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SHORT WAVE LISTENER



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SEPTEMBER 1949
VOLUME 3 · NUMBER 10

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THE **SHORT WAVE** LISTENER

A MONTHLY MAGAZINE FOR THE LISTENING AMATEUR

VOLUME 3

SEPTEMBER 1949

NUMBER 34

Conducted by the Staff of
The Short Wave Magazine.

EDITORIAL

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matter should be addressed to
The Short Wave Listener, 49
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Payment at good rates is offered
for articles of short wave listener
interest.

Reflections

In the glistering heat of the last two months—right in the holiday period—it might have been expected that SWL activity would have slackened off considerably. For us, this would have been reflected in a marked fall in the volume of mail for our news feature articles and perhaps a reduced demand for the *Short Wave Listener* itself.

These are tendencies for which we always watch carefully during the period June-September. In fact—as we have been able to report in previous years—no such results have yet been noticed. This must mean that the really keen SWL is quite indifferent to the season of the year and that the demand for the *Short Wave Listener* is steadily increasing. These are happy auguries for the future, in which we take both pride and pleasure. Indeed, it is certain that this journal is directly responsible for bringing many new recruits into the field, a large proportion of whom go on to become fully qualified amateurs.

Since the term “fully qualified amateur” implies the ability to construct much of one’s own gear, recent issues of the *Short Wave Listener* have carried up-to-date constructional articles on just that type of equipment which the SWL requires and can build himself.

This is in keeping with our policy to provide, through these pages, all that the SWL needs to enable him to maintain a progressive and balanced interest in his hobby.

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

adequate results for the purpose of the unit.

The smoothing circuit, employing a large choke and two 8 μ F electrolytic condensers, may appear excessive, but this does ensure clear reproduction, which is essential when the unit is fitted in a noisy location. For normal home or office use, a small midget choke and one condenser is all that is required.

The selector switch is the ordinary 12-position rotary type, while the "change-over" switch is of the Post Office press-to-talk pattern. Should a rotary switch be employed for this latter operation, care must be taken to ensure that it "breaks" before "making." As will be seen from the diagrams, the object of the "talk/listen" switch is to decide in which order the two speakers in circuit (master-unit and sub-station), will be connected to the microphone and speaker transformers.

The call buzzer is mounted under the chassis, while the battery for it is housed above the smoothing choke.

Dropper Resistance

This is mounted vertically on a normal 6 in. \times 3 in. \times 1 in. wood block, and is protected by a cage made from $\frac{1}{2}$ in. mesh wire netting. The input passes through a pair of cartridge fuses to the resistance, and the output is connected to a 3-pin 2

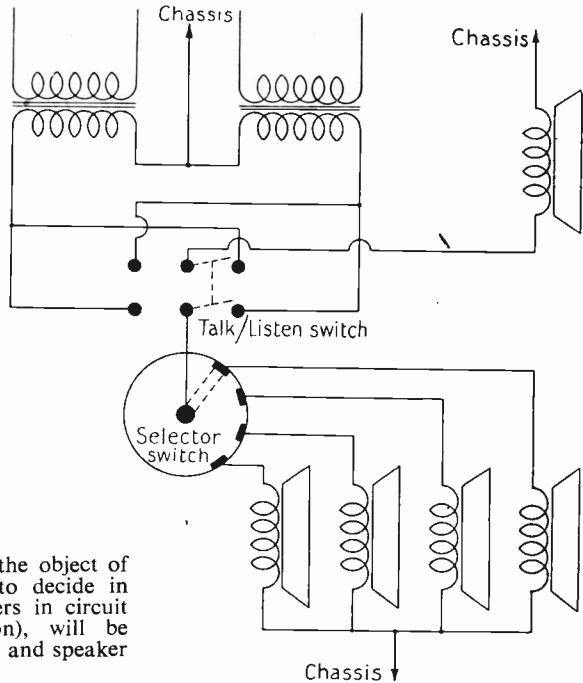


Fig. 2. The switching connections.

ampere socket. The power supply is to the master unit by a three-core flex, having a 3-pin 2 ampere plug top at each end.

For working off 115 volts, the appropriate terminals of the resistance can easily be shorted.

Sub-stations

These consist of a 5 in. speaker mounted in an external cabinet 6 $\frac{1}{2}$ in. \times 6 $\frac{1}{2}$ in. \times 3 $\frac{1}{4}$ in., with a small bell push on the top. The speaker and push are connected to separate pairs of sockets at the rear.

Each sub-station bears a number, which corresponds to a similar number on the selector switch of the master unit.

General

Twin bell wire is suitable for all wiring to sub-stations, and the employment of a battery call system ensures that there is no current carried by the connecting wires.

To call a sub-station from the master unit, the selector switch brings in the

TABLE OF VALUES

Circuit of the Inter-communicator Unit

- C1 = .004 μ F
- C2 = .05 μ F
- C3, C5 = 25 μ F
- C4 = .01 μ F
- C6, C7 = 8 μ F
- R1 = 50,000 ohms
- R2 = 100,000 ohms
- R3 = 250,000 ohms
- R4 = 2,000 ohms
- R5 = 1,000 ohms
- R6 = 500 ohms
- R7 = Dropper resistance (See text)
- V1 = 6K7
- V2 = KT32
- V3 = U31
- LFC = LF choke
- F = Suitable fuse
- S = On-off switch

station required, and it is only necessary to speak to the distant unit.

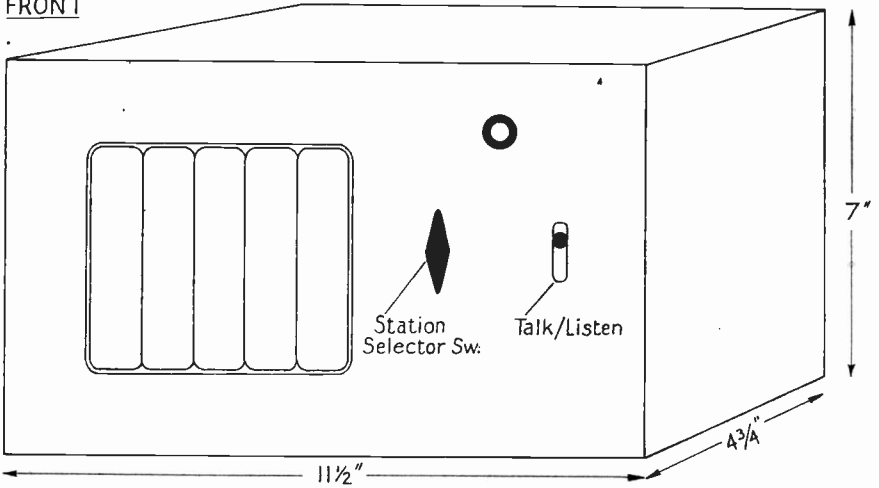
To call the master unit, press the push-button on top of the sub-station a number of times corresponding to the number of the unit ; the operator at the master unit then sets his selector switch to the number of rings he has heard, and conversation is established.

Other Uses

The lead from a pick-up can be connected direct to a pair of sub-station terminals on the rear panel of the master unit, thus providing an inexpensive radiogram.

When installed in a flat, a sub-station can be sited on, or near, the front and/or back doors ; it is then possible to carry on

FRONT



REAR

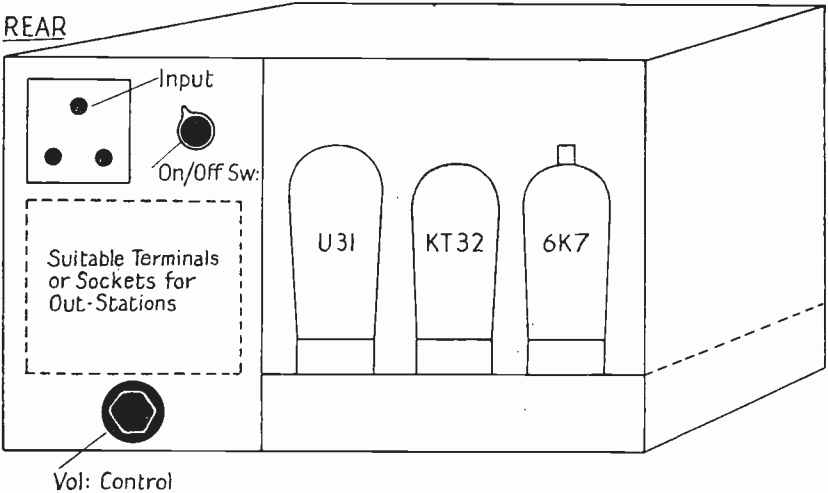


Fig. 3. General layout arrangement for the Master unit. It can be built into any convenient box and need not be bulky.

a conversation with callers (including tradesmen) direct from the flat itself.

The master unit will reproduce (2 to 1) the output of an ordinary radio set in the same room (not necessarily adjacent to the unit itself), to other rooms, or offices, in the building.

In large houses or flats, a sub-station can be sited in the children's nursery, with the result that cries from the children can be heard immediately.

Similarly, it can be employed in a building for checking the presence of intruders, if any suspicious sounds are heard.

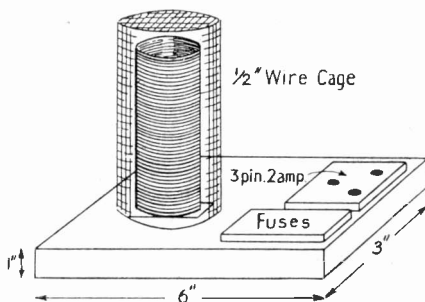


Fig. 4. Arrangement of the mains-dropping resistor unit.

DIRECT SUBSCRIBERS

Readers who would like to be sure of the *Short Wave Listener* every month by having it delivered by post on publication are invited to become direct subscribers. The cost is 16s. a year of twelve issues, post free; order to the Circulation Manager, *Short Wave Magazine, Ltd.*, 49 Victoria Street, London, S.W.1.

LICENCE FIGURES

At the end of June, BCL licences totalled 11,910,850, being an increase of 36,900 over the figure for May. TV licences increased by 7,050 to a total of 147,900.

"RADIO AMATEURS' PROGRAMME"

Amplifying the note on p. 274 of our August issue regarding the "Voice of America" programmes for amateurs, we are informed that reports and comments on these transmissions can be sent to: Gene Kern, Broadcasting Division, Department of State, 224 West 57th Street, New York City, N.Y., U.S.A.

2 useful **EDDYSTONE** Publications

1. "Making the most of your Receiver"

This interestingly written booklet will prove fascinating to the enthusiast who can improve his reception by following the suggestions outlined in its pages. It is newly published and contains up-to-date information on Short Wave Aerials, General Purpose Aerials, Shipboard Aerials, users of an earth electrical interference, etc.

Price 1/-. At your local Eddystone Dealers

2. The **EDDYSTONE** 145 Mc/s Guide

This interesting Booklet is in popular demand. It describes a compact and efficient converter using readily obtainable valves and a crystal-controlled transmitter capable of an excellent performance. Both units are tried and tested, and you can rely on getting really good results.

Perhaps you are a little doubtful about 2 metres? It is an easy band on which to get going, and the units described in the Eddystone 145 Mc/s Guide will not take you long to put together.

Or do you just want a receiver? The converter in the Guide is very fully described, and construction has been simplified, without sacrificing performance. Difficult metal work is avoided if you obtain the ready drilled chassis, etc. The converter can be used with any receiver which tunes to 10 Mc/s.

EDDYSTONE 145 Mc/s GUIDE. : PRICE 1/6 : GET A COPY TO-DAY

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Vision Receiver with valves	...	£3 13 6
Sound Receiver with valves	...	£2 14 6
Time Base with valves	...	£2 7 6
Power Supply Unit with valves	...	£6 3 0

In addition you will need :

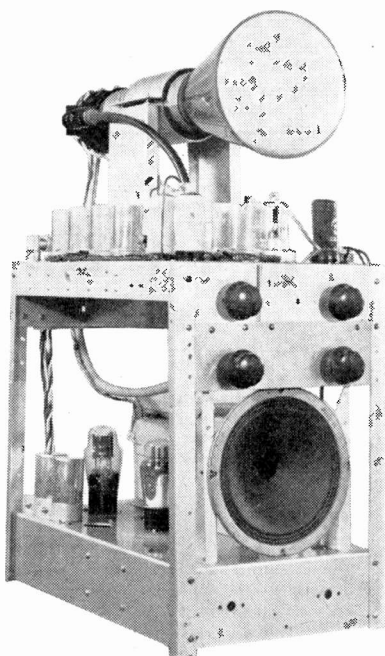
VCR97 Cathode Ray Tube	...	£1 15 0
Set of Tube Fittings and Socket	...	7 0
6in. PM Moving Coil Speaker	...	16 6

The Instruction Book costs 2/6, but is credited if a Kit for the complete Televisor is purchased.

Any of these Kits may be purchased separately ; in fact any single part can be supplied. A complete priced list of all parts will be found in the Instruction Book.

20 valves are used, the coils are all wound and every part is tested. All you need to build a complete Television Receiver are a screwdriver, a pair of pliers, a soldering iron and the ability to read a theoretical diagram.

Modification details for the Birmingham frequency will be available shortly.



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PSE QSL

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

- AG2AB HQ. and HQ. Co., 351 Inf., A.P.O. 209, c/o Postmaster, N.Y., N.Y., U.S.A. 14 and 28 mc 'phone and CW. State type of Rx used.
- CO2JL Lealtad No. 660, Habana, Cuba. 7, 14 and 28 mc 'phone and CW, 1900-0100 GMT.
- CT1IT Rua Zaire 26, Lisbon, Portugal. Modulation of 7033, 7185 and 14066 kc 'phone and CW.
- DL1EQ Pettenkofersstr. 11, Munchen 15, Germany. 14014.5 and 28029 kc CW, operating evenings.
- DL1KU B. Willers, Ammerlanderheerstr., Ofen in Oldenburg, Germany. 3.5, 7, 14 and 28 mc CW.
- DL1MK Soedingstr. 11, Hagen/Westf, Germany. 3.5 and 28 mc 'phone, operating at 1200-1300, 1630-1800 and 2100-2300 GMT.
- DL1MN Spichernstr. 11, Hagen/Westf, Germany. 3.5, 7, 14 and 28 mc 'phone and CW, operating at 0500-0600 and 1600-2200 GMT.
- { DL1MY Rathausstr. 20, Alsdorf, Germany.
DL1NA Ohlgsberg 2, Alsdorf, Germany.
DL1NF Bahnhofstr. 57, Alsdorf, Germany. }
- Modulation and tone of 3.5, 7 and 14 mc CW and 'phone, 0400-0700 and 1800-2359 GMT.
- DL2PD J. Chandler, 1 Wireless Regt., R.Sigs., B.A.O.R. 3, 3.5, 7 and 14 mc CW, VFO, 0600-0900 and 1400-2359 GMT. Details of stability and tone, and of stations calling DL2PD.
- EA3DK c/o Valencia No. 506, Barcelona, Spain. 14250 kc 'phone, VFO, 2200-2359 GMT.
- EA3FL Calvo Sotelo 10, Sabadell, Barcelona, Spain. Operating 7 and 14 mc 'phone.
- EASAF Puerto Rico 37-2a, Valencia, Spain. 7 and 14 mc 'phone and CW, 2100-2300 GMT.
- EAØHK Postbox 6034, Madrid, Spain. Operating 14 mc 'phone in Spanish Guinea.
- GW3FBX 175 Caerphilly Road, Birchgrove, Cardiff. 7, 14 and 28 mc CW operation.
- G3FHL 34 Wharfage, Ironbridge, Salop. Quality of 3510-3560, 3600, 7010 kc CW, 0500-0800 GMT.
- G5QA Lendorie, Birchy Barton Hill, Exeter. 145-224 mc 'phone and CW, 2130-2300 GMT.
- G5QQ Rowallan, Canada Drive, Rawdon, Leeds, Yorks. 7 mc CW, and quality of 7 mc 'phone.
- HA1PA Via A. G. Barrili 49, Roma, Italy. 14 and 28 mc CW, 0001-0300 GMT.
- HA1XB Via S. Jacopo Acquaviva 31, Roma, Italy. 7, 14 and 28 mc 'phone and CW, operating at 0600-0900, 1100-1300 and 1800-2300 GMT.
- HA1ZN Post Box 44, Crema, Cremona, Italy. Operating 7, 14 and 28 mc 'phone.
- HBKK Via Teatro Vecchio 13, Mantova, Italy. 14250 kc 'phone, operating 1800-1815 GMT.
- HA1AN P.O. Box 10, Corigliano, Italy. 3.5, 7, 14, 28 mc 'phone, 1500-1700 and 2100-2359 GMT.
- KG4AD Box 350, Navy 115, c/o F.P.O., N.Y., N.Y., U.S.A. 14 and 28 mc 'phone and CW, operating at 2100 GMT, and at weekends.
- ON4SF 26 rue du Merklein, Brussels, Belgium. CW operation in 3.5, 7, 14 and 28 mc bands.
- PY2FT P.O. Box 286, Sao Paulo, Brazil. VFO-controlled 14 and 28 mc 'phone and CW.
- PY2LM Faz. Curral das Pedras, Pedregulho, Sao Paulo, Brazil. 14 and 28 mc 'phone and CW, VFO.
- PY3QO Rua Dr. Barros Cassal 667, Porto Alegre, Rio Grande do Sul, Brazil. 14 and 28 mc 'phone, VFO, operating 2000-2300 GMT.
- SM5GH Linnegatan 85, Stockholm, Sweden. 7 and 14 mc 'phone and CW, operating 1400-1530 and 1900-2000 GMT. Details of modulation.
- VE1DD 14 Pine Street, Dartmouth, Nova Scotia, Canada. 14110 kc CW, 1400-1800 GMT; 3542.7 kc or 3.5-3.6 mc CW, VFO, 0001-0500 GMT.
- VK2AMB 31 Murdoch Street, Cremorne, N.S.W., Australia. 14000-14120 kc CW, 14150-14400 kc 'phone, 0600-0800, 1100-1400, 0001-0200 GMT.
- VQ3AA S. H. W. Tanner, c/o Traffic Dept., E.A.R., Dodona, Tanganyika. 7, 14 and 28 mc 'phone.
- V52AO 5 Bukit Bintang Road, Kuala Lumpur, Malaya. 14 mc 'phone, 1500 GMT. Details of quality and condx, and of aerial and Rx used.
- VU2ARCI P.O. Box 6666, Bombay, India. 14.3 and VU2SWL 28.4 mc 'phone and CW, 1100-1700 GMT. Report quality of modulation.
- W1FN 11 Taft Avenue, White River Jct., Vermont, U.S.A. VFO-controlled 14 mc CW operation.
- W1QMJ Box 216, Norwell, Mass., U.S.A. Compare with W1PSD, W1WC and stations of East Mass. Net, 3745 kc CW at 2215-2315 GMT.
- W2AFO 4143 Boyd Avenue, Bronx 66, N.Y., U.S.A. VFO-controlled 14 mc 'phone and CW, operating 1100-1400 and 0130-0330 GMT.
- W2HY 1951 Ford Street, Brooklyn 29, N.Y., N.Y., U.S.A. Stability of 14 mc CW, VFO, 1600-0700 GMT. Also details of stations calling W2HY.
- W2OUS 5 Alston Court, Red Bank, New Jersey, U.S.A. VFO-controlled 'phone and CW, 0200-0300, 1300-1500 and 1630-1730 GMT.
- W3NSV 113 N. Ann Street, Baltimore, Maryland, U.S.A. 14060 kc CW, VFO, 2100-2359 GMT.
- W3OCU 1008 Lindale Avenue, Drexel Hill, Pa., U.S.A. Operating 14 mc CW and 28 mc 'phone.
- W3ORU 5031 Bond Avenue, Drexel Hill, Pa., U.S.A. Comparative reports, and stability of 7 mc CW, 2100-0400 GMT.
- W3TVA A. Bellavit, RFD1, Pittsburgh 21, Pa., U.S.A. Quality of 3500-3510 kc CW, 0500-1000 GMT. Give details of aerial and Rx used.
- W4KBP 554 E. Fourth Street, Newport, Ky., U.S.A. 28040, 28092 and 28146 kc CW and 'phone, also VFO-controlled 14 mc CW operation.
- W4NLY 1329 N. Fern Creek Avenue, Orlando, Fla., U.S.A. Operating 28 mc 'phone and CW.
- W4NWJ Box 322, Robersonville, N.C., U.S.A. VFO-controlled 28-8-29-0 mc 'phone, operating 1230-1330 GMT, Sundays 0930-1330 GMT.
- W4OOG R. Mauney, RFD1, Mt. Holly, N.C., U.S.A. Strength and modulation of 28624 kc 'phone.
- W7LNG 848 West Second, Medford, Oregon, U.S.A. 7 and 14 mc CW, VFO, 0400-0900 and 1400-1700 GMT. Report times of best reception.
- W8QZV 251 N. Monroe Street, Bay City, Mich., U.S.A. Operating 7, 14 and 28 mc CW.
- W8RYZ 30 W. Coy Street, Hazel Park, Mich., U.S.A. 1-75, 7 and 14 mc CW, operation.
- W9HUV R. C. Clark, RFD11, Lafayette, Ind., U.S.A. Comparative reports on 3.5, 14 and 28 mc CW, operating 0001-0500 GMT.
- YK1AC Box 35, Damascus, Syria. 14 mc 'phone, operating 0500-0700 and 1500-2200 GMT.
- ZL4JP J. Maloney, Section 3, West Plains R.D., Invercargill, New Zealand. Comparative reports with ZL4, echo effects, and OSB of 14 mc CW, operating 0600-1000 and 1900-2000 GMT.
- ZS1DZ Wilczrene, Pinehurst Road, Lansdowne, C.P., S. Africa. 7, 14 and 28 mc 'phone and CW, operating 1600-2000 GMT.
- ZS6JH 20 Honey Street, Berea, Johbg., S. Africa. 28240-28300 kc 'phone, Sundays 1400-2000 GMT.
- ZS6LG 43 Janet Street, Florida, Johannesburg, S. Africa. 7, 14 and 28 mc 'phone, operating 1600-2000 GMT, weekends 1700-1800 GMT.

NO shortages to report this month, either of DX or of correspondence, although some of the "regulars" are obviously off on holiday and therefore have not written. But it is nice to note that several newcomers have arrived, both in the Calls Heard pages and in the three DX tables.

Those SLP's were not so hot this time, I'm afraid. We struck a fairly dull period on the 29th for the evening listening on 14 mc. And that Portable Period! After seven or eight weeks of hot dry weather, why did it have to rain on just that one day? The weather (or the threat of it) kept most of the would-be hikers indoors, and therefore only five lists have come in.

There was some DX there for the asking, but only two of the portable exponents appeared to hear much of it. They were R. G. Poppi (Beckenham), who shared the



hopeless days, and there have also been outstandingly good ones.

Personally, I haven't been able to listen for all the various parts of the day, but when I

THE 14 mc DX

I should estimate that a good 80 per cent. of the month's listening has been done on 14 mc, so let's see what correspondents have to say about it. Starting with L. W. Ross (Almondsbury), whose letter happens to be on top of the pile, we find AC4YN, AC4RF and W2SAI logged in a three-way! (August 1 at 1135). Ten minutes later L.W.R. logged VQ8AY. He asks whether any other British listeners are able to receive amateur teletype? He has a card back from JA thanking him for the first teletype SWL report received out there.

H. Singleton (Port Talbot) is another newcomer to this feature, and he asks for some gen. on Prefixes and Zone locations. May I refer him to the *DX Operating Manual*? It's all in there. M. G. Whitaker (Halifax) reports "terrific" conditions for Central and South Americans

AMATEUR BAND COMMENTARY *by the DX Scribe*

outfit with B. Davies, and A. Ross (Letchworth). The former logged HS1SS and VS1AX, and the latter found JA2BL, KA1AI, VE1DD, VK3EE and sundry W's—all on phone. Otherwise the logs seem to be remarkably blank. Hard luck about the weather, and we'll try again some time.

THE EVENING SLP

On July 29 the conditions must have been sub-normal. I couldn't manage to listen myself, but the only DX that emerges from a boiling-down of several lists looks like this: CN, CX, FA, FF, HI, HZ, LU, OX, PY, TA, VK, VO, VP6, YV and ZB1. All more or less "bread-and-butter" stuff, and few listeners heard as much as half of it. So let's blame it on conditions, shall we? Since then the 14 mc band has been changing about rapidly. There have been

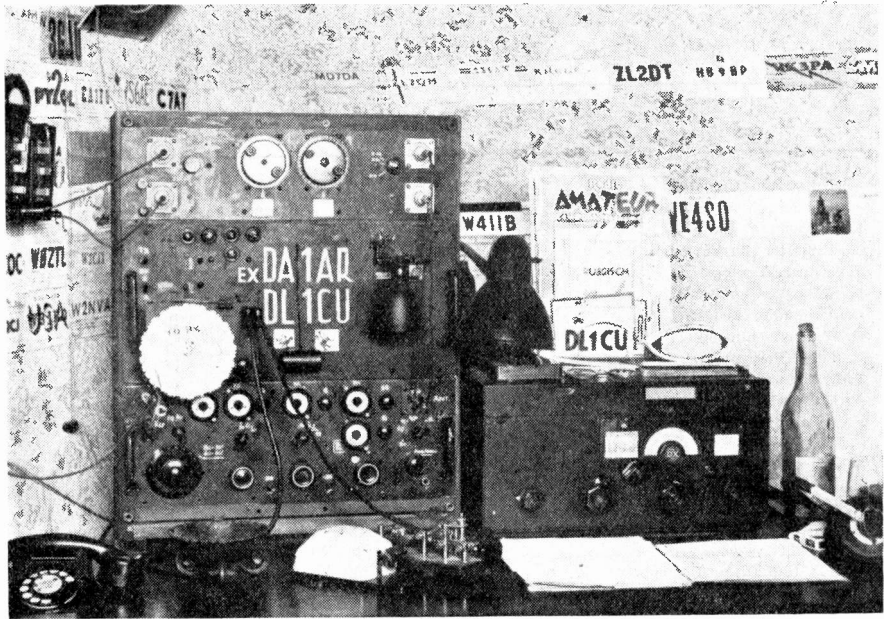
have been on (usually 08-1100 and sometimes 1700-2000) things have either been very good or just hopeless. When the short-skip brings in all the Europeans the DX seems weaker than usual (even if it isn't); but on the rarer days, when Europe has been mercifully absent, some good stuff has been simply crashing in. One evening at the beginning of August, for instance, down in the CW band I found VS1CW (S9), OQ5RA (S8) and VP8AK (S7), all practically on top of one another, with no other QRM of any kind. Next night the same spot was submerged in UB5's, OH's, OK's, DL's and all that.

The 28 mc band has still been alive—if you have a receiver. If you haven't, you can call it dead! But see our various readers' comments upon that later on.

between 0200 and 0700 most nights. He adds "a few Africans at night but nothing much during the day." (See above!)

"Super-DX" is the description A. M. Norden (London, N.W.11) gives to HS1SS. This station has been very active on 14 mc phone, and on one occasion he showed up on CW, but was chased by such a crowd that he quickly returned to the phone band. A.M.N. also mentions CR6A1, FQ8SN, VP2LX, SM8SW/P, SV5UN and LA1AI (all 14 mc phone). He asks why KA1AI is not using the DU prefix. I haven't a clue, but have often wondered myself.

D. L. McLean (Yeovil) comments on the excellence of 14 mc around 0700 and again from 1700 to 1900. His best DX on the band was FE8AB, FQ8SN, YS1ES, YS2AG and MP4BAC—all phone and all



This is DL1CU, Vaihingen, Stuttgart, officially licensed on March 23, 1949. He was on the air "the other way" from 1933 to 1948! The wheel to the left of the Tx is the rotary key for calling CQ DX automatically.

above 14180 kc. A. H. Edgar (Newcastle) is another lucky one who found HS1SS, and adds JA2BA ZS3S, CR6AL, VE8PN and OA4E/P—this latter being in a yacht off Lima. A. H. E. says he heard W3CI on 7 mc phone and wonders why, as he has heard that 7 mc is for CW only over there. Well, it is—so it must have been a pirate. As for the "YA" on phone that A.H.E. thinks he heard—well, *all* YA's up-to-date have been proved pirates.

J. Neal (Birmingham) is still thanking his stars that he went in for CW and now seems to take very little notice of phone transmissions. His best of the month on CW have been CR7IZ, FM8AD, MD7WE, VS1DA, ZD2RGY and "XU2AC"—though who this is I wouldn't like to guess. (XU was once the prefix for China; maybe in view of the

situation out there someone is using it again.)

C. J. Goddard (Coventry), commenting on SPIOP (mentioned last month) says he saw it stated somewhere that Polish amateurs were to be licensed on a trial basis for twelve months. And, with reference to Sicily, he says that 11KB is in Palermo. He, together with many others, supplies the QTH of MF2AA, which appears 'in the list. Among other distinctions we might mention that MF2AA is testing on the 2-metre band with *one kilowatt*!

C.J.G. would like to know when the 21 mc band is being officially thrown open. Shouldn't we all?

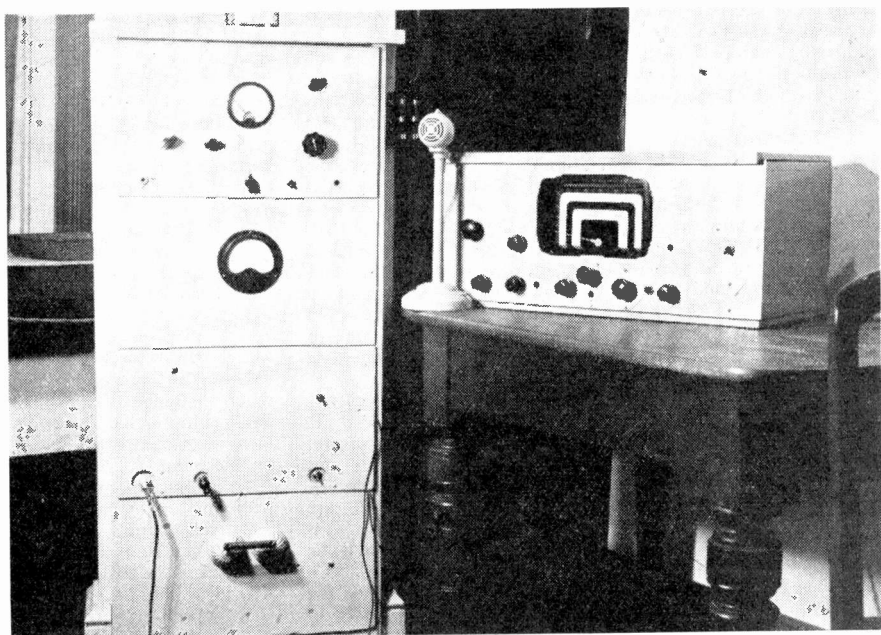
R. M. Bates (Birkenhead) sends a list of stations heard on his broadcast receiver, including TA3FAS, HZ1CD, PY4BU and VK3HW—all during the SLP. He also

mentions (at another time) "KA6GF/SVØ." This, I think, is KH6GF, in Greece. Others have heard him but didn't seem too sure of the prefix. Queries from R.M.B. are DA4NC, UB3AR and DL7AG. Well, I have just heard that DL7's are now official, but I guess the other two are pirates or phoneys.

J. P. Warren (Croydon) found two new countries on the band, in the shape of YN1HB and HL1DJ (2200). He contributes another station in Sicily—11AXV. But it seems definite that Sicily does *not* count as a country. The best heard by F. K. Earp (London, S.W.11) were DU1AR, EL6A, VU2MA and YN1HB—all phone. F.K.E. had a shot at the portable SLP and got as far as Wimbledon Common. After hearing an OK and an HA the receiver went dead and the

FOUR-BAND DX					
Listener	28 mc	14 mc	7 mc	3.5, mc	Total
J. H. I. Austin (Coventry)	21	54	39	7	56
A. Bannister (Manchester)	128	142	19	20	160 (P)
R. L. Bastin (Coventry)	56	95	18	19	108 (P)
M. E. Bazley (Birmingham)	128	218	49	19	222
J. C. Beal (Wembley)	29	121	25	15	126
N. S. Beckett (Lowestoft)	48	154	62	27	161
G. Braithwaite (Belfast)	129	144	25	20	171
D. W. Bruce (Eltham)	151	199	69	34	209
P. Butler (Portsmouth)	85	130	38	18	142
P. Bysh (London, N.8)	62	83	18	14	99 (P)
A. T. Cheesley (London, W.C.2)	73	93	9	9	111 (P)
F. K. Earp (London, S.W.11)	100	137	30	26	152 (P)
F. Finn (Coventry)	21	24	19	7	30
A. O. Frearson (Birmingham)	68	64	13	8	102
C. J. Goddard (Coventry)	3	100	25	14	100
O. A. Good (Oswestry)	111	197	14	8	198
H. M. Graham (Harefield)	53	115	18	19	121 (P)
J. L. Hall (Croydon)	7	202	122	55	205
Miss D. Hall Taylor (Southport)	33	78	7	11	87
K. G. Harland (Westcliff)	39	60	10	14	80 (P)
R. A. Hawley (Goostrey)	125	151	29	19	183
F. A. Herridge (London, S.W.12)	126	96	37	16	152
A. L. Higgins (Aberkenfig)	45	95	13	15	103
B. Hummerstone (Harrow)	45	95	18	16	99 (P)
T. W. Jones (Birmingham)	54	175	63	22	177
D. Kendall (Potters Bar)	125	131	24	29	150 (P)
Miss P. A. Litson (Saffron Walden)	50	67	7	16	89 (P)
P. G. Lucy (East Barnet)	90	102	19	23	119 (P)
D. G. Martin (Cheltenham)	85	111	15	17	137 (P)
O. R. F. Mason (Prittlewell)	3	74	12	11	75 (P)
D. L. McLean (Yeovil)	142	141	19	18	161 (P)
G. Musk (Blackpool)	16	92	12	14	95 (P)
C. A. Naylor (Appley Bdge.)	91	62	15	12	106 (P)
A. M. Norden (London, N.W.11)	3	118	18	15	119 (P)
E. C. Palmer (Bath)	59	80	26	18	108
E. J. Parish (Watford)	105	140	17	23	155 (P)
E. A. Parkinson (Leeds)	107	120	11	14	138 (P)
K. M. Parry (Sandwich)	59	89	12	6	107 (P)
K. Parvin (Thornton Heath)	110	139	22	28	147 (P)
W. J. C. Pinnell (Sidcup)	116	176	76	29	184
C. S. Poole (Ipswich)	68	96	19	24	116 (P)
D. Powell (Wilton)	67	125	59	28	136
A. W. Robertson (Cranford)	83	144	22	20	155
D. Shallcross (Derby)	75	98	18	20	120
K. Smeeton (Barnton)	89	125	22	22	136 (P)
R. S. Stott (Upminster)	129	194	74	26	200
A. Studley (Harrow)	51	131	53	37	134
L. Tombs (Swindon)	115	110	17	21	136
J. P. Warren (Croydon)	10	111	9	8	113 (P)
M. Watson (Malta)	72	144	41	32	135
M. G. Whitaker (Halifax)	80	118	22	27	134 (P)
A. R. Wybrow (London, S.E.22)	89	115	21	18	131 (P)

(P) Signifies 'Phone Only



The neat outfit at VK6KE. Peppermint Grove, West Australia.

rain came down, so that was that!

Another lucky one to log AC4RF was J. E. Hosking (London, S.W.11). He found him early in the evening of July 31, and XZ2FK followed him—both CW. FQ8SN was also heard on CW several times during the month, at S6-8.

D. S. Kendall (Potters Bar) sends a nice score in for the Monthly Zones Heard, and it appears that his entry for last month—which would have put him at the top of the Phone section—was not published. I am very sorry about this, but don't know the reason, unless it just didn't turn up here. At all events he makes a "second" this time. D.S.K. chased AC4YN for two hours, when he heard several W's working him, but couldn't hear him at all. His best on twenty this month

were ET3AM, SV5UN, KG4AA, VP2GG, 4TB, 5MU, YS1MS and KL7WQ.

H. M. Graham (Harefield) was amazed at the number of PY's during the SLP, some of them reaching colossal strengths. Others logged by him include ZA2B, VQ4NSH (as late as 2112), SM8CF/MM (name of ship wanted) and HI6EC. A. W. Tideswell (Stoke-on-Trent), who heads the Phone section of Zones Heard this time, logged CP4DG, EA8MC, HI6EC, VR2BJ, TI2RC, YN1LB, YS2SA, FI8JK, HS1SS, PK4PQ and AC4YN. He also heard MI3CD but missed his QTH, which is Eritrea.

O. A. Good (Oswestry) managed a completely new one on July 16, when FO8AC cae in at 0725. Another "super" for him was ZK2AA (14125 CW, 0800), but he had heard him before—lucky chap!

Others of interest were CP1AP, HI6EC, MP4BAC, VE8AW, VK6DD, ZP8CA and some YN's—all on phone. CW listening produced W2W MV/C3, KS4A1, UAØKFD, UJ8AF and ZL1ABJ/MM. O.A.G. would like to know if anyone else got ZP8CA and if he is genuine—he is the first ZP on 14 mc phone that he has heard.

D. W. Bruce (Eltham) also contributes a nice rare piece in the guise of VK1ADS, who is on Macquarie Island and counts as a country. He, together with HS1SS and PK1MH, were on telephony. CW brought in MD4GC, XZ2FK, VS6AC and W2OXE/MM on a Polar Expedition ship.

ORP DE LUXE

In passing (although it concerns 28 mc and not 14) I was very interested to

receive from D. W. Bruce a card from W6WCL/Mobile, confirming that he was using 4 watts in a car. Can anyone beat *that* one? Nice work, D. W. B.

W. S. Hall (Oxford), although he now boasts the call G2AOL, has gone QRT for awhile and just listens around in the summer. He logged IIALU/M1 and MD4GC to bring his post-war total up to 193, and another nice one was W6ATB/KC6. Best from K. M. Parry (Sandwich) were ZS3F, OA4AT, OA4BW and FQ8SN. He laments that on 14 mc he heard a GM3 station call "CQ G" and then a party developed, discussing anything from racing results to pubs, with OA's, TG's and other DX flattened out underneath.

D. G. Martin (Cheltenham) thinks 14 mc is already improving for VK and ZL in the mornings. (It should be full of them by the time you read this). The only other signals he mentions are XE1AC and VQ4IMS. D. Powell (Wilton) caught VQ8AN on CW (1850), and found ZD4AD and MP4BAC on phone. The latter is an inhabitant of Wilton, so he was more than usually interested. D. P. wonders if anyone else found HZ1ACQ/A on 14 mc CW?

B. Hummerstone (Harrow) lists MP4BAC, KG4AA, UM8KAA, KA1AI and HS1SS as his best for the month. And from A. Baldwin (London, E.11) came FM8AD (2210), FF8GP (0625) and ZM6AI (0735). I think A. B. is the only listener to mention the latter, just as O. A. Good has a monopoly in ZK2AA!

A. Bannister (Manchester) also comments on an FM8, but this one was FM8AJ or 8RJ on phone—working an HH station at 0325. MP4BAC gave him yet another new one. XE1AC was heard at 1540 one day, which made A. B. a little suspicious; other DX in the afternoons included

VS1, VS2, VQ4, KG6 and VK.

"Remarkably good" is the description given to conditions by A. W. Robertson (Cranford). He has found less short-skip and less QRM, and thinks the band during the evenings has been the DX-listeners' paradise. His best were HS1SS, CR7BB, VS9AL and C6FB (the latter a little doubtful). He has also logged XZ2KN on phone recently, round about 1935 GMT—this in answer to J. P. Warren's query last month.

L. Chastey (Penzance) has heard this mysterious 3V8AT, a station queried by several other people. It appears that 3V really is the new prefix for Tunis, and the FT4's are changing over to 3V8's. Most confusing, all this—we'll be hearing some 6J5's and 6L6's one day. Small prize for the first one to log an EF50! L. C. has been interested in the number of African stations on 14 mc phone, and mentions ZS3F (1750) and VQ2DT (1745), as well as ZD1BD (2140). He tells us that SVSUN is with the Truce Commission in the Dodecanese, and his home call is PAØBB.

K. Parvin (Thornton Heath) managed to snare VK1ADS, along with two other new ones, UN1AB and YN1HB. Other good stuff was CPIAP, HH2X, KG4AD, VP3HAG and VU2MA. Shoals of Central and South Americans complete his list. He has heard several W7's in Montana during the month and now needs only Wyoming for 14 mc phone HAS. D. K. Cocking (Farnborough) heard UA3AM, ZD4AD, TI2TG, XE1AC and lots of South Americans—all phone.

W. E. Bachell (Prittlewell) rolled in four nice ones in the shape of HS1SS, VR4AC, VS2BS and XZ2KN. K. Smeeton (Barnton) logged ZM6AC one morning at 0640; otherwise his best were

YN4NW, MP4BAC, VK7KB and FF8FN and 8PM. J. C. Beal (Wembley) weighs in with FO8AD, FQ8SN, HS1SS and ZD2RGY. He describes MP4BAC as the most consistent signal on the band—S7 all the time.

Well, so much for the 14 mc band. Everyone seems to have heard *something* new, and the rarest DX available during the month appears to have been AC4, VK1, ZM6, FO8, ZK2, C3 and KC6.

THE 28 mc BAND

Now for poor old "Ten," much maligned by some and much enthused over by others! Here are some brief remarks on the band: K. Parvin says. "The worst month so far, with only African and South American signals appearing. Only Asiatics have been AR8AB, ZCIAR and VS9AH." E. A. Parkinson (Leeds) says it's remarkable how well the VQ4's come through. They are often roaring signals when there's nothing else about.

O. A. Good: "Coming to life again—logged ZS3Z, OQ5's, VQ5PBD, W3KIF/MM (Walvis Bay) and a whole load of ZS6's." D. S. Kendall: Logged PK4DA, HZ1KE, ZP5BL, YN1HB, CP4DA, VS7's, VQ5's, OQ5's, OA4AN, TI2TG, YV4AM and CE2CC. J. H. I. Austin: Heard MS4A, VK1VU, FO8AB, EQ1RX, C8TY/Airborne and VQ9AA (?)—all 28 mc phone.

D. L. McLean: Logged HZ1KE, PJ5KO, W6AOR (1710) and ZP5BL—all phone. D. G. Martin: Managed to catch an "opening" on July 11, when W's and VE's poured in during the evening. He also heard CX4CS, HC1FG, CE5BH, KP4HM and ZP5BL. R. A. Hawley (Goostrey) rounds off the 28 mc news; he likewise caught the opening on July 11 and logged W's right up to 2200. He also heard the customary MM's and says that W5OTF/MM is

on the S.S. *Kuwait*, which is a new tanker with a capacity of ten million gallons.

Well, I suggest you sort out these various reports and make up your mind about this ten-metre band! The only way to deal with it in the summer is to listen at all the hours you can spare, and you may be lucky!

FORTY METRES

The 7 mc band has also been behaving itself reasonably well, but very few bother to listen. In fact, many readers

go out of their way to make rude remarks about poor old Forty. A. Baldwin logged CO2PD, LU7AZ, OX3XF, VP4TAQ, W6AZ and ZL4AI—quite a nice selection. A. Studley (Harrow) mentions PJ5ZZ, ZL4CS, OX3MG, CO6FL and YV5AL—mostly between 0500 and 0630. N. S. Beckett (Lowestoft) sends a list of Calls Heard and mentions that his best was ZS5YF, who appeared at 0230 with a 569 signal. He called CQ DX repeatedly, but was ignored by lots of

G's who were working DL's and OZ's in response to *their* CQ DX's!

J. C. Beal heard seven new countries on the band—PY, UA, UB5, VE, EA, CT1 and YU.

THE OTHER BANDS

There is little news of 3·5 mc this month. The DX has been there on occasions (meaning ZS, LU, PY and VK) but very few seem to have heard it. On the Top Band the County-Chasing has become very slow, but we'll soon be

1·7 mc COUNTIES HEARD—1949

Listener	Counties	Listener	Counties
'PHONE and CW		'PHONE ONLY	
G. C. Allen (Thornton Heath)	62	J. H. I. Austin (Coventry)	49
A. Baldwin (London, E.11)	60	R. A. Hawley (Goostrey)	49
R. A. Hawley (Goostrey)	57	W. Eyre (Whaley Bridge)	47
D. Webber (Newton Abbot)	52	A. Hart (Ilkeston)	45
L. H. Waine (Yeovil)	50	J. H. Woodward (Stoke)	43
D. Powell (Wilton)	49	K. L. B. Dalby (Gainsborough)	43
R. S. Stott (Upminster)	44	J. H. Roskell (Harrogate)	43
E. C. Palmer (Bath)	41	L. H. Waine (Yeovil)	40
F. Finn (Coventry)	40	E. Nottingham (York)	37
M. Davies (Carmarthen)	40	J. Bagsbaw (Callington)	35
D. Shallcross (Derby)	31	R. S. Stott (Upminster)	34
D. T. Bradford (Denham)	29	D. Garrard (Ipswich)	33
J. Woodfield (Hayes)	27	K. Parvin (Thornton Heath)	28
W. Iball (Wigan)	25	W. McBey (Orkney)	27
A. C. Blair (Farnham)	25	E. C. Palmer (Bath)	27
M. E. Bazley (Birmingham)	19	K. Smeeton (Barnton)	27
D. W. Bruce (Eltham)	15	P. N. Marriage (Newbury)	25
A. L. Higgins (Aberkenfig)	7	M. G. Whitaker (Halifax)	25
		M. Neale (Aylesbury)	25
		H. M. Graham (Harefield)	21
		K. G. Harland (Westcliff)	21
		G. Musk (Blackpool)	21
		D. J. Freeman (Welwyn)	20
		D. S. Grant (Sevenoaks)	18
		O. R. F. Mason (Prittlewell)	11
		R. Line (Birmingham)	9
		R. J. T. Sands (Harrogate)	8
		R. L. Bastin (Coventry)	7

arriving at the Contest season, and that will liven it up a lot. A. Baldwin mentions that he has received a QSL from OK1ZB, who uses 80 watts on

the band. No one seems to have heard a W yet—who will be the first to do so? We shall have to run columns for Counties, Countries, States

and Zones on the Top Band next year!

QUERIES ASKED AND ANSWERED

The publicity given to MF2AA last month has prompted a lot of people to ask where the "AG" prefix comes in. Well, there are *three* genuine prefixes still in use for Trieste—AG, MF2 and II—the latter for Italian nationals. AG2AB is in Trieste and is perfectly genuine. S. Beard (Coulsdon) also appears to have heard AG2AD. G. W. White (Leigh-on-Sea) mentions MF2EE, heard on 28 mc on July 27.

K. Parvin would like information on two American stations signing AJ3F and AIR, working on about 14400 kc at 0500 GMT. He also queries NA9R, being called by OX3BF.

A. M. Norden would like to know who, or what, is OY4T? For the benefit of those who want an ET, A. Bannister says he finds the best time is 0430, when ET3AM is working the W's on 14 mc.

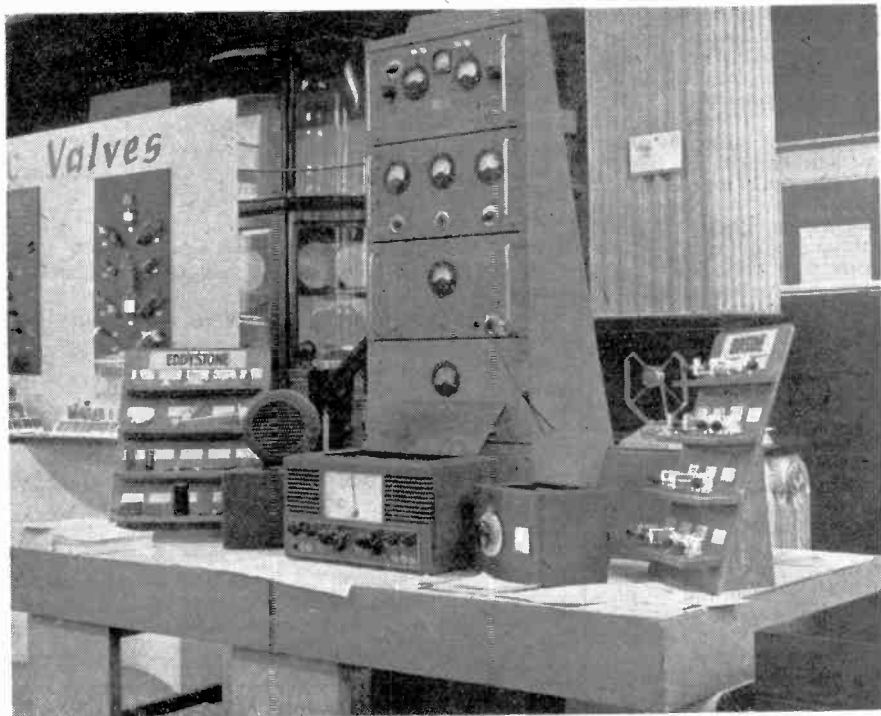
MISCELLANY

W. J. C. Pinnell (normally of Sidcup) writes from Braunschweig, where he is spending an enjoyable holiday with DL1SV and has visited a number of amateurs. He gives the authentic gen. on the DL prefixes, and says that the DL7's are now genuine and officially licensed, being operated by German amateurs in the British and American zones of Berlin. If you hear a DI2, likewise, don't dismiss him as a phoney; this prefix is allotted to experimental scientific stations. W. J. C. P. says the bands out there are much the same as in England, except that during short-skip conditions you hear at least one G for every other European station.

A query from W. J. C. P. concerns UY5AK, claiming to be in "New Republic,

ZONES HEARD (JULY)

Listener	Zones	Countries
'PHONE and CW		
D. W. Bruce (Eltham)	38	125
O. A. Good (Oswestry)	37	104
J. E. Hosking (London, S.W.11)	36	90
J. C. Beal (Wembley)	34	108
R. A. Hawley (Goostrey)	30	72
J. Neal (Birmingham)	28	70
A. W. Robertson (Cranford)	28	68
B. Hummerstone (Harrow)	24	60
'PHONE ONLY		
A. W. Tidswell (Stoke)	36	75
D. S. Kendall (Potters Bar)	35	104
D. W. Bruce (Eltham)	34	104
R. G. Poppi (Beckenham)	33	97
O. A. Good (Oswestry)	33	85
F. K. Earp (London, S.W.11)	33	73
B. Davies (Bechenham)	32	85
W. E. Bachell (Prittlewell)	32	76
J. C. Beal (Wembley)	31	85
K. Parvin (Thornton Heath)	30	91
A. Bannister (Manchester)	30	85
R. A. Hawley (Goostrey)	28	68
J. P. Warren (Croydon)	27	62
D. Vincent (Beckenham)	27	60
K. Smeeton (Barnton)	26	75
M. G. Whitaker (Halifax)	26	61
P. Bysh (London, N.8)	23	59
A. T. Cheesley (London, E.10)	23	57
B. Hummerstone (Harrow)	23	56
K. M. Parry (Sandwich)	23	46
A. M. Norden (London, N.W.11)	22	55
J. H. I. Austin (Coventry)	22	43
D. Dadswell (Steyning)	20	54
H. M. Graham (Harefield)	19	56
K. G. Harland (Westcliff)	14	38
D. K. Cocking (Farnborough)	14	35
A. L. Higgins (Aberkenfig)	11	22
O. R. F. Mason (Prittlewell)	9	16



One of the stands, that of W. B. Radio, at the Liverpool Amateur Radio Exhibition. The centre-piece is a complete 150-watt five-tier CW/Phone transmitter, with an Eddystone 640 (left), and a 2-metre converter in the foreground. Four societies combined to run the Exhibition (Ellesmere Port, Liverpool and District, Merseyside and Wirral) and between them organised and staged a show which attracted no less than 7,000 visitors.

USSR." I have heard this one myself, and can't make up my mind whether he is phoney or not. He works W's in great numbers and is obviously in Europe. Maybe the Yanks will tell us before next month!

DL4DX asks us to state that he is not allowed to QSL from Germany, owing to the nature of his work. OQ5CF, on the other hand, says, "Thanks for all the reports printed in the *Short Wave Listener*—I always QSL 100 per cent."

Three or four listeners mention a station signing US11E and obviously in Germany. I remember that some time back it was stated that the Russians might oper-

ate from the Russian zone of Berlin with the US1 prefix—this is probably one of them.

R. Poppi (Beckenham) asks whether anyone else has noticed that DX always seems to be good about the 15th-17th of the month, particularly round about 1700 GMT. He mentions, in particular, KG6, KA, XZ, VU, VS1, 2, 7, HS, JA and KR6. Check up on your logs and see whether you agree.

G. Moses (Crewe) says that M1B claims to be the *only* station in San Marino. But we know that the recent out-crop of Italian portables was genuine, because it was all organised and publicised beforehand. G. M. also raises the query about KA1A1 and

his use of the KA prefix.

CALLS HEARD

Will you *please* read the plea about Calls Heard lists on p. 271 of the August issue. I received more "Crossword Puzzles" than ever this month, and some lists looked like the work of an educated spider. Fortunately the crop was very large and most of the undecipherable ones were consigned to the W. P. B. But it's such a pity to waste a lot of time writing out a list which we can't possibly send to the printers.

R. W. Finch (Ilford) outlines a nice easy scheme for logging stations, as you hear them, in such a way that the compiling of a Calls Heard

list at the end of the month is simple. You simply keep a line for each letter of the alphabet and enter the best DX on its appropriate line, with a little "P" above it if it was phone. This obviates searching through the whole log at the end of the month.

L. W. Ross (Almondsbury) criticises the quality of the lists, and asks why we let people with 348's, 640's and AR88's send in lists containing hosts of LU's, PY's and the like, when everyone knows they can be heard by simply switching on the receiver. This brings me to the point that I *did* ask for lists to be confined to the "Twenty-Five Best," but people seem to be slipping. I don't want to make out any more rules to complicate things, but do, for goodness' sake, keep an eye on quality rather than quantity. Try to send in a list of a dozen or so stations that no one else has heard, rather than a meaningless welter of PY's and other easy ones.

For next month, then, your *best calls*, please—and it's better for you to "prune" them than for me to do it.

SET LISTENING PERIODS

August 27, 1700-1800 GMT
—14 mc phone.

August 28, 0700-0800 GMT
—7 mc CW.

September 24, 2100-2200
GMT—14 mc Phone.

September 25, 1500-1600
GMT—28 mc CW and
Phone.

ZONE MAPS

We can still supply our DX Zone Map, though stocks are now low. This is a very fine production, suitable for wall mounting, and is a five-colour great circle map of the world centred on London. It shows the world Zone areas as defined for Amateur Radio purposes, lists separately the prefixes for each Zone, and gives true bearing and rough distance of all parts of the world relative to the United Kingdom. The DX Zone Map also carries a world time scale based on GMT. It is 35 in. by 21 in. in size, on heavy linen-backed paper, and costs 6s. post free, despatched in a cardboard postal tube to prevent damage in transit. Order on the Circulation Manager, Short Wave Magazine, Ltd., 49 Victoria Street, London, S.W.1. Delivery is immediate.

DX QTH's

CE5AW	Box 560, Concepcion, Chile.
CR4AC	Box 61, Praia, Cape Verde Islands.
EA6EG	Box 324, Palma, Majorca.
FF8GP	Gilbert Pijeu, Chef Reseau Radio, Gao, French W. Africa.
FF8MM	Box 207, Dakar, French W. Africa.
FF8PM	Box 566, Dakar, French W. Africa.
FQ8SN	c/o S.C.K.N., Brazzaville, French Equatorial Africa.
HZ1KE	British Military Mission to Saudi Arabia, Taif, MELF.
KH6VX/KB6	c/o C.A.A., Canton Island.
MF2AA	Major M. H. R. Carrogher, HQ. VG. Police, Trieste.
MP4BAC	R.A.F. Sharjah, Trucial Oman, Persian Gulf.
PJ5KO	c/o W6MEK, 2719 Richie Street, Oakland, Calif.
PK4KS	Tan Koon San, Pangkalpinang, Banka, Indonesia.
PK6XZ	Swortlaan 3, Macassar, Celebes.
VK4SI/VR4	Ren Foster, Navy Base, c/o 3234, Box M.33, c/o Fleet P.O., San Francisco.
VP2AJ	APO 855, c/o PM, Miami, Fla
W6AZA/KW6	c/o C.A.A., Wake Island.
XZ2TH	75 Montgomery Street, Rangoon.
YK1AC	Alan Rabbat, Salhie Shouhada Street, Damascus.
YN1FTB	Francis T. Brown, U.S. Embassy, Managua, Nicaragua.
YS1RA	U.S. Embassy, San Salvador.
ZC1AR	John Berry, Cable and Wireless, Amman, Transjordan.
ZP2AC	Box 512, Asuncion, Paraguay.

Next month's reports are wanted, please, by first post on August 31, so you will have to confine your month's listening to 29 days rather than 31. Please continue to separate out your letters into well-marked headings such as "Queries," "14 mc," "28 mc," "General," and so on, instead of writing a long but chatty sermon with no paragraphs and very little punctuation

(yes, I get lots of those!). Read those Calls Heard instructions, and keep your DX claims separate from your letter, otherwise they are liable to be overlooked. Everything to be sent, as usual, to DX Scribe, *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

May you have a good month; 73 and Good Hunting.

SMALL ADVERTISING

We would draw the attention of readers to the value of the small advertisement columns of the *Short Wave Listener* as a means of obtaining particular items or disposing of surplus equipment. The rates are low enough to make use of this medium well worth while.

★

E17X—NEAREST AMERICA

G2NZ/GW2NF, of Colwyn Bay, has just set up a new station on the West Coast of Eire, under call E17X. This is believed to be the most westerly amateur station in Europe—and reports are welcomed.

CALLS HEARD

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

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

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

SET LISTENING PERIODS

14 mc

July 29, 2100-2200 GMT

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

'PHONE: CN8MI, FA9KJ, LU4BH, 4DJJ, 6AJ, PY2AK, 3CF, 4BU, 4EZ, 4RJ, 4XI, 7AD, 7DO, 7EE, 7XC, TA3FAS, VK3HW. (Rx : 1-V-1.)

W. Eyre, Whaley Bridge.

'PHONE: FA3WX, 9KJ, LU4BH, 4BJJ, 4DA, 6AJ, PY1ON, 2MK, 3CF, 4BU, 4XI, 6CO, 7AD, 7EE, 7XC, 7XM, TA3FAS. (Rx : S.640.)

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

'PHONE: CX2CO, PY2CK, VK3WU, VP6IS. (Rx : H.R.88 L.F.)

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

'PHONE: HZ1TD, PY7EE.
CW: OQ5RA, 4X4RE. (Rx : 2-V-2.)

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

'PHONE: LU4BH, 4DJJ, PY4BU, 7AD, TA3FAS, VK3HW. (Rx : "Commander.")

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

'PHONE: LU4BH, 4DJJ, 6AJ, PY4BU, 6CO, 7CY, TA3FAS, ZBIAR. (Rx : S.640.)

C. Burton, 168 Aubrey Road, Small Heath, Birmingham, 10.

'PHONE: LU4BH, 6AJ, PY7AJ, 7EE, 7OG, TA3FAS. (Rx : S.640.)

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

'PHONE: CN8EI, FA9WC, FF8PM, HI6EC, LU4BH, 4DJJ, 6AJ, PY1AQM, 1EH, 1RG, 2AK, 2MK, 3CF, 4BO, 4BU, 4XI, 6CO, 7EE, 7EY, 7QG, 7XC, 7XE, TA3FAS, VK2XG, 4VD. (Rx : S.640.)

D. I. Harrison, 99 Silverdale Gardens, Hayes, Middlesex.

'PHONE: CN8MI, FA9KJ, LU4AA, 4BH, PY4BO, 6CO, 7AU, 7XC, TA3FAS. (Rx : S.640.)

T. H. O'Dell, 203 Hawes Lane, West Wickham, Kent.

'PHONE: LU4BH, PY4BU, 7EE, TA3FAS, VK3HW. (Rx : R.11164.)

R. G. Poppi, Beckenham, Kent.

'PHONE: CN8MI, HI6EC, LU4BH, PY2MQ, 3CE, 3SI, 7AD, 7EE, TA3FAS, VK3HW. (Rx : S.640.)

E. Pringle, 34 Woodbine Terrace, Birtley, Co. Durham.

'PHONE: HI6EC, LU4BH, 6AJ, PY1EH, 2NK, 3CF, 4BU, 4XI, 6EO, 7EE, 7QG, TA3FAS, VK3HW, VOIL. (Rx : BC342N.)

W. J. C. Pinnell, c/o Kastanienallee 73, Braunschweig, Germany.

'PHONE: DL4AQ/Airborne, LU4BH, PY4RJ, 7DO, 7XC, TA3FAS, VK4VD.

CW: KP4CU, KV4AA, LUØFA, MD2GO, OQ5RA, PY2AO, 2QZ. (Rx : SH9.)

C. J. Goddard, Handcross Grove, Green Lane, Coventry.

'PHONE: LU4BH, 4JJ, 6AJ, PY7AD, 7QG, 8EY, TA3FAS, VK3HW, YV4HH.

CW: ZD4AD. (Rx : Decca "ACS" Transuperhet.)

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

'PHONE: CN8AQ, FA9KJ,

FF8PM, LU4BH, 4DJ, 6AJ, PY1EH, 2AK, 2MK, 3CF, 3SI, 4BU, 4RJ, 4UO, 6CO, 6XC, 7EE, 7EZ, 7VA, 7XE, TA3FAS, VK3HW.

B. Davies, 73 Eden Road, Beckenham.

CN8MI, HI6EC, LU4DJJ, PY2MO, 7AD, 7DO, 7EE, 7JC, TA3FAS, VK3HW. (Rx : Hambander.)

J. E. Hosking, 19 Garfield Road, Lavender Hill, London, S.W.11.

'PHONE: CN8EI, TA3FAS, VK2SB, 4VD, VOIL.

CW: PYILY, ZL4GA, ZS6CY. (Rx : S.504.)

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

'PHONE: CN8EI, 8NF, LU4BH, 4BL, 6AJ, OX3GE, PY1AQM, 1HP, 4XI, 6CO, 7AD, 7QG, TA3FAS, VK2XG, 3AON, 3EE, 3HW, 3WU, 3VA, 4VD, 5RN, ZBIAR. (Rx : R.F. 24 unit and S.40A.)

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

'PHONE: LU4BH, 6AJ, OX3BD, PY1EH, 4BU, 7EE, 7ZC, TA3FAS. (Rx : Converted Bendix RA-10-DA.)

14 mc

(Portables only)

July 31, 1400-1700 GMT

D. Webber, nr. Newton Abbot, Devon.

'PHONE: CT1UP.

CW: IIALU, IAXB, 1SCJ, OE6GA, OH5NJ, 6NR, OK2SO, UA1BO, 3BW, 4SB, 6CP, 9LF, UB5BP, YU3A. (Rx : R.109 and Converter, with 132 ft. aerial.)

T. H. O'Dell, West Wickham, Kent.

'PHONE: CT1HF, 1UP, FA8ZF, HA4SA, KH6GF/SVØ, MB9BI, OE6BB, OH6MS, 6NZ, SM5TW, 5ZM. (Rx : R.1116 and 33 ft. aerial.)

B. Davies and R. G. Poppi, nr. Chelsham, Kent.

'PHONE: CN8BV, HS1SS, SV1SV, VS1AX.

CW: UA1BA, 1BU, 1BV, UB5BP, 5KIB. (Rx : 0-V-1 and two dipoles.)

A. Ross, Letchworth, Herts.

'PHONE: AG2AB, 2AD, CN8MB, DL1MN, 1PJ, 1VB, 3DP, 4DX, 4JQ, 4MP, 4OE, 4PZ, EA3VV, F9OP, FA9M, FT4V, GC2ASL, GW8PM, JA2BL, KA1AI, LA8V, LX1DG, MB9AG,

OE5KM, OZ1AR, 3BP, 6L, 7KW, 7TU, SM5ALT, 5SI, 5TF, 5TW, VEIDD, VK3EE, WIONK, 1PKW, 2ESC, 3HFD, 4DPI, 8ABS, 8WAI, 8WK. (Rx: 0-V-1 and 66 ft. *Windom aerial.*)

G. Murray, 3 miles from Newcastle.

'PHONE: CT1AH, 1UP, DL3DP, 4AB, 4EH, EA1AI, 4EM, F8KV, HA4SA, 1IBLF, 1FFG, 1HI, 1KO, 1ROH, MB9BM, OH6NZ, ON4TU, SM5MZ, 5LL, KH6GF/SVØ. (Rx: 1-V-2 and $\frac{1}{2}$ -wave *Windom aerial.*)

GENERAL

3-5 mc

M. Whitaker, c/o Rishworth School, Rishworth, nr. Halifax.

'PHONE: VE1IE, 1IK, 1IL, 1IU, 1JY, 1RB, W1DO, 1NO, 2APP, 2BG, 2YEK, 3GFK, 3KMT, 3QZ, 4AMV, 4FV, 4IYO, 4IZZ, 4KQU, 8OHS.

T. Cain, 15a Salterbeck Road, Workington, Cumberland.

'PHONE: W1EKM, 1IXO, 2HCV, 3BJ. (Rx: S.640. August 1, 0500 hrs. B.S.T.)

7 mc

N. S. Beckett, 48 Beaconsfield Road, Lowestoft.

CW: CO2LM, OX3MG, PY2AC, SVØWH, VE2ABV, 2JO, 2JR, 3AGX, 3BNY, VP4TA, W5NAI, 5NIG, 5NPJ, 5OXQ, 9BXI, 9FIS, 9IXV, ØTQD, ØUBK, YV5BC, Z55YF. (Rx: 0-V-0.)

A. Studley 274 Kings Road, Harrow

CW: CO5FL, FT4AP, KZ5BE, 5WJ, OX3MG, PJSZZ, PY2RT, SVØWH, UA1KMC, UB5AZ, UC2BC, UO5AC, UO2AL, VE3AKD, 3AZZ, 3BWE, 3CAI, 7AJA, W5OEF, 5OWG, 5PTD, 9CMQ, 9GHK, 9KD, YV5AL, ZL4CS. (Rx: 1-V-2.)

28 mc

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

'PHONE: CE3IS, CX2CL, HC1FG, LU4CD, 5BO, OQ5AO, 5BA, 5HL, 5VJ, PY2JU, ST2AM, VO2JC, W2AEZ/MM, 2TSL/MM, 6YTY/MM, ØIAX/MM, YN1HB, Z51GR, 6MO, 6NX, 6Z. (Rx: S.504 and AR.88.)

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

'PHONE: AR8AB, CE3IX, 5BH, CX1BN, 2CL, 4CS, 5AP,

EK1AD, EL2A, HC1FG, 10Y, KP4EZ, MI3SC, ST2AM, VQ2HW, 5ALT, VS9AH, ZC1AZ, ZE1JO, 2JA, 2JV, 2KH, ZS3Z, 4X4ES. (Rx: S.640.)

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

'PHONE: CX4CS, PY6AO, VQ4CUR, WØ1AX/MM, ZC1AZ, ZE2JV, 4X4AB. (Rx: AR88L.F.)

G. Moses, 65 Railton Avenue, Crew.

'PHONE: HC1FG, W5AXI/MM, ZS6KF.

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

'PHONE: CX4CS, EL3A, 7A, OQ5AO, 5CH, 5DZ, 5HL, 5KL, 5LL, 5RU, PY1AEB, 2LM, VQ4CRE, 4NJ, 4NSH, 4RF, 5ALT, YN1HB, ZS1FG, 1FJ. (Rx: S.640.)

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

'PHONE: AR8AB, CE2CC, 3IX, CP4DA, CX2CL, 4CS, HC1FG, HZ1KE, KZ5CD, LU1UD, 2DM, 3EJ, 4CD, 4EC, 6ES, OA4AN, OQ5DG, 5LL, PK4DA, PY1ACQ, 1FN, 2AGN, 2AK, 2AMT, 2CK, 2NX, ST2AM, SV5UN, TI2TG, VP4TZ, 5BB, 6JC, VQ4ERR, 4RF, 5ALT, V57PS, 7RF, 9AH, YN1HB, YV4AM, ZC1AZ, ZP5BL, ZS6CZ, 6IH, 6JZ, 6NX, 6Z. (Rx: 14-valve *superhet.*)

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

'PHONE: AR8AB, HZ1KE, KZ5AU, MI3AB, OQ5AO, 5CH, 5CK, 5CL, 5DG, 5LL, 5RU, PJ5KO, ST2AM, TG9RB, TI8AB, VP6SD, VQ4ASC, 4CJG, 4CUR, 4ERR, 4RF, 4SC, 5ALT, W6AOR, ZD4AH, ZP5BL, ZS1P, 2IW, 6DW, 6KD, 6LW, 6Z, 4X4AB, 4BC. (Rx: AR88L.F.)

14 mc

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

'PHONE: CE1AR, CR6AL, CX1CG, EL6A, HS1SS, JA2BA, LAU/Airborne, OA4E/P, 5KM, OQ5VH, ST2AM, 4AN, TA3GVU, UA3AM, 3BC, 3DC, VE8PN, VP4ZB, 6AS, 6IS, VQ4AJ, VU2AA, W7MRA, 7RF, ZS3S. (Rx: S.640.)

C. J. Goddard, Handcross Grove, Green Lanc. Coventry.

'PHONE: AP2G, AR8BC, CN8AM, 8MZ, CO8MP, CX2CL, EA8CO, EK1DL, 1MD, FA8CF, 9WU, FT4AN, HC1FT, HI6EC, HK1DZ, HZ1A, IS1AYN, K2AIR, KA1AI, LU1DJE 9NC,

M1B, MC1J, MD2AF, MF2AC, MI3ZZ, MP4BAC, OE6CC, OX3BC, 3GE, PY2AK, 7AD, 7OG, SM8ANG/Nov, Zem., FAC/Tripoli, TA1AAJ, 3BS, 3AS, TF5OA, UA3AM, UB5BG, VK2ALO, 5RN, 6PJ, VO2CL, VQ4ERR, VP9GG, W6KYM, 9KLK, ØJET, ØYJW, YK1AC, YV5AB, 5AG, ZB2A, ZC6GD, ZC6UNJ, ZD4AB, 4X4BC, 4CZ.

L. G. Chastey, Rosehill Sanatorium, Penzance.

AR8BC, CE1BE, CP1AD, CX2CL, ET3AM, HC1FG, 2KM, HI6EC, KP4DR, 4FO, M1B, MP4BAC, OA4AT, OX3BD, ST2AM, SV5UN, TG9RB, TI2TG, UA3AM, 3DC, 6SF, VP6MO, 9S, VQ2DT, 4CUR, 4ERR, 4IMS, 4NSH, XE1CQ, 1ZB, YS1ED, YV5AY, 5AZ, ZD1BD, 1SW, ZL4HP, ZSZBV, 3F.

A. W. White, 38 Cliffsea Grove, Leigh-on-Sea, Essex.

'PHONE: CN8AI, 8EA, 8E1, 8MZ, EK1DI, 1MD, FA3DS, HC1FG, 2KM, LU2AK, 4BH, 6AJ, 7BU, OA4AT, OX3BF, PY1AI, 2AK, 2CK, TA3BS, VE7ZZ, 6WTH, 7CHZ, 7JYM, 7JNC, 7MBX, XE1CQ. (Rx: *Denco DR21.*)

A. Bannister, 58 Demesse Road, Whalley Range, Manchester.

'PHONE: CE1AC, 1AM, 3AT, CP1AD, CX2AC, 2CL, ET3AM, FM8AJ, HC1CG, 1FG, 2KM, 7KD, HH1FB, HI6EC, HK1FE, 1GA, 3IR, 4DF, 4JB, HP1BR, 1LA, 1LD, 1LO, 1MG, HRIAV, KG4AW, 6AW, 6AR, 6DR, MP4BAC, OA4C, TG9NF, VE8FW, 8MA, 8FN, VP2GG, 2LF, 3HAG, 4CP, 4TB, 5AR, 5AS, 5AX, 5AZ, 6IS, 9WV, VQ4AJ, 4CRE, 4ERR, 4IMS, VS1DZ, 2BS, 7BR, 9AH, VU2MA, XE1AC, 1HA, 1RZ, 3AH, YN1HB, 1HV, 6AP, YS1AM, 1MS, ZD1BG, ZL1HR, ZP1FA. (Rx: *Modified B21A.*)

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

'PHONE: 4X4BC, AR8BC, CO2RR, EL2A, HC1FG, HK3DA, HZ1AB, KP4FO, MP4BAC, TG9RV, OA4AC, 4M, PY2CK, UA6SF, VK2TE, 3AWN, 3HG, 5MS, VQ4CUR, 4ERR, 4IMS, W6TZD, 7GC, 7MLJ, XE1AC, YK1AC. CW: UA9KCC. (Rx: S.504 and AR88.)

O. A. Good, Oswestry, Salop.

'PHONE: CP1AP, HH2X, 3L, HI6EC, HP1BR, 1LB, KG6DF, 6DI, KL7WQ, MP4BAC, PK1MH, PY8GD, TG9RB, VE8AV, VK6DD, 7JB, 7KB, VP3HAG, 5AS, VS1AX, YN1OC, YS1ES, ZL4HP, ZP8CA, ZS5AW. CW: W2WMV/C3, FO8AC, KS4AI, UAØKFD, UJ8AF, ZK2AA, ZL1ABI/MM. (Rx: S.640.)

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

'PHONE: AR8EC, CE3AT, CO2JO, 2SG, 2SH, 8MP, CX4AF, ET3AL, 3AM, EL5B, 7A, FO8AD, FQ8SN, HC1FG, 1KW, 2KJ, 2KM, HH2DS, HK3IR, 4JO, KA1AI, KB6AJ, KP4DR, MI3ZJ, OA4TE, OX3BD, PY1FW, 2KS, 8MN, TI2EV, 2SA, 2TG, UA6SF, VE7ADJ, 7MO, VK2QR, 2WT, 3AGU, 3BH, 3KX, 3OP, 3VA, 3WU, VP4TB, 5AS, 6IS, VQ4AJ, 4NSH, W6NQR, 6PWR, 6TGF, 6YQB, 7CHZ, 7HIA, 7HTB, 7JMY, 7MBX, XE1AC, 1CQ, YK1AC, YV1AN, 5BQ, XB2G, ZL1DE, 2CY. (Rx: Modified RL24 unit and S40A.)

T. Cain, 15a Salterbeck Road, Workington, Cumberland.

'PHONE: CO7VP, EK1DL, HI6EC, LU6BX, OX3BD, 3GG, PY4BU, TI2AB, 2EV, 2HP, 2OE, 2TG, VE7AAD, 7KC, W6NO, 6SZ, 6DYP, 6OSZ, 6PWL, 6TOT, 7JMB, 7JMY, XE1AC, 1CQ. (Rx: S.640.) *AUG. 1, 0330-0730 BST.*

D. I. Harrison, 99 Silverdale Gardens, Hayes, Middlesex.

'PHONE: AR8BC, CN8BK, CX1CG, 1VD, EK1MD, 1QV, FA3DS, 9ML, 9WC, 9WD, FF8PM, KP4CU, 4DR, LU4BH, 4CM, 5AD, 6AJ, PY1AIU, 2AK, 2CK, 4AU, 4CB, 4ZI, 7AD, VK2AU, 2SA, 2TE, 3JD, 3JI, 3VA, 5RN, VO2CX, VPIAP, 4TB, VO4AJ, YV5BQ, ZL14HP. (Rx: S.640.)

S. G. Beard, 8 Whitethorn Avenue, Coudsdon, Surrey.

'PHONE: AG2AD, AR8BC, CPIAP, DUIAI, FM8AD, HI6EC, HK3DA, JA2BL, KH6GF/P/SVØ, KL7WQ, KP4DR, LU7CD, OA2AT, PY7AD, TA3FAS, TG9RB, VE7AAD, 7TQ, 7VT, VK4KR, 5RN, 7AJ, 7CW, VP3AD, 4TB, 6IS, VQ4AC, 4IMS, W6DYP, 6RO, 6TPB, 6CHZ, 7GC, 7HIA, XE1AC, 1CQ, YN1HB, 6AP, YV5AE, ZD4AD, ZL4HP. (Rx: BC348.)

D. Vincent, 22 Upper Elmers End Road, Beckenham, Kent.

CE1AN, CO2RR, CP1ND, EA8MC, HC2KJ, HI6EC, HK2DC, JA2BL, KA2AI, KP4CU, MT2E, OA4C, OX3MK, ST2AM, SV5UN, TI2AFC, VK7AJ, VPF9F, VS9AH, XE1WW, YN6AP, YS1PS, YV5AU, ZL4HP, 4X4BC. (Rx: S.640.)

K. G. Harland, 114 Bridgwater Drive, Westcliff-on-Sea.

'PHONE: CN8EI, EA8MC, FA3DS, 9WD, KP4CU, LU2BB, 4CN, 7DG, OQ5VD, PY2ADG, 4RJ, 6AO, 6CO, 6QM, 7LO, 7QG, TA3FAS, VK2XG, 3HW, VP6IS, VQ4AJ, ZB1AR, 4X4BC. (Rx: R107.)

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

'PHONE: AR8BC, CX2CL, FQ8SN, HC1FG, 2KM, HL1DJ, HK3IR, KP4DR, MI3SI, MP4BAC, OA4M, ST2AM, TG9HM, TI2OEC, VE8OG, VK6BB, VP5AR, 6IS, VQ2JC, XE1CQ, YN1HB, ZD1BD, 4AD, ZL4HP, ZS3F. (Rx: *Converted Bendix RA-10-DA.*)

E. Pringle, 34 Woodbine Terrace, Birtley, Co. Durham.

'PHONE: CE2DY, CO8MP, CPIAD, 5SA, HI6AC, KA1AI, KG4AA, KP4ER, OA4AT, VE7AAD, VK3AWW, 3AB, 3BH, 3EE, 5RN, VP4TB, VP6IS, W6KQY, 6MBD, XE1AC, 1CQ, YN6AP, YV5CD, ZCIAR, ZL1HY, 4HP, ZS6Q. (Rx: BC342N.)

J. Neal, 217 Sladefield Road, Ward End, Birmingham, 8.

CW: CR7IZ, CX1DZ, 6AD, EA8BC, 8FF, 8RM, 8TM, FM8AD, HZ1HZ, 1KE, KG4AD, KL7BD, KP4AL, 4CU, 4GO, 4IE, 4KE, KV4AA, KZ5CH, 5IP, MD7WE, OA4P, 4AP, PZ1QM, UD6AH, UDSKAA, VP5AS, VO4ALF, 4ERR, 4KRL, 4KTF, VS1DA, 9AH, XU2AC, ZCIAR, ZD2RGY. (Rx: S.640.)

P. Bysh, 118 Campsbourne Road, Hornsey, London, N.8.

'PHONE: CE2CC, CN8EI, CO2AP, 2OM, 2VW, 8MP, CX1CG, EK1QV, FA9WU, HH2ES, HK1HY, JA2BL, KP4JF, OQ5CF, PY2RL, 6CO, 7QG, OX3GG, ST2AM, TG9RB, TI2BH, 2SA, 2TG, UQ2AB, VE7AD, VK5RN, 6DD, 7RA, VP4TB, VQ4AJ, XE1AC, YN1LB, 6AP, YS1NF, YV5CD, ZCIAL, ZL4HP, 4X4BC. (Rx: Sx.24.)

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

'PHONE: AR8AB, 8BM, DU1ABC, 1AI, 1HR, HS1SS, HZ1AB, JA2AB, 2AC, 2BL, 2ED, 3AA, KG6DI, KH6GS, MP4BAC, PK1MH, VK1ADS, 6MW, VS1AX, 1DZ, 7DR, 7RA, 9AH, VU2LJ, ZCIAL, 6UNJ.

CW: AP2N, DUIAP, HZ1KE, JA2BQ, 2RO, 4AF, 9AD, KG6FA, MD7DC, MP4BAD, US9CL, 9CO, 9KCA, 9KOG, ØKFDF, ØPA, ØSJ, UF6KAF, UH8KBA, U18AE, UJ8AF, UL7AB, VS1CW, 1DA, 1DZ, 2BX, 6AC, 7LA, VU2AP, 2JP, 2LJ, 2MQ, W2OXE/MM (Polar Expedition), XZ2FK, ZC6DZ. (Rx: 12 valve 5H.)

J. E. Hosking, 19 Garfield Road, Lavender Hill, London, S.W.11.

'PHONE: CE3AT, CX1CG, HC2KQ, HK3IR, KA1AI, OA4AT, VK6DD, VP3HAG, 6MI, XE3BL, YS5AY.

CW: AC4RF, FE8AB, FQ8SN, HP1BR, JA2AB, KG6DI, KH6IJ,

KP4CC, KS4AI, KZ5IP, TI8RB, UAØVB, UD6KP, UF6KFA, U18KAB, VS1DA, VU2CZ, XZ2FK, YS1RA, ZD4AM, ZE2KN, ZL2BV, ZS2FE. (Rx: S.504.)

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

'PHONE: CM6AW, CO2FH, 8MP, EA8CO, HC2JR, HH2ES, HI6EC, HK1AY, 1FP, 3AB, 3IR, 4JB, KG4AA, KP4DR, KL7WQ, MI3SC, MP4BAC, ST2AM, SV5UN, TI5EP, UA3AM, 3DC, UN1AB, VP2GG, 4TB, 5MU, 5RS, VQ4CUR, YK1AC, YS1MS, YV1AD, 5AY, ZL4HP. (Rx: Modified R1155A plus BC453.)

G. Murray, 4 Agricola Road, Newcastle-on-Tyne, 4.

'PHONE: CX1CG, EK1RW, HC1FC, LU4CN, OX3BD, PY2CK, 4RJ, TA3BS, VK3NJ, 3VA. (Rx: 1-V-2 "All-Dry.")

A. T. Cheesley, A.S.D.P., Air Ministry, Alexandra House, Kingsway, W.C.2.

'PHONE: EL5A, HC1FG, HK1FE, HI6EC, HP3EH, HS1SS, KG4AA, KH6GF, MP4BAC, TA3FAS, TI2AB, VP3HAG, 4TB, 5RS, YK1AB, YN6AP, ZD1BD. (Rx: *Hambander—Preselector BC453.*)

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

'PHONE: AR8BC, CO2EP, 2LY, FQ8SN, HC1FG, 1KW, HK3IR, KH6GF/SVØ, MI3CD, OA4AT, 4BW, OX3GE, ST2AM, TA3ABS, TB9RD, TI2OEC, UA1BE, 3AM, 3BC, UQ2AB, VQ4CUR, 4NSH, VK3BH, XE1WW, YV5BQ, ZS3F, ZL3FV. (Rx: R208.)

P. G. Lucy, 11 Hereford Avenue, East Barnet, Herts.

'PHONE: HC1FG, HH2X, HI6EC, KA1AI, KG6DI, LU4CN, MP4BAC, PY6CO, VK3AWN, 3BA, 7AJ, VP4JAR, 7VT, VO4AJ, YN1OC, YV5BZ, ZL4HP. (Rx: R1155A.)

K. Smeeton, 36 Runcorn Road, Barnton, nr. Northwich, Cheshire.

'PHONE: AR8BC, EA8MC, FF8PM, 8FN, FQ8SN, HC2KQ, HK5EB, HP1LP, MI3ZZ, MP4BAC, TI2OEC, UA6SF (Crimea), VK6IO, 7KB, VP2LP, 3HAG, 5RS, VQ2DT, YN4NW, ZD1SW, 4AD, ZM6AC, ZS3F, 4X4ES. (Rx: *Hambander and 1155A.*)

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

'PHONE: EL5A, FO8AD, FQ8SN, HS1SS, HZ1AB, JA2BL, KG4AA, MP4BAC, OA4M, OQ5BW, ST2AM, VP2LX, 3HAP, 4TB, 5AS, VS1AX, VU2MA, ZS3F.

ELECTRADIX BARGAINS

TRANSFORMERS. Foster double wound, 100 watt 50v 2 amps. output, 230v 50 cycles input, insulated terminal block, 15/- as new.

TELEPHONE DIALS. 10-point G.P.O., as new, nickel finish, 7/6. Selector units, 2/6.

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The VHF End

The Angle of Arrival—
Design for a Wide-Spaced Beam—
Individual Reports—Calls Heard—
Achievement Tables

by **A. A. MAWSE**

TO judge by the comments of the transmitting fraternity, overheard during recent weeks, their main interest has been in aeriels. No doubt the weather has, in part, been responsible for this unusually close attention to the outdoor side of the VHF equipment, but it is also coming to be realised that those hearing and working the DX most consistently are those with *good aerial systems*. So 16 and 24-element arrays are becoming popular, such systems generally being of the stacked variety.

Many listeners on Two have also put up beams, but requests for more data on the subject have been coming in month by month.

Angle of Arrival

So here are some more thoughts on the subject and some measurements for a very wide-spaced 4-element rotary. On the VHF bands (neglecting aircraft signals) the waves reach the receiving aerial travelling very nearly horizontally. By that is meant within about 1 degree of the ground. This is in marked contrast to, say, 10 metres where the angle of incoming signals is around 10 degrees or so. Thus, if we are to be successful in logging 144 mc DX our aeriels must be efficient at receiving very low-angle signals. This depends on a number of things, but the principal trouble is that the aerial picks up signals reflected from the ground as well as those arriving direct, and the reflected signal has a habit of arriving out of phase with that received direct, and so reduces the intensity of the reception. At zero angle to the ground this effect is very marked, but at some slightly higher angle, a few degrees, the reverse effect occurs and the two signals reinforce each other. That, however, is not much consolation if the signal is arriving at a lower angle, and since there is nothing we can do about the angle of arrival of the signal, an endeavour must be made to bring down the angle at which our aerial works best.

Luckily, there is an easy method, namely, to raise the height of the aerial, and since it is the height in terms of wavelength which matters, the task is easier on two metres than it would be on 10 metres. At a height of 30 ft. the angle at which peak reception is obtained is about 3 degrees, while at 60 ft. the angle is 1 degree. Bringing this "lobe" lower will, of course, improve the capabilities of the aerial at all angles below the peak. It will be realised from this that raising a VHF aerial is not just a matter of avoiding buildings and so on, but of generally improving the characteristics of the aerial so far as low angle signals are concerned.

Still further improvement in any given horizontal direction can be obtained by beaming. In the Yagi type, such as is described below, the forward gain is obtained mainly at the expense of side and rear characteristics, while in stacked arrays the vertical pick-up is reduced. The two types can, of course, be combined.

Wide-Spaced Beam Design

During the past few weeks a number of transmitting stations in the south have been trying out a 4-element beam with very wide spacing of the directors. The dimensions have been determined by experiment and some stations have claimed as much as 3 S-points gain over their more conventional close-spaced beams. That is not necessarily due simply to the merits of this particular beam, for that would assume that the close-spaced beam had been working to perfection! However, so far, everyone who has tried the wider spacing has had nothing but praise for it.

The spacing of the reflector stays at the fairly normal 0.2 wavelength, but the director spacing is increased to about 0.3. Experiment showed this gave a very worthwhile improvement, and maintained a good front-to-back ratio; 300-ohm twin-lead is used as the feeder. The losses on this are noticeably less than on 80-ohm

Two Metres Counties Heard/ Starting Figure, 10

R. Rew (Birmingham)	..	..	..	24
W. H. Pierce (Reigate)	..	..	..	22
G. E. Magrow (Dawlish)	..	..	..	22
A. W. Blandford (Mitcham)	..	..	..	16
D. T. Bradford (Denham)	..	..	..	16
R. M. James (Chatham)	..	..	..	12

twin, and the difficulties of connecting a coaxial "unbalanced" line to a balanced aerial are avoided. The only snag with this type of line is a liability to be affected by dampness—but so far experience has shown no great deterioration during rainy weather.

Several methods of connecting the line to the beam have been tried, and readers who have the facilities of testing the matching may prefer to use folded dipoles, or a T-match. 'But the simplest, although quite effective, method is to open out the last 12 inches of the 300-ohm ribbon V-shaped and attach it to the driven element of the beam at points 8 inches from the centre. These points are not very critical, but they will be affected by any change in element lengths or spacings.

The elements are made of $\frac{1}{4}$ -in. dural tubing, but larger sizes can be used if desired. The boom is made of 1 in. tube. Element lengths are :

Reflector	40 in.
Driven Element	37½ in.
1st Director	36 in.
2nd Director	36 in.

Spacings

Reflector/Driven Element :	16 in.
• Driven Element/1st Director :	24 in.
1st Director/2nd Director :	27 in.

Putting this beam together takes less than an hour, so it is hoped that many of you will give it a trial. If you do, then send along a report on it, whether it be favourable or otherwise. Two such beams can be stacked, one half-wave above the other,

but the feeding and tuning of such a beam is not easy and if not done properly can produce a result inferior to the single tier, so it is not advised to anyone without adequate facilities for adjusting it.

The Month's News

L. A. Whitmill (Harrow Weald) sends in an excellent list of calls heard using a very unconventional aerial. It consists of a 53 ft. length of coaxial cable, the screening being broken at 6 ft. intervals. He finds it superior to a half-wave dipole. (Anyone any theories on this one?) His converter is the modified RF27 Unit into a S640. He comments on the strength of local stations on Two compared with Ten, finding them stronger on the higher frequency.

At M tcham, A. W. Blandford has not found conditions too good. He is contemplating improving his 27 Unit with a 6J6 stage, and asks if anyone can offer ideas. D. T. Bradford (Denham) can still manage to help a limited number of readers with RF27 conversions, but please do *not* send him your Unit until you have written to him and obtained his permission as he does not want to be inundated with hundreds of sets! This is a very noble offer from D. T. B. and from correspondence received by your conductor it is clear how much his work is appreciated. Congratulations to him, also, on passing the R.A.E. Soon, no doubt, he will be addressing his reports to G2XC. So good luck with the Morse, D. T. B.!

J. B. Buckell (Hayes) is chiefly interested in the reception of aircraft signals and has

TWO-METRE CALLS HEARD

G. E. Margrow, Sherwood, Exeter Road, Dawlish, Devon.

G2AJ, 2AJ/P, 2BMZ, 2CIW, 2KG, 2MR, 2MV, 2NH, 2NM, 2QV, 2WS/P, 2XC, 2YL, 2ZV/P, 3ABH, 3AEX, 3AGA, 3AUS, 3AVF, 3AVF/P, 3BKQ, 3BLP, 3CCP, 3CFR, 3CGE, 3CMT, 3DAH, 3DEP, 3EBW, 3EJL, 3FP, 3LV, 3RI, 3TN, 4CG, 4CI, 4DC, 4GR, 4QL, 4RK, 5BM/P, 5BY, 5MA, 5NF, 5PB, 5PI/P, 5QA, 5RP/P, 5SP, 5TP, 5UF, 5WP, 6CJ, 6DT, 6LR, 6NB, 6NB/P, 6PG, 6UH, 6VX, 6WT, 6XM/P, 6YP, 8AJ, 8IP, 8JB, 8SM/P, 8TS/P, GW2ADZ.

L. W. Ross, Severn Ridge Lodge, Gloucester Road, Almondsbury, Glos.

G2BMZ, 2KG, 2NH, 2XC, 3AGA, 3BLP, 3EHY, 5BY, 5MA. (SCR522 with preselector, at portable QTH 400 ft. a.s.l.)

A. E. Wright, 92 Druid Street, Hinckley, Leics.

G2AVQ, 2ATK/P, 2BR, 2HCG, 2RI, 2WJ, 3ABA, 3APY, 3CKD, 3DJQ, 4LU, 4RK, 8SY, 8UZ. (Mod. RF27 into Hambander, 3-element beam.)

D. T. Bradford, 9 Oxford Gardens, Oxford Road, Denham, nr. Uxbridge, Middlesex.

G2ABN, 2AJ, 2FPP, 2HDY, 2KG, 2MR, 2MV, 2NH, 2WJ, 2XS, 2YC, 3ABH, 3AEX, 3BLP, 3BOB, 3DAH, 3FD, 3FP, 3NR, 3QK, 4AU, 4CI, 4DC, 4HT, 5BC, 5IB, 5MA, 5OO, 5TP, 5WP, 5XA, 5YM, 6CJ, 6JK, 6LR, 6NF, 6PG, 6UH, 6VC, 6VX, 6YP, 8IP, 8SM, GW2ADZ.

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

'PHONE and CW: G2ATK, 2AYQ, 2BUJ, 2IQ, 2OI, 3ABA,

3BKQ, 3BLP, 3BMY, 3BW, 3CXD, 3DJQ, 3EEZ, 3EHY, 3EMY, 4LU, 4RK, 5BM, 5BY, 5CP, 5UJ, 5KX, 5ML, 6FK, 6LC, 6VX, 8BP, 8KL, 8MZ, 8QX, 8QY, 8GM3OL, GW2ADZ. (Rx: CV66-6AK5-9001-9002 into comm. Rx at 12.5 mc. Aerial 6-element close-spaced rotary beam in roof-space. July 17-31.)

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

'PHONE: G2ABN, 2AJ, 2ANT, 2MV, 2NH, 2PU, 2XC, 2XS, 2XV, 2YC, 3AEX, 3ALD, 3BLP, 3BOB, 3CCP, 3DAH, 3DDB, 3FP, 3QK, 3RI, 4AU, 4CG, 4CI, 4DC, 4HT, 4KD, 4LU, 4OO, 4ZU, 5AA, 5BC, 5CD, 5DT, 5GX, 5KH, 5MG, 5OO, 5RD, 5TP, 5YM, 5WP, 5XA, 6DT, 6JK, 6JK/P, 6LR, 6NB, 6NB/A, 6NB/P, 6NF, 6VX, 6WT, 6XM/P, 6YP, 8IP, 8KZ, 8SK, 8SM, 8TS/P. (Rx: S.640 with RF27 Converter. Long Wire aerial. July 2-August 1.)

TWO METRE DX

G. E. Magrow (Dawlish)	G3DAH	210 miles
D. T. Bradford (Denham)	G6WT	153 miles

Note: All claims for this table must be for distances over 100 miles and accompanied by a QSL card to verify.

a R1132A in use. He can also hear a number of airports at distances up to 25 miles or so. Signals from the air have been logged up to 300 miles on the VHF bands, and he had the interesting experience of hearing an aircraft leaving Gander airport in Newfoundland (on 5.6 mc) and the following day hearing the same aircraft on VHF as it called Amsterdam.

A newcomer from the Midlands is C. J. Goddard (Coventry) who hopes to be listening on two metres very soon. He tells us that G2ZV, G3ABA, G4RK, G5PP, G6TD and G8QK are active on that band in Coventry. L. W. Ross (Almondsbury) has been out portable with a SCR522 and a 2-element beam at a height of 400 ft. He succeeded in pulling in signals from six counties, stretching from Essex to Cornwall; he had a 6AK5-6J6 preselector ahead of the SCR522. This combination of valves in the preselector might, with advantage, be used in reverse, as the 6J6 will give a superior signal-noise ratio to the 6AK5 and hence should be used as early as possible in the valve chain. On other bands L. W. R. continues to keep ahead of most of us. He has obtained a Type 207A tuning unit which contains a klystron, and other gear suitable for 2300 mc. On 420 mc he found his RF stage was incorrectly tuned but has now rectified it. He is hoping to put up a corner reflector for this band.

The usual report of much heard comes from G. E. Magrow (Dawlish). In all 69 stations were logged during July. The full list is given in Calls Heard, but it would appear that every transmitter in the south of England active on two metres can be heard in Dawlish! G. E. M. is now going to fit a noise limiter to his BC342 so an even longer list is anticipated for next time. Main trouble this month has been fading, but July 2 and 3, and also the 21st and 22nd were very good days. G. E. M. writes in defence of the SWL's who misread callsigns, alleging that the trouble lies more with the Tx operators sending badly, than with the listener reading it wrongly. There is some bad sending, everyone will agree, and it is also obvious

from their conversations on 'phone that some of the Tx men are not too hot with the code themselves! But it was not experienced listeners like G. E. M. that your conductor was thinking of when he made those comments on misread calls. There are, amongst the VHF listeners, a substantial number who are in the process of learning Morse and this fact, combined with hurried or poor sending, and possibly QSB, does cause many callsigns to be incorrectly logged. This is often very obvious from the correspondence.

R. A. John (Swansea) comes up again, and remarks that the comments here in the July issue regarding the relative merits of the EF54 and the 6AK5 started him off on a new tack. He has now changed to the latter, and finds it a better valve than the EF54 at frequencies above 100 mc; at 145 mc, he can get one more turn on the grid coil than with the EF54, which in itself represents useful gain. Having got the Rx into shape, R. A. J. is now looking to the aerial, and hopes to hear something on Two before long—he is, of course, remotely situated with respect to the main centres of activity, but gets good 135 mc signals from the Transatlantic Clippers.

Conclusion

The promised Frequency List has now been distributed and one feels that it will be of considerable assistance in locating the DX and calibrating receivers—the transmitting fraternity regard it as a most useful guide, in both these respects. On this point, the August issue of our *Short Wave Magazine* sets out the proposed new Band Plan for Two, to take effect from October 1; some of our SWL readers may already have seen this, but details will be given in this space next time, so that we all know where we are.

September is one of our "tight months" again, so the closing date for the next issue must be first post on September 2, at the very latest. Write A. A. Mawse, *Short Wave Listener*, 49 Victoria Street, London, S.W.1. 73 and BCNU on September 15.

SUMMER CALL BOOK

This is now out, and gives the callsign, operator's name and address of every known amateur station in the world, arranged alphabetically by country prefixes following the American section, which alone contains some 200 pages! The British section of the *Radio Amateur Call Book* runs to 15 pages, and includes all entries in "New QTH's" in our *Short Wave Magazine* up to and including the February issue. The Call Book is an American publication, obtainable as advertised from time to time in these columns.

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

DX *broadcast*

From C. P. Turner (Crewe) there comes word that all reporters to Radio Australia receive, in due course, a pile of information about the Overseas Radio Service, a booklet telling in graphic form the story of the Southern Continent to-day, and a photograph of the world-famous kookaburra bird. The address is: Radio Australia, G.P.O. Box 780H, Melbourne.

Commencing July 18, there was an extensive schedule alteration, the details of which are given in our Tabulated Schedules Section.

On June 19 at 2100 over VLA8 and VLC11, J. Brooker (Crawley, Sussex) had the satisfaction of hearing a reply to a letter which he had sent in.

VLB5, 21540 kc, presenting the regular Saturday Sporting Service, was an excellent signal from 0520 onwards on July 2. At 0534, from Sydney, we heard a running commentary on the opening minutes of the Rugby match between Eastern Suburbs and Gordon, the League leaders, in which the latter scored a try in the first three minutes. At 0540, from the Flemington Racecourse, Melbourne, Joe Brown spared no words in describing the Kensington Steeplechase, with David Star as the winner, and at 0548, we were transported

WORLD WIDE RECEPTION OF SHORT WAVE PROGRAMMES

to Adelaide, where South Australia and Western Australia battled in a game of Australian Rules football with the former team leading by 8 goals 6 behind (54 points) to 5 goals 7 behind (37 points).

Those who enjoy a good game of Rugby football and who have no objections to rising as early as 0310 on a Saturday will doubtless derive as much pleasure as the writer did in listening to a commentary of the entire match between Wellington and Christchurch broadcast by 3YA from Christchurch, South Island, and relayed by ZL3, Radio New Zealand, 11780 kc, on July 9. Tries were numerous and the visitors ran out winners by 18 points to 13. On July 16 at 0420, a running commentary from the Wellington racecourse proclaimed Billy Mack as the winner of the final handicap of the day. During the summer months it has been noticeable that ZL3's signals are best between 0300 and 0500, but with the advent of longer nights here it is expected that the peak will soon be around 0600-0700.

AFRICA

C. P. Turner recommends VQ7LO, Nairobi, 4880 kc, as a good signal with News from the BBC at 1800, followed at 1815 by local News and a weather report for the North,

South and Coastal regions of British East Africa. Recordings of classical music are then given until the close down at 1900. J.T.W. Blyth (Leigh, Lancs) has kindly forwarded us the Union of South Africa's latest schedule, but this must be held over until next month.

F. W. Durham (Harrow, Middlesex) observes that Brazzaville, French Equatorial Africa on 9440 kc is a strong and consistent signal with an English broadcast at 2045. R. Patrick (Accrington) mentions another English News at 1845; he also logs OTC2, 9767 kc, with a fine signal in the evenings and says they have an International Goodwill programme entitled: "Radio Leopoldville Calling the World" each Sunday from 1830 to 2145, with announcements in French, English and Dutch. A Request programme follows the English News at 1940 on Mondays, and DX Night is on Wednesday at the same time. R. P. logged Radio Rabat, French Morocco, 6006 kc at 2100 on June 5 with the direction: "Ici Radio Maroc," and this was followed by musical recordings of a distinctly French flavour. J. T. W. Blyth has been hearing Radio Algeria on 9570 kc consistently at good strength during recent weeks; the daily broadcasts are: 1830-2000 (Arabic); 2000-2300 (French).

All times given in this article are GMT except where stated

TABULATED SCHEDULES

I. Servicio Radiofonico Internacional, Buenos Aires, Argentina. LRS, 11880 kc ; LRU, 15290 kc ; LRY, 9455 kc.

S.R.I. English Language Transmission for England.

Station : LRS, Radio Splendid, 11880 kc.

Mondays, Wednesdays, Fridays		Tuesdays, Thursdays, Saturdays	
2330	Opening		Opening
2333	News.		News.
2338	Items on To-day's Programme.		Items on To-day's Programmes.
2340	Music of the Americas.		The Creole Waltz.
2352	Looking at Buenos Aires.		Woman in the News (2355).
2400	Music of the Americas.		Famous Arias.
0012	Historical Days of the Americas.		Historical Days of the Americas.
0015	Tangos.		Music of Old Buenos Aires.
0030	News.		News.
0035	Popular Musical Themes.		Popular Latin American Music.
0047	Story Tellers of the Americas.		Sotry Tellers of the Americas.
0055	Musical Themes.		Latin American Music.
0105	Touring in Argentine (Mondays).		Building up Our Country (Tuesdays).
0110	Gems of the Ballet.		Come to Argentina. Tangos (0115).
0130	News.		News.
0135	Our Picturesque Regions.		Immortal Music.
0150	Scenery and Painting.	0200	Argentina To-day.
0205	Argentina To-day.		Operetta Music.
0210	Famous Melodies.		Operetta Music.
0220	Items on To-morrow's Programme.		Items on To-morrow's Programme.
0222	News.		News.
0227	End of Transmission		End of Transmission.
Sundays			
2330	Opening.	0040	Our Picturesque Regions.
2333	News.	0100	Concert.
2338	Items on To-day's Programme.	0130	News.
2340	Latin American Music.	0135	Immortal Music.
2355	Summary of Reviews.	0200	Argentine Dialogue.
2400	Latin American Music.	0205	Sport in Argentina.
0012	Historical Days of the Americas.	0210	Famous Melodies.
0015	The Creole Waltz.	0220	Items on Tomorrow's Programme.
0030	News.	0222	News.
0035	Art and Labour.	0227	End of Transmission.

II. Radio Australia. Revised Schedules (As from July 18, 1949).

Time	Direction	Call-Letters	Frequency
0700-0745	British Isles	VLC9	17840 kc
0700-0815	British Isles	VLA6, 15200 kc & VLB 3	11760 kc
0830-1345	Forces in Japan	VLA6	15200 kc
0830-1300	S.E. Asia	VLB3	11760 kc
0830-1400	India	VLB3	11760 kc
0855-1130	Malaya	VLG3	11710 kc
0855-1145	India	VLC4	15320 kc
1145-1400	India	VLG6	15320 kc
1200-1615	United States	VLC7	11810 kc
1400-1445	British Isles	VLB3	11760 kc
1400-1500	British Isles	VLA6, 15200 kc & VLG6	15320 kc
1500-1545	N. America, West Coast	VLB9	9615 kc
1515-1615	S.E. Asia	VLA8	11760 kc
1515-1615	Africa	VLG8	9680 kc

N.B.—All other Radio Australian transmissions are as before.

J. C. Catch (South Shields) has been logging a Spanish speaking station on 7518 kc with good signals around 2130-2200, with News in Spanish at 2145. This is EA8AB in Santa Cruz de Teneriffe, Canary Islands, which, with a power of half-a-kilowatt relays EAJ43 from

2100 to 2200 daily. J. T. W. Blyth has received a verification from CR4AA, Cape Verde Islands, giving the current frequency as 6042 kc and the daily schedule : 1830-2000.

From D. H. Germain (La Pouquelaye, Jersey, C.I.) we have some useful tips about

SUX, Cairo, 7860 kc, which can usually be heard at good strength between 1900 and 2230. D. H. G. says that all announcements are in Arabic, and that between programmes it is : "Hoona el Qahira" otherwise : "Here is Cairo."

The writer has been logging Tangier, WWH53, 13470 and

WWH38, 18495 kc, consistently around 0515 of late. These transmitters, which are not used simultaneously, relay United Nations programmes from Lake Success broadcast by WER44, 14800 kc, and WEF50, 10627 kc, and both of these have also been audible. On June 25, WWH53 gave a News in French at 0530, then closed with the announcement: "WWH53 in Tangier, Morocco is now signing off. We shall be on the air at the same time next Tuesday." There are no transmissions during the weekends, apparently.

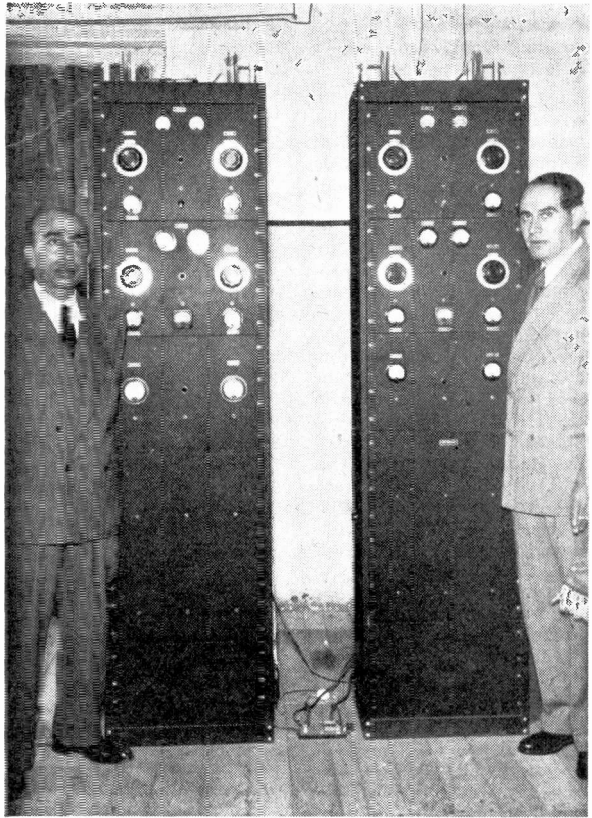
ASIA

BEF7, Chungking, China, 11913 kc has been logged in the afternoons recently. On June 26 at 1450, "When I Grow Too Old to Dream" was heard in a programme of Western dance music prior to the News in English with a female reader at 1503; the direction was: "This broadcast is coming to you from The Voice of China in Chungking." On July 10 at 1540 we heard excerpts from: "The Yeomen of the Guard."

The Australian DXers report that an unknown Chinese station with the callsign BYA is operating on 7025 kc from 1200 until 1630 daily, the final announcement being in both Chinese and French. The schedule is: 1200-1415 (Chinese); 1415-1430 (Indian); 1430-1515 (Chinese); 1515-1530 (French); 1530-1615 (Western music); 1615-1630 (Chinese).

An Indonesian Republican station in Sumatra is said to be on 11640 kc from 1130 to 1400 daily; after broadcasting in Javanese 1130-1230, there is an English News and programme from 1300 to 1330.

J. T. W. Blyth has received word from Radio Indonesia that the daily transmissions from Makassar, Celebes, are as follows: YDQ, 9550 kc: 0300-0630, 0900-1500, 2200-0000; YDQ2, 5030 kc: 1200-1400; and YDQ3, 11084



The equipment at "La Voz de la Democracia," Quito, Ecuador, callsign HCIA-C, on 6210 kc. The transmitter is 1 kW, and the owner-operator of the station is Senor Aziz Mucerszel (left), with A. Howarth as engineer.

kc: 1000-1500. Reports are especially requested for the transmission on 11084 kc between 1200 and 1500.

Bangkok, Thailand is on 7105 kc and 11650 kc now, in parallel with 6010 kc. There are three daily transmissions: 0000-0100, 0900-1130, and 1200-1530, and all programmes are in the Thai language.

R. Patrick finds that All-India Radio from Delhi broadcasts to the British Isles daily from 1900 to 2000 on three channels, viz: 15160 kc,

11760 kc and 9620 kc; he thinks the last-named a suitable channel and advises us that listeners' reports and comments on the programmes are specially welcomed. The Pakistan short wave outlet has again been changed and now occupies 15335 kc. On July 17 at 0630, the writer heard a talk on the New Order in Pakistan, followed at 0640 by Beethoven's Fifth Symphony and other celebrated works. The direction is: "This is Radio Pakistan, Dacca," and at 0730,

the lady announcer said: "Listen to Radio Pakistan again next Sunday for another concert of classical music."

On July 13, the Syrian Broadcasting station in Damascus on 1200 kc was an S9-plus-18 dB signal at 1905 with the English News Commentary which referred to the new President's policy as aiming at the common welfare of the Arabs. Arabic programmes on 12000 kc have been logged by D. H. Germain between 2000 and 2100. Despite intense QRM from CW stations, you may hear the direction which, according to D. H. G. is: "Hoona esh Shama" (Here is Damascus) or "Hathihi esh Shama" (This is Damascus). Kol Yisrael, Tel Aviv was logged simultaneously on 9000 kc; this time the new frequency was announced. R. Patrick also logged Kol Yisrael on 8170 kc with a fair signal and the English News at 1900. R. A. Savill hears a USSR transmission at 2300 on 12395 kc and suspects that it is Baku; they have a woman announcer.

Turkey has TAP, 9465 kc, logged by R. Patrick with daily English News at 1845, and TAQ, 15195 kc, heard by P. E. Woolmer (Grantham) at 2030 on June 30 with an English programme entitled: "A Musical Tour of Turkey." B. J. Tyson (Sheffield) would like to know if TAP, Ankara and VP4RD, Trinidad verify. To the best of our knowledge both will do so, provided you particularly ask for a written verification and enclose an International Reply Coupon. P. E. Woolmer says that in Iran, EQC has reverted to 9660 kc and the schedule is: 0845-1100: EQB, 15100 kc, may be heard at 1900 with its English broadcast.

NORTH AMERICA

R. A. Savill has just received a verification from CJCX, Sydney, Nova Scotia, 6010 kc, for a report sent in January

last, and thinks that this is one of those stations sending out a batch of cards every six months. On June 29 at 0100 he logged CKRA, 11760 kc, with its Latin-American broadcast. CHLS, 9610 kc, has recently been replaced by CKLO, 9630 kc, between 0845 and 1035, and CHOL, 11720 kc, is used simultaneously, both on Sundays only.

In the United States, the Armed Forces Radio Service from San Francisco and Los Angeles is carried over 11790 kc, 11890 kc, 15150 kc and 15250 kc, from 0400 to 0800. P. E. Woolmer often hears KGEX, San Francisco, 17780 kc, around 0600, and KCBA, Delano, 15150 kc is a not quite so consistent signal between 0500 and 0600.

CENTRAL AMERICA

XEBT, Emisora Mexico, 9625 kc, with an S9-plus signal around 0530, has been the best Mexican of the month; on June 29 at 0538, "Slow Boat to China" just rolled in! In Honduras, HRQ, San Pedro Sula, 6125 kc, was logged with direction: "Radio Sulapa" at 0350 on June 30, and after the rendering of a tango and a waltz, closed with its National Anthem at 0355. HRPI, 6350 kc, also in San Pedro Sula, has been most consistent; on July 1 a programme of tangos was followed by a waltz and a final brief announcement at 0500. A fox-trot: "Way Down Upon the Swanee River" with vocals in English, came over clearly just before the close at the same time on July 3.

Guatemalan broadcasters heard include TGTO, Radio Internacional, 6285 kc, closing with slogan and a clock striking the half-hour at 0430, and TGTA, 6335 kc, usually closing at 0600 but heard as late as 0630 on July 3 with marimba music and the direction: "Radio Nacional, Ciudad Guatemala en la Republica de Guatemala."

Nicaragua has been well to the fore with its short-wave radio stations. P. E. Woolmer mentions YNVP, 6760 kc, with its English programme at 0230, but this was not the case at this time on July 9, when with the aid of an S9 plus signal, the writer listened to: "In a Chinese Temple Garden." The elusive YNLAT, Granada, La Voz de Mombacho, 7625 kc, was heard with a vocal tango about the same time, and closed at 0255, but YNDG, Leon, 7651 kc, is a very regular performer of Latin-American dance music, closing with its English direction at 0430 and even later. YNBC, Managua, 6540 kc, heard with its slogan: "Radio Panamericana" at 0334, makes frequent use of a series of vibraphone notes. YNOW, 6850 kc, and YNXW, Radio America, 1890 kc, are usually audible around 0315.

TIPG, 9618 kc, presented a tango and followed this with two descending gong notes and the direction: "La Voz de la Victor en San José, Costa Rica, Centro America" at 0415 on June 29. From Panama, HOLA's card has been received by R. A. Savill for his report on its 9505 kc signals; the message ends with the words: "DX'n 73s from Radio Atlantico." R. Patrick logged this one on June 6 despite heavy side-band interference from GSB. The writer identified HPSB, 6030 kc, with a commercial programme at 0445 on June 29; it gave its slogan: "Radio Miromar" and closed with the Panamanian National Air at 0400. R. A. Savill says that H12A, Dominican Republic, 9682 kc, is a good signal between 0001 and 0100, and he finds the musical programmes from this station singularly enjoyable. In the early mornings it is often S9 around 0540 with the Spanish News, followed by the vibraphone notes — doh-meh-soh-doh and its call: "La Voz de la Reeleccion en Santo Domingo, capital de la Republica Dominicana," and

closing with a few bars of Ravel's famous Bolero.

SOUTH AMERICA

We have received from CH1AC, 6210 kc, a charming reply in Spanish to our letter and report for May 29. This is Radiodifusora, "La Voz de la Democracia," owned and operated by Senor Aziz Noe Murcazel, with Al Howarth as the Engineer. It uses one kilowatt and claims to be the station listened to most widely in Ecuador; its medium-wave counterpart is HC1AB on 1280 kc, and the joint programmes consist chiefly of rich Latin-American folk music. HC1AC was last logged on July 2 at 0432 when a series of vibraphone notes introduced the call: "Emisora La Voz de la Democracia en Quito, Ecuador."

The address is: Apartado 288, Quito. The better-known HCJB in Quito is reported by R. A. Savill, who at 0045 on June 26 heard the "English by Radio" session on 9960 kc. P. E. Woolmer tuned in to the English Mailbag on 5990 kc at 0500 recently. When we listened to this regular Saturday morning feature, the announcer told how the old mail train which formerly steamed up the mountain side from the coast had now been replaced by the aeroplane to bring your letters to Quito. In the chief port of Guayaquil, HCAN, 7350kc, is reported to be on the air until 0730. OAX6B, Arequipa, Peru, 6038 kc, was clearly audible at 0440 on June 29 with a programme of vocal tangos.

After a final Spanish direction at 0512 it closed to the soothing strains of organ music.

Many of our readers have discovered the new Argentina English service, and C. P. Turner (Crewe), like ourselves, has just received their schedule for broadcasts to the United Kingdom. He gives the address as: S.R.I. Broadcasting Service, International

Division, Buenos Aires, Argentina. R. Patrick says they put out a fine signal at 2300 on 9455 kc, and this was true also at 0505 on June 27 when we listened to a talk entitled: "Football as the King of Sport in Argentina." The speaker concluded with: "Thanks for listening; there will be another item about sport in Argentina next Sunday at 0505." R. A. Savill heard LRA1, 9690 kc, also in Buenos Aires, peaking to S8 between 2245 and 0100 recently.

In Brazil; R. Patrick reports on ZYB7, Sao Paulo, 6979 kc, and PRA8, Recife, 6016 kc; both have been putting in considerable signals most nights around 2330. The correct call-sign of Radiodifusora Amazonas in Manaos is ZYSH. Operating on 4955 kc with 5 kw power, it is audible in Europe and requests reports on reception. The address is: Radiodifusora do Amazonas, Rua Joaquin Sacramento 100, Manaos, Amazonas, Brazil. P. E. Woolmer has heard PZH5, Paramaribo, Dutch Guiana, 5757 kc, closing at 0130 with the playing of the Dutch National Anthem, and C. P. Turner has listened to ZFY, Georgetown, British Guiana, 5980 kc, broadcasting the local News from the Argus at 0001, and there is another English News at 0100.

R. Patrick mentions the Venezuelan YVKO, Radio Nacional, Caracas, 5020 kc, with a very fine signal at 0030. YVKR, Radio Caracas, 4920 kc, was heard with calls: "Yay-Vay-Kah-Erray y Yay-Vay-Kah-Essay" at 0332 on June 30, YVKT, 3530 kc, was noted at 0333 closing with the National Air after mention of "Radio Nacional," and the next night at the same time, the closing call of YVXX, 3505 kc, was: "Radio Nacional de Estados Unidos de Venezuela," which was followed by the National Anthem. The new YVPA in

San Felipe on 4860 kc put in a welcome appearance with the direction: "Transmite Radio Yacarucy" at 0320 on June 29; the subsequent sponsored programme advertising coca-cola included numerous bugle calls and male and female announcements. It closed with the Venezuelan National Anthem at 0327. Our last South American port of call is Barranquilla in Colombia. Excerpts from the Desert Song played on an organ were heard between 0345 and 0357 on July 2 over HJAB, 4783 kc. The closing call at 0358 included medium and short wave channels and "Ahtchay-Hotah-Bay-Effay-Emmay," suggesting that a USW frequency-modulated transmitter is in use in this city; the Colombian National Anthem was played at 0400.

EUROPE

Our best catch here was Radio Minorca, logged at 1915 onwards on July 2 on a frequency of 7550 kc. It is located at Port Mahon and broadcasts dance and other music in the evenings; the station direction is given in Spanish at frequent intervals. The address is: Emisora Radio Minorca, Delegacion Insular Del Franke de Juventudes, Mahon, Islas Balearias, Spain.

Several correspondents refer to Radio Espana Independiente, Estacion Pirenaica, which, says J. C. Catch, with its Republican March named after a revolutionary leader, is supposed to be located in the Pyrenees. A Croydon reader used his direction-finder to check up on the signal direction and found it to be 60° for every frequency, suggesting, as our Spanish expert K. M. Dobeson (BM/EABC, London, W.C.1) does, that the probable address for reporters would be: Radio Centre, Moscow!

F. W. Durham and J. Brooker heard Radio Nacional de Espana, Madrid, on 9368 kc with News and talk in English

at 2000, but reception is frequently spoilt by deliberate jamming! On July 8, however, it was S9-plus-30 dB when quoting from the Readers' Digest on Mr. Attlee's views about Communism. D. H. Germain appends the following: "An unusual item outside the normal bands, which I heard on July 9, was Radio Nacional de Espana, Madrid, which closed at 1720. This station was operating on approximately 15630 kc, and is not mentioned in the list published in the *Short Wave Listener* and sounded too strong to be a harmonic: I have not found any images in the Rx yet, either."

K. M. Dobeson informs us that Radio Mediterraneo de Valencia, now on 7037 kc is shortly to have its 100 watt power raised; the schedule is: 1200-1500, 1900-2300. R. Patrick has a letter from T. Delgado, Director of La Voz de la Falange, Madrid. Working on 7380 kc, the schedule is 2030-2330, but here we quote from the letter: "But owing to the shortage of electrical power, we have reduced recently our broadcasts, but when circumstances are normal, we shall broadcast to England as we do now to France from 2030 to 2100 GMT."

B. J. Tyson (Sheffield) has received a verification in French from Radio Tirana, ZAA, Albania. We are unfortunately unable to give the entire schedule this month, but can state that the News in English is given at 2015 on 7850 kc. B. J. T. listened to

Copenhagen on 9520 kc at 0407 on July 3, when an English broadcast to North America mentioned the proposed voyage to England of the 1949 Vikings: P. E. Woolmer has received cards for reports on LLG, 9610 kc, and LLN, 17825 kc—they are of a new design and depict the red, white and blue Norwegian flag. J. Brooker heard PGD, Hilversum, 6025 kc, from 1000 to 1100 on July 9 with the feature: "Window on Holland," presenting people and places in the Netherlands. F. W. Durham, has Radio Monte Carlo's brochure of pictures and times of transmission and frequencies, which are: 0600-0800, 1100-1300, 1800-2215 (English with your request records on Sundays at 2115) and 9785 kc, 6035 kc and 959 kc. F. W. D. says that Warsaw's English broadcast on 6215 kc is at 1630; R. A. Savill has received their QSL card. R. A. S. has another verification from Emil Balecky, Assistant Head of the International Relations Department, Magyar Kosponi Hirado Rt. VIII., Brodysandor—U.7., Budapest, who writes: "Our former short-wave station was destroyed by the Nazis and its equipment pillaged. Building operations at Diosd near Budapest, for the construction of a new 100 kW station will be put into operation on April 15, 1950. From August 1 onward, the present station (6247 kc and 9820 kc) will transmit an independent programme with a power of 2 kW. For the time being, the schedule is 1300-2240, with a relay of the medium-wave programmes."

J. T. W. Blyth says that within ten days he received a reply to his report and a programme sheet. R. A. S.'s letter verification for Nordwestdeutscher Rundfunk on 7290 kc was prefixed: "Much honoured Herr Savill," and from Rome came a picture of the Coliseum. Further a letter from Rita Perrini, the English announcer, mentions the two daily English programmes, 1840-1900 and 1910-1950, with request records at the latter time on Fridays, over 11810 kc and 9630 kc; the address is: Ufficio Radiodiffusioni per L'Estero, Roma—Via V. Veneto, 56.

Lastly, our letter from Lt. Zambetakis Charalambo, Radio Broadcasting Station of "A" and "B" Army Corps, Greek Armed Forces, Larissa, gives 500 watts as the output of their 6745 kc transmitter operating daily: 0430-0630, 0930-1230, 1500-2100. English broadcasts are on Sundays, Tuesdays and Fridays at 2035, but the station's real purpose is for the entertainment of the soldiers, thus contributing towards "the extermination of the bandits."

Our amateur friends may be interested to know that the transmitter is constructed out of equipment formerly in use at the amateur SV1MP, owned and operated by Moraitis Panagiote, who is now radio engineer at the broadcasting station.

Please send your letters for next month to: R. H. Greenland, *Short Wave Listener*, 49 Victoria Street, London, S.W.1, to reach this office by September 15 at the latest.

TRAFFIC CONTROL BY RADIO

It is announced that both the London Transport Executive and the Port of London Authority are installing Pye VHF equipment to assist with the general control of land and water traffic. Two-way working in the VHF range is being provided for, with 5-watt transmitter/receiver equipments in the mobile units. The main transmitter is a 100-watt set in the L.T.E. building, with four auto stations in the north,

south, east and west of Central London. These stations function as automatic relays for two-way contact with mobile units out of range of the main station. The Port of London Authority installation is on similar lines, and P.L.A. vessels can be worked through the G.P.O. ship-to-shore communications system, whereby it is possible to ring up a ship from a public call-box.

SHORT WAVE BROADCAST STATIONS

Revision 104-2-133-2 and 11-30-19-70 Metres

Giving Frequency, Wavelength, Callsign and Location

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

Frequency	Wave-length	Callsign	Location	Frequency	Wave-length	Callsign	Location
2880	104.2	GRC	Daventry.	17775	16.88	PHI	Hilversum.
2810	106.8	YDF	Garoet, Java.	17770	16.88		Colombo, Ceylon.
2600	115.4	YDD	Batavia.	17765	16.89	BEA6	Nanking, China.
2510	119.5	YDH	Semarang, Iava.				Paris.
		HLKA	Seoul, Korea.	17760	16.89	KWID	San Francisco.
2315	129.6	PIC2	Willemstad.			VUD3	Delhi.
2240	133.2	YDB	Batavia.	17755	16.90	WRUW	Boston.
26550	11.30	GSS	Daventry.			WRUX	Boston.
26400	11.36	GSR	Daventry.	17750	16.90		Moscow.
26100	11.49	GSK	Daventry.	17730	16.92	GVO	Daventry.
25750	11.65	GSO	Daventry.				Colombo, Ceylon.
25600	11.72	WRUX	Boston.	17720	16.93	LRA5	Buenos Aires.
21750	13.79	GVT	Daventry.	17715	16.93	GRA	Daventry.
21730	13.81	WNRX	New York.	17700	16.95	GVP	Daventry.
			Oslo, Norway.	17630	17.02	PLD6	Batavia.
21720	13.81		Singapore.	17445	17.20	HVJ	Vatican City.
21710	13.82	GVS	Daventry.	16666	18.00	CNR3	Rabat, Morocco.
21690	13.83	WLWL1	Cincinnati.	15825	18.96	WBC	New York.
21680	13.84	VLC10	Shepparton.	15450	19.42	GRD	Daventry.
21675	13.84	GVR	Daventry.	15440	19.43	RW98	Moscow.
21650	13.86	WLWS1	Cincinnati.	15435	19.44	GWE	Daventry.
21640	13.86	GRZ	Daventry.				Accra, Gold Coast.
21610	13.88	WNRA	New York.	15410	19.47	RW96	Moscow
21590	13.90	WGEA	Schenectady.	15405	19.48	PZC	Paramaribo.
21580	13.90	RW96	Moscow.	15390	19.49	RW99	Moscow.
21570	13.91	WCRC	New York.	15385	19.50	FHE2	Dakar, Senegal.
21550	13.92	GST	Daventry.	15380	19.51	RW98	Moscow.
21540	13.93	VLB5	Shepparton.	15370	19.52	ZYC9	Rio de Janeiro.
21530	13.93	GSJ	Daventry.	15360	19.53		Moscow.
21520	13.94	HER8	Berne.	15350	19.54	WRUL	Boston.
21510	13.95	VUD8	Delhi.			VUD9	Delhi.
		VUD10	Delhi.				Luxembourg.
21500	13.95	WOOW	New York.	15345	19.55		Nanking, China.
21480	13.96		Hilversum.	15340	19.56	RW102	Athens, Greece.
21470	13.97	GSH	Daventry.	15335	19.56		Moscow.
			Colombo.	15330	19.56		Dacca, Pakistan.
21460	13.98	KNBA	Los Angeles.	15330	19.57	WGEO	Schenectady.
21450	13.99		Brussels.			WLWR1	Cincinnati.
21002	14.28		Brazzaville.			WLWR2	Cincinnati.
19850	15.11	WBE	New York.	15325	19.58	OO2RC	Leopoldville.
19345	15.51	PLF2	Batavia.	15320	19.58	RW97	Berne.
18600	16.18	PLA	Batavia.			HE17	Berne.
18495	16.22	WWH38	Tangler.			CKCS	Sackville.
18450	16.26	HBF	Geneva.			OZH2	Copenhagen.
18160	16.53	WNRI	New York.			OLR5B	Prague.
18135	16.54	PMC	Batavia.			VLC4	Shepparton.
18130	16.55	GRP	Daventry.	15310	19.60	GSP	Daventry.
18080	16.59	GVO	Daventry.	15305	19.60	HER6	Berne.
18025	16.64	GRO	Daventry.			RW96	Moscow.
17892	16.77	HCJB	Quito, Ecuador.	15300	19.61	GWR	Daventry.
17880	16.78	WGEX	Schenectady.				Singapore.
17860	16.80		Moscow.	15290	19.62	WRUA	Boston.
17850	16.81	PRL9	Rio de Janeiro.			WRUL	Boston.
			Paris.			VUD3	Delhi.
17843	16.81	HVJ	Brazzaville.			VUD11	Delhi.
17840	16.82	VLC9	Vatican City.	15280	19.63	LRX1	Buenos Aires.
			Shepparton.			RW98	Moscow.
			Brussels.			ZL4	Wellington, N.Z.
17838	16.82		Kiev, USSR.	15270	19.65	WHRE	New York.
17830	16.83	WCBX	Moscow.			RW96	Moscow.
		VUD10	New York.	15260	19.66	WCBN	New York.
17825	16.83	LLN	Delhi.	15250	19.67	GSI	Daventry.
17820	16.84	CKNC	Oslo, Norway.			WLWR1	Cincinnati.
17810	16.84	GSV	Sackville.			KNBX	San Francisco.
17800	16.85	OIX5	Daventry.	15240	19.69	BEA4	Nanking.
		WLWK	Helsingfors.			VLG6	Lyndhurst.
		WLWS1	Cincinnati.			CR7BD	Lourenco Marques.
		KNBI	Cincinnati.				Paris.
17790	16.86	GSG	San Francisco.	15230	19.70	GWD	Daventry.
17784	16.87	HER7	Daventry.			RW109	Moscow.
17780	16.87	WNBI	Berne.			OLR5A	Prague.
			New York.			VLA5	Shepparton.

SMALL ADVERTISEMENTS

CHARGES : *Readers'*, 2d. per word, minimum charge 3s. *Box Nos.* 1s. 6d. extra. *Trade*, 6d. per word, minimum charge 7s. All advertisements must be of radio interest only. Add 25% extra for Bold Face (heavy type) announcements. Copy date for next issue, September 5, addressed Advertisement Manager, *Short Wave Listener*, 49 Victoria Street, London, S.W.1.

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 16 mfd. 450v ... 2/8 32 mfd. 350v ... 1/11
 8 x 8 mfd. 450v ... 3/4 25 x 25 mfd. 200v ... 3/11
 8 x 16 mfd. 450v ... 3/4 8 mfd. 150v ... 1/3
 16 x 16 mfd. 450v ... 3/9 25 mfd. 25v ... 1/-
 16 x 8 x 24 mfd. 450v 4/9 25 mfd. 50v ... 1/6
 50 mfd. 12v ... 10d.
 10 mfd. 25v ... 10d.

PHILLIPS wet electrolytics, standard type, can size 3" high, 14" dia complete with locking screw for single-hole fixing with bottom plate, 32 mfd. 320v, 3/6; 14 mfd. 450v, 2/9.
MIDGET TUNING CONDENSERS. 2-gang #09035, fitted with trimmers, and complete with perspex dust cover. These condensers made by "PLESSEY" are of the type used for tuning personnel receivers. Price is 6/8, plus 8d. postage.
4-GANG TUNING CONDENSERS. #905 each section—fitted trimmers—ceramic insulation. These are complete in a very useful chassis, and are fitted with a drive. Government Surplus equipment but new and perfect. Price 2/9, plus 1/3 postage. Case of six units, 17/6, carriage paid.
2-GANG .0005 CONDENSER. Standard size—ceramic insulation. Price 4/8, plus 9d. post.
CEOKES, IRON CORES, L.F. (Surplus). 250 m.a., 9/8; 200 m.a., 6/-; 70 m.a., 4/6; 50 m.a., 3/9.

ECKO TELEVISION PARTS

We were fortunate last month in being able to obtain a set of T.V. parts which were made by the famous 'ECKO' Company for a small manufacturer who unfortunately came "unstuck." These parts which are suitable for a 9", 10" or 12" magnetic tube are offered to you at approximately half of the present-day prices. The units concerned are:—(1) The tube assembly which comprises a cradle on which are mounted the frame and line deflection coils, and the focus coils. (2) An E.H.T. Transformer to give 4kV. (3) A line output transformer. (4) A diagram showing the wiring of a suitable circuit. A very interesting point about this circuit is that most of the valves used are the Mazda type 8141, which are available from us at the very low price of 3/9 each per doz. Of course, you don't have to stick to the "ECKO" circuit—we tried the items in a T.V. made according to other circuits, and have had very good results. The price of the complete set is only £310/- and as a limited number only are available, we suggest that you order by return.

We will supply the circuit data separately at 2/6 per copy and we will allow this 2/6 to be credited if you purchase the complete kit within 2 weeks.

TU5B TUNING UNIT

American-made precision temperature compensated coils and condensers. This can be turned into a v.f.o. which is really stable. The A.R.R.L. gave details of the alterations, and we will supply a copy of the details with every unit. Alternatively the TU5B can easily become a transmitter and this Magazine has given details of at least three other units. Price only 19/6, plus 3/6 carriage.

VALUES AT BARGAIN PRICES

MISCELLANEOUS TYPES (SURPLUS)

VR91 (EF50) 5/-	VR78 (EDC73) 2/3	VR65 (SP61) 4/9
VR39 (MU12) 7/6	VR55 (EDC73) 5/-	VR65A (SP41) 3/9
VU111 7/6	VR136 (EF34) 7/6	EK32 5/6
VR56 (EF36) 5/-	912 5/9	EL32 4/8
VR53 (EF39) 5/-	812 5/9	SP4 7/6
VR54 (EB34) 3/3	VR92 4/9	Meric eye 6/8
PEN 25 7/6	HL231D 6/6	2VHF pentodes 7/6
TP25 8/6	2v triodes 3/9	Hvac XH 6/6
TP23 7/6	2v screen grids 4/9	XP 6/6

AMERICAN TYPES

OZ4 13/6	6B4 9/6	6L7 9/6	12SH7 7/-
1R5 7/6	6B7 10/2	6N7 10/-	12SK7 8/-
1R4 7/6	6B8 8/-	6Q7 6/6	12SQ7 8/6
1R5 5/-	6C6 9/6	6SH7 6/-	12SK7 6/8
1T4 6/-	6I6 6/6	68J7 6/6	14F6 9/6
2A7 10/2	6F5 6/6	68K7 6/6	25L6GT 7/6
5T4 6/-	6G6G 6/6	68L7 13/3	25V3 7/6
5U4 7/6	6H6 3/6	68N7 6/-	25Z6GT 7/6
5V4 13/6	6J5 6/6	68Q7 7/6	80 10/-
5Z3 13/6	6J6 12/6	68G7 6/6	83 8/-
5Z4 7/6	6J7 7/6	68A7 7/6	89 7/6
6AC7 10/6	6K7G 9/6	68J7 7/6	907 7/6
6AG7 6/-	6K7GT 9/6	6X5 6/6	86A 15/-
6AQ5 8/-	6K7MET 7/6	7C7 7/6	84/6Z4 9/4
6AG7 6/6	6K2MET 7/6	12A6 6/-	1299A 8/-
	6L6G 10/-	12K7 8/6	9001 8/-
		12K8 8/6	9002 8/-

Postage where especially mentioned must be included—otherwise orders over £3 are post free, under £3 add 9d.

PRECISION ELECTRONIC EQUIPMENT

3 ELECTRON HOUSE, WINDMILL HILL, RUISLIP MANOR, MIDDLESEX

12" P.M. SPEAKER "TRUVOX." 10,000 lines flux density—handle 10 watts—2-3 ohm voice coil. Price 42/6, plus 2/6 packing and insurance.
10" P.M. SPEAKER "PLENSHY." Price 28/-, plus 1/6 postage.
8" P.M. SPEAKER R. & A. less trans. Price 13/6, with trans. 15/3, post free.
6 1/2" P.M. SPEAKER Celestion, with transformer. 15/3, post free.
5" P.M. SPEAKER "ROLA" with transformer, 10/6, post 9d.
3 1/2" P.M. SPEAKER "ROLA" less transformer, 8/-, post 9d.
P.V.C. INSULATED COPPER CONNECTING WIRE, really fine for chassis wiring or as a throw-out aerial, etc., 250 yds. coil, £1.
MAINS TRANSFORMER. "PARMEKO," input 200-230v 50 C.P.S., output 350-0-350 at 80 m.a., 0-3 at 3 amp., 5v at 2 amps, half shrouded drop-through type. Price 14/6, plus 1/-.
MAINS TRANSFORMER. 60-70m.a. at 260-0-260, made by R.T.S., otherwise the same as the "PARMEKO," at 13/6, plus 1/3 postage.
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TOGGLE SWITCH (Surplus). Bulgin 8.P. S.P.T., 1/3 each. D.P.S.T. 1/8. S.P.S.T. 1/6; D.P.D.T. 2/6.
SET OF BROWN KNOBS. 1 large 2 small. Price 1/6.
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CLYDESDALE

EX-BRITISH ARMY

Telesonic Xmtr. Rcvr.
YA4911-YA4915

Designed for the transmission and reception of audio frequencies. No R.F. is employed.

The transmitter unit YA4911 with valves 2 ARPI2's (VP23), 2 ATP4's (V248A) (loop aerial not supplied) H.T. V1, 60v, V2 120v, V3 and 4 180v, L.T. 2v.

Space for batteries is provided inside. Size 14½"×11"×8", fitted with handles, khaki finish.

The receiver unit YA4915, with valves, 3 XHI 5v (HIVAC), 1 XPI 5v (HIVAC), which are in series parallel for 3v fil. supply. H.T. 67-5v, space for batteries is provided inside the unit. Dimensions 7"×6"×2", finish khaki, with pick-up coil.

Clydesdale's **£3** Carriage price only paid for both units, with Rcvr. (PU) coil only.

Receiver and PU coil, **34/6**.

Brand New in maker's carton "American" Blower, with Shunt Motor

27v D.C. 1-5A., 1/50 h.p., 3,000 r.p.m. continuous running, multi-bladed fan, outlet dia. 2½". Size overall 7"×5"×6", mnt. size 7½"×5"×4½" on rack 16"×12" with fixing screws, aluminium construction.

Clydesdale's **17/6** each Post Price only Paid

New, Unused Rack Mtg.

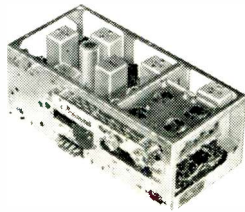
RI481 V.H.F.
R T Receiver Unit

frequency 65-86 mcs.

A 10-valve superhet, with 4 VR53 (EF39), VR54 (EF34), VR57 (EK32), 2 VR65 (SP61), VR66 (P61), VR67 (6J5G) plus stabiliser VS70 (7475), "S" meter, screened R.F. section, B.F.O., etc., etc., in enclosed chassis, size 19"×10½"×11", finish dark grey. Circuit supplied.

Clydesdale's **£4/19/6** each Carriage paid

Also a few RI132 Rcvrs. (freq. 100-124 mcs.), finish light grey. Dimensions, etc., as RI481, available at the same price.



NEW—UNUSED

Units of the SCR-522 (TR5043) for experiments on 2 metres T.V. and radio telephone wavebands.

BC-624-A Receiver Unit Chassis

frequency, 100-156 mcs. with 11 valves—3 12SG7's, 12CB, 12J5, 12AH7, 12H6, 3 9003, 9002.

Complete chassis (less Xtals) with 3/12 mcs. I.F.T.'s Relay, etc., designed for operation on predetermined Xtal frequencies, but easily altered for continuous tuning. Power requirements (external) H.T. 300v C.C. 75 ma., L.T. 24v C.C. 3A. Dimensions 15½"×7½"×6". Circuit supplied, PLUS, BC-625-A, Transmitter Unit Chassis, partly stripped, but containing many useful parts, R.F. section in good order, no valves, modulation trans. or xtal switch. Dimensions as Rcvr. Circuit supplied.

Clydesdale's price only **37/6** carriage paid

Brand New High Voltage Rotary Transformer

(By Hoover)
Type HT32. Input 11-5v D.C. Output 490v 65 ma. Dimensions 5½" long × 3" dia. cylindrical. Clydesdale's **25/-** each Post price only Paid

Brand New in maker's carton Rotary Transformer

(By Hoover)
Type HT31. Input 11-5v. Output 250v at 125 ma. Dimensions 5½" long × 3" dia. cylindrical. Clydesdale's **25/-** each Post price only Paid

Brand New Reflector Aerial (MX-137 A)

E.175. A first-class transmitting and receiving omnidirectional antenna, in original moisture-proof carton with assembly instructions. Size ass'd, approx. Ht. 6'. Wd. 4'. Clydesdale's **5/6** each Post price only Paid

Circuits for Ex-Services Equipment available, full list on application.

Ideal as SHORT WAVE CONVERTERS

Brand New in maker's carton R.F. Unit, Type 26

for 54-50 mcs. 5-6 metres. Variable tuning 2 VR135 (EF54), VR137 (EC52). Output approx. 7-8 mcs., in metal case, 9½"×7½"×4½".

Clydesdale's **35/-** each Post price only Paid

R.F. Unit, Type 24

for 30-20 mcs. 10-15 metres. Switched tuning, 5 pre-tuned spot freq., 3 VR65 (SP61). Output approx. 7-8 mcs., in metal case, 9½"×7½"×4½".

Clydesdale's **19/6** each Post price only Paid
A few used R.F. 24's available at 12/6 each.

New, unused Rack Mtg.

A.C. Mains Power
Unit, Type 3

for RI481 and RI132

Input 0-200-210-220-240-250v, complete with 0/300 voltmeter, 0/150 H.T. milliammeter, 5Z4 rectifier, fully smoothed. Output 200v 40 ma., 6-3v 3A., 4v 1-5A., enclosed chassis, size 19"×7"×11", finish dark grey.

Clydesdale's **£4/10/-** each Carriage paid

Special Offer. Receiver and Power Unit.

Clydesdale's **£8/19/6** both units Carriage paid

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