

*of the*



# SHORT WAVE LISTENER AND TELEVISION REVIEW



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MAY 1951  
VOLUME 5 • NUMBER 5

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# THE SHORT WAVE LISTENER AND TELEVISION REVIEW

VOLUME 5

MAY 1951

NUMBER 53

Conducted by the Staff of  
*The Short Wave Magazine*.

Published on the third Thursday  
in each month by the Short  
Wave Magazine, Ltd., 53 Vic-  
toria Street, London, S.W.1.  
(ABBey 2384).

Single copy, 1s. 6d. Annual  
Subscription (12 issues) 16s.  
post free.

The British Short Wave League  
is associated with the *Short  
Wave Listener & Television  
Review*. Inclusive BSWL mem-  
bership 17s 6d. (Half-year 9s.)

All editorial and advertising  
matter should be addressed to  
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EDITORIAL

## Finance

Elsewhere in this issue appears a notice which many readers will probably have expected to see before now. Actually, it regularises the position as between the cover price of *Short Wave Listener & Television Review* and the direct subscriber rate, and also levels the British Short Wave League subscription with that figure.

This, in turn, will enable all subscribers not at present League members to join the BSWL under most advantageous conditions—and after the “vesting date” of June 30, direct subscribers can, if they so wish, automatically become full members of the League merely by obtaining and signing the form of application. This will, we hope, strengthen the League and it will also simplify office work in connection with BSWL affairs.

All this does, of course, amount to a small increase in cost to BSWL members and direct subscriber readers. But, unfortunately, increased costs are symptomatic of the times in which we live, and the adjustment we are now making does not by any means cover the greatly increased costs (of paper alone) with which we are having to contend in making sure you have your copy regularly and by the due date every month.

We feel sure, therefore, that all readers affected will accept the increase not only with this in mind, but also in the knowledge that an adjustment on these lines is both fair and necessary.

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

# R.A.E. Questions Answered

FROM THE MAY 1950 EXAMINATION

## PART III

by THE OLD TIMER

*(The answers below complete treatment of the Paper set for the 1950 Radio Amateurs' Examination, questions for which were given in full on p. 5 of our January 1951 issue. It now only remains for us to wish success to those of our readers taking this year's R.A.E. on May 2, with the hope that they have been assisted in their preparation by following this series.—EDITOR.)*

**QUESTION 4.** Describe a heterodyne frequency meter and explain how it is used to measure the frequency of a transmitter.

**ANSWER:** A heterodyne frequency meter is, basically, nothing more than a stable and accurately-calibrated oscillator. Any such oscillator may be used, in conjunction with a receiver, to produce a heterodyne beat with a transmission. The "zero-beat" position, at which both the oscillator and the transmitter are tuned to the same frequency, may then be detected with considerable accuracy, and the frequency read off directly from the frequency-meter calibration.

In practice, of course, it is just the construction of a suitably stable oscillator, and its accurate calibration afterwards, that give rise to certain problems. Many oscillator circuits are sufficiently stable, inherently, to be suitable, but even more important is the nature of the components used in building them. However stable a circuit may be, a condenser or resistor which changes its characteristics to a marked degree with, for example, changes of temperature, will upset the calibration of the frequency meter.

Thus it is normal practice not to attempt to calibrate the oscillator with extreme accuracy once and for all, but to produce a circuit with a nearly straight-line characteristic which can easily be corrected from time to time. The sub-standard from which corrections are made is usually a crystal oscillator using a 100-kc bar, followed, if necessary, by a harmonic amplifier.

From this, 100-kc "markers" will be available on the calibrated scale of the frequency meter, and the whole calibration can be shifted slightly to one side or the other to ensure that it lines up with the 100-kc points. These latter, for the purposes of calibration, are regarded as "infallible," and, of course, their accuracy is of a very high order.

As there are so many types of stable oscillator circuits, no detailed circuit diagram has been drawn, but the block diagram of Fig. 1 shows the layout of a typical frequency meter. It consists of a crystal oscillator with a 100 kc bar; a variable-frequency oscillator with a stabilised power supply; an amplifier/multiplier for the higher-frequency harmonics; and a detector-amplifier unit for mixing the outputs of the two oscillators. This latter unit renders the use of a separate receiver unnecessary during the operation of checking the transmitter's frequency.

It is suggested that the frequency range covered by the oscillator circuit should be either 1715-2000 kc or 3500-4000 mc. If the 1.7 mc band is not to be used for transmitting, the wave-meter should certainly cover the latter range, which will give strong harmonics down to the 28 mc band. (Even a meter with a 3500-4000 kc range can be used for checking frequencies on the 1.7 mc band, by beating the frequency-meter against the second harmonic of the transmitter.)

The oscillator circuit should be one of the very stable arrangements such as the series-tuned Colpitts (the "Clapp"), with high-grade components used throughout; the coil wound with great rigidity and solidly wired to its tuning condensers. The dial should have a very open scale to enable accurate readings to be taken (for accurate calibration is easily spoiled by the taking of inaccurate readings)!

The procedure of measuring the frequency of the transmitter, set up on roughly 14020 kc, can be given as an example. The frequency meter has

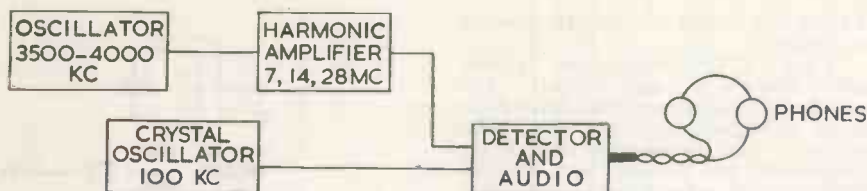


Fig. 1. Block schematic of a suitable amateur frequency checking and measuring equipment, to answer Question 4.

been switched on for long enough to enable the warming-up process to have run its course. Switch on the crystal oscillator, set the tuning scale to 14000 kc and listen for the 100 kc beat. Set the oscillator correction condenser or that this is "dead on," and switch off the crystal.

Switch on the transmitter, with the power supply to the last stage disconnected. Rotate the main dial of the meter slowly from 14000 kc upwards. Stop immediately the heterodyne beat with the transmitter is heard. (Previous experience will have shown how near, physically, the meter must be to the transmitter, or whether any artificial coupling between the two is required.) Adjust the dial very carefully to zero-beat and take a direct reading.

Conversely, to adjust the transmitter to a known frequency, repeat the first part of the above process; set the dial of the meter to the desired frequency; then slowly rotate the VFO control of the transmitter (again with no power supply for the last stage) until the zero-beat condition is reached.

**QUESTION 6.** Explain: either (a) the meaning of class A, class B and class C amplification or (b) the method of neutralizing a power amplifier.

**ANSWER (a):** "Class-A" amplification is that type of amplification which reproduces, in the output voltage from a valve or stage, the waveform of the input applied to the grid circuit. It is obtained from an amplifier so biased that the grid is always negative, whatever the amplitude of the signal applied to it, so that the valve operates entirely on the straight part of its characteristic curve.

The load into which such an amplifier works, whether it be a succeeding stage, a loud-speaker or, in the case of an RF amplifier, an aerial circuit, is always

coupled to the anode of the valve through an impedance-matching circuit. A true Class-A amplifier is simply a *voltage* amplifier.

"Class - B" amplification was developed to overcome an inherent disadvantage in the Class-A system. We have already seen that the latter can use only the straight portion of the characteristic. Now this is but a small portion of the working curve of the valve; to use more of the curve makes it possible to obtain a much larger output from a given valve or stage.

In Class-B amplification the valve is operated at the bottom end of the curve (at the "cut-off" point). This means that the positive half-cycle is perfectly reproduced, but the negative half-cycle practically suppressed. In order to restore this, a second valve is used in push-pull with the first, each valve thus supplying the half-cycle that is "missed" by the other. (For RF amplification only, the use of a push-pull stage is unnecessary, the flywheel effect

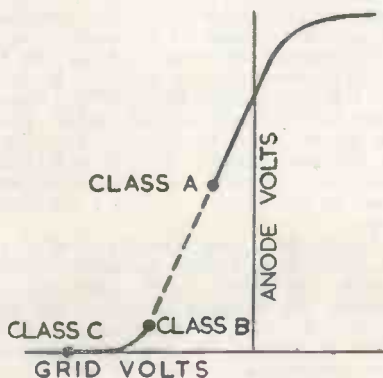


Fig. 2. Bias settings for a valve operated Class-A, Class-B or Class-C, discussed in the answer to Question 6 (a).

of the tuned circuit restoring the missing half-cycle.)

"Class - C" amplification merely carries Class-B a stage further. The amplifier is now biased well *beyond* the cut-off point, and the entire characteristic used. This necessitates driving the grid harder; grid current flows, and the anode current wave-form becomes distorted. For this reason Class-C amplification is used only for RF purposes, where high anode efficiency is necessary. It has no disadvantages from this point of view, but is, of course, quite impracticable for audio amplification.

**ANSWER (b):** Fig. 3 shows one simple method of neutralising a triode power-amplifier. Without the neutralising condenser NC, this amplifier would behave as an oscillator, since the grid-anode capacitance would provide more than enough coupling between grid and anode circuits (both tuned to the same frequency) to make a state of self-oscillation inevitable.

This capacity (or, rather, its effect) is therefore nullified by feeding back to the grid, *via* the neutralising condenser, a voltage which, instantaneously, is equal to, but in opposite phase to that voltage which is fed back through the valve capacity itself.

This condition is achieved by earthing the centre point of the anode coil; voltages at opposite ends of this coil are then equal but 180 degrees out of phase. By carefully adjusting the capacity of NC it is possible to reach a stable point of operation in which there is no tendency for the amplifier to go into a state of self-oscillation.

In practice the correct setting can be found by the following method: Remove the HT supply from the amplifier stage; apply RF input to the grid circuit. Tune the anode circuit to the same frequency as the grid circuit, and it should be possible to detect the presence of RF there by means of a bulb in a resonance loop.

Adjust NC until the RF begins to diminish; then retune the anode circuit (which has been slightly detuned by altering the capacity of NC) until the bulb glows most brightly again. Continue to adjust NC for minimum (or zero) brightness of the bulb, and adjust anode circuit tuning each time to make sure that it does not increase in brightness at a different setting. With care a position can be reached at which it

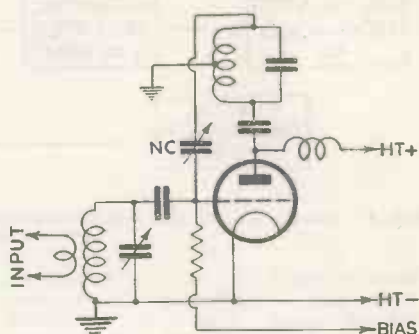


Fig. 3. Answering Question 6 (b), this is one way of neutralising an RF power amplifying stage.

is not possible to detect RF in the anode circuit, whatever the setting of its tuning condenser. This setting, once reached, should hold good in all conditions without further adjustment; but it should be noted that if the same stage is used on different frequency bands the anode circuits must all be very accurately tapped at their centre, or re-neutralising may be necessary with the insertion of different coils.

There are other methods: the *grid* circuit may be centre-tapped, the remote end from the grid then being connected *via* NC to the anode. Or inductive neutralisation is possible, a loop coupled to the anode circuit being connected, through screened cable, to another loop coupled to the grid circuit. Basically the requirement is always the same—the feeding back of voltage in reverse phase to that fed back through the internal capacity of the valve.

#### BLIND AMATEURS

A note in the current (April) issue of our *Short Wave Magazine* mentions the case of G3IOW, newly licensed, of Ventnor, Isle of Wight. He is a blind amateur who has had to learn from scratch everything up to pass standard in the R.A.E. and the GPO Morse Test. He was greatly assisted in all this, by Morse practice over the air and a long correspondence conducted in Braille, by G6KJ, of Buckingham, himself a blind operator. This is a fine example of how the disability of blindness can in practice be met and overcome, and how the blind help one another and themselves.

# TV Sound and Vision with the R3084

## Part II

### POWER SUPPLIES

by W. N. STEVENS (G3AKA)

IF the instructions have been carefully followed, no difficulty will be experienced in sorting out the two HT feeds. The wiring must follow this sequence: The main HT line (plain red leads) should all be connected together and finally pass through a rubber grommet at the rear of the chassis to connect with the common top terminals of the two large dropping resistors above chassis. The lower tag of the 10,000 ohms resistor will then pass back through the grommet *via* a red/yellow lead to meet the secondary (G<sub>2</sub>) HT line. The lower end of the 1,491 ohms resistor also passes through the grommet and is taken to the HT positive output from the power supply used. This lead, incidentally, which is plain red, originally terminated at one end of the small iron-cored chokes which were removed initially.

The "live" heater lead (all heater wiring in blue sleeving) is taken from the appropriate terminal on the V<sub>5</sub> valve-holder. Before connecting up the power supply it would be as well to trace through the wiring to make certain that all supply lines are, in fact,

Fig. 4. A suitable Power Pack for the modified R.3084.

- Transformer = Merribull UT6.  
 C<sub>1</sub>, C<sub>2</sub> = 16.0  $\mu$ F, 750 V wkg.  
 C<sub>3</sub> = 0.1  $\mu$ F, 2,500 V wkg.  
 C<sub>4</sub> = 0.25  $\mu$ F, 2,000 V wkg.  
 V<sub>1</sub> = VU39A  
 V<sub>2</sub> = VU134  
 L<sub>1</sub> = 250 mA, 9 Henry.  
 R<sub>1</sub> = 1 Megohm, variable.  
 R<sub>2</sub> = 1 Megohm.

connected up. Providing that the foregoing instructions have been carried out, everything will be in order, but it is safer to make certain that no mistakes have been made! There is one final point: A 16  $\mu$ F decoupling condenser should be inserted at the junction of the two large resistors (this is shown as C<sub>24</sub>).

With 400-450 volts applied to the main HT line, and assuming that the time bases and sync separator stages are running, the voltage drop across R<sub>28</sub> will be of the order of 180 volts, so that the main HT feed to the receiver unit proper will be in the region of 250 volts.

### Signal Sense

The vision receiver, as shown, will provide an output in which the modulation is positive and the sync pulses negative-going. Thus the signal can be fed into a tube of the VCR97 type for grid modulation. The sync pulses, as the circuit stands, are of correct sense for feeding to hard valve time base generators. However, if a pentode sync separator is used there will be a phase change, which means that a phase reversing stage (or a diode separator) will be required.

Should a magnetic tube be used, where cathode modulation is preferable, the diode V<sub>11</sub> should be reversed (that

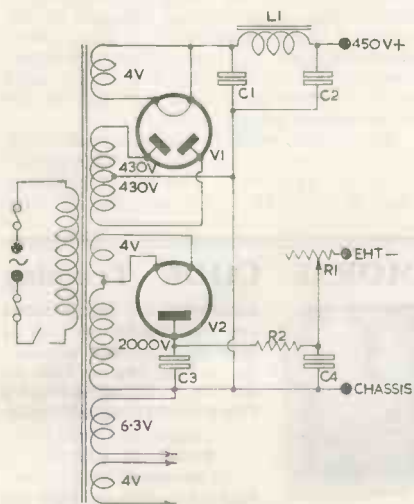


Fig. 4. Suggested power supply for a combined HT/EHT system where an electrostatic tube is to be used.

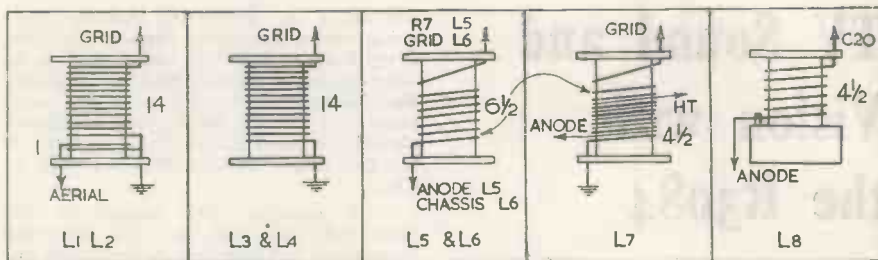


Fig. 5. Coil details for sound and vision receivers. Number of turns in each instance is given at side of coil. All coils are wound on standard 11-millimetre formers, and tuned by standard dust-iron cores.

is, the cathode and anode connections). This will provide a negative picture modulation and positive-going pulses. The pulses can be fed into a diode separator if thyratrons are used for generators, or through a pentode separator for hard valve generators.

### Conclusion

The operation and lining-up of the receiver calls for the usual procedures. For Alexandra Palace, the oscillator operates at 75 mc and should be adjusted to that frequency. Naturally, the oscillator could be made to operate at the incoming frequency less the IF channel, but the second channel band would then be approximately 12-15 mc against 102-105 mc, and the chances of interference from strong signals in the former band increased. The usual objection to a very high oscillator frequency is instability, but there need be no worries of that nature due to the construction of the unit.

The sound receiver tuned circuits (L5, L6, L7) are all adjusted for maximum sound at 41.5 mc. The mixer grid coil (L4) is tuned to 45 mc and the IF strip

cores adjusted to 16.5 mc (unless a new unit with sealed cores is used, in which case they should not be touched). The common RF stage coils L1/L2 and L3 can be set to give adequate amplification of both sound and vision channels.

The unit, as modified, will be found extremely sensitive, giving ample gain at quite considerable distances. Additionally, the band-width of the IF strip is some 4 mc, so that full definition of picture will be easily obtained.

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# Time Base and Tube Circuits

FOR USE WITH RADAR RECEIVER CONVERSIONS

## PART I

By W. N. STEVENS (G3AKA)

BY using one of the various Indicator Unit chassis in conjunction with a converted radar receiver, it is possible to build a reasonably compact TV receiver at low cost. With the units mounted above each other, the complete assembly will not assume the massive proportions that certain surplus conversion propositions demand.

We have already described in *Short Wave Listener & Television Review* the modification of certain radar units for use as vision and/or sound receivers, but the following circuits were devised for operation with the R3084 receiver as converted to a sound/vision/power supply unit. Thus it remains to provide only the sync separator, time base and CRT network circuits to complete the television.

Of the Indicator units available, perhaps the Type 6A is the best proposition for the conversion in mind. This includes, of course, a VCR97 cathode ray tube. The cost of such a unit is little more than the cost of purchasing a VCR97 on its own; there is, additionally, the advantage of having the chassis, tube mountings, and miscellaneous small components which help to keep costs down.

### The Circuit

The synchronising and scanning stages are shown in Fig. 1. They are far from elaborate and are very suitable for those just starting up in TV construction. The output from the video amplifier (of the R3084) gives negative-going sync pulses and positive picture modulation. Although negative pulses are required to trigger the scanning oscillators, the sync separator stage (V3) provides a phase inversion in the normal way; hence, it is necessary to insert an intermediate stage so that the pulses are of the correct sense for feeding to the time

bases. This stage is shown as V2—which is an amplifier-cum-phase-splitter. Operating as a triode, it not only provides the requisite phase change, but gives some amplification, thus ensuring adequate amplitude of sync pulse (and video modulation) even in areas of low signal field strength. As the VCR97 is grid modulated, the positive-going picture modulation can be conveniently taken from the cathode circuit of the V2 stage.

One further point concerning this part of the circuit: As V2 is capacity coupled from the video amplifier, the DC component will be lost. This is remedied by the insertion of V1, acting as an orthodox DC restorer diode. The phase splitter is also capacity coupled to the sync separator valve V3, and so it may be thought that this AC coupling necessitates the provision of a further DC restoration diode at the V3 grid. This is not, however, the case, because the circuit is so arranged that no bias is applied to the cathode, the valve runs into grid current, and the grid/cathode section acts in the same way as the diode would. This can be compared with the action, roughly, of a normal leaky grid detector.

The potentiometer VR1, providing variable screen grid voltage, acts as sync control, and the use of this is to enable adequate discrimination of the line pulses. It also has some bearing on linearity and interlace, but once the initial critical setting has been found, it will not be necessary to re-adjust this control—except, perhaps, at long intervals when valve ageing and so forth slightly alter the circuit constants.

The deflector plates of the VCR97 are fed from the outputs of the line and frame oscillators (V4 and V5 respectively). The output from these stages is such that no further amplification is necessary to provide scanning power. This is rather convenient in more ways than one, since it obviates the necessity to insert between the oscillator and amplifier a phase inverting stage which would be required. In both sections, hard valve oscillators (VR91) of the Miller Integrator type are used.

In the control grid feed circuit of the line oscillator (V4) are two potentiometers, VR5 acting as the line linearity control and VR6 as line hold (or frequency) control. The condenser C8 is the charge/discharge condenser. The output of the line oscillator is fed via a coupling condenser C9 to the X1 plate of the VCR97, the potentiometer VR2

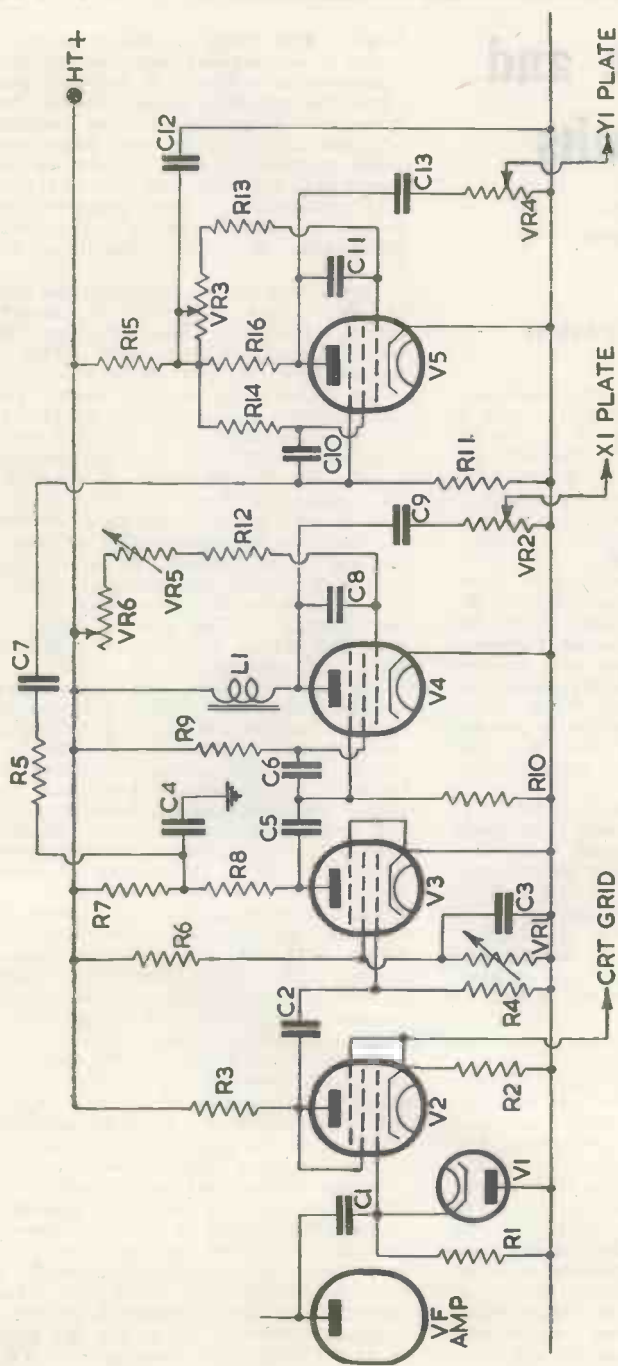


Fig. 1. Circuit diagram of the phase splitter, sync separator and the time bases described in the text.

#### VCR97 Base

Base connections for the VCR97 (see Fig. 2) are: 1, signal grid; 2, cathode; 3/4, heater; 5, anode 1; 6, anode 2; 7, graphite coating; 8, Y2 plate; 9, X2 plate; 10, anode 3; 11, X1 plate; 12, Y1 plate. The graphite coating (pin 7) should be connected to anodes 1 and 3.

## Table of Values

## Time Base and CRT Network.

C1, 2, 9, 13	= 0.1 $\mu$ F
C3, 11	= 0.02 $\mu$ F
C4	= 0.006 $\mu$ F
C5	= 100 $\mu$ F
C6	= 250 $\mu$ F
C7	= 0.05 $\mu$ F
C8	= 150 $\mu$ F
C10	= 0.005 $\mu$ F
C12	= 16 $\mu$ F
C14	= 0.25 $\mu$ F

(All condensers can be 450 volts DC working, except C14 which must be 2.5 kV).

R1	= 1 megohm
R2	= 12,000 ohms
R3, 8, 15	= 10,000 ohms
R4, 7, 14, 16, 17, 20	= 100,000 ohms
R5, 6, 24	= 47,000 ohms
R9	= 68,000 ohms
R10	= 33,000 ohms
R11	= 150,000 ohms
R12	= 470,000 ohms
R13	= 2.2 Megohms
R18, 19, 25	= 220,000 ohms
R21	= 330,000 ohms
R22	= 200 ohms
R23	= 1.8 Megohms

(All resistors can be  $\frac{1}{2}$  watt except R7, R16 (1 watt), R15, R8 and R24 (2 watts)).

VR1	= Sync control, 20,000 ohms.
VR2	= Line amplitude, 1 megohm
VR3	= Frame hold, 2 megohms
VR4	= Frame amplitude, 1 megohm
VR5	= Line linearity, 1 megohm
VR6	= Line hold, 5 megohms
VR7	= Vertical shift, 20,000 ohms
VR8	= Horizontal shift, 20,000 ohms
VR9	= Focus, 1 megohm
VR10	= Brilliance, 1 megohm

(Note: VR11 should be wire wound).

V1	= VR54
V2, 3, 4, 5	= VR91
L1	= 4 Henrys (see text)

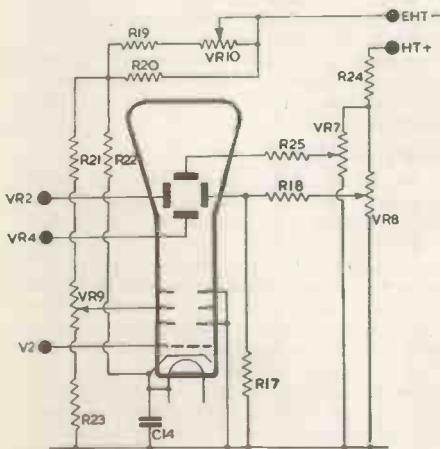


Fig. 2. Circuit of the CRT network for the VCR97, used in conjunction with the circuit Fig. 1.

providing a control of line output, or amplitude, and is thus the width control.

Also fed from the anode circuit of the sync separator, via the line pulse limiter components R5 and C7, is the frame valve V5, the circuit of which is substantially the same as the line stage. The control grid feed resistor VR3 functions as the frame frequency (or hold) control and is decoupled by a 16  $\mu$ F condenser (C12). The output from this stage is fed via coupling condenser C13 to the Y1 plate of the tube, the amplitude being controlled by VR4, which is the height, or frame, amplitude potentiometer.

All the valves in the separator and time base section are of the VR91 (EF50) type, except the DC restorer diode—a VR54, or VR92. The HT supply is taken to the main (450 volts) positive output from the power pack already described.

## CRT Layout

The tube network is shown in Fig. 2, and is quite straightforward. Modulation (from the cathode of V2) is applied to the signal grid, which is maintained slightly negative in respect to cathode. The heater is fed from its own isolated supply (of 4 volts), and one side is connected to cathode so that the possibility of beam current ripple is reduced and risk of high potentials building up across heater and cathode, thus causing insulation breakdown, is eliminated.

The cathode is decoupled by C14, which must have a rating of at least 2,000 volts DC working. The outputs from the time bases are simply fed to their appropriate plate connections. The first and third anode are joined together and taken to chassis, but the second anode is the focussing electrode, the control itself being VR9, which, with R21 and R23, forms part of the EHT potentiometer. The cathode and second anode are fed through another potentiometer network, one of the resistors (VR10) being variable; this controls the intensity of the beam and is, therefore, the brilliance or brightness control. Note that this network is taken to EHT negative (see power pack circuit).

The two other deflector plates are supplied from the 450 volt output of the power pack through various resistors, two of which (VR7 and VR8) act as vertical and horizontal shift controls respectively. R24 is a limiting resistor functioning with the shift controls.

[To be continued]

# Watch Your Step

## WHEN OFF THE BEATEN TRACK

*This article draws attention to certain restrictions imposed by the terms of the ordinary receiving licence. In effect, while there can be no prohibition on general reception, the listener is expressly forbidden to make any use of private or commercial messages he may overhear, nor may he disclose their contents. In other words, when listening to commercial traffic, he stands in exactly the same relation as the third party to a private conversation between two people who do not wish to be overheard or reported.—Editor.*

MANY short-wave enthusiasts will doubtless be attracted by what, for the listener on the amateur bands, are the fascinating by-ways of radio communication described in T. Cooper's article on listening to ships and aircraft, in the April issue of *Short Wave Listener & Television Review*.

In following his suggestions for out-of-the-ordinary short-wave listening, however, they might be well advised to bear in mind the regulations which apply to the reception of messages of the kinds described.

Clause 5 of the Receiving Licence Regulations (which can be found printed on the back of your receiving licence) should be noted in this connection.

The regulation says: "If any message, other than a message for the receipt of which the use of this apparatus is authorised, is unintentionally received, the Licensee shall not make known or allow to be made known its contents its origin or destination its existence or the fact of its receipt to any person (other than a duly authorised officer of His Majesty's Government or a competent legal tribunal) and shall not reproduce in writing copy or make any use of such message or allow the same to be reproduced in writing copied or made use of."

A footnote adds that the licence does not authorise the licensee to do any act which is an infringement of any copyright which may exist in the matter transmitted.

Ironically enough, the prohibitions in the regulation apply, in the strictly

literal sense, only to the *unintentional* interception of the messages in question! But it is obvious that the same prohibitions are intended to apply with equal or greater force to the deliberate reception of such messages.

### Practical Considerations

These restrictions do not mean that the ordinary listener is not legally entitled to pick up any of the transmissions mentioned in BSWL-3681's article. On the contrary, a number of the transmissions he describes are definitely sent for general reception.

How can one tell which messages are which? Well, in the majority of cases, the calling procedure makes it quite clear. Any message preceded by the call "CQ" (general call to all stations) is normally intended for general reception, and, according to my reading of the regulations, this includes reception by any ordinary listener.

SOS messages undoubtedly come within the category of transmissions which the listener is free to intercept; and in some cases, amateurs have been expressly requested by the authorities to join in the watch for signals from some missing ship or aircraft. In these cases, however, particular care should be taken to see that the receiver used is not capable of radiating oscillations which might cause interference in the reception of very weak distress signals by the official stations which are searching for them.

Many transmissions of weather forecasts and reports in code, press bulletins, and so on, are also sent for general reception. So there are plenty of by-ways of wireless which one can explore without any infringement of wireless regulations.

### Don't Do This!

As an example, in contrast, of what you are expressly forbidden to do, let us suppose that you happen to intercept a radio-telegram from a ship to a coast station, and that the radio-telegram is a private message from some passenger on the ship addressed to a person whose name and address you recognise as being that of a near neighbour of yours. You might well be tempted to copy down the message and deliver it to your neighbour some hours ahead of the official delivery of the message to his door! But in succumbing to such a tempting course you would undoubtedly be violating the receiving licence regulations. So watch your step!

## RECEIVER ALIGNMENT WITHOUT A SIGNAL GENERATOR

**T**HOSE without signal generators are at a disadvantage when it comes to the initial lining up of a superhet receiver. There are, however, several methods which can be used without having recourse to a test oscillator.

It must first be understood that, should the intermediate frequency be 465 kc, the transformers need not necessarily be tuned to that exact frequency. They may be set at 475 kc, 450 kc, or some other frequency in that range, the proviso being that each IF tuned circuit must be adjusted to the same frequency. It is best, however, if separate oscillator tuning is not provided for, to adhere to the exact intermediate frequency.

Superhet "hiss" can be used as a guide when adjusting the IF's; but if a BFO is fitted this can be switched on, since the hiss will become louder. Better still, one can make good use of electrical interference! The most potent devices include an electric drill, vacuum cleaner or electric shaver. These will enable any set, however off alignment they may be, to be peaked for maximum noise! The final trimming must, of course, be carried out on actual signals.

### Using a Second Receiver

A more effective method can be used if another receiver is available. The procedure is quite simple and the results, even though the only instrument required is a trimming tool, are surprisingly accurate.

Set Receiver 1 (the receiver to be aligned) to a signal at the low frequency end of the range. Place Receiver 2 (the one already lined up) adjacent to Receiver 1 and set it to a signal higher in frequency than the one to which Receiver 1 is tuned—make it the nearest possible signal which has a frequency the sum of the station on Receiver 1 plus the IF of Receiver 1, e.g., if Receiver 1 is set to 500 kc and its IF is 465 kc, Receiver 2 must be set to the station nearest 965 kc (500 + 465).

Adjust the padder (in the oscillator circuit) of Receiver 1 until the beat note is heard in Receiver 2; trim until the pitch becomes as low as possible. Now adjust the IF's in Receiver 1 until the station to which it is set (in our example on 500 kc) is at maximum strength.

Then tune Receiver 1 to a signal at the high frequency end of the range and adjust the oscillator tuned circuit trimmer until the signal is at the correct spot on the scale.

Finally, re-tune to the original signal on Receiver 1 (500 kc) and adjust the oscillator padder for correct scale position reading. It only remains to tune the RF trimmers for optimum reception.

### IMPORTANT NOTICE

With effect from June 30, 1951, the direct subscriber rate for SHORT WAVE LISTENER & TELEVISION REVIEW will be 18s. for a year of 12 issues—in order to bring it up to the cover price of 1s. 6d., in accordance with normal trade practice. Renewals and new subscriptions will, however, be accepted at the existing rate of 16s. (with BSWL membership, 17s. 6d.) until June 30. This date is extended by one month to July 31 in respect only of those readers with addresses outside the United Kingdom.

All existing direct subscribers to SHORT WAVE LISTENER & TELEVISION REVIEW who are not yet members of the BRITISH SHORT WAVE LEAGUE can join the BSWL on completion of the form of application and payment of 1s. 6d. This entitles them to the 12-page monthly BSWL REVIEW, bound in as an extra with SHORT WAVE LISTENER & TELEVISION REVIEW, for League members only. If you are interested in this scheme, please write immediately for League forms.

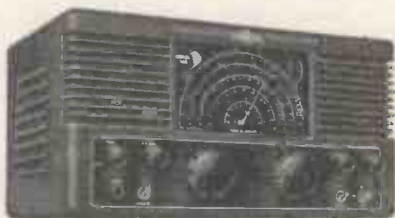
Additionally, we shall in future be prepared to accept payment of League membership dues on a monthly (1s. 7d.) or quarterly (4s. 9d.) basis, if made direct to us. This is intended for the convenience of junior members, and they will, of course, retain all the privileges of League membership.

Orders and remittances, by crossed cheque or postal order made payable to Short Wave Magazine, Ltd., should be addressed to:

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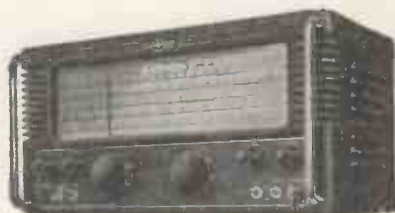
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### GETTING AROUND

A recent check through the overseas direct subscriber lists of our *Short Wave Magazine* discloses that it now goes to readers in no less than 45 different countries outside the United Kingdom and Eire, from the Falkland Islands furthest South to Iceland furthest North, and including such unexpected destinations as Arabia and Russia. This survey takes no account of the additional overseas coverage obtained through supplies in bulk to various export wholesalers.

### "GLOBE-KING"

Short Wave Kits and Components. Production fully booked up until new series commence Autumn, 1951. Watch this Magazine for later announcements:

**JOHNSONS (Radio),  
MACCLESFIELD.**

# Have you heard?

WHATEVER some of the more optimistic listeners may say, conditions have been *bad* lately. I have noticed that I have only to make a statement of this kind to elicit all sorts of contradictions; letters arrive saying that conditions *can't* have been bad, because the writer heard his first station from this, that or the other. Sorry—but the fact remains; they have been downright *bad*. And, whatever you've heard, you've heard nothing compared with what you would have heard had conditions been good.

The spring should be with us by the time you read this, and, with it, maybe a spell of better conditions. But don't expect even a temporary return to the Golden Days of 1946 and 1947, because you won't see that for the next four years at least!

Good conditions are not, by any means, an unmixed blessing. The bands become so crowded with DX that it is difficult to unearth the best pieces, so to speak. I have heard many listeners express the opinion that they have logged more new countries and interesting places during a bad spell than they would ever have done during a good one—and probably they are right.

Let me say, though, so as to get everyone in a good mood, that some of the lists of Calls Heard appearing this month reflect great credit on the senders; the way some of these chaps go on pulling in the difficult ones, and even logging new ones, when conditions are as bad as they have been, is a real testimonial to patience and careful listening.

So endeth the prologue—from which you may gather that I think conditions have been *bad*. Let's pass on!

## DX in General

The fact that you can't rely on anything these days is proved by last month's SLP's. The 10-metre one

(March 17, 1700-1800 GMT) didn't bring in one single list, from which I presume that those who did listen at that time just scanned the band for a few minutes and then switched off in disgust. The 20-metre Phone period (March 18, 0800-0900 GMT) attracted several customers, who doubtless did all that they could with it. But look at the results: the only DX shown in the combined lists amounts to AR8, EA9, EK, EL, FF, UL, MD2, MI, PY, VK, VQ4, YK1, ZB2, ZC4, ZL, 3V and 4X. Yes, that's the lot (apart from CN8, FA8 and SV, which some people still include in their lists!). Why, two years ago we shouldn't have recognised any of those prefixes as being DX.

To cheer me up after that dismal discovery, I went carefully through the 28 mc General lists, which seemed to be fairly promising, and I unearthed some interesting facts. First, there are still some countries which you just can't log unless you go on 10 metres for them; secondly, on the whole the month's DX as shown by the 10-metre lists is not really inferior to that in the 20-metre category.

During March the combined efforts of our keen 'chasers brought in the following 41 countries on the 28 mc band: AP, AR8, CE, CR6, CR7, CX, EA8, HC, HP, KG6, KP4, KV4, KZ5, LU, MD2, M13, OQ, PK3, PY, PZ, VK, VP3, VP6, VQ2, VQ4, VS7, VS9, VT, VU, XE, YV, ZC4, ZD1, ZD2, ZD4, ZE, ZP, ZS, ZS3, ZS7 and ZS9. These were all on phone and all on 10 metres. Any questions?

## The Ten-Metre Band

Having opened up with our guns on Ten, let's continue with this band. It has plenty of good friends who stick by it through thick and thin—here are a few of them. D. L. McLean (Yeovil) says it's been good compared with previous months; on March 25, during the

morning, he heard about sixteen countries selected from the above list. Best for the month were AP2N, VS9AA, VT1AB and 1AF, VU2FH, ZC4TF and ZS9F—all phone, as, of course, is practically all the 28 mc DX mentioned this month.

D. Robertson (Caithness) received QSL's from CE6AB, DL4HA (Mobile in car), MP4BAB, VK5ZR and 6JW, VS1CS and XZ2SY. M. G. Whitaker (Ouston) says the band has been consistently open except to USA, with African and South American paths providing the best signals. He picks out as "worthy of mention" CR6CB, EA8AX, ZD1SW, ZS7C and ZS9F. He has also heard ZS5DD/Portable in Zululand (not a new country, unfortunately) and queries an I5? station in Italian Somaliland. Yes. Italian nationals in that country are now using the I5 prefix—it could have been I5ZA.

T. Spencer (Slimbridge) has found the band good for Africa and has logged AR8, MD2, MI3, OQ, VO2, VO4, ZD2, ZD4, ZS, ZS7 and ZS9. All these except the last two were heard in one hour on March 17. K. Parvin (Thornton Heath) was lucky and bagged ZD6RD, who was making his first G

contact. On March 4 K.P. heard all ZS call areas except the 8th.

E. J. Logan (Hertford) sums up the differences of opinion about this band in one sentence: "When things seemed dead, much DX was possible by concentration, or deep digging amongst the QRM." Just ponder on that, you who say the band has been dead all the month! E.J.L.'s concentration and/or digging brought in KG6AAD, PK3WH, ZD6RD and ZS7C at S9 plus. W. J. C. Pinnell (Sidcup) also heard the last two and found the Easter week-end offered "a pretty universal selection of DX."

C. S. Pollington (Chichester) thought things fairly quiet, but did receive CR6AQ and ZS9F. R. W. Pennells (Lamberhurst) says the band was waking up, and logged AP2N, some AR8's, LU and ZS9F. A. M. Norden (Golders Green) collected CR6AJ, TF3MB, VT1AB and 1AF, ZS7C and ZS9F.

That still leaves many more letters with comments on 10 metres, but as half of them say the band is waking up at last, and the other half say it couldn't be more dead, I leave the senders to sort themselves out. The letters selected above mention most of

## "ZONES HEARD" LISTING (POST-WAR)

Listener	Zones	Countries	Listener	Zones	Countries
<b>PHONE and CW</b>			<b>PHONE ONLY (cont'd)</b>		
A. H. Edgar (Newcastle) ...	40	223	R. G. Poppi (Beckenham) ...	39	167
R. S. Stott (Upminster) ...	40	222	F. K. Earp (London, S.W.11) ...	39	163
E. Trebilcock (Australia) ...	40	218	R. A. Hawley (Goostrey) ...	38	187
D. W. Bruce (Eltham) ...	40	215	D. Kendall (Potters Bar) ...	38	170
R. A. Hawley (Goostrey) ...	40	200	M. G. Whitaker (Ouston) ...	38	154
W. J. C. Pinnell (Sidcup) ...	40	198	K. M. Parry (Sandwich) ...	38	154
D. W. Waddell (Hitchen) ...	40	194	D. Vincent (Beckenham) ...	38	148
R. W. Thomas (London, E.5.) ...	40	190	D. L. McLean (Yeovil) ...	37	183
B. Davies (Beckenham) ...	40	177	P. H. Strudwick (Lon. N.W.11) ...	37	168
M. G. Whitaker (Ouston) ...	40	174	J. P. Warren (W. Croydon) ...	37	167
N. S. Beckett (Lowestoft) ...	39	193	A. M. Norden (Lon. N.W.11) ...	37	156
L. Singletary (Oxford) ...	38	177	R. J. Line (Reading) ...	37	156
F. A. Herridge (Lon. S.W.12) ...	37	157	E. J. Parish (Watford) ...	36	164
W. Neal (Birmingham) ...	37	155	C. S. Pollington (Chichester) ...	36	151
M. J. Marlow (Guildford) ...	37	138	D. G. Martin (Cheltenham) ...	36	150
G. H. Coulter (Dover) ...	36	144	N. Roberts (Launceston) ...	36	140
C. J. Goddard (Coventry) ...	36	129	B. W. Sutton (Liverpool) ...	36	128
R. W. Finch (Ilford) ...	35	133	H. M. Graham (Harefield) ...	35	148
A. O. Frearson (Birmingham) ...	34	122	A. L. Higgins (Aberkenfig) ...	35	138
<b>PHONE ONLY</b>			J. P. Moore (Solihull) ...	35	134
E. J. Logan (Hertford) ...	40	202	A. R. Holland (Malvern) ...	34	131
D. W. Bruce (Eltham) ...	39	188	W. C. Askew (Melton Mowbray) ...	34	130
K. Parvin (Thornton Heath) ...	39	174	D. C. Stace (New Zealand) ...	33	116
			T. R. Lamble (Ardingly) ...	33	101
			G. Murray (Newcastle) ...	32	112



## THE MARCH CONTEST

### (Four Band DX)

Listener	Total	14 mc	7 mc	3.5 mc	1.7 mc
N. S. Beckett (Lowestoft)	175	86	55	26	8
R. A. Hawley (Goostrey)	106	64	27	7	8
H. M. Graham (Harefield)	84	49	15	16	4
K. Sketheway (Newcastle)	67	44	10	9	4
R. J. Riding (Wednesfield)	65	49	8	5	3
J. E. Kelly (Manchester)	62	33	17	9	3

the worthwhile goings-on and all the real DX on the band.

### DX on Twenty

Very few listeners neglect *this* band, however unreliable or infuriating it may be. Even now, with present conditions, it occasionally flares up and provides some quite spectacular DX, but the short-skip QRM is shocking and the general level of conditions pretty low. "Patchy" is an adjective that practically everyone has applied to it this time.

Best on phone for A. O. Frearson (Birmingham) were CX2AF, VP6FO, VP9G, YV4AM and ZL3BX. On CW he found FF8AB, FM7WF and VP6CDI. A. M. Norden's phone list reads like this: EL9A, UG6AB, VS1AY and 2BS, VT1AB, VU2JU and ZS3S. R. W. Pennells mentions EL9A, JA3AH and 2MB, OQ5DZ, VE8OP, VP9FA, VQ3AWL and 5CB, VT1AF and VU2MA.

C. R. Burchell (Walsall) heard some good stuff in the afternoons (1600-1800), such as DU1AL, VS1AD and VU2JP. Late at night his best were HI6EC, HP1LA, KG4AU and VP3MCB. He asks who FKS8AL might be? The "FKS" prefix is used by amateurs in the French zone of Austria, who are mostly in Vienna. C.R.B. also asks the best times for hearing various parts, to which I reply as follows: West Coast USA and Canada—1600-1900, and probably 0600-0800 by next month; West Coast South Americans—2200 onwards. Japan, Burma, East Indies and Western Australia—apparently "in" at all times between 1100 and 1800. *Best time is "when you hear them"!*

P. King (Offaly, Eire) comments on

freak conditions that existed between 1530 and 1730 on March 11, when the short skip faded right out and all manner of DX came in, including Asia, Africa, Australia, South America, West Indies and West Coast U.S.A. His best phone DX of the month included DU1AL, VP7NH, VQ4BU, YS1ZG and XZ2KN. P.K. pleads for more CW lists in the Calls Heard section, and for more attention to the users of home-grown receivers. He regards home-construction as "a dying art"—and he's probably right at that. Personally, I would always like to see more CW lists and more home-brew. How about it, some of you enthusiasts? Do you *all* get a kick out of listening to phone on a receiver built by an American manufacturer during the war?

C. S. Pollington (Chichester) has found the best times 0730-0930 and 1400-1600, and mentions DL4ES/Airborne, two hours' out from the Azores at 9000 feet. K. R. R. Bowden (Letchworth) heard CT3AA on CW and asks if there are any more of them. (I heard CT3AB myself a few weeks ago; he is an old timer dating back to about 1926.) On March 21 K.R.R.B. logged four new ones—EL9A and VS7BR (phone) and YI3BZL and DU1AL (CW). He also mentions ET3Q, who is becoming very active on CW.

### The Status of the VT's

This same listener asks who the VT's are, and whether they are genuine. The answer is that VT1DF, some time back, was genuine, and so are the present VT's, 1AB, 1AC and 1AF. They are all as good as gold and situated in Kuwait, Persian Gulf. The prefix is

unofficial, but they will probably be using their official calls by the time you read this. (They don't yet know what the prefix will be.) Don't deluge them with SWL reports, because practically everyone they work tells them they are a new country and wants a card. Furthermore, VT1AF told me that his QSL'S were costing 30/- a hundred—so be kind! (They probably wouldn't mind scribbling "Verified" across a card of your own if you sent return postage.)

K. B. Ranger (Rochester) commends VP6FO for consistent signals, and has also heard VP6PV and 6SJ. His best on the band have been TF5AS, VP9G, TI2OE and YV1AB, and he queries HZ1TA. The latter is genuine, all right. R. E. G. Sivyer (Henley) says he is a newcomer, and starts off with a sage remark: "You can always hear something if you listen!" His best on phone were CO8MP, OX3BD, PY2CK and YV5BQ, and on CW KP4KF, LU2FN, VK3AZW, YI3CM and ZS5KL. R.E.G.S. also asks about EA7's. They are, of course, just ordinary EA's, although the prefix was once quoted (wrongly) for Rio de Oro. Finally, he gives a list of "funnies": SL1CF (genuine, and Swedish); FKS8AA (see above); VT1AF (see above); CS3AA (Azores); UI2CK (suggest PY2CK); LJ2R (Norwegian); YX3R and TV8BF—goodness knows, but the latter might be a pirate G trying to be funny.

J. H. Lloyd (Enfield) is a 20-metre phone enthusiast, and likes the band between 0700 and 0730, one of his few free times. One morning in this period he logged CE6CZ, CP5EP, TF3AF, TI2OA, VK's and ZL's. But he still thinks the best time of all is 1600-1700. His best were DU1AL, JA2BL and 2BR, KG6AP and VT1AB, with the consistency prize for VP6FO, 6SD and VK2QR.

R. A. Hawley (Goostrey) has found afternoons good for the Far East, and also mentions EL9A, HZ1TA and YU1AD on phone—probably the first YU on phone since the war. A. W. White (Leigh-on-Sea) says his best catch was CE7ZM, giving his QTH as "Chilean Antarctic." Other good ones have been VE8OP and 8TG (Baffin Island), DU1AL, EA0AC (Spanish Guinea), JA2OM, VQ5CB and ZS2MI (Marion Island). Don't overlook the latter, by the way—there's nothing about his prefix to show that he's a new country—and he is in Zone 39.

## TOP BAND MARATHON

Feb. 1 to Apl. 30

Listener	Coun-tries	Coun-ties	Total
M. G. Whitaker (Ouston)	14	53	67
F. A. Herridge (London, S.W.12. ....)	16	48	64
R. A. Hawley (Goostrey)	9	47	56
H. J. Hill (Whitley Bay)	6	44	50
W. J. C. Pinnel (Sidcup)	10	38	48
N. S. Beckett (Lowestoft)	10	37	47
N. S. Roberts (Launceston) ... ..	5	41	46
K. R. R. Bowden (Letchworth) ... ..	8	37	45
E. Cheese (Croydon) ...	5	39	44
H. Watson (Grimsby) ...	7	32	39
J. P. Colwill (Launceston) ... ..	4	35	39
H. M. Graham (Harefield) ... ..	4	20	24
W. G. Gore (Yatesbury)	3	17	20

D. Tilcock (Mitcham) queries some unexpected ones, such as AF3FMC and AH2HQ (both American military stations) and AG2AB (Trieste). His best during the month were CE3CZ, some CO's, EL9A, HK1DZ, OX's, TI1JG, VP5AO and 5MU, VP7NH, YN4CB, YS1ZG, and a bunch of YV's. (These were among a list of Calls Heard, but as it was all so mixed up with his letter we couldn't use it as such. D.T. and others please note, for future reference!)

N. S. Beckett (Lowestoft) gives a pat on the back to VS6AE and 6BP for good signals, and says the Far East is excellent during the "tea-time" period. New ones for W. J. C. Pinnel were CR5AD, VP1AA, VP8AI (Falklands) and VT1AF. E. Cheese (Croydon) is one of the very few who noted a real "scoop" in the shape of FR7ZA (Reunion Island, near Mauritius). He is perfectly genuine and works CW on 14025 and 14108 kc.

E. J. Logan was surprised to log HH, HI, VP6 and LU's on phone during the lunch hour. A. M. Munford (Cambridge) found new ones in the shapes of AR8BC, FP8AW, VQ5AU, VS9AH and ZM6AA—all CW. He also heard

CE7ZO, but was not sure of the last letter. (Could it have been CE7ZM, already mentioned by someone else?)

D. L. McLean's best were EL2R and 9A, FF3CN, 8DA and 8MM, FP8AW, HP1LA, VP5BP (Cayman Is.), VP7NH, YN4CB and YS2AG. The rewards for the CW listener are shown by B. Davies (Beckenham), who comes up with CR5AD, FP8BX, HS1VR, PK4DA, SUIAD, UA0AA, VP1AA, VS4YB, VS5AF and XE1AC.

M. G. Whitaker has made his 40 Zones at last, thanks to ZS2MI. He says "If you want Central and South Americans, they are there for the picking any night after 1900." R. J. Riding (Wednesfield) mentions CE2CZ and 7ZN, EL9A, HC1JW, KG4AG, VQ5AU and YV5AB.

Out in New Zealand, D. C. Stace has found conditions very poor, but sends the shortest-ever list consisting of HC2GRC, HR1BG, KC6WC and ZM6AR—all phone. A. R. Daniel (Bristol) writes for the first time and says Australasia has been good between 0700 and 0800, although the evenings are also good after the short-skip has disappeared.

J. P. Francis (Croydon) says his best were VR5GA and CE7ZN. (Looks as if these CE's in Antarctica are multiplying!) Other nice ones were DU1AL, KG6AD, KR6FA, JA's and VQ5AU. G. M. Iredale (Eltham) sends his first list of Calls Heard and asks whether there are any *genuine* amateurs in the Vatican City. I don't think there are.

From I. S. Davies (London, N.13) comes a list with FP8AW, KG4AU, VS1AD and VU2MA, plus CO's, TI's, VP5 and VP6. K. Parvin supplies CE7ZN, CR4AD, VP5BP (Caymans) and ZD6HJ—four nice ones on phone. K.P. tells me that CM9AA will be operating from FG8 (Guadeloupe) by, or before, the time you read this.

G. C. Allen (Thornton Heath) picks out FP8BX, VQ9QK and VQ8AF as the best of the month. T. Spencer transfers the consistency prize from VP6 to VQ4RF—but with VP6FO and 6SD still not far behind. He heard VQ4RF say that ZM6AK and VR5GA are good signals down there in Kenya.

H. M. Graham (Harefield) has logged CE7ZN and also mentions CE6AK, EL2R, HC1FG, three TF's, TI2OA and 2OEC, VP3MCB and ZS2MI. G. Hardwick (Knaresborough) heard all continents in two hours on March 21 (1930-2130) with VK5MS, VQ4RF, VS7BR, W9RBI and YV5AB. H. J.

Hill (Whitley Bay) has logged ZD8AM and naturally wants to know if he's genuine. I should say not—ZD8A and ZD8B were the only two stations ever known to operate from Ascension. Could it have been ZP?

#### Forty Metre News

And so to 7 mc, which is, at the moment, a DX paradise for the CW listener but not so hot for the others. G. C. Allen's CW list includes VP1AA, 2GH, 4TB, 6CDI, 7NM, 8AI, VS6AC, VK9MR and VQ3CF. K. Parvin, on phone, logged CE2CC, CO8WM, EA8AZ, MD2EU and some PY's. M. G. Whitaker heard FC, VP6 and HP for new ones, and says the W7's and VE7's are S9 plus at 0430.

J. L. Hall (Croydon) logged VK9MR, VQ3CF, VS7NG and 7NX, and also VU2JP—and received a QSL from KJ6AI for last month's reception. W. J. C. Pinnell also found some new ones—VP8AI, VS7NX, VU2JP and ZD4AB—all CW. FP8BX and ZB2I were also heard.

N. S. Beckett says that between 0700 and 0800 the spate of ZL's has crowded out the locals! He was also pleased about VK7JB, VP8AI and VQ3CF. R. W. Pennells heard VPrQG on phone at 0030 for a nice new one; A. O. Frearson logged FY7YC, HZ1KE, UQ2AN and YU1CAG for new countries on CW, and A. M. Norden's phone list looks like this: CX1AP, HK2FL, PY9AS, VP6AL, YV1AV, 5AY, 5DS and 5DV.

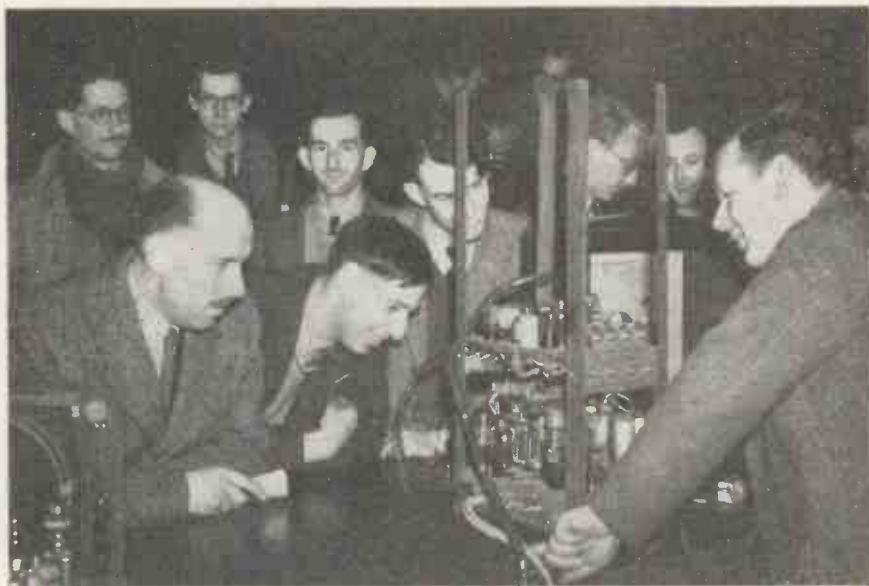
That's all the Forty-Metre news, but I should say it's pretty concentrated for a few small paragraphs—do you agree?

#### And So to Eighty

Up here we have even fewer listeners, but there is a lot of interest to be derived from this band still. One of the more startling things to emerge is the reception by A. M. Norden, of ZS6BW, on phone. A.M.N., who calls 80 the "band of the month," also logged CM9AA, HZ1KE, MD2MD, VP6SD and VP9AF—all on phone.

K. Gurney (Aylesbury) also combed the band to some effect and logged VP6SD, VP7NH, VP6FO, YN4CB and ZC6JM—again, all phone. J. L. Hall says MI3US is active on phone, and 3A2AC (Monaco) is on the band on CW. ST2TC will also be on with CW during April.

G. C. Allen collected ZD4AB and ZS5U, also various VE's, VP4, VP6, HP1BR, MP4KW and PY7WS. K. Parvin heard FA8LH and FKS8AL, both on phone. He says that the Y's are



Recently, the British Amateur Television Club staged a live demonstration at the Cavendish Laboratory in Cambridge, before the University Wireless Society and the Cambridge & District Amateur Radio Club. In this picture, G2DUS is (on right) explaining his gear.

not licensed for the band, but I1XYZ may be heard, nevertheless—a genuine I operating under a phoney call.

I. E. Davies found several new ones, including HZ1KE, YU's, FA9UP and SP1CM. M. G. Whitaker heard PY7WS at RST 599 "almost by mistake." D. L. McLean confirms the "I1XYZ" item. W. J. C. Pinnell logged TA3GVU on phone and 4X4BX on CW for his first Asiatics, giving him HAC on the band. Others were VP4TB, 6CDI and ZC4TF.

N. S. Beckett found a nice one in the shape of FP8AW, and also mentions EK1AO and ZD4AB. A. W. White is another with the Italian story, and he also heard YU1CAG, a VE and a few W4's.

### Top Band Topics

With the end of the winter season and the Trans-Atlantic Tests, the DX on the Top Band has naturally dried up somewhat, but there are still some very interesting snippets of news. F. A. Herridge (London, S.W.12) has heard KV4, HA and HB9 for three new ones on the band. He also had quite a nice bag of W's, including W4KFC, during the last two test week-ends.

M. G. Whitaker more or less scoops the pool this time, having heard YI3ECU (RST 339 at 0330) and ZD4AB (RST 559 at 0350) on March 4. He also logged UB5BP—all on an o-v-1. I have no hesitation in awarding M.G.W. the Monthly Biscuit for this reception! He has now heard 18 countries on the band, but still lacks HZ, TA, VE and OZ. (The latter country, by the way, is no longer licensed for Top Band).

R. Iball (Worksop) recently complained of a shortage of GI stations and now seems to log them in blocks of four! He also heard lots of OK's, and EK1AO. N. S. Beckett mentions UA3CR and UA4FC; W. Eyre (Whaley Bridge) heard UA3CR, 3IS and 4FC, plus a string of OK's; A. O. Frearson managed to find TA3FAS; and H. M. Graham puts in a complaint about the number of stations who do not give their QTH or even county—some, in fact, who are content to sign off with Christian names instead of call-signs!

G. C. Allen found KV4AA again (on March 11) and also logged EK1AO, HB9CM and OK2TZ. He also heard a terribly weak signal that he thinks *might* have been CM2US, but can't

claim anything. D. Robertson (Caithness) tabulates his Top-Band reception as follows: 63 Counties, 20 Countries, 4 Continents, 7 Zones, 10 States! Can anyone beat that?

Finally, J. E. Kelly (Manchester), who may well be our youngest reader (age 13), asks, "Why is 160 being made a DX band? I would rather hear a G using 3 watts than a PY using 3 kilowatts!" Well, in all fairness to the DX crowd, I don't think their activities spoil the band as the traditional place for what he calls "local pow-wow." After all, the QRP gang and the phone nets don't operate all through the night, and the DX crowd do more or less huddle together without upsetting the character of the band. Let's say there's room for both—just while conditions favour the DX.

**Late Flash:** Our redoubtable G. C. Allen turns in an exceptionally interesting item. On Sunday, April 1, he heard UA1KMC, 3AW, 3CR, 4FC, UB5BO, 5BP, 5KAA, 5KAE and 5KAO on the Top Band, in their own Contest. It may be that they only use (or are allowed to use) 1.7 mc for Russian contest events.

### Miscellany

E. Hall (Bolton) was an SWL (if you can call it that!) in the days when amateurs used 440 metres, and has a card dating from those days of sloping ebonite panels and rows of brightly-glowing valves. Happy days, too . . . E.H. sends in an SLP list and says he will try to report regularly.

R. W. Finch (Ilford) hands us a nice bouquet for the "Have You Heard Club" and makes some more interesting suggestions for future contests—duly noted . . . Paul Q. Dodson (RAF, Rhuddlan) was amused to hear one of the worst Italians commenting on another chap's poor modulation, and says he nearly fell out of his chair laughing at the idea. H. J. Hill brings up the old Phone-versus-CW controversy again, but I haven't any space left to do justice to this! It's one that will

never be settled. Personally, I take the view that the chap who goes to the trouble of learning the code deserves the extra DX that he manages to bring in; but the Phone-Only fraternity don't agree, and think they should be credited with the extra difficulty of receiving DX phone. There's no answer!

### Contest Department

- 1- **The Top-Band Marathon:** This runs on until April 30, which is too late to catch next month's deadline. So send in your scores, as hitherto, but they won't give the final placings; those will appear the following month.
- 2- **The March Contest:** Results of this Four-Band affair are shown in the accompanying table. Congratulations to N. S. Beckett, the runaway winner, and regrets that there weren't more entries for it.
- 3- **The April Contest:** This is already well under way and consists of logging African prefixes on the 7 mc band. It ends at midnight on April 22, so report your score for next issue, stating whether it is for Phone and CW or Phone Only.
- 4- **The May Contest:** This will be an all-out scramble on 14 mc Phone Only. The winner will be the listener who logs the greatest number of countries outside Europe during the period April 22 (midnight) to May 22 (midnight). Never mind Zones, Continents or States—just countries. And if some of the CW enthusiasts like to have a shot at beating the Phone specialists on their own ground, here's their chance.

### Set Listening Periods

April 21,	2200-2300 GMT	— 14 mc
	Phone and CW	
April 22,	1000-1100 GMT	— 28 mc
	Phone	
May 26,	1800-1900 GMT	— 14 mc
	Phone and CW	
May 27,	0700-0800 GMT	— 14 mc
	CW only	

Next month's closing time is **first post on April 25**, and for the following issue it will be first post on May 30. Please note these dates and make sure of catching the boat. Address everything to The DX Scribe, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.

Until next time, 73, Good Hunting, and BCNU.

### BOOK TO BUY

For over 25 years, the ARRL's *Radio Amateur Handbook* has been the standard manual of Amateur Radio. It covers theory, design, construction and practice—from the LF bands to the VHF's—for receivers, transmitters, power supplies, modulators, aerial systems and much else besides. The ARRL *Handbook* can truly be said to

give the whole story in a way that no other publication can, because it is written for amateurs and is therefore practical. The price of the 1951 (28th) Edition of the *Radio Amateur's Handbook* is 22s. (postage 1s. extra), and it can be obtained on order from Gage & Pollard, Publishers' Agents, 49 Victoria Street, London, S.W.1.

# CALLS HEARD

## SET LISTENING

### PERIODS

14 mc

Mar. 18, 0800-0900 GMT

R. J. Riding, Fibbersley, Wednesday, Staffs.

EA9AI, EK1JC, FA8BE, LU4BH, 6DJ, M13US, PY2CK, SV0WX, 3V8BB. (Rx: Home Built Battery 1-V-1).

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

CN8BA, 8BX, EA9AI, EK1JC, EL9A, FA8BE, 8CC, FF8CN, LU1CR, 4BH, 4CN, 6DJ, 8CV, M13VS, PY2CK, 2JU, VK2AGW, 2BX, 3AJP, 3AUP, 3GR, 3HW, 4RT, 4UL, ZC4TF, ZL2WS, 4IG, 3V8AC, 8AP, 8BB. (Rx: S540).

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

CN8BX, EL9A, FA8CC, LU1GR, 6DJ, 8CW, M13US, PY2ARK, 2JU, SV0WX, VK2NO, 3GR, 3KW, VQ4RF. (Rx: AR-88 and S.504).

G. Mawdsley, 9 Cross Street, Radcliffe, Nr. Manchester, Lancs.

EA9AI, EK1DX, 1JC, PY2CK, 2JU, SV0WX, 3V8BB.

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

CN8BA, EA9AI, FA8BE, 8CC, LU2NC, 4BH, 6DJ, PY2CK, 3V8BB. (Rx: McMichael 484).

A. M. Munford, 51 Woodlark Road, Cambridge.

CN8BA, EA9AI, EK1JC, FA8BE, 8CC, LU1CR, 4BH, 6DJ, PY2ARK, 2CK, VK2AGW, 3V8AP, 8BB. (Rx: 6 valve Super het).

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

EA9AI, EK1JD, EL9A, FA8BS, LU4BH, 6DJ, 8CW, M13US, PY2ARK, 2CK, 2JU, VK2AGW, 2AP, 2BX, 4RT, ZL4FO, 3V8AP, 8BB, 4X4CL. (Rx: AR88LF).

E. Hall, 10 Somerset Road, Bolton, Lancs.

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

28 & 14 mc: No Europeans.  
No USA except W6 & W7  
No VE except VE5, 6, 7 & 8.  
7 mc: No Europeans.

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

EL9A, LU1CR, 4BH, 6DJ, PY2ARK, 2JU, SV0WX, VK2ABW, 3AUP, VQ4RF, 3V8BB.

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

CN8BX, EK1JK, EL9A, FA8CC, LU6JD, 8CW, M12US, PY2ARK, 2JU, VK2AGW, 2BX, 3IP, 3LUP, 3NG, 4RT, 7AZ, YK1AH, ZB2I. (Rx: Commander)

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

EA9AI, EK, JC, EL9A, FA3WW, 8BE, LU4BH, 6DJ, MD2AC, PY2JU, VK3IP, 3V8AP, 8BB. (Rx: 1-V-1).

E. H. Goldsmith, 34 Amoy St., Southampton.

EL9A, PY2CK, 2JU, VQ4RF, VK3AUP, 3KS, 4RT, ZL2WS. (Rx: BC348).

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

CN8EJ, EA9AI, EK1DX, 1JC, PY2CK, 2JU, VK2AGW, 3ASD, 3HW, VQ4RF, 3V8AB, 8BB. (RFU24 into 0-V-1).

R. E. G. Slyyer, 7 Norman Avenue, Henley-on-Thames, Oxon.

EA9AI, PY2JU, SV0WA, UI2CK, YUIAD, ZB2I. (Rx: Decca 55).

K. Brownless, 7 The Avenue, Clifton, York.

AR8AB, EK1DX, FA3WW, LU1CR, 2TN, 4BH, 6DJ, 8CW, M13US, PY2ARK, 2CK, SV0WX, VK2AGW, 3GR, 3HW, 3IP, 3JE, 4RT, 7AZ, 3V8BB. (Rx: S740).

## GENERAL

28 mc

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

PHONE: AR8BB, M13NA, 3US, OQ5BR, 5LL, PK3WH, VK6MK, VQ2C, 2HW, 4BU, 4RF, V87PS, 9AA, 9AH, VTIAF, VU2GJ, ZD2DYM, 4AH, ZS1KO, 5KY, 6SG, 7C, 9F. (Rx: Commander).

G. C. Jones, 19 Braithwaite St., Staincross, Barnsley.

PHONE: EA8BB, 8AX, LU4BF, 4EP, 4EZ, 5DC, 5DZ, PY1FT, 2AC, 2CK, 2JU, 3BZ, 4ER, VQ2C, 2HW, 2WD, ZB1BE, ZC6UNJ, ZD1AX, 1AIH, 1AIS, 1SW, 4AB, 4AF, ZS1B, 1KO, 1KW, 2ET, 6GF, 6JL, 6JW, 6KD, 6NX, 6TE, 6UR, 7C, 9F. (Rx: S540).

A. R. Daniel, 18b Tyndalls Park Road, Bristol, 8.

PHONE: AP2N, AR8PO, EA8AX, LU6BK, MD2AM, 2GC, 3AM, PY2KU, 4ER, SV0WS VP6FO, VQ2WD, VS9AV, VTIAF, ZB1AJ, ZD4AB, 4AF, ZS1KO, 1KW, 6JF. (Rx: BC342).

E. J. Logan, Linten Cottage, Fanshawe St., Bengoe, Hertford.

PHONE: AP2N, CR6AJ, 6CB, 7IV, KG6AAD, M13US, OQ5BJ, PK3WH, VP6CJ, 6HM, VQ2DR, 2WD, 4RF, VS9AA, VU2FA, 2GB, 2JU, ZC4XP, ZD1SW, 4AH, 6RD, ZE2JL, ZS7C, 9F. (Rx: BC342/RF32).

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

PHONE: AP2N, AR8PO, KP4MG, M13ZX, PK3WH, PY2ADT, VP6HR, VQ4CRM, VS7S9AH, XE2WW, ZE2JK, ZS1B, 6UR, 9F. (Rx: 0-V-1).

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

PHONE: AP2N, 5HQ, CR6AJ, 7IV, EA8AX, FF8PG, HC1OY, KP4MO, KV4AQ, PK3WH,

PZ1WK, VP6SD, VQ2C, 2HW, 2WD, 4ERR, 4RF, VS9AA, VU2GB, 2GJ, 2JU, ZDISW, 6RD, ZE2JK, 2JL, ZP3AW, ZS30, 51W/MM, 7C, 9F. (Rx: S504 and S640).

I. S. Davies, 127 Hazelwood Lane, London, N.13.

PHONE: AR8AB, 8PO, CR6AJ, HP1RI, LU4EZ, 5DZ, MI3NA, PY2AUC, 2CK, VQ2C, 2WD, 2WP, 4AC, ZDISW, ZE3JT, VS7PS, 9AH, VT1AF, VU2DB, ZS1DO, 1KO, 1KW, 4H, 5KI, 6OY, 7C, 9F, 4X4CR, 4CZ. (Rx: R208).

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

PHONE: AR8AB, CE2CC, CX4CS, EA8AX, KP4MC, 4MG, 4O4, LU4BH, 4DD, MD2GC, VP3CW, 6LD, VQ4CRE, W1AUR, 1RPC, 4CBL, ZS6SG, 6WW. (Rx: AR-88 and S504).

A. D. Moore, 20 Bill Street Rd., Frindsbury, Rochester.

PHONE: AP2N, CR6AJ, LU6BK, 8UB, OQ5LL, PK3WH, PY2AC, 2AUC, 2KU, 3YE, 4EL, VQ2WD, VQ4ASC, 4CRE, 4ERR, VS9AA, VT1AF, VU2G, ZE2JB, ZS1AX, 2AF, 4EZ, 5CU, 51W/MP, 6AJ, 9F. (Rx: Home Built 7 value Superhet).

G. Ayton, 76 St. Bernard Road, Stockton-on-Tees.

PHONE: CX3BL, KZ5CA, LU4DD, 5VU, MD2AM, 2EU, 2GC, PY1AUC, 3AC, VP6HR, VQ4ERR, 4RM, W1AAU/MM, 4UT/MM, YV1VE, ZB1BE, ZS6SC, 6WW, 3V8BB. (Rx: S640).

R. W. Pennells, Neals Cottage, Lamberhurst, Nr. Tunbridge Wells, Kent.

PHONE: AP2N, AR8BO, 8UN, LU6BK, MI3NA, 3US, VQ4RF, ZD4AF, ZS1KW, 6IH, 6JF, 9F. (Rx: 0-V-2).

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

PHONE: AP2N, AR8AB, 8BB, 8MR, 8UN, MD2AM, 2BC, MI3AB, 3NJ, 3US, 3ZX, OP5AB, VS9AA, VT1AB, 1AF, VU2FH, ZC4TF, 6UNJ, ZD4AB, 4AX, ZS1GB, 1JD, 1KO, 1KW, 6Z, 9F. (Rx: SX28 and AR88LF).

## 14 mc

J. H. Lloyd, 51 Larmans Road, Enfield, Middx.

PHONE: CE6CZ, CP5EP, DU1AL, EL9A, HGIJW, 1FG, HI6EC, HP1DA, HZIAB, JA2BL, 2BR, KG4AS, KG6AP, KP4EA, OQ5BP, OX3BD, TI2OA, VK6WD, 7AZ, VP4TK, 8SO, 9F, VQ2JD, VS1AX, 1AY, 7AD, YV1AB, ZE2JK, ZL4AW 4HV. (Rx. Mod. R.1155).

K. B. Ranger, 89 Station Road, Strood, Rochester, Kent.

PHONE: CS3AA, 3AB, HZ1TA, KP4AZ, MD2AC, 2AF, 2GC, MI3US, OX3BD, PY1RC, 2ACM, 4CT, 7LO, TF5AS, 5TP, TI2OE, VE8PJ, VP6FO, 6PV, 6SJ, 6WR, 9G, VQ4RF, YV1AB, ZS6CY. (Rx: 0-V-2).

N. B. Henbrey, Perrymans, Northiam, Rye, Sussex.

PHONE: AR8UN, CS3AA, CX2CO, DU1AL, EA8AI, 8AV, 8BB, EL9A, EK1AS, 1FG, 1JC, FF8DH, HC1FG, HZ1AF, LU6DJD, MO2AC, 2AF, 2GC, 2PJ, MI3OV, 3US, 3ZX, OX3BG, PY7EE, 7LM, 7XC, TF5TP, TI2AR, VK2ATL, 3AKA, 3ASV, 3HW, 3MW, 3RL, 4XR, 5MS, VP6CJ, 9G, 9HH, VQ4CG, 4RF, VS7GD, ZC6DO, ZL2WS, 3JE, 4HG, 4X4DK, 4DR. (Rx: Murphy A.122).

P. O. Dodson, 7 R.A.F. Camp, Rhuddlan, N. Wales.

PHONE: EL9A, FA9WC, FP8AW, OX3MC, 3BD, TF5TP, VK2JP, VP1CV, YV5BZ, 5BQ. (Rx: HR0).

E. Horton, 44 Grafton Road, West Bromwich, Staffs.

EA9AI, FA3JY, IT1CLT, MI3RP, VE6UI, VO1DX, VP6SD, ZB2A. (Rx: Home-Built 1-V-1).

H. Watson, 8 Homefield Ave., Grimsby, Lincs.

CW: CN8EP, CT2BO, CX1BZ, EA8TVR, EK1RR, FA9UQ, JA2OM, KL7PA, LU2FN, 7B, 9CV, MI3ZX, PY1IF, 7WS, PZ1AL, ST1DZ, SU6XN, TA3FAS, 3GVU, TF3KG, 5TP, VK5BO, VQ2GW, ZL4FO, 3V8AJ, 8AN. (Rx: Ecophone E.C.2).

M. Milne, 73 Woodville Road, South Woodford, E.18.

PHONE: DU1AL, HZ1KE, KL7ACO, KP4AZ, 4GP, 4KE, MI3US, 3RP, MP4KW, OX3BF, TF5SV, 5TP, VE8OV, VO6D, VP6FO, 6SD, 9G, VQ2HW, 4RF, 4ERR, VS1AX, 7BR, VU2JU, W7DV, YV5AB, ZE2JZ, ZL2LS, 3LE, 4X4DR. (Rx: S.640).

G. M. Iredale, 184 Well Hill Rd., Eltham, Lon., S.E.9.

PHONE: CN8EX, CS3AA, 3AB, EA8AZ, EK1CH, FA8EV, HGIJW, HK1DW, HZ1TA, 1KE, KP4AZ, 4GU, MD2AC, MI3NJ, 3NA, 3ZX, OX3MC, PY7GJ, 7PK, 7XC, TF5AS, 5TP, VP4LS, 6CJ, 6FO, 6MO, 6SD, 9G, 9W, VQ4BU, 4RF, VS1AD, 1DP, YV5AB, 5BZ, 5EN, ZB1A1S, 2A, ZC6JM, 3V8AS, 4X4BL, 4DR, 4SK. (Rx: R.107).

G. Hardwick, 11 Carmires Ave., Knaresborough, Yorks.

PHONE: HH2X, HZ1KE,

KL7ACO, OX3WX, TF5AS, VK5MS, VP3HAG, 5AK, 6PV, 9G, VS6BE, 7BR, W4JBT/KP4. (Rx: Battery 0-V-2).

C. R. Burchell, 109 Dartmouth Ave., Walsall.

PHONE: AR8BC, CR6AQ, CS3AA, DU1AL, EA9AI, EA8AC, EL9A, FF8DA, HI6EC, HP1LA, MZ1KE, KG4AU, KP4KE, LU6DJD, MI3US, 3ZX, OQ5DZ, PY1RC, 2CK, 7CJ, TA3AF, 3FAS, TF5AS, 5TP, VK3ASD, 3AUP, 3HW, 3RP, 5MF, 5RN, 7AJ, VO2N, VP3MCB, 5AO, 5MU, 6FO, 6LN, 6MO, 6SD, 9F, 9G, 9VV, VQ2JD, GW, 4A0, 4RF, 5AU, VS1AD, VU2JP, YK1AA, 1AE, YN4RB, YV5AB, ZC1AL, 4TF, 4XP, 6GL, 6JM, ZE2JM, 3JZ, ZL4FO, ZS1BV, 1DO, 1GG, 4AF, 5GU, 5II, 6EY, 6OI, 6SO, 7C, 3V8AC, 8BB, 4X4DR.

A. Jackson, 57 De Lacy Ave., Almondbury, Huddersfield.

CE3CZ, CO2VW, 8MP, CS3AB, CX2CO, EA8AV, 8AZ, HP1LA, KP4AZ, MI2US, 2ZX, PY2CK, 4LB, 6DJ, 7XC, VK6DX, VP5AK, VP6CJ, 6FO, 6SD, VP9F, 9G, 9TT, XZ2KN, YN4CB, YV5AB, 5BT, ZS1BV, 3V8BB. (Rx: 0-V-0).

P. Bysh, 86 Barrenger Road, London, N.10.

CW: CE1BP, CO2OE, 5PN, EK1RR, KZ5CP, LU1AX, 2FN, 7BH, PY1ARZ, VK2WF, 3GA, VQ2AN, ZB1BE, 1BS. PHONE: HC1FG, 1JW, HI6EC, KG4AU, KL7ACO, LU2NC, MI3US, PY7FC, TI2ES, VK2ATL, 2DX, 2QR, 2QS, 3BW, 3IP, 3JE, 3VA, 4HR, 7AJ, VP3MCB, 6JC, 6SD, 9TT, YV5AB, ZL4HV. (Rx: SX24).

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

PHONE: CO8MP, CS3AA, 3AB, EA6AR, 8AP, HK1DZ, HP1CM, HZ1AB, 1KE, JA2OM, KP4AZ, MD2AC, MI3US, 3ZX, VK2AGW, 2NO, 2WT, 3NF, 3HF, 5MS, VP6FO, VS2CX, XZ2FM, VU2DR, ZL4B, 4AC. (Rx: AR-88 and S.504).

N. Roberts, Aspen View, 29 Race Hill, Launceston, Cornwall.

PHONE: AR8BC, EL9A, HK1DZ, KP4KE, VK2JP, 3HW, VP5AR, 6SD, 7NR, 7NU, VQ2HW, 3AWL, VS1AV, 1AX, 1AY, 2BS, 2CY, XZ2KN, YV5BN, ZE2JE, 2KI, ZS1BV, 5GK, 6DW, 6JW. (Rx: S.750).

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

PHONE: CE7ZN (Antarctica), CR4AD, DU1AL, EL2R, 9A, FF8CN, 8DA, JA2OM, KG4AT, KL7ACO, 7AHJ, VP3MCB, 5BP

(Cayman Is.), 7NH, VQ2JD, VS2CY, VT1AF, VU2JP, 2JU, XZ2EM, 2KN, YI3ECU, YN4CB, ZD1S, ZS3S, ZE2JE, ZP2AE, 4VA, ZS5S. (Rx: S.640).

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

CO2MG, CX2BG, HP1RW, KP4IG, MIBNA, 3ZX, OQ5CA, VK3AUP, 3HW, 4UL, 5MS, 5RN, 7AN, VP6CJ, 6FO, 6KM, 6LN, 6MO, 6SD, 6WR, VQ4BU, 5AU, YV5DM, ZL2AHV, ZS60Y. (Rx: McMichael 484).

**E. J. Logan, Linten Cottage, Fanshawe St., Bengo, Hertford.**

PHONE: DU1AL, EL2R, HH2X, HI6EC, HP1LA, HZ1TA, KR6FA, OQ5BP, OX3GG, OY8LA, VP2PO, 3HAG, 4LS, 5BP, 6SD, 7NH, VQ4RF, VT1AB, VU2JU, XE1AC, YI3ECU, ZC4XP, ZD2AE, ZE2KR, ZS3M. (Rx: BC 342).

**H. J. Hill, 7 Ventnor Gardens, Whitley Bay.**

PHONE: EA8AH, 8AY, EL9A, HZ1TA, 1KE, JA2OM, M1B, M13US, OX3WX, PY2CK, 4CT, 7CF, SVQAB, VP3MCB, 6MO, 6SE, 6FO, 9F, VQ4YR, 4RF, W6EBG, 7DV, 4X4BD, 4BR, 4AT, ZC6JM, ZS6DW, 6Z. (Rx: R107).

**I. S. Davies, 127 Hazelwood Lane, London, N.13.**

PHONE: CO7PM, 8MP, CR7AH, EL9A, FP8AW, HZ1AB, 1KE, 1TA, KG4AU, KP4ES, OQ5BP, 5CH, 5CZ, 5DZ, TI2GG, 2OA, UD6AH, UG6AB, VE8OP, VK3AKA, 3GR, 6OR, VP3WI, 5AK, 5AO, 6CJ, 6MO, 6TR, 7NR, VS1AD, 7PJ, VT1AB, 1AF, VU2ET, 2JD, 2JU, 2MA, XZ2EM, ZS3S. (Rx: R208).

**R. E. G. Sivyler, 7 Norman Ave., Henley-on-Thames, Oxon.**

CW: EA6AM, 8AF, 8JRE, F8ACR, 8IH, 8RJ, 9KI, 9UQ, HZ1KE, KP4KF, LU2FN, M13AB, MP4KW, OX3ZP, PY7LN, WS, TF3NA, 5TP, VK3AZW, VP6CDI, VQ4AQ, VS9AA, YI3CM, ZB1AJ, 1AJX, 1BE, 1BJ, 1CB, 1CH, 1EH, 1GDU, 1IF, ZC4TF, ZS5KL, 6ACD, 3V8AN, 8AJ, 4X4BN, 4BX, 4DC, 4RE, 9S4AX. (Rx: Decca 55).

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

PHONE: CX2CL, HZ1KE, 1TA, M13CUS, 3ZX, TI2OA, KP4AZ, VK2OR, 2JP, 3HW, VS2CY, 7SV, VU2BN, 2JP, VP6PV, 6SD, 9F, XZ2KN, ZC6UNJ, ZS4DH, 60Y, 4X4AG. (Rx: B.36).

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

PHONE: CE7ZN, (Antarctic), DU1AL, EQ3FM, JA2FC, 2OM, KG6AD, KR6FA, PK4DA, UD6AH, VP3MCB, 5AK, 5BP,

VQ3AT, 3AWL, 5AV, VR5GA, VS2BS, 6BO, 6BP, VT1AB, 1AF, XZ2ST, YI3ECU, YN4CB, YS1MS. (Rx: R.103/RF 24 Unit).

**J. E. Cheese, 104 Outram Rd., Addiscombe, Croydon, Surrey.**

CW: CE3AX, CO7RO, CP5EK, CR5AC, 7BN, EA9AP, FP8BX, HH3AI, HP1LO, KC6WC, KH6ABG, 6ES, 6HY, 6SO, KV4AA, OQ5LL, PZ1AL, TI2TG, VK2DG, 3AL, VQ3X, VP7NM, VS7NG, ZL2CW, 3OA, 4FO, ZS1KK. (Rx: 0-V-1).

**W. Neal, 217 Sladefield Road, Ward End, Birmingham, 8.**

CW: CO2CB, CR5AF, 5WI, CT2BO, FF8AB, HZ1AB, KZ5CG, MD2RG, SU1AD, VP4CO, 5BL, 6CDI, 6SD, 8AP, 9G, VQ2AB, VS6BA, ZC4TR, ZD4AE. (Rx: S.640).

**R. W. Pennells, Neals Cottage, Lamberhurst, nr. Tunbridge Wells, Kent.**

PHONE: EL9A, HZ1KE, JA2MB, 3AH, M13GH, OQ5BP, VE8OP, VP4BU, 4TK, 6FC, 9FA, VQ3AWL, 4AC, 4BU, 5CB, VS2BS, VT1AF, VU2MA, W7EF, 7QZ, ZC4ND, ZS1GG, 4X4EA. (Rx: 0-V-2).

**P. King, Boveen Lodge, Shara-vogue, Offaly, Eire.**

CW: AR8AB, CM6AH, CR4AD, 5AF, 6AQ, 7CR, FP8AW, 8BX, HH3L, 5VE, HP1LL, ILO, HR1AZ, HZ1KE, KG4AT, KV4AQ, M13VG, MP4KW, OQ5LL, PJ5TR, TA3AA, VK3ARV, 3AZW, VP1AA, 5BL, 8AI, VO2RG, 4BB, 4HK, 5AU, VS1BX, VT1AF, XE1XB, YK1AH, ZC4BV, ZD4AD, 4AE, 4BB, 4BD, ZL2FA. (Rx: Batt., 0-V-1).

**A. O. Frearson, 66 Wheelwright Road, Erdington, Birmingham, 24.**

PHONE: CX2AF, EA8RM, PY2JU, SVQWM, VP6FO, 9G, YV4AM, ZL3BX. CW: CN8AB, 8BW, CT3AB, FA9UP, FF8AB, FK8SAV, FM7WF, PY1AJT, 7VB, VP6CDI ZL4FO. (Rx: S.640).

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

PHONE: EL2R, 9A, FF3CN, 8DA, 8MM, FP8AW, HP1LA, HZ1KE, M13AB, 3CD, 3LV, 3NJ, 3NA, 3RP, 3US, 3ZX, OQ5BB, VE7RV, 8TJ, VP3MCB, 5AK, 5BP, 7NH, YN4CB, YS2AG. (Rx: SX28 and AR88LF).

## 7 mc

**J. E. Cheese, 104 Outram Rd., Addiscombe, Croydon, Surrey.**

CW: CM8RB, CO5FL, 8FH, HK5AY, 5CR, 5DH, 5DS, 5EV, KP4EQ, 4KF, MP4KW, PY7WS,

VE7AR, 8TA, VP8AI, 8AP, W5GP, YV6AO, ZC4TF, ZD4BC. (Rx: 0-V-1).

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

CW: CX1FY, FM7WF, KP4HU, LU5IA, 8EB, 9AX, PY1AL, 1CJ, 2BBO, 2BF, 2DV, 5FF, 7WS, 8MG, VP5BM, 6PV, 8AI, 8AP, VS7NG, 7NX, ZE4JA. (Rx: S.640).

**W. Neal, 217 Sladefield Road, Ward End, Birmingham, 8.**

CW: EK1AO, FA8EV, FF8JC, HZ1KE, KP4KF, PY2XV, 5FF, 7WS, ZS1FX. (Rx: S.640).

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

CW: FFBAC, 8JC, HZ1KE, KG4AD, PY2BFD, 2BU, 4AHG, 7WS, VE7EO, 7VC, VP8AI, VK2ANN, 2AX, 2OY, 2ZR, 3HG, 3XU, 3ZA, 3ZV, 4RK, 5RN, 7JB, VQ3CF, VS7DB, W6CWO, 6MHB, 7AST, YV6AO, ZD4AB, ZLIAH, 1AQ, 1BY, 1IQL, 1HY, 1MB, 1PN, 1UQ, 2AGL, 2CH, 2FI, 2GH, 2IQ, 2MM, 3BA, 3GQ, 3JE, 3MQ, 3OA, 4DV, 4FT, 4GA, 4GN, 4HI. (Rx: Hambander).

## 3.5 mc

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

CW: EK1AO, FP8AW, KP4KF, ZD4AB, ZL1MB, 3OA, 4AV, 4IE. (Rx: Hambander).

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

CW: CN8EJ, EK1AO, FP8BS, FY7YC, HP1BR, HZ1KE, KV4AA, 4AQ, MP4KW, VP5BD (Cayman Is.), 6CDI, ZC4TF, ZD4AB, ZLIC1, 1HM, 3FM, 3JA, 3JD, 3IT, 3NE, 3OA, 3OX, 3PG, 4BO, 4DU, 4AV, 4IE, 4KI, PHONE: CN8EJ, VP6FO, 6SD, 7NH, YU3FMK, YN4CB, ZL4AV.

## 1.7 mc

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

CW: HB9CM, OK1AEF, 1AJB, 1DC, UA3CR, 4FC, W1BB. (Rx: Hambander).

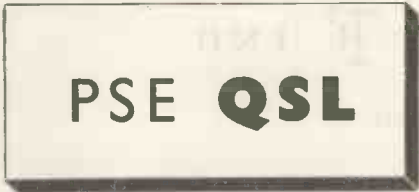
**F. A. Herridge, 95 Ramsden Road, Balham, Lon., S.W.12.**

CW: EK1AO, HA4SA, HB9CM, KV4AA, OK1AJB, 1AW, 1AWA, 1GY, 1OBV, 2BMK, 2TZ, 3DG, ON4AB, 4BI, PA6NOL, VE1EA, W1BB, 4KFC. (Rx: Modified R.103 A).

**R. Iball, 48 School Road, Langold, Worksop, Notts.**

CW: G3FWW, 3NL, 8VP, G13CDF, 3GQA, 3HBT, 3HCI, 3HFT, 3ML, 6YW, GD3FBS, GW3CBY, 3EFZ, 3FSP, GM3GUA, 4GK, EK1AO, HB9CM, OK1AJB, 1AW, 1AWA, 1GY, 2TZ, 3DG, OZ7KG. (Rx: 0-V-0).





# 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.

- AR8BA Bab. Idris Souk El Arwam Immeuble, Aleyli, 24, Beyrouth, Lebanon. CW and phone: 14 mc, 1800-2200 GMT; 28 mc, 1200-1500 GMT.
- CO2PY Calle Animas 81, Casa Blanca, Habana, Cuba. 7 and 14 mc CW, 2200-2300 GMT. Any chirp.
- CPIAD Casilla 674, La Paz, Bolivia. 28.2 mc phone, 2000-2359 GMT.
- FA9KI 2 cite Alcaras, Maison-Carree, Algeria. 14340 kc phone, 1200-1230 GMT. Modulation.
- G2BP 73 Skinner Street, Chatham, Kent. 7020, 7055, 14040 and 14110 kc CW.
- G2FHF Elmbridge, Rectory Road, Appleby Magna, Burton-on-Trent. 7040, 14080 kc CW; 7185, 14 and 28 mc phone; 1630-2359 GMT and Sundays.
- GM3AOD 57 Graham Street, Johnstone, Renfrewshire. Reports on 7 mc phone; 14 mc phone and CW.
- G3CMH c/o 9 Cedar Grove, Yeovil, Som. 3.5, 7, 14 and 28 mc phone and CW. Note and quality.
- G3FNK 79 Hillsway, Littleover, Derby. VFO-controlled 1.7 mc phone and CW.
- G3FQU 29 Bridge Way, Whitton, Twickenham Middx. 3541 kc CW; 3703, 3748.5 and 3778.5 kc phone: 0530-0615, 0715-0745, 1815-2200 GMT.
- G3GAC 20 Darwin Street, Northwich, Ches. 1.7 mc phone: 1.7, 3.5, 7, 14 mc CW: from 1830 GMT, and weekends. 7 and 14 mc=outside U.K.
- G3GIO 65 Leyborne Avenue, W. Ealing, London, W. 13. VFO-controlled 14 and 28 mc phone and CW.
- G3HCK The Beeches, London Road, Hurst Green, Sussex. 144.936 and 145.35 mc CW, 1900-2359 GMT and weekends.
- G4XF 5 Marshall Road, Ruinham Park, Gillingham, Kent. Phone and CW, VFO: 1.7 mc, 200-2200 GMT; 3.5 and 7 mc, 1900-2000 GMT. Also 0530-0615 GMT.
- HP1LA Apartado 1567, Panama, Rep. Panama. Reports on 7, 14 and 28 mc phone.
- LAIYD P.O. Box 898, Oslo, Norway. 3.5 and 7 mc LAZBD CW, 1700-2359 GMT.
- OA4AO Arnaldo Marquez 960, Lima, Peru. Phone: 14 mc, 0400-0600 GMT; 28 mc, 1700 GMT.
- OA6C P.O. Box 64, Arequipa, Peru. 7, 14 and 28 mc phone; 2200-2359, 0200-0500 GMT. Modulation.
- OZ4IM Svanekevej 56, Roenne, Denmark. 3.8, 7.12 and 28. 4 mc FM phone, 1200-1300 and 1900-2200 GMT. Details of modulation.
- PA0EIB 36 bis Acaciastr., Utrecht, Netherlands. 3.5 and 7 mc phone, 1830 GMT. Modulation.
- PA0VF Bisschopstr. 30.A, Rotterdam, Netherlands. Reports on 3.5 and 7 mc CW, evenings.
- PK3JF Djalan Andjasnoro 3, Surabaya, Java, Indonesia. 14 and 28 mc phone. Modulation.
- PY1HF Rua Luiz Gargel 82, Rio de Janeiro, Brazil. 7010, 7020 kc CW; 0800-0900, 2200-2359 GMT.
- PY2AF Trav. Brig. Luiz Antonia 25, S. Paulo, Brazil. 7129, 7080, 7205, 14258 kc phone, 0900-1200 and 2300-0200 GMT. Modulation, QRG.
- PY7XC Rua Jose Lourenco 1451, Fortaleza, Ceara, Brazil. Reports on 14 mc phone.
- SM3AXX Seljansogatan 5.F, Sandviken, Sweden. 3.5, 7, 14, 28 mc phone and CW, 1830-2100 GMT.
- SM3BZD Grongatan 41, Ostersund, Sweden. Reports on 3.5, 7 and 14 mc CW.
- VE1IV Box 30, Merigomish, N.S., Canada. 14 mc phone and CW, 1200-1600 and 1900-2100 GMT. Modulation, signal strength, any chirp.
- VE2AIM 430 3rd Avenue, Shawinigan Falls, Que., Canada. 28220 kc phone, 1200-1800 GMT.
- VE3DF J. Stauffer, R.R.4, West River Road, Galt, Ontario, Canada. 3.5, 14 and 28 mc CW and phone, 0400-0700 and 1400-2100 GMT.
- VE3DJP 9 Island View Blvd., Mimico, Toronto, Ontario, Canada. 3.5, 14, 28 and 50 mc phone and CW, 0800-2300 GMT.
- VE5NQ D. Buckberger, Gerald, Sask., Canada. 14 mc phone and CW, 1730-1900 and 2130-1400 GMT.
- VK2ACP Grand View, Cliff Drive, Katoomba, N.S.W., Australia. 3525, 7007, 7050, 7100, 7180, 14014, 14200 and 14360 kc CW and phone.
- VK2IC 76 Fricourt Avenue, Earlwood, N.S.W., Australia. 14 and 28 mc phone and CW at 0700 and 1900 GMT.
- VK3KS 24 Parslow Street, Malvern, S.E.A., Vict., Australia. 14 mc CW, 0500-0800 GMT. Comparative reports.
- VS1BX V. Thorne, Braddell Hill Hostel, Braddell Road, Singapore, Malaya. 3536, 7010, 7050, 7062 kc CW, 1600-2200 GMT. Comparative reports.
- VS2AA J. MacIntosh, Postal Dept., Kuala Lumpur, Malaya. 3.5, 7, 14 and 28 mc CW and phone, 1300-1600 GMT. CW note and phone quality.
- VU2JK 87 Rashbehary Avenue, P.O. Kalighat, Calcutta, India. 14 and 28 mc phone and CW, 1800-1800 GMT.
- WIAGW 161 Greenwood Street, New Bedford, Mass., U.S.A. 14 mc phone, 1400-1500 GMT.
- WISNT 200 Main Street, Bar Harbor, Maine, U.S.A. 28600, 28656 and 28772 kc phone, 1700-1830 GMT, Sundays 1330-1500 GMT. Modulation.
- W2FE P.O. Box 406, Bath, N.Y., U.S.A. 3.5, 14, 27 and 28 mc phone and CW.
- W2UKS 515 Eighth Street, Ocean City, N.J., U.S.A. 1805 kc phone and CW, 0001-0300 GMT. Monthly reports required.
- W3IBT 2905 Stanton Avenue, Silver Springs, Md., U.S.A. 7 and 14 mc phone and CW, 2200-0400 GMT. Reports from Asia and S. Pacific.
- W4NPt Lt. Sarno, Bldg SP-82, N.A.S., Norfolk, Va., U.S.A. 14 and 28 mc phone and CW, 1600-1800 GMT. Modulation quality and signal strength.
- W7PZ Fidler, RFD.3, Box 752, Tucson, Ariz., U.S.A. Phone and CW: 14070 kc at 1500 GMT; 28 mc.
- W9HTY 398 Walnut Street, Menasha, Wis., U.S.A. Phone and CW: 7 mc, 2100-2359 GMT; 14 mc, 0700-0900 GMT; 28 mc, 1000-1400 GMT.
- YN4CB P.O. Box 10, Bluefields, Nicaragua. 3.5 and 7 mc phone at 0100 or 0300 GMT.
- YS1RR P.O. Box 323, San Salvador, Salvador. VFO-controlled 7, 14 and 28 mc phone.
- YV5BT Oeste 16. No. 91, Caracas, Venezuela. 14300 kc phone, 1100-1400 and 2300-0300 GMT.
- ZB1AIS Lt. D.C. Smith, HMS Ricasoli, c/o F.M.O., Malta, G.C. 14 and 28 mc phone, 1700-2100 GMT, Sundays 1000-2000 GMT.
- ZL2AAH 6 Mariri Road, Wellington, W.I., N. Zealand. 3.5, 7, 14, 28 mc phone and CW, 0500-1100 GMT.
- ZL2AGL C. Gregory, Kiwi Road, Taihape, N. Zealand. 3500.7, 7001.4 and 14002.8 mc CW, 0500-0900 and 1700-1830 GMT. Keying, QSB, tone.
- ZL2OI I. Hansen, Sutherland Road, Manaia, Taranaki, N. Zealand. Phone and CW: 3620 kc, 0530 GMT; 7, 14, 28 and 50.5 mc, 0001-1000 GMT.
- ZL3OA J. Bruce, Percy Street, Akaroa, N. Zealand. 3.5, 7, 14 mc CW; 0500-1000, 1700-1900 GMT.
- ZL3OX 121 Church Street, Timaru, N. Zealand. 3.5, 7, 14 mc CW, 0600-0900 GMT. Comparative reports.

# THE VHF END

by A. A. MAWSE

## Bad Weather—Patchy Conditions—

## More About Finding the Band—

## Activity Reports and News Items—

ONLY two correspondents comment on the March Activity Week-end, and although in different parts of the country, they agree in assessing both activity and conditions as poor. Certainly, propagation conditions were nothing like as good as they were a few days prior to the week-end, but, in spite of that, some of the Tx men made contacts of over 150 miles. G3VM, for instance, from his QTH near Norwich, worked G2XC at 170 miles and GW2ADZ at 195 miles. G3BA and G3BW also worked over the long path from Daventry to Whitehaven. Such contacts, however, were not common and apparently were confined to stations favourably placed for working each other.

Best day of the month was, without question, March 4, when circuits between North and South of England were wide open. G3BW was heard on the South Coast and, as reported below, many South of England stations were audible at good strength in Lancashire. This coincided with the only spell of good weather so far experienced this year, and was short lived. It is worth recording that the area of the good conditions was widespread, and during those days of early March some excellent DX was worked on the Continent, including the first contacts between DL and OZ, and DL and SM.

## Finding the Band

Last month's remarks on the subject of finding the band has drawn further comments. L. A. Whitmill, with two converters available, purposely "lost" the band on one of them—then found the "overtones" produced by the other converter. These were very easy to trace, being on 26.2 and 25.6 mc. The

two-metre band was then found on the first converter by adjusting it to produce these same "overtones." Thus, the band was located again without difficulty, although there were no signals available on two metres at the time.

A. H. Edgar suggests another method. This requires two crystals, frequencies 5,000 kc and 5,800 kc respectively. These have a common harmonic on 145 mc. Hence, all that is required is a small crystal oscillator in which the crystals can be inserted, and the converter is then tuned until a frequency is found on which both crystals will produce a signal. This method, of course, involves the purchasing, or otherwise procuring, of the two crystals. In addition, care must be taken, due to the ease with which image reception can occur at these very high frequencies. This results in the apparent production of many spurious "harmonics." For example, if the IF in use is 7 mc, then tuning the converter oscillator to 123 mc will produce a signal from the 26th harmonic of the 5,000 kc crystal, which will be 7 mc on the *high* side, and it will also produce a signal from the 20th harmonic of the 5,800 kc crystal, which will be 7 mc on the *low* frequency side. Thus, although *both* crystals are producing signals at the same tuning point of the oscillator dial, the converter is tuned for reception on 123 plus 7 mc, *i.e.*, 130 mc, and not 145 mc as required.

This difficulty can be overcome and the method simplified by making the search oscillator self-excited and tunable. It must then be accurately calibrated. This should be easy enough with the aid of a good communications receiver. It then becomes possible to check the converter tuning from more than just two wavemeter frequencies, for in addition to 5000 and 5800 kc, harmonics are produced on 145 mc by fundamental frequencies of 5178.5, 5370.4 and 5577 kc—and if all these harmonics coincide, then there can be no doubt of the converter frequency, unless it is on *twice* 145 mc!

L. A. Whitmill raises another interesting point. He has been trying

to locate the 435 mc band by the overtone method. His 70 cm converter oscillator has its fundamental around two metres and then triples. His query is whether this converter should produce these "overtones" at the same settings of the main receiver as does his 2-metre converter. The answer is No. Presuming an IF of 7 mc, then for reception of 145 mc the oscillator is tuned to 138 mc. For reception of 435 mc, the tripled oscillator frequency has to be 428 mc, which means the fundamental is on 142.7 mc, and hence the "overtones" will be at different readings. L.A.W. goes on to say that he is receiving 2-metre signals on his 70 cm converter. This implies that his oscillator is tuned to 145 mc minus IF. In the above case, that would be 138 mc, giving a tripled frequency of 414 mc; hence, his converter is tuned to about 421 mc and not 435 mc, where most of the present 70 cm activity is to be found.

### Station News

A welcome letter comes from G3HAZ, probably better known to readers of this column as R. Rew (Birmingham). He is now active on both 2 metres and 70 centimetres. He finds a fair amount of activity in the Midlands these days, but so far conditions have prevented him working any DX. Indoor aerials are in use at present, as the "ridiculous spring weather" has made the erection of an outdoor array an impossibility. However, the neighbours are soon to be treated to a sight such as they have

never seen before, as masses of metal tubing, guy wires and the like rise into the sky. In addition, the roof space is to be filled to capacity with an indoor array. G3HAZ would be grateful for listeners' reports from any distance. Another Midland reader, W. C. Askew (Melton Mowbray) has also found activity good and asks us to pass on a request from G2FNW (144.416 mc) for reports from listeners in NW and SW directions from his QTH. Unfortunately, G2FNW's full address is unknown to your conductor, and is not in the latest Call Book, but doubtless W.C.A. would be glad to send on such reports to G2FNW, and W.C.A.'s address appears in the Calls Heard section of "VHF End."

R. Bastin (Coventry) has heard G3HAZ with a nice T9x note, and at long last has managed to log G2XC (Portsmouth). This was on March 4. Unfortunately, activity seemed low on this day and no other South Coast signal was heard. G4RO (Herts) and G6CW (Notts) have provided two new counties for R.B. After 12 months on Two, R.B. has been looking back over his results. The best month from the point of view of stations heard was July, while September provided the longest DX. A new converter, under test, uses 6AK5-6AK5-Z77 and 6J6. It appears to be just a fraction better than the previous 6J6 push-pull circuits in the matter of signal-to-noise ratio. Other constructional work in hand includes an 8-element collapsible beam for portable work. (over)

## VHF CALLS HEARD

**E. A. Lomax, 28 Welbeck Rd., Bolton, Lancs.**

G2BOC, 2BUJ, 2CDB, 2DCI, 2FCV, 2HCG, 2HGR, 2JT, 2OI, 2XC, 2XS, 3ABA, 3ABM, 3AGS, 3AHX, 3ALN, 3AOO, 3ATZ, 3AUB, 3BA, 3BK, 3BKX, 3BLP, 3BPJ, 3BW, 3CHY, 3CXD, 3DA, 3DH, 3DUP, 3EHY, 3ELT, 3ENS, 3FMI, 3GHI, 3GMX, 3UX, 4GR, 4HT, 4RO, 5BM, 5CP, 5MA, 5RW, 5VN/A, 6LK, 6NB, 6QT, 6VX, 6XM, 6SB, GW2ADZ, 5MQ.  
(February 20 to March 25: 6J6 type converter into AR88D on 10 mc. "City Slicker" aerial 40 feet high. QTH 650 feet a.s.l.).

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

G2BCY, 2DKH, 3CYY, 3DMK.  
(February 18 to March 13. Modified RF26 into S640. 4-element very wide spaced Yagi in roof-space).

**R. L. Bastin, 196 Binley Road, Coventry, Warks.**

G2AOK/A, 2ATK, 2BVW, 2FNW, 2HCG, 2MV, 2XC, 3ABA, 3BA, 3BCY, 3BLP, 3BVJ, 3DUP, 3EHY, 3GHI, 3GR, 3HAZ, 3WU, 4HT, 4NB, 4RK, 4RO, 5BM, 5IW, 5LJ, 5PP, 5SK, 6CI, 6CW, 6NB, 6XM, 6XY, 6YW, 8QK, 8QY, GW2ADZ.

(February 21 to March 24. 4-element v.w.s. Yagi in roof space.).

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

G2AHP, 2AVR, 2BMJ, 2BZ, 2CIW, 2DD, 2DI, 2DPD, 2DSW, 2DTO, 2FAB, 2FMF, 2FPP, 2FTS, 2HCG, 2HDZ, 2IQ, 2LW, 2MQ, 2MR, 2MV, 2UJ, 2VH, 2XC, 2YC, GW2ADZ, 3BCY, 3BK, 3BLP, 3BA, 3BWC, 3CGO, 3DIV/A, 3ECA, 3EIW, 3EHY, 3ENY, 3EYV, 3FD, 3FSD, 3FXG, 3GBO, 3GHI, 3GHS, 3GSE, 3SM, 3WW,

4CG, 4DC, 4FB, 4HQ, 4HT, 4KD, 4MR, 4MW, 4RO, 5BC, 5BY, 5CD, 5DS, 5DT, 5KH, 5LK, 5LQ, 5QB, 5RD, 5SK, 5TP, 5OM, 5YM, 6AG, 6BO, 6CB, 6HG, 6JK, 6JP, 6KB, 6LK, 6LO/A, 6LR, 6NF, 6OH, 6QN, 6NH, 6VX, 6WU, 6XM, 6YP, 8IP, 8KZ, 8LG, 8TB.

(Rx: 6J6 pre-amp. into RF27 into S.640, with 5-ele beam. February 19 to March 22).

**W. C. Askew, Burrough, Melton Mowbray, Leics.**

G2BVW, 2CPL, 2DLJ/A 2FNW, 2HCG, 2IQ, 2RI, 2XS, 3ABA, 3APY, 3BA, 3BLP, 3CGQ, 3DUP, 3EHY, 3EMJ, 3ENS, 3FFC, 3GHI, 3HW, 4NB, 4RK, 5RW, 5SK, 6AG, 6CW, 6NB, 6VX, 6XM, 6YU, GW2ADZ.

(G2IQ converter into Commander, 4-ele Yagi 600 feet a.s.l. February 20 to March 20).

## TWO-METRE COUNTIES HEARD

IN 1951

Starting Figure, 10

E. A. Lomax	...	...	...	27
L. A. Whitmill	...	...	...	19
W. C. Askew	...	...	...	18
A. W. Blandford	...	...	...	17
R. L. Bastin	...	...	...	15
P. J. Towgood	...	...	...	15

Note: Only counties heard since January 1, 1951 may be claimed for this table.

ALL-TIME

Starting Figure, 10

E. A. Lomax (Bolton)	...	39	(152)
P. J. Towgood (Bournemouth)	...	37	(191)
L. A. Whitmill (Harrow Weald)	...	28	(296)
A. W. Blandford (Mitcham)	...	28	(240)
R. L. Bastin (Coventry)	...	27	(81)
W. C. Askew (Melton Mowbray)	...	22	(50)
P. Finn (Iver)	...	17	

Note: Figures in brackets give total number of stations heard.

E. A. Lomax (Bolton) considers the month has been fairly good, although conditions over Easter were disappointing. On March 4, things were excellent to the South, and G2XC, G4RO and G6LK provided him with new signals. The barometer was very high at the time. E.A.L. had a very welcome visit from G3HBW (A. L. Mynett), when, in spite of poor conditions, some Southern DX was pulled in. Having acquired a TV receiver, E.A.L. finds the nightly weather maps a great help in forecasting "tomorrow's conditions."

Still further North, A. H. Edgar (Newcastle) reports local activity as good as three stations can make it. On March 11, between 1500 and 1600, A.H.E. heard a strong wide-band FM station carrying the light programme. It was very unstable and drifted from 145.5 to 144.5 during the course of an hour. He asks if anyone else heard it. (Parasitic oscillations in the output stage of a broadcast receiver can cause re-radiation of the programme being received. There have been instances of this causing interference to television, and it is possible something of this sort was happening.) A.H.E., without a barometer, has been determining the atmospheric pressure by the ingenious method of taking the temperature of boiling water. Recently the average has been down to 98° C. He now proposes to use distilled water and a super-accurate thermometer to improve his system.

L. A. Whitmill (Harrow Weald) has

found activity very good indeed, and conditions excellent from February 28 to March 4, when he logged G5BY, G5SK and GW2ADZ. A. W. Blandford (Mitcham) has nothing startling to report, but he has noticed how lively 70 cm seems in London recently, and the transmissions have improved both in quality and strength.

### In Conclusion

Thanks once again to our regular correspondents for their interesting letters and reports. The latest date for next month's mail is **April 26**, and the address is, of course, A. A. Mawse, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.

### THE CALL BOOK

In the Spring 1951 issue of the *Radio Amateur Call Book*, now available at 20s. post free from Gage & Pollard, the G listings alone occupy some 18 closely-printed pages, representing over 6,400 U.K. callsign/addresses. The G section is complete up to and including the "New QTH's" published in the February issue of our *Short Wave Magazine*.

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## WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

**DX** *broadcast*

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

RECENT listening has harvested a profusion of world-wide sporting events. In particular, the British West Indies Cable and Wireless Station ZNX<sub>32</sub>, 7547 kc (39.76 metres announced) in Bridgetown, Barbados, was heard most evenings between February 21 and March 10. Initially, there were the two Inter-Colonial cricket matches between Barbados and Trinidad, played on the Kensington ground at Bridgetown. Broadcast commentaries were normally available daily between 2030 and 2130 or 2200; we were treated to some scintillating displays of batsmanship, notably by Stollmeyer (208 for Trinidad) and by Clive Walcott (who replied with a faultless 209 for Barbados).

On one occasion the commentator said: "We hope you have received this broadcast clearly in Trinidad, British Guiana and throughout the West Indies."

Three days in the period under review were devoted to the Spring Meeting of the Barbados Turf Club, and at 2140 on March 8, over ZNX<sub>32</sub>, we heard Ian Brown with a rousing commentary, concluding with a dead-heat in the last race of the day. On the final day, the News from London was heard at 2000. The broadcasts were all sponsored by Barbados Rediffusion Services Ltd., so that we sometimes received the invitation to write for samples and quotations of Barbados rum!

At 0650 on February 28, England's victory over Australia in the final cricket Test Match at Melbourne was well heard over Radio Ceylon, 15120 kc, with a scramble for the stumps, Iverson grabbing the ball, and Hutton facing a semi-circle of photographers. Johannesburg, 11927 kc, gave a Sportsman's Review at 1930 on March 3; in it we heard a recording of a running commentary of that sporting high-light, the

Cape of Good Hope Stakes—the Cape Town Derby—run that afternoon on the Kenilworth racecourse and won by Green Lass.

From New Delhi, 7155 kc, too, commentaries in English on the final of the free-style 400 metres swimming race for men, and excerpts from the Soccer games, India *v.* Afghanistan and Iran *v.* Japan—all part of the Asian Games—have been well received. Finally, WRCA6, New York, 15150 kc, assisted at 1945 on March 8 with a recording of the Heavyweight Boxing Championship fight between Ezzard Charles and Joe Walcott. What a galaxy of sport!

At this point we must acknowledge letters from Arne Skoog (Radio Sweden), Graham Hutchins (DX Editor, Radio Australia), Paul Borsinger (Swiss Broadcasting Corporation) and I. Dilworth (Canadian Broadcasting Corporation), and we heartily reciprocate all the good wishes contained in them. The first-named would like to hear from listeners to the Saturday "Sweden Calling DX'ers" broadcasts, particularly about their reactions to the recordings made and played of the transmissions from various world-wide short wave stations; we, personally, have heard several around 0825 on 6065 kc and think the idea is an excellent one. A. Skoog also writes: "The other day the last antenna mast for our new short wave station at Hörby was erected, and tests will be made by the two 100 kW transmitters in a few weeks."

Elsewhere there are details of Radio Australia's "Listeners' Choice" programme, which has been extended; and the CBC, P.O. Box 6000, Montreal, Quebec, would appreciate period-reports on their transmissions from our readers.

**Africa.**

The SABC's experimental transmissions on 11927 kc are again in the

news. G. Paton (Salford, Lancs.) heard a concert from the Town Hall, Cape Town, at 1815 on February 1; we have noted this regular feature which is presented by the Cape Town Municipal Orchestra. Other items heard were Dr. J. H. Carree's talk on the cancer problem at 1730 on February 20; three members of the staff of the University of Natal reviewing a new Encyclopædia; and Dr. E. Ashley's informative talk at 1730 on March 8 about the conversion of Rhodes College, Grahamstown, into the new Rhodes University, which ceremony took place on March 10 of this year. Cape Town itself has been logged on 5890 kc with a recording of "Much Binding In The Marsh" at 1915, but with the usual heavy Morse interference. On February 21, Cape Town gave News in English at 2000, a weather forecast at 2005, and a programme preview at 2008-2010; the next News was advertised for "7 o'clock tomorrow morning," *i.e.*, 0500 GMT.

The island of Mauritius was noted at 1700 on March 4 on a frequency of 15060 kc; we heard a talk entitled: "Lawn Tennis Personalities of Britain," and V3USE closed down promptly at 1730 with the words: "This is Mauritius Broadcasting Service" and the playing of God Save the King.

We have received a letter of verification from R. Guillon, Officer-in-Charge of Broadcasting, Poste Radio-Tananarive, Madagascar.

As given elsewhere, there are two networks, one employing French on 9515 kc and 6172 kc, the other broadcasting in the Malgache dialect over 9693 kc and 7394 kc. M. Guillon mentions that regular reports are appreciated from distant listeners. In Mozambique, CR7BG, 15180 kc, has been logged with a Portuguese transmission at 1700 by P. Fry (Chandlers Ford, Hants.); English programmes can be found as follows: 0600-0800, 4932 kc and 11766 kc; 0800-1700, 7260 kc and 11766 kc; 1700-2000, 4932 kc and 11766 kc; 2000-2300, 3490 kc and 4932 kc. In Angola, CR6RD in Nova Lisboa has lately moved from 11925 kc to 9705 kc, and is on the air daily from 1900 to 2030. R. A. Savill (Sevenoaks, Kent) mentions Salisbury, Southern Rhodesia, 3320 kc, with a female giving a programme summary at 1815 (S8), and VQG1, Nairobi, Kenya, 4855 kc, which was audible on closing at 2000 with the direction: "This is the Cable and Wireless Station in Nairobi closing down until our lunch-time programme at 1 p.m. tomorrow."

E. Lund (Morecambe) has received a letter from the Civil Secretary's Office, Khartoum, acknowledging his report of Radio Omdurman and enclosing a copy of the "Sudan Almanac for 1950"; Radio Omdurman uses 9746 kc and 5975 kc.

A new and sometimes difficult station to log, because of mutual interference, is ELB, Monrovia, Liberia, which operates on a frequency of 6025 kc and is audible in the United Kingdom between 2200 and 2345. March 17 was an exception, for ELB was received at good strength (S7) and with clear signals for its Saturday night "Listeners' Choice" feature. Amongst other items, we heard Dinah Shore singing "For Ever and Ever," and a chorus rendering "Auld Lang Syne." At 2340, the compère said: "Now we end our Saturday night racket with: 'Saturday Night's Big Fight.'" Then, at 2345, the following statement was made: "You have been listening to a broadcast from the Liberian Broadcasting Company's studios of Station ELBC (medium-wave). ELBC, operating on 6.025 mc in the 49-metre band, is now leaving the air at approximately 11 p.m. Monrovia Time, and this is your announcer, Cleve Dewer, wishing you Pleasant Listening and a Good Night's Rest. Ladies and Gentlemen, the Liberian National Anthem!" J. Holden (York) has logged ELB between 2315 and 2345 with American recordings; ELBC's schedule is: 1945-2345. Reporters may write to: Dr. John B. West, The Liberian Broadcasting Company, Station ELBC, Monrovia, Liberia.

R. T. Blackmore (Exeter) reports OTH, Leopoldville, 11645 kc, relaying an OTC (9767 kc) programme at 2255 on February 17, and P. Fry offers FHE3, Dakar, 11895 kc, closing with La Marsellaise at 2300 on the same date. R.T.B. also logged Radio Africa, Tangier, on 7101 kc, with Spanish and French directions at 2230; and J. Balneaves (Edinburgh) has a verification card for the Voice of America relayed by Tangier and logged at 1730 on 15250 kc. R. Abrahams (Hounslow, Middsx.) writes: "I am pleased to tell you that I wrote a letter report based on your model letter in French to this station (Radio Africa) and received a verification card, also in French, within 20 days of posting—ordinary mail both ways"; he also listened to Tangier on 15048 kc between 1307 and 1330, when the final direction was: "You have been listening to Pan-American Radio, Tangier."

## TABULATED SCHEDULES

**I. Radio Australia, Overseas Service, ABC, P.O. Box 780 H, GPO, Melbourne**

"Listeners' Choice" Programmes. Requests for this feature are welcomed; send your request to the above address; your tune will be played after notification has been sent to you by letter.

Stations: VLA6, 15200 kc; VLB4, 11850 kc.  
 Mondays: 1440-1458.  
 Wednesdays: 1402-1415.  
 Thursdays: 1402-1415.  
 Saturdays: 1402-1415.

**II. Radio Jamaica, Kingston, Jamaica, British West Indies**

4950 kc: 1130-1400; 1700-1900.  
 3360 kc: 2100-0400.

**III. Radio Nepal, Khatmandu, Nepal**

Transmission 1: 0400-0430; 7100 kc and 60 mc.  
 Transmission 2: 0830-0930; 7100 kc and 60 mc.  
 Transmission 3: 1415-1515; 7000 kc and 60 mc.

**IV. Radio Tananarive, Madagascar**

Address: Monsieur R. Guillon, Le Chef de Section de la Radiodiffusion, Service des Emissions Radiophoniques, Radio-Tananarive, Tananarive, Madagascar.

Schedules:

(i) French Network.	Frequencies: 9515 kc and 6172 kc.
	Weekdays: 0330-0530, 0900-1100, 1500-1930.
	Sundays: 0400-0745, 0830-1100, 1415-1930.
(ii) Malgache Network.	Frequencies: 9693 kc and 7374 kc.
	Weekdays: 0330-0500, 0820-1031, 1400-1700.
	Sundays: 0330-0500, 0820-1030, 1400-1700.

Reception reports (preferably in French) are invited from distant listeners.

**V. Radio New Zealand, Wellington, N.Z.**

1800-2045, 0700-Close down: ZL8, 9620 kc and ZL3, 11780 kc.  
 2100-0645: ZL10, 15220 kc and ZL4, 15280 kc.  
 Close down: Sundays: 1000; Weekdays: 1030; Saturdays: 1120.

testing on 19 metres, 15048 kc—P.A.R. is now closing down." R.A. also recommends Algiers, 9570 kc, for enjoyable programmes and a "lovely Good-night Melody" before the final announcement at 2258; B. P. Middleton (Clapham, S.W.11) got a kick out of their relays of the Tour d'Afrique cycle races, heard around 1720. Radio Maroc, Rabat, 7214 kc, was heard with a dance session at 2200 by P. Fry.

SUX, Cairo, 7867 kc, can be identified by the slogan: "Hoono El Kahira" and a clock striking eleven at 2100, followed by a March from a Wagner opera (R. Abrahams); after this they gave Arabic News and close around 2130 (E. Lund). We have been logging CR4AA, Praia, Cape Verde Islands, consistently around 2100-2200 on a new frequency of 5940 kc: all directions are in the Portuguese language, and on the hour you may hear the words, "Radio Club do Cobo, Verde, Praia." Before closing at 2200, the time is indicated by a studio clock which strikes eight. CR4AA on this new frequency was logged by R. Abrahams, but J. Holden mentions the old channel of 5895 kc, which he found on March 12.

In Portuguese Guinea, CQM4, Bissau, can be heard on 5839.2 kc in the schedule 2130-2300 (Radio Australia).

**Australia**

D. W. Waddell (Hitchen, Herts) has spotted VLM, Brisbane, on 4917.5 kc, with a playing of the Lew Stone recording, "I Get A Kick Out Of You" at 2023 (time given as '23 minutes past six'); a News was heard at 2045. When we logged VLM at 1958 on March 7 we were told: "The time is two minutes to six o'clock. Our morning session will commence in two minutes' time, when we broadcast the News over 4QL, 4QG, 4QM and 4QR and other regional stations." When J. M. Simpson (Hassocks, Sussex) spotted VLM at 2000, they gave news, weather report and market prices. VLQ3, Brisbane, 9660 kc, is normally heard best around 1315; on March 4, the Governor of Queensland was heard giving a Red Cross appeal. More surprising was the appearance of VLQ3 at 0800 one morning with the direction: "This is the ABC"—a play followed. D. W. Waddell also logged VLX, Perth, Western Australia, 4897.5 kc, at 2228 on February 18 with the playing of "Good-night, Irene," but there was consider-

able QRM from the CW transmitter ATN6. Arne Skoog tells us that VLT5, Port Moresby, New Guinea, on 7280 kc, is audible in Britain between 1100 and 1145, but, so far, we have been unlucky. However, one Sunday we were able to trace a carrier until 1200, when it disappeared, which coincides with VLT5's closing time (with an extension to 1330 on Saturdays).

P. Fry offers VLG10, 11760 kc, with ABC Inter-State programme at 1245; VLC4, 11810 kc, with the Amateur Talent Hour at 1315 and VLB9, 9580 kc, with a transmission directed to S.E. Asia at 0715. R. T. Blackmore gives the evening session intended for U.K. listeners between 2030 and 2200 over VLA8, 11760 kc; he heard aboriginal songs and breakfast music after an English News at 2045. C. Costello (Wellington, N.Z.) gives Radio New Zealand's new schedule, reproduced elsewhere.

### Asia

During the month of March, the transmitter JKI4 in Tokio, Japan, on 11800 kc, has been audible between 0745 and 0800, often with a request programme of dance recordings and a female compère. The station closes down quite abruptly at 0759 with the words: "This is the United States Armed Forces Radio Service—The Voice of Information and Education. This is the Far East Network relaying the AFRS from Tokio, Japan. Stations JKL2, 9.605 kc, and JKI4, 11.8 mc, now leaving the air—JKL 4.86 mc, and JKI3, 6.175 mc, will continue in a few moments. The time is now five o'clock." J. M. Simpson reports JKI4 at 0755 with the "Harry Lime Theme" and flutter on signals.

Graham Hutchins tells us that British Commonwealth Occupation Forces stations at Kure and Iwakuni in Japan transmit for their respective areas only. Kure (ex-WLKS) operates on 1470 kc (medium-wave) and 6105 kc daily from 2130 to 1330, with an extension on Saturdays until 1400. The auxiliary station at Iwakuni operates on 1440 kc (medium-wave only) on: Week-days, 2130-1400; Sundays, 2130-1330.

The Communist-controlled Chinese station on 15060 kc has been well received, opening up at 0830 with their new Anthem; the English programme opens at 0930 with the direction: "This is Radio Peking. Here is the News." On one occasion we listened to a propa-

ganda talk, in which we were led to believe, if we heard aright, that the inhabitants of the British Isles are attempting to exist on a starvation diet! J. C. Catch (South Shields) heard Radio Peking on 15060 kc at 0945 on March 7 giving messages from United Nations prisoners of war in Chinese hands. The closing comments on March 4 included a request for written reports and the words: "We wish all our listeners Good Evening." At 1700 recently, J. M. Simpson heard a Chinese broadcast from Nanking on 9730 kc. *Australian DX'ers* advise us that the Nationalist station in Taipei, Taiwan, on 3220 kc, using the call-letters BED2 and BED32, gives English/Chinese language lessons on Saturdays from 1100 to 1130; and *World Radio Handbook* offers Radio Tibet, owned and operated by Reg Fox, Lhasa, on 7255 kc, with Tibetan, English and Chinese programmes on Mondays, Wednesdays and Fridays from 1500 to 1600. We were given to understand that AC4YN had moved to Kalimpong in North Bengal as a member of the retinue of the Dalai Lhama; perhaps these advertised broadcasts emanate from Kalimpong! (*It would be interesting to have reports on the recent reception of Radio Tibet.*—Editor.)

G. Paton has heard Delhi, 9720 kc, with News in English at 1900, and we noted New Delhi on 7120 kc on March 4 with a report on the Asian Games in a special transmission directed to Bangkok, Thailand.

It is reported that an English News from Karachi is given at 1515 from a station on 4810 kc styling itself as "Radio Pakistan, Lahore."

We have logged for the first time DZH8 on 15300 around 1329, when the following direction was given: "You have been listening to 'Doctrine and Song.' This is the Far East Broadcasting Company, Manila, Philippines. . . . The time in the Philippines is one minute before 9.30 p.m." On another occasion, DZH8 was heard at 1400 with the direction: "This is the Call of the Orient. DZAS is now closing down, and we say Good Night and God Bless You to our medium-wave friends." Between 1200 and 1230, DZH8 frequently presents a recording of a religious Revival Service conducted in Hollywood, California. C. Costello mentions that DZH8 is fair at 0600, strong at 0700 with the identification: "Your stations are DZB2, 3.30 mc, in the tropical broad-



cast band; DZH6, 6.03 mc; DZH7, 9.73 mc; and DZH8, 15.3 mc."

P. Fry has logged YDC, Indonesia, 15150 kc, with a musical programme at 1430, and Singapore, 11880 kc, with a BBC News in English at 1600. On February 25, Singapore, on 15300 kc, gave the musical comedy, "The Rebel Maid," at 1445; B. P. Middleton advises us that the Voice of Indonesia (over YDC) now gives its English broadcast from 1430 to 1530; R. A. Savill hears YDB<sub>3</sub>, 7270 kc, with a Dutch programme at 2330, and another English session on 7220 kc between 1900 and 2000; R. Abrahams hears the last mentioned broadcast over YDF<sub>2</sub>, 11785 kc. R. A. Savill offers these addresses:—Singapore: British Far Eastern Broadcasting Service, Thomson Road Studios, P.O. Box 434, Singapore; and Ceylon: G.P.O. Box 574, Colombo.

In the Middle East, Israel, 9000 kc, with an English talk, was logged by G. Paton at 2230; we have also heard an English news over 4XB<sub>31</sub>, 9000 kc, and 4XB<sub>21</sub>, 6830 kc, at 2015. We understand that Radio Kol-Israel will introduce new 50 kW transmitters on the Israeli Independence Day, May 14, and that the frequencies will be: 21465 kc, 17880 kc, 15415 kc, 11935 kc, and either 9500 kc or 9615 kc or 9640 kc; the medium-wave channel is 1025 kc. On February 24 at 1855 we logged YI<sub>5</sub>KG, Radio Baghdad, Iraq, 7092 kc with a programme of Eastern music. A studio clock struck the hour at 1900, after which came Arabic News and talk, and at 1930 the clear chirps of this station's mechanical nightingale interval signal. We wonder how many of our readers possess a YI<sub>5</sub>KG verification card dated 16/12/1938! Ours gives the owner as H.R.H. Prince Feisal, and the operator, Mr. T. Hassan, who was then Supervisor of the Wireless Station, Civil Airport, Baghdad, wrote: "We thank you for your interest and for writing to us, and we will much appreciate further reports from you."

### North and Central America

P. Fry supplies CBNX, St. Johns, Newfoundland, 5970 kc, which he heard, despite heavy QRM, at 2330; CHNX, Halifax, Nova Scotia, 6130 kc with commercial announcements was an S<sub>9</sub> signal at the same time, however. We noted CBNX with 'Annie Laurie' at 2312 on March 17 at the termination of a short news bulletin. CBLX, 15090

kc, has resumed its United Nations beam to the Pacific daily except Sundays and Mondays from 0430 to 0505 (C. Costello). R. Abrahams likes "Canadian Primer"—a weekly programme from 1715 to 1730 every Sunday over CKNC, 17820 kc and CKCS, 15320 kc.

### Europe

J. Balneaves tells us that he heard Radio Nederland, 6025 kc, at 1800 and on 11730 kc at 1815, and Radio-diffusion Française, Paris, on 6200 kc, at 1845. The latter service has also been noted on 11940 kc and 7165 kc recently. J.B. spotted Prague on 9504 kc at 1915, and offers their latest English schedule: 1145-1230 on 11875 kc; 1915-1945 and 2030-2045 on 9504 kc; 2215-2230 on 9504 kc and 6010 kc; and 2300-2345 on 6010 kc. The entire Sunday half-hour programme at 1915 is devoted to Answers to Listeners. Budapest was heard by R. T. Blackmore with News in English at 2315 on an announced wave-length of 41.5 metres (7226 kc), and both he and G. Paton comment on Radio Malaga, Spain, 7012 kc, which offers a musical programme at 2230 and, half-an-hour later, gives the direction: "Radio Nacional de Espana." On February 21, Radio Nacional de Espana in Madrid was logged on 9368 kc at 2025 with Notes on the week's sport, but this station has now moved to 9585 kc; reports on reception on this channel are requested, and there is a Mail Bag on Sundays at 2300. EDV<sub>10</sub>, 7170 kc, has sent B. P. Middleton a card with schedule: Mon-Sat: 1800-0000; Sun: 1300-1700, 1800-0000, with English on Fridays at 1930. C. Costello says that the letters FET in Spanish call-signs stand for Falange Espanola Tradicionalista.

Pleasant sounding bells proclaimed the feature "Memories of Switzerland" heard over HER<sub>6</sub>, 15305 kc, on March 4, and on another occasion we logged Athens, 9607 kc, at 1930 with the English feature: "The Adventurers of Ancient and Modern Greece"; it closed at 1945 with the folk dance "Kato stou valtou du choria." Athens now broadcasts in English at this time over 11718 kc.

As usual, we shall be very pleased to receive your reports on reception; the address is: R. H. Greenland, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1, and the closing date May 15.

# SHORT WAVE BROADCAST STATIONS

Revision 31.53-41.61 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 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.

Fre- quency	Wave- Length	Callsign	Location	Fre- quency	Wave- Length	Callsign	Location
9515	31.53	KRCA1	San Francisco	7850	38.22	ZAA	Tirana, Albania
		KRCA3	San Francisco	7784	38.54		Pyongyang, Korea
9510	31.55	GSB	London	7670	39.11	LZG	Sofia, Bulgaria
9508	31.56	YUC	Belgrade			HC1GP	Quito, Ecuador
9505	31.56	HOLA	Colon, Panama.	7667	39.12		Dacca, Pakistan
		JBD	Kawachi, Japan	7655	39.19	YNDG	Leon, Nicaragua
9500	31.58	XEWV	Mexico City			CE776	Santiago, Chile
		VL13	Sydney, N.S.W.	7618	39.38	YNLAT	Granada, Nicaragua
		DZH3	Manila, P.I.	7582	39.56	CR6RO	Silva Porto, Angola
		OAX5C	Ica, Peru	7530	39.84	FET	Mahon, Menorca
94090	31.61	H12A	Santiago, D.R.	7520	39.89	EASAB	Tenerife, Canary Is.
		YSA	Santa Ana, Salvador	7472	40.15	HC5AB	Riobamba, Ecuador
			Lagos, Nigeria	7462	40.20	TGDA	Quezaltenango
9485	31.63	CP38	La Paz, Bolivia	7448	40.28	FGSHA	Guadeloupe
9480	31.65	RW96	Moscow	7413	40.47	YNAO	Masaya, Nicaragua
9470	31.68	CR6RN	Luanda, Angola	7410	40.49	PS2T	Sao Paulo
9465	31.70	TAP	Ankara, Turkey	7385	40.62		Sanaa, Yemen
9460	31.71	CPI	Sucre, Bolivia	7380	40.65		Madrid
9455	31.73	LRA	Buenos Aires	7375	40.68	FIQA	Tananarive
9445	31.76		Karachi, Pakistan	7370	40.70	YDP2	Mandalay, Burma
9440	31.78	FZI	Brazzaville	7360	40.76		Moscow
9435	31.80	COCH	Havana, Cuba	7350	40.82	HC2AN	Guayaquil, Ecuador
9430	31.81	XERQ	Mexico City	7340	40.87		Moscow
		CP21	Sucre, Bolivia	7325	40.96	GRL	London
9410	31.88	GRI	London	7314	41.02	YSO	San Salvador
9400	31.91	OTM2	Leopoldville	7300	41.10	ZOY	Accra, Gold Coast
9380	31.98	OAX4W	Lima, Peru				Athens, Greece
9368	32.03		Madrid, Spain	7295	41.12	YDQ3	Makassar, Celebes
9362	32.04	COBC	Havana				Johannesburg
9340	32.12	OAX4J	Lima, Peru	7290	41.15	VUD2	Delhi, India
9320	32.19	LRS	Buenos Aires			ZEAH	Salisbury, S. Rhodesia
9290	32.29	PRN9	Rio de Janeiro				Hamburg
9273	32.35	COCX	Havana	7287	41.17		Douala, Cameroons
9254	32.42		Bucharest	7285	41.18	TAS	Ankara, Turkey
9250	32.43	YSF	San Salvador			JKJ	Nazaki, Japan
		CR6RD	Nova Lisboa	7280	41.21	GWN	London
9235	32.49	COBQ	Havana			HVJ	Vatican City
9210	32.57	OTH	Leopoldville			DXV2	Davao, P.I.
		H12G	Trujillo, DR.			VLT5	Port Moresby
9200	32.61	CE92O	Punta Arenas, Chile				Paris
9165	32.73	CR6RB	Benguela, Angola	7275	41.24	VUD9	Delhi, India
9148	32.79	FIA6	Douala, Cameroons	7270	41.27	RW97	Moscow
9110	32.93	ZRB	Waterkloof, Pretoria			YDB3	Djakarta
9045	33.17	HRA	Tegucigalpa				Tangier
9040	33.19		Peking, China	7260	41.32	GSU	London
9035	33.20	COBZ	Havana			OZU	Copenhagen, Denmark
9000	33.33	4XB3I	Tel Aviv, Israel			VUM2	Madras
8960	33.48	BCAF	Taipeh, Formosa			VUM3	Madras
8955	33.50	COKG	Santiago, Cuba			BED4	Taipeh, Formosa
8825	33.99	COCQ	Havana, Cuba	7257	41.34	JKH	Karachi, Pakistan
8700	34.48	COCO	Havana, Cuba	7255	41.35		Yamata, Japan
8665	34.62	COJK	Camaguey, Cuba	7250	41.38	PJC2	Lagos, Nigeria
8550	35.09		Jodhpur, Rajputana			HVJ	Willemsted, Curacao
8440	35.55	YNCHA	Diriamba, Nicaragua				Vatican City
8400	35.74		Ulan-Bator, Mongolia				Munich
8320	36.06	HTX1	Managua, Nicaragua				Rome
8265	36.30	VED	Edmonton, Alberta	7245	41.41		Vienna
8242	36.40	CR6RG	Dundo, Angola	7240	41.44	VUD10	Delhi
8230	36.45	ZNB	Mafeking, Bechuana-land			VUB2	Bombay
						VUB3	Bombay
8215	36.52		Scutari, Albania			YDL	Padang, Sumatra
8192	36.63	YNXW	Managua, Nicaragua				Paris
8188	36.64	CNR3	Rabat, Morocco	7235	41.47		Moscow
8185	36.65	FZF2	Fort-de-France, Mar'que	7230	41.49	GSW	London
			Haifa, Israel	7225	41.52	VUD10	Delhi
8170	36.72	4XB24	Granada, Nicaragua	7220	41.55	ZQP	Lusaka, N. Rhodesia
8150	36.81	YNWW	Beirut, Lebanon			BED2	Taipeh, Formosa
8036	37.33		Jinotepe, Nicaragua				Malta
8007	37.46	YNMG	Alicante, Spain	7215	41.58	RW96	Moscow
7950	37.74		Bissau, Port. Guinea	7214	41.59		Tangier
7940	37.78	COM4	Rio de Janeiro	7210	41.61	HEI3	Berne, Switzerland
7935	37.81	PSL	Cairo, Egypt			LLS	Tromso, Norway
7860	38.17	SUX				VUC2	Calcutta

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