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AUGUST 1951
VOLUME 5 • NUMBER 8



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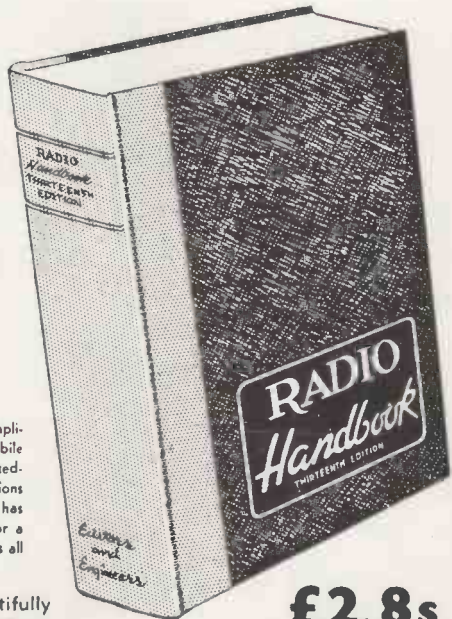
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THE SHORT WAVE LISTENER AND TELEVISION REVIEW

VOLUME 5

AUGUST 1951

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EDITORIAL

Activity

This is the season of the year when one would expect individual enthusiasm for radio to begin to slacken—the counter-attraction of outdoor activities and the incidence of holidays during the period June-September quite naturally tends to reduce to some extent the level of SWL operations. Only in the VHF field is the approach of the summer period felt to herald “The Season” and so far this year our hopes in that respect have been fulfilled beyond expectation.

But on most other bands, we are in the doldrums—as well as being in what one can only hope is the trough of the sunspot cycle—so that it would not be at all surprising if SWL activity fell to a low level under such conditions.

The fact that it does not and that the slight decline actually noted can quite obviously be related to the seasonal trend remains (as it always has done) a very good sign for the health and well-being of the Amateur Radio movement. There are those who “pack it in” altogether for the summer; those who still listen at regular intervals but spend far less total time on the air than they do during the rest of the year; those who keep up their interest but go weeks without touching the receiver.

But there is a large and increasing body of SWL's who maintain their activities at the same level all the year round. They are the hard core of real enthusiasts and it is from their ranks that the top-line SWL's and the leading amateur transmitters of the future will eventually emerge.

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

Adaptor for Television Sound

GENERAL PURPOSE UNIT FOR THE EXPERIMENTER

By W. N. STEVENS (G3AKA)

(It is in every way desirable to have available a separate sound channel adaptor when experimenting with home-built TV receivers. But apart from that, a receiver unit for television sound alone is of considerable experimental interest from the point of view of the SWL in TV areas who wishes to check on reception at different locations. In the adaptor described here, coil data are given for the London, Midlands and Northern TV sound transmitters. The design is simplified by the fixed-tune circuits, and full details cover the construction, bringing the unit within the range of the less experienced—and the building of an adaptor of this kind will also serve as a useful introduction to VHF construction generally.—Editor.)

A SEPARATE unit for television sound channel is often of use. It saves space and cuts down cost—although, admittedly, it requires a separate switching or plug-and-socket arrangement. A separate unit is an advantage, in that "common RF stages" can be eliminated; these are always running at low efficiency, since they must have a pass band to respond to both vision and sound channels. Another asset is that the alignment of early stages is not so critical because the danger of sound-on-vision (and *vice versa*) is not encountered. And since the sound unit is powered from a separate source, the feed voltages for sound and vision have individual decoupling.

The unit shown in the photograph has three valves. The first is a grounded-grid RF stage, the second a pentode RF stage, and the third a double diode used as demodulator and noise limiter. At the writer's location (nine miles from Alexandra Palace and badly screened) this little unit, in conjunction with the audio section of a small broadcast-band receiver, provided extremely good results, the sound volume being more than adequate even though the aerial was a simple indoor fixture.

The unit should provide adequate gain in the main service areas, providing that

a reasonable aerial system is available. At greater distances, and where the receiving site is badly screened, it may be advisable to add an extra RF amplifier. This stage will be an exact replica of the first pentode RF stage, and the component values are identical—in the theoretical circuit diagram this extra stage is shown in position (dotted) for the benefit of readers wishing to add it to the unit.

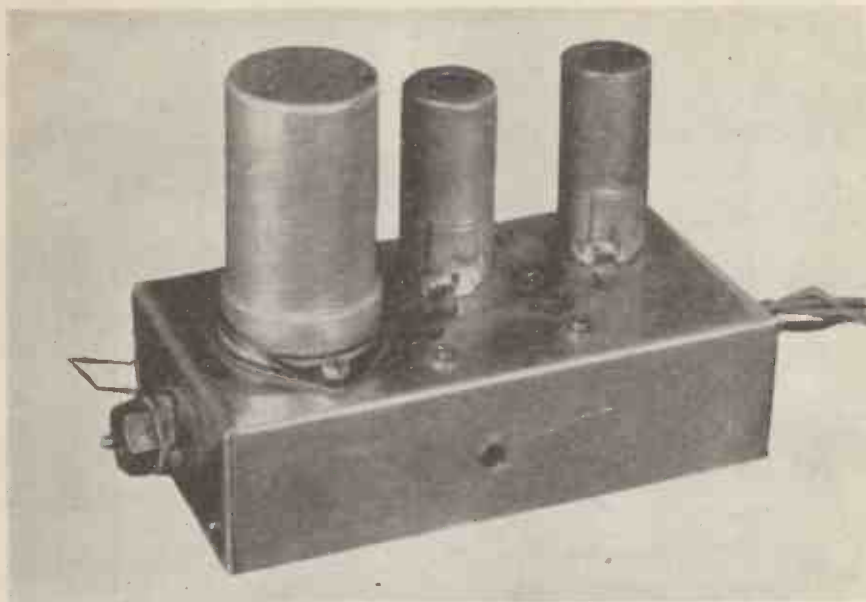
The Grounded Grid RF Amplifier

Although this stage uses a triode, it has a number of advantages which justifies the sacrifice in gain. All valves generate "noise" because the electron stream is not truly continuous but moves from cathode to anode irregularly. In the audio stages of a receiver this noise may be in the region of 15 microvolts or so; this is so small that it can be completely disregarded for practical purposes. But in the pre-demodulator stages such a noise voltage could be of serious consequence, because the signal level itself may be of a similar value. It is therefore very important to reduce the valve noise in the initial RF amplifier stage.

Since the general ruling is that the greater the number of grids the more noise will be generated, a triode is obviously a good choice for the first RF amplifier. Any triode is better than a pentode in this respect, but there are special triodes developed for this type of work, such as the CV66 (or civilian Mullard EC91).

These VHF triodes have close electrode spacings, resulting in low inter-electrode capacitances, low input and output capacitances and short leads. One of the snags in VHF work is the shunting effect of the input impedance on the tuned circuits, and even with a triode the grid/ground capacitance cannot be substantially lowered. However, using the grounded/grid technique, the triode as an RF amplifier begins to show its worth.

In this type of circuit (with the signal applied to the cathode) the input impedance is reduced to around 100



The fixed-tune TV Sound converter as constructed and described in the article.

ohms, but the output impedance is high. Thus, a good input circuit is presented for the low impedance feeder ordinarily used for television aerial systems. And the output impedance is such that it imposes no serious damping on the subsequent tuned circuit.

In effect, the grid is a shielded electrode between the input and output circuits, and this is a great advantage, inasmuch as it minimises the risk of back coupling and reduces the possibility of oscillation. The GG stage, then, acts as an impedance transformer which minimises the tendency for the amplifier stages to self-oscillate, and also gives a useful stage gain.

In the normal pentode RF stage, the input circuit is normally tuned in a transformer-coupled arrangement. Since the input circuit of this type will have an impedance of between 5-10,000 ohms, it has a measurable "Q"; this leaves it prone to instability with even minute amount of feed-back voltages.

The Pentode RF Stage

This is a conventional RF amplifier, with 6F12 pentode. An EF50-type

valve could be used here, but the B7G base valves were chosen in the interests of compactness. Technically, there is no reason why an EF50 (or SP61) should not be used in this position, but the 6F12 will probably give somewhat better results.

A tuned circuit is shunted across the input of the stage, which is coupled to the first RF stage via a 100 μF condenser. Fixed bias is used, but a gain control could be fitted in the cathode circuit if desired. However, since there will be an available gain control in the audio amplifier, this is hardly necessary.

Should a second RF amplifier be required, this can be inserted between V2 and V3a (as shown in dotted outline, Fig. 1) with the same component values as shown for V2. R/C coupling is used to the demodulator; tuned transformer coupling would be possible here, but, in the interests of simplicity, parallel feed has been adopted.

The Demodulator and Noise Limiter

Here an EB01 double-diode is used; V3a as a diode demodulator and V3b as car ignition suppressor. The demodulator operates in the conventional

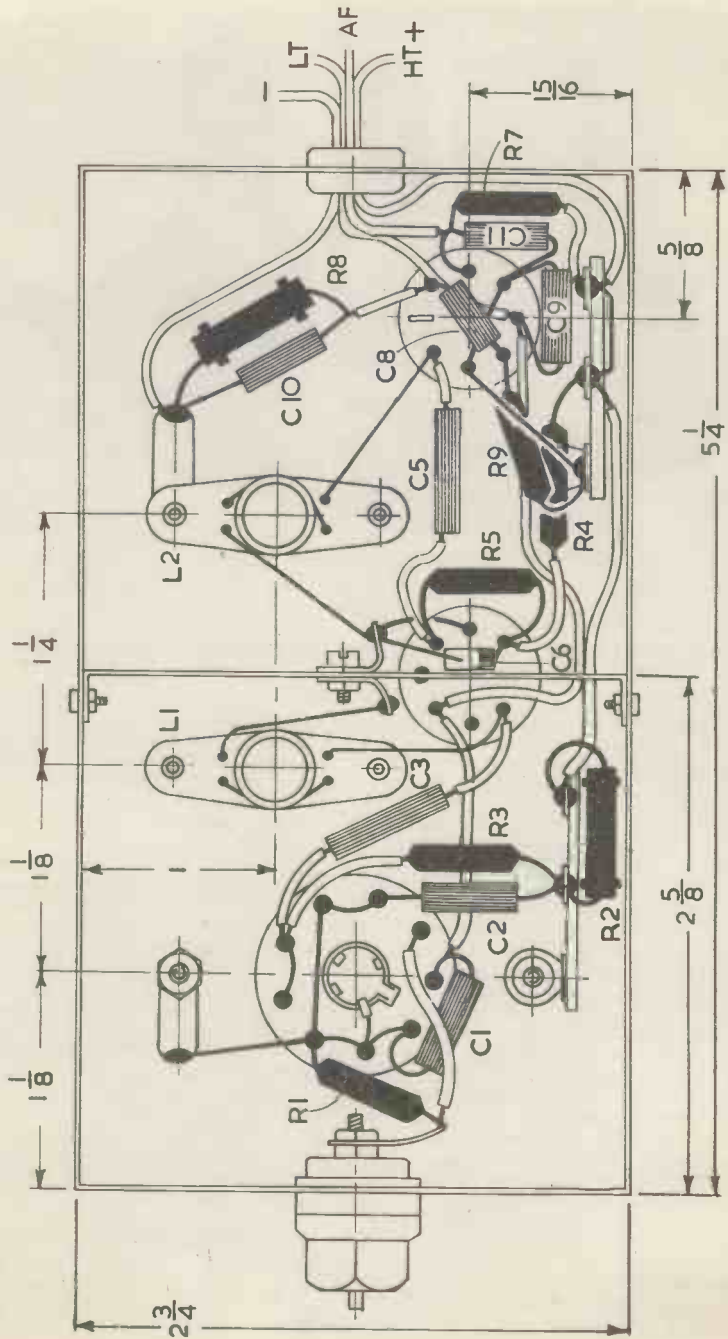


Fig. 2. Under-chassis layout of the unit, with main dimensions. To avoid confusion, certain wiring to pins 2 and 3 of V2 are not shown (refer to Fig. 3 for details). The chassis is 1 1/4 inches deep.

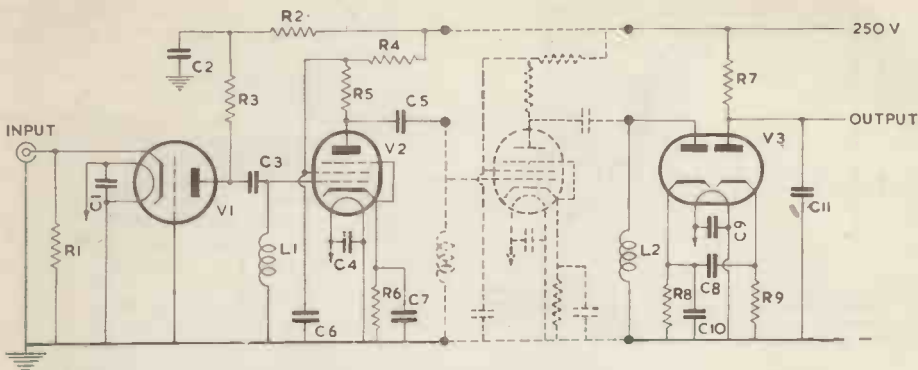


Fig. 1. Theoretical circuit of the television sound adaptor. For a three-valve unit, as described, the six large dotted positions are connected together ignoring the outlined stage. Should a further RF stage be required the circuit in dotted outline is added as shown — components are exactly the same as their counterparts in the V2 stage.

manner, the rectified signal voltage being fed to the noise limiter cathode via the coupling condenser C8.

The type of noise limiter shown is an "envelope follower," because although the diode will follow the signal voltage envelope, it will not conduct on voltages outside the envelope. Car ignition pulses materialise as sharp peaks superimposed on the signal waveform, so that if the diode V3b is biased in such a way that

it only conducts up to the required signal peaks, all extraneous pulses will be clipped off. The components affecting the operation of the limiter are R8/C10, forming a long time constant.

The valve used is an EB91, but any similar twin-diode could be used. Note, however, that a valve incorporating a screen between the two sections (and, of course, separate cathodes) must be used.

Setting Up

The audio output from the unit is then fed into an audio amplifier. Probably the simplest method is to take the output to the pick-up terminal in the broadcast-band receiver. HT and LT connections have to be made and, using a suitable switched or plug arrangement, the unit can be conveniently mounted out of the way behind the receiver, to be switched on when required. Lining up is, of course, simplicity itself. All cores are adjusted to the sound channel frequency for maximum volume and preferably sealed against risk of movement by standard

Table of Values

Fig. 1. Circuit complete of the TV Sound Channel Adaptor.

Condensers :

C1, C2, C4, C6 = 500 $\mu\mu\text{F}$
C7, C9.

C3, C5 = 100 $\mu\mu\text{F}$
C8 = 0.01 μF
C11 = 0.001 μF .

Resistors

- R1 = 220 ohms.
- R2 = 2,200 ohms.
- R3 = 10,000 ohms.
- R4 = 6,800 ohms.
- R5 = 4,700 ohms.
- R6 = 220 ohms.
- R7 = 10 Megohms.
- R8 = 27,000 ohms.
- R9 = 6,800 ohms.

Valves :

- V1 = CV66
- V2 = 6F12
- V3 = EB91

Coils :

L1, L2 London : 8 turns.
Midlands : 5 $\frac{1}{2}$ turns
Northern : 6 $\frac{1}{2}$ turns

} Wound on Alladin F804 formers, and tuned with standard iron-dust cores.

VALVE PIN CONNECTIONS

- V1 (CV66) — B9G base.**
Heaters—1, 9; Cathode—8; Grid—2, 3, 6, 7; Anode—4, 5. (N.B. Where indicated all pins must be joined together).
- V2 (6F12) — B7G base.**
Heaters—3, 4; Signal Grid—1; Screen Grid—7; Suppressor Grid—6; Cathode—2; Anode—5.
- V3 (EB91) — B7G base.**
Heaters—3, 4; Cathode 1—1; Anode 1—7; Cathode 2—5; Anode 2—2; Inter-section shield (earthed)—6.

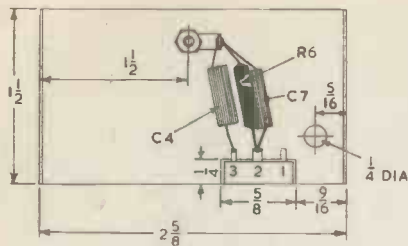


Fig. 3. Showing dimensions of the V2 shield, together with details of the three components mounted vertically between pins 2 and 3 and the soldering tag on the shield.

methods. The unit can be fed with the aerial used with the vision unit.

Construction

The sketch, Fig. 2, gives the positions of components as wired in the original unit. Construction is quite straightforward and should present no difficulties. Needless to say, wiring must be kept short and direct, and good clean solder joints are essential. Positioning of components is not especially critical.

The valve-holders can be mounted first, noting the positions of the spigot of V1 and the identification tag of V2 and V3—in the former this "looks away" from the coils, and in V3 towards the coils (this can be clearly seen in Fig. 2). When mounting the V1 holder, note that a tag strip is fixed to one bolt and a soldering tag to the other to act as a common earth return point. The second mounting strip can be placed at any convenient position between the V2 and V3 holders. Other main fixtures are the input plug (the Pye type is recommended), a large-diameter rubber grommet to take the output and supply leads, and the coil formers.

It is best to wind the coils before fixing the formers; they are both single windings, and details are given in the table of values accompanying Fig. 1. There are two sets of small holes in the base flange of these formers, so that if the ends of the windings are fed through them (as shown in Fig. 2) the coils will be held quite rigid. Leaving sufficient spare ends, the formers can then be fixed into position.

Wiring of the first stage is quite simple, as a glance at the underchassis layout will show. When connecting the pins which have to be earthed (1, 2, 3,

6, 7) remember to join the spigot tag to this line. Wiring of the other stages is also so simple that no further comment is required. The fixing of the screen is best left until most of the wiring has been soldered in. The screen should fit snugly over the B7G base; it is best to make the cut-away slightly smaller than required and file it until it just fits over the valve base without any "slack." A bolt is fitted at the top of the screen, with a soldering tag on each side. On the V2 input side of the screen the tag is used to earth the returns of L1, C4, C7 and R6; on the output side of the screen the tag earths L2, C6 and the suppressor grid of V2. Other earthing points (for V3 stages) are to the soldering tag attached to one of the L2 fixing bolts and to the earthed tag on the mounting strip.

No coupling condenser is shown in the output lead. If the unit is to be used with a receiver in which no coupling condenser is fitted when in the "pick-up" position, a condenser of around 0.05 μF should be inserted in series with the output lead at the junction of R7 and C11 (anode 2 of V3).

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Receiving on the Amateur Bands

WHY LISTEN ?

By THE OLD TIMER

(This is the first of a short series of articles intended to initiate the absolute beginner to amateur band listening—what it is all about, and what Amateur Radio really means. Our contributor is a well-known and very experienced transmitting amateur who has himself been through it all and can still remember his own initiation. So if you would know more about Amateur Radio, follow this series.—Editor)

SOONER or later most short-wave listeners discover that broadcast reception is not the only kind of listening; sooner or later it begins to pall, and so another amateur-band listener is born.

There must, however, be many who have not yet found out for themselves the peculiar fascination of this side of short-wave work; some of them take a casual look round the dial of an all-wave broadcast receiver and find nothing but weak signals in the tracts labelled "Amateurs," and some just don't know the ropes anyway.

This short series of articles is aimed at the absolute beginner, in the hope of telling him "what makes them tick," and in the still greater hope of introducing more and more casual listeners to the specialised but absorbing hobby of amateur-band reception.

What Are They ?

I suppose a few people are put off the whole thing by the word "amateur," which they subconsciously connect with someone just playing about or dabbling with something. In Amateur Radio the word has its true meaning; radio amateurs are *lovers* of their hobby, and many of them differ from commercial or professional men only by virtue of the fact that they experiment with their gear for the sake of finding things out, for the love of doing it—and not for any motive of gain or reward.

Nearly all the countries of the world issue licences to radio amateurs, who,

naturally, are regulated and controlled with varying degrees of strictness. One thing they have in common: the frequency bands they are allowed to use, which are determined by international agreement. Not all countries are allowed to use all bands; but the bands are definitely laid down for the whole world to know.

Working within these bands, which, for the moment, we will describe as centring round 160, 80, 40, 20 and 10 metres, are amateur enthusiasts of all nations, from all sections of their respective communities, and of all degrees of intellect and capability. One might add, also, of all degrees of wealth or poverty, for the amateur fraternity embraces millionaires and schoolboys alike. Side by side, on the same band, you may hear one of the former wielding a kilowatt of commercially-built gear, feeding one of the many rhombics on his "aerial farm," and the latter calling the other end of the world with his home-built 25-watter (all out of pocket-money!) There would be nothing surprising about hearing these two in contact with each other, for there is no more levelling or democratic body than this.

What Do They Do ?

You may ask why such people are granted licences, and what they are supposed to do with these slices of the ether that have been made over to them. Formerly the amateurs of this country were licensed as *experimenters*, and their conversations over the air were supposed to refer only to technical matters and to the work they were doing. Now they are openly licensed as *amateurs* and are allowed to use their gear simply for the purpose of communicating with other amateurs, whether they talk technicalities or whether they merely discuss the weather and the doings of the family.

The one thing they are *not* allowed to do is to operate a station for any purpose of private gain, such as advertising a business, handling messages for a reward, or putting out entertainment for listeners in general. So you will find, mostly, that one amateur is very much the same as another in his range of subjects to discuss over the air; that they vary from the subject of getting up early in the morning to going to bed late at night, through all kinds of strange double-talk which will mean precious little to you until you become initiated.

(over)

There is no ceremony for the latter; you simply have to listen and listen. Gradually it will dawn on you that most of what you hear makes some kind of sense, and the few codes and abbreviations in use are quite easily picked up and memorised.

A very large proportion of amateurs use telephony for their contacts; an equally great number stick to "CW," or Morse Code sending. The amateur who derives full enjoyment from his hobby does both. It is easy to decry Morse as a primitive or old-fashioned means of communication; the fact remains that Morse signals will get through when telephony won't (e.g. in bad conditions or when very low power is in use). Most amateurs licensed in this country have to stick to the key for a full year before they are granted a telephony licence; all amateurs have to pass a Morse test before their licence is granted.

The reason for this is fairly obvious; a state of urgency might arise, in which a commercial or service station would possibly call an amateur and tell him to stop transmitting because he was interfering with vital traffic. It is ten to one that this procedure would be carried out in Morse—probably by a station not equipped for telephony at all—and therefore the amateur must be able to read such a message.

The mysterious pastime of "Working DX" is mostly followed by the CW fraternity; it merely means a greater interest in long-distance contacts than in local nattering. At first, the greater the distance, the greater the thrill. But then our amateur works Australia and New Zealand and realises that he has achieved the greatest distance possible—on this planet. So what more natural for him than to turn to all the obscure places that he has not yet been in touch with. Perhaps on a lonely island in the Indian Ocean there is just one amateur station. Naturally, all the others want to contact him—just to fill up the gap in their log and to show that where others' signals reach, their own will also go.

Thus we have an intense form of competition based on working as many different parts of the world as possible—known as Country-Chasing. With a total of nearly 250 to choose from, there is no end to this pursuit; no one in the world has yet worked all active countries, and very few can claim to have reached the 200 mark.

Note that this same thrill is open to

you, in a slightly different way—in the form of receiving countries. Though you are not licensed to transmit and work them, you can improve the technique of short-wave reception best by seeing how many of them you can hear. The thrill of receiving a new one for the first time is quite comparable with that experienced by the transmitting amateur when he first contacts a new one from his station.

How Do I Start ?

If you want to break in on this most fascinating hobby, you can start right now. A broadcast receiver with a short-wave band is all you will need at first, but do put a decent aerial on it! When you start combing the amateur bands you will be listening for signals with a power of 100 watts or less, instead of broadcast stations using 50 or 100 kilowatts. So naturally they will be somewhat weaker.

Indeed, the first thing you will have to train yourself to do is to *listen to weak signals*. Remember, the weaker a signal is, the more likely it is to be interesting. Don't strain your ears at first; you will hear scores of countries on telephony without even bothering about really weak transmissions.

You will, of course, have to get used to handling the dial with a very sensitive touch, particularly if your receiver has no band-spread and not much in the way of slow-motion control. An amateur band occupying half-an-inch of dial space on your receiver may be inhabited, at any moment, by some hundreds of stations, tightly packed. The stronger ones will stand out, but they still won't occupy much space.

I always visualise an amateur band, on the average broadcast receiver with a straight-line scale, as a short piece of board with lots of needles of different heights sticking up from it. The tall ones are the strong signals which can't be missed; but they still tune just about as sharply as the weak ones.

It is, of course, a thousand times worth while to have a specially-designed short-wave receiver. If the set hasn't got to cover the ordinary broadcasting bands, then the short-wave bands can be made to occupy a reasonable amount of dial space. From this we progress to one designed for the amateur bands only—neglecting all the rest of the short-wave spectrum—on which each amateur band can be made to occupy the whole dial instead of a tiny fraction thereof.

It is not an expensive business; many of our regular readers still use one- and two-valve receivers and hear the whole world on them. Kits of parts for such sets are available at extremely reasonable prices. Superhets are more sensitive and easier to handle (particularly for telephony reception), and in this department there are some excellent bargains to be had in the shape of ex-

Government surplus receivers, as well as the specially-built jobs at reasonable prices.

I shall have more to say about the choice of a receiver in a later part; for the moment, try to get interested, using whatever you may have in hand, and next month I will go into more detail about the various bands and what you may expect to hear on them.

Amateur Television Transmission

CONVENTION REPORT
AND STATION NEWS

By M. BARLOW (G3CVO)

(These notes are contributed by the Honorary Secretary of the British Amateur Television Club, which is concerned with the problems relating to amateur television transmission — on frequency bands recently allotted for the purpose — and the reception of amateur TV on those bands. If you are interested in furthering the cause of amateur TV, write G3CVO at Cheyne Cottage, Dukes Wood Drive, Gerrards Cross, Bucks.—Editor.)

THE big happening of the month was, of course, the Convention, held in the very pleasant surroundings of the C.E.A. Building in Shaftesbury Avenue, London, W.C.2. Some 50 amateur TV enthusiasts were present, and as an instance of their keenness it may be mentioned that no less than 16 of them had travelled more than 100 miles just to be there.

The morning was devoted to a general business meeting at which the terms of the TV transmitting licence were read out and discussed in detail. The general feeling was that the authorities had been very fair but that the cost of the entire licence (£6 10s. od. per annum) was very high and might discourage many

from making the effort of getting on the air with TV. A resolution was passed expressing the hope that the GPO would in time be able to reduce this to a more reasonable figure.

A discussion of standards followed, and it was agreed to adopt positive modulation on the centimetric wavebands, and to leave the choice of positive or negative modulation on the 70 cm band until some later date. Double sideband horizontally polarised transmissions will be employed.

A general discussion followed, and after a few words from PAØZX, of the Groningen amateur TV group, the meeting adjourned for lunch.

Demonstrations

In the afternoon, all the equipment was on view to the public. G. G. Short, of Boston, Lincs., showed his extremely neat and well finished Iconoscope camera, with lens turret (ex-car headlamp) and chrome handles (ex-Woolworths' towel rail!). Unfortunately Mr. Short was unable to bring along his monitor unit, so that it was not possible to run this most impressive gear. G3BLV of Sunderland had brought his $\frac{1}{4}$ -plate telestill camera unit, and demonstrated some first-class pictures all day. His gear was partly rack built, and was extremely neat in appearance. Fred is doing a good trade in test patterns now!

Grant Dixon, of Ross-on-Wye, showed his 6-valve interlace generator, and also a neat 35 mm film scanner head for telestill work. G3GBO and G3CVO showed 931A PEC amplifiers, and 13 cm transmitting and receiving equipment. G3CVO also demonstrated his multi-purpose AM/FM 45 mc IF strip modified from a No. 10 set receiver.

Those members unable to attend or to bring gear, sent or brought photographs, and there were some particularly fine exhibits of PAØ TV and G2DUS-TV. SM5TT and G3ETI also produced

pictures of their gear, and Messrs. Watts and Bellamy of Bristol had a display of their 86-valve camera control apparatus.

The Television Society, the *Short Wave Listener*, and E.M.I. Ltd. also had stands showing various products for the television amateur. A stand was also arranged for the Club journal *CQ-TV*. The B.A.T.C. office did a record trade in everything from overdue subscriptions to single frames of test film at rd. each! A large map titled "I'm Here" was soon dotted with flags, and some useful personal QSO's resulted. The meeting closed with a draw at 5.30 p.m. for some (almost) valuable prizes, and it was agreed by all that the day had been most successful. It is hoped to repeat the Convention on another occasion.

Progress

The rest of the month's news is of continued progress — G2DUS is co-operating with the authorities in 70 cm tests to determine whether interference is caused with those "other services."

George Short is cleaning up his camera troubles; G3ETI is trying to make an image orthicon out of an Infra Red Image Converter and a PEC. Grant Dixon has built yet another pulser unit. Tony Sale has ordered a camera tube; Sandy Wemyss is carrying out modulator tests. G3GBO is trying to get a telestill camera into his packing case-sized shack, and G3CVO is playing with Klystrons on 13 cm. The race to get on the air has somewhat abated in view of the cost of the licence, but the next few months should see the first British amateur transmitting TV.

Getting an Amateur Licence

WE frequently receive enquiries from readers which amount to "How Can I Become an Amateur Transmitter?" If you do not hold exempting qualifications, you have to pass a technical examination and a Morse Test. Here is an outline, in brief, of the procedure involved.

The Radio Amateurs' Examination is conducted under the *ægis* of the City & Guilds of London Institute, at examination centres all over the country, and is held about May every year. Thus, the next one will be in May 1952. Particulars regarding the R.A.E. can be obtained either from your local Technical College or the Superintendent, City & Guilds of London Institute, Dept. of Technology, 31 Brechin Place, South Kensington, London, S.W.7. Question papers and specimen answers appear regularly in *Short Wave Listener & Television Review* in good time for the next sitting. Thus, the 1950 Examination was covered in issues dated January, March, April and May of this year. Similarly, the R.A.E. held in May 1951 will be dealt with in detail in issues appearing in early 1952.

The authority for the issue of licences is the Engineer-in-Chief, Radio Branch W5/5, G.P.O., London, E.C.1, from

whom Forms E-in-C 447 (Application) and E-in-C 428 (Conditions and Exemptions) can be obtained. The Morse Test standard is 12 words per minute, sending and receiving, and is arranged through the nearest head post office on instructions from London.

Almost all prospective applicants who have been in the communications or radar branches of the Services, whether commissioned or not, will find they are exempt from either the R.A.E. or the Morse Test, if not both—provided application is made during service or not later than two years after discharge. For instance, an Officer R.N. (C), a LRM W/T, an Officer R.A. (I.F.C.), a Foreman of Signals, a Signals Officer R.A.F., and a W/Op (Air) are merely examples from a long list not having to take either examination. They would thus be granted an "A" Licence as amateur transmitters merely on the acceptance of their applications by the G.P.O.

Grades such as LRM A.R., Radio Mech., R.Sigs., and Wireless Mech. I would be exempt from the technical examination but would have to pass the Morse Test. On the other hand, an Air Signals Officer (F.A.A.), a Telegraphist S., an Operator Wireless & Keyboard, and a W/T Slip Reader Operator are accepted as being fully qualified in Morse but would have to sit the technical examination.

There are also a number of civilian exemptions in the same sense as the foregoing, including those of appropriate degree status, radio officers in the

Merchant Navy, and others similarly qualified. All are covered in Form E-in-C 428, obtainable from the G.P.O.

For those taking the written part of the Radio Amateurs' Examination, the syllabus is essentially basic theory, simple calculation and circuitry, and a knowledge of the licensing conditions. Anyone who takes a real interest in radio as a hobby should have little difficulty in reaching the qualifying standard—for the last three years an average of about 70% of the candidates sitting have been passed.

Useful study reading for the R.A.E. is the *Radio Amateurs' Handbook* and the latest *Radio Handbook*. Excellent and well-tried correspondence courses, for both written examination and Morse test, are also offered by *Short Wave Listener* advertisers.

GB3FB AT BIRMINGHAM

During the three weeks August 4-25, when the Festival of Britain Land Travel Exhibition is at Birmingham, amateur station GB3FB will be on the air under the charge of G5VM and a party of local operators.

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We are informed that all vehicles operated by Shell-Mex & B.P., Ltd., are being fitted with suppression to obviate radio and TV interference. Slowly but surely the need for this is being recognised—so far only by firms and organisations with a sense of public duty. It is to be hoped that the great "nationalised" monopoly undertakings—like the Coal Board, the Railway Executive, the British Electricity Authority and the Steel Corporation—will in due course get round to it. But not if we have to depend upon our legislators.

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E.M.I. INSTITUTES—The College backed by an Industry

Have you heard?

EACH time I set out to report the previous month's DX achievements I comfort myself by saying "It can't get any worse than this; we're round the bend now." But unfortunately it *does* get worse, although I really don't think it can go down hill much further! After all, it was to be expected that June would be about the worst month of the year, and it may be that 1951 will prove to be the worst year of the cycle. In that case we have sunk to the depths, and survived.

DX conditions really have been *bad* lately. The general lack of strong signals from interesting parts of the world has been made even worse by the continued prevalence of short-skip conditions, bringing in hordes of Europeans at S9. And this at times when one would hardly expect to hear them at all!

The general attitude of our SWL's to such a state of affairs, *plus* the call of the open air and a modicum of fine weather, is reflected in the somewhat attenuated Calls Heard section this month, together with the lack of support for the SLP's. They turned out to be hardly worth supporting, anyway. But it is always the luck of the draw what sort of conditions we do get for them.

The Bright Side

Let's not be dismal—there *are* some cheerful aspects. For one thing, the LF bands are going to be amazingly good during the coming autumn and winter. For CW listeners, the 3.5 mc band is pretty good right now; for the Phone-Only fraternity it is not so hot. But more of that when we get to it.

If you want to conquer the general flatness of the usual DX bands, you should do two things; first, learn Morse, and second, explore the 7, 3.5 and 1.7 mc bands more thoroughly. They all

pay handsome dividends and go a long way to off-set the miserable hours spent on the 14 mc band when one or two Asiatics or Australians have just poked through the mass of Europeans. Nearly all this month's reports concern the 14 mc band, although the faithful few have stuck to 28 mc through thick and thin (and mostly thin). So we will hump these two bands together and discuss the general DX or lack thereof.

Ten and Twenty

A. M. Munford (Cambridge) says the VK's, ZL's and KH6's seem to have vanished, but he has heard some good W6 and W7 signals in the mornings. Mingled with them are a few Central and South Americans, notably HC1FG, who often reaches the S9 mark. Another one of interest was PY9AE, with KZ5NM giving a new country.

G. C. Jones (Staincross) heard 13 DX countries on ten-metre phone, including AR, OQ, ZD2 and 6 and ZE3. B. W. Sutton (Liverpool) rolled in 25, of which the best were CE, CR6, FF8, VU and ZD1. He says the DX is still there "if you listen for it." On 14 mc he logged three new ones, all on phone—FO8AC, HE9LAA and JY1XY. The latter gave his full QTH in Transjordan, and appears to be genuine after all.

C. R. Burchell (Walsall) found I5ZC, VP7NH, XE1AC and 1CQ, and MP4KAC. (The latter is in Kuwait—not Bahrein Island—and the "K" in the call-sign gives the clue.) C.R.B. adds that YN4CB and HC1FG show fine signals nearly every morning, but he would very much like to catch up with the Pacific Islands, or even a KL7.

J. R. Sergeant (Peterborough) found the month his best since he started listening in January; new ones added to his score were CO8MP, HI6EC, HP1LA, OA4AO and VP4TH—note that they are

all around Central America, which seems to be the one part of the world for which conditions are good. J.R.S. gives consistency prizes to PY2CK and VP6FO, and he wants to congratulate A. Jackson on last month's list of Calls Heard with an o-V-o.

Short Skip on Ten

J. W. Cave (Parkstone) is a ten-metre specialist if there ever was one; he sticks to the band irrespective of conditions. He has found June remarkable for short skip, with nearly all the Europeans sounding like eighty-metre locals; but there have been occasions when "semi-DX" filtered through.

J.W.C. disagrees violently with S. Smith, who said last month that Ten was the lazy man's DX band. He thinks this might possibly hold good when Ten is "on the peak," but otherwise it's obvious that the minimum of effort is required on *Twenty*. No, says J.W.C., you can't call Ten a DX band at midsummer and down the bottom of the sunspot trough!

By the way, an interesting sideline to the short-skip conditions on Ten was the fact that quite a lot of CW activity was observed for a while. M. G. Whitaker (Ouston) confirms this, and in one hour on June 10 he logged 17 CW stations on his o-V-1. One very active one, as he says, was 9S4AX.

M.G.W. also gave *Twenty* a good run through, and mentions the outstanding phone signal from IIRCB/M1 (operating, of course, from San Marino). On the CW side there were plenty of W6 and KH6 signals, but M.G.W. wants to identify a loud ZK1 heard working at 0715. I suggest ZK1BC, who was on at the middle of the month and had a terrific signal on occasions.

M. J. Marlow (Guildford) also reports on Ten, and didn't think a lot of the band during the month. But he did find EL10A, VS1AD, FF8PG, CR4AC and CR10BB on phone, and was also pleased to add FY7YC on CW. For the June Contest M.J.M. says it's a pity CW and European stations were excluded—otherwise his score would have been 53!

R. A. Hawley (Goostrey) found Ten very bad up there, and gave up wasting time on the band. He heard very little except AR8PO, CN8EJ, EL10A, KZ5AR and some MM's. On the other hand he thinks *Twenty* has been slightly better; best loggings were HP1LA, OQ5LL, VP3YG, VQ4ERR and 4RF, ZC1AL (all phone) and FP8BX, VP5BL, VS6AA

and YI3AG (all CW). In addition there was a lovely one signing 8Q8AW—but I haven't a clue to his identity.

Activity in Andorra

Talking of queer call-signs, there has at last been a spot of genuine activity from Andorra. No, not PX1A or anything so simple, but 7B4QF! Sounding like the phoniest of phoneys with that queer call-sign, this station was as good as gold! It was a portable operated by ON4QF, SM5UM, W8PQQ (F7AR) and W6SAI. Working both phone and CW, this little party gave many stations their first contact with Andorra. They then moved on to Monaco, where they became 3A2AC for a while.

Lots of readers logged 7B4QF; some of them with the knowledge that it was all genuine, others passing it over as a hoax, pirate or phoney. Thanks to all those who have taken the trouble to mention the incident, and am indeed glad to reassure some of the others!

A good many have also referred to 9B3AA. This is an unlicensed station (he says so himself), but he is believed to be genuinely in Bulgaria, and he does QSL.

D. L. McLean (Yeovil) found *Twenty* patchy, but logged CP5EZ, FF8DA and 8JC, HI6EC, KR6FA, OA4EG, OY3FD, VP5BL, VQ5AU and 5CB, VS7MP and VT1AG. A W7 was heard at 2325 one night, and the early evenings have, in general, been pretty good. Ten metres, apart from short skip, produced only EL10A, FF3CN and 8PG, and MI3NA. But on June 9 the band opened for USA and several W4's were heard around 1930; the next day W1, 2, 3 and 8 were all heard between 1330 and 1430, many of them at S9.

H. M. Graham (Harefield) also found Ten hardly worth the listening time; apart from KZ5, PY, W and some Europeans he has nothing to report. On *Twenty*, however, things were better, and he even describes the band as "in pretty good shape." (Great thing, this relativity!) VE8TH was heard at 1400

THE JUNE CONTEST

(Countries outside Europe on Ten-Metre Phone)

Listener	Countries
M. J. Marlow (Guildford)	26
B. W. Sutton (Liverpool)	25
K. Parvin (Thornton Heath)	24
N. C. Smith (Petts Wood)	19
J. W. Cave (Parkstone)	17
G. C. Jones (Staincross)	13



Clifton (South-West London) Amateur Radio Society's station G3GHN, with G3FVG and G3GZH operating.

GMT—an unusual time—and apart from the prefixes in the Calls Heard list, H.M.G. logged CE, CO, CS, MD2, TA, VP6 and 4X. M1B and a bunch of ZB1's are also commented on.

Yet another San Marino station was heard by W. Neal (Birmingham)—this one was I1AHR/M1, on Twenty CW. This may be taken as genuine, since I1AHR was one of the keen amateurs who, I believe, made a portable expedition once before. He was reeling off quick QSO's of the rubber-stamp variety, as one might expect.

The Lucky Dip

R. W. Finch (Ilford) describes Twenty as the lucky-dip band with the surprise packets; he has had little time to spare for listening, but something of interest has cropped up each time. Singled out for mention are ZL4IG (phone at 0812), HZ1AB (CW), FP8BX—a new country for R.W.F.—at 2200, and some TF's, M13's and MD2's.

K. Parvin (Thornton Heath), who scooped the pool in the May Contest, just fails to make the top line this month, although his total of 24 is very close to the top-scorer. He mentions the ten-metre opening to USA an June 10, and remarks that this was the first time he had logged W's in June—even in the "good years." Best of the others heard were AR8, CR4, 6 and 7, FF8,

VQ2, 4 and ZD6.

On Twenty, K.P. scored a notable success by hearing a station only mentioned by one other—HC8GI in the Galapagos Islands. EA0AC and PJ5FN were two other nice ones. But K.P. says that the good DX known to be on the band seems to have got away from him, and he quotes prefixes like AC3, KC6, KJ6, KM6, VK1, VR1, VR2, VR5, ZK2, ZM6 and the like! He also understands that MD9AB, in Yemen, is supposed to be active.

His Zones Heard listing takes a nasty dive to 38, since he has found that UA9CL, counted as Zone 18, is really in Zone 17. Finally, he says that LU0BD, queried by M. G. Whitaker, is an LU operating portable.

J. H. Lloyd (Enfield) has put up his total by 17 countries in two months, although June only helped him to the extent of PJ, VPI and ZC1. He, and many others, mentions hearing HZ1AT (H.R.H. Prince Abdullah) saying that he can be QSL'd via HZ1KE.

More Short Skip

E. Hall (Bolton) was amazed by the very short skip on May 30, when practically all the G's on the 20-metre band were roaring in at S9 plus; he thought he was on the Top Band for a minute! June 3 and June 17 were two more days that brought similar conditions. On the

latter day a contact between G2DPZ and VP6FO brought similar signals from the two stations; and on June 23 there were some outstanding signals from VP7's. During the SLP on June 24, E.H. heard HC, VE, VK, VP6 and 3V.

N. C. Smith (Petts Wood) starts a useful idea by dividing his letter into two parts—DX Heard and News Heard. For the former, he mentions DU1VVS, F18RO and 8TP, FN8AD, KR6FA, VR2BU, XU6F, ZK1BC and FO8AC as his best catches on CW; on Phone the best were HC8GI, TG9AZ, XE1AL and ZK2AA. All the above, of course, on Twenty. Stations being called were TT2KNC, HV1M, KM6AA, JA8AK, HZ9U and C3AB.

Now for the News Heard. From VQ4RF it was learned that VQ3PBD is going to Zanzibar (VQ1) and will be on 40 and 10, but *not* 20; also that HZ1JM is going to Yemen, and will possibly be an MD9. F7AR gave news of the expeditions to Andorra and Monaco, already mentioned. CT1BW/OZ7TS reported that CT1BW may be going to Goa (CR8); that CR8AB is active now on 14140 kc; that AC3PT and 3SQ are active. "Y1AD," heard working an Italian on phone, was certainly YU1AD, whose name is Merko and QTH Belgride. (Talking of CR8's I have been hearing CR8CC on 14060 kc CW.)

G. C. Allen (Thornton Heath) heard 7B4QF reeling off contacts with W's but never giving his QTH, so he doesn't yet know about the Andorra business; this should be a pleasant surprise! Other nice ones for G.C.A. were ZK1BC, KG6GM, FN8AD and I1AHR/M1—all CW. But he says "screwy" is the only adjective to describe the band, which has been doing all sorts of queer and unexpected things. For instance, the only notable signal one morning, rattling along at about 24 w.p.m., proved to be ZK1BC; on another occasion the only readable signal at 0515 was FQ8AC. Other mornings (but not very often) the band is simply full of W617, VE7, KH6, KL7 and the like, all with terrific signals.

J. P. Warren (West Croydon) thinks the band has shown a marked decline since April and May, and doesn't even send any Calls Heard for that reason. On Phone his best DX, however, was ZM6AA, AC3PT, I5ZC, HE9LAA and ZS3Z. His list of DX Missed includes KJ6AQ, ZC2AB, FR7ZA, VP8AI and VP8ZA, the last seeming a bit peculiar! J.P.W. searched frantically for the

Andorra expedition, but had no luck at all. Further remarks under "Miscellany."

N. S. Beckett (Lowestoft) was lucky with ZK1BC, PJ5RE and FN8AD, all giving him new countries. (He also heard 7B4QF but didn't know who that was—so maybe it's another one!) But what on earth is this 5S5EE that he reports? Is that a call-sign or a group of sunspots?

I. S. Davies (London, N.13) says Twenty is "the only band worth getting a headache over—Ten is too noisy." On the headache band he heard ZC1AL, eight VS7's, VU, VK, KL7 and HE9LAA. HZ1AF was heard, with Ken Ellis of HZ1KE at the mike. For the benefit of C. R. Burchell he says there is plenty of phone activity in UB5 and UO5, with a few in UP, UQ and UR.

Disappointment

E. J. Alban (London, W.2) tells me that he sent in a score last month that would have put him at the head of the May Contest—75 countries plus 5 possibles. Unfortunately I simply didn't receive his letter, so he wasn't credited. Perhaps it will turn up in 1955 as a reminder of what conditions were like this year. Sorry, E.J.A. — wonder where it went to? He has only been "on the air" since April and has already heard 111 countries in 36 Zones on his R. 1155 and preselectors. He is so disappointed about the non-appearance in the last issue that he doesn't say a word about this month's DX, but I hope we shall be hearing from him regularly in future.

A. Jackson (Huddersfield), working with a o-V-o, found conditions even poorer than last month. But he says he enjoys every minute of it and will not give up trying! R. J. Riding (Wednesfield) hopes to get an o-V-o together, not for the Portable Contest, but for use thereafter—just for fun. He says he has heard a station calling himself LI1B, giving QTH as Libya. This, of course, is all wrong, but one or two Libyan stations *have* been known to manufacture calls of that sort, and he is probably genuinely there.

On The Other Bands

There has been a slight outbreak of 80-metre DX again, but the band has so few supporters that such phenomena tend to pass almost unnoticed! However, J. L. Hall (Croydon) reports VQ4CM, heard several times on 3505 kc,



When G3GIF/P of the Coulsdon (Surrey) Group went out portable, this was their 20/40 metre station near Caterham, 730 feet a.s.l. Operators are, left to right: G3GKF, G3DQY, G3CIF, G2FI, G3EFO and G3FTQ.

CW at S6 or S7, various times between 2000 and 2300; and CE4AD, 3530 kc, S6 at 0140. Further, on 3.7 mc phone, J.L.H. has heard PY4JO (S8 at 0250). He tells us that CE3AG and 3AX have also been heard on the band, which seems to be wide open for South America.

I. S. Davies mentions W's coming in on phone after 0500, and quotes W2GSU and 4HZT. On *Forty* he reports a lot of stations signing 2AJ, 2AL, 5BH and another with a completely unintelligible call-sign ending with "Costa Rica." What all these things were, I don't pretend to know.

D. Morris (Oswestry) sends a list of Calls Heard for *Forty* only, and says conditions have been very patchy of late, although the band has opened up once or twice. June 12, in particular, was quite good in the early morning, with ZL's breaking through.

N. S. Beckett (Lowestoft) collected two new ones in the guise of HP1JB and SU1GM during a "middle-of-the-night" session. He says that there were lots of PY's on CW at that time, with KP4, W4 and W5. Evenings and early mornings, he finds, have dropped off considerably, and static has been a bit troublesome.

Antarctica Again

Several readers have taken the trouble to disagree rather violently with my statement (last month) that these CE7Z stations, claiming to be in "Chilean Antarctica," should be regarded as "just ordinary Chileans." Surely, one of them says, that is tantamount to admitting that the territory from which they operate is Chilean—it would be more logical to count them as VP8's! I see the point, admit the correctness thereof, and reverse my decision. If they are really in Antarctica (Graham Land, South Shetlands, or whichever one of the Falklands Dependencies they operate from) they should be counted as that particular country. The snag is that you will probably *not* get a QSL from them, so as far as Countries Confirmed are concerned—you've had it!

Miscellany

R. W. Finch puts up a novel idea for a contest, and one that I like the sound of. The "target" is "The Oceans of the World"; the winner the listener who logs stations in as many oceans and seas as possible. All stations logged must therefore be on islands. For example, South Atlantic (ZD9), Pacific (KH6), Indian Ocean (FB8), Persian Gulf (MP4), North Atlantic (FP8) and so forth.

It would be a bit of a headache for the judges, who would need a very good atlas to cope with some of the suggestions which would doubtless be put up, but sounds like a good one for the future. Wait until conditions are a little better.

M. J. Marlow kindly sends the following gen. on the Norwegian prefixes. LA—all fixed amateurs stations; LB—portable or mobile; LC—Military stations; LF—Experimental stations; LJ—Naval Schools and Institutions.

J. P. Warren adds some information about the U.S.A. prefixes to be used by holders of the new "Novice" licences over there. They will only be allowed on 2 and 10 metres, with low power; those in the States will use the prefix WN, and those in the possessions will sign WH6, WP4, WL7, etc.—just substituting a W for the present K.

H. M. Graham has amused himself through the bad conditions by looking through some pre-war logs and doing a little clerical work! He finds that he has heard 10,203 different stations—averaging three new ones per day for 7½ years. These include 3758 W's, 1606 G's, 530 VE's, 363 PY's, 215 LU's and 128 CO's, to take the leading DX scorers. H.M.G. has never bothered

about QSL's, and only possesses one—from G8KW.

M. G. Whitaker says he has parted with his faithful Hambander and may now be using another o-V-1 from his home QTH. He is spending a lot of his time building transmitting gear, so his DX is suffering a little. This, I suppose, means that we shall lose him one of these days, and our companion *Short Wave Magazine* will acquire another G3. . . . Meanwhile he has brought along another interested SWL up at Ouston and has "put him right" with an o-V-1. That's a job that a lot of you could get on with while DX conditions are bad, or while you are passing through a spell of waning interest.

Forthcoming Contest

The Annual VK/ZL Contest takes place this year in October—from 0001 GMT on Saturday the 13th, until 1200 GMT on Sunday, the 14th, for the CW event, and at similar times a week later for the Phone event. The Receiving Section, in which some of you might be interested, covers both events.

As this is a special Jubilee Contest (50 years since the Federation in 1901) the VK's, who are organising it this year, want to make it a huge success and hope for a large entry. I will keep

"ZONES HEARD" LISTING (POST-WAR)

Listener	Zones	Countries	Listener	Zones	Countries
PHONE and CW			PHONE ONLY (cont'd)		
A. H. Edgar (Newcastle) ...	40	223	R. A. Hawley (Goostrey) ...	38	188
R. S. Stott (Uplminster) ...	40	222	K. Parvin (Thornton Heath) ...	38	179
E. Trebilcock (Australia) ...	40	218	D. Kendall (Potters Bar) ...	38	170
N. C. Smith (Pettis Wood) ...	40	214	M. G. Whitaker (Ouston) ...	38	156
R. A. Hawley (Goostrey) ...	40	202	K. M. Parry (Sandwich) ...	38	154
R. W. Thomas (London, E.5) ...	40	200	D. Vincent (Beckenham) ...	38	148
W. J. C. Pinnell (Slcup) ...	40	198	D. L. McLean (Yeovil) ...	37	187
D. W. Waddell (Hitchen) ...	40	194	J. P. Warren (West Croydon) ...	37	176
B. Davies (Beckenham) ...	40	177	P. H. Strudwick (Ldn. N.W.11) ...	37	168
M. G. Whitaker (Ouston) ...	40	177	A. Levi (Belfast) ...	37	160
N. S. Beckett (Lowestoft) ...	39	198	A. M. Norden (London, N.W.11) ...	37	156
W. Neal (Birmingham) ...	38	162	R. J. Line (Reading) ...	37	156
M. J. Marlow (Guildford) ...	38	157	B. W. Sutton (Liverpool) ...	37	145
F. A. Herridge (London S.W.12) ...	37	157	D. G. Martin (Cheltenham) ...	36	154
A. M. Munford (Cambridge) ...	36	131	C. S. Pollington (Chichester) ...	36	151
R. W. Finch (Ilford) ...	35	134	N. Roberts (Launceston) ...	36	145
A. O. Fearson (Birmingham) ...	35	125	D. C. Stace (Spring Creek, N.Z.) ...	36	129
PHONE ONLY			H. M. Graham (Harefield) ...	35	149
E. J. Logan (Hertford) ...	40	203	A. L. Higgins (Aberkenfig) ...	35	138
R. G. Poppi (Beckenham) ...	39	175	J. H. Lloyd (Enfield) ...	35	122
F. K. Earp (London, S.W.11) ...	39	163	R. Lambie (Ardingly) ...	34	107
			B. L. Stedman (London, W.3) ...	34	105

reminding you and give more particulars of the scoring later.

- 1- **The June Contest:** This was for Countries Heard (outside Europe) on ten-metre phone. Only six entries were received, and the order of merit is shown in the accompanying table. Congratulations to M. J. Marlow, P. W. Sutton and K. Parvin, the first three.
- 2- **The July Contest:** This will be all over by now, and took the form of a private Field Day on July 7 and 8. Lists of the 25 best stations will be judged when they arrive and the winners announced next month.
- 3- **The August Contest:** Back to the Zonal method of scoring, and this will be for the greatest number of Zones and Countries heard during the period July 22 to August 22. All bands, but two lists—one for Phone Only and one for Phone and CW. So see what sort of totals you can rake in during that month.

Set Listening Periods

- July 21, 2100-2200 GMT — 14 mc
Phone
- July 22, 0800-0900 GMT — 14 mc
CW and Phone
- August 25, 1800-1900 GMT — 28 mc
Phone
- August 26, 1100-1200 GMT — 1.7 mc
CW and Phone
(including G's)

And that concludes the session for this month. Next month's deadline is **first post on July 25**, and the following one **August 29**. Address all news and views, DX reports and Calls Heard to DX Scribe, *Short Wave Listener & Television Review*, 55 Victoria Street, London, S.W.1. Good Hunting and BCNU.

CALL BOOKS

The Summer 1951 Edition of the *Radio Amateur Call Book* contains, in the G listing, nearly 7000 U.K. callsign addresses, corrected to May 1951. This section, under the title *The G Call Book*, is now available separately, at 4s. 6d. post free, of Gage & Pollard, as advertised in this issue. We understand that the print is limited.



"PSE QSL"

As we have pointed out on previous occasions, this unique feature remains by far the best means of acquiring a good selection of QSL cards. Enough scope is given by the regular appearance of "Pse QSL" to keep any active SWL busy for the month between issues. Furthermore, to follow "Pse QSL" is to QSL *usefully*, since all the stations

listed (different every month and covering all parts of the world) are those actually wanting SWL reports; they have taken the trouble to write us with the details as listed, and we notify them that their request for reports has appeared. But remember also that your report must still earn its QSL by being as detailed and as factual as possible, since no amateur is compelled to QSL such reports as he may consider to be of no value or interest to him. And when sending your report, it will probably help to cross-refer to the issue of *Short Wave Listener & Television Review* in which his request is published.



AMERICAN VALVE GUIDE

A new edition of *RCA Receiving Tube Manual* is now available. Running to over 300 pages, it lists more than 450 RCA valves and CRT's, with all the necessary operating data, base connections and application notes. Designated Manual RC-16, it costs 5s. 6d. post free and can be ordered through RCA Photophone, Ltd., 36 Woodstock Grove, London, W.12.



THE S.640 RECEIVER

Many readers own a model of this well-known Eddystone receiver, which first appeared on the amateur market shortly after the war. An interesting and fully detailed article on possible modifications to improve the S.640 and bring it right up-to-date appears in the recent (June) issue of our *Short Wave Magazine*. A few copies are available at 2s. 3d. post free.

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L.32

CALLS HEARD

SET LISTENING PERIODS

28 mc PHONE

June 23, 1800-1900 GMT

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

CR6CC, CX4CS, LU4BH, 7BU, PY2AUC, 3CR, VQ4AC, 4CRM, 4SGC. (Rx: S.504).

N. C. Smith, 79 Greencourt Road, Petts Wood, Kent.

CR6AQ, 6CB, CX4CS, EA8AX, EK1AD, LU3AK, 7BU, VQ4AC, 4CRM, 4SGC, W6YYT/MM. (Rx: S.750).

14 mc

June 24, 0700-0800 GMT

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

PHONE: EA9AI, FA8CC, HC1FG, KP4KP/KP4, M13ZX, VK3TA, VP6MO, 3V8BB. (Rx: S.504).

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

CW: VE5RI, VK3YC, 6MO, W6ADP, 6AM, 6DZZ, 6ENV, 6FV, 6IQ, 6KIP, 6KYV, 6SC, 6VE, 7B4QF. (Rx: *Hambander*).

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

PHONE: 3V8BB, HC1FG, W1JFG, 6LDZ, 8OAK, 0DGE. CW: UA9KWA, W2AJR, ZB1BJ. (Rx: AR-88 and S.504).

C. Smith, 79 Greencourt Road, Petts Wood, Kent.

PHONE: HC1FG, KP4KP, M13ZX, VK3PA, CW: KP4KP, VE8AJ, VK3APV 3CP, 32T, 5LE, W6AM, 6DZZ, 6KIP, 6MVQ, 6TIP. (Rx: 750).

GENERAL

28 mc

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

PHONE: AR8AB, 8BB, CE3AE, CX4CS, EL10A, FF3CN, 8PG, LU3DZ, 5DZ, M13NA, OQ5BO, 5HL, 5NK, PY1JY, 1RY, 2ACF, 2AGC, 2ATG, 2AUC, VQ4CRM, 4SGC, ZS6CV, 6SG, 4X4CZ. (Rx: SX28 and AR88LF).

Please note these simple rules for sending in your lists of Calls Heard.

28 mc: No Europeans.

14 mc: No Europeans or North Africans, no East Coast U.S.A. or Canada no PY.

7 mc: No Europeans.

3.5 mc: No Europeans.

1.7 mc: No U.K. stations.

Arrange logs in the form given in this section with (a) Prefixes in alphabetical order, but not repeated after the first one; (b) Numbers in numerical order and repeated as part of the call-sign; (c) Call-signs in alphabetical order. For example:— VK2GW, Z2C, 3CP, 4UL, VF1AA, 2GB, 5BJ, 7NM, VQ4RF, 8AF.

Underline each prefix; put your name and address at the head, and type of receiver at the foot; restrict your lists to a total of 25 calls. In short, make them out exactly as those shown herewith, but take as much space as you like. Microscopic writing is neither necessary nor popular. And if you want to use our Calls Heard Report Forms, specially produced for the purpose and supplied free of charge, send a large S.A.E. to the office, with a card marked — "Report Forms, please."

M. G. Whitaker, 607 Sqdn., RAF Ouston, Newcastle-on-Tyne.

CW: DL3MQ, 5BA, F3NB, G6XA, HB9BX, OE1FF, 5ZZ, ON4UT, 4VT, 4VU, 4WZ, SM5OI, 6YZ, 7MS, 7MV, 4X4BX, 9S4AX. (Rx: 0-V-1).

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

PHONE: AR8AB, CR6AI, EA8AX, LU6AJ, MD2GC, OQ5DZ, VQ4RF, W2PFL/MM, 4KVP, 6YYT/MM, ZD4AD, ZS1CI, 4X4CW. (Rx: 0-V-1).

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

CR6AG, EK1AD, LU5DZ, PY2KC, SP5AB, W2PFL/MM, W4IUT/MM, W6YYT/MM. (Rx: B36 with RF Unit No. 24).

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

PHONE: CE2CC, 3AE, 3BE, CR4AC, 4AI, 6AQ, 6AT, 6CB, 6CC, CX1NE, 2CO, 4CS, EL10A, FF8JC, 8PG, M13NA, OQ5BI, 5BO, 5HL, 5NK, VQ2NS, W2BDO 3MS, 4OBG, 8GPQ. (Rx: S.504).

M. J. Marlow, Lynkhurst, 158 Epsom Road, Guildford.

PHONE: AR8PO, CE2CC, CR4AC, 6AT, EL10A, KP4CD, LU5AR, OQ5HL, PY2AUC, VE3QO, VQ4HJP, VS1AD, W1S1, 5OXV, ZD1SW, ZE2KH, ZS6CV, 7C, 4X4CZ. CW: CP4AI, F8QK/MM, FY7YC. (Rx: S.27).

14 mc

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

PHONE: AR8BC, CR6AI, FF8DA, HE6EC, KG6AAE, KZ5AA, 5NM, OA3C, 4AI, 4AO, 4EG, 4M, PY9AE, (Matto Grosso), VP3YG, 4TH, 6CJ, 6FO, 6MO, 6SD, 7NH, 7NL, VQ4NJ, 4RF, W7GC, YN4CB.

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

AR8BC, CS3AA, CR6AG, KR6FA LU5DZ, 6KE, OY3FP, UA1KAC, VP6FO, 6SV, VQ4AC, 4ERR, 4RF, VS2BS, 7PW, XE1AB, 1CQ, YUIAD, YV5EC, ZD1SS. (Rx: B36).

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

CW: CE3DZ, FP8BX, HZ1AB, LU3CV, 5EO, 8EE, 8VR, TF3AB, 3NA, 3VO, 3AN, W6DZZ. PHONE: LU9AF, M13LP, 3US, VQ4RF, YV5BQ, ZB1AR, ZL4IG. (Rx: 3-V-2).

J. Butcher, 27 Westfield Road, South Shore, Blackpool, Lancs.

PHONE: AR8BS, CS3AA, HC1JW, HE6EC, 8WF, HP1LA, 1LB, KP4AZ, 4JG, KZ5AA, LU4BH, 4CN, 6AG, M13LP, 3ZX, TA3XOX, VK3HG, VP6FO, 6SD, 7NH, 9L, VQ4RF, 5CB, ZC1AL, 6GI. (Rx: 1-V-1).

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

PHONE: CE3CZ, EL9A, EQ3FM, FF8OA, HC2LF, HE9LAA, HH2X, HE6EC, MP1LA, HZ1TA, ISZC, KZ5AA, M1B, MD1VK, MP4KAC, OA4EG, 4M, OQ5DZ, OY3FP, SU1AS, VP7NH, VQ5CB, VS1DB, 6AA, VTIAG, XE1AC, 1CQ, YN4CB, YS1RR, ZC1AL. (Rx: H.M.V. 1120).

J. R. Sergeant, 21 St. James' Avenue, Peterborough, Northants.

PHONE: CO8MP, HI6EC, HP1LA, LUIDJU, 5CZ, OA4AO, TA3AA, VP4TH, 6CJ, 6FO, 6SD, YV5AB. (Rx: 0-V-1).

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

PHONE: CS3AA, CX2CO, HK3AS, HZ1AT, KG4USA, MI3ZX, OA4AO, 6G, P1CI, VK2J, 2ATL, VP1AR, 6C6, 6FO, 6JK, 6MO, 6PK, VQ4MJ, VT1AB, W7LLM, YV5EC, ZC1AR. (Rx: Mod. R.1155).

J. P. Colwill, Hay Common, Launceston.

PHONE: CE2CC, 2DT, CO8MP, CX2AF, EL9A, HC1FG, HK3FF, HP1LA, KP4EE, 4JG, OQ5CA, TA3QZ, TI2OE, 4JE, VK3JE, 3TE, VP6WD, VQ4ERR, 4N1, 4WLH, 5CB, VS7PW, VT1AB, YV1AJ, ZC6GI. (Rx: Roberts P4D).

N. C. Smith, 79 Greencourt Rd., Petts Wood, Kent.

CW: AP2N, CR4AH, DU1VVS, F18RO, 8TF, FN8AD, FQ8AC, FQ8AG, 15ZU, JA2HB, KG6HF, KH6WU, KL7ZR, KR6FA, PJS5O, ST2GL, SU1NK, UH8KAA, VS6CB, VU2GU, XE1GM, XU6F, VK9GB, VR2BU, 2S8MK. (Rx: S.750).

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

PHONE: CE1BN, CX2CO, TA3AA, 3FAS, 3QZ, VP6FO, 6MO, 6SD. (Rx: Eddystone 400.X).

N. C. Smith, 79 Greencourt Rd., Petts Wood, Kent.

PHONE: CR6AI, EL2R, HC8GI, HR1BG, HI8WF, KG6AAE, 6GC, OA4AI, 4DE, 4EG, 4M, PJ5HO, TI2CAF, TG9AZ, XE1AL, VP4LG, VQ5CB, VS6BP, 7MP, YN3MS, YS1GM, ZC1AL, ZM6AA, ZP2AE. (Rx: S.750).

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

PHONE: AR8UN, CX4CS, EL2R, HC, JW, HH2S, 3DL,

HI6EC, HK4DC, HP1LA, KG4AT, KZ5AA, MI3US, TF5TP, TI2EV, VP5AK (Jamaica), 9XX, VQ4NJ, 4WLH, 5AU, VS7PW, 7SG, YV1BF, ZC1AL, 6DO, ZD1SS. (Rx: 1-V-1).

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

PHONE: CO8MP, KP4FE, HP1LA, KG4AU, KZ5AA, LUB8S, 9AF, MD1VK, 2AC, OQ5LL, VP3YG, VP6FO, 6SD, VQ4ERR, ZC1AL, 6GI.

CW: CO2OE, 7AH, FP8BX, KZ5GF, VP5BL, VS6AA, W7BZO, Y13AG, ZC4KN. (Rx: AR-88 and S.504).

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

PHONE: AR8BS, CE3AI, CP2DT, CR6AI, CX2CO, DU1AL, HH1HB, HK1BG, HP1LA, HZ1AB, MP4KAC, Q35BD, OQ5RL, SU1AS, TA3QZ, TI2OE, VK3LN, VP4AA, VQ2JV, 5CB, V57MP, VT1AB, ZC1AL, ZC6DH, 4X4DB. (Rx: 0-V-2).

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

PHONE: AR8AB, 8BC, CP5ZE, FF8DA, 8JC, HI6EC, KR6FA, M3R3P, 3US, 3ZX, TA3FAS, 3XOX, TI2EV, 2OE, VP5BL, 6MO, 6SD, VR5AU, 5CB, VS7NP, VT1AG, W7HIA, 7HRV, 7JMY, 7KMG, ZC6GI. (Rx: SX28 and AR88LF).

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

PHONE: CR4EI, HC2LF, KG4AB, KR6ZI, LU7OX, VT1AB, W5OFT, 7LVV, YN4CB, YV5AB, ZC3CZ, ZP6JM. (Rx: FBX and Pre-selector).

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

PHONE: CR4AI, 6AI, EA0AC, HC8GI, HR1BG, 15ZC, KG6AAE, KL7YZ, PJ5FN, VQ5AU, 5CB, VS1AD, 1AX, 2BS, 7MP, 7PW, 7SG, VT1AB, 1AG, ZD1SS, ZE2JE, ZP2AA, 2AE, 2AL. (Rx: S.504).

G. J. Burges, 225 Havant Road, Drayton, Hants.

PHONE: AG2AC, AR8BC, 8BS, GE2CC, CM9AA, EA7BB, HC3OV, HI6EC, KG4AU, KT4AZ, MI3US, SU1AS, SV0WL, 0WS, TA3AA, VK4NJ, VP6SD, VQ4RF, VS7MP, XF1CO, YO3RSI, YUIAD, YV5AB, 5BT, 2G4ND, ZP1AL, 4X4AH, 4AV. (Rx: HRO).

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

CO8WM, KC6WC, MI3ZX, OA4AI, P0AB, PK4DA, 9K9HI, W7NOU. (Rx: Mullard 1957).

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

PHONE: AR8BP, CE1HF, CM9AA, CR4AU, CT3AC, EL2R, HH2X, HK1DZ, HP1LA, HZ1AB, KG4AT, KP4JG, TI2AB, VP4TH, 5FR, 6HN, 9G, VQ4RF, VS6BP, XE3EM, XZ2KN, YV5BF, ZC6DH. (Rx: 0-V-0).

R. J. Riding, Fibbersley, Wednesfield, Staffs.

PHONE: CE2CC, CO2MG, CX3CN, HI6EC, KG4AT, LU3VP, 7HJ, 9CI, VK3EE, VP6SD, VQ4ERR, VT1AB, YV1AA, 5AB, ZC6DH, 6GI, ZD1SS, ZP2AE, 4X4DR. (Rx: 1-V-1).

7 mc

D. Morris, Priddwell Mawr, Llangedwyn, Oswestry.

CW: FN8FA, VR3GY, W4BF, 4MF, ZL4FG, 4WL. PHONE: EL9A.

N. C. Smith, 79 Greencourt Road, Petts Wood, Kent.

KZ5WZ, VE1IW, 3DN, 3KE, 3NS, VP5AL, 6FM, ZL1MP.

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

CW: CM2FC, EK1DS, HP1JB, HZ1KE, SU1GM, UA9KC, W5ATW, 5SNR, ZB1AJX/P, ZL4HI. PHONE: GM8LS, CO6AV. (Rx: Hambauer).

SUBSCRIPTION NEWS

To be sure of your copy, you should place an order with your newsagent for regular delivery of *Short Wave Listener & Television Review*, as we cannot yet supply newsagents with copies for casual sales owing to the extreme shortage of paper. In other words, every single copy has to be ordered, whether

obtained through a newsagent or by direct subscription from us. If you want to have it delivered by post on publication, direct from us, it costs 18s. for a year of twelve issues—order on The Circulation Manager, *Short Wave Magazine*, Ltd., 55 Victoria Street, London, S.W.1.

PSE QSL

The operators listed below have informed us that they would like SWL reports on their transmissions, in accordance with the details given. All correct reports will be confirmed by QSL card. To maintain the usefulness of this section please make your reports as comprehensive as possible.

- CE3CB *Avda. Euclides 1350, San Miguel, Santiago, Chile.* CW and phone, all bands, 0001-0400 GMT.
- CO6NF *P.O. Box 136, Santa Clara, Las Villas, Cuba.* 14 mc phone and CW, 2000-2359 GMT. Modulation.
- CO8DL *P.O. Box 114, Santiago de Cuba, Oriente, Cuba.* Reports on 7150 and 14025 kc CW.
- CR6AQ *Box 79 Luanda, Angola.* 14 and 28 mc phone and CW, 1700 GMT. Modulation.
- CR7BN *Caixa Postal 75, Beira, Mozambique.* 7050, 14075, 14200 and 28200 kc phone and CW, 1500-1800 GMT, weekends 1300-1700 GMT.
- DL1EQ *W. Koch, Evang. Pfarramt, Gerzen/Ndbay, Germany.* 3510, 3722, 7010, 7020, 7025, 7075, 14020, 14050, 14150 and 14300 kc phone and CW. Stations calling DL1EQ, not heard by him.
- DL3QK *Auf der Bunte 11, Kassel-Ki, Germany.* 3.5, 7 and 14 mc phone, 0630-0700 GMT.
- DL4DN *Gallas Strasse 10, Danibach-Furth, Germany.* 3.5, and 7 mc CW, 1700-2359 GMT.
- DL6GH *Schillerstr. 17, Reinsfeld/Holstein, Germany.* 3.5, 7 and 14 mc phone and CW, 0400-0530 GMT, and weekends. Tone: harmonics: condx.
- DL6IF *Gr. Altesfahre 7, Lubeck, Germany.* 3.5, 7 and 14 mc phone and CW, Sundays 1100-1300 GMT. Details of modulation.
- DL6KW *Dollstr. 12, Ingolstadt/Donau, Germany.* 3.5, 7 and 14 mc phone and CW.
- DL6PR *Stadtfeld 20, Schleswig, Germany.* 3.5 and 7 mc CW, 1400-1800 and 2100-2300 GMT.
- EA3CY *Padilla 242, Barcelona, Spain.* 14.0-14.1 mc CW, 1800-2200 GMT.
- EA3FK *Wilredo 97, Badalona, Spain.* 14 mc phone and CW, 2000-2359 GMT. Modulation quality.
- EA3GH *Gen. Franco 460. 3-1, Barcelona, Spain.* 14180-14350 kc phone, Sunday mornings. Modulation, speech quality, stability.
- EA3GT *General Sanjurjo 152, Sabadell, Barcelona, Spain.* 7 and 14 mc phone and CW, 0830-0800, 1300-1500, 1830-2030, 2200-0200 GMT.
- EA4CX *Serrano 81, Madrid, Spain.* 14 mc phone, 0900-1230 and 1500-2100 GMT.
- EA5AF *Puerto Rico 39-2, Valencia, Spain.* 7, 14 and 28 mc phone and CW, 1300-1430 and 2200-2359 GMT.
- EA5DT *Matias Perello 70, Valencia, Spain.* 14 mc phone, 1200-1400 and 2000-2300 GMT.
- EA0AC *P.O. Box 195, Santa Isabel, Fernando Poo, Span. Guinea.* 14.3-14.35 mc phone, 0600-0800 GMT and 2200-2359 GMT. Modulation.
- F9UX *H. Lafon, rue du Temple, Eymet, Dordogne, France.* 7 and 14 mc phone, 1215-1300 and 1930-2130 GMT. Modulation, QSB, Wx.
- G3BUJ *49 Swanage Road, Southend-on-Sea.* 1760 kc phone, 0630 GMT: 1990 kc CW, Thursdays 1830 GMT.
- G5TH *198 Clifton Drive South, St. Annes-on-Sea, Lancs.* CW and phone, VFO, all bands.
- HA4SA *Dr. L. Radnai, Marx Park 8, Szolnok, Hungary.* 1.8, 3.5, 7, 14 and 28 mc CW.
- IICBG *via dei Martiri 24, Castelfranco Emilia, Modena, Italy.* 7 and 14 mc phone, 1200-1400 and 1800-2359 GMT.
- IITT *via Jacopo Nani 36, Lido di Venezia, Italy.* Reports on 28.2-28.3 mc phone.
- ITIBSY *via Pacini 52, Catania, Sicily.* 44 mc phone, 0800-1000 and 1500-1700 GMT.
- IT1SNC *via Umberto 25, Catania, Sicily.* 14 and 28 mc phone, 0900-1100 and 1500-1800 GMT. Details of modulation.
- KP4MC *P.O. Box 171, Caguas, Puerto Rico.* 28 mc phone, operating weekends.
- KZ5GF *Box 54, Gamboa, Panama Canal, Zone.* 7004, 7024, 7029, 14008, 14049, 14059 kc CW.
- KZ5NA *Box 20, Fort Amador, Panama Canal Zone.* 7008, 7010 and 14017 kc CW, at 0001 GMT.
- LU6BY *Avellaneda 550, Buenos Aires, Bs. As., Argentina.* 14 and 28 mc phone and CW, 0100-0400 and 1000-1200 GMT.
- OHIPW *Itsenaisyydenkatu 74, Pori, Finland.* 14 mc CW, 1400-2200 GMT. Frequency and tone.
- ON4IC *28 Ter Looigemweg, Brugge, W.V., Belgium.* Operating 7 mc CW. Critical reports.
- OQ5BP *P.O. Box 271, Leopoldville, Belgian Congo.* 28492 kc phone, 1000-1800 GMT.
- PA0HJC *v.d. Heimstraat 29, Delft, Netherlands.* 3.5, 14 and 28 mc phone.
- PAOKAM *19 Spechtweg, Apeldoorn, Netherlands.* 3.5 and 7 mc phone and CW, 1750-1900 and 2100-2300 GMT. Modulation quality: condx.
- PA0ZS *J.v. Goyenkade 10, Zaandam, Netherlands.* 14 mc CW, 0500-0600 and 2100-2300 GMT. Comparative reports.
- PY1AZ *P.O. Box 4394, Rio de Janeiro, Brazil.* 14 and 28 mc phone and CW, 0200 GMT.
- SM3BNL *Bengt Frolander, Hjalteforsen, Langsele, Sweden.* 3.5 and 7 mc CW, 1700-2300 GMT and weekends.
- SP1SE *Biesowice, Powiat Miastko, Kosralin, Poland.* 3.5, 7 and 14 mc phone and CW, 0730-2359 GMT.
- SV0AN *924937 A.Q.M.S. Whiting, Camp H.Q., B.M.M.(G.), British Forces in Greece.* 3.5 and 14 mc CW and phone, 1700-1900 GMT. Modulation quality and percentage; stability, keying.
- VE1HZ *A. Stocker, Port La Tour, Shelburne Co., N.S., Canada.* 14 mc CW, 1800-2300 GMT.
- VE2AFV *4575 Lacombe Avenue, Montreal, Quebec, Canada.* 7 mc CW, 2100-0100 GMT. Comparative reports. Details condx.
- VE3BUR *141 Prado Place, Riverside, Ont., Canada.* 3.5 and 7 mc CW, 0001-0300 GMT.
- VE3DBJ *35 Lake Street, Creighton Mine, Ont., Canada.* 3.5, 7, 14 and 28 mc phone and CW. 2200-0400 GMT.
- VE7RV *6807 Angus Drive, Vancouver, B.C., Canada.* 14155-14310 kc phone, 0630 GMT.
- VE8BK *A. Dempster, c/o R.C.A.F. Str., Whitehorse, Yukon Terr., Canada.* 7 and 14 mc CW.
- VK3ZA *265 Clarendon Street, South Melbourne, S.C.S., Victoria, Australia.* 3.5, 7, 14 and 28 mc phone and CW, 0800 and 1400 GMT.
- VQ5AU *E. J. Brice, Police H.Q., Signals Office, Kampala, Uganda.* 7068, 7078, 14056, 14122, 14132, 14136, 14156 kc and 28 mc phone and CW, 1700-2100 GMT. Quality; stability; condx.
- VQ5CB *P.O. Box 264, Kampala, Uganda.* 7, 14 and 28 mc phone and CW, 1400-2100 GMT and weekends. Comprehensive reports.
- VS6BP *P.O. Box 541, Hong Kong.* 14 mc phone, 1000-2359 GMT.
- VS6CB *P.O. Box 541, Hong Kong.* 14 mc CW, 1000-2359 GMT.
- VS7GD *G. H. Dullin, Pambagama, Parakaduwa, Ceylon.* 14 and 28 mc phone and CW, QRP, 1130-1230 and 1530-1630 GMT. Modulation.
- VU2DH *W. M. Hamilton, c/o Madura Co., Ltd., Tuticorin, India.* 14162 kc phone, 1530-1830 GMT.
- W2EHF *W. J. Gorman Jr., RFD. 1, West Road, Ballston Lake, N.Y., U.S.A.* 14 mc phone, Saturdays 1200-1500 GMT.
- W2SMK *408 43rd Street, Union City, N.J., U.S.A.* 7008, 7014, 7044, 7050 kc CW, 2000-0100 GMT.
- W3ELH *2240 Lincoln Street, Bethlehem, Pa., U.S.A.,* Reports on 3.9, 14 and 28 mc phone.

- W3GHD** 139 Campbell Avenue, Havertown, Pa., U.S.A. 14 mc phone and CW, 1000-1300 and 2130-0530 GMT.
- W3HHK** 139 Gay Street, Philadelphia 27, Pa., U.S.A. 3.5, 7 and 14 mc CW, 0100-0600 GMT. Comparative reports with W2 and W3.
- W3MAL** 1025 Wyoming Avenue, Exeter, Pa., U.S.A. 14005-14150 kc CW, QRP, 1200-2000 GMT.
- W3NUI** } 325 Spring Valley Road, Springfield, Pa.,
A2NUI } U.S.A. 7120 kc CW, 1400-1600 GMT:
K4WAG } 28.9 mc phone, 1800-2100 GMT: 14350 kc phone, at 2300 GMT.
- W3QS** 168 Keswick Avenue, Glenside, Pa., U.S.A. 3.5 and 7 mc CW, 2100-0500 GMT.
- W3QWW** 423 Parkwood Road, Pittsburg, Pa., U.S.A. 7 and 14 mc CW, 28 mc phone and CW, 1600-2359 GMT, Wednesdays and Sundays 0800-1400 GMT.
- W4GHL** J. W. Selby, RFD. 5, Kingsport, Tenn., U.S.A. 14014 and 14270 kc CW and phone, 0100-1100 GMT.
- W4SCR** 104 Simmons Street, Opelika, Ala., U.S.A. Reports on 28.5-29.7 mc phone.
- W4SDA** R. W. Slye, TACRon 4, N.A.S., Norfolk, Va., U.S.A. 14 mc CW, 14 and 28 mc phone, 1700-2300 GMT.
- W7MVC** 7204-F East 14th. Street, Vancouver, Wash., U.S.A. 7 and 14 mc CW, 0300-0700 and 1500-1700 GMT.
- W8FWC** 13490 Hazelridge, Detroit, Mich., U.S.A. Reports on 28 mc phone.
- W9ABA** 1606 Lake Avenue, Wilmette, Ill., U.S.A. 7 and 14 mc phone and CW, 0001-0400 GMT.
- W9EPC** 553 West Paris Street, Frankfurt, Ind., U.S.A. Reports on 28 mc phone.
- W9HUV** R. C. Clark, RFD. 11, Lafette, Ind., U.S.A. 3656 kc and 14 mc CW, 0030-0130 and 0300-0330 GMT. Comparative reports.
- W0DMA** 238 East Main Street, Caledonia, Minn., U.S.A. VFO-controlled 14 and 28 mc CW.
- XZ2ST** } 39 Sandwith Road, Rangoon, Burma.
XZ2TS } 14335 kc phone, VFO, 1300-2200 GMT.
- YU1CAG** P.O. Box 48, Belgrade, F.P.R., Yugoslavia. 3.5, 7, 14 and 28 mc phone and CW, 1500-2359 GMT. Modulation quality. Comparative reports.
- ZC4TF** 35 Edward VIII Street, Famagusta, Cyprus. 3.5, 7 and 14 mc phone and CW. Quality and modulation depth. Reports when working QSOs at right-angle directions away from U.K.
- ZL1ADY** M. Purdie, Commercial Road, Helensville, New Zealand. 7 and 14 mc CW, at 0600, 0800 and 1200 GMT. Comparative reports.
- ZP2AE** Antequera 380, Asuncion, Paraguay. VFO-controlled 14 mc phone, 2100-0300 GMT.
- ZS3S** P.O. Box 338, Windhoek, South-West Africa. 14 and 28 mc phone, 1200-2000 GMT.
- ZS6ACD** 41 Downing Mans, Eloff Street, Johbg., S. Africa. 14056 kc CW, VFO, after 2200 GMT.
- ZS6OS** P.O. Box 44, Vanderbijlpark, S. Africa. 7 and 14 mc CW, at 0430 and 1800 GMT.
- 4X4BR** 35 Blue Coast Road, Bal-galim, Haifa, Israel. 14 mc phone and CW, 0300-0400 and 1800-1900 GMT.
- 4X4CJ** 4 Nachlat-Benjamin Street, Tel-aviv, Israel. 7000-7050, 14001-14150, 14320-14350 and 28001-28500 kc CW and NB.FM phone. Reports on quality and modulation.

OUTDOOR ACTIVITY

This is the season of the year when there is usually quite a lot of outdoor or portable work. We shall be interested to see clear, sharp photographs of Club or Group subjects covering such activities, and payment will be made for any pictures that we are able to use. They should be identified on the back and accompanied by brief descriptive notes.



STILL THEY COME

The total of TV licences as at the end of April 1951 was 825,600—showing an increase of more than a quarter of a million since the end of November 1950! When taking out a TV licence, costing £2, the Post Office will allow a rebate on the unexpired portion of the £1 sound licence, as the £2 TV permit now covers all reception.



RADIO CONTROLLED MODELS

Our well-known contemporary *The Model Engineer* is holding an Exhibition at the New Royal Horticultural Hall, Westminster, London, S.W.1, during the period August 22—September 1. Of particular interest to our readers will be the display of radio-controlled model aircraft, ships and tanks. The radio

radio control of models is attracting increasing support among both model engineers and radio enthusiasts, who are thus able to combine their specialised knowledge in two different fields.



GIFT SUBSCRIPTIONS

Do not forget that one of the best presents you can make to an overseas contact is a gift subscription to *Short Wave Listener & Television Review*, or (if your friend is a transmitter) *Short Wave Magazine*. The cost is 18s. or 24s. post free respectively for a year of twelve issues.



CALLS HEARD REPORT FORMS

Readers who are interested in sending us Calls Heard lists for publication—in either "Have You Heard?" or "The VHF End"—are advised to make use of our special Report Forms, issued free for the purpose. It is a case of helping yourself and us, since the layout of the Form is such as to ease the very difficult job of getting these lists accurately into print. A large S.A.E. with a card marked "Calls Heard Report Forms, Please," will bring a supply by return. To ensure expeditious handling at our end, please keep this request separate from any other correspondence.

THE VHF END

by A. A. MAWSE

Good Conditions Maintained—

Reports & Results in Detail—

Progress Up The Ladders—

Calls Heard and The Tables

ONCE again as your conductor starts to write this monthly VHF report the sun is shining, the temperature is up and Two Metres is open for DX. In regard to both the weather and VHF conditions and results, June came in and went out in a blaze of glory. Some of the stuff in between was not so good, but in general there was little cause for grumbling. True, some nights activity seemed lower than normal, but one must get some sleep sometime, so it is best to take it when conditions are not so good!

A brief account of the happenings during the early days of June was given as a postscript to last month's "VHF End." With just an occasional lapse DX conditions lasted until June 21. June 4 was, of course, the peak night, but Continentals were coming across on numerous other occasions, and good paths frequently opened between North and South in this country. Good openings also occurred between North and South on June 24 and the final days of the month. Continental signals were again to be heard on June 29, including DL4XS, who was received by G2OI in Manchester.

Best reception claimed by any of the SWL fraternity comes from J. E. Harman, who logged OZ2FR on June 2 at 2000 BST, when his 'phone was S9 in Eastbourne. The distance from J.E.H. to OZ2FR in Baekke is 505 miles. Another very creditable performance is that of R. L. Bastin, who received OZ2FR in Coventry at 486 miles, on June 1. As R.L.B. has sent us his QSL from OZ to confirm this reception he appears at the top of the Two Metre DX Table, which is re-introduced this month. L. B. Bailey

(Stockton-on-Tees) logged OZ2FR at 421 miles, while W. C. Askew (Melton Mowbray) also heard him at 450 miles.

The above distances have all been calculated from latitudes and longitudes taken from a gazetteer. It would help if any of you who have DX claims to make would let us know at the same time either your National Grid Reference or exact Lat. and Long. The former is most useful for claims between points both located in this country (G, GM and GW), and the latter for claims to points outside Great Britain. Both NGR and Lat. and Long. can be obtained from modern editions of Ordnance Survey Maps.

Station News

E. A. Lomax (Bolton) has been pretty active, but missed the first few days of the Continental opening; he has logged GM for the first time this year, and EI for the first time ever. GI still evades E.A.L. and he would very much like to hear GC! He reports that local transmitting activity is still good and G2HGR, G3AOO and G3BKS all have newly erected "City Slickers" with which they hope to work the South very soon. (A.A.M. heard G2HGR and G3AOO in the South on June 29.) G8SB has a similar aerial, but with reflectors. GW3ENY (Llandudno) provided E.A.L. with a new county.

A. H. Edgar (Newcastle-on-Tyne) was somewhat unlucky on June 4, as his main receiver became unserviceable right in the middle of the DX session. He reports that there has been much local transmitting activity on Two, G2BCY and G2DKH being there every evening, and G3CYY frequently. DX logged by A.H.E. has included ON4BZ and ON4IW, both on 'phone. He heard a station on 144.1 mc with an American accent on June 4 and wonders if it was DL4XS. (It is understood that DL4XS was *not* active during this opening.) A watch for G2AJ and G3BLP has so far gone unrewarded. A new converter is well under way with which it is hoped to do things. A.H.E. asks us to pass on his advice that 7475's should not be

used as stabilisers, as they are guaranteed to give T7 notes! A VR105 is much superior and produces a T9 note. Some interesting trigonometrical calculations have been made by A.H.E. to determine the angles subtended by local hills.

L. B. Bailey (Stockton-on-Tees) heard real DX for the first time on two metres. In addition to Continentals some good GDX was rolled in, including G3BA (Daventry) at 160 miles; G8SB was heard almost every night from June 1 to 12.

R. L. Bastin (Coventry), in spite of a change of QTH, did not miss the openings. His most wonderful moment since he started as an SWL came on June 1, when an S6 'phone carrier was identified as OZ2FR calling "CQ DX 2m"; later this signal came up to S9. This was the first Continental signal ever heard by R.L.B. He was also

there for the fun on June 4, and at first thought it must be his new 8-element stack that was doing it, but a quick change to the old 4-element Yagi showed that OZ2FR was 8 to 10 dB stronger still! At his new location R.L.B. hopes to hear some of the northern stations, as he has a clear outlook in that direction. He has been helping G5ML to get ready for some high-power work on Two, and says that SWL reports will be welcome (QTH: 28 Cannon Park Road, Coventry). Little constructional work has been done by R.L.B. this month, as he has spent all his spare time listening for DL, EI, F, GC and SM!

H. J. Balsam (Didcot) has replaced his dipole with a 4-element Yagi and finds a great improvement. A start has now been made on an 8-element stacked array. P. J. Towgood (Bournemouth) considers June to have been a month of

VHF CALLS HEARD

Two Metres

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

F9RL, G2AVR, 2BMZ, 2DGB, 2DVD, 2FTS, 2HCG, 2HDZ, 2MV, 2NH, 2WJ, 2XC, 3ABH/P, 3AUS, 3BA, 3BCY, 3BEX, 3BHS, 3BLP, 3BNC, 3CGE, 3DIV/A, 3EHY, 3ESS, 3FAN, 3FSD, 3GAO, 3GAV, 3GHS, 3GOP, 3GSE, 5BY, 5LK, 5MA, 5UF, 5WP, 6AG, 6DT, 6NB, 8IL, 8OU, GW3EJM, ON4AP, 4BZ.

(All on phone, G2IQ converter and cascade type with G7E mixer/osc. 4-ele v.w.s. beam, 30 ft. high).

L. B. Bailey, 16 Fulthorpe Road, Norton, Stockton-on-Tees.

0-25 miles: G2FO, 2FXA, 3DMK, 5QU, 8GL.

25-50 miles: G2ADR, 5YV.

50-100 miles: G3FFW, 8SB.

100-200 miles: G3BA, 3WW, 5RW.

200-350 miles: PA0AD, 0WL.

Over 400 miles: OZ2FR.

(RF27, 6-ele stack, 3-ele Yagi).

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

EI2W, G2DCI, 2FCV, 2HCG, 2HGR, 2IN, 2OI, 2XS, 3ABA, 3AGS, 3AOO, 3ATS, 3BA, 3BKS, 3BK, 3BLP, 3BW, 3CHY, 3CXD, 3DA, 3DH, 3DMU, 3DUP, 3DUS, 3ELT, 3EHY, 3GMX, 3HAH, 3HII, 3WW, 4HT, 4MW, 5CP, 5DS, 5KX, 5LI, 5MA, 5RW, 5TP, 5UD, 5YV, 6AG, 6CW, 6LC, 6LI, 6NB, 6VX, 6XM, 8AX, 8QK, 8SB, 8SY, GM3OL, GW2ADZ, 2FVZ, 3ENY, 5MQ,

ON4AP, 4BZ, 4IF, 4HC, 4UV, PA0AD, 0AJA.

(G7E into 640. City Slicker. May 21 to June 24).

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

G2BCY, 2DKH, 2FO, 2UO, 3CYU, 3DMK, 4JJ, 5QU, 5YV, 6LI, 8GL, ON4BZ, 4IW.

(June 2 to 26. RF26 into S640. 4-ele. v.w.s. in roof space).

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

DL4XS/3KE, F3CA, 3CT, 3LO, 3WH, 8EC, 8GH, 8JR, 8KF, 8LO, 8MX, 8NW, 8OL, 8OX, 8ZR, 9AE, 9DI, 9FT, 9MX, 9QC, ON4AP, 4BZ, 4GN, 4HN, 4HC, 4IF, 4LI, 4UV, 4VL, OZ2FR, PA0AD, 0BAL, 0BP, 0CJP, 0DOK, 0EO, 0FB, 0FC, 0IH, 0IK, 0NO, 0PN, 0RK, 0TF, 0TG.

(G2IQ converter into 8.4 mc IF. 8-ele stack, 30 ft. high).

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

Phone and CW: 100-150 miles: F8AA, 8NW, 9RL, G2HCG, 2WJ, 3ABA, 3BA, 3BK, 3DAH, 3DUP, 3HAZ, 4MW, 5JU, 6XY, 6YU, 8QY, 8SY, GC2CNC, 150-200 miles: G2IQ, 3AHX, 5UD, 8SB.

200-250 miles: G5YV, ON4AP.

250-300 miles: ON4BZ, 4HC, 4HN.

(Rx: G7E, G7E, 2x6C4 converter into 9 mc xtal controlled converter, into 1.6 mc IF/AF amp. Aerial:

4 cl. c/s beam, 22 ft. high. All heard May 30—June 21).

R. L. Bastin, BSWL 3484, 152 Avon Street, Coventry.

Phone and CW: All over 50 miles: G2AJ, 2AOK/A, 2BWJ, 2DLJ/A, 2FMF, 2HOP, 2MV, 2NH, 2OI, 2UO, 2XC, 2XV, 3BCY, 3BK, 3BLP, 3CGO, 3EHY, 3FAN, 3FSD, 3GHI, 3VM, 3WW, 4HT, 4MW, 4RO, 4SA, 5BM, 5DS, 5MA, 5TP, 5UD, 5WP, 6AG, 6CB, 6KB, 6LK, 6NB, 6VX, 6XM, 8AX, 8IP, 8OW, 8SB, 8SY, 8WV, GW2ADQ, 3EJM, ON4BZ, 4HC, 4IF, 4IW, OZ2FR, PA0AD, 0AJA, 0ALO, 0BAL, 0EO, 0FC, 0IK, 0LDG, 0PR.

(Rx: 6AK5, 6AK5, 6F6, 955—955 xtal controlled into RF 24 unit, 28 mc, into BC342-N 8-10 mc. 8 clc stack (top at 29 ft.) N—S. Location 200 ft. ASL. Also SWL 4 elem VWS Beam in roof space. May 25—June 27).

H. J. Balsam, 38 Wantage Rd., Didcot, Berks.

Phone and CW: 2AJ, 2AK, 2AOK/A, 2ATK, 2BUJ, 2BN, 2BVW, 2FNW, 2HCG, 2HDZ, 2HIF, 2MV, 3AVO/A, 3BCY, 3BA, 3BK, 3BKW, 3BLP, 3CCF, 3DUP, 3EHB, 3EHY, 3FZL, 3GHS, 3MI, 4DC, 4MW, 4SA, 5DF, 5LI, 5LI, 5MA, 5RP, 5RW, 5TP, 5UF, 6AG, 6CB, 6JK, 6KB, 6LX, 6NB, 6VX, 6YU, 8DM/A, 8IC, 8IL, 8SB, 8SY, 8VZ, GW2ADZ, GW3EJM.

(Rx: 2IQ Type Converter into "Commander". Aerial: 4 ele Yagi. 20 ft. high. May 27 to June 24).

extremes. At times the band has resembled 7 mc on a Sunday, and at other times, he says, it has seemed hardly credible that there were such things as 144 mc transmitters. He listened on 12 days and was fortunate enough to be in on the European party on June 4. He was disappointed at not hearing the DL's, but found it very enjoyable; he heard a weak OZ on 'phone, but could not get the full call. P.J.T. remarks that G2HCG's turnstile aerial was putting an S9+ signal into Bournemouth (100 miles to the South) while he was working PA and giving them S9 reports. So P.J.T. would like to erect a similar array! However, his Yagi at Bournemouth brought in 50 stations in 5 countries on June 4, so that also must be pretty efficient. For the information of P.J.T. and others, GC counts as a county (each island separately) and so do the EI counties.

A newcomer to this column and to VHF work is J. R. Paul (Lymington), who built his first converter for Two a few weeks ago. He has a 4-element very wide spaced Yagi up at 30 feet, and has been trying out some converter circuits, including the G2IQ and a cascode type. The beam is of the sort described in *Short Wave Listener* for September 1949, but he has found it necessary to bring the tapping points for the delta match closer together. In all, J.R.P. has heard stations in 15 counties and 4 countries.

J. R. Harman (Eastbourne) receives one or two Paris stations every night. DL4XS/3KE is also heard very consistently, often when nothing else is coming in from that direction. A cascode converter is on the stocks, but in the meantime the G2IQ job is working well.

TWO-METRE DX

R. L. Bastin (Coventry)	OZ2FR	486 miles
A. L. Mynett (Wembley)	DL3NQ	410 miles
E. A. Lomax (Bolton)	PA0IK	340 miles
R. Hastie (Hayes)	F3DC	221 miles
P. Finn (Iver)	G5BY	172 miles
R. A. John (Swansea)	G3BLP	168 miles
A. F. Hayton (Palmer's Green)	G5BD	116 miles

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

TWO-METRE COUNTIES HEARD

IN 1951

Starting Figure, 10

P. J. Towgood	...	...	38
E. A. Lomax	...	...	29
A. W. Blandford	...	...	26
R. L. Bastin	...	...	24
W. C. Askew	...	...	22
L. A. Whitmill	...	...	22
H. J. Balsam	...	...	22
J. R. Paul	...	...	15

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

ALL-TIME

Starting Figure, 10

E. A. Lomax (Bolton)	...	...	40
P. J. Towgood (Bournemouth)	...	...	39 (245)
A. W. Blandford (Mitcham)	...	...	30
R. L. Bastin (Coventry)	...	...	30 (123)
L. A. Whitmill (Harrow Weald)	...	...	28 (317)
W. C. Askew (Melton Mowbray)	...	...	25 (60)
H. J. Balsam (Didcot)	...	...	22 (79)
P. Finn (Iver)	...	...	17
J. R. Paul (Lymington)	...	...	15

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

Dutch Contest

The V.E.R.O.N., the Dutch amateur radio society, is organising a two-metre contest for all Europe over two weekends, September 22-23 and September 29-30. Activity should therefore be at a high level. If conditions are good this may be a grand chance to push up the records still further, so book the date with your receiver and be prepared for those new counties and countries.

In Conclusion

It is often possible to take really hot news qualifying for "Late Flash" treatment for some days after the routine closing date, but please do not ask us to amend Table scores or Calls Heard Lists, or anything else of a routine character, after the date given in these columns as "the latest." Such matter should be kept for the following month's reports. Thanks for all the interesting letters this time, and send next month's mail to A. A. Mawse, *Short Wave Listener and Television Review*, 55 Victoria Street, London, S.W.1, by July 26 latest.

Become a Direct Subscriber

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

DX broadcast

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

A LETTER has come in from Wm. Yates, Director of Radio New Zealand at 38 The Terrace, Wellington C.1, giving the frequencies and current schedules and C. Costello (Wellington, N.Z.) confirms these in his latest report. The schedules read: Daily: 1800-2045, 0700-Close Down—ZL2, 9540 kc and ZL8, 9620 kc; 2100-0645—ZL10, 15220 kc and ZL4, 15280 kc; Close Down is at 1045 (Monday to Friday), 1120 (Saturday) and 1000 (Sunday). From our own experience, there seems little likelihood of Radio New Zealand being heard here except, perhaps, in the very early mornings; for instance, at 0420 on June 2, ZL10 was fair with a sporting commentary. On June 13, after a session of dance music, we heard the words: "Hullo Children!" at 0500, and ZL10 has also been logged with a dramatic presentation commencing at 0300.

Radio Australia over VLB11, 11760 kc; VLA9, 9580 kc; VLC17, 17840 kc and VLG15, 15210 kc has been noted asking for technical reports or comments on programmes to be sent to: Radio Australia, Melbourne. F. W. Hattemore (Eastbourne) listens to Australian DX'ers Calling at 0700 on Sundays over VLA9 and VLB11; the former was audible at 1345 on June 3 with Australian Amateur (Talent) Hour, followed at 1400 by DX'ers Calling. C. R. Johns (Bournemouth) has listened at 0605 of News from Home and a Church Service over VLA9, and J. Lippold (Cricklewood, N.W.2) found VLA11, 11760 kc to be a good signal when opening with clock chimes and kookaburra laugh at 2000. We have noted, also, VLA15, 15200 kc with News from Australia read by Charles Peckover at 0440, and VLH15, 15230 kc with an Australian Eastern States weather forecast at 0259.

Australian Saturday Sports Session

was audible on June 2 over VLC21, 21680 kc and VLG15, 15230 kc with a Rugby League commentary at 0535, and at 0758 there was a recording of the commentator's words from Newcastle, N.S.W., as Broome scored a splendid last-minute goal for England to beat New South Wales at soccer by 3-1.

Asia

D. K. Cocking (Farnborough, Kent) says that Peking's signals on 15060 kc have been either very poor or non-existent since the middle of May, and mentions that the P.O.W. broadcasts are only made in the 0930-1000 and 2200-2230 sessions. We logged this channel at 1345 on June 3, when the female commentator said: "You have been listening to the News from Radio Peking." Taipih, Formosa on 6066 kc and 9619 kc gives a daily English broad from 1410 to 1427, according to J. A. Russell (Pasadena, California, U.S.A.).

R. Abrahams (Hounslow, Middlesex) finds Radio France-Asie, Saigon, good on 9524 kc at 2230, though sideband interference sometimes mars the quality; R. T. Blackmore (Exeter) has received their verification and current English schedule, which reads: 2230-2245, 9524 kc; 0000-0015, 9754 kc; 0130-0145, 11780 kc; 1000-1015, 11830 kc; 1400-1415, 11780 kc. There is an Entertainment feature daily at 0900 over 11830 kc, and the address for reports (which are welcomed) is: Radio France-Asie, 86 Rue MacMahon, Saigon, Indo-China.

In Malaya, Kuala Lumpur, 6024 kc is heard with English News at 1400 (J. A. Russell); J. C. Catch (South Shields) logged an English-speaking station on 4820 kc with lady announcer and closing with "God Save The King" at 0405 on June 4; this appears to have



Radio Andorra's main studio for broadcasting. PX-land has recently been in the amateur band news with a station signing 7B4QF, operated by a syndicate of visitors to Andorra!

been Radio Malaya, Singapore, on its allotted channel of 4825 kc.

Particularly good reception of YDE, The Voice of Indonesia, 11770 kc between 1900 and 2000 is recorded by J. Lippold; this station has a Mailbag feature on Tuesday evenings at 1030, when listeners' letters and reports are acknowledged.

Coming westwards, Delhi has been logged with News at 0800 on four channels in the 16-metre band by D. K. Cocking; the frequencies were: 17760 kc, 17800 kc, 17840 kc and 17890 kc. A number of correspondents refer to the excellence of Radio Ceylon. On June 12 at 1600 over 11975 kc there was a talk on India and Pakistan's athletic contests in the forthcoming Olympic Games (E. Lund, Morecambe, Lancs.); there is a Request programme on Saturdays at 1600; the transmission ends at 1630 with the tune: "When Day Is Done," the time being announced as "Ten o'clock Indian Time" (J. Lippold): the address is: Commercial

Service of Radio Ceylon, P.O. Box 574, Colombo, Ceylon. On 15120 kc, Radio Ceylon has been well heard at 1600 by D. K. Cocking and in the early mornings by J. C. Catch.

Damascus, Syria, 11922 kc has been a good signal at 2130 with its English transmission, according to J. Lippold. The programme consists of a Newscast and orchestral selections, the direction being: This is the Syrian Broadcasting Station Calling Europe from Damascus." R. T. Blackmore has heard them concluding their English broadcast at 2225. The Voice Of Zion, Jerusalem, 9000 kc has been logged with News at 2115 by C. R. Johns, who also noted Radio Ankara, 9465 kc with News from Turkey at 2100. Several readers, including R. Abrahams, have logged TAU, 15160 kc with a tremendous signal beamed on Europe at the same time. D. K. Cocking informs us that TAS, 7285 kc is not now in use for this transmission and appends this schedule: 1015-1200: TAQ, 15195 kc (TAV, 17840 kc in

parallel until 1115); 1600-200: TAP, 9465 kc and TAU, 15160 kc.

Africa

A letter is to hand from the Publications Executive of the South African Broadcasting Corporation, the following being an extract: "We would like to draw your attention to our African Service, which is apparently being received all over the world." We find reception of the 9870 kc evening transmission very variable.

Signals were S9 at 2000 on June 2 when the English News contained an item referring to the football match played that afternoon at Cape Town and in which Wolverhampton Wanderers defeated Western Province by 4-0. At 1730 on June 14, the Variety show: "Intimately Yours" from the Cape Town studios was followed at 1755 by a relay from London, with an account of the South Africans *v.* Northants

cricket match by Charles Fortune direct from the ground. Cape Town, 5892 kc, was once heard by us at S9 with a Saturday night late dance session around 2210. Lourenço Marques over CR7BU, 4930 kc, has been well heard at 1951 with a commercial style English programme, in which the address: P.O. Box 594, Lourenço Marques was quoted. R. A. Savill (Sevenoaks, Kent) has received a letter verification for Salisbury, Southern Rhodesia, 3320 kc; the postal address is: Broadcasting House, Manica Road, Salisbury, S.R. He has also obtained a verification from Cable and Wireless, Electra House, Kabete, P.O. Box 777, Nairobi, Kenya: 4885 kc is the *only* frequency quoted and the schedule is: Monday, Tuesday, Thursday, Friday, 1000-1100, 1500-1900; Wednesday, Saturday, 1000-1100, 1500-2000; Sunday, 0700-1000, 1500-1900. When we logged this station at 1815 on June 3, we listened to a talk by the

TABULATED SCHEDULES.

I. The Australian Broadcasting Commission. Head Office: Postmaster General's Department, 264 Pitt Street, Sydney, N.S.W.

Inland Schedules.

Melbourne, Victoria.

VLR6, 6150 kc: 2000-2215 (Sats: 2045-2215), 0830-1300.
 VLR9, 9680 kc: 2230-0830.
 VLH11, 11880 kc: 2000-2315 (Sats: 2045-2315).
 VLH15, 15230 kc: 2330-0815.
 VLH9, 9680 kc: 0830-1330 (Sats: 0830-1400).
 VLG15, 15210 kc: 2000-0030, 0145-0545 Weekdays), 2000-0545, Fri.-Sat. and (Sat.-Sun.).

Sydney, New South Wales.

VL16, 6090 kc : 2000-2245 (Sats: 2045-2230), 0715-1330 (Sats: 0715-1400).
 VL19, 9540 kc : 2300-0700 (Sats: 2245-0700).

Brisbane, Queensland.

VLQ9, 9660 kc : 2000-1300 (Fri: 2000-Sat: 1400), (Sat: 2045-Sun: 1330).
 VLM4, 4917.5 kc: 2000-1330 (Fri: 2000-Sat: 1400), (Sat: 2045-Sun: 1330).

Perth, Western Australia.

VLW9, 9610 kc: 2200-0215 (Sats: 2245-0215), 1015-1530 (Sat: 1015-1600) (Sun: 1045-1530)
 VLX4, 4897.5 kc: 2200-0215 (Sats: 2245-0215), 1015-1530 (Sat: 1015-1600) (Sun: 1045-1530)
 VLW11, 11830 kc: 0230-1000 (Suns: 0230-1030).
 VLX9, 9610 kc: 0230-1000 (Suns: 023L-1030).

Port Moresby, New Guinea.

VL17, 7280 kc: 2045-2245 (Fri: 2045-2230), (Sun: 2145-0100),
 0815-1245 (Sat: 0815-1300), (Sun: 0815-1200).
 VLT9, 9520 kc: 0200-0345 (Sat: 0200-0800), (Sun: 0200-0400),
 0600-0800 (Sats excepted).

II. South African Broadcasting Corporation, P.O. Box 8606, Johannesburg.

Experimental Transmissions

(i) 15230 kc: 0830-1215; 1400-1545.
 9870 kc: 1600-2005 (Saturdays until 2145).
 On Sundays, Mondays, Wednesdays, Fridays--Afrikaans.
 On Saturdays, Tuesdays, Thursdays--English.

(ii) South West Africa Service.

9680 kc: 0445-0630 (Sundays: 0555-0630), 0815-1215, 1400-1630
 (Sat: and Sun: Continuous 0815-1630), 1640-2105
 (Saturdays: 1640-2145).
 English programmes throughout.

Secretary of the Milk Marketing Board of England and Wales; in it he made a comparison between the milk producing area around Bombay and the East Africa milk producing cattle centre of Mombasa and the related pasteurizing plant in Nairobi.

On May 18 at 2250, R. T. Blackmore logged Brazzaville, 11970 kc with an interview (in English) with the American film star, Humphrey Bogart, who had just arrived in Africa to take part in scenes being filmed there for his new picture. D. K. Cocking offers OTC2, 9745 kc with "a 'smashing' signal and programme in every sense of the word, both at 1900 and 0310." R. Abrahams has been agreeably surprised to hear Sao Tomé, 4807 kc regularly just before the close-down at 2105; there is a dance session, and at 2103 gong-notes herald a frequency announcement and the final announcement: "A qui Sao Tomé, Radio Club de Sao Tomé e Principe" before the playing of the Portuguese National Anthem. A. E. Nichols (North Shields) hears CR4AA, Praia, 5893 kc before it closes down at 2124, but J. C. Catch observes that on this measured frequency they usually terminate at 2200. The slogan is: "Radio Club de Cabo Verde." R. Abrahams says that, CSA93, Ponta Delgada, 4845 kc has been a very good signal at 2200 with a single vibraphone note and the words: "A qui Ponta Delgada, Emissora Regional dos Açores, Emissora Nacional:" from this station he heard a fine recording of the Hungarian Rhapsody with orchestra under the direction of Leopold Stokowski.

E. Lund wonders if other listeners hear Addis Ababa, Ethiopia, nowadays, for he does not! ETA on 15032 kc appears to be inactive, and on 9620 kc, the daily transmission does not seem to be able to penetrate the QRM. Omdurman on its new channel of 18070 kc is a good signal for its weekly Friday transmission, which now takes place at 1700, though R. Abrahams heard the English News at 1730 and this was followed by a discussion on local government in the Sudan.

At 1730 on June 8 we noted the following announcement: "This is Omdurman Calling! We shall be on the air next Friday at the same time, 7 p.m. Local Time, 1700 GMT, on the short wave-lengths of 16.6 and 30.78 metres and on a medium wave-length of 524 metres. Goodnight Everybody, Goodnight."

North America

J. C. Catch has lately received a new verification from OXI, Greenland, for its 6678 kc channel. During the month we logged faint signals from OXI, 5942 kc with music at 2225 and on 6678 kc with News at 2300. C. P. Turner (Crewe) heard CKLO, Sackville, New Brunswick, 9630 kc signing on at 0405 with National Anthem followed by a United Nations broadcast. At 0310 on June 2, CHNX, 6130 kc was logged with a local News for Nova Scotia and the baseball results; at 0315 the weather forecast included a sunny Sunday outlook for Halifax. The final direction which followed read: "This is M.B.C.—The Maritime Broadcasting Company." CKCX, 15190 kc was once heard at 1700 with an interesting educational feature entitled: "Let's Look At Science."

In the United States, WRUL, Boston, 6040 kc was heard closing with the playing of "The Star Spangled Banner" at 0345; R. Abrahams finds WRUL, 15350 kc good at 2000, and he forwards their basic programme schedule. The European broadcasts extend from 2000 to 2100 over 15350 kc and 17800 kc. J. S. Bollard (Chester) tells us that he enjoys listening to the Sunday programmes from WABC1, 9590 kc, 11830 kc; WABC2, 15270 kc; WABC5, 15130 kc; WABC3, 17830 kc, and WABC6, 21500 kc. C. R. Johns likes the Voice of America Sunday feature: "Of, By and For the Radio Amateur" heard at 1915 over WGEO1, Schenectady, 9530 kc: C. P. Turner noted KCBR2, Los Angeles, 15310 kc in the early mornings around 0400-0500 with an AFN broadcast to the Pacific area.

South America

The new Chilean CE1515, Santiago, 15150 kc is reported by J. C. Catch to be heard regularly after 2245 nightly. CE1174, Santiago, 11740 kc was logged here with pasadobles around 0425; the frequent direction was: "Difusora Nuevo Mundo," and the address for reports is: Sociedad Radioemisora Nuevo Mundo Ltda., Alameda Bernardo O'Higgins 924, Santiago de Chile. CE622, Santiago, 6223 kc, operated by Radio Sociedad Nacional de Minería was heard with slogan and closing with soft music at 0408.

R. T. Blackmore logged LRT, Tucuman, 11840 kc with vocal musical items, followed at 2245 by the identification: "LRT, Radio Independencia."

R. Wales (Douglas, I.O.M.) has been listening to the Argentina International Broadcast Service to the United Kingdom at 1800-2027 over its new outlet of 17720 kc; D. K. Cocking says that the signal is superb, and E. Lund likes the feature "Argentina Today" at 1930. Congratulations to R. Abrahams, whose name figured in the S.I.R.A. Programme Honours List for May/June; R.A. recommends particularly their "Musical Almanac" at 1930 daily.

In Peru, a station on 5910 kc gave Dvorak's Humoresque at 0350 on June 2, and OAX4H, Radio Mundial, Lima, 6350 kc has been heard closing with soft music at 0504. Ecuadoreans have been moderate: HC2RL, Guayaquil, 6635 kc gave orchestral items around 0420 and concluded with the National Anthem at 0442 on June 13. HC2AK, Guayaquil, 4651 kc has been logged closing at 0400, and HC2ET, 4712 kc twelve minutes later. HC1AC, Quito, 6210 kc gave a single gong-note followed by the direction: "Radio La Voz de La Democracia" at 0400. J. Lippold has received HCJB's verification for 9958 kc; a covering letter explains that HCJB operates six transmitters of modern technical design, these having been built in Quito by the station's own technical staff; the 17890 kc aerial is beamed on Europe. At the present time, HCJB is in the midst of general reorganisation, which they hope will greatly alter the technical picture by giving a total power increase of 100 kW; with additional ground space which will allow for higher gain aerials to be erected, it is expected that there will be greatly improved world-wide reception. E. Lund has listened over 17890 kc between 1900 and 2030 to hymn-singing and evangelistic talks.

In Brazil, ZYC2, Sao Paulo, 9510 kc has been heard with a sponsored programme amount 0200, and we logged Emissoras Associadas de Recife, Radio Tamandare, 3265 kc with a brass band feature at 0210 on May 30. J. C. Catch has noted a new Brazilian as early as 2130 on 4975 kc. He has lately received a verification for YVKR, Radio Caracas, Venezuela, 4923 kc; and A. E. Nichols spotted YVKC, 4890 kc with slogan: "Radiodifusora Venezuela" when closing at 0430. A.E.N. also heard HJKD, Bogota, Colombia, 6000 kc at 0325 with a programme of organ music and announcing as: "Emisora Nuevo Mundo." ZFY, Georgetown, Britain Guiana, 5981 kc has just sent

R. A. Savill a verification for a report dated more than twelve months ago!

Central America

HRXW, Radio Comayagueta, 8990 kc gave a definite Spanish announcement at 0230, but J. C. Catch is mystified by the station heard on this frequency at 0001 with chimes, announcements in French, the "Army Air Corps March" and a following French News. Any offers?

HRN, Tegucigalpa, 5875 kc gives a Spanish News at 0300, and HRA, 5940 kc has been noted at 0355 relaying an orchestral broadcast from the BBC in London. It closed with the call: "Hatchay-Erray-Ah" at 0400.

We have logged the Guatemalan Missionary station TGNA on a new announced frequency of 5955 kc; "From Greenland's Icy Mountains" is the closing hymn at 0338, prior to which there is a request for reception reports and particulars in respect of the new outlet. The address given is: "Radio Station TGNA, Box 601, Guatemala City." Other Guatemalans are TG2, 6620 kc and TGZA, 6660 kc, both with music at 0250 and closing at 0300; also, TGTQ, 6285 kc with marimba music at 0510, announcing as "Radio Internacional" at 0555 and closing down at 0620. A. E. Nichols heard YNBH, 6550 kc with popular dance recordings at 0420 and closing at 0500 with three vibraphone notes and direction: "Radio Panamericana." J. C. Catch offers TIPG, Costa Rica, 9620 kc, closing at 0425 with the tune: "Ah! Sweet Mystery Of Life"; you will certainly hear the words: "La Voz de la Victor" included in its closing announcements.

In Salvador, YSUA, 6250 kc has been a very powerful signal when closing at 0500; and YSR, 6275 kc announced as: "Radio Internacional, Republica de El Salvador" at the same time. On June 2 at 0300 over 9505 kc we heard the words: "This is Radio Atlantico, Station HOLA in Panama City. The time here is five seconds before 10 p.m." J. C. Catch has a new verification for HO50 on 6045 kc. In Mexico, XEWW, 9500 kc gave a Spanish News with frequent mention of Mexico at 0255; and XEBT, 9625 kc was heard with Liszt's Liebestraume at 0405.

In the West Indies, Radio Jamaica has discarded the call-sign ZQI and operates as follows: 4950 kc and 880 kc: 1130-1400, 1700-1900; 3360 kc and

880 kc: 2100-0400. A. E. Nichols logged HI4T, Trujillo, 5970 kc with direction: "La Voz Dominicana" at 0315, and HI2T, 9760 kc with a Spanish talk on 0310. In Cuba, COBZ, 9035 kc with a sponsored programme was good at 0415, and COKG, 8955 kc announced as: "Santiago de Cuba" at 0417; COCQ, 8825 kc has been excellent with Latin-American "swing" music at 0255.

Europe

C. Costello informs us that Denmark now broadcasts to the Pacific at 0930-1030 on Tuesdays, Thursdays and Saturdays over 15180 kc. D. K. Cocking heard the 9520 kc broadcast terminating at 0215. A Letter-Box programme from Radio Norway at 1930-2000 on May 30 began and ended with English announcements over LKV, 15170 kc.

D. C. Cocking writes: "It is my opinion that the best frequency and time for the Swedish DX'ers programme on Saturdays is SDB2, 10780 kc at 1515; I find bad fading on both QRG's, 6 and 15 mc on the morning BC at 0715—do other people?"

C. R. Johns likes Radio Switzerland, 11875 kc at 1900 with the weekly Sunday feature: "Europe At Work," and he noted Radio Espana, Madrid, 9368 kc at 2010 with interesting musical and poetic items. R. Abrahams forwards the latest schedule for Radio Athens, which gives an English broadcast at 1930-1945 over 11718 kc; he also received Radio Moscow's summer schedule, together with a coloured picture postcard of the "Moskva Hotel." Finally, C. P. Turner and R. A. Savill mention Radio Sofia, Bulgaria. C.P.T. gives their English schedule: 15310 kc: 0400-0415; 7670 and 6204 kc; 2000-2025 and 2100-2130; their card gives R.A.S. a 100% verification for European countries. Well done!

Please send your comments for next month to: R. H. Greenland, *Short Wave Listener and Television Review*, 55 Victoria Street, London, S.W.1, to reach this office not later than August 15.

"NO BAND FOR DABLERS"

This article, appearing in our February issue, has provoked (somewhat unexpectedly) a strong reader reaction. Opinion is about evenly divided between

those who consider our contributor has made out a good case, and those who think that the existing regulations are fair and reasonable. The latter school contends that basic knowledge of radio (as called for by the R.A.E.) would in any case be essential to enable anyone to dabble successfully on any band, particularly in the VHF regions.



TOP BAND TESTS

This is the time to remind readers interested in DX reception on the Top Band that during the coming season we shall again be running, through *Short Wave Magazine*, a series of 1.7 mc DX Tests. Dates are not yet finally fixed, but the period will be December to February, and following the outstanding results of the last series, world-wide support is expected.

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SHORT WAVE BROADCAST STATIONS

Revision 50.25-84.51 Metres

Giving Frequency, Wavelength, Callsign and Location

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

Fre- quency	Wave- Length	Callsign	Location	Fre- quency	Wave- Length	Callsign	Location
5970	50.25	CBNX	St. Johns, Canada	4895	61.29	PRF6 HJCH	Manaos, Brazil Bogota
5968	50.26	HVJ	Vatican City				Johannesburg
5965	50.29	OAX4S	Lima, Peru	4890	61.35	H13C YVK6	La Romana, D.R. Caracas
5960	50.34	RW109 HJCF	Moscow Bogota			ZEAH	Salisbury, R.S.
5951	50.41	4V2S	Port-au-Prince	4885	61.41	HJDP	Medellin
5950	50.42	OAX4P	Huancayo, Peru Panama City	4880	61.48	VUC2 YVKF	Calcutta, India Caracas
5942	50.49	OXI	Godthaab, Greenland	4878	61.50		Pietermaritzburg
5940	50.51	COM4 HRA	Bissau, P. Guinea Tegucigalpa	4875	61.54	HJFH	Armenia, Colombia
			Moscow	4865	61.66	PRC5 HJFA	Belem, Brazil Pereira
5920	50.68		Lima, Peru				Srinagar, Kashmir
5908	50.78	OAX4V OAX4Z	Lima, Peru	4860	61.73	JKL YVPA	Yamata, Japan San Felipe
5896	50.88		Praia, C. Verde Is.				
5895	50.89	CR4AA					
5892	50.92	ZRK	Cape Town	4855	61.79	VQGI HJCA	Nairobi, Kenya Bogota
5880	51.02	YNCS	Managua, Nicaragua			YDK	Palembang, Java
5875	51.06	HRN	Tegucigalpa			YVMS	Barquisimeto
5870	51.11	TIPGH	San Jose, Costa Rica	4850	61.86	HJGF	Bucaramanga
5855	51.24	CP15	La Paz, Bolivia	4847	61.90	CSA93	Ponte Delgada, Azores
5840	51.37	OAX1B	Piura, Peru	4845	61.92	ZYU8 HUB	Teresina, Brazil San Salvador
5800	51.72	CE8AA	Santiago, Chile			VUB2	Bombay, India
5758	52.10	PZH5	Paramaribo			YVOI	Valeria
		YNJAT	Leon, Nicaragua	4840	61.98	YDI4	Denpasar, Bali
5726	52.41	HCP1M	Quito, Ecuador			HJKE	Bogota
5620	53.38	OAX2A	Trujillo, Peru			YVOA	San Cristobal
5580	53.76	HJ	Tulcan, Ecuador	4835	62.05	ZYE7	Parnaiba, Brazil
5260	57.03		Ulan-Bator, Mongolia	4828	62.14	HJED	Cali
5200	57.69	YSCP	San Salvador	4825	62.18		Singapore
5060	59.29	YVKD YDJ	Caracas, Venezuela Djogjakarta, Indonesia			CR7BV YVRC	Lourenco Marques San Fernando de Apur
5045	59.46	ZYB23 HI8Z	Petropolis, Brazil Santiago, D.R.	4820	62.24	XEJG CE482	Guadalajara, Mexico Antofagasta, Chile
5040	59.52	YVKM	Caracas			HJBB	Cucuta
5050	59.64	YDQ	Makassar, Celebes			YVMG	Maracaibo
5020	59.76	YVKO	Caracas	4815	62.31	HJDU	Medellin
5010	59.88	PJCI	Willemstad, Curacao	4810	62.37	ZYS8	Manaos, Brazil
5000	60.00	WVW	Washington, D.C.	4805	62.43		Sao Tome y Principe
4990	60.13	YVMO	Barquisimeto			YVME	Maracaibo
4985	60.18	HCQRX	Quito, Ecuador				Johannesburg
4980	60.24	HI1A DYB2 OQ2AC	Santiago, D.R. Bacalod, P.I. Elizabethville	4790	62.63	YVQC	St. Denis, Reunion
4975	60.30		Caracas, Venezuela	4785	62.70	HJAB	Bolivar
4967	60.40		Karachi, Pakistan			ZYM6	Barranquilla
4965	60.42	HJAE ZIK2	Kartagena, Colombia Belize, B. Honduras	4780	62.76	YVLA	San Luiz, Brazil Valencia
4960	60.48	VUD2 YVQA HC5HP	Delhi, India Cunama Riobamba, Ecuador	4777	62.80	HJGB	Singapore
		HJQC	Bogota	4766	62.95	HC4FA	Bucaramanga
4950	60.61	ZOI H1L	Kingston, Jamaica Trujillo, D.R.	4752	63.13	YVMA	Portoviejo, Ecuador
4948	60.63	HJCW	Bogota	4738	63.30	HC11M	Maracaibo
4940	60.73	YVMQ	Barquisimeto	4725	63.49	HC5BE	Ibarra
		JKM	Kawachi, Japan	4721	63.53	HC6VT	Punta
4935	60.79	HJAR	Manizales	4712	63.66	HC2ET	Abato
4931	60.84	HJAP	Kartagena	4651	64.50	HC2AK	Guayaquil
4930	60.85	CR7BU	Lourenco Marques	4373	68.60		Johannesburg, S.A.
4920	60.98	VUM2 YVKR	Madras, India Caracas	4370	68.05	YDI2	Sourabaya, Java
4918	61.01	VLM4	Brisbane, Queensland	4170	71.94	TGOA	Tanaharive, Mad'car
4915	61.04	ZOY YDB2	Accra, Gold Coast Djakarta	4025	74.53		Guatemala City
4910	61.10	JKI	Nazaki, Japan	3990	79.20		Isfahan, Iran
4907	61.14	YVMM	Coro, Venezuela	3950	75.95		Mecca, Saudi-Arabia
4900	61.22	ZOH YVQE	Colombo, Ceylon Bolivar, Venezuela	3935	76.24	HC5EH	Cuenca, Ecuador.
		HJAG	Barranquilla	3914	76.65	ZQP	Lusaka, N. Rhodesia
4898	61.26	VLX4	Wanneroo, W. Australia	3800	78.95	ZEB	Bulawayo, S. Rhodesia
				3790	79.16	JOAK	Tokio, Japan
				3775	79.47		Jodhpur, Rajputana
				3620	82.87	YVLG	Maracay, Venezuela
				3590	83.50	YVQA	Sucre, Venezuela
				3550	84.51	YVOC	San Cristobal

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