

SHORT WAVE NEWS

Vol. 2 • No. 1

JANUARY, 1947

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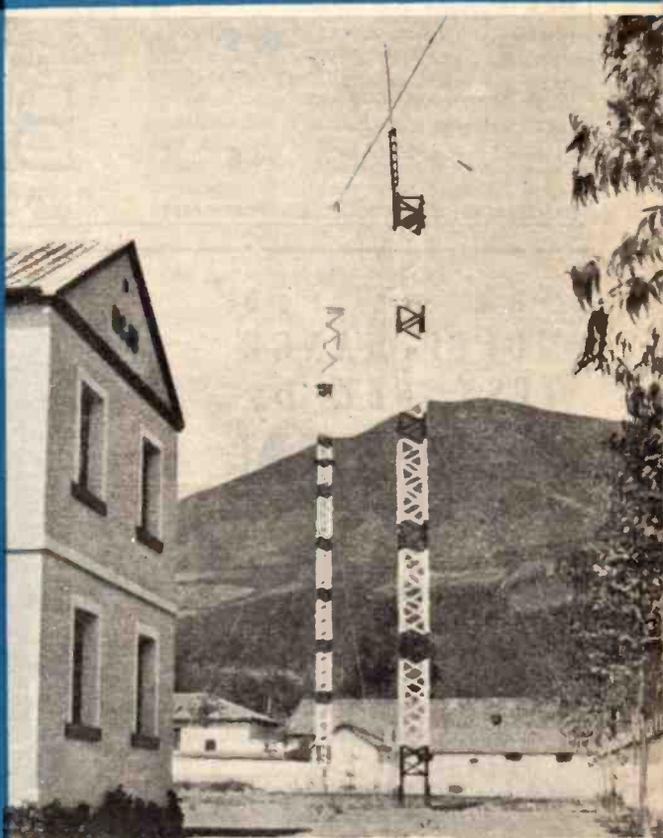
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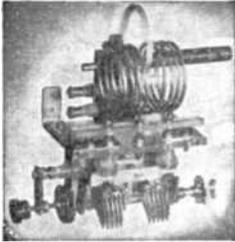
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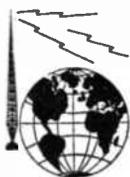
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Short Wave News

Vol 2 No 1

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January, 1947

Editor : ARTHUR C. GEE, G2UK

Asst. Editor : W. NORMAN STEVENS, G3AKA

Advertisement & Business Manager : C. W. C. OVERLAND, G2ATV

EDITORIAL

NUMBER ONE, *Volume Two*. Penning this editorial, your editor's thoughts go back to this time last year. No mother looked forward to the delivery of her first-born with half the expectation we looked forward to the appearance of the first number of the *Short Wave News*. For us it was indeed the dawn of a dream come true.

News of the arrival of the first post-war magazine for the short-wave enthusiast spread up and down the country quite quickly and our first number brought in letters from all the larger centres of population congratulating us on our enterprise. We felt very gratified. We knew we had started something which would help to rally our hobby and speed the way back to the joys of its pre-war participation.

One would be a presumptuous man to talk about one's schemes when they have not so much as begun and so we said little at the time about the reason for the appearance of the SWN. Having now completed a very successful year, perhaps we may be permitted to say a few words about how the SWN came into being.

Your editor has taken an active interest in short wave radio—both as an amateur transmitter and as a short wave listener—for a number of years, particularly in the literary side of our hobby. He holds the opinion that no hobby—or any human activity of any sort for that matter—can be really alive unless it has a good journal behind it, disseminating news of activity throughout the country, giving an opportunity for the exchange of ideas, spreading information and generally tying together the activities of all those interested in that particular pursuit. You will find that all those hobbies and pastimes which are active and progressive and require a high level of knowledge, intelligence and skill, are characterised by a healthy and competitive Press.

It was with some disappointment therefore, that despite the cessation of hostilities, he watched 1945 drawing to a close with still no sign of a journal for the short wave enthusiast, distinct from Radio Society publications catering solely for their mem-

bers. The non-appearance of such a journal meant a continuation of the state of "suspended animation" into which our hobby had sunk during the war years.

In order to see what could be done, your editor sought the co-operation of Mr. Austin Forsyth, of Short Wave Magazine fame. The Short Wave Magazine had ceased publication during the war and the address of its offices was unobtainable. Not to be outdone, he then wrote to the B.S.W. League H.Q., asking if they could help establish contact with the Short Wave Magazine. Your editor's letter was opened by none other than Norman Stevens who had held the B.S.W.L. together during the war and had edited and published the League's Short Wave Review. He was able to supply the information required and he also remarked in his reply that he too would welcome the reappearance of a short wave journal as soon as possible.

A "get-together" with Mr. Forsyth was arranged, but his plans were immature and it became even more apparent that if short wave enthusiasts were to get their journal in the immediate future, Norman and I would have to take the plunge and start a journal ourselves.

Norman's closest colleague was Bill Overland and both he and Norman had already had experience of publishing and so in due course we sorted ourselves out and the first copy of the SWN moved from off the editor's desk into the printer's hands. Thus was the SWN born!

Our first number had all the signs of a new born infant! But as each succeeding number came out, readers commented favourably on the progress we were making. Considering that new publications are still only given a quota of 8 cwts. of paper per quarter, we really think we have done very nicely indeed. Our further development is hindered only by the paper control restrictions, but presumably these will—like all other forms of rationing—cease some day. We can assure readers that our present standard will be maintained during the coming year and we hope very much that by the time *Volume Three* comes along, each number will be very much thicker and there will be enough copies available to satisfy the needs of all who are waiting to join our subscribers list.

A.C.G.

V.H.F NEWS

The Month's News

THE most interesting event during the past few weeks was of course the G6DH/W1HDQ 28/50 Mcs. contact on November 24th, the main features of which were reported in our "flash" last month. It gives your VHF News conductor some satisfaction to be able to recall some comments of 6DH's quoted in these columns last August, viz.:—"Certain prophets are forecasting suitable conditions during summer months for contact between Britain and U.S.A. on 5 metres. This is *extremely* unlikely. A simple study of 10 metre conditions during the past years should make this obvious. Summer conditions are limited to short skip which hardly ever exceeds single-hop distances of between 500-1200 miles The most and only likely time for U.S.A. contacts would be at sunspot maximum by F₂ layer bending in October-November and February."

G6DH's prediction of the times of Maximum Useable Frequency approaching 5 metres has proved correct and whilst the MUF is unlikely to reach 56-60 Mcs. for transatlantic contacts, some DX VHF signals may be heard again in February and a close watch should be kept on these frequencies during next month.

PAOUN now has permission to work on 50 Mcs. Using 100 watts and a four element beam, he should be all set for U.S.A. QSO's when conditions open again. 6DH remarks that there are possibilities of S. African or S. American contacts in the early spring (February to end March) but G stations are rather far north for the best circuit path. F3SB in S. France should be well placed for these contacts. ZS1T is on 58.5 Mcs. and he too is keeping a close watch on 50 Mcs.

G6DH's daily sked with W1HDQ on 28 Mcs. has been continued for the exchange of VHF news. Those interested may like to know that they are on 29.1 Mcs. at 1300 G.M.T.

The MUF during December did not reach 50 Mcs., but on December 22nd—the 28th day from November 24th—the MUF reached 47 Mcs. The next peak days are January 19th and February 16th, so watch these days. WGTR, Boston, has been heard almost daily on 44.3 Mcs. and W1HDQ is using our television sound and vision transmissions as indications of conditions.

The Month's Conditions

Tropospheric Propagation. All reports indicate that tropo. conditions have been very poor during the month. 2XC says, "I think one can say without fear of contradiction that it has been the poorest spell of conditions this year. The poor conditions have coincided with a run of depressions and troughs which have produced generally unstable air and high humidity up to a considerable altitude. In addition, the spells of good weather have almost without exception been cold ones, which means that no large contrasts in water vapour content of the air are possible."

Ionospheric Propagation. Nil.

Tropospheric Humidity and the Propagation of VHF Signals

The work of G2XC and G6DH during the past few months has "tidied up" very nicely our knowledge of the effect of weather changes on the propagation of signals in the 60 Mcs. range. 6DH has very kindly furnished us with some figures which illustrate his work well. 6DH first points out that it is essential to distinguish between relative humidity and absolute humidity if a correlation between weather conditions and VHF conditions is to be made. For instance, 100 p.c. relative humidity—i.e. air saturated with water vapour—at 40 degrees F. gives an air mass containing 6.56 gms. of water vapour per cubic metre of air. At 30 degrees F. 100 p.c. r.h. is equivalent to 4.49 gms per cubic metre. At 50 degrees F. 100 p.c. r.h. gives an air containing 9.41 gms/m³. At 60 degrees F. the figure is 13.26 and so on. Thus while the relative humidity of two adjacent masses of air may be the same, if their temperatures differ, then their absolute humidity will also differ, and refraction of 60 Mcs. signals passing from one mass to the other will take place. Low or high ground temperatures in themselves do not of necessity dictate conditions. What matters is how the structure of the air in the troposphere varies—whether a layer of warm air (and consequently one of greater humidity) is resting on or over-running the underlying colder air. Good tropo. conditions are brought about by well defined humidity contrasts which then give marked bending of the VHF waves. 6DH remarks that during his skeds with 2XC, he has never heard him when ground temperatures have been below 40 degrees F. Low ground temperatures usually give a cold atmosphere up to a considerable altitude and hence no marked temperature or humidity changes occur. Those who quote good conditions having occurred with snow or ice at each end of a 126 mile path, have missed the point that the top of the snow cloud layer was possibly bathed in sunlight

and the air above it consequently warmer than the air beneath. In interpreting tropo. conditions, many factors must be taken into account.

An example of differing humidity giving different radio conditions taken from 6DH's records is as follows:—During one of the best days in July—July 23rd—at 1800 GMT, surface temperature was 68 degrees F. Relative humidity was 70 p.c. The temperature at 800 millibar level was 52 degrees F., with a rel. hum. of 33 p.c. This gives a figure of 12.04 gms/m³ absolute humidity at the surface and 3.06 at 800 mbs., a 4/1 ratio. On a typically bad day—July 19th—corresponding figures were:—Surface abs. hum. 10.5 gms/m³. At 800 mb. level 5.3 gms/m³—a 2/1 ratio.

Midland Area Monitor Station Report

Norman White G3IS, 59 Eastlands Road, Rugby, reports: 'From November 9th to December 9th, activity has in general continued at a fair average, but due to the inclement weather over most of this time, contacts over semi-DX distances have been few and far between. The best period appears to have been during the evening of November 26th between 1930-2200 when the band did open, particularly for 6YU Coventry who made 8 contacts over good distances, the best being 5TX Isle of Wight with S9 phone both ways. Altogether this Coventry station has made 112 contacts with 28 stations with 8 first timers in 2FT, 3APY, 5JU, 5VU, 6XJ, 8JV, 8LY and 8WL all during the period under review. He has also maintained regular schedules with 2XC at Portsmouth and 5MA at Ashstead. Stations worked by 6YU are as follows:—2FT, 2AK, 2MR, 2MV, 2XC, 3ABA, 3APY, 3IS, 4AJ, 4CI, 5JU, 5LJ, 5MA, 5TX, 5VU, 6CW, 6FO, 6LK, 6VA, 6VX, 6XJ, 8GX, 8JV, 8LY, 8QY, 8UZ and 8WL.

8UZ of Sutton in Ashfield has also continued active, but has been bothered by gales swinging his 3 element about, causing the incoming signals to vary as his Rx has no RF stage at present. He is building a converter which should help to improve things.

New stations on the band in this area are 6MN of Worksop, 8FW of Epworth near Doncaster and 5VU of Nottingham, O.T's returning to the band.

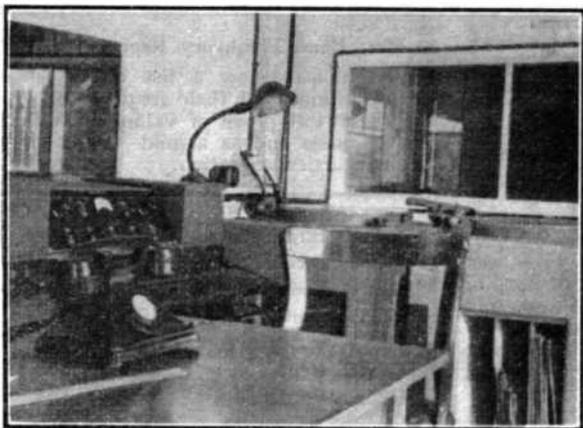
BRS 8897 now 3BCS of Wednesbury remarks on the poor conditions, but reports new stations heard as follows:—2FT, Sutton Coldfield, 3ANN and 8QY both of South Birmingham.

3IS of Rugby confirms the poorness of conditions, but has had 74 contacts during the month., 8WL, 6XJ, 8QY, 2FT and 3APY being new contacts.

60 Mcs. Band Frequency Register

We publish below a list of the more active stations and their frequencies. We feel these will prove of value for calibration purposes and as a guide to searching for any particular station.

G2AK	Birmingham	.. 59-168 Mcs.
G2FT	Birmingham	.. 58-748 Mcs.
G2MR	London ..	.. 58-6 Mcs.
G2MV	Coulsdon, Surrey	58-64 Mcs.
G2NV	Stourbridge	.. 59-12 Mcs.
G2WS	Kent ..	.. 59-5 Mcs.
G2XC	Portsmouth	.. 58-77 Mcs.
		.. 58-88 Mcs.
G2YL	London ..	.. 59-48 Mcs.
G3ABA	Rugby ..	.. 59-2 Mcs.
G3APY	Sutton in Ashfield	58-56 Mcs.
G3IS	Rugby ..	.. 59-0 Mcs.
G3OO	London ..	.. 59-0 Mcs.
G3PD	Oldham, Lancs	58-85 Mcs.
G3PW	Maidenhead	.. 59-06 Mcs.
G4OS	Chester ..	.. 58-9 Mcs.
G5BD	Mablethorpe, Lincs	59-024 Mcs.
G5BR	Streetly ..	.. 59-380 Mcs.
G5BY	S. Devon	.. 58-632 Mcs.
G5LJ	Sutton Coldfield..	58-872 Mcs.
G5LL	Mablethorpe, Lincs	58-950 Mcs.
G5MA	Ashstead	.. 59-08 Mcs.
G5OJ	Ewhurst ..	.. 58-8 Mcs.
G5OO	Harrow ..	.. 59-1 Mcs.
G5TH	St. Annes-on-Sea	59-12 Mcs.
G5WH	Wolverhampton	59-44 Mcs.
G6CW	Nottingham	58.5 (eco) Mcs.
G6DH	Clacton-on-Sea	.. 58-55 Mcs.
G6FO	Penn, Bucks	.. 59-18 Mcs.
G6LK	Cranleigh	.. 58-91 Mcs.
G6NA	Guildford	.. 59-24 Mcs.
G6OH	Ascot ..	.. 59-2 Mcs.
G6VX	Hayes, Kent	.. 59-25 Mcs.
G6YU	Coventry..	.. 58-576 Mcs.
G6YQ	Liverpool	.. 58-55 Mcs.
G8DV	Farnham..	.. 58-77 Mcs.
G8GX	Northwood, Mdlx.	59-2 Mcs.
G8JV	Nottingham	.. 58-6 Mcs.
		59-0 Mcs.
		59-6 Mcs.
G8LY	North.Waltham	58-94 Mcs.
G8UZ	Sutton in Ashfield	58-72 Mcs.
G8VN	Rugby	.. 59-2 Mcs.



A view of ZFY's control room.

Around the Broadcast Bands

Monthly Survey by
"MONITOR"

All times are given
in G.M.T.

HIGHLIGHTS of this month's news are of Radio Addis Ababa via Sidney Pearce, New Zealand's forthcoming SW stations via Arthur Cushen, Radio Monte Carlo, latest European catch for the "Country" collectors, via Peter B. Jones and last but not least—Medium Wave DX by Stan Keeley.

● Asia

Iran. EPB Teheran 15100 kcs. often R9 with news in English at 1130, in French at 1145 (Pearce).

Levant. Radio Levant, Beirut 8020 kcs., Good signals at 1600-1645 with English programme. Strong CW QRM (Pearce).

China. XGOY Chungking. News at 1600 in English. Signals weak with bad CW QRM. (Harrison).

India. VUD7 Delhi 6190 kcs. heard with news in English at 1530. Very strong signals on 9590, 11870 and 15170 kcs. (Harrison). Good signals from VUD3 17760 kcs. at 0800 to 0830 also with English news bulletin and music. (Pearce).

French Indo-China. Radio Saigon 11780 kcs. heard at 1400-1430 with strong signals in English broadcast. Closes with "God Save the King." Very bad QRM from Moscow. (Pearce).

Ceylon. J. Rose reports Radio SEAC testing on its 7185 kcs. channel at 2028 one Friday. (RX: 1 valve!).

Radio SEAC sends latest schedule as 0030-1730 on 15120 kcs. (100 kW.), and 6075 kcs. (7.5 kW.) QRA: Radio Unit SEAC, c/o GPO, Colombo. (Hughes).

● Africa

Mozambique. CR7BE "Radio Clube de Mozambique" Lourenco Marques, now

heard on 9645 kcs. evenings until close at 20.30. Gives English news at 1955. (Pearce).

Tangier. Radio International 6190 kcs. operates 1800-2330. Programmes are in English, French, Spanish and Arabic. Has English programme at 2145 and irregularly at other times. Gives English announcements. QRM from HVJ early evenings. (Harrison).

Ethiopia. Addis Ababa 15070 kcs. (approx.), heard testing until 2000. Announced in English "This is Radio Addis Ababa, Ethiopia." (Pearce). (Very nice catch OM indeed). (*Is listed as on 15100 kcs.—Ed.*)

Belgian Congo. OTC2 Leopoldville 9745 kcs. heard at 1630-1715 with BC in English. (Pearce).

Madagascar. "Radio Tanararive" very well received on its new outlet of 6065 kcs. Has plays in French to 1800 then news, Dance music and signs off at 1825. (Cushen, N.Z.)

British Somaliland. "Radio Somali," Hargeisha 7126 kcs. heard R5-6 Q4 once sending both Eastern and Western type music around 1530. Bad QRM from W "Hams" and ICW. (Hughes). (Not 7090 kcs. O.M.)

● South America

Chile. CE1180 Santiago 12000 kcs. Good signals at 2200 with Chimes and call "Radio Sociedad Nacional de Agricultura." (Pearce).

Ecuador. Roger Legge (New York) reports:—HC1AC Quito now moved to 6210 kcs. HC1TR "Radio Equinoccial" Ibarra heard on 6025 kcs. at 0100-0330. HC4EB "Radio Manta" Manta at 0100-0400. Freq. 6870 kcs.

HC5HC "Ondes del Chimborazo" Rionbamba at 0200-0400 on 4960 kcs. The last three are new stations.

Peru. OAX1B "Radio Piura" Piara has moved freq. to 6197 kcs. (Legge).

British Guiana. ZFY Georgetown heard R8 Q4 at 0030-0045 by your scribe with local news and announcements. Freq. 6000 kcs. Announces as "This is the Voice of Guiana, Station ZFY, Georgetown."

● **Central America**

Guatemala. Roger Legge reports the following stations:— TGLA "la Voz de Centro America" on 6295 kcs. Heard 0000-0330. Now located in Guatemala City.

TGOA Guatemala City now on 6100 kcs. TGRA "La Voz de la Guardia Civil" Guatemala City at 0000-0300. Freq. 6255 kcs. This station replaces TGNA.

Panama. Two new stations are reported this month in HOB 6175 kcs. "Radio Panamericana" Panama City, HOLA 9505 kcs. "Radio Atlantico," Colon, both heard 0000-0400. (Legge).

● **Australasia**

Australia. Pearce reports the daily transmissions from "Radio Australia" to British Isles on Schedule.

Broadcast to Asia 1400-1500 over VLA8 11760 kcs. and VLG9 11900 kcs., VLC4 15320 kcs. from 1430 and VLB9 9615 kcs. from 1445. Bc to Canada and U.S.A. over VLB 9540 kcs. and VLC7 11840 kcs. closing at 1415 with strong signals. C. Parrott (Gloucester) states that "Aussies" faded out at his QRA at end of November around 2300. Suggest you listen at 0800 for VLB3 11770 kcs. or VLA4 on same freq. at 2100-2200. Conditions have not been at all good for VK DX over the past month, O.M.

Pearce in a later report lists VLQ Brisbane on 7240 kcs. at 2000 often R6-7 with news bc and "Early morning music." Some QRM from Moscow. A BC to West Coast of U.S.A. was heard at 1600-1700 over VLG10 11760 kcs., VLA4 11770 kcs. and VLC6 on 9615 kcs.

A. Cushen (New Zealand) states that the Forces Service from 0830 is now transmitted over VLC4 and VLB8 (21600 kcs.), while VLA9 21600 kcs. is being used for BC to British Isles at 0700.

W. H. Harris (Gt. Bealings) gives schedule of transmissions to British Isles as follows:—VLA8 11760 kcs. 1500-1530, VLG9 11900 kcs. VLC4 15320 kcs. 1500-1545, VLB9 9615 kcs. 1500-1600. (Not VLV9 O.M. as stated in your report). J. Hughes has heard VLA8 at 1515 with R9 Q5 signals.

New Zealand. A Cushen sends in some very interesting data regarding the new SW

**BROADCAST STATION
COUNTRY PANEL**

No. 9: CUBA

COBC: Havana. "Radio Progreso." 9360 kcs. 1000 watts. 1900-2100, 2200-0250, 0430-0800.

COBF: Havana. "Radio Libertad." 6040 kcs. 1000 watts. 0100-0400.

COBL: Havana. "Radio Cadena Suaritos." 9830 kcs. 1000 watts. 0000-0545.

COBQ: Havana. "La Voz de Cuba." 9235 kcs. 1000 watts. 1300-1700, 0100-0330.

COBZ: Havana. "Radio Salas." 9025 kcs. 1000 watts. 0000-0545.

COCD: Havana. "La Voz del Aire." 6130 kcs. 1000 watts. 1400-0500.

COCH: Havana. "Radio O'Shea." 9437 kcs. 1000 watts. 1100-0600.

COCO: Havana. "Radio America." 8700 kcs. 2000 watts. 0000-0430.

COCQ: Havana. "Circuito CMQ." 8825 kcs. 5000 watts. 2230-0430.

COCV: Havana. "Ondas Deportivas." 6330 kcs. 1000 watts. 1100-0400.

COCX: Havana. "Emisora del Pueblo." 9273 kcs. 1000 watts. 0000-0530.

COCY: Havana. "RHC Cadena Azul." 11740 kcs. 1000 watts. 1130-0530.

COJK: Camaguey. "La Voz de El Camagueyano." 8725 kcs. 1000 watts. 0100-0530.

COKG: Santiago. "Cadena Oriental de Radio." 8957 kcs. 2500 watts. 2330-0430.

COKQ:* Santiago. "Cadena Oriental de Radio." 6345 kcs. 2500 watts.

COK:* Havana. 11625 kcs. 2000 watts.

COX: Havana. "Radiodifusora del Ministerio de Educacion." 9640 kcs. 5000 watts.

COX7:* Havana. "Radiodifusora del Ministerio de Educacion." 4290 kcs.

CMZ1:* Havana. 7750 kcs. 250 watts.

* Station not active at present.

Notes :—COBC has alternative channel on 17850 kcs, COBZ on 17820 kcs, and COCY has an allocation on 21620 kcs.

For the sake of completeness we are now including the operating schedule, where known, in Country Panels.

service, soon to come into operation. He states that two transmitters each using 7½ kW. will BC to the Pacific from the transmitter building at Tatahi Bay, Wellington commencing with a two hours service between 0800-1000 for listeners in Cook and Elice Is. and Pacific (Southern). The schedule is expected to be extended with more coverage and longer transmission times. What Freqs. O.M.?

● **U.S.A. (West Coast)**

Sidney Pearce reports the following Californians:—

KNBA	San Francisco	9650 kcs.	at 0700
KCBR	Los Angeles	9700 kcs.	at 1400
KWID	San Francisco	9570 kcs.	at 1400
KGEE	San Francisco	15130 kcs.	at 2200
KGEX	San Francisco	15120 kcs.	at 2200
KWID	San Francisco	17760 kcs.	at 2200
KCBF	Los Angeles	17850 kcs.	at 2200

● **West Indies**

Dominican Republic. HIG Trujillo City 6115 kcs. heard at 0000-0330. (Legge).

H1Z also in Trujillo City operating on 6312 kcs. and logged by J. Hughes at 0230 with signals R8 Q5. Mentions "Broadcasting National."

Curacao. PJC "Princess Juliana Sender," DWI heard nightly with R9 signals. Gives News in Dutch at 0015 (Scribe). Has anyone a QSL from them?

Haiti. HH3W Port-au-Prince. Recordings of popular music at 0005. Announces in French. Signals R7 Q5. (Scribe).

Cuba. COCQ Santiago 6345 kcs. R8 at 0100. (Hughes).

● **Europe**

Monaco. "Radio Monte Carlo" 6130 kcs. Comes on at 0630 to around 2130 with French programmes. Heavy QRM from Moscow. (Martin Harrison). P. B. Jones reports them and states they have no call sign and that programmes are relayed from the MW station of Radio Monte Carlo on 731 kcs. with power of 10 kW. SW outlet uses 300 watts.

Operating schedule: 0630-0830, 1100-1300, 1800-2210 daily.

Heard by your scribe at 1930 with call "Ici Radio Monte Carlo" and announcements. Signals R5 Q4. Male and female announcers are employed.

● **Medium Wave DX**

U.S.A.—Canada. Stan Keeley (Birmingham) sends in an excellent log in the following: WCKY Cincinnati 1530 kcs., WKBW Buffalo 1520 kcs. (QSL), WMEX Boston 1510 kcs. (QSL), WTOP Washington DC 1500 kcs. (QSL), WCAU Philadelphia 1210 kcs., WHAM Rochester 1180 kcs., WNEW New York 1130 kcs. (QSL), WBT Charlotte NC 1110 kcs., WBAL Baltimore 1090 kcs. Wtic Hartford Conn.

1080 kcs., WHN New York 1050 kcs. (QSL), WBZ Boston 1030 kcs., WCSH Portland Maine 970 kcs., WABC New York 880 kcs. Signals peaked to R7 and noise level was fair.

CBA Sackville Canada also heard on 1070 kcs. is a very consistent signal he states. WABC has altered its call to WCBS on November 1st. Stan uses an R1155F RX with 60ft. Inverted L type aerial E-W. Your scribe was greatly tempted to try this band after receiving this report and the following were logged on December 15th between 0000-0200: WNEW R5-8, WHN R6-9 plus, WTIC R5-8, CBA R4-8 on LS. Station identification is given every 15 minutes. RX used by your scribe is a S20 and DB20 Pre-selector. Aerial ¾ Wave Windom NNW-SSE 35 ft. high. More reports on this band would be appreciated.

● **U.H.F.**

Stan Keeley doubts if there are any U.H.F. American BC stations in operation at the moment. He has been combing 45-21 Mcs. for the past two months and apart from Police and Fire Service Americans, results have been negative, except for W2XHN (location unknown) testing on 35.42 Mcs. with R6 Q5 signals at 1530. Stan hopes to have more "gen" on U.H.F. TX's shortly. He has sent a report via FCC on latter station. (Hope to hear more from you O.M.)

RX used was R1155 with 6AC7-6C5 Converter.

● **QSL's Received**

Sidney Pearce has had a fine lot in SBT, Radio Italia, TAP, CXA19, CKLX, VLA6, CE1190, HIL, COCD, VUD7, KGEE, KGEX, Radio SEAC (7 Mcs.) LKJ, LLI, LKQ, VLC7, VLG9, VLG3, VLA9, VLC4, VLB3, VLB6. (Very FB O.M.)

M. Forrest from CKCS, SBT, VLA3, VLA4, plus one from VLA which wasn't filled in! A Levi CJCX, PCJ (new card), J. Hughes Radio SEAC, ZFY (Buff coloured card with black lettering).

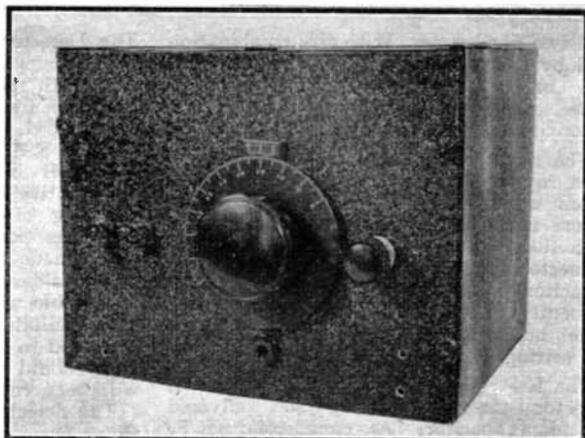
● **Acknowledgements**

Roger Legge (New York), J. W. Hughes ISWL G/30 (Rochdale, Lancs.), U DX Club (U.S.A.), Arthur Cushen (Invercargill, New Zealand), M. Forrest BSWL 2593 (Laverstock, Salisbury), Stan Keeley (Hall Green, Birmingham), A. Levi BSWL 2634 (Belfast, N.I.), W. H. Harris ISWL G/42 (Gt. Bealings, Suffolk), J. Rose (Framlingham, Suffolk), C. Parrott (Gloucester), P. B. Jones (Watford), Sidney Pearce BSWL 336 (Berkhamstead), Martin Harrison ISWL G/54 (Darlington, Co. Durham).

A TRF3 for 60 Mcs



Constructed and
described by
W. Tanser



IN the past the super-regenerative receiver has been the most popular for the 5-metre band. Today this receiver is becoming more and more unpopular in the world of amateur radio. This unpopularity is due to two main causes; firstly, where extreme sensitivity is required, the super-regenerative receiver has limitations; secondly, unless adequate screening is provided and great care is taken in the design, severe interference is caused over a large area.

Disregarding the super-regenerative receiver, the choice today is between the communications receiver plus converter and the straight receiver. The communications receiver, however, is in short supply and the present cost is prohibitory. Thus, for those ultra high frequency enthusiasts who are looking for a good 5-metre set and do not possess a communications receiver, a "straight" designed round a good valve seems to provide the answer.

The receiver described here is a straight three for mains operation. The R.F. amplifier and detector both use *Mullard* EF50's.

The first stage is a T.R.F. stage which is directly coupled to the detector. The detector stage uses the cathode-tap method of regeneration, controlled by the screen potential and is followed by a single stage of audio amplification which will give loudspeaker reception on all but the weakest signals.

While this receiver does not have the overall gain of the communication receiver plus converter, it has a lower background noise level. This feature makes the receiver comparable in performance with the super-heterodyne. It is relatively easy to construct and provides ample scope for experiment

The R.F. Stage

The whole secret of a worthwhile straight receiver for 56 Mcs. and above lies in the R.F. stage and the secret of the R.F. stage lies in the valve. The valve used in this receiver is a single ended short wave R.F. pentode; the *Mullard* EF50. This valve is one of the "all-glass" series in which the electrode lead-out connections serve also as the valve pins. This construction results in a considerable reduction in the length of the lead-out connections, which reduces the losses in the valve due to inductance and capacity effects. These losses are further reduced by an internal screen which is brought out to two pins. The whole valve is enclosed in a metal container.

In order to take full advantage of the reduction in losses in the valve, the valve holder, which is a British 9 pin, should be one of the ceramic insulated type and not one of the lower grade paxolin types.

The connections to this valve should be direct and as short as possible. It is an advantage to reduce the number and length of the earth returns. The most convenient method of obtaining this is to "common" as many of the earth connections as possible to the centre spigot connection of the EF50.

The heater connections to the R.F. stage and the detector should be short and run in single cored screened cable with the sheath earthed, and the non-earthly side decoupled as shown in the diagram.

The R.F. grid coil L1 consists of four turns of No. 14 gauge wire $\frac{3}{8}$ in. diameter spaced $\frac{1}{4}$ in. The aerial is link coupled to the earthy end of L1 by a single turn of the same diameter and gauge as L1.

Tuning is affected by a Polar 25 μF . capacitor reduced to a single moving vane

and two fixed vanes. With this combination and by suitably adjusting L1 by compressing or expanding the spacing between turns, the frequency range covered is approximately 56 Mcs. to 60 Mcs.

The same coil and capacitor values are used in the detector stage and the capacitors are ganged together. In order to ensure that the R.F. stage is in resonance with the detector stage a small trimmer is connected in parallel with the R.F. tuning capacitor. This trimmer is present and consequently not brought out to the front panel but is made accessible for preliminary setting.

The R.F. stage is directly coupled to the detector through a 100 μ F. silvered ceramic capacitor. A commercial R.F. choke can be used in the anode circuit but it should be of a reputed make, designed to cover the 5-metre band. It is, however, quite a simple matter to make one's own, and an efficient choke can be made by winding 35 turns of No. 28 double silk covered wire on a 3/16 in. diameter polystyrene former 1 in. long. The turns should be close wound as the silk covering ensures that the turns themselves are slightly separated.

The cathode bias resistor recommended by the makers for the EF50 is 31 ohms. and this resistance should be measured to make certain that it is not below 31 ohms.

The Detector Stage

The detector stage is a conventional circuit, with the circuit constants adjusted to suit the frequency of operation and the valve used. An EF50 is used as it was in the R.F. stage in order to minimise losses. It is used here as a cathode-tap regenerative detector. In order to keep the damping of the detector grid circuit as small as possible, the coupling capacitor C6 is made small, and the cathode tap is made as near to the earthy end of L3 as is possible while ensuring that the set will still oscillate when the screen potential is increased to nearly its maximum. The position should be found by experiment and will be normally between $\frac{3}{4}$ and 1 turn.

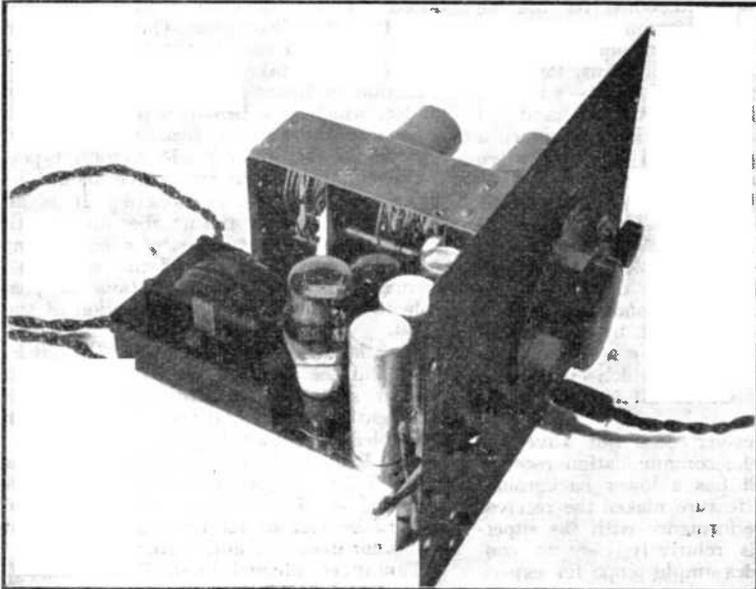
The detector is transformer coupled with shunt feed to the output stage.

Two decoupling capacitors are shown connected to the screen. C22 is intended to be mounted directly to the screen pin of the valve holder and C11 across the screen potentiometer.

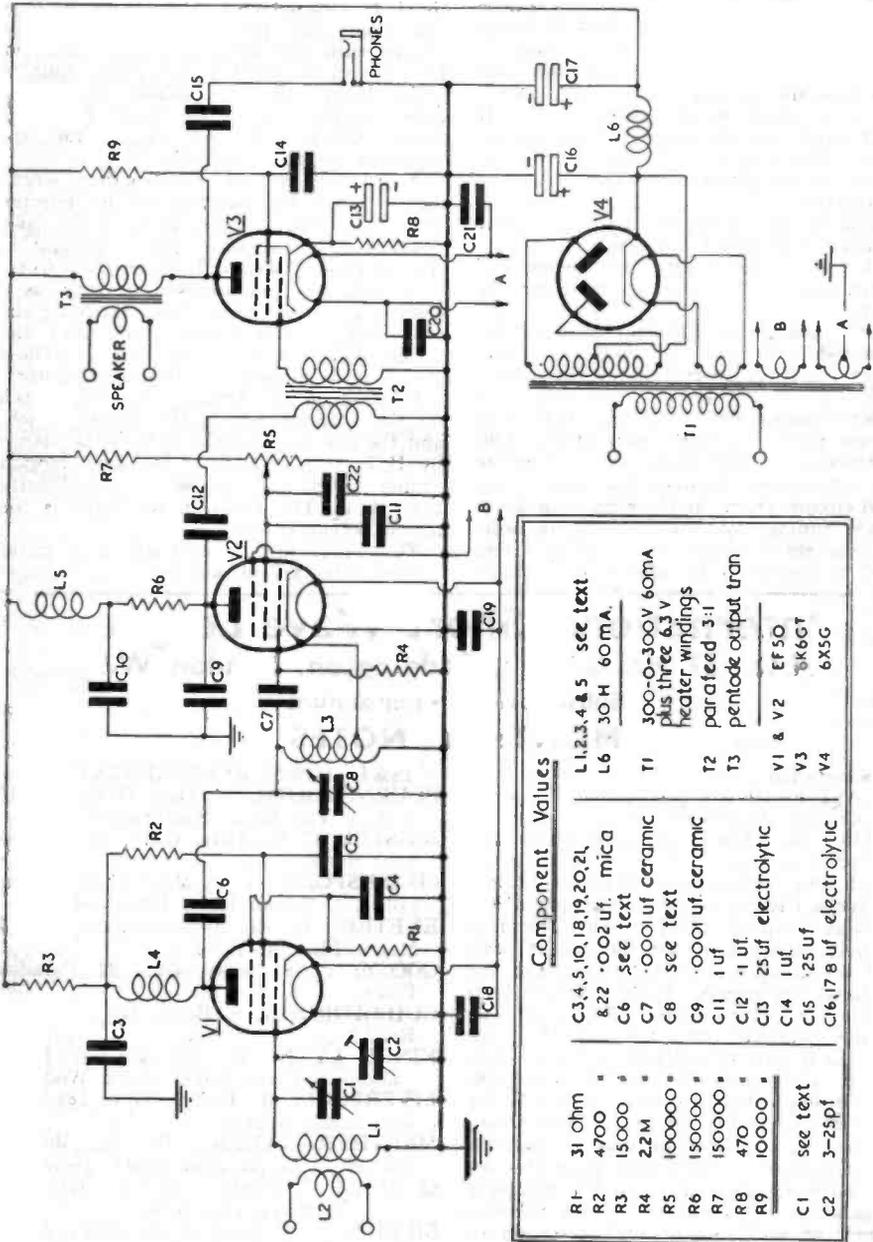
The R.F. choke should be similar to that in the R.F. stage.

The Output Stage and Power Supply

Little can be said about the output stage and power supply except that components were selected to keep the size of the receiver down to a minimum. The output stage can be of any conventional type. The valve used by the writer in the receiver illustrated is a 6K6GT. The main point to



View of receiver with cabinet removed



Component Values	
L1,2,3,4,5	see text
L6	30 H. 60MA.
T1	300-0-300V 60MA plus three 6.3 V heater windings
T2	parafeed 3:1
T3	pentode output tran
V1 & V2	EF50
V3	6K6GT
V4	6X5G

Theoretical circuit

(N.B. Please note that transformer centre tap shown connected to cathode side of L6 should be taken to earth (H.T.—) instead.)

watch is that mains hum is not introduced at this stage. The heater winding should be centre tapped and earthed, and if found necessary the leads should be screened.

Inspection of the circuit diagram will show that the rectifying valve is a 6X5G. This is a small rectifier with a six-volt heater originally designed for use in car radios. This valve, while having the advantage of being small, will pass 75 mA.

Construction

While the precise layout of the receiver is a matter of personal preference, it is proposed to describe briefly the layout and construction of the receiver used by the writer.

The chassis is of all-metal construction, which reduces hand capacity effects and increases stability. Inspection of the photograph Fig. 1 will reveal a peculiar twin chassis construction with the R.F. and detector valves mounted horizontally. This construction results from an attempt to keep connections between the valves and tuned circuits short, at the same time keeping the tuning capacitors central, in order that the slow motion drive on the front panel is conveniently placed for tuning.

This system provides complete screening of the R.F. and detector stages from the output stage and power supply. The sub-chassis with side cover removed, shown in Fig. 1, can be wired as a separate unit.

The other conventional chassis carries the power supply and output stage. The inter valve transformer and choke L6 are mounted on the underside.

Another point of construction worth mentioning is the screening of the detector and R.F. stages. The most usual and simplest form of inter-stage screening is that of placing screens between the valves.

In this receiver however, screens were erected across the valve base, shielding the grid and cathode connections from the anode and screen as in Fig. 3. These screens also support the tuning capacitors.

Looking on the front panel, the switch on the extreme left is the mains switch, and the one on the right of it is the standby H.T. switch. Next is the slow motion tuning control with the phones' jack directly beneath it. The knob on the right is the screen potentiometer.

The whole unit is enclosed in a metal cabinet 9 in. x 7 in. x 7 in.

International Short Wave League H.Q.: 57 Maida Vale, Paddington, London W.9

Subscription 1/- per annum

MONTHLY NOTES

Representation

LAST month we gave our first list of County Representatives. Below we list the Town Representatives appointed to date. It is essential to the smooth and efficient running of the League to have a CR for every county and a TR for every town of sufficient size. Therefore we invite applications for the vacant positions shown by the list below and the one published last month. Apply now and help to put your county on the ISWL map! We are now working out plans for DX contests, so it will be evident from this that it is in each county's interest to get organised. Briefly what we want is a CR for each county, a TR for every large town, and for all members to lose no time in getting acquainted with their respective representatives. In other words—complete co-operation. Our Representation Scheme, a copy of which is in the possession of every representative, is designed to ensure smooth running of local League affairs. It will fail if no co-operation is forthcoming from individual members. So—to use the vernacular, "get cracking" !!

ISWL TOWN REPRESENTATIVES

- BOURNEMOUTH:** W. Dall, G347, Flat 9, 4 Belle Vue Road, Southbourne.
BRISTOL: C. G. Tilly, G211, 95 Chesterfield Road.
CHELMSFORD: W. C. Mills, G261, 3 Elm Cottages, School Lane, Broomfield.
EXETER: E. G. Wheatcroft, G203, 7 Mount Pleasant Road.
GOOLE: B. S. Scott, G69, 11 Paradise Place.
GUILDFORD: A. S. Berry, G56, 8 Denzil Road.
KINGS LYNN: H. O. Armour, G325, "Lorain," Green Lane, South Wooton.
LIVERPOOL: M. Illidge, G44, 181 Oakfield Road, Anfield.
MERTHYR TYDFIL: W. E. Morgan, GW190, 7 Corporation Street, Penyard.
OLDHAM: F. Clarke (G2FAY), G262, 62 Chestnut Street, Chadderton.
SIDCUP: G. V. Haylock (G2DHFV), G301, 28 Longlands Road.
SWANSEA: W. H. Longhurst (GW3AAO), GW207, 82 Gower Road, Sketty.
TONYREFAIL: W. H. Thomas, GW229, 10 Collenna Road.

ISWL SERVICES

Contrary to the predictions of certain "Doubting Thomases," the ISWL is continuing its policy of providing members with useful free services, despite the low membership fees! This month we announce an addition to the Translation Service and also another special service. Further services are in process of formation and will be announced in future issues.

Translation Service

Oriental Languages: We are fortunate in securing the services of Mr. M. Preston, a teacher at the Oriental School of Languages, who will be the manager of this section. Mr. Preston has spent about 20 years in the Far East and his section covers a range of 14 remarkable tongues! The full list is: **Chinese, Japanese, Javanese, Malay, Filipino, Tarmil, Marathi, Pushtu, Persian, Arabic, Turkish, in addition to Russian, Finnish and Gya.**

The rules and conditions are the same as given last month. The QRA is M. Preston, 2a Brenda Road, London, S.W.17.

Broadcast Station Query Service

Information by cable!

We are proud to announce the formation of this service! We have no hesitation in claiming it to be the only service of its kind and scope available ANYWHERE! It is a unique service exclusive to members of the ISWL. The functions of the service are (a) to tackle queries on unidentified stations and (b) to supply current schedules of given stations. Is the data up-to-date? Listen to this! The Service will provide the very latest information on any given station, and is kept advised as to schedule and frequency changes from all the major broadcasting stations throughout the world direct by cable! In fact the Service will have in its possession all data on schedule changes **THE DAY BEFORE THE CHANGES BECOME EFFECTIVE !!**

The manager of the service is Mr. C. L. Wright, who has so kindly offered to place his services at the disposal of the League. Here are the conditions of the service as applied to station queries.

(a) No charge is made, but an S.A.E. must accompany each enquiry.

(b) ISWL membership number **MUST** be quoted.

(c) The following details must be supplied: Approximate frequency or wavelength, Time of reception, Language(s) used, Type of programme radiated (with a brief description of broadcast), Signal strength, and Receiving equipment in use.

(d) Be sure the details are correct and be as brief as possible.

(e) Address all enquiries to: BC Query Service, BM/BTP, London, W.C.1.

For current schedules, just send along your request together with an S.A.E.

If any reader can tell us of a similar service as comprehensive, and free, we would certainly be pleased to hear about it!

ISWL CHAPTERS

We form our first Chapter—at Khartoum!

Yes, it's true,—the boys at the R.A.F. Station in Khartoum have beaten everyone to it and have the honour to be the League's first Chapter! They have their own club call sign and details will be found in this month's "Ham Bands" commentary. We would like to congratulate these enthusiasts, far from home, on their initiative. Readers in the Khartoum area are invited to get in touch with Cpl. Short, 3005820, Signals Section, R.A.F. Station, Khartoum, M.E.F.4.

From our remarks on co-operation at the beginning of this month's notes, it will stand out clearly that we cannot overstate our desire to get Official ISWL Chapters formed throughout this country and abroad. For those members either interested in forming a Chapter or anxious to help form one, here is the procedure.

Contact at once your County or Town Representative. He will help you by direct co-operation as he is in a position to supply addresses of local members, and is bound by his office obligations to assist in developing local ISWL interest. The TR or CR will notify HQ of progress in his monthly report. We will do the rest in the direction of publicity. Where no TR or CR is appointed, write direct to HQ.

Members in the following areas are invited to assist in the formation of Chapters, already projected:

CHELMSFORD: W. E. Mills, G261, 3 Elm Cottages, School Lane, Broomfield.

EXETER: E. G. Wheatcroft, G203, 7 Mount Pleasant Road.

BROMLEY (Kent): A. Veness, G89, 37 Park Road.

WATFORD: R. W. S. Halsey, G155, 7 North Approach.

MIDDLESEX: J. Patmore, G7, 16 Osborn Gardens, Mill Hill, London, N.W.7.

READ NEXT MONTH'S ISSUE FOR DETAILS OF THE I.S.W.L. QSL BUREAU! Our Bureau, which caters for outgoing and incoming cards, will have a unique feature never yet attempted by any other QSL Bureau!

Resonant Lines

IT is gratifying to know that many readers enjoyed "Still going strong" last month. Oddly enough my entry into radio journalism some 18 years ago was, or should have been, by way of a humorous article. Indeed I have often thought of it as my masterpiece. In those happy days one could always swap a masterpiece with some great-hearted baker for a loaf of bread—nowadays it would take both a masterpiece and B.U.s. Actually it was based on a very original gadget (most useful) and after describing it, the article slid gently into a satire of its further applications with a few imaginary blessings it might confer, finishing off with what I thought to be a highly amusing incongruity. The few friends to whom I showed it were greatly amused, so I duly forwarded it to one of the many radio journals of those days.

To my great chagrin the Editor stripped out all the humour and published it simply as a short article explaining a useful idea, for which I received a cheque for a few shillings. I would have forgiven him if he had returned it complete with a "regrets" slip, and when a little later that journal disappeared from the bookstalls, to my then less mature judgment I felt it was the natural result of an Editorship so completely out of touch with his public. That however, wasn't the real CENTRE TAP—he wasn't born until 1937 when G5GQ felt the need for his creation.

QuoRuM

I visited a friend's shack the other evening where he was entertaining a few fellow hams and proudly displaying his new rig incorporating the Brookes 4-way Crystal Selector. In the course of the comments, praise and criticism which ensued, none of us referred to the "bank," "battery," "range" or "gang" of crystals in the same way. There is, it seems, no recognised term for a group of crystals. After all, we speak of a herd of cattle, a shoal of fish, a pride of lions, a covey of partridges, a gaggle of geese and even a bevy of bathing belles, so there should be a term to describe a crystal bank. G2ATV facetiously suggested a "wobble" of crystals.

I finally sought the learned opinion of Mr. Brookes (Brookes Crystals Ltd.) who, after a short huddle with Mr. H. L. Hammett decided on a "quorum" of crystals. Their suggestion "Avoid QRM by using a QuoRuM" seems to have the making of a good slogan.

What's in a name?

At the same gathering I was much in-

trigued by a discussion on that inexhaustible (and inconclusive) topic, home-built versus commercially made receivers. A well-known American communications job was matched against a home-built receiver and the aerial switched from one to the other as each was tuned to various stations throughout the bands. Valve for valve the sets were evenly matched, both having 2 r.f. stages. There were, of course, minor differences, from better band-spreading on the home-built to the easy wave-band changing on the factory model, but judged by performance alone there was little, if anything, to choose between them. There is, of course, no current fixed price for American communications receivers but the few second-hand models available fetch very high prices. The former cost just about one-third of what I should imagine the probable cost of a new model of the other would be. The owner of the factory-made job pointed out, quite rightly, that if he offered his set for sale it would command two or three times the amount the home-made receiver would. The truth of this cannot be disputed, although there is no very logical reason for so great a difference. Yes, definitely a purchaser would willingly pay say £60 for a well-known "Ether Buster" but hum and ha for a long time before handing over £20 for a "Dick Smith Special" despite its almost equally good appearance and performance. While agreeing that there are a number of good reasons for a fair difference in the prices, the actual difference is normally quite out of proportion to their real comparative values.

Rigidity

In what respects did the commercially made set score over the amateur job? Compactness, accessibility, workmanship, finish? Within limits they were more or less equal in these respects with, perhaps, the former leading by a shade on the first two counts. The only point where the commercial set really scored conclusively was in rigidity of construction. Its chassis was ribbed and re-inforced and could be counted on to retain its alignment when handled or taken from its case for maintenance and servicing.

Incidentally this point is always a difficulty in amateur construction of the bigger receivers. Many communications sets are built on a cast chassis. For amateurs, the heavier metals are difficult to engineer while additional bracing tends to produce a clumsy appearance and often impedes the most efficient layout. In multi-circuit receivers rigidity of construction must be given a high place in the list of "points in favour."

Bence Yap

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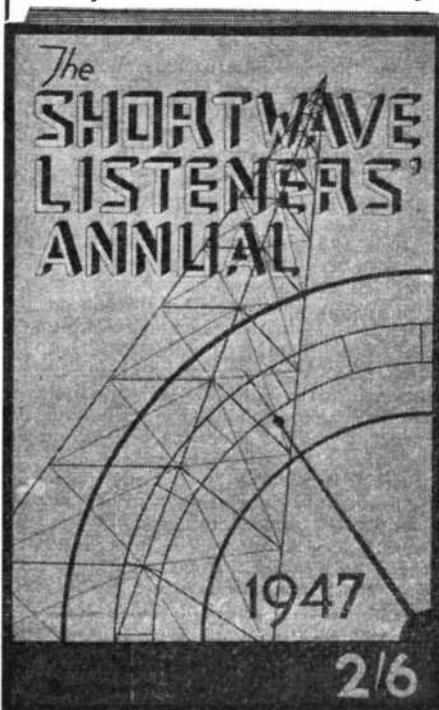
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WORLD NEWS

AMATEUR RADIO IN PALESTINE

By Reuben Sokolovsky

(*"S.W.N."* Correspondent—Near East)

HE history of Amateur Radio in Palestine begins back in 1924, when G2ZV began operating his Amateur Station under the strange call-sign of PE6ZK, and which continued operating, later in Trans-Jordan, until December, 1926.

From that year until 1936, nothing definite is known about any Ham activities, and the writer is quite safe in saying that nobody even knew the meaning, or anything about, Amateur Radio. In the beginning of 1936, however, the writer was intrigued by a small pamphlet bearing the name 'of:—"International Short Wave Radio"', published by the American Club, the "International Short Wave Club". This latter led to the meeting with an English Short Wave Listener, who introduced the writer to the "British Short Wave League", with whose monthly publication's help, a search for S.W. Broadcast Stations began. The birth of the Palestine Broadcasting Service gave also a distinctive push, and the younger people of Palestine began wondering "what's what".

British Air Force and Army personnel began, in 1937, operating Stations ZC6AQ and ZC6RP, to be followed by an unlicensed ZC6AA, to be still later joined by ZC6RL and ZC6EC. Repeated applications for a transmitting licence met always with a strict refusal, and operation, therefore, was confined to "under cover", when in 1939 a special licence was issued to ZC6HS (the local Hallicrafter's Agent, Eng. H. Spector, A.M.Brit.I.R.E.), and which lasted until the outbreak of the War.

In order to organize the few "would-be-hams" in Palestine, a Society was formed in Jerusalem, initiated by the writer, and which is known as "THE AMATEUR RADIO SOCIETY OF PALESTINE" with the initial membership of 25. During the War, nearly all of its members volunteered to serve with the British Forces, until the fall of Germany and Japan.

Political reasons necessitated a large garrison of British Army personnel and as such, some of them, mostly British Hams, began operating their respective Stations, whilst the civilian population was denied of such a privilege. The said Hams included ZC6NX, ZC6CU, ZC6FP and ZC6MF.

When these stations began operating, a protest was made to the P.M.G. against the preference made in this issuing of Transmitting Licences, and as a result, all stations were ordered to QRT as from September, 1946. Efforts are continuously carried out, however, to restore the situation to normal, and as to the future ??? next time

NEW CORRESPONDENTS



North Eastern Pacific: The photo in this heading is of R. W. A. MacKichan, who has recently taken up residence in Hong Kong. He is now our Correspondent for the area.

New Zealand: Arthur Cushen, one of the foremost DX-ers of the world, is now active as our Correspondent for this country.

Ceylon: Activity in the island will be regularly reported to us by our good friend Mahinda Wanigasuriya, who has recently accepted the position.

Switzerland: Guy de Cramayal is now Correspondent for this country.

We now have Official Correspondents in the following countries:—Australia, Ceylon, C.M.F. Area, Czechoslovakia, Hungary, Hong Kong and N.E. Pacific, Near East, New Zealand, Switzerland and U.S.A. Appointments for Malaya, China and South Africa will be announced next month.

These enthusiasts keep us in touch with local activities by regular reports. In order to establish complete contact with happenings overseas, we invite applications from readers willing to act as Correspondents in countries or areas not already covered. When writing, please give brief details of similar experience, and any other information of relevant interest.

From our Mailbag

The Editors do not necessarily endorse the opinions expressed by their correspondents.

Dear Sirs, **S.W. CLUBS**

Being one of the few people who are professionally engaged in the Monitoring of Short Wave Broadcasting Stations, I do, in the course of my duties, have to peruse all the technical Press, and I was surprised lately to find the old question of Radio Clubs, etc., coming into the "line-of-fire" once again.

I see from a recent issue of the "Short Wave News" that you have decided to foster the "International Short Wave League" so perhaps it was the founding of this league which caused this question to arise once more. I have read the arguments for and against these newly formed clubs and perhaps if you have a little spare space (a sore point these days) you will allow me to "air" my views on this matter.

One article (not published in the "S.W.N.") referring to the foundation of new clubs queries the service that could be given for a small subscription, and I find that I must disagree with the author of same on several points.

Taking the matter of fees, there are lots of young people who seek guidance on short wave matters whose pocket money is very limited, thus large fees would not enable them to obtain this guidance. I do agree, however, that there is one radio society giving good service to its members, namely "R.S.G.B.", but what the writer of the article has forgotten to take into consideration is that this excellent society deals with Amateur transmission and reception whereas what is wanted in this country is a good information service for the broadcasting short wave stations. Also, I do not think that the main attraction of a S.W. Club is a "beautiful certificate" and I think that very few people would join just for that alone. Surely the success of such a club depends on the work of its members and there is an old saying, but nevertheless a true one which runs:—"United we stand—divided we fall" . . . Surely it is not etiquette to condemn a venture before it is properly launched, and I shall await with interest your comments on the running of the "International Short Wave League."

So in conclusion let me say to the "youngsters"—take up the challenge and show some of these sceptical people what you can do.

Yours faithfully,
C. L. Wright.

Dear Sirs,

I wonder if any readers can supply me with information on the Canadian 48 Set? I would like to know (a) The frequency range, (b) The air-range for communication, and (c) If it could be operated from a dry battery, and if so, at what voltage?

Yours faithfully,
R. Livsey ("Tunshill," Bryn Avenue,
Old Colwyn, North Wales.)

I.S.W.L.

Dear O.M.,

I certainly agree with you on the question of "who is going to run the League?" In my opinion, an organisation like the ISWL cannot be run by a so-called "council," consisting of a few members who are naturally going to voice their own opinion on any issue that may come up for debate. Let us then, as members, be responsible for our own actions and then no one can grumble. As for members who do not write in and raise their opinions, they have got themselves to blame if they disapprove of the verdict. I may add that myself I detest writing letters but as a member of the League I feel it is my duty to do so.

Yours faithfully,
I. T. Evans G316 (Birmingham)

Dear Sirs,

Re. voting by post on topics of interest concerning the management of the League, I think that the majority of amateur radio enthusiasts will agree that it is a better system than having a selected few decide the courses to be taken.

May I suggest that the value of the League would be enhanced by the formation of a QSL Bureau which would redirect QSL's and also reports from SWL's. I should be interested to know if the League can arrange for a group of members to pay visits to some of the well-known amateur stations or perhaps a visit to one of the B.B.C. transmitters.

Yours faithfully,
P. F. J. Redman, G186 (Romford).

Dear Sir,

The subject of who is going to run the League is rather a difficult one if you intend to keep it International. The only way I can see is for "S.W.N." to form a council of well-known members whose job it is to piece together the wishes of the members who should meet in their own town once a month to discuss club affairs, and their representatives forward their wishes to H.Q.

73,
J. F. Squires, G2DBF, ISWL/G311
(Bournemouth).

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The World Electronic Research Pioneers Society

Editorial Note.—We have not so far been successful in our quest for details of the "mush-room" growth of so-called 'national' and 'international' radio clubs, leagues and societies", mentioned in our last issue, nor have our readers sent in any suggestions. Our tame detective, however, has been on the prowl, and submits a report—published below—on one new organisation which he has unearthed.

FOLLOWING the further account of the inventive genius of Ambrose Fandermere, which appeared in the December issue, he has now joined The World Electronic Research Pioneers Society. Its Founders, Justin Thyme (the Chief TWERP) and Wise Guy (TWERP 2) have decided that his patient research work over many years merits this honour, and so Ambrose, in consideration of payment of 1/- per annum, becomes entitled to use the identification: TWERP 3.

After acceptance, his first concern was to propose the Dumb Blonde for membership as he felt that his achievements would not have been possible without her encouragement and co-operation. Thus she was offered the opportunity of becoming TWERP 4 and of being issued with the beautiful gilt-edged inlaid-with-Mother-of-Pearl Certificate of Membership (on condition of course that she slipped her shilling into the kitty). As she had recently been reading a stern warning about certain organisations, who she gathered, were simply out to collect honest shillings from the unwary—giving little in return—she took this well-meaning advice and wanted to know more about the TWERP organisation.

Her first question "If I join, how can I help?" was readily answered by Wise Guy who pointed out "Don't be silly. You help by paying your shilling, don't you?" "That seems fair enough" she agreed cautiously "but I am also supposed to ask 'Who do I help?'" "What a funny question" retorted Wise Guy. "Me and the other two TWERPS of course."

These logical and prompt answers allayed her suspicions somewhat, but there were still some points which, according to that article, she ought to know before parting with her cash, so her next question was "What help do I get?" "Well," replied Wise "It doesn't set out to be a philanthropic Society, and anyway it would depend on what sort of help you wanted. If it was on money matters you had better see old Justin. For inventions of all sorts Ambrose would fix you, and you can always count on me for advice on anything"—adding

modestly "there's not much I don't know about."

"You couldn't say fairer than that" agreed the Dumb Blonde "so that only leaves the Balance Sheet. Is that published?"

"That depends of course" answered Wise Guy "on whether it balances or not. There'd be no sense in publishing a Balance Sheet that didn't balance, would there?"

So, to cut a long story short, it was perfectly clear to her that the TWERPS have nothing to fear from such questions and as it was all fair and above board, she accepted their offer.

Ambrose, in addition to ordinary membership, has also been honoured by the award of the TWERPS First Class Diploma for his distinguished work in the field of amateur invention. As Justin Thyme pointed out, this award is made solely on the merits of each case and the recipient needn't even be a TWERP to get it.

Although Ambrose's inventions are well known in radio circles, as a mere formality Justin decided it would be as well if he called round at Ambrose's Shack to see some of his later work. It so happened that Ambrose was being plagued by a visitation of mice, but with his usual resourcefulness, he had the matter well in hand.

With the Dumb Blonde's willing assistance he had built a neat arrangement by which, when a mouse stepped on a small platform containing the bait, it unwittingly tripped a relay which started up a vacuum cleaner and the mouse would be dragged into the bag by suction. Unfortunately the bait was sucked up as well as the mouse, so Ambrose added a reversing gear to blow the bait back on to the platform after the mouse was caught.

Unhappily this blew both the mouse and the bait back, but once he has solved this small problem of blowing ONLY the bait back he looks forward to the final elimination of these unwelcome visitors, and to being able to market this unique contrivance. A suggestion thrown out by Justin that he should add a device which would electrocute the mouse while it is in the bag (so that its ejection on the "blow" cycle wouldn't really matter) does not meet with Ambrose's approval. He has turned it down on the grounds that the sight of the bodies of electrocuted mice thrown around outside his contrivance would simply discourage other mice from stepping on the platform
(Cont. on p. 23)

ON THE HAM BANDS

Conducted by "CQ"

● 14 Mcs.

WE welcome back to this feature **A. J. Slater** (Southwick) who has been missing due to his SX24 going "up the spout." However he has managed a good DX log on a commercial "all waver." The best are:—EKIAD, MD; EL4A, 5B; ET3Y; FG3FP; HH5PA; J3HRP (0730), 9AGT (1215); K6RVU/W6 (1615); OX1Z; TG9RV; UA1KBA; VO4P, 6H, G, K; VP2GB; VQ4ERR; VS9AR; VU2AD; W9BNB/KL7; ZS6GV (1830), and very many Latins and VK's. He gives these QRA's:—PY7VB, Box 20, Ceara; VO2D, Communications Officer, APO 862, c/o PM, New York; PY1HP, Box 2353 Rio de Janeiro; W9BNB/KL7, c/o Alaska Communications System, APO 729, c/o PM, Seattle, Washington.

D. L. McLean comments on the poor conditions on the DX bands, and has also had a mishap—his 40 ft. pole blew down! His DX log includes EK1MD, J3HRP (0810, Kyoto), HK3AN, AS, OX3BC, PZ1J, VK7TR (0750), VO2Q, 6K, ZBIL and ZS1CN. He gives the QRA of F7AJ as 132 AACs, Istres Army Air Base, Istres, France, APO 201, U.S. Army.

Congratulations to **J. Bowes-Taylor** for the neatest and most detailed reports received for a long time! We certainly appreciate all the trouble you take, O.M.—thanks. Here are the "pickings" from this month's log:—J3aad (14005 kcs. at 0940), KL7ad (14300 kcs., 2010), KL7bd (14110 kcs., 0750), ST2am (ISWL Chapter, Khartoum at 2050), SU1abc (14100 kcs. at 1700, Alexandria, 40 watts), VE8aw (14005 kcs., 1700), VE8nw (14015 kcs. 2030), VP4tr (14380 kcs., 2110), VQ3hjp (14090 kcs., 1700), and ZS's lab, 1bm, 1ag, 1cn, 2aw, 5b, 6bo and 6go (all between 1630-2030). There are also 6 ZS's and many VK, W6, W7, etc.

George Hare (Lincoln) heard on his Eddystone 504 UA1KBA (578 at 0915), EK1mb (578 at 2200), ZS2bj (568, 1950), ZS6gv (568, 1900) and ZB2a (588, 1920).

John Clarke comes forward with CR9ag, KA1ak, KZ5aw, PK3SM, PK4ri, PK6TC (Biak), UD6ab and UD6kba (both in Azerbaijan, U.S.S.R.), VE8MJ (Baffin Island), VP2at (Antigua), VP4TR, VS9an, VU2PR and ZE1ji.

In his first log **Leslie H. Waine** (Yeovil) reports C07CX (2200), PK1ADC (2015), OE4FR (1945), ZS2AZ (1940), VE5HI (2205) and many other interesting calls.

● 28 Mcs.

Pride of place this month must go to the log of **S/Sgt. Whiting** (Nanyuki, Kenya). He is now using a 6 stage SH and a 35 ft. end-on aerial. The log includes CR7AD, G8SB, G5PP, J9ANA, KA1ABM, KP4AJ, OQ5AE, AR, BA; VQ3EDD, TOM; VS1AB; XE1GE; ZE1JB, JS, JU, JX, 2JA; ZS6CY, GV, DK, BY, GO, DW, EQ, FU, CX, EJ, A, S. Also some dozens of W's, etc.

S/Sgt Whiting says that VQ4GJD is active and contacted CR7AD using only 0.8 watts! The ZS, ZE, OQ and VQ's come in at very good strength and act as a good guide to general skip and conditions. The W's are at their best after 1700 GMT, but are mostly East Coast. VE's are rarely heard and this equally applies to Latins. The best time for G's is between 1100-1500 G.M.T. and occasionally until 1700. To wind up, our friend sends along a few QRA's. They are:—

CR7AD: P.O. Box 276, Lourenco Marques.

OQ5AR: Box 370, Jadotville.

XE1GE: Box 907, Mexico City.

ZE1JU: Box 475, Bulawayo.

ZS6GV: 7 Chapman Road, Germiston, Transvaal.

D. L. McLean, though not listening much, has managed to log G5KW/HZ (0915), SU1RC, VO2N, VO2X, UA1AB, YI2CA, ZB1AB, ZB1L, ZS1CN, 1T, 6GV, W5IHW, WOBDO, WOVAT.

George Hare reports SU1HF (1330), SU1LE (1730), J9ANA (0900), VK3JD (0900), KP4AJ (1830).

From B.A.O.R. Signalman **A. R. Poulston** sends in a good log, including HC1FG (Q5 R5 at 1810), J9ANA (55 at 1000), KA1ABR (44 at 1010) KP4AJ (45 at 0820), PK1AM 33 at 1500), SU1CX (44 at 1500), VK2IKR (44 at 1015), VQ3EDD (34 at 1740), XABU (Rhodes, 45 at 1330), XZ2AF, XZ2DA and XZ2YT (all between 1510-1530).

Another good log, this time from **A. J. Slater**, includes KP4CU, LU3BQ, OQ5AR, PK1AM, AW; PY5AQ, PZ1A, SU1CX, RC, HF; VK2AKR (1120), VO2M, VP6MR, YB, 9F; VQ4ERR, VS9AB, VU2AQ, LR; XZ2OA, ON, YT; YI2CA, ZE1JB, ZS1AX, T, 6FU. Also VE1, 2, 3, 4, 7, all W districts.

Roger Legge, of New York, has heard FA8DX (28400 kcs.), J2AAP (28470), LX1BO (28100), VP4TK (28200), VP6ZI (28450), W8WHW/KG6 (28420), YI2CA (28380) and ZB1AB (28400).

In his usual comprehensive report, **Geoff. Johnson**, G2BJV, remarks on the FB conditions on the band, apart from a spell at the end of November, Geoff. also notes the short skip that now prevails on most mornings with G, GW, GM coming in about 559 and with flutter. This short skip usually coincides with good VK reception. The log, which is shorter than usual, contains only "a few good 'uns" but is nevertheless laden with DX. The best are VK5ko (589 1330), VE7yt (559 1830), VK5no (449 0850), TG9jk (559 1840), ZS1ch (1340), ZS6ih (1345), VS9an (0915), UA9cf (Sverdlovsk, 1130), PZ1rm (1200). VK3pg, and the following VK's between 0930-1030—2RA, 2ws, 3jk, 3op, 3amp, 4hy, 5mp, 5nr, 6ov, 6fl and 7jk.

● **Top Band**

First results of the recent balloon-aerial tests are to hand. G4AU of Grove Park (Kent) employed a balloon 6 feet in diameter and got out extremely well. He had 76 contacts when using the balloon-aerial and 21 contacts in the same space of time when working with his ordinary aerial.

The most consistent DX station of the month has been D2ch, of Plon (near Kiel), who uses only 9 watts. His home QRA is in Yorkshire. D2fy (Hanover) has also been putting a fine signal into this country and is none other than G6FY (ex-PAOFY) of Datchet, Berks. Another DX signal has been OZ1w, who was heard working G2fwa (Croydon).

● **3.5 Mcs.**

Wot, no logs! We have, however, a nice letter from John Hall, that diehard of "80." He sends the following data. VE3AYE, Toronto, uses 1000 watts to a centre-fed $\frac{1}{2}$ -wave Zepp. He wants G-skeds on 80. He is on ECO and has been heard R8. W2JGZ, Orange (N.J.) listens for

Europe on Sunday mornings 0600-0730 GMT and uses 75 watts. W1pdn, Maine, heard RST 569 at 0630. Uses only 20 watts. KS4aa is on Swan Island, West Indies, and was heard at 0330. W1PI, Hyde Park (Mass.), puts in an R9 signal most mornings. He says "Tell the boys to get on 80 round there!" VE3AMX, Toronto, is on 3843, 3870, 3880 and 3890 kcs., and asks for G reports. Thanks, O.M. How about some more support for 3.5 Mcs.?

● **Query Corner**

Many thanks to all those who wrote in about LH2A. We know all about that station now! This feature has proved a great success, we are pleased to report, and we hope that readers will continue to support it. First of all, a summary of the outstanding doubtfuls not yet sorted out. These are VQ1ANA, P1ZZ, ZB3Q, OP2C, YO5WZ, KILMO, HS3YU and PK1VHN. We have worked OP2C on the air and he refuses to disclose his QRA! Of the others we still need data, but as no more has been heard of them we assume that they are more or less defunct now.

John Clarke wonders about the F7's. He says that some seem to be in France and others in French Morocco, and are they "the McKoy?" Yes, they are OK and are U.S. service personnel licensed under similar conditions to the D4's. The QRA's you need, John, are:—F7AA—Signal, Officer, 1408 AAF BU, APO 741, c/o PM, New York, F7AE—APO 524, c/o PM, NY. There is no individual method of discrimination between the French and French Morocco stations. The same reader asks about EQ4dc, on 14 Mcs., and ZA2d. You are in luck, O.M.! We know about these two. EQ4dc QSL's should be mailed to Elmer Heib, 3149 N. 26 Street, Milwaukee, Wisconsin. The other

The neat listening post of Arthur Cushen, our New Zealand Correspondent. Not much in the way of DX 'phone, BC especially, escapes Arthur's ears.



one, ZA2d, gives his QRA as Box 63, Durazzo, Albania.

There seems to be a growth of new EP stations. J. Bowes-Taylor has heard EP1al (14040 kcs. at 1730), EP3d (14150 kcs. at 1750) and EP3Q (14295 kcs. at 1615). Has anyone any data, please?

Lionel Howes wants to know the "gen" on YT5aa, EZ4x and VZ2rw. All we know of 5aa is that he runs 225 watts, is somewhere in Yugoslavia and says he is "not officially on YET!" EZ4x says he is in the Saar (thought this had ceased to be a separate "country"). He says QSL via HB9CE. Of VZ2rw—your guess is as good as mine!

The puzzles of A. G. Hyams are VP7n, XUA1R and, a station heard frequently some time ago, TR1P. The former, though the call departs from the usual Bahamas practice, appears to be genuine and gives his QRA as Box 931, Nassau. Our old friend TR1P can be reached via A. H. Hix, 47 College Park, West Virginia University, Morgantown, West Virginia. You can come again with XUA1R!

Well, that's the lot for this month. Please send in any details you may have of the queries mentioned and also, we will be pleased to hear your particular "doubtfuls."

● Stations of the Month

Here are some new ones to search for. W6OPQ is on 14 Mcs. in Corsica. . . . FL8SH is active in French Somaliland on 14170 kcs. . . . ZD2K is in Nigeria on 28 Mcs. . . . ZD7AD is on from St Helena. . . . VQ1BD is said to be in Zanzibar on 28 Mcs. . . . VK4EC is in Papua on 14170 kcs. . . . W1SHO is operating from Sudan on 14 Mcs. . . . VP7XX is another new one from Bahamas and is on 17075 kcs. . . . UI8aa is on 14 Mcs. from Tashkent.

● Special Tests

How many readers heard the "QSO party" organised by Dorothy Hall, W2LXY? It took place between 0500 Sunday, December 8th to 0500 Monday, December 9th. The station ran continuously for the 24 hours on 2, 20 and 10 metres simultaneously, and the idea of the tests were to determine just how many stations could be worked on the three bands and to give the rigs a complete "airing." These special experimental transmissions were carried out by "Dot" herself, assisted by 6 other hams including W2NBD (late OX1AA), W2NBH and W2NQM. The 14 Mcs. transmissions were coming over R9 plus, really very FB. The aerial in use for the 14 Mcs. tests was a four half-waves in phase type.

Special QSL cards have been printed for the occasion and Dorothy would greatly

appreciate any SWL reports covering the period. She mentions that, for these tests, no postage need be sent for return mailing.

● Gossip

A letter from A. Sass, of the Hungarian Short Wave Society, says that HA hams formed their union on November 15th. Permission to transmit is not yet to hand but the QSL Bureau is all ready. The QRA for Hungarian cards is:—QSL Bureau Manager, A. Sass, Dohany-u, 1/c, Budapest.

S/Ldr. H. Pain, late of ZB2A is now back in G and has his own call—G3ATH. However, he says he will be leaving for Rangoon in mid January and will be taking a 6L6/807 rig with him. Of ZB2A they are on 28080 and 14040 kcs. Operation on 14 Mcs. is confined to after 1900 GMT to avoid interference with Service traffic. The new station—ZB2B—is now operating.

Bob Martinon, FM8AC, writes that he is a "new-comer" to ham radio, his first QSO being on February 5th. Since then he has worked 52 countries and has WAC. He only wants Asia for 28 Mcs. WAC. The rig is 89 (CO)—6L6 (FD)—807 (PA), running at 50 watts. The aerial is a half wave Windom and the RX a home built 9-valve super. His QRA is Box 260, Fort-de-France.

News from our ISWL Chapter in Khar-tum. The club has been issued with an "experimental" licence and accordingly the ops have to grind out the old "test" call instead of CQ! The rig at present is an ex-aircraft TX converted for use on 14 Mcs. and runs at 70 watts input. The aerial is a half wave Zepp and the RX an AR88. They are aiming to construct a new 100 watt job as soon as possible. Considering the location (surrounded by metal hangars, and the aerial only 24 ft. high) the station, ST2AM, is doing fine as has had 200 QSO's so far.

Our old friend A. G. Anderson now has his ticket. We hope that his call—GM3BCL—is not an ill-omen!!

Cyril Greenaway, G2LC, has been working some DX. Over the last month he worked OY3igo (Thurshavn, Faeroes), VO5z, KL7ad, ET1jj, VE8aw, W7qi/KL7, VE8ai, VS9ab, UQ2ab, UA0kaa, and 3 W6's, LU, VK, ZL and ZS. His rig is a VFO consisting of 6F6 and 6L6, coupled to a 6L doubler and a pair of 807's.

● Readers' Reports Wanted

G3ATH: S/Ldr. H. Pain, 53537, Officers' Mess, R.A.F., Uxbridge, Mddx.

G2DHV: 14196 kcs. CW and 3580 kcs.: G. V. Haylock, 28 Longlands Road, Sidcup, Kent.

GM3BCL: 7150 kcs.: A. G. Anderson, 87 Braemar Place, Aberdeen.

● **DX Target—(South Pacific)**

Another new idea! Each month we will focus our attention on a different target area, and include notes on the really rarer DX calls either heard or known to be operating. Make these calls your target and please write in if you get any bulls-eyes!

Dutch New Guinea: PK6DB (14335 kcs.), PK6TC (14300 kcs.). Celebes: PK6HW and PK6HL. (The PK6AW in Biak is now in Java, signing PK1AW.) Dutch Borneo: PK5AR. New Guinea: VK4OS and VK9AZ (14050 kcs.) Fiji Islands: VR2AB, VR2JI (14285 kcs.) and VR2AC (28 Mcs.) New Hebrides: YJ1AD. Cook Islands: ZK1AA (3957 kcs. and 28 Mcs.)

Tough nuts to crack—but how many have YOU heard?

● **QSL's Received**

Roger Legge: CN8AB, EL4A, ET3Y, FA8NF, FG3FP, J2AAI, J2SJB, J9AAR, KA1ABA, KA1AER, KA1SS, LA4R, LA8C, OX1AA, OZ4HF, OZ7PH, PM2X (Galapagos Islands), PZ1G, PZ1UD, PZ1W, SM5UN, SU1USA, TG9FP, TG9RC/Ray Island, VP2AT, VP2GE, VP5EM, VP9F, W1LTQ/TF, ZB2A, ZP8AC. Very fb indeed!

A. J. Slater: CE1AR, CX2CO, CX3CN, KP4CE, T14AC, VQ4ERR, XAEU, ZS6GV (14 Mcs.): XACW, W0POY, XZ2DN (28 Mcs.)

H. H. Mansfield: LU6AJ, I1FP, VP6YB, PZ1G.

J. Bowes-Taylor: CM2BC, EK1AA, VE4IF, VQ3HJP, W4ERT, WOLAE, W6VIB/C7, XAET..

PSE QSL TO

This month's quota of selected QRA's
C1MG: Box 409, Shanghai.

CE5EA: Apartado 15, Cochabamba.
EK1MD: Milton Ramsey, Radio International, 34 Soya Street, Tangier.

J2AAI: 304 Signal Op. Battn., APO 343, c/o PM, San Francisco.

J3AAA: APO 25, c/o PM, San Francisco.

J3AAD: APO 301, c/o PM, SF.

J9LG: Box G, Navy 824, c/o FPO, San Francisco.

KL7AD: Tanacross, Alaska.

KL7BA: Box 988, Juneau.

OX1A: 166 ACS, APO 959, c/o PM, New York.

PK6TC: D. Beloit, 105 W. 4th Avenue, Gary, Indiana.

PZ1G: Box 184, Paramaribo.

PZ1GB: Box 77, Paramaribo.

PZ1W: Box 679, Paramaribo.

VO2D: Communications Officer, APO 862, c/o PM, New York.

VP2MY: Box 201, Plymouth, Montserrat.

VP4CK: 74 Duke Street, Port of Spain, Trinidad.

VP4TR: c/o P.A.A., Trinidad.

VP6YB: T. Archer, "Hillview," St. Phillip, Barbados.

VQ6GH: G. H. Hillier, Somaliland Signals, HQ Troops, British Somaliland.

VR2AB: Box 338, Suva, Fiji.

VS1BZ: TRE, No. 2 BS & RY, SEAC Air Forces, Singapore.

VU2AA: c/o 166 Piccadilly, London.

VU2JD: 3 Sigs. Training Battn., Mhow, India Command.

VU8GA: Central Technical College, Calcutta

XAAP: Trans World Airlines, Athens.

XAAN: 47 AASBO, APO 794, c/o PM, New York.

ZB1AB: Port Radar Centre, HM Dockyard, Malta.

ZD7AD: Gildora, St. Helena.

ZE1JU: Box 475, Bulawayo.

ZS1AB: Box 277, Paarl.

ZS2CI: Box 688, East London.

ZS6AM: G. Dent, 74a High Street, Rosettenville, Johannesburg.

APOLOGY

We tender our profound apologies for the inconvenience caused to our readers and distributors by the insertion last month of the notice stating that the "Annual" was available. This notice was inserted by us in all good faith, under the impression that it would be so available by the time that issue was published. As it happened, the first supplies—discounting a few sample copies—were received by us on January 6th, and were dispatched immediately. Further supplies are on the way, and by the time this issue appears all outstanding orders should have been cleared.

We thank the many correspondents who have appreciated our difficulties and borne patiently with us.

BINDERS FOR VOLUME ONE

In response to many requests we have placed on order a quantity of spring-back binders suitable for housing Volume One. The supply position is such, however, that deliveries to us will be made in small quantities at a time. The estimated cost will be around 5/-. Readers desirous of purchasing one are asked NOT to send any money but to send along a postcard requesting to be placed on the waiting list. They will then be advised when their binder is ready. Note that we can make no previous promise as to date of delivery.

My Favourite Receiver

No. 9: D. Strachan

THOUGH not strictly a receiver, this month's circuit should be of much interest to those who do not feel inclined to build a multi-valve communications receiver and yet want high performance on the short wave bands. The adaptor, or converter, shown herewith has been built by a reader who claims to be "very much of a beginner," with very little trouble and with no elaborate auxiliary gear, such as a signal generator, etc. Providing that care is used in the construction, and the values given adhered to, no snags should be encountered by the average constructor. The converter in question is used in conjunction with a standard commercial 5-valve superhet receiver, and the results claimed for it are indeed very creditable. One important point to note is that the variable capacitor in the oscillator circuit must not exceed $25 \mu\text{F}$.

The coil data is as follows:

RANGE 1 (25,000—10,000 kcs.)

Coil 1: Denco Maxi-Q, No. 5 BLUE, or similar coil.

Coil 2: Grid winding: 7 turns 20 SWG, wound on 1 in. dia. former, spaced 1 in. overall. Centre tap to earth. Anode winding: $2\frac{3}{4}$ turns 36 SWG DSC wound between grid windings so that $1\frac{1}{2}$ turns are each side of centre tap.

Coil 3: 7 turns 20 SWG centre tapped. Spaced identically as grid coil.

RANGE 2 (12,000—7,500 kcs.)

Coil 1: Denco Maxi-Q, No. 4 BLUE, or similar.

Coil 2: Grid winding: 14 turns 20 SWG wound as Coil 2, Range 1. Anode winding: $4\frac{3}{4}$ turns 36 SWG DSC, wound $2\frac{1}{2}$ turns each side of centre tap. Dimensions as Range 1.

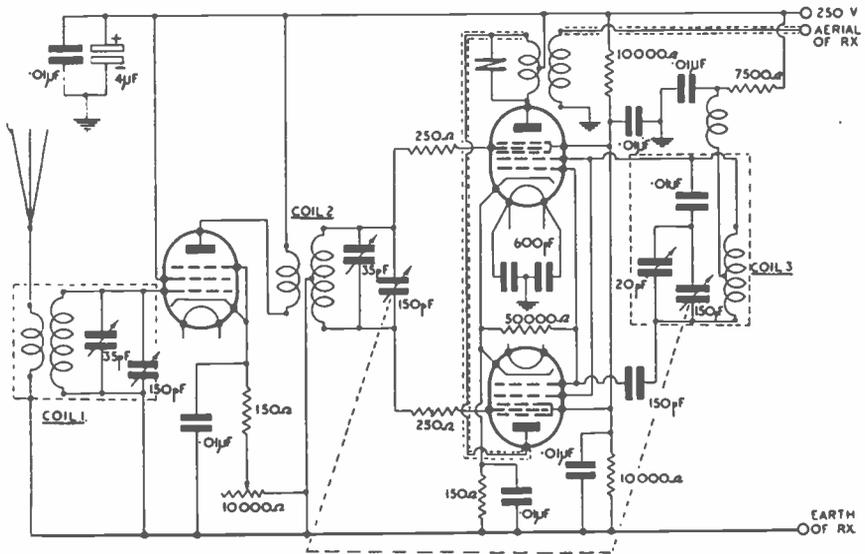
Coil 3: 14 turns 20 SWG, centre tapped. Dimensions as in Range 1.

RANGE 3 (7,500—4,500 kcs.)

Coil 1: Dimensions as Coils 2 and 3. Grid winding: 30 turns 24 SWG. Aerial winding: 10 turns 36 SWG DSC close wound $\frac{1}{2}$ in. away from earth end of grid coil.

Coil 2: Grid winding: 30 turns 24 SWG close wound, as Range 1. Anode winding: 10 turns 36 SWG DSC wound 5 turns side of centre tap. Dimensions as in Range 1.

Coil 3: 30 turns 24 SWG, centre tapped. Dimensions as in Range 1.



Around the Shacks

No. 7

G3ACC



THE female voice is heard frequently enough on the amateur bands these days, but a real genuine YL operator is still a rare bird! It is with great pleasure therefore, that we introduce Margaret Mills, G3ACC, who must surely be the first YL to be licenced since the war.

Megan—as she is more familiarly called—first became interested in radio when she joined the R.A.F. in 1940. After the usual square bashing, she became a Teleprinter Operator. After several months operational duty at Northolt, she was seconded to F.O. until 1942 when she was commissioned. Whilst on the W.A.A.F. Signals Officer's Course, she met a number of radio enthusiasts who encouraged her to take an active interest in Amateur Radio. In her own words:—"At the end of the Course, when the finals were over and I was in a weak condition through overwork, I was persuaded to sign on the dotted line and became a BRS. To everyone's delight, I was the proud possessor of the number 7388!! This caused quite an amount of amusement. So at the end of 1943, I was a Signals Officer and BRS7388".

On demobilisation, Megan was appointed Display Supervisor for Express Dairies, which was as she remark "quite a change". She missed her radio so much that something had to be done about it. So she borrowed

a Hallicrafters SX16 and with the aid of "a dear little transmitter—just the usual CO-PA", she got on the air—after the usual formalities of course! Describing her first experiences of being on the air, Megan continues:—"The first time someone came back to my CQ, I could hardly hold the key for excitement; my hands were hot; my feet got cold, and my mind went a complete blank! It was equally exciting when I answered my first CQ call. I'm not sure whether I hoped someone else would get him first or not and when I found that I had got him, I was completely at a loss for something to say"!

We think Megan's description recalls vividly the thrills which so many of us have forgotten once came our way.

Megan is quite an old hand now. The "little CO-PA" has undergone many modifications and she is now active on 3.5, 7, 14 and 28 Mcs. Most of her time is spent on 14 Mcs. She has got well and truly bitten by the "DX bug" and her best DX so far is PY and LU.

Incidentally, those fortunate to receive Megan's QSL card will be left in no doubt of her artistic ability, and if you do QSO, you'll probably be quite surprised at her "pretty fist", for all her QSO's are of necessity on CW at present.

(T.W.E.R.P's—cont. from p.17)
and obviously impair its selling potentialities.

Needless to add, Justin Thyme was well satisfied as to the validity of Ambrose's entitlement to that invaluable distinction—the TWERP First Class Diploma.

All readers will agree that the Pioneers are fortunate in having such a nucleus upon which to build their organisation.

While they feel hurt that anyone might even think that they may in any way be suspected of Bob-snaffling they are not averse to extending their membership to the right type of people. As Justin remarks "We have nothing to fear, and we will report on our further activities in due course."

C.T.



STATION DESCRIPTION No. 8

Location

ONCE again South America claims our attention as the location of our station description. This time we take our readers to the famous "Voice of the Andes", HCJB of Quito, Ecuador.

The station itself is located among the snow-peaked Andes—the "Switzerland of South America"—and the station buildings are built on the lower slopes of Mount Pichincha, an extinct volcano. Since the equator bisects Ecuador, the climate is mainly tropical, though the cool mountain areas allow a change of atmosphere.

History

HCJB is a real pioneer station, the first programmes being aired on Christmas Day, 1931, the year of the Incorporation of the World Radio Missionary Fellowship, who operate the stations. In 1932 a portable transmitter-loudspeaker system was installed in trains for special broadcasts in connection with a 25th railroad anniversary. The first HCJB Central Studio and office in Quito was opened in 1933, and the following year saw the beginning of the Radio Circle idea by which radio receivers were loaned to communities to hear HCJB. The next two years saw the purchase of a new transmitter for 73 metres, to replace the original one, and also the inauguration of

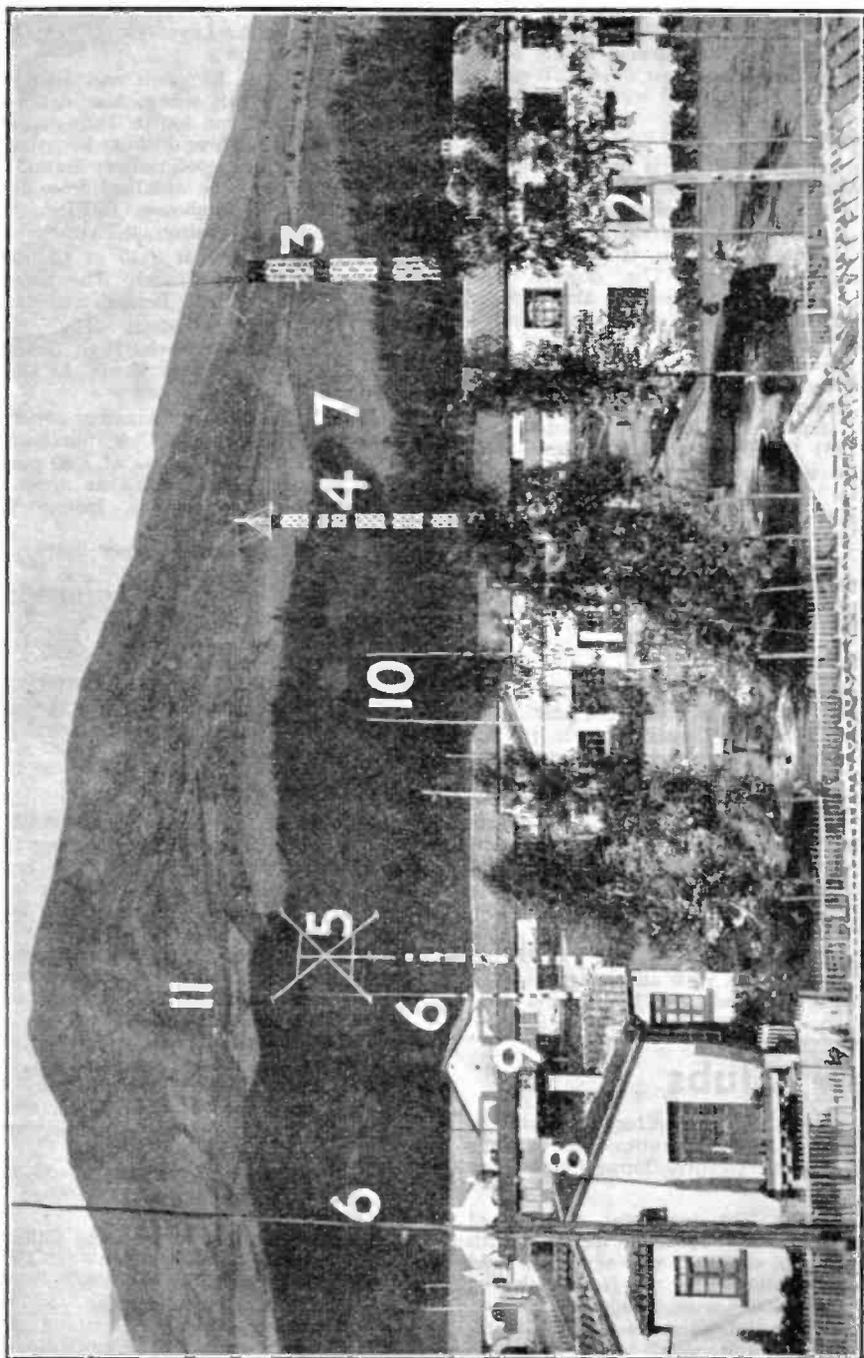
mobile transmission systems. In 1937 the first 1,000 watt short wave station was installed and the first transmissions in English began. The intervening years were taken up mainly with plans for newer and better equipment, and in 1940, on Easter Sunday, the President of Ecuador opened officially the present 10,000 watt short wave station. During the next few years many changes were made and powers increased. Transmissions were now being given in the additional languages of Swedish, Russian, French, Dutch, Czech, Yiddish and Quechua.

Equipment

The studios are at Inaquito in a two story office and studio building near the transmitters. The transmitters themselves are built entirely by the HCJB engineering staff. Three different types of aerials are in use, a five-element rotary beam, a box-type beam, and "L" type.

Six frequencies are in operation, as follows:—Local—974 kcs., 800 watts; National Short Wave—4107 and 6240 kcs., 1000 watts; Continental Short Wave—9958 and 15115 kcs., 1000 watts; International Short Wave—12455 kcs., 10000 watts.

HCJB is on the air daily, except Monday from 1130-1400 and 2115-0245 G.M.T. Programmes, in English, are radiated five



General view of the HCJB Group. (1) Transmitter building (2) Studio and office building (3) 24-metre tower (4) 30-metre tower (5) 19-metre tower (6) Long wave aerial (7) 78-metre aerial (8) Co-director's residence (9) Staff member's apartment (10) Flagpole (11) Mount Pichincha

times daily, except Monday, at 1200, 1300, 1930, 2300 and 0230 G.M.T. A popular feature with English listeners is the Mail-bag programme broadcast, every Wednesday at 2330 G.M.T.

Organisation

The control of HCJB is in the hands of the World Radio Missionary Fellowship, Inc., a non-profit organisation founded in 1931. Although the station is the Quito outlet of the NBC chain, it is entirely an independent concern. The objective of HCJB, known sometimes as the Pioneer Missionary Broadcaster, is to radiate Gospel programmes to the far corners of the earth. This type of programme is not the only broadcasting from the station, however, and many fine musical, topical and special transmissions are also radiated.

In 1931 there was a staff of three—this has now risen to many dozen. A board of trustees, elected by members of the W.R.M.F., vesting authority in the co-directors, administers the affairs of HCJB. The organisation includes Regional Co-ordinators and a Home Advisory Council, composed of representatives in the U.S.A., Canada and Great Britain.

Future Plans

Clarence W. Jones, one of the HCJB Co-directors, tells us that the station is planning to secure larger grounds (to increase the size and power of the stations), and to construct more adequate beam aerial arrays. Though no tangible steps have been taken towards the actual visible accomplishment of these plans, it is hoped that it may not be long before they are put into effect.

Reports

Reports are always welcomed at HCJB, the station verifies with an attractive QSL. The QRA is: Radio HCJB, Casilla 691, Quito.

New Clubs

Our revised "Club Directory" will appear next month. In the meantime here is some information on recently formed clubs and modifications.

HARROW: The inaugural meeting of the Radio Society of Harrow was held with an attendance of 33. It was agreed to hold fortnightly meetings at the Northwick Tea Rooms, 206/208 Kenton Road, at 7.30 p.m. The annual subscription is 10/-. Refreshments are available, which is one advantage of holding meetings in a Tea Room! Full

details may be had on application to the Secretary:—J. F. A. Lavender, G2KA, 29 Crofts Road, Harrow.

KINGSTON: The Kingston and District Society is now in full swing. Meetings are held on the second and fourth Thursday of the month at the Three Fishes, Kingston-on-Thames (near Kingston railway station). Further details may be obtained from the Secretary:—W. F. Limhouse, G2FDF, 84 Cattemare Avenue, Walton-on-Thames.

LEICESTER: Meets at 7.30 at Charles Street United Baptist Church. The Secretary is O. D. Knight, 16 Berners Street.

STOKE-ON-TRENT: Meets Thursdays (7.00) at Tabernacle Church, High Street, Hanlet. The Secretary is D. Poole, 13 Oldfield Avenue, Norton-le-Moors.

YEOVIL: The Yeovil Amateur Radio Club meets at the Pen Mill Cafe, Sherborne Road, every Thursday evening at 7.30 p.m. Readers in the Yeovil area are invited to contact the Secretary: B. Hover, 57 Everton Road, Yeovil.

Here are some recent changes in Secretaryship.

READING: L. A. Hensford, G2BHS, 30 Boston Avenue, Reading.

SLADE: L. A. Griffiths, 34 Florence Road, Sutton Coldfield.

SOUTHEND: K. F. Crispin, G6MH, 27 Thurston Avenue, Southend-on-Sea.

WEST BROMWICH: R. G. Cousens, 38 Collins Road, Wednesbury.

THE TOPS CW CLUB

A short time ago G6AQ and GW8WJ decided to launch a scheme for bonding together all operators who are keen CW fans and good "hams." The club gives its full support to the sponsor organisation, The World Friendship Society of Radio Amateurs, and is running a weekly "net control" on approximately 3540 kcs. every Thursday evening at 2030 G.M.T. Here are some brief details of the club.

(a) Members must have a good readable "fist" of 15 w.p.m., or over.

(b) To encourage the use of break-in and such terms as QRZ, QHI, QLO, etc., in order to relieve the bands of unnecessary QRM.

(c) To encourage the use of 1.8 and 3.5 Mcs. for Inter G/Europe contacts when 7 Mcs. is open for DX.

At the time of going to press the following members have been accepted:—G2CIW, FTU, 3SB, VM, 5HS, 6AQ, GW3CF, 6AA and 8WJ. Interested readers who wish to apply for membership please write J. P. Evans, "Westcroft," Meliden Road, Prestatyn.

Component Review

MULLARD QVO4-7 R.F.

AMPLIFIER TETRODE

Among the new and interesting transmitting valves which have recently been made available by the Mullard Wireless Service Co., Ltd., one of the most useful from the point of view of the amateur short wave enthusiast is Type QVO4-7. This is a R.F. amplifier tetrode dissipating 7.5 watts at the anode, and capable of delivering an R.F. output of 6.3 watts at a frequency of 150 Mcs. and, of course, correspondingly greater outputs at lower frequencies.

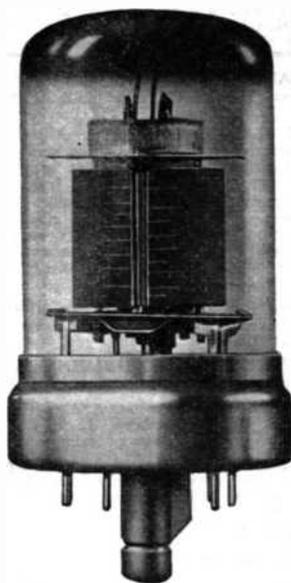
The QVO4-7 is a versatile valve for it can be employed as an oscillator; as a frequency doubler or trebler; in the buffer stage; or as an R.F. amplifier.

Static characteristics at anode volts 250, screen volts 135, and anode current 30 mA. are: mutual conductance 3.0 mA. per volt, impedance 60,000 ohms.

The QVO4-7 is of the Mullard all-glass construction with flat pressed-glass base, and with the standard B9G arrangement of nine contact pins. In this form of construction, it will be remembered, the contact pins are moulded into the pressed-glass base, and, therefore, serve not only as external connecting pins but also as lead-in wires to which the electrode assembly is directly attached. One advantage of this construction is that it results in a very rigid and compact assembly, with the minimum number of internal electrical and mechanical joints. As a consequence the QVO4-7 is an extremely robust valve and one well able to withstand mechanical vibration. It may, therefore, be employed in confidence in mobile equipment.

Another, and even more important advantage of the all-glass construction, is that it involves only very short and direct electrical connections to the electrodes with the result that the inter-electrode capacitances and lead inductances are very small, and the performance of the valve at high frequencies is of a high order.

The cathode is indirectly heated, and designed for the standard 6.3 volt heater supply. The contact pins are of copper-clad chrome-iron, silver plated, and thus have low contact resistance.



Outputs at various frequencies are given in the table below:

	Frequency (Mcs.)	Output (W)
Single Valve as Class "C" Amplifier	150	6.3
	125	7.0
	100	7.4
	75	7.6
	50	7.8
	20	7.9
	3	8.0

In operation the anode voltage should not be allowed to exceed 300 volts, and the screen voltage 250 volts. The maximum permissible dissipation is 7.5 watts at the anode and 2.0 watts at the screen, while the cathode current must be limited to

We have just received the Winter 1946/7 catalogue from Messrs. Mail Order Supplies, which contains a number of interesting items. M.O.S. mention that a copy will be sent to any reader who encloses a 1d. stamp. Future copies of the Catalogue will also be assured by those writing in. The address is 24 New Road, London, E.1.

SMALL ADVERTISEMENTS

Readers' small advertisements will be accepted at 3d. per word, minimum charge 3/-. Trade advertisements will be accepted at 6d. per word, minimum charge 6/-. If a Box Number is required, an additional charge of 1/6 will be made. Terms: Cash with order. All copy must be in hand by the 10th of the month for insertion in the following month's issue.

QSL CARDS, Short Wave Listeners' and Full Call. Samples Free. Send S.A.E. to G6MN, Worksoop, Notts.

ODEON RADIO, HARROW. All components, complete equipment, test gear and technical books for transmitting amateurs, short wave listeners and experimenters now obtainable from 56 College Road, Roxborough Bridge, Harrow (2 minutes Harrow Met.) Prompt repair and re-alignment of communication receivers Personally supervised by G4HV. Postal enquiries receive immediate attention. Open 9 to 6.30 daily, including Saturdays. Odeon Radio, Harrow.

5K25, just overhauled for £2 10s., tiptop job as new, 12 tubes, S meter, 8 other controls, £55 or near.—Box 1011.

INSTRUMENTS & EQUIPMENT designed to specification. Send details, requesting quotation, to Box 1012.

WANTED, Back Numbers, 1, 2, 4, 5 and 11, of Short Wave News. Cash or exchange! Box 1013.

SEND 2d. stamp for complete bargain list. Examples, Yaxley type switches 1/-. 1mA Rectifiers for meters 2/6, $\frac{1}{2}$ Amp. for chargers 5/-. 300 v. 60 mA. 5/-. Volume controls 1/-. Thermo 0.5 Amp. meter 8/6, Resistors 1W. 6d., $\frac{1}{2}$ W. 4d. All Short Wave Components. Carter's 67 Bell Lane, Marston Green, Birmingham.

FOR SALE S.X.28 with speaker and spares as new. For 230 A.C. Buyer collects. Offer to 69 Cleckheaton Road, Odsal, Bradford, Yorks.

REPORT PADS 150 sheets printed report forms for the DX listener. Complete with instructions. Indispensable to the QSL collector. Send a report that will be appreciated by the recipient!! Price 2/6 post free from "S.W.N.", 57 Maida Vale, Paddington, London, W.9.

SWAP two QCC crystals, 1883 and 1933 kcs., for any others between 1750-1815, 1845-1900 or any 3.5 or 7 Mcs. frequencies. Cash adjustment if necessary. Write Box 1010.

EAST ANGLIAN HAMS. All components for receivers and transmitters, crystals, test gear valves. Authorised distributors for Hamrad, Raymart, Eddystone, Labgear. No lists yet but all enquiries dealt with promptly, send stamped addressed envelope. Newson, G3GY ex-G2GF, 28 Market Place, North Walsham, Norfolk. Telephone 219.

AMATEUR selling up, has for sale, valves, S.W. coils, transformers, etc., etc. Send S.A.E. for full list, to D. J. Parvin, 20 The Byeways, Surbiton, Surrey.

G3AOS undertakes all types of construction work which includes Transmitters, Modulators, Power Packs, Amplifiers, Receivers, etc., enquiries invited for any apparatus. Agents for Eddystone and all leading Amateur component manufacturers including G4BI metal cabinets, chassis, see write-up December issue. Eddystone Manual No. 5 by post 2/9, prompt Mail Order service. G3AOS, J. G. Barnes & Co., 4 Victoria Road, Hale, Altrincham, Cheshire. Tel.: Alt 4464.

VALLANCE'S INTRODUCE

to Newcomers to the Ham Bands **THE W.F. 25D C.W. TRANSMITTER.** Efficient, dependable, and ready for immediate C.W. operation. Can be supplied with modulator for phone operation.

SPECIFICATION

Power Input	25 watts C.W.
Fq. Range	Plug-in coils for 10 to 160 metre bands. Complete with link output.
Valves	Metal 6L6 Xtal controlled oscillator feeding 807. 5U4G Power Supply.
Metering	Grid and Anode of 807. Separate Meters.
Controls	Mains switch with pilot lamp. Stand-by Transmit. switch with indicator lamps. P.A. Tuning Control. Osc. Tuning Control. Jacks for keying in C.O. or 807.

The equipment is complete in beautifully finished grey cellulose case with chromium carrying handles. All components and insulation are of the highest quality, and each instrument is fully tested on the air before delivery. The WF25D is the first of a series of units now in course of production. An outstanding feature of its design is that not only is it a most efficient C.W. Transmitter, but it may ultimately be used as a Driver Unit for the WF150F, 150 watt Power Amplifier, without any alteration. It can, therefore, form the first unit of a high power transmitting outfit, thereby considerably cutting down cost when High Power is required. From stock £39 10s.

The WF150F POWER AMPLIFIER, complete in finished grey cellulose double shelf case, with chrome carrying handles. Consists of power supply and P.A. on separate chassis. In conjunction with the WF25D an efficient 150 watt C.W. Transmitter of excellent quality, and pleasing appearance, can be used on the major bands. The P.A. unit is easily disconnected, enabling the WF25D to be worked on bands where lower power is necessary. Delivery 6-8 weeks from receipt of order. Price on application.

50 watt MODULATOR. This will be available shortly, and will give sufficient audio output to plate and screen modulate the 813 tube in the P.A. 100 per cent. **Specification.** 6C5 pre-amplifier, 6C5 driver, 807's in class A B push pull. Complete in grey cellulose case with chromium carrying handles. Detailed specification and price available shortly.

A smaller version of the modulator will be produced at some later date, suitable for use with the WF25D.

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COILS!**

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*Adjustable Iron-cored Coils
are now available from stock*

AERIAL—H.F.—OSCILLATOR
The range covers all wavebands

- 2000 Metres to 800 Metres (Iron Cored)
- 550 Metres to 200 Metres (Iron Cored)
- 206 Metres to 80 Metres (Iron Cored)
- 90 Metres to 33 Metres (Iron Cored)
- 45 Metres to 16 Metres (Iron Cored)
- 25 Metres to 9 Metres (Iron Cored)
- 15 Metres to 4.5 Metres (not Iron Cored)

ALL AT 3/- EACH

Above ranges also available on standard size paxolin formers, 1½" x 8", in Aerial—H.F.—Oscillator, at 2/6 each.

CERAMIC TRIMMERS 30, 50, 70pF, at 1/- each

4-WAVE BAND S/W COIL UNIT. 206 to 9.3 metres. Fully wired and switched; for 2-valve battery-operated receiver, using 160 mmfd. condenser. 30/- complete with circuit.

All orders to Dept. "S.W.N."

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Telephone: MOUntriview 4745

A.C.S. RADIO

OUR LARGE STOCK of Short-Wave Components is detailed in our New Price List "S.N.", a copy of which will be gladly sent on request.

Among the new items we can offer this month, are the following:—

VARIABLE CONDENSERS

- Single 100 mmfd., ceramic insulation, brass vanes 4/6
- Single 75 mmfd., ceramic insulation, ball bearings, precision job with extended spindle for ganging 4/6
- Twin Gang Midget type, 25 x 25 mmfd., 7/9; 50 x 50 mmfd., 9/9; 75 x 75 mmfd., 11/3.

COIL FORMERS

- RAYMART** 6-pin threaded 2/2; 7-pin threaded 2/3
- CERAMIC VALVE HOLDERS**
- 4-pin British, 1/-; 7-pin British, 1/6; Int. Octal, 1/6; American Acorn, 2/6; Button Base, 1/6; UX Med. 7-pin, 2/6; UX 4-pin, 1/3; UX 6-pin, 1/- and 9-pin local, 2/9.

We can still supply any reasonable quantity of our Ceramic Coil Formers, 2" x 1½" diam., ribbed, with separate mounting strips, 5/- per dozen.

(PLEASE ADD SUFFICIENT FOR POSTAGE)

We also have several Communications Receivers in stock, including NATIONAL HRO, NC8X, NC45, HALLICRAFTERS MARINE, DEFIANT and Dual Diversity, MARCONI CR10 and can frequently offer RME, HAMMARLUND and other well-known makes.

We shall be pleased to forward our current List "C.S.N." on request.

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MIDGET COMMUNICATIONS RECEIVERS

Ex-Government (MCR1) as used by the Resistance Movements. Brand New, Ready for use as battery or mains receivers.

Frequency Ranges:—	150 Kcs.	—	1600 Kcs.
	2.5 Mcs.	—	4.5 Mcs.
	4.5 Mcs.	—	8 Mcs.
	8 Mcs.	—	15 Mcs.

Dimensions of set 2½in. x 3½in. x 9in.

These are available in 3 forms as detailed below:—

1. Complete with 5 miniature type valves, headphones, set of plug in coils, aerial, earth, etc., and with batteries, ready for use as a battery operated unit. **ONLY £8 19s. 6d.** (carriage 1/6).
2. As above, but with midget AC/DC power pack instead of batteries, ready for use as a mains operated (80v.-250v.) unit. **ONLY £10 9s. 6d.** (carriage 1/9).
3. As above, but with power pack and batteries ready for use either as battery or mains operated unit. **ONLY £11 19s. 6d.** (carriage 2/-).

We have only been fortunate enough to secure limited quantities of these receivers, therefore **ORDER NOW** so that you will not be disappointed.

SEND STAMP FOR LATEST CATALOGUE. ORDERS BY POST C.W.O.

PREMIER RADIO

MORRIS AND CO. (RADIO), LTD.

ALUMINIUM CHASSIS.—Substantially made of bright aluminium, with four sides, 10in. x 8in. x 2½in., 7/-; 12in. x 9in. x 2½in., 7/9; 16in. x 8in. x 2½in., 8/6; 20in. x 8in. x 2½in., 10/6; 22in. x 10in. x 2½in., 13/6.

SUPERSENSITIVE DOUBLE HEADPHONES.—Balanced armature with reed driven aluminium diaphragm. 60 ohms, 8/6.

ELECTROLYTIC CONDENSERS.—Miniature metal can type, 8 mfd. 500 v.w., 3/-; 16 mfd. 500 v.w., 4/-; 2x8 mfd. 500 v.w., 6/6; 50 mfd. 12 v., 1/9.

2-VALVE, SHORT WAVE BATTERY KIT.—A complete Kit of Parts for a 2-valve receiver, covering 15-600 metres, including valves, coils, drilled chassis, H.T. and L.T. dry batteries, to last approximately 6 to 12 months. A pair of Double Headphones and full instructions. Price £3/10/-. An Extra Coil can be supplied, covering 600-1900 metres at 4/-.

ROTARY TRANSFORMERS.—Input 12 v., output 180 v. 30 mA., 4 v. 2-3 A. with 19 volts input, output is 50 per cent. higher. May be used on D.C. mains as L.T. Charger. With small conversion could operate as D.C. Motor. Original cost over £5. Employ powerful ring magnet. Price 10/- each.

OUTPUT TRANSFORMERS.—A super production. By means of ingenious series-parallel arrangement, all windings are used at all times. Match any tube, single or push-pull to any voice coil 2-30 ohms. 7 watts, 22/6; 15 watts, 30/-; 30 watts, 49/6; 60 watts, 59/6.

BATTERY CHARGER KITS.—All incorporate metal rectifiers, input 200-250 v. A.C. 40/100 cycles.

To charge 2 v. accumulator at	½ amp. ...	15/-
.. 6 v. ..	1 amp. ...	17/6
.. 12 v. ..	1 amp. ...	22/6
.. 6 or 12 v. ..	4 amp. ...	...

Complete with Variable resistance and meter £3/15/-
To charge 6 or 12 v. Accumulator at 6 amps.
ditto £5

H.T. ELIMINATOR AND TRICKLE CHARGER KIT.—Consists of a complete kit of parts to construct an H.T. Eliminator with an output of 120 v. at 20 mA. and provision for trickle charging a 2 v. accumulator. Two metal rectifiers are employed. With circuit, price 30/-.

RADIOGRAM CABINETS.—Dignified appearance and good workmanship. Size 34½in. high, 19 in. deep, 36in. wide. Send for illustration. Cabinet only, £26. With Electric Motor and Pick-up, £32/16/-.

ROTARY TRANSFORMERS.—Size only 7in. by 4½in. diameter. With 6 v. input; output 200 v. 50 mA. With 12 v. input; output 400 v. 80 mA. Price 20/-

ROTARY TRANSFORMERS.—With 12 v. input; output 600 v. 250 mA. With 6 v. input; output 280 v. 250 mA., Price £3.

OUR 1946 LIST IS NOW AVAILABLE. All enquiries must be accompanied by a 2d. stamp.

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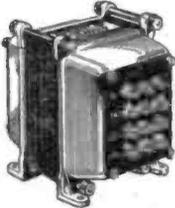
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