1, and I. Griffiths has logged Mitteldeutscher Rundfunk, Leipzig, 9730 kc, with News at 1100. He says that Luxembourg on 15350 kc with French only is reasonable at 1200 ; the Rev. S. W. Bowen sends along details of the religious programme, "Bringing Christ to the Nations," heard over Luxembourg long-wave on 1293 metres every Saturday at 2300 and every Wednesday at 1600. We heard one of these religious broadcasts lately over 4VRW, Port-au-Prince, Haiti, 10135 kc, at the early hour of 0215 (Wednesday).

On June 16, at 0515, KZCA, Salzburg, was a powerful signal with a request programme of swing music on a new channel of 9620 kc. At the same time, Athens was logged on 9607 kc with an English News ; B. P. Middleton (Clapham, S.W.11) logged them on an announced frequency of 15360 kc with English News at 1545, as did I. Griffiths also. I. G. heard Radio Dacia, Roumania, 9252 kc, with News in English at 2013, and Radio Monte Carlo with a request programme and English announcements between 2125 and 2205 on 9785 kc.

Africa

Rhodesia is again in the headlines ! I. Griffiths reports receiving at 1615, after a B.B.C. News on approximately 4870 kc, the indistinct direction : "This is Bulawayo calling on 2— metres and 61— metres." J. M. Simpson (Hayes, Middlesex) remarks on the consistency and strength of Southern Rhodesia on 4887·5 kc ; we have heard the latter with the Peer Gynt Suite played by the Hallé Orchestra under Sir John Barbirolli, followed at 1930 by the direction : "This is Rhodesia calling from Salisbury." Northern Rhodesia, broadcasting from Lusaka, is said to be on the air daily from 1500 to 1830 over 3939 kc (400 watts) and 7220 kc (2·5 kW). J. M. S. found Cape Town, 5885 kc, at its best recently ; on June 7 at 2000 it was giving an introductory talk in English prior to an impressive orchestral feature ; at 2030 the call was briefly : "This is Cape Town." The

station broadcasts in English only on Wednesday evenings.

J. M. Simpson has observed CR7BU, Lourenco Marques, with its English commercial broadcasting programmes on 4932 kc after 1830; CR7BJ is now on 9600 kc from 1600 to 1755 daily. The French Cameroons is represented by Radio Douala on 9150 kc, which is on the air every day from 1830 to 2130 on 9150 kc with an output of 600 watts.

B. P. Middleton reports OTM2, Belgian Congo, 9380 kc, with frequent call: "Ici Radio Congo-Belge" in the evenings before 2000, and Brazzaville with fine signals on 11970 kc; P. E. Woolmer (Grantham) supplies a full schedule for their English broadcasts: 0515 on 9440 kc; 1015 on 15595 kc, 17840 kc and 21000 kc; 1600, 1815, 2050 and 2245 on 9440 kc and 11970 kc. A. Yeomans heard VQ7LO on 4855 kc with a fair signal at 1800 on May 29.

Radio Dakar has caught the attention of R. J. Riding (Wednesfield, Staffs), R. A. Savill, B. P. Middleton and I. Griffiths. It is a fine signal on 15345 kc at 1900 (R. J. Riding) and over FHE3, 11897 kc, at 2050 (I. Griffiths). The English News at 1900 is given by a lady reader (B. P. Middleton), and R. A. Savill, who holds their card bearing a coat-of-arms, gives the address as: Poste Fédéral de l'Afrique Occidentale Francaise, Dakar.

On June 3 at 1730, Radio Omdurman, 9746 kc, presented A. J. Jacks of the Sudan Public Works Dept., who gave a talk about the Government's new brick factory in Khartoum; the old and uncertain method of brickmaking by hand will be replaced by the new process involving mechanical mixing and moulding, sun-drying and kiln-baking. S. Neeld has logged Cairo on the less familiar 10055 kc channel (SUV); the programme consisted of gramophone recordings and announcements in English and other languages at 1915. Lastly, there is the Tangier International Zone. Radio International, 6110 kc, is in a bad spot for QRM in the evenings according to R. A. Savill; the "Voice of

TABULATED SCHEDULES

I. Spanish Broadcasting Stations

(*a*) Radio Nacional de Espana, *Madrid*, 15635 kc. 40 kW. 1530-1700 (Except Sundays).
(*b*) Radio Nacional de Espana, *Madrid*, 9368 kc. 40 kW. 1715-0300. English: 2015 (to British Isles); 2300 (to North America).
(*c*) Radio Falange de *Alicante*, 7940 kc. 0·75 kW. 1200-1400, 1900-2300.
(*d*) Radio Club, *Tenerife*, Canaries, 7518 kc. 0·5 kW. 2200-2300.
(*e*) Radio SEU, *Menorca*, Balearics, 7400 kc. 0·1 kW. 1800-2200.
(*f*) La Voz de la Falange, *Madrid*, 7380 kc. 0·2 kW. 1900-2030, 2130-2330.
(*g*) Radio Falange de *Oviedo*, FET22, 7230 kc. 0·25 kW. 1100-1400, 1900-2300.
(*h*) Radio SEU, *Madrid*, EDV10, 7171 kc. 1·0 kW. 1900-2400.
(*j*) Radio Mediterraneo de *Valencia*, 7037 kc. 0·2 kW. 1200-1500, 1900-2300.
(*k*) Radio Nacional de Espana, *Malaga*, 7012 kc. 1·0 kW. 1300-1530, 2000-2300.
(*l*) Radio Falange de *Valladolid*, FET1, 7006 kc. 0·45 kW. 1230-1430, 2000-2300.
(*m*) Radio *Tetuan*, Spanish Morocco, 6030 kc. 1·5 kW. 0730-0800, 1330-1500, 1800-2300.

Programmes in Spanish for all stations (*a*) and (*c*) to (*m*) inclusive. Reports may be sent direct to any of the above or to: K. M. Dobeson, BM/EABC, London, W.C.1.

II. United Nations, Radio Division. Lake Success, New York, U.S.A. English Broadcasts.

To Europe:	1805-1810 (Mon. to Fri.) 1810-1824 (Mon. to Fri.) 1900-1915 (Mon. to Fri.)	WRCA3.	21610 kc.
To Caribbean:	0006-0015 (Mon. to Fri.)	WRCA1. WRCA6.	15210 kc. 9670 kc.
To Australasia:	0430-0435 (Mon. to Fri.) 0435-0450 (Mon. to Fri.)	CHOL. CKLX.	11720 kc. 15090 kc.
To Pacific:	0730-0735 (Tues. to Sat.)	KRCA2. HON1.	9700 kc. 17800 kc.
	0800-0815 (Tues. to Sat.)	KRCA2. HON1.	9700 kc. 17800 kc.

Direct broadcasts of major United Nations meetings, when in session: 1600-1800, 2000-2345: WRCA1, 21610 kc; WRCA5, 11770 kc.

The Radio Division is anxious to establish contact with as many listeners as possible and will gladly acknowledge all communications. A U.N. Verification card and a copy of the Charter will be sent on request.

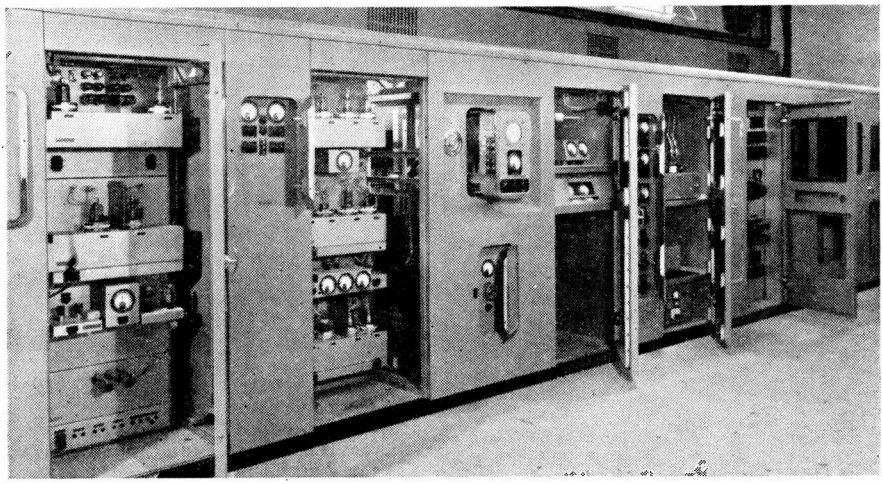
III. Prague, Czechoslovakia. English Language Transmissions (Daily)

1115-1130, 2215-2230: OLR4A, 11840 kc.
1915-1945, 2030-2045, 2215-2230: OLR3A, 9550 kc.
2300-2345: OLR3A, 9550 kc—Night concert.

IV. Polskie Radio, Short-Wave Station Warsaw III. English Broadcast.

6220 kc. 1930-2000.

Monday:	"The Week in Poland."
Tuesday:	Polish Folk Music.
Wednesday:	Press Review.
Thursday:	"Musical Silhouette."
Friday:	"Getting to know Poland."
Saturday:	Next Week's Broadcasts.
Sunday:	"This is the New Poland."



Vision transmitter at the BBC's Sutton Coldfield station ; the modulator stages are at the left, and the RF section to the right. This transmitter is capable of a peak power output of 40 kW.

America" relay is heard by B. P. Middleton on 15210 kc and 15240 kc, opening up at 1415 ; and I. Griffiths hears Radio Africa, 7080 kc, at 2030, with French and Spanish announcements and, on each hour, the time given by Westminster chimes.

West Indies and Central America

ZQI, Kingston, Jamaica, 3480 kc, has been logged on several occasions here. On June 3 at 0300 it concluded a recording of "Variety Bandbox" from Camberwell, London, and on June 16 at 0220 we listened to a talk entitled : "Bach and His Music." Haiti with 4VRW, 10135 kc, has been heard with call in French at 0210, and at 0230 with a first-class orchestral concert. 4V2S, 5951 kc, closed as early as 0250 on June 7, after call in French ; three days later, at 0240, we heard the announcement in English : "Our next programme will be broadcast to-morrow at nine." There followed the playing of some rumbas, an excerpt from Saint-Saens' " La Cygne," four vibraphone notes, the French direction "Ici Radio Port-au-Prince," and to conclude, a March at 0258. Station 4VEH on 9885·5 kc is a new one operating from 2340 to 0200 with a broadcast of devotional services ; there are occasional English announcements, but directions are mainly in Spanish. Reports, which are requested, should be sent to Radio Station 4VEH, Box 1, Cap-Haitien, Haiti. The writer logged this one for the first time on June 23 at 0150, when an address in Spanish was followed by the singing of two verses of a hymn ; signal strength was S8 ! Before closing at 0208, 4VEH's English announcement ran : .'We shall be on the air to-morrow at 10 a.m. Eastern Standard Time, and so—Goodnight ! "

COCW, Havana, 6322 kc, was logged with call : "Say-Oh-Say-Dooblevay" at 0430 on June 6, and R. A. Savill has received a letter-verification (no cards issued) for COBL, 9833 kc ; the address is : Radio Cadena Suaritos, Apartado No. 541, Havana, Cuba.

In Nicaragua, YNVP, 6758 kc ; YNOW, 6850 kc, and YNEQ, 6963 kc, were all logged at good strength around 0320 ; YNCHA, La Voz de Carazo, Diriamba, 8440 kc, was heard at 0337 on May 31, when a cello solo was being given ; this station boasts a lady announcer, closes with a March at 0403, but does not appear to be on the air regularly. YNDG, Léon, is back on its old frequency of 7655 kc ; it was heard closing at 0400 with the following English announcement : "YNDG is on the air daily at 9 p.m. Central Standard Time. Goodnight, Everybody—Goodnight."

In Honduras, HRN, 5875 kc, was noted with call in Spanish at 0215 on June 3. There is a new one in this Republic, namely, HRX, on a frequency of 9000 kc. The call is given every quarter-hour from before 0200 until 0400 and reads : "Hatchay-Erray-Ekis, Radio Comayagua," though there is some doubt about this final word. The following Mexicans have been well heard in the early mornings : XEBT, 9625 kc, with Liszt's Liebestraume

before a trumpet fanfare and "information official" at 0500 ; XEQQ, 9680 kc, with gongs, "Muy buenas noches," and Ravel's Bolero to fade out at 0445 ; XEWW, 9505 kc, with Spanish News at 0503 ; XEBR, Hermosillo, 11820 kc, can also be traced until 0500.

South America

Reports from this continent are widespread. In the south, LRY, Buenos Aires, 9455 kc, was logged by A. Yeomans with English News just before 0700 ; LRU, 15290 kc, has been heard at 0436 with the three musical notes doh-ray-fah followed by Spanish call, "Ellay-Erray-Oo."

R. A. Savill has received a card for CXA19, 11835 kc, and in addition their leaflet depicting Montevideo and the "El Espectador" radio set-up.

The inscription reads : "Under the Southern Cross vibrates in the voice of 'El Espectador' the fervent wish for and the ratification of the Liberty of Man." The address is : Difusoras del Uruguay, S.A., Av. 18 de Julio, 1393, Montevideo. In Peru, OAX4B, Radio Azul Cerro de Pasca, 6530 kc, has been heard signing off at 0520.

HCJB, Quito, Ecuador, has sent C. P. Turner (Crewe) a verification card for a report on their 17890 kc channel broadcast in English from 2200 to 2300 except Mondays. This station is operated by the World Radio Missionary Fellowship, Inc., and its slogan, "The Voice of the Andes," is, of course, widely known. C. Findley informs us that they have a programme of well-known hymn tunes at 2100 on the same channel.

Several times recently we ourselves have logged HC2RL's Wednesday morning programme of operatic music on 6635 kc between 0315 and 0430, at which hour it closed with the words "Good Night" and the Ecuadorean National Anthem. This one, like the new HC2FB, Radio Nacional, 6130 kc, is located in Guayaquil.

C. Findley has received ZYK3's verification from Recife, Brazil. Operating on 9565 kc, this station now broadcasts an English programme daily at 0105. ZYN7, 15165 kc, has an English broadcast from 1900 to 2000 on Mondays, Tuesdays and Wednesdays. J. M. Simpson heard PZC, Paramaribo, 15405 kc, after 2245 with guitar music, and a female announced "Avros Paramaribo" at 2300.

Australasia

ZL3, Wellington, 11780 kc, is reported by C. Findley and C. P. Turner. C. F. hears it regularly, and at 0530 on May 24 he logged a recording of Dame Clara Butt singing *Rule Britannia* in Hyde Park on Empire Day many years ago. ZL4, 15280 kc, supplies C. P. T. with another verification ; the blue card depicts the globe with New Zealand's position on it, and is sent with the compliments of Wm. Yates, Director, New Zealand Broadcasting Service, P.O. Box 3045, Wellington, C.1, N.Z.

J. M. Simpson has heard ZL3 on several occasions at 1815, but best reception appears to be around 0350 ; during the month of June at about this hour we heard several Rugby football commentaries—the British Isles Touring Team versus South Canterbury at Timaru, and versus Wellington, being examples. On June 10 at 0300 an SOS was broadcast for which information was required by the "Wellington Central Police Station, Telephone Wellington 47000."

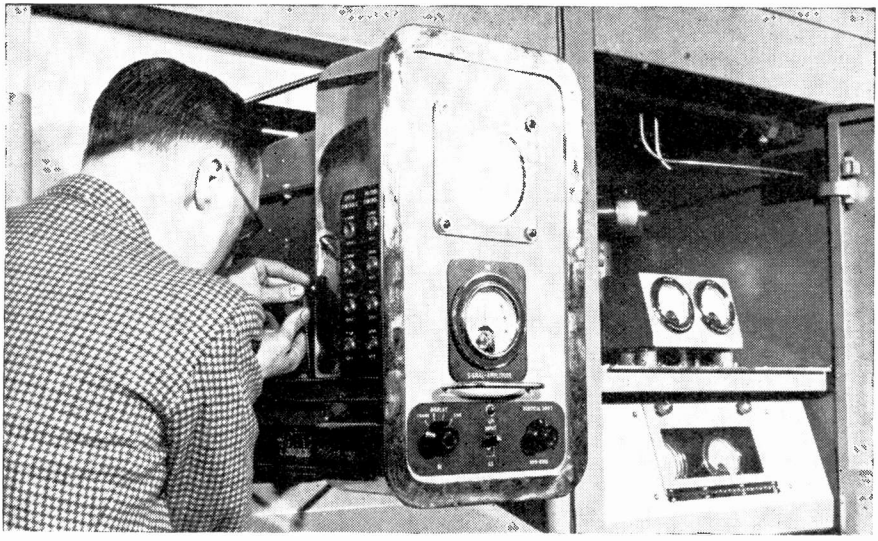
M. Griffith (Baillieston, Glasgow) logged Radio Australia for the first time recently at 1600, with a talk on Australian sheep dogs. A. Evans (Llanddoget, Denbighshire) wants the times of Australian and New Zealand News. Try 0730 (15200 kc), 1430 (11850 kc), 2030 (15200 kc) and 2245 (17840 kc) for Australia, and 0830 (11780 kc) for New Zealand. C. Findley heard Kiddies' Korner from Radio Australia over 15160 kc at 2120 on June 6 ; hints were given on how to make a wireless "crystal" from molten lead with a pinch of sulphur ! D. K. Cocking (Farnborough Park, Kent) says that VLA4, 11850 kc, the only transmitter now in use for the 1400-1500 U.K. beam, is swamped by Radio Norway on 11852 kc ; we wonder why Radio Australia has suspended the 15200 kc transmission ; this channel was always good at any time of the year !

We have heard VLH5, ABC Service, 15230 kc, and VLC, Radio Australia, 15200 kc, both with readable signals, at 0415. C. P. Turner once listened to part of a concert given by the Sydney Symphony Orchestra, conducted by Charles Groves, between 0610 and 0640 ; the station was VLA10, 17840 kc (announced), but he received them on approximately 12000 kc. Surely this was a harmonic of some kind !

Asia

A. Rothwell (Huyton, Liverpool) sends us the schedule for Radio Ceylon, received by him from W. R. Fletcher, Chief Engineer, from Torrington Square, Colombo. The Home Service on 6075 kc is broadcast 0200-0245, 0645-0830 and 1100-1700 (weekdays) ; 0200-0300, 0500-0830 and 1030-1630 (Sundays). The BBC use 21620 kc from 0825 to 1705 ; 17730 kc from 0825 to 1400 ; and 15120 kc from 1410 to 1705 daily.

Radio Indonesia claims the attention of R. J. Riding ; he hears YDF2, 11785 kc, with its English programme from 1900 to 2000.



Close-up of the waveform monitor at the BBC's Sutton Coldfield TV transmitting station.

B. P. Middleton has heard them over YDC, 15150 kc, with dance music at 1745 and occasional English directions. C. Findley heard English News over YDC at 1500; J. M. Simpson logged it with News at 1545 and the announcement that YDE, 11770 kc, closes at 1600. Other Indonesians are : YDG, Surakarta, 3332 kc ; Madium, 4160 kc ; Kediri, 3510 kc ; Jogjakarta, 3700 kc ; and Kotaradja, Sumatra, on 8910 kc. Menado, Celebes, is on 9840 kc from 1130 to 1230.

In the Philippines, DZH7, 9730 kc, is now using 3 kW power, and DYB2, Bacolod, signs off at 1500 on 4980 kc. In Nationalist China, the Voice of Free China, Taiwan, broadcasts on 15235 kc from 0300 to 0500 (English at 0400) ; and BCAF, their Air Force station, is again on the air on 8996 kc at 1200. A. Yeomans heard Singapore on 15300 kc at 1430.

In the Middle East, Iran claims considerable attention. D. J. Miller (Bognor Regis) has noted them on 15100 kc from 1920 to 2030, with News in English at 2000. S. Neeld and B. P. Middleton report excellent reception of this transmission. P. E. Woolmer observes that Djedda, Saudi-Arabia, operates on 3960 kc, 5985 kc, 9645 kc, 11760 kc and 11950 kc, each with a power of 3 kW ; listen for their Arabic announcements at 1730. Lastly in Asia, Turkey has been giving experimental broadcasts using the new 100 kW transmitters. B. P. Middleton heard them at 1745 over TAT on 9515 kc ; other transmissions have been made over TAV on 17840 kc from 0915 to 0945 and 1700 to 2300.

North America

A. Rothwell queries HON1 and HON2 in Hawaii because he had heard from KGMB (medium-wave) in Honolulu that there were *no* short wave broadcasts sent out from any of the Hawaiian Islands. We think they must mean *commercial* short-wave broadcasting stations, for we ourselves hold a verification card for KRHO. C. P. Turner has in fact just reported receipt of a card for KRHK, Honolulu, formerly on 11790 kc.

The latest schedule (dated May 1) for the U.S. Relay Stations in Hawaii reads : HON1, 17800 kc, 0715-0845 (Tues. to Sat.) ; HON1, 11790 kc, 0900-1415 (Daily) ; HON2, 15250 kc, 0900-1415 (Daily).

Pacific coast stations are in the news ! B. P. Middleton, A. Yeomans and J. M. Simpson all report KGEI, 11730 kc (at 0530) and KWID, 11900 kc (at 0700) ; R. J. Riding heard KCBR, 15310 kc, with News in English at 0500. On June 4, before relaying the "Of, For and By the Short Wave Radio Amateurs" programme at 1340, it was heard with this direction : "This is Station KCBR, Los Angeles, California, owned by the Columbia Broadcasting System and operating on a frequency of 15·13 mc in the 19-metre band."

A. Rothwell sends the AFRS New York station schedule which is from 1800 to 2145

daily, and the address is : 641 Washington Street, New York, 14. C. Findley sends the AFRS Los Angeles address which is : 1016 North Mcleadden Place, Los Angeles, 38.

Lastly, CHNX was good at 0310 with Local News and a weather forecast following. Then came the words : "This is MBC, The Maritime Broadcasting Company, CHNX, P.O. Box 400, Halifax, Nova Scotia, Canada. We are now closing down." God Save The King followed ; the frequency is 6130 kc.

For next month please send your reports to reach us **not later than August 15.** The address is : R. H. Greenland, *Short Wave Listener and Television Review*, 53 Victoria Street, London, S.W.1.

TVI IN REVERSE

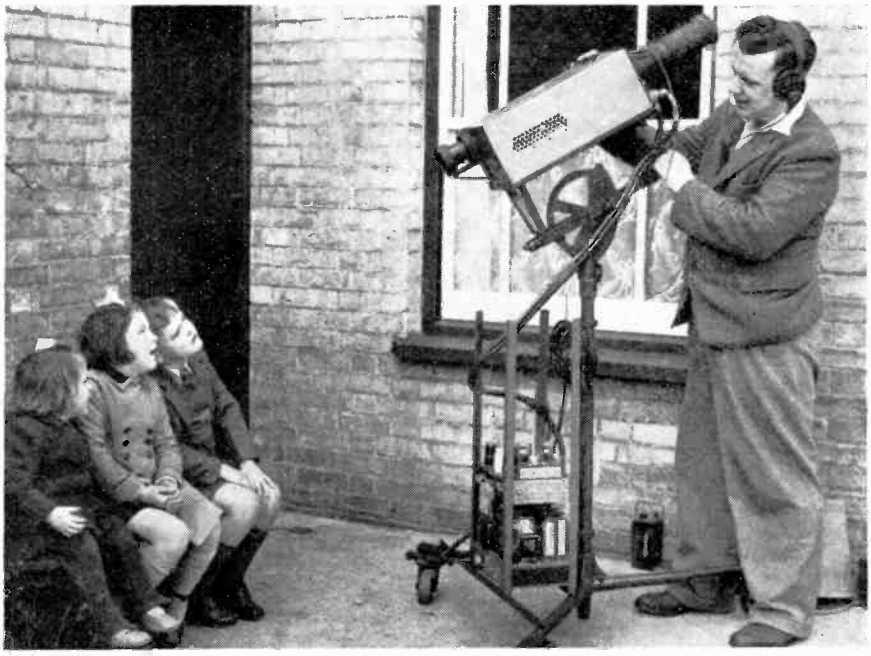
To amateur radio enthusiasts, the letters TVI conjure up visions of filters, wavetraps and so forth. But it is not so often realised that the TV set itself can cause interference to neighbouring radio receivers.

The trouble is centred around the line output circuitry but the associated circuits can also radiate including, in some instances, the wall coating of the cathode ray tube itself. The solution would seem to lie in adequate screening of all the offending components, but this unfortunately does not often solve the problem.

It appears that the only fully effective method is to screen the whole receiver. This would, of course, prove a difficult method if orthodox screening expedients were employed. However, Acheson Colloids Ltd. have been experimenting with a special conducting paint for application to TV set cabinets. It is claimed that the resultant paint is entirely successful in eliminating any radiation beyond the confines of the cabinet.

It is a quick-drying water-based paint designed to be brushed on the inside of the cabinet. On test it has been proved that an ordinary radio receiver, situated only a few feet away from the hitherto offending TV set, operated without any trace of interference.

Apart from TV uses, several applications of such a conducting paint will be obvious to the short-wave enthusiast.



In our issue for June, mention was made of the work being done by certain members of the British Amateur Television Club with closed-circuit amateur TV transmission. Here is G2DUS with his camera.

SHORT WAVE BROADCAST STATIONS

Revision 33·33-46·66 Metres

Giving Frequency, Wavelength, Callsign and Location

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

Frequency	Wavelength	Callsign	Location
9000	33·33		Tel Aviv, Israel.
8955	33·50	COKG	Santiago de Cuba.
8825	33·99	COCQ	Havana, Cuba.
8820	34·00	RW64	Chabarovsk, U.S.S.R.
8700	34·48	COCO	Havana, Cuba.
8665	34·62	COJK	Camaguey, Cuba.
8550	35·09		Jodhpur.
8320	36·06		Managua, Nicaragua.
8266	36·30	VED	Edmonton, Alberta.
8242	36·40	CR6RG	Dundo, Angola.
8232	36·46	CR6RH	Huilla, Angola.
8215	36·52		Scutari, Albania.
8190	36·63	YNXW	Managua.
8170	36·72		Haifa, Israel.
8150	36·81	YNWW	Granada, Nicaragua.
8107	37·00		Larissa, Greece.
8027	37·37	FXE	Beirut, Lebanon.
8010	37·45	YNS	Teustepe.
7960	37·69		Shiras, Iran.
7940	37·77		Alicante, Spain
7935	37·78	CQM4	Bissau, P. Guinea.
7933	37·81	HLKA	Seoul, Korea.
		PSL	Rio de Janeiro.
7860	38·17	SUX	Cairo, Egypt.
7850	38·22	ZAA	Tirana, Albania.
7785	38·54		Pyengyang, Korea.
7780	38·56	JVE	Tokio, Japan.
7700	38·96	ZM2AP	Apia, Samoa.
		HC1EB	Quito, Ecuador.
7670	39·11		Sofia, Bulgaria.
7655	39·19	YNDG	Leon, Nicaragua.
		CE776	Santiago, Chile.
7618	39·38	YNLAT	Granada.
7550	39·74	CR6RO	Silva Porto.
7518	39·89	EA8AB	Tenerife, Canaries.
7472	40·15	HC4AZ	Riobamba, Ecuador.
7460	40·21	TGDA	Quezaltenango.
7448	40·28	FG8HA	Guadeloupe.
7413	40·47	YNAO	Masaya, Nicaragua
7400	40·55		Mahon, Menorca.
7380	40·68		Madrid.
			Tananarive.
7360	40·76		Moscow.
7350	40·82	HC2AN	Guayaquil.
7340	40·87		Moscow.
7325	40·96	GRJ	London.
7314	41·02	YSO	San Salvador.
7300	41·10	ZOY	Accra, Gold Coast.
			Athens, Greece.
7294	41·13		Moscow.
7290	41·15	VUD2	Delhi.
			Hamburg.
			London.
7285	41·18	JKJ	Nazaki, Japan.
7280	41·21	GWN	London.
		VLT5	Port Moresby.
			Paris.
7275	41·24		Damascus, Syria.
		VUD8	Delhi.
7270	41·27	APK1	Karachi, Pakistan.
		RW97	Moscow.
		YDB3	Djakarta.
7260	41·32	GSU	London.
		VUM2	Madras.
		VUM3	Madras.
			Paris.
7257	41·34	JHK	Yamata, Japan.
7250	41·38	PJC2	Willemstad, Curacao.
			Munich.
7245	41·41		Vienna.
7240	41·44	VUB3	Bombay.
			Paris.

Frequency	Wavelength	Callsign	Location
7240	41·44	VUD1	Delhi.
		VUB2	Bombay.
7230	41·49	GSW	London.
		FET22	Oviedo, Spain.
7225	41·52	VUD10	Delhi.
7220	41·55	ZQP	Lusaka, N. Rhodesia.
		FEBS	Singapore.
		FBS	Malta.
7215	41·58	RW96	Moscow.
		BED29	Taipeh, Taiwan.
			Tangier.
7210	41·61	GWL	London.
		VUC2	Calcutta.
		VUC3	Calcutta.
		LLS	Tromso, Norway.
7200	41·67	GWZ	London.
			Singapore.
			Moscow.
7195	41·70	OQ2AZ	Elizabethville.
7190	41·72	FBS	Mombasa, Kenya.
7177	41·79	CR6AA	Lobito, Angola.
7171	41·83	EDV10	Madrid, Spain.
7170	41·84		St. Denis, Reunion.
7165	41·87		Moscow.
7164	41·88	CR6RE	Malanje, Angola.
7155	41·93	CR7IB	Beira, Mozambique.
7140	42·00	APD1	Dacca, Pakistan.
7130	42·08	CR6RN	Benguela, Angola.
7125	42·10	VQ6MI	Hargeisa, B. Somaliland.
7120	42·13	GRM	London.
7092	42·30	YI5KG	Baghdad, Iraq.
7062	42·48		Baghdad.
7059	42·50		Tangier.
7054	42·53	CR6RF	Benguela, Angola.
7040	42·61	YSI	San Salvador.
7037	42·63	EAJ3	Valencia, Spain.
7010	42·80	CR6RS	Benguela, Angola.
		EAJ9	Malaga, Spain.
7006	42·83	FET1	Valladolid, Spain.
7003	42·85		Ljubljana.
7000	42·86	HC1VT	Ambato, Ecuador.
			Brazzaville.
6980	42·98	FO8AA	Papeete, Tahiti.
6963	43·08	YNEQ	Managua, Nicaragua.
6917	43·37	FZK6	Dakar, Senegal.
6900	43·48	TGBC	Mazantenango.
6877	43·62	YNWW	Granada, Nicaragua.
6870	43·67	HC4EB	Manta, Ecuador.
6860	43·73	TGRB	Guatemala City.
6850	43·80	YNOW	Managua, Nicaragua.
6845	43·83		Khoramabad, Iran.
6830	43·92		Tel Aviv, Israel.
6825	43·96	RAD	Tashkent.
6790	44·18		Limassol, Cyprus.
6770	44·31	CP49	La Paz, Bolivia.
		FEBS	Singapore.
6760	44·39	YNVP	Managua, Nicaragua.
			Larissa, Greece.
6716	44·67	YNCNM	Managua, Nicaragua.
6710	44·71	OAX4G	Lima, Peru.
6672	44·97	HBQ	Geneva, Switzerland.
6661	45·04	TGZA	Zacapa, Guatemala.
6635	45·21	HC2RL	Guayaquil, Ecuador.
6630	45·25	HIT	Trujillo, D.R.
6620	45·32	TG2	Guatemala City.
6560	45·73	HC2VP	Guayaquil, Ecuador.
6549	45·81	YNBH	Managua, Nicaragua.
6511	46·07	CP40	Cochambamba, Bolivia.
6464	46·41	YNZZ	Managua, Nicaragua.
6450	46·51	COHI	Santa Clara, Cuba.
6442	46·57	TGWB	Guatemala City.
6433	46·66	HI1R	San Cristobal, D.R.

SMALL ADVERTISEMENTS

CHARGES : *Readers'*, 2d. per word, minimum charge 3s. Box Nos. 1s. 6d. extra. *Trade*, 6d. per word, minimum charge 7s. All advertisements must be of radio interest only. Add 25% extra for Bold Face (heavy type) announcements. Copy date for next issue, August 7, addressed Advertisement Manager, *Short Wave Listener*, 53 Victoria Street, London, S.W.1.

EDDYSTONE "All-World-Four," VP210 RF HL2 DET. HL2 LF KT2 output ; with complete set coils 9-170 m. continuous, £5. Milnes HT Unit spares; electrodes, tubes, separators, etc. Many 6·3v 2v, and 1·4v valves to clear—name your wants.—GM2HIK, 30 North Street, Forfar, Angus.

EDDYSTONE S640 Receiver with built-in Goodmans speaker, 18 gns.—Nicholson, Carlton, Oakwood Road, Rotherham, Yorks.

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EDDYSTONE S640 Receiver complete with matched speaker. Perfect condition, £18 or near offer.—117 Powder Mill Lane, Twickenham.

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BC348 for sale. New condition, with 230v internal power pack, £14, carriage paid. Or will exchange for camera.—Box No. 035.

WIRELESS Telegraphy. Attendance and postal courses.—Dept. F, Wireless School, Manor Gardens, Holloway, N.7 (*ARC* 3694).

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