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SHORT WAVE LISTENER AND TELEVISION REVIEW



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AND AMATEUR TELEVISION

APRIL 1951
VOLUME 5 • NUMBER 4

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THE SHORT WAVE LISTENER AND TELEVISION REVIEW

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EDITORIAL

Cards

Four years ago we discussed in this space the matter of QSL cards, and the same subject has been touched upon more than once since.

The lure of DX makes heavy demands upon its devotees—and not least is that of obtaining confirmation of what is entered in the log. To most SWL's seriously interested in DX listening, the QSL card is an essential factor in the scheme of things, crowning results with proof of ability.

From the point of view of the transmitting operator, things are a little different. Cards are often just as important and interesting to him, but the emphasis is changed. He sends and receives QSL's to confirm contacts; and with the volume of traffic on the amateur bands today, this is about as much as he can cope with. SWL reports are therefore of little interest to him unless he wants them for a coverage survey, or they tell him something he could not otherwise know. For instance: That he is being heard in an unexpected direction at an unusual time; that his call was answered by an exotic DX station; that, in comparison with other stations in his neighbourhood, he is stronger or weaker; that, though he called and called and *called* without result, he was yet being heard by an SWL able to give him a detailed report.

The operator behind a call DX to this country is not only burdened with the task of QSL'ing the G's he has worked, but is also flooded out with SWL report cards—from G listeners! In such a case, the obligation to QSL becomes a heavy drain on his time and his purse, and he cannot be expected to QSL all and sundry merely for the asking.

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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 II

by THE OLD TIMER

(The answers to Questions 5, 7 and 8 appeared in our issue dated March. The remaining questions will be covered in the next issue. By payment of an additional registration fee, there is still time to apply for admittance to the forthcoming Radio Amateurs' Examination on May 2 next. The final date for entries is March 31, and full details as to how to apply were given on p.82 of our last issue.—Editor.)

QUESTION 1. With the aid of a diagram, describe the essential features of a crystal-controlled radio transmitter suitable for the 14 Mc/s frequency band and indicate the method of keying.

ANSWER: A typical low-powered transmitter for the 14 mc band might well consist of three stages—a crystal oscillator, a frequency-doubler and a power amplifier. A crystal with a frequency in the 7 mc band would then be used.

Fig. 1 shows a simple transmitter of this kind, employing three tetrodes as CO, FD and PA. The first, quite a small valve of the 6F6 or 6V6 type, operating with not more than about 200-250 volts of HT, has its anode circuit tuned to resonance with the crystal which is in the grid circuit.

This stage will supply plenty of RF power to drive the following doubler stage. This may be a similar tetrode or one of a slightly larger type such as a 6L6 or 807. It is biased to about twice cut-off to ensure a good output of the second harmonic, its anode circuit being tuned to this frequency.

A certain amount of amplification will also take place in this stage, resulting in ample power output at the second-harmonic frequency (14 mc) to drive the final stage, which, again, will probably be of the 807 type. This stage, however, operates at a higher input, the anode circuit being fed from a 500-volt line instead of the 300-volt line used for the two preceding stages.

The anode circuit of the PA will, of course, be tuned to resonance with its input; neutralising should not be

necessary for 14 mc work, provided that sufficient care is taken to provide good spacing and, if necessary, screening between grid and anode circuits.

The tank circuit of this last stage (C14, L3) is equipped with a link winding (L4), which may be connected either via 72-ohm coaxial line to a resonant dipole, or through a similar type of line to an aerial coupler which makes it possible to use any sort of aerial that the operator may desire. In any case, the aerial coupler should be separated from the transmitter, and the coupling should be through some type of low-impedance line.

There are many ways of keying such a transmitter. Should "break-in" be desired (*i.e.*, complete absence of radiation when the key is up) it will be necessary to key the oscillator stage. This will probably be best achieved by using "grid-block" keying, which imposes a high negative voltage on the grid of V1 (*via* R1) when the key is up.

The type of keying shown in the diagram, however, is probably preferable from the point of view of securing a good note and complete absence of clicks. The key (X) is in the screen circuit of the frequency-doubler. The current to be broken here is of a very low value; the potential-divider feeding the screen, and the bypass condenser to earth, already provide a kind of click-filter; and the additional condenser C10, connected across the key, may be adjusted to give the best balance between freedom from clicks and too "soft" a keying characteristic.

When the keying circuit is broken, the output from the stage will be so low that the PA stage will not be driven, and there should be a complete absence of output from that stage with the key up.

Suggested values for the various resistances and condensers are given in the accompanying table; the sizes of inductances are optional, provided that L1 will tune in the 7 mc band, and L2 and L3 in the 14 mc band. L4 is

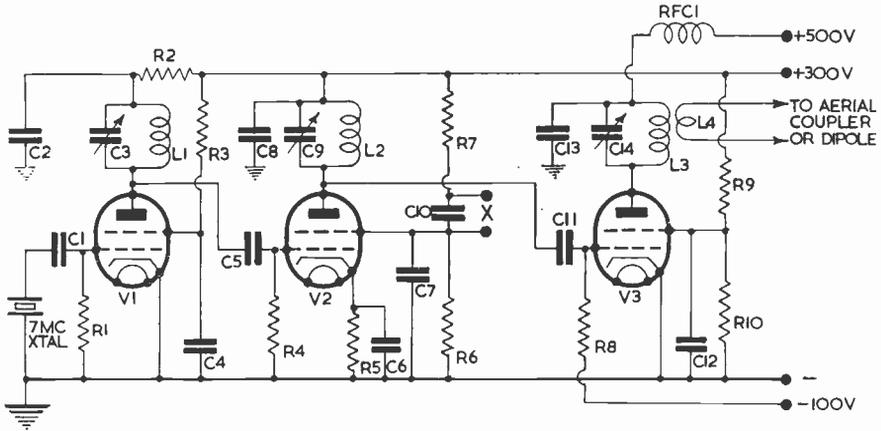


Fig. 1. Circuit of the Transmitter to answer Question 1 — values are given in the accompanying table.

merely a link winding of one or two turns.

Note that an external negative bias supply is used for the PA stage. Its anode current will therefore fall to zero when the key is lifted and the drive from the preceding stage thus removed.

A more complex or high-powered transmitter might need a buffer-amplifier stage between the frequency doubler and the power amplifier, but for a typical 25-watt transmitter the layout shown should be ideal.

Fig. 1. A suitable Transmitter Circuit to answer Question 1.

- C1, C5 = $0.0003 \mu\text{F}$
- C2, C6, C8, C13 = $0.1 \mu\text{F}$
- C4, C7, C12 = $0.01 \mu\text{F}$
- C11 = $0.0001 \mu\text{F}$
- C3, C9 = Variable, $0.00015 \mu\text{F}$
- C14 = Variable, $0.0001 \mu\text{F}$
- C10 = see text
- R1, R4 = 50,000 ohms
- R2 = 5,000 ohms
- R3 = 25,000 ohms
- R5 = 1,000 ohms
- R6, R8 = 20,000 ohms
- R7, R10 = 30,000 ohms
- R9 = 15,000 ohms

QUESTION 2. Describe a superheterodyne receiver suitable for the reception of CW signals over the frequency range 1 to 20 Mc/s. Illustrate your answer with a block diagram.

ANSWER: A receiver of the type referred to consists of three main sections: the RF amplifier and mixer, the IF amplifier, and the Output stage or stages. The receiver shown in the block diagram (Fig. 2) employs two RF stages and two IF stages with a quartz crystal filter preceding the first IF.

Automatic volume control is applied to both RF and both IF stages, with an audio gain control on the output stage.

The RF stages and the mixer will each have a series of ganged tuned circuits covering the desired frequency range, probably in four different ranges, such as 1-4 mc, 4-9 mc, 9-14 mc and 14-20 mc. The beat oscillator will cover these same ranges, but at a frequency 465 kc higher in each range, since that

frequency—465 kc—has been chosen as the intermediate frequency. This is also the frequency of the quartz crystal used in the filter.

An alternative to the use of this crystal would be a further IF amplifier at a still lower frequency, giving a double conversion. The second IF amplifier, at a frequency of 110 or 85 kc, would make possible a degree of selectivity comparable to that obtained with the 465 kc crystal.

The necessary heterodyne for CW reception is provided by a beat-frequency oscillator working in conjunction with the IF and second detector. This oscillator must be tunable for five or ten kc on either side of the intermediate frequency, and is provided with a control on the front panel for this purpose.

By "peaking" the IF stages to the exact frequency of the quartz crystal, an extremely sharp resonance curve for

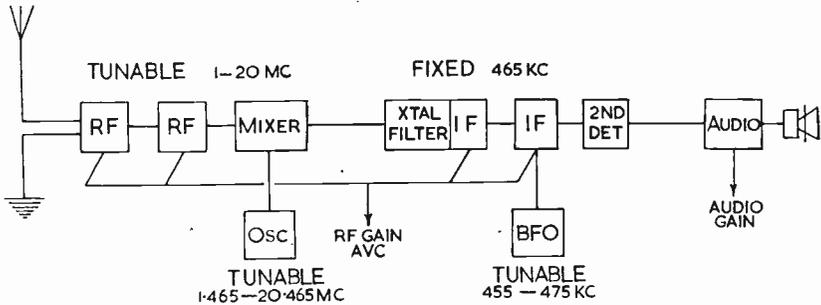


Fig. 2. Block schematic of the receiver arrangement to answer Question 2.

CW reception may be obtained; the BFO is then set to the (audio) frequency at which it is desired to receive CW, and a very strong audio peak should then be possible, assisting in the rejection of unwanted signals at a slightly different frequency.

In some receivers of this type the quartz crystal circuit is provided with a phasing control. This makes it possible to move the characteristic "notch" in the crystal resonance curve to *reject* unwanted signals of a certain frequency.

Front-panel controls on such a receiver will probably be as follows: RF gain, Wave-Band Selection, Tuning, Audio Gain, BFO setting, Input Trimmer, Crystal Phasing. There may also be provision for removal of the AVC and the use of *manual* volume control, the AVC being retained for the reception of telephony only.

A noise-limiter diode (or pair of diodes) is also a desirable accessory; this device usually operates in conjunction with the second detector, which is sometimes a double-triode, one of the diodes being utilised as a limiter. An audio filter, sharply tuned to some frequency between 1000 and 2000 cycles, is another accessory sometimes incorporated for CW reception.

QUESTION 3. State what requirements have to be met under the non-interference conditions of "The Postmaster-General's Licence to Establish An Amateur Wireless Station."

ANSWER: This clause in the licence implies several precautions, some tech-

nical and some purely operational. Technically, it is necessary to suppress (a) key-clicks, (b) over-modulation, (c) unwanted frequency modulation, and (d) harmonics. Thus full use must be made of keying filters, modulation indicators and monitors, and harmonic suppressors if necessary.

Interference with television has made it essential that the latter should be looked after with great care, and the use of harmonic-traps and similar devices is now almost a necessity. Over-modulation can, of course, be detected by one of the many types of modulation indicator in current use.

Operationally, the licence states that the station shall not cause interference with stations outside the authorised bands, but adds that "sending shall at once be discontinued or postponed at the request of any Government or commercial station." Since many commercial stations in foreign countries are operating *inside* the amateur bands, this clause becomes a little ambiguous. Obviously, in the case of the "shared" bands, such as 1.7 and 3.5 mc, operation should be discontinued at the request of a commercial or Service station inside these bands. In the case, however, of Russian commercial stations, operating without authority in the 14 mc band, it is more than doubtful whether any notice would be taken of a request to stop transmitting; on the other hand, it is unlikely that such a request would be made.

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Off the Beaten Track

LISTENING TO SHIPS AND AIRCRAFT

By T. COOPER (BSWL-3681)

MOST listeners who have been bitten by the radio bug would say that the effects are permanent: there is no cure. At the same time, they would agree that after several seasons of listening, and particularly during the present deteriorating conditions, the amateur bands tend to lose some of their old thrill. So, to maintain interest in radio generally, it is desirable, as a temporary expedient, to look for pastures new.

The purpose of this article is to suggest avenues down which one may explore off the usual frequencies, and, to do this thoroughly, a knowledge of Morse is of great help. Agreed, there is a lot of telephony about, but the bulk of the world's communication is still in Morse; to make the most of what can be heard, all listeners should learn the code, as urged so strongly and frequently in these pages.

Ship Working

Almost the earliest application of wireless was in communicating with ships at sea, and this remains of vital importance even today. Much of this traffic is carried out on frequencies of 500 kc, 425 kc and 375 kc—and in rough weather there is always the possibility of hearing an SOS signal.

The writer well remembers logging his first SOS on New Year's Eve, 1924, when the s.s. *Western Valleys* broke her back going ashore at Heysham Harbour (the masts are still visible in the sand even now) and listening to the rescue efforts gave a thrill quite equal to capturing any DX signal. Since then, scores of distress messages have been intercepted, most of them being equally dramatic. Even the most prosaic messages have a tang of the sea about them.

When ships arrive or leave port they are required to inform the nearest Post Office Station by sending what is known

Many readers will have been interested in No. 37 of our SWL Station series, which appeared in the February issue. The subject of those notes contributes below an article which will help to focus the attention of numerous SWL's on frequencies which so far have attracted only specialist listeners.—Editor.

as a TR (which is a position report), and it is thus possible to follow a ship's progress, especially the short-distance ships.

The 160-metre band has long been shared between amateurs, small craft, trawlers, lifeboats, and so on, these being usually fitted for phone only, the calling wave in this instance being 1650 kc. Most British Coast Stations reply between 1825 and 1845 kc. Since the re-shuffling of wavelengths last year, lightships have appeared in our band, and most of them work on 1860 kc. Much of interest can be heard, especially about 10 p.m., when they seem to close down after wishing each other (and their folks ashore) "Good Night."

Fishing vessels often work together on 2012 kc, 2135 kc and 2125 kc, and the conversations, to say the least of it, are interesting!

Long-Distance Traffic

Ships making long voyages can keep in touch with the homeland by calling Portishead Radio, which transmits a Traffic List, and messages, every four hours, beginning at midnight. Frequencies vary but will be one or more of the following:—

GBZ	19.4 kc	GKC3	8210 kc
GKB3	8340 kc	GKC4	12612 kc
GKB4	12678 kc	GKC5	16885 kc
GKB5	16440 kc	GKC6	22010 kc

Before leaving the shipping traffic, reference can be made to the various radio beacons which surround our coasts. Twice an hour in clear weather, and oftener during fog, these stations transmit their call-sign or other characteristic signals to give ships with D/F apparatus an opportunity of determining their positions. These transmissions occur between 290 kc and 320 kc. Also on long waves, aircraft radio beacons of a similar nature perform the same service for air traffic.

Aircraft Channels

Having briefly dealt with what can be heard on the Shipping Waves, we turn to Aircraft. Radio is a very neces-

sary life-line between planes and ground. An aircraft in flight is always in touch with one or other of the airways control stations and, by keeping watch on some portions of the short wave band, interesting reports can be intercepted. As an example of this, the traffic handling arrangements during the Berlin Air Lift were well worth hearing, 4220 kc being one of the many channels used.

When an aeroplane is overdue, a search and rescue organization takes over, and the air hums with signals. The writer has followed traffic between searching planes and ground control when an aircraft was missing off the Eastern seaboard of the U.S.A. This was on 8566 kc, Bermuda, Miami and New York being concerned. Montreal also appears on this frequency.

Aircraft crossing the North Atlantic have an irresistible attraction, and whilst various bands are used—depending on distance, time of day, and season—5672 kc and 3285 kc generally prove fruitful of results. Gander, Iceland, Shannon, Prestwick, Berlin and Frankfurt all use these frequencies. Prestwick, which controls planes flying over a portion of the North Atlantic, also has 6543 kc and 2912 kc. London Control is on 5672 and 3432 kc.

Another interesting channel is 4742 kc, upon which can be heard Damascus, Istanbul, Rome, Cairo and Beyrouth, and American planes have been logged working to Madrid on 8440 kc.

Nearer home, the internal and short-distance traffic can provide many a pleasant hour, the planes being followed in their progress across country or over the short sea stretch to the Isle of Man or Eire.

Flight Information Centres

The country is divided up into five Flight Information Regions, and aircraft entering, passing through or leaving these areas have to communicate with the respective Air Traffic Control Centre (A.T.C.C.) which handles all aircraft within its area, up to the point of handing over to another A.T.C.C. or to the aerodrome of destination, which then assumes responsibility for control. At regular intervals, therefore, aircraft report their positions and their progress can thus be followed. At one time, 333 kc was the main channel, but increasing use of HF is being made, and it is worth while to listen round on 3895 or 5962 kc.

Weather Reports

With the withdrawal of the old Airmet weather transmissions (which has been referred to in the Press) there is a gap which, in part, can be filled by taking the coded weather information given out by various stations. Those generally radiated to assist aviation are from Prestwick (MZK), Preston (MZJ), Gloucester (MZO) and Uxbridge (MZL). Frequencies 495.5 kc, 395.3 kc and 849.2 kc. For further details of these and other weather information, the reader is referred to Part 1 of a very useful booklet issued by H.M. Stationery Office under the title, *Handbook of Weather Messages*, ref. M.O.510a.

Standard Frequency Transmissions are undertaken by various stations, the most famous and the most useful being those emanating from WWV, The Central Radio Propagation Laboratory at Washington, U.S.A. These are radiated continuously throughout the 24 hours on 2.5, 5, 10, 15, 25, and 35 mc. At 19 and 49 minutes past each hour, ionosphere disturbance warnings are given, a series of W's indicating a disturbance, a series of U's for unstable conditions, and a series of N's for no warning.

Time Signals are also another source of interest, Rugby transmitting at 0955 and 1755 GMT on 8640 kc (GIC) and 16455 kc (GKU3).

There are innumerable point-to-point services between various stations, both short and long distance, but as these are usually sent at high speed on automatic equipment, they have little interest for the listener.

At week-ends various Army Cadet Centres and some Public Schools carry out procedure exercises (phone), and, whilst the wavelengths vary, it is worth while to try 3980 kc and 5690 kc on any Sunday afternoon.



CANDLER FOR CODE

The Candler System Co., of 121 Kingsway, London, W.C.2, offer a very attractive shortened Code Course for those wishing to attain the standard of proficiency required by the GPO for the amateur Morse Test. Many operators now on the air owe their ability on the key to Candler home training—and there can be no doubt that the system does give most satisfactory results. Ask for the Candler *Book of Facts*, of the address above.

TV Sound and Vision with the R3084

Part I

• ANOTHER USEFUL CONVERSION

By W. N. STEVENS (G3AKA)

MANY of the radar receiver equipments, now available on the surplus market, are very suitable for conversion as television receivers. Units such as the R1355, R3515 and so forth have been described at length, but the R3084 has not received the attention it unquestionably deserves.

The main feature of the R3084 unit is the 30/16.5 mc IF strip, which can easily be converted into a sensitive vision receiver, especially since the frequency changer and oscillator stages can be retained. Assuming that the main task is to modify the unit to function as a TV vision receiver, the remaining chassis space can be utilised for various purposes—depending mainly on individual requirements. In the conversion described, a sound receiver is incorporated for convenience and because existing valves can be used.

Even when the sound and vision receivers have been completed, there still remains a certain amount of space on the chassis. This could be used for the time bases and synch separator stages, or for a power pack. In the writer's case, a standard 350-0-350 volt arrangement was accommodated, as the assembly was operated in conjunction with another unit comprising the tube and the time base circuitry.

Clearing the Deck

Before work is started, it is necessary to take away the major unwanted components. First of all, working above chassis, the motor and two transformers must be removed, together with *all* leads (mainly grouped) which terminate on panel controls, switches and plugs. In the interests of simplicity, it is best

to disconnect all this surplus wiring before unbolting the motor and transformers. All wires from these components which pass through the chassis, whether single or grouped, can (for the time being) be snipped off at chassis level, and two condensers can be taken out. One is a 0.01 μ F (2.5 kV) and the other an 0.5 μ F (750-v), the latter located between the two transformers. When carrying out these deletions it is safer to remove the two rectifier valves, as they could easily be damaged during the operations.

When this work has been completed, turn the whole job upside down and locate a large block condenser (0.25/1.8/1.0/1.0 μ F). This is unbolted and discarded and all leads taken to the tags snipped off. Adjacent to this block condenser will be found two small iron-cored chokes; these should be removed.

Working towards the rear of the chassis, a rubber grommet will be seen carrying leads through the chassis from the transformer which occupied the position at the back of the chassis. These leads are coded yellow (two), black (two), blue (one) and yellow/red (one)—trace each one to the nearest terminal point and cut off. Also remove the coaxial line which comes through a grommet adjacent to the position of the block condenser and runs along to the rear of the chassis to terminate at a three-way tag strip.

Positioning of Sound Receiver

The layout sketch, Fig. 1, shows the final positioning of items in the completed unit. V_1 and V_2 are the RF stages common to sound and vision channels. From the latter stage the sound section continues as a TRF circuit and the vision receiver as a superhet—see also Fig. 3, the modified theoretical circuit.

In the position shown for V_3 , a VU134 EHT rectifier will be located. This is removed, as is the 4-pin ceramic valve-holder. In the position shown for V_5 a VR91 is fitted; this is taken out with the valve-holder. The B9G valve-holder removed from the V_5 position is then replaced in the hole for the original 4-pin ceramic holder (for the use of V_3). Then, in the vacant hole left by the removal of the B9G base, an octal-holder (for V_5) is fitted.

In carrying out this change-over of valve-holders the wiring will, of course, be disturbed. However, this is of no importance, since all the wiring on the eventual V_5 position should be removed.

are wired in and the VF amplifier is then completed. Turning now to the final IF stage V_{10} , it only requires the addition of a decoupling resistor (1,000 ohms, R_{26}), condenser (C_{23}) and the gain control R_{p3} . It will be seen that two leads are taken from the V_{10} stage to the adjacent heater choke tags. One is blue (the heater lead which is retained) and the other, yellow/red, is taken to an anchor tag on the choke. Referring for a moment on these leads once again, it is important to note that the plain red leads indicate the main HT line and the red/yellow and red/black leads are the G_2 line.

Therefore, it is only necessary to break the red/yellow lead from the anchor tag and insert R_{26} and C_{23}

according to the circuit diagram. The gain control R_{p3} and its associated condenser C_{22} can be fitted anywhere along the G_2 line; the best position is above chassis, between the two large wire-wound resistors. The potentiometer is simply wired from the lower tag of the 10,000 ohms resistor (R_{27}) and mounted on a small bracket.

When these modifications have been completed, the screen can be replaced. The vision strip—right back to the grid circuit of the mixer valve—needs no further modification, except to wire up the power lines. This is dealt with below.

Sound Receiver

Attention can now be turned to the sound receiver. V_4 and V_5 are wired according to the circuit diagram. Note, however, that the heater connection to V_4 is already existing and that the G_2 by-pass condenser (C_9) is already wired. The HT line for the sound receiver section is taken to any of the plain red leads on the vision receiver heater choke anchor tags. The tone control (C_{14}/R_{p2}) is optional, but, if fitted, the potentiometer can be mounted conveniently on a bracket at the side of the chassis.

Three 11 mm. formers must now be fitted; these are L_5 , L_6 and L_7 —their positions can be seen in the sketch, Fig. 3. Details of windings are given in Fig. 5. With these in position, the V_3 stage can be completely wired up. Note that the sound gain control is inserted in the V_3 screen-grid circuit. This can be brought out to the panel or mounted on a bracket at the side of the chassis.

RF, Oscillator and Mixer Stages

This is, perhaps, the major operation because the existing coils are all subject to modification. To obtain access to the V_1 , V_2 , V_6 and V_7 stages, the two screening boxes must be removed; they are identified (if in doubt) by being the largest of the five boxes and are removed by unfastening the fixing nuts above the chassis.

Dealing first of all with the common RF stages V_1 and V_2 , these are in the smaller of the two screening box compartments. The small tube V_1 507 (fixed to the valve screen) is discarded. The grid and anode coils L_1/L_2 and L_3 are removed and replaced according to the details given in the coil data. A length of coaxial line (removed when the motor unit was discarded) can be used to take the input to one of the

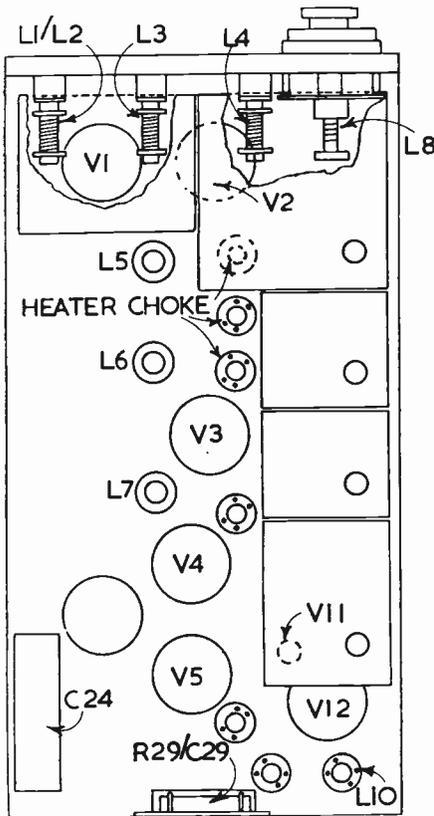


Fig. 2. Below-chassis layout sketch showing positions of screening boxes, chokes and coils, and other important components. Note that the screening cans housing V_1 , V_2 , V_6 and V_7 are shown broken to identify the various coils.

Fig. 3. The R.3084 as modified.

C1, C2, C3, C4, C5,	
C7, C8, C9, C15,	
C16, C17, C18,	
C22, C23, C25	= 0.001 μ F
C6	= 2 μ F
C10, C26	= 100 μ F
C11, C21, C28	= 50 μ F
C12, C14	= 0.01 μ F
C13	= 25.0 μ F
C19	= 200 μ F
C20	= 5 μ F
C24	= 16.0 μ F
C27	= 50.0 μ F
C29	= 8.0 μ F
R1, R6, R21, R35	= 4,700 ohms
R2, R23, R25	= 22,000 ohms
R3, R5, R20	= 18,000 ohms.
R4, R7	= 8,200 ohms.
R8	= 150 ohms.
R9	= 25,000 ohms.
R10, R22	= 330 ohms.
R11	= 470,000 ohms.
R12, R13	= 220,000 ohms.
R14	= 1 megohm.
R15, R31	= 47,000 ohms.
R16, R30	= 470 ohms.
R17, R18, R19	
R26	= 1,000 ohms.
R24, R29, R27	= 10,000 ohms.
R28	= 1,491 ohms.
R32	= 27,000 ohms.
R33	= 5,000 ohms.
R34	= 100 ohms.
V1, V2	= VR136
V3, 4, 6, 8, 9, 10, 12	= VR91
V5	= 6F6
V7	= VR137
V11	= VR92.

coaxial plugs on the front panel. Of the other wiring, some can be retained, but it is important to note that V1 and V2 are VR136's, which have base connections different from the VR91. The heater wiring is intact and the heater condenser can be left in; the anode load and screen decoupling resistors (R4

Fig. 3. Theoretical circuit of the modified R3084 unit. In the vision receiver IF section, no values are given for stages V8, V9 and part of V10 since no alterations are necessary in this section. For simplicity, and since the components are already wired in, the heater by-pass condensers and heater chokes are not shown in the circuit. Trimmers across L5, L6 and L7 are 20 μ F.

and R3) need not be altered, as they are of correct value and are already wired *via* a three-way terminal strip to the main HT line. The screen decoupling condenser must be replaced (or shunted with another 50 μ F condenser). A grid resistor and condenser must also be provided, for both V1 and V2 stages, and the cathode resistors inserted.

In the large compartment, the V2 anode-screen circuits require modification. The screen decoupling resistor is of correct value, but must be returned to the main HT line and not, as existing, to the secondary HT line. Its associated condenser must be altered to the correct value and a lead taken to the coil L5 (mounted outside the cans). It should be noted that the metal rings on the V1 and V2 holders are *not* at earth potential and earthing must be made to the chassis. The mixer coil can be re-wound, the coupling condenser C16 and the damping resistor R21 wired in. Here various components can be removed; they are: Two small ceramic condensers (each 8 μ F), 8,200 ohm half-watt, 390 ohm quarter-watt, and 100,000 ohm quarter-watt resistors. The oscillator coil may then be modified according to the data given; note that it already has the requisite $4\frac{1}{2}$ turns, but they are close-spaced.

In re-wiring the mixer and oscillator stages, these are new components required: Coupling condenser C16, oscillator grid coupling condenser C21, oscillator shunt condenser C20, common oscillator/mixer cathode resistor R22. Apart from the grid and cathode circuits, the mixer stage is *untouched*. The oscillator anode load (10,000 ohms one watt) resistor is retained in the original position.

(To be continued)

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Have you heard?

WE meet again, after another month of rather half-hearted DX and patchy conditions. There has been very little to console the ardent DX-chaser for his memories of the glorious days of 1946 and 1947. The experts tell us, however, that there are signs that the rate of decrease in sunspot numbers is slowing down; which means either that DX will not get worse so quickly — or that it may even stay at its present level for a while without becoming worse at all. Work that out and see whether it cheers you up!

Calls Heard and SLP's

The Calls Heard section is practically back to its normal size again, and there are some Set Listening Periods to examine once more. The first two (January 27 and 28) are noteworthy in having produced only two or three lists each, with an average of 3.5 calls per list! So I will not comment, except to remark that it seems strange that so few people admit to logging the W's and VE's on the Top Band during the tests on January 28.

The 14 mc period on February 17 attracted more attention, but conditions must have been pretty bad, judging by the high percentage of European and "non-DX" calls in the lists. The only countries appearing that I should call real DX were EL, OX, VQ2, VSr, VU, and possibly W6. This must have been quite the poorest 14 mc period we have had since we started them four years ago!

By comparison, the 28 mc hour on February 18 was quite bright. Once more we struck lucky and found a band that was almost open. There is a remarkable similarity about the lists for this one, except that two listeners included such a striking crowd of W4's that I left them in (although, strictly, they don't qualify for 28 mc lists). It

is interesting to note that the band was wide open for the Southern States at the same time as for so many other countries.

Passing on to the general lists, again we have ample evidence that 28 mc has been in quite good shape (by 1950 standards) during the month. Certainly one can log countries on that band that cannot be heard anywhere else, and that, alone, is a good reason for sticking to it through poor conditions.

On occasions, 14 mc has carried some good stuff, but they have been few and far between, and the prevalence of S9 Europeans has made it pretty trying. KG6's, though, and KR6's and stations like ZS2MI and VT1AF have provided some fun from time to time.

There seems to be a tendency now to disregard requests to confine 14 mc lists to the "25 Best," and some enormously long ones arrived, which had to be pruned by me. So, naturally, I cut out the oddments like CN, FA, EA8, PY and LU—none of which ought to be regarded as DX on 14 mc, even in its present poor state.

The 7 mc lists are not numerous—but the quality is good! Just study them and ask yourself what you are missing, if you allow the 7 mc QRM to frighten you off the band. Note, in particular, J. L. Hall's list, which includes FO8, FP8, KJ6, TG and VP8—among others. The 3.5 mc band has not been so good (except for W's), but the Top Band has, of course, turned into a DX paradise for those who don't mind early rising. Study the three lists reproduced and ask yourself whether it will ever be worth our while publishing long lists of G's, GM's and GW's again!

And so on to this month's reports, which are just about as numerous as ever; and may I say how nice it is to see some "new blood" coming on, both with letters and Calls Heard.

AMATEUR BAND COMMENTARY by the DX Scribe

The Top Band

Surprisingly few listeners seem to have been following the Top Band Trans-Atlantics, but those who *have* are well rewarded. DX received has included VE1 and 3, W1, 2, 3, 4, 8, 9 and Ø, KV4 and, of course, EK, TA and HZ. So you can hear four continents nowadays on our "local-natter" band.

As usual, the longest and most detailed log comes from G. C. Allen (Thornton Heath). He found January 28 a very good morning, and the WØ that we mentioned in "Stop Press" last month was WØTQD in Nebraska, heard between 0212 and 0219 GMT. On February 18, from 0500 onwards, G.C.A. bagged another lot, including KV4AA again. The rumour that PY7WS has been on the band appears to be disposed of; he was standing by on 3510 kc and listening on 1750 kc.

R. Iball (Worksop) is another who has done well on the band; his results are all the more creditable when one reads of his o-v-o receiver with a maximum of 20 volts HT and a short aerial! W1BB wrote to him and thanked him for his very complete reports on signals; and also suggested that he should listen for KV4AA,

W4NNN/Ø and WØTQD—all round about 2000 kc.

F. A. Herridge (London, S.W.12) logged several W's on February 11, and on February 18, although unsuccessful in searching for DX, he heard F9VA and ON4RI on the band. Of course, both these are regarded with some suspicion, and F.A.H. is still awaiting a reply from VERON on whether the PA's are licensed for the band. (Incidentally, I heard from an OZ that they are no longer allowed to use the Top Band in Denmark; and the DL2's have had their 1.7 mc licences cancelled, too).

N. S. Beckett (Lowestoft) heard W1BB and W1SS, but is very badly placed on the East Coast, where he receives the barrage of Dutch trawlers and weather-men at full blast. N.S.B. makes an interesting observation on "overtones" received from the 80-metre band (such as, possibly, the F9 and the ON4 mentioned by F.A.H.) He used to get lots of them when he had a short receiving aerial, but, with a long wire, they completely disappeared. It seems that one's aerial and coupling circuit may quite easily be resonant in the 80-metre band—hence the reason why some listeners hear more of these "overtones" than others. [over

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

Listener	Zones	Countries	Listener	Zones	Countries
PHONE and CW			PHONE ONLY		
A. H. Edgar (Newcastle) ...	40	223	K. F. Earp (London S.W.11)	39	163
R. S. Stott (Upminster) ...	40	222	R. A. Hawley (Goostrey) ...	38	187
E. Trebilcock (Australia) ...	40	218	D. Kendall (Potters Bar) ...	38	170
D. W. Bruce (Eltham) ...	40	215	K. M. Parry (Sandwich) ...	38	154
R. A. Hawley (Goostrey) ...	40	200	M. G. Whitaker (Ouston) ...	38	151
W. J. C. Pinnell (Sidcup) ...	40	194	D. Vincent (Beckenham) ...	38	142
D. W. Waddell (Hitchin) ...	40	194	D. L. McLean (Yeovil) ...	37	180
R. W. Thomas (E.5.) ...	40	190	P. H. Strudwick (N.W.11) ...	37	168
B. Davies (Beckenham) ...	40	171	J. P. Warren (W. Croydon) ...	37	165
N. S. Beckett (Lowestoft) ...	39	190	A. M. Norden (N.W.11) ...	37	156
M. G. Whitaker (Ouston) ...	39	170	R. J. Line (Reading) ...	37	144
L. Singletary (Oxford) ...	38	177	E. J. Parish (Watford) ...	36	164
F. A. Herridge (Ldn. S.W.12.) ...	37	157	D. G. Martin (Cheltenham) ...	36	150
M. J. Marlow (Guildford) ...	37	138	C. S. Pollington (Chichester) ...	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	131	H. M. Graham (Harefield) ...	35	148
PHONE ONLY			J. P. Moore (Solihull) ...	35	134
E. J. Logan (Hertford) ...	40	202	R. W. Finch (Ilford) ...	35	131
D. W. Bruce (Eltham) ...	39	188	A. R. Holland (Malvern) ...	34	131
K. Parvin (Thornton Heath) ...	39	169	W. C. Askew (Melton Mowbray) ...	34	130
R. G. Poppi (Beckenham) ...	39	167	D. C. Stacy (New Zealand) ...	33	116
			T. R. Lambly (Ardingly) ...	33	101
			G. Murray (Newcastle) ...	32	112

M. Marlow (Guildford) has had an air mail QSL from W1BB for his Top Band reception, and awaits one from VE1EA.

M. G. Whitaker (Ouston) logged three W1's on an o-v-1 and indoor aerial, and has also been hearing OK1AWA, EK1AO and HA4SA. F. K. Earp (London, S.W.11) pulled out a plum by logging UA4FC on phone—1850 kc. R. A. Hawley (Goostrey) found UA3AW and two OK's—all on CW.

The 3.5 mc Band

It is always difficult to size up the 80 (or 75) metre band, for the reason that it means different things to different listeners. Super-DX is possible for the CW listener, but for the Phone-only man the standards are somewhat looser. But several new countries are becoming available on the band for both types. E. J. Logan (Hertford) was pleased to log VP9AF at 2240 GMT, and also heard VO4AM. P. H. Strudwick (London, N.W.11) had an early morning session and logged VP6SD, 6FO and 7NR—all on phone; but other stations being called by the W's included CO7QM, HC2AX, HK4DP and XE2W.

D. L. McLean (Yeovil) found lots of VE1's, but considers that his best DX on the band was TA3GVU. A. M. Norden (London, N.W.11) rolled in MD2EU, TA3GVU, VP6SD and VP9AF, but his "funniest one" was FKT6AA (Ile de Ré)—and we should like to know more about *him*. K. Parvin (Thornton Heath) logged MD2EU and TA3GVU for two new ones; D. S. Kendall (Potters Bar) weighs in with KP4GU, VP6SD, VP7NH and TA3GVU; and J. P. Warren (West Croydon) has heard VP6SD and remarks that the band is still in good condition. All the foregoing refers to phone reception.

J. L. Hall (Croydon) reports very much the same sort of thing; M. G. Whitaker scores a bull with VP1BJ (phone) and adds that HR1AT and VS7KR are supposed to be active on the band, too. M. Marlow logged 9S4AX—not DX, but new!

MD2EU and TA3GVU were two new ones for H. M. Graham (Harefield). The sole piece of CW news on the band comes from N. S. Beckett, who heard HP1BR, working a WØ. He adds that the ZL's come through most mornings, but they are usually the same ones every time, and their strength is dropping off considerably by now.

Forty-Metre News

And so to Cacophony Corner. Star

turn, as already mentioned, is J. L. Hall, who logged FO8AC, KH6ZG and KJ6AI, all heard on CW between 0620 and 0730. The latter two have been noted more than once, sometimes peaking at S8 on an otherwise dead band.

P. H. Strudwick only spent 35 minutes on the band, but pulled in CO8QA, HZ1KE, MD2JH and YU1CAG—all phone. Phones heard by D. S. Kendall were FA8LI, EK1JG, PY4JO, and CM8MF. Still more from K. Parvin include CM8LS, CO6ON, EA6AT, EK1BA, with some FA8's and PY's.

A. M. Norden comes up with HZ1KE, HK1DW, HP1AH and 1AK, HR1AT, VP6CDI, three YV's and ZE3JIT—a nice bag. J. P. Warren reports CO, CT3 and PY, and a mystery—"Station AH, Isle of Corfu"! Now what are we to make of *that*?

M. G. Whitaker is content with remarking that the band has been excellent, with some DX always to be heard, especially at night. M. Marlow says his best was FM7WF, although OX3BG, VU2CP, VQ2 and ZL were also heard.

N. S. Beckett winkled out AR8AB and FJ8BX on CW. The latter, with a chirpy, creeping T7 note, seems to be genuine. I heard him working FM7WF at great length one night. H. M. Graham heard HZ1KE at S8/9 (2150) and CO2WA (2230). F. K. Earp persevered with the band and was rewarded by hearing VP2GQ on phone, working another VP2; others were PY1AKM, UA2DA, CT3CF and EK1BA.

DX on 14 mc

And so to poor old Twenty, which, however badly it is suffering, continues to attract the bulk of the activity. R. W. Thomas (London, E5) raised his score by three with FM8AD, FQ8AC, VS5AC (the latter being on phone). J. E. Kelly (Wythenshawe) thinks VP6SD the most consistent telephony station; many others agree with him.

F. W. Hardstone (London, S.W.16) remarks about the extraordinary luck we had with SLP's, for both of which the respective bands were wide open. (This compensates for some of the less fortunate efforts in recent months!) B. R. J. Pooley (Pangbourne) sent his first reception report out on February 9, and a week later his first QSL arrived back—from VS7GD. '7GD works on 14740 and 28680 kc with a 20-watt battery-powered transmitter.

P. King (Offaly, Eire) returns to the fold with a nice list of CW Calls Heard. He has found conditions terrible on the

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NYIAE

Radio *660B* Ur sigs wkd *30 out* 1937

4207:15 m. E. S. T.

QSA5 R5T4

on 28 MC Band

100 watts to

Info for you

73



TXN 4 per Y60's
PSE
QSL

EX - CMAUF @ W7CFC

JACK D. BYRD

Carle

Another DX rarity—a Panama Canal Zone Station on the air in 1937.

whole, but quite interesting when the band did come to life. Phone DX logged was CP5EK, CN3BL, EL2R, HC1FG, VP3LF, 4LS, 6JC, 9G and ZC1AIS.

K. R. R. Bowden (Letchworth) reports ZA1CC and F8EN/AR on CW. The latter has been heard by others and appears to be genuine—F8EX himself. In Lebanon, I presume. W. G. Gore (Yatesbury) heard some nice Phone DX on the band, including ZD1SS, YV5BQ, VP4LF, CR6KQ, CO8MP, YN4CB and T12OE.

The best for R. J. Line (Reading) were MP4KW, VP4LS, 4TI, 9P and YV5AB. He heard VS5AC being called by CT1BW and wonders if he is genuine. Quite a few listeners logged the VS5, but I haven't a clue about his authenticity. B. W. Sutton (Liverpool) lists the following as his best: CO8MP, CT3AG, CX2CO, EL2R, TF5SV, VP3MCB, 6FO, 9G, ZD1PW and ZE2JE. He also heard a W2 Maritime Mobile operating from the docks at Liverpool, but didn't think that was DX!

R. W. Finch (Ilford) was pleased to discover CR5AC on CW. He is in Portuguese Guinea and therefore counts separately from the one-time famous CR5UP, who was on the St. Thomas and Prince Islands. Others please note—you may have an extra one without

knowing it. R.W.F. goes on to query "YD5CG," giving his QTH as "Balbao," and wonders who he might be. My translation is KZ5CG at *Balboa*, Panama Canal Zone! February 18 struck R.W.F. as like "the years of plenty after the famine"—there was so much DX about. In amongst it he was pleased to log CP5EK (2242 GMT, CW), who can be QSL'd via "Radio Club, Bolivia."

E. J. Logan (Hertford) is one of those who found ZS2MI on phone, and is delighted to know that he is a separate country; so his phone score goes up to 202, keeping him handsomely in the lead. D. L. McLean found the band very good for Africa between 1700 and 1900; as well as his better DX, he logged 25 ZS's on phone. Others were CR6AM, 6AQ, 7AH, 7AI, ZS2MI, 3F and 3M. D.L.M. tells us, also, that VP1BR and 1NW use phone on 14189 kc round about mid-day; that ZD6HJ works 14145-14155 kc phone, and that ZS2MI is VFO between 14150 and 14200.

Nice ones from P.H. Strudwick include EA0AB (1900) and ZD4AD/P. This latter character came home from ZD4-land in a Jeep, and operated while crossing the Sahara, with 50 watts of FM phone. How many others heard him? D. S. Kendall singles out CR7AH, EL2X, KG4AK, PK3JF, VS0AH and

TOP BAND MARATHON

Feb. 1 to Apl. 30

Listener	Coun-tries	Coun-ties	Total
M. G. Whitaker (Ouston)	11	45	56
F. A. Herridge (London S.W.12)	11	39	50
W. J. C. Pinnell (Sidcup)	10	38	48
R. A. Hawley (Goostrey)	7	41	48
N. S. Beckett (Lowestoft)	8	31	39
K. R. R. Bowden (Letchworth)	3	33	36
H. J. Hill (Whitley Bay)	4	30	34
J. P. Colwill (Launceston)	4	29	33
W. G. Gore (Yatesbury)	3	17	20
H. M. Graham (Harefield)	3	15	18
E. Cheese (Croydon) ...	2	7	9

ZC4TF—all phone. A. M. Norden lists EL9A, VS7SV, ZS7C and KC6WC. The latter operates from the Palau Islands—separate from the Carolines for counting purposes. See last month's note on him.

K. Parvin found two nice ones in EA0AC and VT1AB, as well as CR6AQ, KG4AU, OA4M, VP7NH, YN1LB and several ZP's. He also remarks that he has heard VK's and ZL's calling ZK1BA, ZM6AA and VR5GA—all on phone. Maybe those three will break through as the year wears on? K.P. would also like to query a station heard at 1800 on February 17; it was either UD6AH or UG6AH, and he would very much like to know which.

Cleaning Them Up

A. M. Munford (Cambridge) writes for the first time, and straight away asks for a further clean-up of Calls Heard by the weeding out of such stuff as CN8's, FA8's and EA8's; he also thinks some of the PY's might well be left out. He found the most consistent station was PY4AGZ, with the popular VP6SD relegated to the position of runner-up. New countries heard were EA0AC, VK9MR, VP7NR and YS1MS. I. S. Davies awards the palm for "whacking signals" to VP3MCB, HI6EC and VS7BR.

J. P. Francis is another who has

heard KC6WC on phone, and KP6AA followed within half-an-hour. Other "good stuff" was CR7AH, DU1AP, VT1AB, ZS2MI and ZS7C—also UD6AH—K. Parvin, please note! New ones for M. G. Whitaker were CR5AD, ZS2MI and ZS8MK. M. Marlow was pleased to log FB8ZZ, and the band also presented him with FF8, FP8, HS, KZ5, VSP, and a doubtful ET3K.

A funny one comes from H. M. Graham, in the form of AKZ1AB, speaking Spanish and in contact with EA5DT; now who on earth is *this*? He also logged FKS8AA, who is genuine, in spite of the comic prefix. F. K. Earp has found the band unreliable, his best being HP1WV, PJ5FN, OX7TS, UG6SD, VS1AX and XZ2EM—all on phone.

R. A. Hawley mentions MP4BA0, TI2TG, VK2JR and 3JD, YS1MS and ZS7C as the best phones, plus UA9EE and FQ8AF on CW. And that just about sums up the 14 mc news. Adding all these reports together, one realises that anyone with enough time to spend on the band could put up quite a formidable total of DX, in spite of the difficulty of logging it in poor conditions. It all causes me a slight misgiving—surely when conditions become really good again, DX reception will be so easy that no-one will want to bother with it—or will it?

The Ten-Metre Band

J. W. Cave, the ten-metre specialist from Parkstone, considers this band much improved, and was pleased to find it wide open during the SLP. (Since then, I think it has fallen off again, but never mind!) R. A. Hawley comments on the way the MI3's in Asmara have been pounding in, and also mentions VP3CW, VU2BM and ZS9F as good ones. F. K. Earp feels that the SLP struck lucky and mentions, in addition to stations in his list, CR7IR, ST2KR and ZC4XP.

H. M. Graham asks why it is that W4's so often come through with no other W's audible. Well, this has always been a characteristic of Ten, which is so often open to Central America and the West Indies. Sometimes the "opening" creeps up to W4 and W5 at times when a genuine East-West opening has not occurred. At various times H.M.G. has logged W1, 2, 3, 4, 5, 8, 9, and 0; also VE3, HK, KP4, MD2, MI3, OQ5, SV, TA, VQ2, ZB1, ZE and ZS. N. S. Beckett describes ZS9F as "the only notable."

M. Marlow scooped up several new countries, such as FF8, MI3, VP6, TI, ZD2 and ZD4. M. G. Whitaker says the band is "not so dead as is thought" and quotes HC, MI, OQ5, ZD2, ZE and ZS as proof. J. P. Francis has found several good spells, all at week-ends; his best were VQ3AWL, VS7PS, ZD2DYM and 4AB, and ZS3D, as well as lots of Central and South Americans.

I. S. Davies asks whether MP4KW counts as an MP4 or an HZ. The answer is the latter — it is HZ1KE using his military call so as to be eligible for the BERU Contest, which he would not be as an HZ. Four new ones on the band were AP2N, CT3AK, HP1WM and VP3CW.

K. Parvin heard CR6AQ, FF8PG, HK4AM and PZ1WK. A. M. Norden mentions AP2N and VP3CW. D. S. Kendall throws in VS9AH, YN4VN, YS1MS, ZC4XP and ZD2DYM. P. H. Strudwick pulls off the beaten track with HR1RL and TG3AD, and also mentions SV0WZ/P, a 20-watt mobile in a car near Athens.

D. L. McLean heard all W districts as well as KZ5JQ, MP4BAB, VP3CW, XE1VA and ZC4XP. B. W. Sutton mentions MD2AM, MI3ZK, TA3GVU, ZD2DYM, 4AB and ZS9F. He asks whether the MP4's on Bahrain count separately from those in Trucial Oman — they certainly do. R. J. Line's bag was CT3AK, MP4BAB, 4KW, PK3JF, VP3CW and VS9AH. And R. W. Thomas rounds off this ten-metre report with HC1OY, HK4AM and KG4AT.

All the DX reported in the foregoing paragraphs was on phone; there is very little CW activity on the band except at Contest times, and even then there doesn't seem to be much.

General Patter

K. M. Parry utters a mild protest about the lack of discrimination between "Phone Only" and "Phone and CW" in some of the monthly contests. His point of view is "let those who are interested in CW get on with it, but don't hold a pistol at those who aren't!" So I shall continue to run monthly contests of both kinds—those in which the highest total wins, irrespective, and those in which the Phone-Only types have a chance to shine on their own.

C. R. Burchell (Walsall) is a brand-new SWL and is perturbed because he heard a phone station signing AC4OW or 4LW on February 18 at 1850 GMT. This certainly wasn't a genuine Tibetan

—there aren't any these days; who could it have been—a pirate or a mis-read call?

H. J. Hill (Whitley Bay) corrects a bad "blunder" of last month. The "VK8AA" he alluded to should have been "FK8AA"—heard on 7 mc phone. This is a different story, and is a very nice piece of DX if it wasn't piracy! H.J.H. has been listening on all bands, but hasn't considered conditions too good.

E. Cheese (Croydon) would like enlightenment on a CF9AA, heard on February 18 at 2205 GMT, 14 mc. Apart from suggesting a possible CM9AA, I can't imagine! And E.C. completely stumps me by asking: "For what reason does one say a call is phoney?" I could write an article on that subject, and probably will, when I have my ideas sorted out sufficiently.

Paul Q. Dodson (RAF Rhuddlan) describes himself as "an ex-G.I. from W5-land" and is no newcomer to short waves. He now sticks mostly to 14 mc, and his "pet peeve" is the over-modulated Italian phones, who certainly are the No. 1 Post-war Menace on that band. He has logged an F18 and an FR8 recently, and adds that CN8EQ has been "knocking the speaker out of the cabinet," with EA6's and EA8's doing much about the same. P.Q.D. promises to report regularly—and I certainly hope he will. (over)

**THE FEBRUARY CONTEST
(Zones and Countries Heard)**

Listener	Zones	Countries
M. J. Marlow (Guildford)	... 36	106
N. Roberts (Launceston)	... 35	100
N. S. Beckett (Lowestoft)	... 35	97
E. J. Logan (Hertford)	... 34	104
F. K. Earp (S.W.11)	... 31	83
K. Parvin (Thornton Heath)	... 29	96
R. A. Hawley (Goostrey)	... 27	84
M. G. Whitaker (Ouston)	... 23*	71
L. C. Mason (Surbiton)	... 22	61
H. M. Graham (Harefield)	... 21	70
R. J. Line (Reading)	... 21	45
W. G. Gore (Yatesbury)	... 19	56

* 7mc only

P. H. Strudwick will be spending the latter half of March roaming around the districts known as F, 3A, I, HB and QN! He hopes to have a receiver with him and looks forward to an interesting time on 40, 80 and possibly 160 metres. And we would be very interested to hear all about it when he gets back.

Miscellaneous DX gen. from M. G. Whitaker includes the following:—VR5GA is on 14165. Phone; on CW there are such peaches as ZM6AK, XU8SR, FO8AC, FK8AH and 8AL, YJ1AB, C3KS, C9AA, KM6AK and KN6AA—all on 14 mc. Ten-metre phones known to be around are MX1AF, KB6AR (28792), VR1E (28417), W4IKC/KW6, and VQ9AA, CW on 28002. ZD7B in St. Helena is also said to be active. M.G.W. certainly knows how to make one's mouth water (or do the ears just tingle?)

He asks for the QTH of SM8BEM, who, he believes, is *not* in Sweden, but somewhere more exotic; and for the Zone of ZS2MI. I think the latter is 30.

R. W. Finch puts up an idea for a contest: How many African prefixes can you log on 7 mc in one month? I rather like that, for a change, so let's make it the April Contest. Read on!

Contests

- 1- **The Top-Band Marathon.** This has already started, as you will see from the table, and runs from February 1 until April 30.
- 2- **The March Contest.** This is a Four-Band affair, the bands being 1.7, 3.5, 7 and 14 mc. Dates are from February 19 (midnight) until March 25 (midnight). Send in your claims to catch the deadline on March 28.
- 3- **The April Contest.** African prefixes on 7 mc—phone, CW or both. This will run from March 25 (midnight) until April 22 (midnight). Separate entries for Phone-Only or Phone and CW.

Set Listening Periods

- | | |
|-----------|---------------------|
| March 17, | 1700-1800 GMT—28 mc |
| | Phone |
| March 18, | 0800-0900 GMT—14 mc |
| | Phone |
| April 21, | 2200-2300 GMT—14 mc |
| | Phone and CW |
| April 22, | 1000-1100 GMT—28 mc |
| | Phone |

Deadline for the May issue is **first post on March 28**. For the June issue it will be April 25. Please don't overlook these dates, because it is waste of time sending reports if you don't catch the post. So, for now, Good Hunting, 73, and may conditions improve. Everything, as usual, to DX Scribe, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.

GB3FB—FESTIVAL OF BRITAIN

As many readers probably know, the Travelling Exhibition associated with the Festival of Britain—incidentally, this touring exhibition will be a large undertaking in its own right—will include, in the hobbies section, an amateur station operated on the usual bands under callsign GB3FB. Special QSL cards will be provided for Exhibition QSO's, and it is hoped that Amateur Radio will be brought before a very wide public. GB3FB will be in operation as follows: Manchester, May 4-26; Leeds, June 23-July 14; Birmingham, August 4-25; and Nottingham, September 15-October 6. Local amateurs in these areas have been nominated to control GB3FB during the period of the visit.



.. SWL STATIONS—No. 38 ..

The name of the operator of the station appearing under this title in our March issue was given incorrectly—it should have been J. P. Moore, at the address as stated.

TOP BAND DX

Readers who see *Short Wave Magazine* will know that an interesting series of Trans-Atlantic Tests is now being concluded after organised sessions on the Top Band extending over the last two months. A detailed summary of results will appear in the May issue of the *Magazine*. This will show that many DX stations were heard, and that a number of G's were successful in accomplishing one of the most difficult feats in Amateur Radio—working W's and VE's on 160 metres.



DO YOU SEE IT?

Our *Short Wave Magazine* covers the whole field of Amateur Radio and provides all the background required by any amateur for the full enjoyment of his hobby. It is the mirror of progress and the chronicle of events, and is read throughout the world. Of 64 pages with colour cover, *Short Wave Magazine* costs 20s. for a year of twelve issues, post free. Order on The Circulation Manager, *Short Wave Magazine, Ltd.*, 53 Victoria Street, London, S.W.1.

CALLS HEARD

SET LISTENING

PERIODS

14 mc

Jan. 27, 1600-1700 GMT

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

PHONE: MD2PJ, OQ5CF, TA3GVU. (Rx: Roberts' P4D.)

B. R. J. Pooley, Nautical College, Pangbourne, Berks.

PHONE: TA3GVU, VQ4RF, 4X4CL. (Rx: 1155A.)

1.7 mc

Jan. 28, 0500-0800 GMT

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

CF: WIBB, IBEU, IEFN, 2UKS. (Rx: 0-1-0.)

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

CF: VE3AAZ, WIBB, ILYV, 2UKS. (Rx: Modified R.103a.)

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

CF: WIBB, IEFN, ILYV, 2BFA. (Rx: BC348.)

14 mc

Feb. 17, 1600-1700 GMT

G. Curtis, 45 Holyrood Avenue, South Harrow, Middx.

CF: IS1RIC, OE5AL, 5FR, SU1AD, TF5TP, UA1BD, 4KKC, 6KOC, VK2AAN, 2GW, W6EFM, 6DH, 4X4AE, 4BN, 4DK. (Rx: 1-1-1.)

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

PHONE: CN8EX, 8MZ, CT1BF, 1CM, 1PK, EA3GH, 4CV, 8AX, EL9A, FA3ZH, HZ1KE, MD2AC, OX3BD, VQ2JD, VS1DT, 7GD, VU2FH, 2MA, W6IDY, 7DL. (Rx: R.F. 24 into S40A.)

L. C. Mason, 29, Upper Brighton Road, Surbiton, Surrey.

PHONE: CN8EX, 8MZ, EASAX, FA3ZH, OX3BC, W7DEL,

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.

4X4BL. (Rx: R.1155B.)

H. Froggatt, 28 Lea St., New Mills, Stockport, Cheshire

CF: DL6FH, 4TA, EA51M, F8FO, FK8AR, HB9DB, 11ST, LA2ED, 4ZC, 9XB, OQ2NL, OE8QE, 5AU, PAOKW, SM5ARY, 5WV, 5QN, 5MX, 5MA, SU1AD, UA6KSA, UB5KBE, 5KAB, UP2KBC, W6QHD, YU1CAF. (Rx: 358 X.)

28 mc

Feb. 18, 1600-1700 GMT

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

PHONE: CR6AQ, KZ5PC, LU4DD, 9DAT, PY3SL, 7EE, VP8SD, W6YYT/MM, ZS6FN, 6XT. (Rx: S.640.)

F. K. Earp, 33 Lavender Terrace, S.W.11.

PHONE: CR6AQ, HC10Y, HK4AM, 4CO, KP4CD, 4JR, KZ5PC, LU5AD, 7DV, MD2PJ, MI3US, OQ5CL, PZ1WK, ZS6GW, 6FN, 7C. (Rx: 1-1-2.)

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

PHONE: CR6AP, HK4AM, LU4DD, OQ5CL, PY3SL, VP8SD, ZS5G. (Rx: 1-55R and Converter.)

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

PHONE: CN8EG, HC10Y, HK4AM, LU3DH, MI3US, OQ5CL, PY3SL, W6YYT/MM, ZS6XT. (Rx: 0-1-1.)

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

PHONE: HK4EU, LU3DH, OQ5CL, PY3SL, VQ2JD, ZS6DW, 6FN, 6JZ, 6ME, 6TE, 6NT. (Receivers: AR-88 and S.504.)

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

PHONE: HC20S, HK4AN, K4WAR, LU7DV, MI3US, OQ5AB, 5CL, PY3SL, VE1TX, W4CGG, 4DCQ, 4ESP, 4FT, 4FUM, 4HXN, 4OTD, 4RTS, 4SET, 5SJD, 6YYT/MM, ZS1HY, 1JD, 1T, 5G, 6DW, 6FN, 6KW, 6NT, 6NX, 6TB, 6XK, 6XJ. (RF24 into 0-1-1.)

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

PHONE: CR6AQ, HK4AF, 4AM, KZ5PC, PY3SL, 7EE, UA1BE, VP6SD, VQ2JD, W4YF, 4CCA, 4CGG, 4DOC, 4FT, 4FUM, 4GLY, 4KPO, 4LNE, 4MTU, 4OTD, 4PJW, 4QBK, 4RVG, 4RVV, 6YYT/MM, ZS1JM, 5G, 5K, 6DW, 6GC, 6TE, 6XT. (Rx: RF24 unit into S40A.)

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

PHONE: CX2CN, KG4AO, LU3DH, 5AD, OQ5CL, PY3SL, 7GY, VP6GD, ZE2KH, ZS1JD, 1PY, 5G, 6DW, 6FN, 6ME, 6RA, 6TE, 6WW, 6XT. (Rx: AK88LF.)

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

PHONE: HC1DL, 10Y, OQ5DL, PY3SL, 7GE, VP6JK, W6YYT/MM, ZS1JD, 6DW, 6FN, 6TE, 6NT. (Rx: RF24/S740.)

GENERAL

28 mc

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

PHONE: HP1WM, KP4CU, MI3GH, 3NX, 3ZX, OQ5DZ, OX3BD, 5VOWS, TA3GVU, TI2RL, VO1AB, VQ2HW, 2WP, ZC4XP, ZD4AD, ZS1BV, 6JW, 6XK. (Rx: S.750.) (over)

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

PHONE : CN8EM, EK1AD, HZ1KE, LU6DJY, MI3NJ, 3RP, 3S1, 3XX, 3ZX, OX3BD, PY2AUC, SV0WZ/Mobile, TA3GVU, UA1BE, VP3CW, 6YB, VU2BM, W5LRO/MM, ZB1AJX, 1H, ZE3JD, ZS6CX, 6EB, 9D. (Receivers : S.504 and K.C.A. AR-88.)

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

PHONE : CR6AQ, CT3AK, FF8PG, HK4AM, KZ5FL, 5PC, MI3GH, 3NJ, 3XX, 3ZX, MP4HAB, 4KW, OQ5CA, PZ1WK, TI2VE, 2RC, 2RL, VP3CW, 6SD, 6YB, VQ2HW, 2WP, VS9AH, XE1PY, ZD4AB, 4AX, ZE2JE. (Rx : S.640.)

K. M. Parry, 6 St. Barts Rd., Sandwich, Kent.

PHONE : AR8MR, CE3CZ, FF8PG, H18WF, HK4CO, 4JA, HP1WM, KP4BY, KZ5LM, MP4KW, OQ5AO, 5CA, ST2KR, TI2RL, VP9F, 9L, 3CV, VQ2H, 3AWL, VS9AA, 7PS, ZD2DYM, 4AB, ZE3JD, ZS9F. (Rx : RF24 into BC348.)

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

PHONE : CO7GM, DU2GC, KP4BQ, LU2DM, MD2EU, MI3NJ, 3SL, 3ZX, MP4KW, OQ5AO, 5CL, PY4VX, VP3CW, 6YB, VQ2DR, 2HW, VS9AH, ZD2DYM, 4AB, 4AH, ZE3JD, ZS9F, 4X4BC. (Rx : BC-342J) RFU-32.)

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

PHONE : AR8AB, 8MR, CO7GM 7RQ, HC1OY, 2JR, KP4DD, 4HF, KZ5JQ, MD2AM, 2GC, MI3GH, 3XX, 3ZX, MP4HAB, SV0WZ/M, TA3GVU, TG9AS, TI2RL, VP3CW, 9HH, VS9AH, XE1VA, ZC4XP, ZD4AB, 4AH. (Rx : SX28 and AR88.)

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

PHONE : AR8MR, CN8EN, HP1WM, KV4AQ, LU5JVV, MD2EU, MI3RP, OHSOC (Lapland), TA3GVU, TI2RL, VO2Z, VQ2WP, VS9AH, ZB1AH, ZD4AB, ZE3JP, ZS6Z. (Rx : 0-V-1.)

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

PHONE : CN8EM, EA8AX, EK1AD, HK4AM, KP4MQ, MD2GC, MI3NJ, 3XX, 3ZX, MP4KW, PY4VX, PY7VB, SV0AN, VQ2HW, 2WP, VS9AA, 9AH, W6YYT/MM, ZD2DYM, ZD4AH, 4AB, ZS1HY, 5CV, 6UR, 6XT. (Rx : 0-V-2.)

M. J. Marlow, Epsom Road, Guildford.

PHONE : CT3AK, HC1OY, HK4RJ, KP4VQ, 4MQ, MI3XX, 3ZX, MP4KW, PY2AUC, VP6CD1, 6ZK, VQ2WP, 3AWL, 4CUR, ZS5XM/MM, ZD2DYM, 4AH, ZS5DE. (Rx : RB74.) CW : FF8JC, 8JR. (Rx : RB74.)

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

PHONE : AP2N, AR8AB, CO7GM, CT3AK, FF8PG, HC1DL, HP1WM, KP4FP, 4HF, 4HZ, 4MN, 4MQ, KZ5WA, MI3GH, 3ZX, MP4KW, OQ5LL, TI2RL, VP3CV, VQ2HW, 2QP, 2WP, VS9AH, ZD2DYM, 4AB, 4AH, ZE3JP. (Rx : R208.)

14 mc

R. W. Finch, 36 Bathurst Rd., Ilford, Essex.

PHONE : CN8EP, KP4HF, MI3US, VP3MCB, VP4LS, VP6SD, W7DL. CW : CP5EK, EA8AV, FA8RJ, KZ5DE, LU2FN, VP5BL. (Rx : 3-V-2.)

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

PHONE : KG6USA, VS7GD, 7SV, VU2CU, 2DH, ZP2AS. CW : CR7AD, EL2M, FQ8AC, FM7WF, FN8AD, HP1LL, KV4AA, UA9KOG, VP8AT, VU2CW. (Rx : 1-V-1.)

H. J. Hill, 7 Ventnor Grdns., Whitley Bay.

PHONE : CN8EP, 8EJ, 8EQ, EA6AT, 8GT, 8AI, 8AY, EK1CH, 1PH, 2AJ, FA3GZ, 3ZA, HH2RT, KV4AT, LU2BS, 5DH, 6DJ, MI3ZX, OQ5SO, OX2ZE, 3BD, PY7DD, SV0WX, OWM, OVZ, TA3GVU, TF5TP, U14AGZ, VQ2JB, VE7CN, VP3CH, 6FO, W7JMI, ZE2JE, VS7BR. (Rx : R107.)

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

PHONE : AR8BC, CE3AA, CM9AA, CX2AF, EA9AJ, EL9A, H16EC, HP1LL, KG6AD, KH6FE, KR6FA, KV4AA, PY7VA, TI2GP, VE8OV, VP2SE, 3MCB, 4LD, 6FO, 7NR, 9G, VQ2HC, YN4CB, ZS2MI, 3M. (Rx : BC 342-J.)

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

PHONE : AJ3AA/airborne, EK1CH, 1MB, F18GJO, KP4ES, PY4AZ, VK6MK, VQ4RF, 4X4BL. (Rx : HRO.)

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

PHONE : CE3CZ, CR6AN, 7AD, CX2IL, HC1FG, H16EC,

JA2CJ, KG6AD, KH6ES, TI2OE, UA1BE, VE8AX, 8RD, VK2QR, 5LP, VP3MCB, VL1AX, 9AH, VU2RX, W6QS, XE1AC, ZX2KN, ZD4AI, ZL4AW, ZS2MI. (Rx : S 750.)

D. C. Stace, Box 30, Spring Creek, New Zealand.

PHONE : CE6CW, CX2CL, DU1VVS, 6IV, FK8AH, HB9GX/MM, HH2RP, JA8AB, KG6GC, KH6WU, KM6AR, KR6AF, KR6AC, LU1KG, PY2AK, TI2OE, VK9YT, VP7NH, VR2AS, VS1AG, W1FAX/KW6, W6RVO/KJ6, XE1HC, ZP1BL, 4CM. (Rx : Mullard 957.)

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

PHONE : AP2N, CE3CZ, CT2AE, 3AN, CX3BL, EA6AT, 8JP, 9AI, H16EC, HK4FV, HP1MD, KG4AU, KP4ES, MI3US, OA4M, OX3MC, SV0WX, TF5TP, UG6WD, VP3MCB, 4TH, 6LN, 9G, YN4CB, YS1RP, YV1BJ, ZC4XP, ZL2JB, ZS6TE. (Rx : 1-V-1.)

B. R. J. Pooley, Nautical College, Pangbourne.

PHONE : EA9AI, EK1CH, 1JC, EL9A, FA3GZ, 3VA, 3WW, 3ZF, 3ZH, 9WC, FF8DA, JA2BL, KZ5KS, MD2AF, 2AM, 2EU, 2MD, 2PJ, MI3BS, 3NA, 3OV, 3SL, 3US, 3ZX, OX3BD, 3BG, 3MC, 3WX, TA3GVU, TF5TP, VK2VX, 3AJC, 4LM, 4MW, 6PW, VP6FO, 6SD, 9G, VQ4RF, VS1AX, 1DP, 2BA, 7BR, 7GD, VU2JU, 2SM, W6AM, 7ADS, 7MBX, XZ2KN, YV5AB, ZB1AJX, 2A, ZL2JB, 2LY, 2VX, 2WS, 4HJ, ZS1GG, 3D, 6JW, 6MR, 6OW, 3V8BF. (Rx : R.1155.)

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

CS3AB, CN8BG, CR4AD, CE6AK, CX2AF, EA8AV, 8AX, 8BD, 8BE, LU2BS, 4BH, 6DJ, 8CW, OX3BD, PY1AQT, 2AUC, 4AGZ, 5DW, 7WH, 8RJ, TF3AA, 7GD, VP3MCB, 6FO, W7MBX. (Rx : Eddystone 400 X.)

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

CW : CO7AH, CR5AC, 5AF, 7AD, 7AG, 7BN, CX6AD, FF8AC, FM7WF, FQ8AC, FY7YB, HH2JC, KP4KD, KV4AA, KZ5AA, OQ5NK, PFSO, TG9AD, TI2TG, VP4CO, 6PV, 7NM, 8AP, VQ2GW, 4BY, 6N, XE1AC, ZC4XZ, ZD1AR, 2TBS, 4AE, ZE3JO, ZS5DE. (Rx : 0-V-1.)

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

PHONE : CR6AQ, EA6AC, EL2R, 9A, FF8DA, HP1LA, JA2BC, KG4AU, OA4M.

VP3MCB, 4LS, 7NH, VQ2HW, VS7BR, 7GD, 9AH, VT1AB, VU2FH, XE1AW, YN1LB, ZE2JP, 3JE, ZP2AE, 3XA, 4AB. (Rx: S.640.)

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

PHONE : CE3CC, CS3AB, HI6EC, HK1EE, LU3CS, 6DJ, 9CI, MI3UF, PY8MQ, TI2OE, VK6DX, VP3MCB, 6AL, 6FO, 6SD, 7NH, VQ2GW, 4ERR, 4RF, VS7BR, 7SG, YV5AB, ZC4TF, 4XP, 6JM, ZS1BV, 1GG. (Rx: R.208.)

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

PHONE : AR8BC, CO7IQ, CR7AH, 7AI, CS3AA, EL2X, HZ1KE, MI3ZX, 3LV, OQ5DL, OX3BD, VK6OR, VP6SD, 9G, VQ4RF, VS7SV, 9AH, ZC6JM, ZE1JX, ZL3GX, ZS2MI, 4N, 5KE, 6FN. (Rx: S.640.)

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

PHONE : AG2AB, CMSMP, 9AA, CR7AH, CS3AA, EASAV, 9AI, EK1CH, FA3ZH, HI6EC, HK1EE, KP4JM, LU9CI, MI3ZX, PY3IT, TA3XOX, TF5TP, VE5FA, 7CN, VK1AD, 3HW, VP3MCB, 7NH, 7NR, 9G, VQ2C, VS7BR, W6YX, 7AJS, 7DL, YV5AB, 5BT, ZC6DH, ZE3JZ, ZS5II, 6JS, 7C, 4F. (Rx: 0-V-2.)

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

PHONE : CE2AK, CO2CE, 7KK, 8GM, CX1CA, 2CO, 3BL, HC1FG, HK1DW, KP4KE, LU6JD, OQ5DZ, PY8GD, VP2SE, 3MCB, 4TH, 6FO, 7NH, 9G, 9HH, VQ2JD, YN4CB, YS1MS, YV5AO, ZS6SB. (Rx: McMichael 484.)

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

PHONE : CR6AM, 6AQ, 7AH, 7AI, EL6A, 9A, HP1LA, HZ1KE, MI3US, OA4M, VE7CN, 8MB, 8OV, 8SF, 8TH, 8TJ, VP3MCB, 67NH, YS1MS, ZC4XP, 6JM, ZD1SS, ZS2MI, 3F, 3M. (Rx: SX 28 and AR 88.)

W. G. Gore, Yatesbury, Calne Wilts.

PHONE : CN8EP, CO8MP, CR6KQ, EASAV, FA3GZ, HK3CO, KP4JM, LU9CI, MI3XX, OX3BD, PY4IE, TF5TP, TI2OE, VE8OV, VP3MCB, 4LF, 6SD, VQ2DR, 4ERR, W7ACS, YN4CB, YV5BO, ZD1SS, ZE3KZ, ZS1BV, 3Y8BF. (Rx: 9-valve superhet.)

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

PHONE : AP2N, CR7AH,

DU1AP, EL2R, 9A, KC6WC, KL7AGJ, KP6AA, PK4DA, UD6AH, VE8OV, VP3MCB, 4LD, 7NH, VQ2HW, VS1AX, 7BR, 9AH, VT1AB, VU2DB, 2FH, XZ2KN, YK1AH, ZS2MI, 7C. (Rx: R.103 and RF.24.)

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

PHONE : CR7AH, EA9AI, EL2X, HH2X, 3DL, HP1LB, HZ1AB, 1KE, KG4AK, KP4KE, MP4KW, OA4BR, PK3JF, TF3MB, 5TP, VP4LS, 5RA, 6FR, 6SD, 9G, VS7BJ, 7RA, 9AH, YK1AD, YN1LB, 1RA, YS1RC, ZC4TF, ZD4AB, ZE1JX, ZS3F. (Rx: National HRO.)

J. E. Cheese, 104 Outram Road, Addiscombe, Croydon, Surrey.

PHONE : CE3DZ, HI6EC, KP4HM, LU6DJG, 9CI, MI3US, PY5DH, VP6MCB, 7NH. CW : CE3DZ, CO6VV, CX6AD, EASAV, 8BD, 8BE, 8BN, 8JR, FM7WS, KZ5AA, PY2AVY, 4AJD, 4CT, 7LN, TI2TG, 4X4DR. (Rx: 0-V-1.)

7 mc

M. G. Whitaker, R.A.F. Ouston nr. Newcastle-on-Tyne.

CW : AR8AB, CX5AB, EP1AA, FF8AC, FM7WF, HH2LD, HK4DP, KV4AA, 4FAU, KZ5AA, MP4BAM, OX3BG, PY8MG, UC2KW, UF6AA, UO5KAA, VK5LE, VP5AL, 8AK, 8AP, VQ2AK, YV5DO, ZD2KF, ZS5FY, 5UI, 4X4BX, 4DF. (Rx: 0-V-1.)

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

PHONE : CX1BN, EA8AE, EK1AD, 1BA, LU4DJJ, PY1ACK 1ARG, 2BDV, 4AB, SP5AB. (Rx: R.103.)

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

CW : AR8AB, CE3BB, CR5AF, FF8AC, 8JC, FM7WF, FO8AC, FFSAL, FY7YC, HH2HF, 2JC, 2LD, HRIAZ, KH6ZG, KJ6AI, MP4BAM, ST2TC, TG9AD, TI2PZ, 2TG, VK2ZR, 3AE, 3ZA, 4AP, 4FJ, 4JU, 5FH, VP4TB, 5BH (Cayman Is.), 8AI, 8AP, VQ2GW, ZE2JV, ZS1FX, 1H, 1KF, 1KS, 5DE, 5IR, 5U, 5Z, 6QF. (Rx: R.107.)

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

PHONE : EK1BA, 1SL, FA3GA, 3IK, 8BE, 8JO, 8LH, LU4DJJ, PY1AU, 2ARM, 2CP, 2JY, 2NM, 4AI, 4YQ, 6AA, VP6COL. (Rx: R.1155.)

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

CW : AR8AB, CO2AJ, FP8BX, LU1JO, 3DI, 8AE, PY1ALO, 7WS, VK3XU, W6YAW, ZB2I, ZL1MG, 2RI, 3JQ, 3LL, 3LR, 4GH, ZS1BK, 1H. (Rx: Ham-bander.)

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

PHONE : CN8EJ, KP4GU, TA3GVU, VE1IE, 1IU, 1LR, 1NN, 1PQ, 1QW, 1YV, 2LT, VO1VI, VP6SD, 7NH, WIATE, 1DQ, 1ME, 1NST, 1OND, 2SGU, 3LOE, 3PWR, 4AGB, 4CPG, 4KFC, 4KWY, 8LIO. (Rx: HRO.)

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

MD2UE, TA3GVU, VE1CW, WIATE, 1RFE, 2DFO, 2GFU, 3BES, 3EQA, 3HFO, 4BGU, 4DCQ, 4FUM, 4IYC, 4KWY, 4NSD, 8UKS.

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

PHONE : TA3GVU, VE1AA, 1DW, 1FM, 1HC, 1ID, 1LZ, 1QW, W1CP, 9S4AD. (Rx: SX28 and AR8SLF.)

R. W. Pennells, Neals Cottages, Lamberhurst, nr. Tunbridge Wells, Kent.

PHONE : VE1IE, 1N, 1PK, 1PQ, 1QW, VO1AB, 1VI, WIATE, 1BFB, 1GIX, 1ME, 1OND, 1RFE, 3BES, 3CAC, 3DHM, 3PWR, 4BGO, 4CPG, 4DCQ, 4DPI, 4FUM, 4KFC, 4KWY, 4OM, 4PFC, 8LIO. (Rx: 0-V-2.)

1.7 mc

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

CW : EK1AO, F9VA, K1NRE, KV4AA, OK1AWA, 1AJB, UA3AW, VE1EA, 3AAZ, W1BB, 1BEV, 1DVS, 1EFN, 1LYV, 1MQB, 1PLO, 1SAN, 1SRI, 1SS, 1ZE, 2BLR, 2UKS, 2WJE, 3FNF, 3LII, 0TQD. (Rx: HRO.) Jan. 28 to Feb. 18.

F. A. Herridge, 95 Ramsden Road, Balham, London,

S.W.12. CW : DL1IQ, 6OS, 6OX, EK1AO, F9VA, OK1AJB, 1AWA, 1KPI, 1ZW, ON4RI, TA3FAS, UA3AW, W1BB, 1EFN, 1LYV, 1SS, 2PEO, 2WC, 4KFC. (Rx: Modified R.103.A.)

R. Iball, 48 School Road, Langold, Workop.

CW : EK1AO, OK1AWA, 1TZ, TA3FAS, UA3AW, UR2AF, W1BB, 1BEU, 1EFN, 1LYV, 1SS, 2PEO, 2WC. (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.

- DL1HT** *Farrenstr. 60, Stuttgart, O, Germany.* 3.5, 7, 14 and 28 mc phone and CW.
- DL3TP** *Ringweg. 1, Kaufbeuren, Germany.* 3.5, 7 and 14 mc CW and 3.5 mc phone.
- DL3TZ** *Rathausstr. 13, Wilbaden-Biebrich, Germany.* 3.7 mc phone, 1900-2300 GMT; 14 mc phone, 1300-1600 GMT. Details of modulation, any distortion or carrier ripple.
- DL4QD** *J. E. Simmons, APO. 742, c/o P.M., N.Y.C., U.S.A.* 14 mc phone and CW. Modulation.
- DL6KB** *Burgstr. 8, Kamen/Westf, Germany.* 3.5 mc phone at 1600 and 2200 GMT; 3.5 mc CW, 2000-2200 GMT.
- DL6QA** *Ruschenbrink 16, Hameln, Germany.* 3.5 and 7 mc phone and CW, 1700-1800 GMT and weekends. Reports on modulation.
- EA3GT** *General Sanjurjo 152, Sabadell, Barcelona, Spain.* 7 and 14 mc CW, 1900-2030 GMT.
- EA3HI** *Pasaje Nogues 30-2a, Barcelona, Spain.* 14 mc phone. Details of modulation.
- EA5DR** *Salamanca 29, l'alencia, Spain.* Reports on 7, 14 and 28 mc CW.
- F3UX** *J. Deltier, Bessines-sur-Gartempe, Haute-Vienne, France.* 3.5, 7, 14 and 28 mc phone and CW. Modulation and tone reports.
- F8GB** *1 rue Edmond Magnez, Conflans Sainte Honorine, S.-et-O., France.* 7006, 7073, 7106, 7125 and 7173 kc phone, Tuesdays, Thursdays and weekends, 0900-1800 GMT. Modulation quality and percentage.
- G3AFZ** *292 Gwendolen Road, Leicester.* 14.08 mc CW, Wednesdays and Saturdays 1800-1900 GMT. Reports from Africa only.
- G3AJF** *3 New Villas, Fritton, Gt. Yarmouth, Norfolk.* 14 mc CW, 1930-2130 GMT and weekends. Reports over 4000 miles, especially ZS and Oceania.
- G3CIZ** *18 Blenheim Road, Wakefield, Yorkshire.* VFO-controlled 14 mc phone, 1800-2000 GMT, from 2230 GMT onwards, and at weekends.
- GM3EMV** *240 Braidcraft Road, Pollok, Glasgow, S.W.3.* 14 mc phone and CW, VFO, weekends.
- G3GRW** *34 Amy Street, Southampton.* 14056 kc CW, Tuesdays 1645-1715 GMT.
- G3GYV** *Dusyhulme Cottage, Dark Lane, Whitley, via Warrington, Lancs.* 1.8 mc CW, 1200-1430 and 1800-2030 GMT, Sundays 1000-1300 GMT.
- GM3HHB** *90 Lorne Terrace, Muirhall Road, Lurhert, Strirlingshire.* 3584 kc CW, 1900-2000 GMT.
- HA5BP** *Box 185, Budapest, 4, Hungary.* 14 mc CW, Mondays, Wednesdays, Thursdays and Saturdays, 1500-1800 GMT.
- HB9LR** *Dammstrasse 9, Burgdorf/Bern, Switzerland.* Reports on 3.5, 7 and 14 mc phone and CW.
- IIFQ** *R. Mambretti, Fino Mornasco, Como, Italy.* Reports on 28 mc phone, 1800-2300 GMT.
- KH6HY** *P.O. Box 16, Lawai, Kauai, Hawaiian Islands.* 14 mc CW, 0530-0630 and 1730-1830 GMT.
- OHIOW** *Pori 3, Tellervonkatu 54, Finland.* 14 and 28 mc phone and CW, 1530-1700 GMT, Sundays 0700-1730 GMT. Modulation.
- PA0GIN** *Gorechtkade 174, Groningen, Netherlands.* 3.5 mc CW, operating 1800-2359 GMT.
- PA0IT** *Hoekschede 43, Bergschenhoek, Netherlands.* Reports on 14 mc CW, weekends.
- PA0IW** *Tjerk Hildes de Vriesstraat 5.1, Amsterdam, Holland.* 3.5, 7, 14 and 28 mc phone and CW.
- PA0NNY** *Madeliefstraat 25, Tilburg, Netherlands.* Reports on 3.5 and 7 mc CW. QSB.
- PK1SH** *P.O. Box 127, Djakarta, Java, Indonesia.* Reports on 14 and 28 mc phone and CW.
- PY2ADT** *P.O. Box 261, Marilia, Sao Paulo, Brazil.* 28350-28500 kc phone, 1500-2200 GMT.
- PY6DU** *Praia de Itapou 1, Salvador, Bahia, Brazil.* 7, 14, 21 and 28 mc phone and CW.
- PY7WO** *P.O. Box 298, Fortaleza, Ceara, Brazil.* Reports on 14000 kc CW.
- SM5AYC** *Klockartorpsgat 21.C, Vaesteraas, Sweden.* Schedule with W6KYG, 14100 kc CW, 1630 GMT. Need reports only when schedule fails.
- SM7BDC** *Tomasgatan 19, Ullanda, Sweden.* Reports on 3.5 mc CW, 1700-2300 GMT.
- VE1DQ** *69 Dublin Street, Halifax, Nova Scotia, Canada.* 14.17 and 28.3 mc phone, at 1400 and 1600 GMT.
- VE2RS** *3502 Westmore Avenue, Montreal, Quebec, Canada.* Reports on 3.5 and 14 mc phone.
- VE8RY** *P.O. Box 453, Whitehorse, Yukon, Canada.* 7 and 14 mc CW, 14 mc phone, 0700-1900 GMT. Quality, modulation, and comparative reports.
- VK3ARV** *18 Madden Grove, Burnley, Melbourne, Vic., Australia.* 7 and 14 mc phone and CW, 0800-1400 GMT, weekends 0200-1400 GMT.
- VK6WS** *40 Irvine Street, Peppermint Grove, W. Australia.* Reports on 14 and 28 mc phone.
- VO6BD** *S. F. Cronk, c/o T.C.A., Goose Bay, Labrador.* 14020 and 14056 kc CW. Keying and stability.
- VP6LD** *St. Ives, Hastings, Christ Church, Barbados.* Reports on 28.4 mc phone.
- VS2BS** *8 Perak Lane, Penang, Malaya.* 14 and 28 mc phone, 1530 GMT onwards. Enclose IRC.
- W1MXG/MM II.** *J. Homer, P.O. Box 2411, Houston, 1, Tex., U.S.A.* 28 mc phone, 1700-1900 GMT.
- W2EMX** *1225 Madison Avenue, Lakewood, N.J., U.S.A.* 28.5-28.6 mc phone, 1300-1600 GMT.
- W2WL** *32 Loft Avenue, Baldwin, N.Y., U.S.A.* 7, 14 and 28 mc CW, 1700-2100 GMT.
- W2ZLL** *2070 Kyer Avenue, Bronx 57, N.Y., U.S.A.* 3.8, 14 and 28 mc phone and CW, 2200-0300 GMT, weekends 1400-1900 GMT.
- W4KIK** *111 Hall Street, Bainbridge, Ga., U.S.A.* VFO-controlled 28.5-28.52 mc phone, weekends.
- W4OAR** *Box 487, Hapeville, Ga., U.S.A.* Quality of VFO-controlled 28 mc phone.
- W6KPC** *11935 Wagner Street, Culver City, Calif., U.S.A.* 14 and 28 mc phone and CW, 1500-2359 GMT. Comparative reports.
- YU1CAG** *Box 48, Belgrade, Yugoslavia.* 28 mc phone, 1300-1600 GMT. Comparative reports and quality of modulation.
- ZD2DYM** *Capt. F. Dymond, Nigeria Signal Squadron, Lagos, Nigeria.* 14 and 28 mc phone and CW, at 1600 GMT, Sundays at 0900 GMT.
- ZE3JL** *26 Jameson Street, Bulawayo, S. Rhodesia.* 14 mc phone reports only, 1800-2000 GMT.
- ZE3JS** *W. M. Vandy, Officers' Mess, R.A.F., Lebrani Bulawayo, S. Rhodesia.* 14080 kc CW, Wednesday and Saturday 1800-1900 GMT.
- ZL1MP** *D. Mitchell, Chauti Settlement, via Hairini, Tauranga, N. Zealand.* 14-14 13 mc CW, 0700-0930 and 1730-1900 GMT. Comparative reports.
- ZS4CX** *68 Water Street, Uptington, S. Africa.* 28 mc phone, 0700-1800 GMT.
- ZS5HA** *2 Kensington Drive, Durban North, Natal, S. Africa.* VFO-controlled 14 mc CW, alternate weeks 1800-2359 GMT.
- 4X4CL** *P.O. Box 4099, Tel Aviv, Israel.* 14 mc CW, 0600-0900 and 1600-2359 GMT. Details QSB.
- 4X4DR** *3 Gezer Street, Tel Aviv, Israel.* 14 and 28 mc phone and CW, 1900 GMT.

THE V H F END

by A. A. MAWSE

PDC from the Oscillator—

Finding the Band, and Calibration Methods—

Conditions Generally Dull—

Station Reports and News

TWO correspondents have asked for help in cleaning up the note produced by the oscillator in their 144 mc converters. Now, P. J. Towgood reminds us of a point which has been made in these columns more than once before—namely, that too much loading on the oscillator can produce a poor note. P.J.T. is using two 6C4 valves in place of the 6J6, but his circuit is otherwise the same as the oscillator-mixer in the G2IQ converter. With this he has found reducing the coupling capacity to a value of 6.8 μ F improved the note considerably. G2XC has several times pointed out that it is possible to get ample coupling between oscillator and mixer by just building them adjacent to each other and using no coupling capacity at all. The stray coupling is sufficient to provide the injection volts to the mixer. Some experimenting with the relative positions of oscillator and mixer tuned circuits is desirable if best results are to be obtained, but a clean DC note is readily produced by this method.

So it is suggested that when a 2-metre converter refuses to produce a DC note and the wiring and layout appear to be as good as two-metre construction should be, then steps should be taken to reduce the coupling between oscillator and mixer circuits; in fact, go on reducing until the converter output shows signs of serious falling off. It is as well to remember that signal-to-noise ratio is more important than actual output from the converter, and although tight coupling may give greater output.

it does not necessarily give greater readability.

However, strange things can happen on VHF to produce bad notes. The connections between the converter and receiver chassis should be watched. A recent experience of our own may be of interest and possibly help to others. A converter was under test and was placed on top of the main receiver, so that there was a direct earth connection between the converter chassis and the metal cabinet of the receiver. In addition, there was an earth connection by way of the outside of the length of coaxial cable used to take the converter output into the main receiver. Converter and receiver had separate power packs. The quality of the note produced by this arrangement was decidedly poor. Stations known to be T9 normally not being better than T7. It was then discovered, by accident, that lifting the converter off the receiver, even by only a fraction of an inch, restored the signals to T9. In fact, a thin piece of insulating material between converter and receiver was sufficient to produce a good note, whereas any form of electrical contact, even just a short piece of wire, made direct between the converter chassis and the main receiver cabinet top, produced a very rough T7 note.

There have also been cases of poor electrode assembly in a valve causing trouble, and sometimes changing the valve from a horizontal to an inverted position can cure it. Incorrect heater volts can result in a tendency to produce bad-quality note, but, if everything else is in order, variations in heater voltage will probably have little effect. It is therefore suggested that when a low heater voltage does produce T7, then there is something wrong in the circuit.

Finding the Band

Also among last month's correspondence was a letter from a reader who was hesitating to rebuild his converter in case he would be unable to locate the band again. This should really present little trouble, as all that is necessary is to construct and calibrate

a simple absorption wave-meter before demolishing the original converter. Nothing elaborate is required—just a suitable tuning condenser and coil, and rigid construction. A 2-turn coil of 14 SWG wire across a 15 μF tuning condenser is a suggestion, and an extension handle is advisable to avoid hand-capacity errors. Place the wave-meter coil near the oscillator in the converter and tune the wave-meter until the oscillator is pulled out, and ceases to oscillate. This will give the oscillator setting on the wave-meter. For greatest accuracy, coupling between wave-meter and oscillator should be as slight as possible. An alternative way of detecting resonance between the wave-meter and the oscillator is to place an RF meter near the oscillator coil. A crystal diode (CV101, 102 or similar) across a 0-1 mA meter will do. The RF generated by the oscillator should give a small reading on this meter. Placing the wave-meter nearby and tuning it to resonance will effectively reduce the meter reading. The wave-meter tuning should be noted and can be used to get the new converter on tune later.

A Second Method

Another method which can provide a useful check is as follows: Leaving the converter tuning fixed, tune the main receiver over its higher frequency ranges. At a number of points, "over-tones" of the converter oscillator will be found. Note the points at which these occur, and when the new converter is built ensure they are the same. Actually, these are not overtones, but the result of harmonics of the main oscillator beating with the converter

oscillator. In fact, of the main receiver is really accurately calibrated and its IF known, the frequency of the converter oscillator can be calculated from these "overtones." For example, if the main receiver is tuned to 27 mc and its IF is 465 kc, then the oscillator frequency is 27.465 mc, which will produce a fifth harmonic on 137.325 mc. This will beat with an incoming signal on 136.86 or 137.79 mc to produce the IF of 465 kc. Hence, if the converter oscillator produces a "signal" at the 27 mc point on the main receiver, its frequency must be one of the two above, unless it is very far off tune and is beating with a harmonic other than the fifth; a check on the other frequencies at which the converter can be tuned-in will usually satisfy the latter point. To decide which of the two frequencies it really is, locate the image signal. This will be 186 kc higher or lower. If it is higher, then the converter is on the higher of the two frequencies. A small extension of this method actually enables the band to be found by a newcomer.

The Month's News

R. L. Bastin (Coventry) says VHF activity is at a low ebb in his part of the country. He feels that the construction of two-metre converters is a problem which very few SWL's care to undertake, and, until ready-made equipment is obtainable, he doubts whether there will be any great increase in our numbers. With the low level of activity, the locating of the band is made a more difficult problem. Due to restrictions by his landlord, R.L.B. is forced to use indoor beams and the *Short Wave Listener* 4-element Yagi is in his roof

VHF CALLS HEARD

Two Metres

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

G2ALN, 2A00, 2FCV, 2HCJ, 2HGR, 20I, 3ABA, 3AGS, 3AHX, 3A00, 3ATZ, 3BA, 3BKs, 3BLP, 3B0C, 3BPJ, 3BY, 3CHY, 3DA, 3DH, 3DUP, 3EHY, 3ELT, 3EMJ, 3FM, 3GMX, 3SP, 3WW, 4HT, 5CP, 5RW, 5TP, 6IC, 6NB, 6UQ, 6VX, 6XM, 8GL, 8SB, 8UF, G4W2ADZ, 3DNN, 5M0. (January 20 to February 19, 6J6 converter into AK88D. Aerial, "City Slicker.")

R. L. Bastin, 196 Binley Road, Coventry Works.

G2AK, 2ATK, 2FNW, 3ABA,

3BA, 3BLP, 3BVJ, 3DUP, 4NB, 4RK, 5SK, 6CL, 6NB, 6YU, 8QK. (February 1 to February 20; Receivers, see text.)

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

0-30 miles: G2BCY, 2DKH, 3CYV.

30-100 miles: G3DMK, 8GL.

Over 100 miles: G6PJ. (February 1951, Mod. KF26 into S640, 4-ele w.s. beam in roof space).

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

PHONE and CW: G2ATK, 2BVW, 2FNW, 2FQP, 2XS,

3ABA, 3BA, 3BK, 3BLP, 3DUP, 3EMJ, 3FC, 3GH1, 4NB, 4RO, 6NB, 6YU. G2IQ (converter into Commander 4-ele yagi 600ft. a.s.l. Jan. 22 to Feb. 19).

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

PHONE and CW: 50-100 miles: G2AOK/A, 3BLP, 3DJX, 3GSE, 4RO, 5DS, 5NF, 6AG, 6KB, 6NB, 6XM.

100-150 miles: G2WJ, 3DUP, 3WW, 4MW. Rx: 6J6, 6J6, 2X6C4 converter into 9 mc Xtal controlled converter, into 1.6 mc IF/AF amp. Aerial: 4-ele. cfs beam, 22 feet high. QTH 86 feet a.s.l. (All heard Jan. 25 to Feb. 20).

Activity Week-End

Next is fixed for April 7-8, 1830 to midnight on the Saturday, and 1000-1600 on Sunday. Spend as much time on the two-metre band as you can during these periods, and please report your results in detail.

space. Three converters are available: Two are 6J6 line-ups, one SEO and the other CC, while the third, just being completed, is a 6AK5 circuit. A BC455 is the IF amplifier and is found superior to a BC342N. Regarding results, R.L.B. has heard G3BLP as his only DX in recent weeks; the occasions when he was logged were February 1, 10 and 14. G3EHY has been missing, which is an unusual phenomenon.

P. J. Towgood (Bournemouth), in spite of having to miss some evenings, thinks it unlikely that there has been anything startling happening. He has been hoping that one evening he might hear just *one* Northern station, but so far no luck! He considers this probably due to some nasty-minded bundles of conditions. Apparently P.J.T.'s local Tx men have been no luckier. February 12 was the brightest day with him and, with steady 145 mc activity in progress throughout the evening, he asks what was wrong with the TV programme during that period! On February 19 he was interested in some super-modulation tests carried out by G2BMZ while working G8IL. G8IL, who was getting G2BMZ well, obviously found the super-mod the better, but P.J.T., who could barely hear G2BMZ, found the amplitude modulation more *nearly* readable.

A welcome letter comes from G3EHY (Banwell), whom we are delighted to have among our readers. He comments on the reception of his signals by P.J.T. on December 18. This was reported in "VHF End" in February, and it now appears that this may well have been an Aurora reflection. There were queer conditions, quite probably due to Aurora, on ten metres on the day in question. The directions of the beams at Banwell and Bournemouth also lend support to the theory that this two-metre reception was *via* the Aurora. G3EHY remarks that he will be active on 70 cm from March 1, every evening during 1840-1850 on 435.75 mc. Any listeners' reports would be very welcome and a QSL direct by return is promised.

Up North

A. H. Edgar (Newcastle) continues to

progress, and has received G6PJ (Sheffield) at 115 miles on phone. There was a thick fog at the time, and no doubt this lent a hand. Other new stations heard have been G3DKH (Stanley, Co. Durham) and G3DMK (Catterick). A.H.E. is hoping to try out a new converter using EC91-EF91-EF91-ECC91 very shortly, but unfortunately examinations will curtail the time he can give to radio in the next few months. He wonders why more local contacts are not made on Two instead of 160 metres and the DX bands. As he says, the advantages are enormous.

E. A. Lomax (Bolton) has found things somewhat brighter, with some Southern DX getting through to him. The period January 19 to 25 was particularly good. Local activity is also on the increase in Lancashire, and he mentions G2ALN, G2HGR, G3BKS, G3BTO, G6QT, G8UF as new ones for us to look for. E.A.L. recommends matching the aerial into the G2IQ converters. A great improvement in the shape of lower noise level is obtained. He doubts A. H. Eager's suggestion that Lancashire is the best part of the country for two-metre work, and feels that there is much to be said for an East Coast location, with its better outlook to the Continent.

For the information of the DX-minded—and those transmitters who follow "VHF End"—a report too late for the current issue of *Short Wave*

TWO-METRE COUNTIES HEARD

IN 1951

Starting Figure, 10

E. A. Lomax	...	...	...	...	20
P. J. Towgood	...	...	...	...	15
A. W. Blandford	...	...	...	...	14
L. A. Whitmill	...	...	...	...	14
W. C. Askew	...	...	...	...	13

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

(ALL TIME)

Starting Figure, 10

E. A. Lomax (Bolton)	...	...	38
P. J. Towgood (Bournemouth)	...	...	37 (191)
A. W. Blandford (Mitcham)	...	...	28 (230)
L. A. Whitmill (Harrow Weald)	...	...	28 (291)
R. L. Bastin (Coventry)	...	...	25 (70)
W. C. Askew (Melton Mowbray)	...	...	21 (45)
P. Finn (Iver)	...	...	17

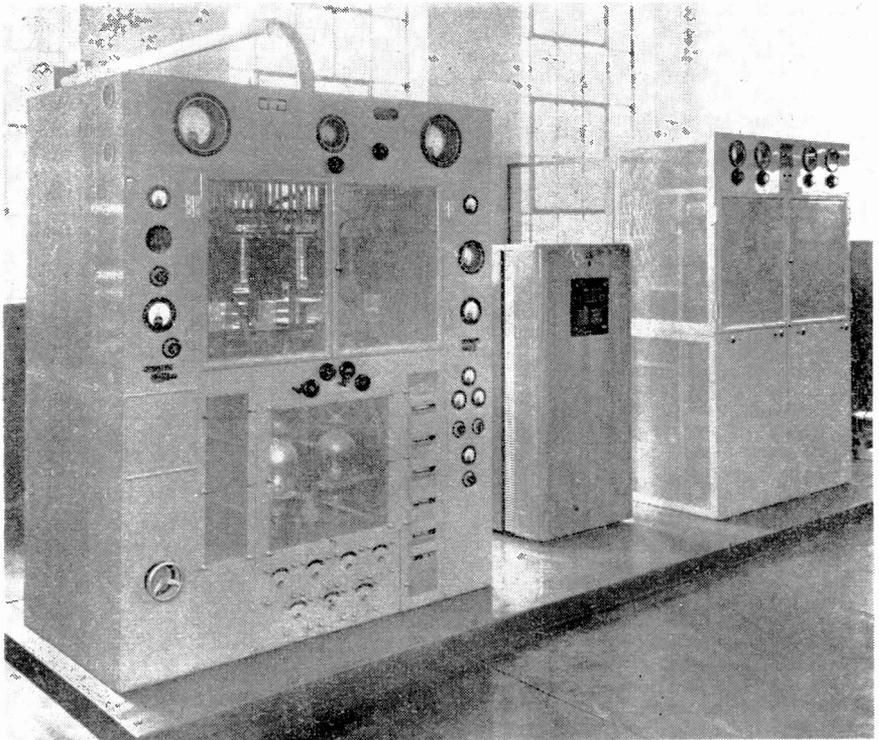
Note: Figures in brackets give total number of stations heard.

Magazine was received by G2XC from ON4BZ (Brussels). He is on 144.95 mc every evening from 2000-2359, looking for G's and also hoping for reports from any SWL's who may hear him. ON4BZ further remarks that three genuine LZ's are coming up on Two, and that LZ1JW is licensed and ready to start; and that in Belgium there are nine ON's properly equipped and regularly active on VHF, with more promised "when conditions are better." Add to this the DL4, F and HB stations on Two, or preparing for it, and we have the promise of some interesting Continental listening when the band opens up again.

In Conclusion

There will be another Activity Week-

End on April 7 and 8. So if you are after that extra county or even country, listen between 1830 and midnight on the Saturday and 1000 to 1600 on Sunday (*see panel*). With the earlier dates for receipt of mail for this column, a number of letters have been arriving too late during the past few months. So if you have written and then no mention of it has appeared in "VHF End," the reason is almost certainly that we did not get it in time. The latest date for receipt of reports for next month is **March 28**. The date for the following month will be April 26. The address, of course, is A. A. Mawse, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.



The 5 kW set for the South African short wave broadcaster at Johannesburg, operated in the 31, 60 and 90 metre bands and using the Afrikaans language.

*Read Short Wave Listener & Television Review
regularly and Keep in Touch*

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

DX *broadcast*

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

HONOURS this month go to the South African Broadcasting Corporation for their new short wave service to the continent of Africa. Admittedly, this venture appears to be no more than experimental at present, but, for programme value, the English broadcasts, at least—given on Tuesdays, Thursdays and Saturdays—have reached a high degree of efficiency.

In the early stages, Johannesburg was audible on 9870 kc, between 1600 and 2005, sometimes peaking to $S_9 + 12$ dB, but on 15230 kc at 0830 it was scarcely intelligible. More recent transmissions have been on 17748 kc at 0830—again, signals have been mostly weak—and on 11927 kc from 1600 until 2005. Whilst reception on 11927 kc has been good, there has been interference from a radio telephone station using a "wobbler" on the same frequency, at times creating a veritable cacophony of noise effects!

We have been impressed by the feature programmes which the SABC have given, and particularly the noteworthy co-operation with other members of the British Commonwealth of Nations. For instance, at 1730, on the eve of Australia Day, Mr. M. H. Marshall, Acting High Commissioner for Australia, spoke of the formal proclamation in 1901 of the Act of Federation of the Australian States (9870 kc). Likewise, at 1730 on New Zealand Day, we heard a recording of a broadcast given earlier from that country; it described conditions and opportunities in the Dominions, and Maori songs were heard during the intermissions (11927 kc).

On February 6, at 1715, a tribute was paid to the late Dr. Stals, Minister of Health in the Union; other worth-while programmes have been a Symphony Concert at 1815, the Punch-Bowl Competition feature from Durban on Saturdays at 1730, and Saturday-Night

Theatre presenting "A Phoenix Too Frequent" at 1800.

For those who have not yet logged this new service, for which reports are requested, we suggest that you listen at 1650 to the announcement: "This is the South African Broadcasting Corporation Calling Africa," which is followed by the News, weather forecast and programme summary. Reports should be sent to: The South African Broadcasting Corporation, Johannesburg. Our latest mail includes letters from A. E. Nichols (North Shields), J. C. Catch (South Shields), F. W. Dobson (Burton-Latimer, Northants) and D. A. Read (Broughton Gifford, Wilts.), reporting reception of Johannesburg on 11927 kc around 1845. J.C.C. measured the frequency and found it to be 11938 kc on one occasion; A.E.N. listened to an orchestral concert given by the Cape Town Municipal Orchestra; and D.A.R. makes a complaint about the telephonic interference.

Johannesburg on 4895 kc has been logged with the same Afrikaans programmes as those offered in the new service. A single church bell has been heard calling worshippers to Divine Service at 1730 on Sundays, and at 2105 the 4895 kc transmission closes with the English direction: "This is the South African Broadcasting Corporation. We are now closing down," and the playing of the two National Anthems. J. C. Catch has been lucky enough to hear Johannesburg IV, 4800 kc, with English announcements at 1915.

B. P. Middleton (Clapham, S.W.11) hears CR7BG, Mózambique, 15190 kc, with terrific signals from 1645 onwards, and almost all the programmes appear to be sponsored by tobacco firms! J. C. Catch noticed CR7BU on 4909 kc with both English and Portuguese directions at 1900. In Angola, CR6RD, 11925 kc, was audible after Johannesburg had left

TABULATED SCHEDULES

I. South African Broadcasting Corporation, Johannesburg.

Experimental Short Wave Service to Africa.

Programmes : In Afrikaans on Sundays, Mondays, Wednesdays, Fridays.
In English on Tuesdays, Thursdays, Saturdays.
Monday to Friday : 0830-1200, 1400-2005.
Saturday and Sunday : 0830-2005 continuous.

Frequencies : 0830-1200, 1400-1545 : 17748 kc OR 15230 kc.
1600-2005 : 11927 kc OR 9870 kc.

Reception Reports from all parts of the world will be appreciated ; address as above.
Typical programme (Evening session) from Johannesburg.

1600 : News in English.
1610 : Stock Market-Prices.
1620 : Light Orchestral Music.
1645 : Dance music selections.
1700 : " Six pips," Time Signal, followed by News in English.
1710 : Weather Forecast.
1713 : Programme summary.
1715 : Dance music recordings.
1730 : Topical talk : e.g., Nursing as a Career for Women.
1745 : Musical Interlude.
1800 : Quiz and Query—a fortnightly feature presented by Barbara Evans.
1830 : Commemorative programme : e.g., Life of Robert Burns.
1900 : Review of New Books.
1915 : Radio Scrapbook.
1930 : Sporting feature : e.g., Review of the Springbok Cricket Touring Team selected to visit the United Kingdom in 1951.
2000 : English News.
2005 : Closing announcement.

II. Salisbury, Southern Rhodesia.

Frequency : 3319.5 kc.
Typical Programme : 1600-2000.
1600 : BBC News in English from London.
1715 : Popular Light Music Recordings.
1745 : Topical Talk.
1755 : Johannesburg Stock Market Prices.
1759 : Station Identification.
1800 : BBC News from London.
1814 : Programme Summary.
1815 : Rhodesian News.
1820 : SABC News.
1827 : Forthcoming Events.
1900 : Halle Orchestra Recordings.
1959 : Station Announcements.
2000 : Close down with National Anthem.

the air on February 3; at 2030 we heard a clock with half-hour chimes and the direction: "A qui Nova Lisboa"—it closed down at 2035. Radio Clube do Bihé in Silva Porto operates CR6RO, 7582 kc from 1700 to 2005 daily; the address is: P.O. Box 33, Silva Porto, Angola.

I. Griffiths (Scarborough) has logged Madagascar on 9000 kc with the announcement: "Ici Radio Tananarive," at 1648; also Radio Douala, Camerouns, on 7000 kc, with News in French at 1955 before the closure with a March, but no Marseillaise, at 2005. R. Abrahams (Hounslow, Middsx.) heard V3USE, Mauritius, 15060 kc, with an English play between 1710 and 1730, after which came the direction: "This is the Mauritius Broadcasting Service—Goodnight, Everybody, Goodnight," and a shortened version of "God Save The King."

J. Holden (York) found ZEA, Salisbury, S.R., on 3320 kc, a good

signal for "Sunday Serenade" at 1820, and he received a letter verification for this broadcast within fifteen days. He has heard ZNB, 8230 kc, with musical items before 1930, at which time we have heard the announcement: "This is ZNB, Mafeking, Calling, and we are now closing down." We also noted Sao Tomé, 4807 kc, at 2000, with what appeared to be a recording of Big Ben striking nine, and J. Holden has heard it closing at 2100.

W. D. Nutt (Nottingham) recommends OTC2, Léopoldville, 9767 kc, with its DX programme at 1915 on Wednesdays; J. C. Catch remarks that OTH, 9216 kc, gives the call: "Radio Congo-Belge," at 1900; and R. Chear (Paris, France) and A. E. Nichols respectively find Dakar, Senegal, 11895 kc, a good signal with French News at 0815 and English News at 1900.

Radio Afrique à Tanger, 7125 kc, is heard at 2000 with a cabaret show, according to J. Brooker (Crawley).

Sussex), and Radio Omdurman, 9740 kc, at 1730 on February 9, gave us a lucid account of H.E. The Governor's recent tour of the Red Sea littoral with Port Sudan as the focal point.

Perhaps the most notable broadcast from Africa has been that from ZOY, Accra, Gold Coast, 4915 kc, from 2105 onwards on February 8, when the results of the individual elections held that day for seats in the new Legislative Assembly were given in English and several native dialects.

Australasia

New Zealand is again audible in this country! D. R. Knight (Dundee) heard ZL3, 11780 kc, at 0915; and R. Chear says that this transmission provides quite a powerful signal at 1000, despite the proximity of a Moscow outlet. Our French correspondent once logged Perth, Western Australia, 11830 kc, and submitted a report; the reply, made over the air, expressed surprise, for this one is not always too well received in its own territory, apparently. J. Holden logged Perth through VLX, 4898 kc, at 1559 on February 10; the time was given as "One minute to twelve." J. C. Catch logged this one at 2203 on January 30 with News Headlines, and a programme preview and weather news at 2230. J.C.C. also claims VLM, Brisbane, 4917.5 kc (checked), heard testing at 1950 and opening up the ABC programme at 2000 with the News; C. Costello (Wellington, N.Z.) informs us that VLM is now using 10 kW power.

B. Mercer (Hulme, Manchester) has found VLQ3, Queensland, 9660 kc, between 1235 and 1400; in the local News at 1315 on February 7 we learnt that the Dutch swimmer, E. Schumacher, had just broken the record in a 200-metre free-style race at Brisbane. P. Fry (Chandler's Ford, Hants.) noted VLG10, Lyndhurst, 11760 kc, with News and announcements at 1300-1330; E. Lund (Morecambe) spotted VLH3, 9580 kc, with the same programme, as did D. R. Knight (Dundee).

R. Abrahams and B. Mercer mention VLB9, 9580 kc, audible with the recent Adelaide Test Match commentaries; we noticed that whereas the BBC Light programme was not giving the commentary at 0745 on February 4, it was audible over VLC10 on 21680 kc. J. Brooker mentions Radio Australia's afternoon transmission to the British Isles; VLA6, 15200 kc, and VLB4, 11850 kc, are both well heard, though

VLB4 is "jammed" by Manila (and Moscow) at 1415; W. D. Nutt hears VLA6 with "Sporting Round Up" at 0845 and News at 0900. Of the VLA8, 11760 kc transmission at 2000, J. Brooker writes: "It is here today and gone tomorrow."

Graham Hutchins, of Radio Australia, informs us that Tahiti has lately been reported on 6040 kc with a French programme from 0345 to 0445 daily, but he asks us to accept this with reserve and suggests that it is perhaps Noumea, New Caledonia, which uses 6035 kc.

Asia

JKI3, Tokio, 6175 kc, was logged on Christmas Day at 0930 by I. Griffiths, who heard a Nativity Play, followed by an American version of "Twenty Questions." Signal strength was S8! We noted their News (English) at 0905 on February 3. In Formosa, the Chinese station, BED32, at Taipei, is now using 3220 kc with English from 1100 to 1130.

Radio France-Asie in Saigon, using 9524 kc, has been heard with an English talk at 2245 by C. R. Johns (Bournemouth), with News in English at 2230, by E. Lund, and, perhaps surprisingly, on 6035 kc with a French News bulletin at 2230, by R. Chear.

In the Philippines, DYH4, Damaguay, 6055 kc, is on the air daily from 1000 to 1300; DZH5, 9690 kc, which was formerly owned by the Philippine Broadcasting Corporation, is now a Christian Missionary broadcaster using 250 watts —reports are requested and should be mailed to: Fr. Antonio Pinon, O.P., Station Director DZST, The Voice of the Catholic Philippines, University of Santo Tomas, Manila.

Helen Barker, of Pasadena, California, writes to tell us that she has been associated with the Far East Broadcasting Company in Manila for the past three years; recently they put another transmitter on the air and are particularly anxious to receive reception reports from listeners in the British Isles. To quote from Miss Barker's letter: "We have a non-directional antenna at 6.03 mc (49-metre band), DZH6; a north-east-southwest antenna at 9.73 mc (31-metre band), DZH7; and a rotary-beamed antenna at 15.3 mc (19-metre band), DZH8. We broadcast 2200 to 0600 GMT, and also 0800 to 1700 GMT. Any reception reports would be appreciated if sent to the station in Manila."

J. Brooker logged Manila, 11890 kc, at S8 until 1415, when the News in

Russian was heavily jammed. We heard the same service opening up on 15250 kc at 0900 with the words: "This is Manila broadcasting in the Far Eastern Service of the Voice of America."

According to C. Costello, Indonesia is now using YDC, 15150 kc and YDF5, 7220 kc, for its 1900-2000 daily broadcasts to the United Kingdom and New Zealand. J. C. Catch has a mystery station on 4929 kc, heard with News (possibly Indonesian), preceded and followed by a deep-sounding gong—there were male and female announcers; we suggest that this is YDP, Medan, Sumatra, on 4930 kc. YDF, Djakarta, Java, 6045 kc, was heard by R. Chear at 2230 when it was opening up with clock chimes.

Radio Ceylon continues to be well heard by many of our readers, and W. D. Matt mentions tuning in on 15120 kc to their relay of the recent Test Matches from Australia. If you listen at 1515 to their Commercial Service on 11975 kc you may hear these words: "Would you like to increase your profits? Do you wish to improve your organisation, planning and efficiency? Then write to Scientific Management, Taj Mahal Hotel, Bombay!" Once on 11845 kc we heard: "Bringing Christ To The Nations" (it was being broadcast simultaneously by the Commercial Service), followed at 1630 by the announcement: "The Time is 10 p.m."; this was the Home Service of Radio Ceylon.

In the Indian sub-continent, Nepal is using 7100 kc and 60 mc (UVH) with three daily broadcasts, English being one of the languages used to introduce each session. The times are: 0400-0430, 0830-0930 and 1415-1515. The National Song opens and closes each broadcast, a News in Nepali is given in each session, and a bulletin in Hindustani is offered in the second and third transmissions. R. Abrahams mentions VUM2, 4920 kc, which came in at fair strength with English News at 1530 and the direction: "All-India Radio, Madras," at 1545. At this time on February 4 we heard a talk on National Savings.

From Delhi on 9720 kc and 7155 kc nightly J. Brooker has heard summaries of the recent India-Commonwealth Test Matches. On February 8 and 9 we listened for two hours each day, from 0900 to 1100, over VUD3, 17840 kc, to the Fifth Test Match commentaries; the announcement at 0900 was: "All-India Radio, Lucknow, calling from Green Park, Kanpur."

P. Fry mentions the strong signal on 7155 kc for the 1900 transmission to the United Kingdom; at 1935 on January 28 we listened to a fascinating talk by E. Kingdon Ward, entitled: "Plant Hunting on the Assam Frontier." There, you would find the needle-leaf tree and a new species of dog-wood, and the hills in summer are ablaze with all the rainbow colours of millions of flowers, including the gentians and the spotted lilies.

R. Chear says that Pakistan has a new station with Hindi announcements at 1700 on 6235 kc. He also hears Saudi-Arabia with particularly strong signals at 0600 over 5957 kc and 11900 kc; we heard Basra, Iraq, 11935 kc, opening up with Anthem and Arabic broadcast at 1630 on February 6. Radio Tashkent, 6825 kc, is, according to I. Griffiths, perfectly audible at 1615-30 with English News and a summary of items from newspapers of Central Asia; the opinion of P. Fry is that FXE, Beirut, 8037 kc, has been good with modern music at 2000-30. C. R. Johns listened at 2100 to TAS, Ankara, 7285 kc, and its interesting talk: "Black Sea Holiday"; R. Abrahams likes the "Voice of Zion" nightly broadcast in English at 2200, and particularly their serial story: "The Adventures of Ronnie and Anita."

North and Central America

Arne Skoog (Radio Sweden) states that OXI, Godthaab, Greenland, 5942 kc, is on the air daily from 2145 to 2215, but that its service will soon be extended; we spotted it at 2205 on February 3, closing with the Danish National Anthem.

In Canada, J. Brooker logged CKRZ, 6060 kc, with English News at 2230; and P. Fry heard CHNX, 6130 kc, with the feature: "The Adventures of Hop-along Cassidy," at 2330. Being on Radio Canada's mailing list, R. Abrahams has answered their questionnaire asking for comments on programmes and reception conditions; he writes: "As from 4/2/51, the third English transmission from Canada started at 2230 to make way for a new Russian transmission at 2200-2230." Russian jammers, please note!

Hawaii, on 9650 kc, was logged at 0930 on February 2 by D. R. Knight, the direction being: "This is Honolulu broadcasting the Voice of America programmes on 9650 kc and 6... kc in the 31 and 49-metre bands—the next News-

cast in English will be at 1130 GMT." (S6-7).

F. W. Dobson heard KCBR2, Los Angeles, California, on 9700 kc (it was operating simultaneously on 6040 kc) at 0900 on February 5, and he located KWID, San Francisco, 9580 kc, with the same programme until 1100.

Here we would acknowledge with thanks the latest Voice of America Programme Schedules, received from RCA Photophone Limited.

ZQ1, Radio Jamaica, has been logged by B. Mercer on a new frequency of 3360 kc at 0215; the 4950 kc channel is unchanged but terminates at 1900. He also mentions the "Happy Gang" programme of VP4RD, Radio Trinidad and Radiodiffusion Golden Network, 9625 kc, heard at 0030; E. Lund noted this one at 0140 with a religious feature sponsored by Lifebuoy Soap. B. Mercer logged ZFY, British Guiana, 5981 kc, with dance music and frequent pleas to buy Ovaltine, around 0005; he says that HI2T, Dominican Republic, 9737 kc, always provides good programmes around 2000. R. Chear appears to be an expert on the French-speaking Haiti broadcasters; he hears 4V2S, 5050 kc; 4VGM, 6165 kc; 4VCM, 6407 kc; 4VRW, 9840 kc; and, of course, 4VEH is now using 9730 kc—all are best heard after midnight. *World Radio Handbook* offers TIFC, San José, Costa Rica, 9645 kc, from 2100 to 0500, and TGQA, Quezaltenango, Guatemala, 6401 kc, from 0200 to 0530; the latter will shortly radiate English programmes twice weekly—on Sundays, 0315-0330, and on Fridays, 0245-0300.

South America

According to A. E. Nichols, Brazil has a new one in ZYU8, Teresina, 4815 kc, heard with Latin-American music, followed at 2130 by the direction: "Radiodifusora de Teresina Limitada." J. C. Catch hears Radio Record, Sao Paulo, now using the channel listed for ZYC2, 9504 kc—the full station call is given at 0013; he also enjoyed popular English music over PRC5, Belem, 4805 kc, at 2250—the call was: "Radio Clube do Para." I. Griffiths has been hearing a new Brazilian in Rio de Janeiro on 5045 kc after 2115—the slogan appears to be "Radio de Givinia"; and J. Holden says that ZYS8, Manaus, 4805 kc, has been good most nights after 2300.

In Columbia, HJFB, Manizales, gave clock chimes at 0001 and station calls at 0005 (J. C. Catch); HJKE, Bogota,

4835 kc, offered the slogan: "Radio Continental" at 0400 (B. Mercer); and HJCX, Bogota, 6010 kc, was heard announcing as: "La Voz de Colombia" at 2300 (J. Holden). Venezuela has YVKB, Caracas, 4800 kc, with "Hit Parade of American Songs" at 0415; YVMQ, Barquisimeto, 4940 kc, with call at 0300; YVLD, Valencia, 3460 kc, with Venezuelan songs at 0135 (B. Mercer); and YVMG, Maracaibo, 4810 kc, with a fanfare of trumpets proclaiming the Spanish News at 2315 (A. E. Nichols).

D. Macleod (Falkirk) has been listening to HC1B, Quito, Ecuador, 15115 kc, with its English programme from 2200 to 2300. J. C. Catch heard OAX6E, Arequipa, Peru, 6338 kc, with the full short and medium-wave calls and the slogan, "Radio Continental," at 0006. Further south, in Uruguay, CXA19, 11835 kc, and in Argentina, LRA, 11880 kc, have recently been logged by F. W. Dobson. LRA, 9600 kc, was a powerful signal, with dance music at 2300 (P. Fry), and LRA, 11880 kc, was strong at 2000 (W. D. Nutt). J. Brooker has received the latest S.I.R.A. schedules from Buenos Aires;

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their English transmission for Europe over LRA, 9690 kc, is 1900-2200 daily.

Europe

M. G. Claydon (Braintree, Essex) has forwarded a copy of the Philips *Radio World Map of International Short Wave Stations*, and exquisite it is, both in design and colour; we would point out that the wave-length allocated to Sydney, N.S.W., is actually that for Sydney, Nova Scotia. As from March 1, the "Happy Station" programme in English is on the air on Sundays only, as follows:—1030-1200: 6025 kc, 15220 kc, 17770 kc, 21480 kc; 1600-1730: 6025 kc, 11730 kc, 15220 kc; 2130-2300: 6025 kc, 9590 kc, 11730 kc; 0230-0400: 9590 kc, 11730 kc.

TFJ, Iceland, 12174 kc, has at last been heard, opening at 1613, on Sunday, by J. Brooker; J. C. Catch remarks that it sometimes leaves the air as early at 1627. The Finnish authorities have sent R. Abrahams a verification and enclosed two bi-monthly bulletins on the XV Olympiad to be held in Helsinki from July 19 to August 3, 1952; R.A. heard "Moscow Mail-

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bag" at 1923 on 7320 kc; reception reports were acknowledged and listeners' letters answered. According to B. P. Middleton, Warsaw Radio has again changed schedule, with English broadcasts as under: 1700 (9527 kc); 1745 (11740 kc); 1850 (9527 kc); 2130 (7205 kc); 0030, 0400 and 0515 (9570 kc). Budapest is now using 6248 kc, 7220 kc and 9833 kc for the nightly English programmes at 2200 and 2310. According to C. Costello, OLR3B, Prague, 9505 kc is fair with commentaries at 1915, but over-rides GSB for the English News at 2030.

To conclude, there are two medium-wave items: LRI, Buenos Aires, 1070 kc, a magnificent signal at 2325 for an outside broadcast heralding the arrival of an important personage at the airport (R. Abrahams); and WBOL, Baltimore, 1084 kc, consistent with popular American tunes after 0030 (P. Fry).

Your comments and reports for next month will be appreciated and should reach this office not later than April 15; the address is: R. H. Greenland, *Short Wave Listener & Television Review*, 53 Victoria Street, London, S.W.1.

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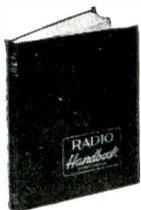
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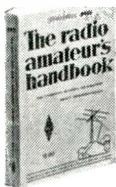


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