SHORT WAVE NEWS

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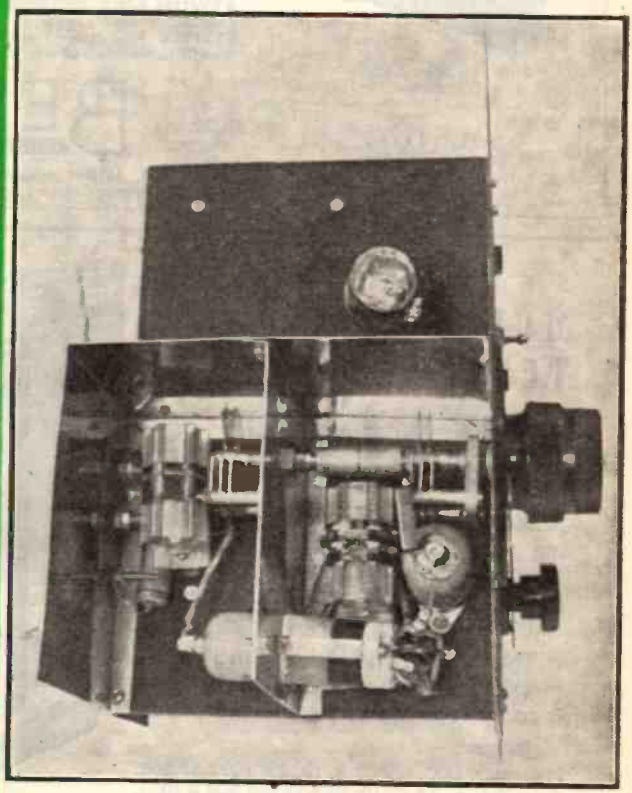
In this issue

Also



THE TRF-3 DESCRIBED WITHIN

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Short Wave News

Vol I No 11 Annual Subscription 16/- November 1946

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

EDITORIAL

We Stand Alone

THE recent change in policy of our only contempory, whereby two magazines will now be published monthly —one of direct interest primarily to the transmitting amateur and the other for the listener—instead of as hitherto, a single magazine covering all aspects of short wave radio interest; leaves the SHORT WAVE NEWS in the unique position of being the only journal in the country catering for *ALL* aspects of short wave interest. Our experience has shown us that whilst there are more S.W. broadcast fans than there are listeners to the ham bands, and whilst there are many ham band listeners who do not want to take up transmitting, each finds interest in the other's speciality and to have a balanced outlook on his hobby, each must appreciate the other's interests and difficulties. We feel therefore, that to be complete, a S.W. radio journal must cover all differing tastes. This is admittedly a first class headache for an editor these days with the very severe paper restrictions still in force, but we can assure our readers that we shall continue to follow this policy. As more paper does become available, we shall develop the S.W.N. in such a way that no matter what particular interest a reader may have, he will find his taste satisfied somewhere between our two covers.

On Being an Editor

Being an editor is not the easy task some appear to imagine. Each month either Norman or I write a couple of columns on this page upon which several thousand short wave enthusiasts will base their ideas and gossip for the ensuing month. The moulding of people's ideas is a pretty big responsibility and both Norman and I are quite aware of the task we set ourselves.

We in turn try to base our ideas—and consequently our editorials—on what we hear S.W. enthusiasts discussing. Both of us spend far more time listening on the air than transmitting, and our conversations and mail bag help us to keep our fingers on the pulse of S.W. radio interest throughout the country.

One of the features of a non-dictatorship country is that it must have a Press sufficiently "free" to permit the expression of all shades of thought. Until recent years, our hobby has not enjoyed a great variety of periodicals in which differences of policy affecting our interests could be aired. The temper of our Correspondence Columns recently has shown that a vehicle in which the editors permit "the dissenters" to air their views is appreciated, and we are pleased to be able to let some of the "minorities" get their grievances off their chests. Whilst not agreeing with all some of our correspondents write, we welcome the views of those whose aim is to improve the conditions under which we indulge in our hobby.

The I.S.W.L.

The I.S.W.L. has got off to a good start. The list of members is growing fast. We should like to make it clear that this League is not meant to be a competitor to any existing organisation, but rather, supplementary to them. Its aims are wider than existing organisations. It is International in outlook, rather than National. Our hobby is one which overlaps national boundaries, and we feel that the formation of a League designed specifically to bring together S.W. enthusiasts of all tongues, creeds, nationality and outlook, will help just a little to bring about a better understanding between the nations of the world.

A.C.G.

THE EDITORS invite original contributions on short wave radio subjects. All material used will be paid for. Articles should be clearly written, preferably typewritten, and photographs should be clear and sharp. Diagrams need not be large or perfectly drawn, as our draughtsman will redraw in most cases, but relevant information should be included. All MSS must be accompanied by a stamped addressed envelope for reply or return. Each item must bear the sender's name and address.

CLUB SECRETARIES are invited to submit details of activities for insertion in our monthly club notes, which must arrive at this office by the 15th of each month.

COMPONENT REVIEW. Manufacturers, publishers, etc., are invited to submit samples or information of new products for review in this section.

ALL CORRESPONDENCE should be addressed to "Short Wave News," 57 Maida Vale, Paddington, London, W.9. Telephone CUN. 6579.

V.H.F NEWS

The Month's News

G5BY has received a card from HB9CD confirming his QSO of August 22nd as being the first G-HB contact. Congrats. O.M. 5BY must now have more "first contacts" to his name than any other amateur.

We have appointed another 60 Mcs. monitor station, this time for the Midlands, where Mr. N. White, G3IS, 59 Eastlands Road, Rugby, will cover V.H.F. activity for us. His first report is published below.

G8JV of Nottingham, has reported what appears to be the first auroral reflection in this country. This is referred to in detail below.

Conditions for "tropo" contacts have been good during the month and activity all over the country is on the increase, so much so, that we have decided to stop publishing lists of stations worked by the more active "regulars" and devote these pages instead to comment and discussion on V.H.F. topics.

The R.S.G.B. announce the release of the frequency band 2300-2450 Mcs. Frequency Modulation is permitted and an input power of 25 watts may be used. Who will make the first contacts on this band we wonder ?

The Month's Conditions

Tropospheric Propagation. Conditions have been good during the month. This is agreed by all stations sending in reports. Conditions have been much better than during the preceeding month. Some stations have gone so far as to report conditions as "exceptional." 8JV reports that his "sked" contacts with 5BD and 5LL have been far above the usual strengths, 5BD being S9 plus on occasions. These regular skeds are of great value in getting an idea of how conditions change and it is noticeable that stations who work them are not in the class of those who still think that conditions do not change materially from day to day.

5BY reports conditions as follows:—"Good up to Sept. 14, poor to Sept. 22, then poor to Sept. 26 which was fair. Sept. 29 fair, poor till Oct. 5. Oct. 5 to 15 fair."

2XC gives the good days as Sept. 16, Sept. 28-29, Oct. 11. Oct. 11 was an exceptionally good day, quoted by both 2XC and 5BD.

3IS gives best days as Sept. 12, 16, 19, 25-29, Oct. 4-6, 8-12.

So summing up these reports we can say that the good periods were Sept. 12, Sept. 16-19, Sept. 25-29, Oct. 5-15. These are dates at any rate when some opinions considered them to be good.

Temperature inversion data for the period —once again thanks to 2XC—was as follows:—An inversion of 9 degrees at 3,500 feet on the evening of Sept. 12, with a layer of low humidity air at about the same height. "By midnight the inversion had dropped to a much lower altitude and the dry layer disappeared. This change in the atmosphere probably accounts for the severe fading which settled in on midland signals around 2200 G.M.T. that night." No further inversion occurred from then until the late evening of Sept. 15, when one appeared around 5 to 6 thousand feet and persisited until the early hours of Sept. 17 and reached a magnitude of 7 degrees. On Sept. 21, an inversion occurred of 14 degrees at 5,000 to 6,500 feet, the humidity dropping sharply at the same level. Small inversions were present throughout Sept. 22, 23, 24 and during the subsequent period of fine weather.

Regular readers to these notes will notice that the *humidity* of the air is mentioned for the first time. Evidence has been presented recently to suggest that the cause of the bending of V.H.F. waves in the troposphere is due to the water vapour content—or rather the differing water vapour content of adjacent masses of air, rather than the difference in temperature. The latter of course affects the former, but it is the water vapour content or *humidity* which is the controlling factor. 6DH has been analysing the results of his regular QSO's with 2XC and 2MV and remarks:—"Think the deciding factor is really *humidity*. Have obtained very good comparison between signal readability and humidity gradient. . . I find that whenever the gradient is negative by 5 per cent. or over conditions are good . . . When gradient is zero or slightly positive, conditions are bad." In passing, 6DH remarks that lower frequency signals require some attention from the tropospheric angle. Ten metres, he says, seems quite affected and there is no doubt DX conditions are to some extent helped or hindered by the tropo effect.

Ionospheric Propagation. There have been no reports of Sporadic E contacts this month.

Auroral Reflection

8JV reports that on Sept. 22 he heard 2MR at 1655 G.M.T. with a very fluttery

note. His beam had to be turned to the north-east to bring 2MR up to maximum strength, and 8JV remarks that as this occurred during the recent display of the aurora borealis, it seems that this was in fact a case of "auroral reflection." 2MR's QRA is near London; 8JV's is near Nottingham.

"Auroral reflection contacts" take place by reflection of waves passing near the magnetic pole. The reflection is thought to result from a vertical "curtain" of ionization occurring during sunspot activity and is usually accompanied by a display of the aurora. (See S.W.N. Vol 1, No. 4, p88). The waves must be projected towards the magnetic pole—north-easterly in this country—and beam reception will indicate that the received waves are coming from this direction. The "curtain" is very unstable and the signals are characterised by rapid distortion, which may be so bad as to make phone signals unreadable. This type of propagation has received more attention in America than elsewhere, and it is said that it is rarely observed in latitudes south of 35 degrees. England is from lat. 50 to 60 degrees, so this type of propagation should easily be accomplished here with the right conditions. The aurora borealis is not often visible in these latitudes, but lack of a *visible* aurora is no indication that conditions are not suitable for auroral reflection. Periods of intense sunspot activity should be watched for instances of this type of propagation. Sunspot activity was sufficiently high over the period Sept. 20-23 to cause interruption of radio communication and reports of the aurora being visible from the N.E. coast appeared in the daily papers at that time.

Midland Area Monitor Station Report

N. White, G3IS, 59 Eastlands Road, Rugby, reports: "It is pleasing to find that activity on 60 Mcs. in the Midlands is definitely on the increase and numbers of new stations and calls are beginning to make themselves heard. 5TX, 2MV and 5MA were worked by 8UZ, Sutton in Ashfield on Sept. 12, when the band opened for 100 mile skip and the 16th and 19th appeared good with 5BY and 5TX being heard by 8UZ. Harmonics of commercial stations GBI, GCV and GIA were also heard on the 25th and 6MN was heard on the same night. 8JV's nightly sked with 5BD and 5LL may account for his sigs. not being heard in the Midlands.

Activity in Rugby has now reached the stage when four stations are now on 60 Mcs. 2AIH, 3IS, 3ABA, 8VN and it is hoped that another station will soon be in operation, after receipt of ticket.

New stations worked by 3IS are 6HJ, 3PD with 5TX, 8UZ and 2MV previously worked. On the 28th Sept., contact with 5TX resulted in a report of R5-S8 to 9, conditions on this night were very good but it was gathered from 5TX's remarks that few stations were active. Whilst working 5LJ it was learnt that a new station on "five" will be 5BR of Streetly and also 5JU who is now living in the Birmingham area. 6LK and 8GX have also been heard on the band. BRS 8897 of Wednesbury reports having heard 5WH, 5BR, 2NV, 2BKZ together with many others including 5TX, all received on a long wire antenna and an 0-v-1 Rx. A very good effort.

6YU the very active Coventry station, reports 69 contacts from Sept. 10 to Oct. 10, working stations 2MR, 2MV, 2XC, 3ABA, 3IS, 5LJ, 5MA, 5TX, 6CW, 6LK. 6VX, 6YQ, 8GX, 8UZ and heard 2NV, 5JU, 2AIH and 6HJ. Regular skeds are made with 5MA and 2MR and in 6YU's words, "I feel that one could guarantee practically 100 per cent. contacts irrespective of conditions with these stations," so it looks as though 60 Mcs. may become a dependable band for 100 per cent. QSOs free from QRM! 6YU has been working stations at 0700 G.M.T. including 100 per cent. skeds with 2XC, so it appears that if stations come on at any time of the day, contacts can be made over good distances. How about a little more activity in the early evenings?

Equipment

A reader asks for some particulars of the receivers used by those whose work we mention here from month to month. Of those who have sent in material for this feature, we have the following particulars:

5BY's receiver consists of 956 RF, 954 mixer, 955 osc., 2-6K7 IFs. 6H6 det. and avc, 6C5 a.f., 6N7 a.n.l. and 6J7 b.f.o. 6CW's Rx uses 956 RF, 954 mix, 955 osc., used as a converter into an HRO. 6DH uses a home built superhet using acorns. 5MQ uses a converter with 954 mix, 955 osc., into a HRO. In fact some form of converter is the most popular form of receiver. 3IS uses a two valve converter into a Sky Challenger. 8RS uses a 6AK5 RF, 1852 mix, 9002 osc., into an AR77. 8JV uses a converter with 9001. 9001 and 9002 as osc. A really sensitive receiver is almost essential for tropospheric work, though the "straight" type of receiver can be made to give quite good results. The writer of these notes, used an 0-v-1 quite successfully before the war. 2LC has been using a 1-v-1, receiving 5TX in the Isle of Wight from Ruislip, Middlesex. Mr. Tanser, another

(Cont. on page 287)

The Studio Building at "Radio Andora"

Around the Broadcast Bands

Monthly Survey by "MONITOR"

All times are given in G.M.T.

MORE reports are needed for this column. Due to September holidays and DX conditions fewer reports have been received by your scribe. Now that we have that "extra" hour for night listening, we hope to hear more from readers about South American reception. Remember this is your column so let's know what you're hearing at your QTH. Please send any Broadcast Band News to S.W.N. marking envelope in left hand corner "Monitor." Now for the month's news.

From the Log Book

7250 kcs. PJC Willemstad Curacao DWI, heard R8 at 0000 when signing on. Mentioned "Princess Juliana Sender."

7185 kcs. "Radio SEAC Colombo, Ceylon" heard R9 QSA 5 testing 1830-2030 with transmission beamed to the British Is.

6000 kcs. ZFY Georgetown, British Guiana heard closing at 0045 with Ted Lewis Goodnight song. Announces as being in the 49 metre band and relays B.B.C. and N.B.S. programmes daily. Signals R7 with bad QRM.

Asia

Ceylon. Radio SEAC Colombo 15120 kcs. reported by A. W. Gilbert and M. Preston at 1800. Signals were R9. Our old friend Sidney Pearce reports them on 7185 kcs.

Burma. Pearce states that Radio SEAC Rangoon now uses their 9540 kcs. channel instead of 11845 kcs. Schedule 1345-1515.

Java. PMA Bandoeng 19350 kcs. with fair signals at 1240-1415 (Pearce).

Indo-China. "Radio Saigon" 11780 kcs. signs off at 1330 with "Marseillaise."

India. Latest schedules for AIR transmissions are as follows: 0315-0330 Programme summary. 0330-0345 News. 0530-0600 News. On frequencies of 17830, 15350, 15190, 15160 and 11870 kcs.

0630-0645 News. 0930-0945 News. 0945-0955 Programme Summary. Frequencies 17760, 15190, 11870, 9670 and 9590 kcs.

1130-1200 News etc. on 17830, 15350, 15190 and 11870 kcs.

1430-1540 News on 15160, 11870 and 9590 kcs.

China. Latest schedules for XGOY Chungking, are as follows :—

11913 kcs. 0855-1030 Beamed to Australia. 9635 kcs./7153 kcs. 1035-1235 Beamed to Eastern Asia and South Seas; 1204-1440 Beamed to N. America. 11913 kcs./7153 kcs. 1445-1550 Beamed to Europe and Asia.

News bulletins in English are given at: 0900, 1100, 1300, 1515, states M. Levi. English news now given 1 hour later according to Sidney Pearce who also states that the 11913 kcs. frequency suffers bad CW QRM.

Siberia/Mongolia. Alma Ata 7315 kcs. heard at 0300 R6 QSA3. Krasnorgorsk 6005 kcs. at 0615 R6 QSA4. Verkhendinsk 9540 kcs. at 2145 R8 QSA4. Ovat Tula 12450 kcs. at 1945 R6 QSA3. Seoul, Korea 6880 kcs. at 1750 R6 QSA3. (M. Preston). FB O.M. !

Oceania

New Caledonia. FK8AA "Radio Noumea," Noumea heard at 0615. Signals were R7 QSA 3. Freq. 6208 kcs. (M. Preston). Uses 80 watts power.

Tahiti. FO8AA "Radio Club de Papeeti," Papeeti, 6980 kcs. heard at 0530 R7 QSA3. 200 watts power (M. Preston). Both very FB O.M. indeed.

Africa

Azores. Emisor Regional dos Acores, Ponta Delgada, 11090 kcs. Excellent signals at 2000-2100, also strong signals on

their 4040 kcs. channel from 2200 but suffers bad CW QRM. (Pearce).

British Somaliland. "Radio Somali," Hargeisha. 7120 kcs. operates at 1500-1530 on Tuesdays and Thursdays. Power 1 kW. QSL's all reports.

Gold Coast. ZOY Accra heard daily at 1700-1830 on 61.04m. channel with B.B.C. news relay at 1800 followed by local news.

Northern Rhodesia. ZQP Lusaka, broadcasts test transmissions daily 1530-1700 on 80.5m. Closes 1630 Sundays. English and Native programmes are given and reports should be sent to: Information Officer, P.O. Box 209, Lusaka, N. Rhodesia.

Portugese Guinea. "Radio Bissau" Bissau heard at 2300. Signals R6 QSA 3. Operates on 7105 kcs. (M. Preston). Nice work O.M. Uses 50 watts.

● Central America

Panama. HP5J "La Voz de Panama" Panama City, with news in English at 2300 on 9605 kcs. Heavy QRM.

HOXA "Radio Americana Central" 15100 kcs. Good signals from 2100 but often QRM from GWG after 2115 (Pearce).

Heard with inauguration programme October 12th by President of Panama Republic. Schedules are 1700-0200 on 15100 kcs.

HOXB 11810 kcs. 0200-0400. News in English at 2300.

HOXA heard once by your scribe at 2030 with Spanish announcements and mention of station HOXB now being in operation. HOXC is testing on 9660 kcs.

A FM station HOX FM, operates on 43300 kcs. with power of 200 watts. Programmes are relayed from MW station HOX. Reports are requested and should be sent to Box 1335, Panama City. (Goran Hill).

HP5J also reported by M. Preston. J. Hughes has heard HOXA.

San Salvador. YSR San Salvador City reported by J. E. Watkinson at 0305-0330 with usual type Latin American Programme. Call in Spanish only. Freq. 6270 kcs.

YSS operates on 9250 kcs. according to UR DX Club. (*9250 kcs. is the alternati channel of YSR.—Ed.*)

BROADCAST COUNTRY PANELS ISSUED TO DATE

May: No. 1—HONDURAS REPUBLIC.
June: No. 2—ECUADOR.
July: No. 3—NICARAGUA.
August: No. 4—GUATEMALA.
September: No. 5—EL SALVADOR.
October: No. 6—MEXICO.
November: No. 7—CHINA.

COUNTRY PANEL.

No. 7: CHINA

WLXJ:* Shanghai. 3010 kcs. and 5510 kcs.
XUSA:* Chungking. 4760 kcs. (frequency varies).
XGOA: Chungking. "Central Broadcasting Station." 5920 and 9480 kcs. 7500 watts.
XGOH:† Laiyang. "Hunan Provincial Station." 6000 kcs. 350 watts.
XRRA: Peiping. 6090 and 10260 kcs. 10000 watts. Also on 7380 kcs. at times.
XGOY: Chungking. "The Voice of China." 6155, 7153, 9635, 11905, 11913 and 15220 kcs. 35000 watts.
XGNC: Kalgan. "New China Broadcasting Station." 6175* and 9625 kcs.
XPSA: Kweiyang. "Kweichow Broadcasting Station." 7010 kcs. 10000 watts.
XNCR: Yenan. 7050 kcs.
XRSA: Sichang. "Sikang Broadcasting Station." 8110 kcs. 2000 watts.
XNEW:*† Kunning. 8690 kcs. 1000 watts. Also operates on 16540 kcs.
XGOB:* Nanking. 9540 kcs.
XGOL: Foochow. "Fukien Broadcasting Station." 9995 kcs.
XTPA: Canton. 11650 kcs. 500 watts.
XORA: Shanghai. 11695 kcs. 4000 watts.
XLPA: Changsha. "Hunan Broadcasting Station." 12220 kcs.

(Notes:—**XGOY** sometimes uses 9810 kcs., and is also allocated the channel of 17800 kcs. **XGOH**, Laiyung, has apparently ceased to use its 14000 kcs. channel. **XGOA** has a channel on 9720 kcs., but is apparently not used at present. **XGOP**, Kukong, now ceased to operate on 12400 kcs. Power was 200 watts. Two mystery stations are **XNTA**, 6230 kcs., a Chinese Army station believed to be located in the Kaifeng area, and a station thought to be at Hankow operating on 6050 kcs.)

* *Station not in operation at present*
† *American Forces Station.*

South America

Ecuador. A. Levi has heard HCJB operating on 12445 kcs. also on 9958 kcs. with good signals, and wonders if the latter freq. is a new one. No O.M. they have operated on this frequency for a long time now. M. Preston reports them at R9 on their 12445 kcs. channel at 0445.

Paraguay. ZP14 logged by J. Hughes on 6010 kcs. around 0100. Signals were R6 QSA4 with bad QRM from AFN Frankfurt (Believe they are now on 6025 kcs. O.M.)

British Guiana. ZFY Georgetown heard R7 evenings. (Hughes).

North America

Canada. M. Forrest sends in schedule of CBC frequencies now in use.

CKNC 17820 kcs. 1600-2000 Daily. 1200-2000 Sundays.

CKLX 15090 kcs. 1600-1700 Daily. 1200-1700 Sundays.

CKCS 15320 kcs. 1700-2300 Daily. 1820-2100 Sundays.

CHOL 11720 kcs. 2015-2300 Daily.

CKRA 11760 kcs. 2320-0030 Daily, also 0030-0200.

Pearce reports CHOL, CKCS from 2015, CKRA from 2320 (to the Americas). J. E. Wilkinson reports CKRA at 1320-1430 and to 1600 on Sundays with programmes to West Indies and South America.

Mexico. M. Preston reports XERH Mexico City (?) on 11800 kcs. at 2345. Signals were R8. (*Is this XEHH, 11880 kcs. —Ed.*)

Newfoundland. VONH St. Johns' 5970 kcs. heard at 0100 with strong signals (Hughes).

Bahamas. ZNS2 Nassau 6090 kcs. logged at 0200 R6 QSA3. (Preston) Power 600 watts.

U.S.A. WCRC New York 21580 kcs. heard R9 afternoons (Hughes).

WLWS Cincinnatti 21650 kcs. R9 with news at 1530.

M. Forrest sends in schedules of NBC transmissions which we hope to publish next month when space is available. A. Gilbert also sends in same.

U.S.A. West Coast. M. Forrest has heard the following :—

KCBF Los Angeles (CBS) 17800 kcs. at 2145.

KWID San Francisco (ABI) 17760 kcs. at 2200.

KCBR Los Angeles (CBS) 15330 kcs. at 2345.

KWIX San Francisco (ABI) 15290 kcs. at 0100.

KNBX San Francisco (NBC) 15340 kcs. at 0200.

KCBR Los Angeles (CBS) 11770 kcs. at 0215.

KNBA San Francisco (NBC) 21610 kcs. at 2200.

KWID San Francisco (ABI) 17760 kcs. at 2215.

KGEX San Francisco (GEC) 15210 kcs. at 2300.

KGEI San Francisco (GEC) 15130 kcs. at 0600.

KGEX San Francisco (GEC) 11730 kcs. at 0700.

Australia

Transmissions to the British Isles at time of going to press are as follows :—

0700-0815 Station VLB3 25.49m.
1500-1530 VLA8 25.51m.
1500-1545 VLG9 25.21m.
0700-0800 VLA9 13.89m. (Not Sats.)
1500-1600 VLB2 30.99m. VLC6 31.20m.
2030-2330 VLA4 25.49m.

M. Forrest sends in this schedule.

Your scribe now understands that VLC10 13.84m. now operates with VLB6 19.74m. and VLA4 in 2030-2330 transmissions to Pacific areas and Europe.

Pearce reports VLB2 with good signals when closing at 1458 after broadcast to Troops in Pacific and SWL's in India, also VLC4 15315 kcs. with good signals at 1000 with transmission beamed to Pacific. He reports also above schedule and mentions VLA4 being heard at 2030 with strong signals transmitting programmes for SWL's in Europe and India also Forces in Pacific Area. VLA8 strong signals at 1400-1500, VLB2, VLC6 (and VLG9 from 1415 with weak signals).

VLB 6100 kcs. operates or tests. VLW3 Perth 11830 kcs. heard with news at 0900 (UR DX C). VK2ME, 3ME and 6ME may return to the air states UR DX Club. (*We understood that 2ME was dismantled, according to the station director.—Ed.*)

Europe

France. A. W. Gilbert sends in schedule of transmissions to Great Britain as follows :—2100-2200 over 31.38m. (Beamed to N. America at 0155-0345 on 31.41m. and 25.33m).

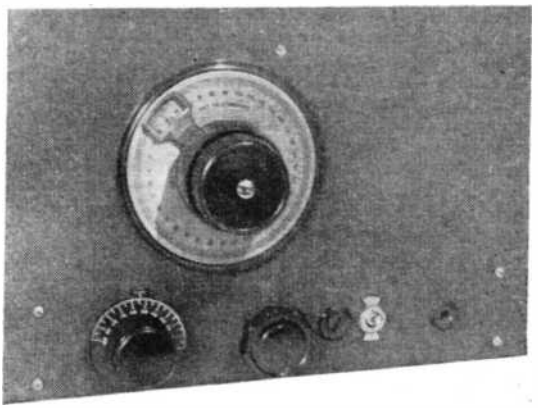
Norway. Norwegian State Radio gives test transmissions to British Is., closing at 2200 on frequencies of 6130, 6180, 9540 and 11735 kcs.

Poland. Warsaw heard on 6160 kcs. with news in English at 2015. Signals were R8.

Spain. Madrid on 9369 kcs. gives news in English at 2000-2030. R9.

Vatican City. HVJ gives news in English at 1400 on 151000 kcs. and also on 9660 kcs. Heard using 9660 and 5970 kcs. channels at 1815. (Cont. on page 287)

The S.W. News (Battery) TRF - 3 Receiver



Designed and Air-tested in our Workshops and Proving Posts

Introduction

JUDGING from our mailbag, it is apparent that the "straight" receiver has many adherents. Many letters have requested a TRF receiver with an "above-average" performance, yet not unduly complex, and simple to handle.

The receiver about to be described fulfills all these requirements, and has been, like all our constructional features, designed, built, tested and tried in the S.W.N. workshops and proving posts. We would like to point out at this stage that every S.W.N. constructional feature is thoroughly tried and approved before appearing in print. That is why our pages are adorned with comparatively few constructional articles—not more than one per issue. We believe in quality rather than quantity!

Special Valves

The receiver employs a new series of valves, and we are pleased to say that this is the first receiver, using these valves, to be described in any publication! The valves in question are the new Mullard "K" types—with 2 volt filaments and international octal bases—and are civilian counterparts of those specially designed for short-wave work for the Services during the war. The line-up is KF35 (R.F.), KF35 (Detector) and KL35 (Output). The KF35 is a variable-mu pentode and the KL35 is an output pentode.

Coverage

This is entirely a matter for the individual constructor. In our case, we decided to forgo complete coverage of the short wave bands in order to obtain high efficiency and adequate coverage of the amateur bands alone. As will be seen from the circuit diagram, Fig. 1, no bandspread was fitted to the original model, the Premier 20 $\mu\mu$F. capacitors ganged together with the Utility drive, giving just that ease of tuning that serious listening on the amateur bands demands. The coils used are Denco Type 1, Blue series for the R.F. stage and Green series for the detector stage, which cover the amateur bands quite conveniently. Range 1 covers the 1.8 Mcs. band, Range 2—3.5 Mcs., Range 3—7 Mcs., Range 4—14 Mcs., and Range 6—28 Mcs.

As we said before, individual constructors will no doubt have their own ideas on coverage. The 20 $\mu\mu$F. capacitors could be replaced by ones of 100 $\mu\mu$F., thus ensuring complete coverage from 1 Mc. to 60 Mcs. and below. Bandspread could, of course, be added in addition. However, if listening is to be confined to the ham bands, then the arrangement we used will be found ideal.

The Circuit

The theoretical circuit is shown in Fig. 1. Provision is made for doublet or end-on type of aerial. If a doublet is used the

terminals A and B should be used. If an end-on type of aerial is used it should be connected to terminal A, and terminal B connected by a strip of wire to the earth terminal C.

The aerial is inductively coupled, via L1, to the R.F. stage tuned circuit (L2/C1). The capacitor C2 is to isolate the "earthy" end of L2 in order to apply bias to the valve. R1 and C3 are R.F. screen feed and decoupling respectively. R.F. stage is transformer coupled via L3 to the detector stage, this method having proved to give better selectivity and overall effciency. The detector stage is conventional leaky grid, C6 and R4 being the grid capacitor and grid leak respectively, and L4/C5 comprising the tuned circuit.

We tried four different methods of obtaining regeneration, and by far the most effective, especially on the higher frequencies, was that finally adopted and incorporated in the receiver. Reaction is controlled by variation of the screen voltage by R5. L5 is the reaction winding of the coil, and C7 takes the place of the usual variable capacitor. The RFC in this part of the circuit is most essential, and one of good make should be used—this, of course, applies equally to the RFC in the anode circuit. C8 is the screen by-pass capacitor, whilst C9 ensures silent control of the potentiometer (R5).

Coupling to the output stage is by a "parafeed" transformer, via the coupling capacitor C11. The detector decoupling combination is R6/C10, with R7 as the anode load resistor. It was found necessary owing to the sensitivity, to insert an audio volume control (R11). The resistor R8 is the usual grid stopper. Choke output is used, this being found more satisfactory than having the 'phones in series with the H.T. feed. The whole H.T. supply is decoupled by C12. Auto-bias is applied to the R.F. and output stages by the voltage dropping resistors R9/R10, these being decoupled at audio frequencies by C15.

Construction

There is nothing much liable to cause trouble to the average constructor—the circuit diagram and accompanying photographs and sketch showing quite clearly the most important features of the construction. There are, however, one or two points that should be mentioned in order that prospective constructors do not encounter the snags we did!

The greatest difficulty is likely to be met in the detector stage, as here the wiring and layout is rather compact. Once all the necessary holes have been drilled, the first item to be wired-up is the detector coil. We mounted the coil base on two Denco polystyrene stand-off insulators (Type SO12). The leads from the coil base should be soldered before the base assembly is fixed to the chassis. There will be two leads going through the chassis, one from the earthy end of L3 and one from the earthy end of L5. The capacitors C4 and C7 are taken direct from their appropriate

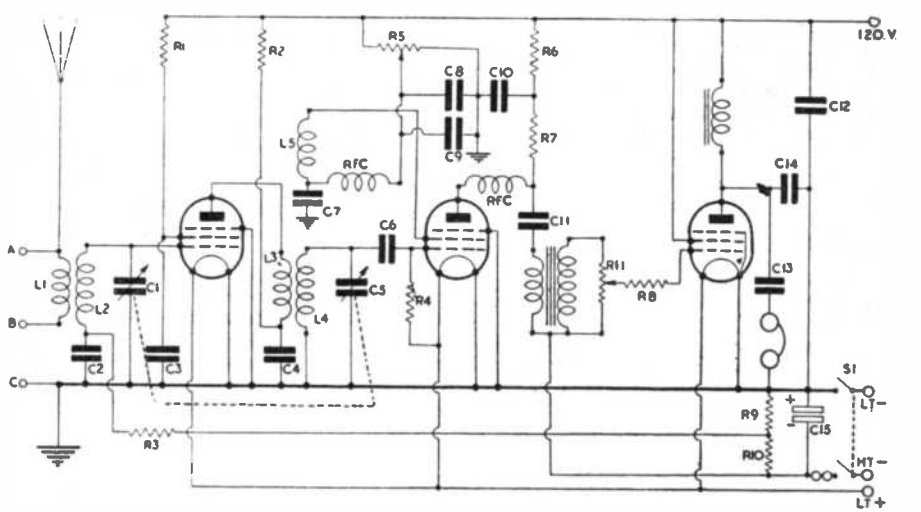


Fig. 1. Theoretical Circuit

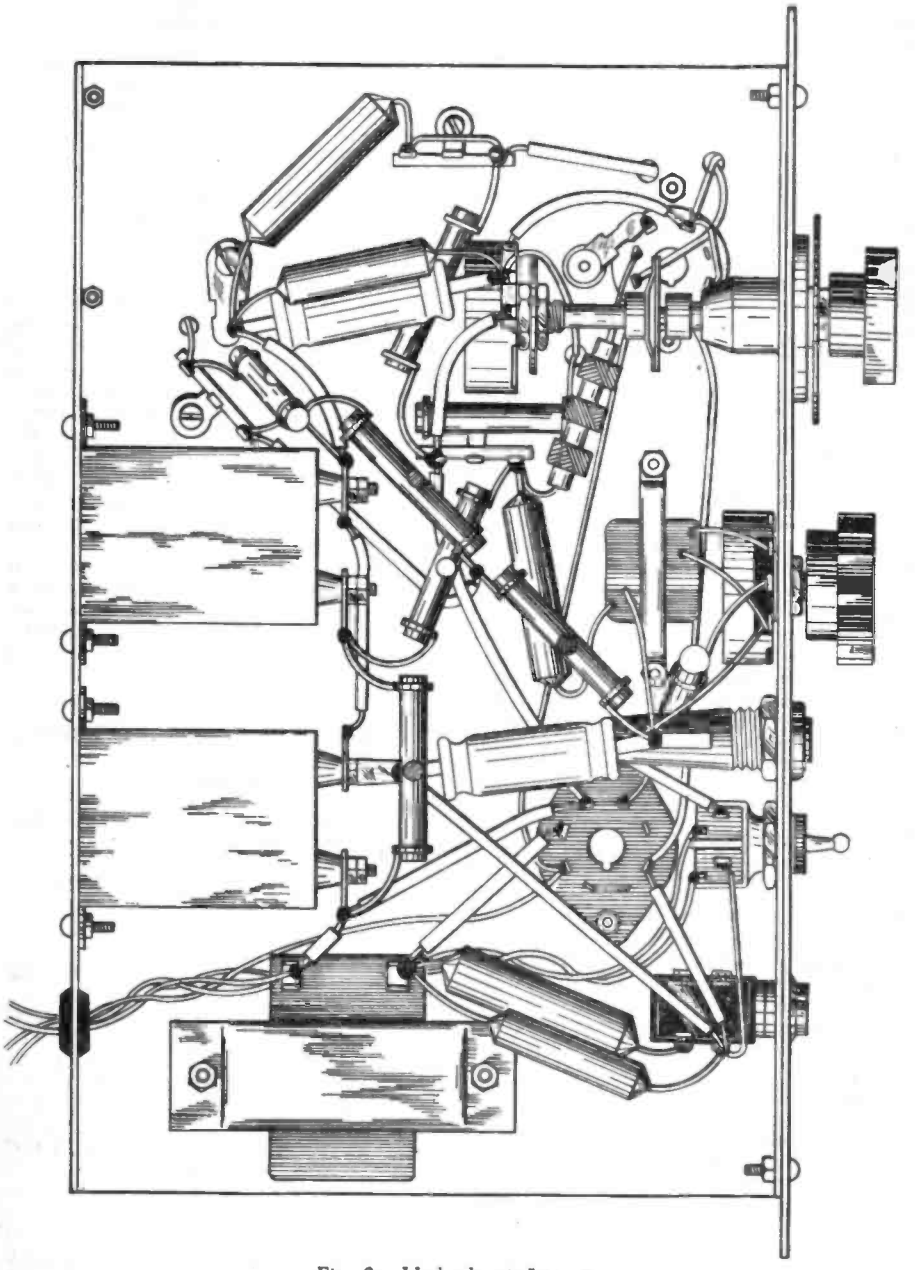


Fig. 2. Underchassis Layout

coil-holder pins to a bolt on the metal screen between the R.F. and detector stages. When the capacitors have been fixed, and the fly leads attached to the coil holder, the assembly can then be bolted to the chassis. In order to ensure complete rigidity, we coated the fixing bolts with Denfix before screwing up. Two words of warning! Firstly, remember that polystyrene melts at quite low temperature, so that care when soldering is necessary. If care is not taken, distortion of the pin positions can easily occur, as the polystyrene sets again in a few seconds. Secondly, solder is apt to run into the inside of the pins, so that the coil will not engage to its maximum length. We got over this problem by inserting match stalks into the holder whilst soldering. Simple but effective!

The same notes apply more or less to the R.F. stage, though there is not so much chance of trouble here owing to the fewer leads. The only component, apart from the coil and tuning capacitor, is C2, which is taken direct to the earth terminal on the back metal screen.

The R.F. valve, as will be seen from the photograph, protrudes through the metal screen, in order to keep the inter-stage wiring to a minimum length. The brackets holding the valve holder were made from a convenient piece of scrap metal, and the construction of a similar pair should present no difficulty to readers. The wiring from this valve holder is quite straightforward, with three leads going through to the under-chassis. These three are the L.T. and screen grid leads, C3 is affixed to the same tag as C4/C7. Reverting to the detector coil, the lead from the screen grid end of L5 was in our case merely a soldering tag! This was taken direct to a Denco feed-through insulator (FT11), which connects, by another soldering tag on the under-chassis side, to the screen grid connection of the valve holder.

The under-chassis wiring is perfectly simple, as the sketch will show. In fact, we feel there is no need whatsoever to enlarge on the matter!

Operation and Performance

The controls, etc., along the bottom of the panel, left to right, are reaction, volume control, fuse-holder, on/off switch and 'phone jack.

It will be found that the reaction is delightfully smooth, sliding into oscillation with a pleasant, hardly discernible, hiss. There is no trace of the annoying "plop" that often occurs in straight receivers. Also, it will be found that the reaction setting will hold good over each band with very little adjustment from one end to the other. On the amateur bands themselves, practically no adjustment will be found necessary—which is how it should be. The reaction control is further enhanced by the Eddystone slow-motion drive, which is a real pleasure to handle.

The completed receiver was put through its paces at one of our proving posts for three weeks intensive testing. It was found to be stable and sensitive on all the amateur bands covered. Although 28 Mcs. was passing through one of its frequent bad periods, much in the way of interesting DX was logged. On the 14 Mcs. band alone, more than 100 different countries were heard, including VS1, 2, 4, 7, 9, AC, VK7, VE7, 8, ZS, ZD8, J8, J9, KA, VP2, 3, 4, 6, 7, 8, 9, ZP, CP and a host of others. On the 7 Mcs. band the DX also came through nicely, with W1, 2, 3, 4, 5, 6, 8, 9, 0, CM, YV, LU, PY, VE1, 2, 3, VO and TI amongst those logged. Reception on the 1.8 and 3.5 Mcs. amateur bands was also up to the same high standard.

Although we used 'phones most of the time, the receiver performs very well on the speaker. Incidentally, these tests were carried out on a very inefficient aerial—a 35 ft. end-on. The H.T. was supplied by an Ever Ready 120v. block.

THE COMPONENTS WE USED

Resistors

R1	40000Ω Erie	R7	50000Ω Erie
R2	20000Ω ,,	R8	25000Ω ,,
R3	250000Ω ,,	R9	150Ω ,,
R4	3 MΩ ,,	R10	300Ω ,,
R5	250000Ω ,,	R11	250000Ω ,,
R6	20000Ω ,,		

Capacitors

C1	20μμF. Premier	C8	.01μF. T.C.C.
C2	.01μF. T.C.C.	C9	2μF. T.C.C.
C3	.01μF. T.C.C.	C10	2μF. T.C.C.
C4	.01μF. T.C.C.	C11	.1μF. T.C.C.
C5	20μμF. Premier	C12	2μF. T.C.C.
C6	100μμF. T.C.C.	C13	.1μF. T.C.C.
C7	100μμF. T.C.C.	C14	.01μF. T.C.C.
		C15	25+25μF. T.C.C.

Valves

V1 (R.F. Stage)	KF/35 Mullard
V2 (Detector)	KF/35 Mullard
V3 (Output)	KF/35 Mullard

Inductors

Plug-in coils	Denco Type 1
R.F.C's	Premier
Output Choke	Premier
Parafeed Transformer	Bulgin

Miscellaneous

Utility Drive—Premier.
Slow motion drive—Eddystone, No. 597.
On/Off swith.—Bulgin Type S259.
Phone jack.—Igranic.
Fuseholder.—Belling & Lee, Type L356.
Stand-off Insulators (4).—Denco, Type SOI-2.
Feed Through Insulator.—Denco, Type FTI-1.
Aerial and Earth Terminals.—Belling & Lee, Type L1001/IW.
Valve holders (R.F. and Detector).—Raymart, International Octal (Ceramic).
Valve holder (Output stage).—Raymart, I.O. Wafer type.
Epycyclic Drive.—Berrys (Short Wave) Ltd.

(V.H.F. NEWS—Cont. from page 279)

reader who sends us reports, uses a very nice little 1-v-1 of his own design which uses EF50's. We have a complete write-up of this on our desk, with photographs, waiting for space in the mag. We hope to have it in the January '47 number. The S.W.N. is full till then! Sporadic E propagated waves, frequently being of high signal strength, can be well received on a simple receiver. B.S.W.L. 1952 (Hull) has received I1DA at Q5RB and I1AY at Q3R5, numerous commercial harmonics and A.P. sound on 41.5 Mcs., using only a 0-v-1 superregenerative Rx, so those who do not possess elaborate receivers need not loose heart!

(B.C. NEWS—Cont. from page 282)

U.H.F.

GSK heard at 1230 with R9 signals on 26100 kcs. with heavy QRN. (Scribe).

Has anyone received any USA stations on the "ultras" lately? Your scribe would appreciate any news from readers who QRX these Bands.

Alexandra Palace Television sound heard here at 1515 on 41.5 mcs. (130 miles distant). Signals were weak, R4 QSA 3.

QSL's Received

KNBX, XEWW, XEQQ, XEFT, Prague, VLA4, VLC11, KGEI, KWID, Vienna, Radio SEAC, KOFA and Radio Maroc have obliged Sidney Pearce. Leslie Singer has had a fine string of VK cards and letters in VLA, VLA3, VLA4, VLA6, VLA8, VLA9, VLB3, VLB6, VLC4, VLC6, VLC8, VLC11, VLG, CHTA, CKNC, CHOL, CKCX, OTC (card depicts transmitter and antenna tower), FZI, PCJ, KOFA (card shows map of Austria with antenna protruding from Salzburg. AFRS). (Very FB indeed O.M.)

J. Hughes from FZI (letter veri by air mail). A. Levi reports the first QSL from HOXA (according to your scribe, who has not been lucky enough so far!) A. W. Gilbert has veries from General Electric's WGEA and WGEO. J. Beaunoir, down in Natal, received one from ZQP.

Acknowledgements

UR DX Club (USA), Sidney Pearce BSWL 336 (Berkhamstead, Herts).

M. Preston (London, S.W.17), J. Hughes BSWL 2387 (Rochdale), Goran Hill.

BSWL 2583 (Kalmar Sweden), J. E. Watkinson BSWL 1900 (Hedon Yorks), M. Forrest.

BSWL 2593 (Laverstock Salisbury), J. Beaunoir (Jacobs Natal SA), M. Levi.

BSWL 2364 (Belfast N.I.), Leslie Singer BSWL 2360 (London, N.3.), and last but not least A. W. Gilbert (Fordingbridge).

NOTE.—Please write your name on **each** sheet of paper O.M. We are getting schedules and reports without name or address on!

OUR DIPLOMA OF MERIT

The following stations, whose full calls are withheld for security reasons, have been awarded our Lids Diploma this month.

The well-known G5 who said to a station he was working "if you are QRM'd, just slip 500 kcs. outside the band. You will be clear there"!

The same G5 who advised a station to increase his modulation to 200 per cent. in order to push through the QRM.

The unknown station who called something like 100 CQ's without signing his call. We are still keeping check on him, and if he ever signs, we will start a collection for him as the undoubted winner of the "CQ Marathon."

The G4 who was happily calling a G5 bang in the middle of the 19 metre B.C. band.

(More awards next month!—Ed.)

Resonant Lines

THE post-war broadcast receivers that have come on the market, although they seem to find a ready sale under scarcity conditions, have been a disappointment to those who look for something much in advance of 1939 design. Most manufacturers are still sticking the short-wave band in as though it were just simply an "extra" that does not really matter much. In fairness it must be agreed that these short-wave ranges are generally efficient enough, but with the dozens of stations now crowded in any particular band even the keenest enthusiast could not make much of say, the 19 metre band for example, where a score of stations may occupy a dial space barely wider than the tuning pointer, let alone the average listener who generally speaking has little opportunity of discovering the vast store of entertainment offered by the s.w. broadcasters. Let us hope that when the public, now only too ready to buy any sort of set, has a chance to pick and choose, they will insist on receivers fitted with a reasonably usable short-wave range.

A Chance for the No. 7 Hats

The other day I was asked a question that I have never previously heard raised. It was by a constructor who had a number of carbon resistors which had been once used and the wire ends had either been cut close or broken off. He wanted to know if there was a simple method of fitting new wire ends to them. If there is any way of doing it, I have never heard of it, but perhaps some reader may have found a way of making permanent (and silent) joints between the wire end and the carbon rod.

Unsuspected Pitfall

Recently when visiting a friend's shack we spent part of the time trying out some alterations and adjustments to his newly constructed super-special receiver. When it "motor-boated" violently I instinctively turned the gain right down and he laughingly hinted that "I couldn't take it." He seemed quite surprised when I pointed out that it was not only me, but the speaker that couldn't take it. It has since occurred to me that many other amateurs might fail to realise that the large resultant amplitudes of the cone can cause a very severe strain both at the point where the cone is joined to the speech coil former and also to the seam and outer suspension. Such damage when it makes it presence felt can often be repaired by careful cementing, but only too often such repairs when performed by unskilled hands results in a much poorer performance due to non-linear movement of the cone caused by slight inexactitudes at the repaired points.

Switching

Most amateur constructors normally favour plug-in coils for their receivers but in the eyes of a not inconsiderable minority their advantages are more than off-set by the nuisance of layout considerations, time lost in removal and insertion at each change, the need for a hinged lid cabinet, the problem of storage when not in use and the liability of being put off calibration when handled. The coil-box does partially or completely overcome most of these drawbacks but it still remains very much less convenient than a switched coil bank. The question is usually settled individually by the points each constructor considers to be the most inportant, just as it is with that interminable argument Straight versus Superhet.

The small inevitable losses involved in switching arrangements due to additional wiring, etc., can be generally countered by the enormous amplification afforded by the later high efficiency valves in the bigger sets. Modern switches are self-wiping and if of good design are rarely responsible for any great loss particularly if given an occasional clean with one of the proprietary prepartions of carbon tetrachloride. The rotary wafer type invariably used nowadays have changed but little in recent years either in general form or contact design but the improved metals used in the later patterns retain their springiness for indefinitely longer periods and thus overcome the last weakness of this pattern.

Personally I like the idea of either incorporating, or ganging, the On/Off switch with the wave-range switching. This plan ensures the contacts are "wiped" each time the set is used, but oddly enough this idea is only rarely seen in commercial design.

Hot Water

The Dumb Blonde is very annoyed with me. She complains that after reading in this column last month that many amateurs are inspired with good ideas for gadgets whilst sitting in the bath-tub, she decided to try it. It was, she indignantly insists, a sheer waste of time, and demands that I warn any readers who may be toying with the idea of giving it a trial, that it simply doesn't work!

Vincent Yap

Broadcasting Station List

Part 9 : 6010 kcs—4840 kcs.

This list has been compiled by the Short Wave News Monitoring Department, and contains only stations that are operating on regular or irregular broadcasting schedules. Stations not in use at the time of going to press, and stations under construction, are not included.

Frequency	*Call-sign*	*Location*	*Slogan*	*Power (watts)*
6010 4.8 ...	RW96	Moscow, U.S.S.R.	Radio Centre, Moscow	
	OQ2RC	Leopoldville, Bel. Congo	Radio Congolia	250
	CJCX	Sydney, Canada		1000
	CE601	Antofagasta, Chile	La Voz del Norte	5000
	OLR2A	Prague, Czechoslovakia		30000
	VUC2	Calcutta, India	All India Radio	10000
	OAX4Q	Lima, Peru	Radio Victoria	1000
6005 ...	ZRH	Johannesburg, S. Africa		
	HP5K	Colon, Panama	La Voz de la Victor	800
	CFCX	Montreal, Canada		75
	——	Moscow, U.S.S.R.	Radio Centre, Moscow	
6000 ...	PR13	Bello Horizonte, Brazil	Radio Inconfidencia	5000
	ZFY	Georgetown, British Guiana	The Voice of Guiana	500
	——	Salisbury, S. Rhodesia		
	XEBT	Mexico City, Mexico	Radio Panamericana	10000
5996 ...	——	Andorra la Vieja, Andorra	Radio Andorra	
5990 ...	LRS1	Buenos Aires, Argentine	Radio Splendid	5000
	FG8AH	Pione-a-Pitre, Guadeloupe	Radio Guadeloupe	200
5985 ...	OAX4P	Huancayo, Peru	Radio Huancayo	250
5980 ...	YSW	Santa Ana, El Salvador	Radio del Pueblo	
5970 ...	HVJ	Vatican City, Vatican	Radio Vaticano	25000
	VONH	St. Johns, Newfoundland		300
	HCQRX	Quito, Ecuador	Radio Quito	250
5948 ...	HH2S	Port-au-Prince, Haiti	Societe Haitienne de Radiodiffusion	300
5945 ...	OAX4V	Lima, Peru	Radio America	500
	——	Bahrein, Bahrein Island		
5940 ...	RV15	Kharbarovsk, U.S.S.R.		20000
5935 ...	PJC1	Willemstad, Curacao	Radio Princess Juliana	3000
5920 ...	——	Moscow, U.S.S.R.	Radio Centre, Moscow	
	XGOA	Chungking, China	Central Broadcasting Station	7500
5895 ...	OAX4Z	Lima, Peru	Radio Nacional del Peru	14000
5890 ...	——	Moscow, U.S.S.R.	Radio Centre, Moscow	
5885 ...	HCK	Quito, Ecuador	Radio Nacional	300
5880 ...	ZRK	Capetown, South Africa		5000
5875 ...	HRN	Tegucigalpa, Honduras	La Voz de Honduras	750

Frequency	*Call-sign*	*Location*	*Slogan*	*(watts) Power*
5865 ...	ZOY	Accra, Gold Coast		
5860 ...	CR7AA	Lourenco Marques, Mozambique	Radio Club de Mozambique	300
5845 ...	——	Paramaribo, Suriname	Avros Paramaribo	5000
5810 ...	——	Moscow, U.S.S.R.	Radio Centre, Moscow	
5760 ...	YNJAT	Leon, Nicaragua	La Voz del Aire	500
5730 ...	——	Leningrad, U.S.S.R.		
	HC1PM	Quito, Ecuador	El Palomar	150
5720 ...	——	Magadan, U.S.S.R.		
5660 ...	——	Djokjakarta, Java	Radio Republic Indonesia	
5620 ...	OAX2A	Trujillo, Peru	Radio Trujillo	250
5580 ...	HCJ	Tulcan, Ecuador	La Voz del Carchi	250
5530 ...	OAX1B	Piura, Peru	Radio Piura	300
5510 ...	WLXJ	Shanghai, China		
5480 ...	——	Pontianak, Dutch Borneo		
5455 ...	——	Batavia, Java	Radio Republic Indonesia	
5450 ...	——	Samarkand, U.S.S.R.		
5320 ...	——	Yakutsk, U.S.S.R.		
5150 ...	——	Tadzhik, U.S.S.R.		
5090 . .	——	Moscow, U.S.S.R.	Radio Centre, Moscow	
5080 ...	——	Grozny, U.S.S.R.		
5060 ...	——	Frunze, U.S.S.R.		
5030 ...	——	Leningrad, U.S.S.R.		
4990 ...	YV3RN	Barquisimeto, Venezuela	Radio Barquisimeto	4000
4978 ...	YVKO	Caracas, Venezuela	Radiodifusora Nacional	10000
4975 ...	HJAG	Barranquilla, Colombia	Emisora Atlantico	450
4970 ...	YV5RM	Caracas, Venezuela	Radiodifusora Venezuela	5000
4965 ...	HJAE	Cartagena, Colombia	La Voz de los Laboratorios Fuentes	750
4960 ...	VUD2	Delhi, India	All India Radio	10000
4955 ...	HJCQ	Bogota, Colombia	Radiodifusora Nacional	1000
4950 ...	——	Soerakarta, Java	Radio Republic Indonesia	
	VQ7LO	Nairobi, Kenya		1500
4945 ...	HJCW	Bogota, Colombia	Emisora Sur America	1000
4930 ...	HJAP	Cartagena, Colombia	Radio Colonial	750
4925 ...	CR7BU	Lourenco Marques, Mozambique	Radio Club de Mozambique	10000
4920 ...	VUM2	Madras, India	All India Radio	10000
4915 ...	YV5RN	Caracas, Venezuela	Radio Caracas	5000
	ZOY	Accra, Gold Coast		5000
4900 ...	——	Colombo, Ceylon		
	ZQP	Lusaka, N. Rhodesia		
4895 ...	HJCH	Bogota, Colombia	La Voz de la Victor	750
	PRF6	Manaos, Brazil	Radio Bare	250
4885 ...	HJDP	Medellin, Colombia	Emisora Claridad	2500
4880 ...	VUB2	Bombay, India	All India Radio	10000
	——	Pietermaritzburg, S. Africa		500
4875 ...	HJFH	Armenia, Colombia	La Voz de Armenia	3000
4865 ...	HJEX	Cali, Colombia	Radio Pacifico	2500
	PRC5	Belem, Brazil	Radio Clube do Para	2000
4860 ...	YV5RU	Caracas, Venezuela	Ondas Populares	2000
	VUD3	Delhi, India	All India Radio	5000
4855 ...	HJCA	Bogota, Colombia	Radio Cristal	1000
4850 ...	HJGF	Bucaramanga, Colombia	Radio Bucaramanga	1000
4840 ...	VUC2	Calcutta, India	All India Radio	10000
	YV1RZ	Valera, Venezuela	Radio Valera	300

ON THE HAM BANDS

Conducted by "CQ"

● **Top Band**

Several portables have been operating on this band recently, including one using telephony from a car one Sunday afternoon. G2FWA/P of Croydon has been heard on CW. This station has worked from Beachy Head in a gale when the noise from the wind and breakers was so great that it was hard to read weak signals. Incidentally, this station arrested the attention of the mobile police ! Suffice it to say that everything was in order ! On another occasion this portable station has been operated from under canvas at night.

It is surprising what can be achieved with indoor aerials on this band. G8PD (Wembley) was heard to state that he reached Basingstoke with one. G8VN (Rugby) and G2KG (Chelmsford) each had indoor aerials when working to G2NJ (Harrow). G5JL (Hayes) has also got out remarkably well with his "bit of wire on the floor."

It is of interest to note that "Franklins" are becoming increasingly popular with hams on the top band.

● **3.5 Mcs.**

"Eighty" is a useful band inasmuch as it presents a great opportunity to those who find it impossible to fight the QRN on top band and the QRM on 7 Mcs. Local contacts up to 50 miles are possible during the day, with general coverage of the British Isles and the near-continentals during the early evening. Sometimes the continent can be worked during the midday period. PAOku being frequently heard around this time. We have, of course, our usual quota of pirates ! There is ZA2la, ZA2lb, D4lox, D4boy, D4awx, to mention a few !

● **7 Mcs.**

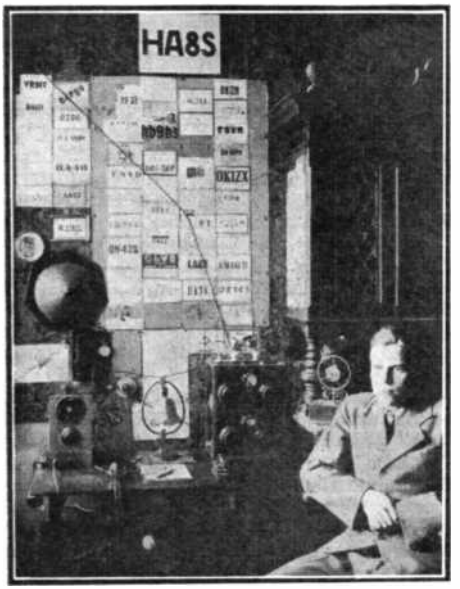
Only one DX log has been received for this band, this month, although the DX IS there if you can get under the QRM ! D. Parker reports ZC4nx and SUlke. Of interest was a Dellinger effect on Saturday, September 21st, commencing at 1110 G.M.T., when a general fade-out took place. The 14 and 1.7 Mcs. band were also affected. The fade-out lasted for over half an hour, but was not accompanied by any hissing phenomena.

● **14 Mcs.**

Undoubtedly the biggest attraction ! In his first log, J. Bowes-Taylor (Birmingham) has some good DX. He uses an R.1155A receiver and a 100 ft. Inverted "L" aerial. His best catches, all CW, are: VU2am (468 at 2015. QRA: Capt. Edwards, G.H.Q. Signals, India Command), OX2mj (489 at 2050. QRA: c/o 293 Grand Street, Brooklyn, New York), KH6ct (345, 1930), PKldk (599, 0830), HH31 (347, 2155), W6vib/C7 (466 at 1910. QRA: Lt. B. D. Lott, Peiping H.Q., c/o Postmaster, San Francisco), PKlhx (1730), VS9an (347, 1850), CO7cx (2205), CO2bc (QRA: Luz 205, Havana), KP4cc (466, 2140), VSlbx (1720), ZSlm and ZSlci (1915). Mr. Bowes-Taylor also reports some interesting new ones, including EL5b (1850), VS7ff (1800. QRA: Box 433, c/o G.P.O., Colombo), EKlaa(1700. QRA: c/o RCA Communications, Br. P.O. Box 57, Tangier). He alsa heard several VK's and ZL's and CT1YT—the first CT1 we have seen mentioned for a long time !

Martin Harrison, ISWL/G54, of Darlington, reports KL7AH (Q5 R6 at 0830), TI4JG (5-9 at 0835. Uses 1000 watts !), VP5RS (5-4 at 2230. QRA: 100 Kind Street, Kingston, Jamaica), VS7VP (5-7 at 2155), KH6AR (3-4 at 0900. Uses 1000 watts), KH6AK (5-5 at 0810. QRA: 4564 Kahala Avenue, Honolulu), KA2NJ (5-6 at 1800, Manila), PK1BK (5-8 at 0825), VE8MQ (5-7 at 1915), J9AAR (4-3 at 1735). Martin says that reports to "J" stations should be addressed to 8th Army H.Q., Amateur Radio Society, A.P.O. 343, c/o Postmaster, San Francisco.

Another good log from R. G. Cousens (Wednesbury) this month keeps up his usual high standard ! He has heard EL5b (2240), J4aab (569 at 0817), K6cgk, K6plz KH6ea, KH6ed, KH6el (all between 0620-0640), KL7ad (579, 0810), KL7ez (579, 0745), VE8's ai, ak, as, aw and mf (mostly around 0630), 14 VK's including 4do, 4ks, 4el, 4es, 5bc, 5fm, 5js (between 0630-0830), VQ2hc, VQ3hjp (a pre-war friend. 579 at 1850), 16 ZL's including 1ng, 1nt, 2ay, 2qm, 3ab, 3is, 4bq, 4ck and 4gm (between 0620-0735), and finally ZS6go (568 at 1855). On 'phone we note C8YR (Q5 R8 at 1820), ET3Y (5-9, 1840), KH6CT (5-8, 0725), PZ1J (5-6, 2205), VK2AGU, VK2HG, VQ3TOM (5-7, 1915), VS2BG, VS7FF, VU2HI, VU2JD, W1FHU (Portable KA1. 5-8 at 1930) and W7ELJ (Portable KL7. 5-7 at 0640). Thanks for setting out your log alphabetically, O.M.!



A view of HA8S "S.W.N." Correspondent for Hungary

D. L. McLean (Yeovil), another of our "regulars", again supplies some interesting data. His log mentions EA9AI, EL4A (2200), HH5PB, KA1CB (1615), KH6AI (0825), KH6CT (0645), OX1BC (2335. QRA: A.P.O. 55 U.S. Army, c/o Postmaster, New York), PZ1J (Julian Archer, P.O. Box 184, Paramaribo), PZ1W (2350), VE2SZ/VO6, VP2GB (2330), VP4JB (2310. QRA: R. Wilson, c/o Pan American Airways, Port-au-Spain, Trinidad), W5LEF/KL7 (0835), W9DGW/VP9 and YN1LB (2335).

The first log from D. W. Waddell (Nantwick) contains some good calls, including VK7nc, OQ5ce, OQ5jf, VQ4kth, VU2am, ZS1ci, VP4tb, VS9an, KH6ct, OQ5ba, and the usual run of Latins, VK's etc.

A fine log from A. J. Slater (Southwick) includes AC3SS, EA9AI, FG3FP, HC2OA, HH2PB, HI8S, J8AAA, J9AAB, PK3RS (1530), PZ1GB, TG9RC, TG9RV, VP3LF (0000), VP5RS (0100), VQ4ERR (1900), VS's 1AE, 1BD, 1BG, 1BF, 1BV, 1BZ, 2BE, 2BF, 2BG, 7FF, 9AR (2100), VU2AD, VU2CQ, VU2JD, VU2WJ, YIiCX, YI2XG, ZB1A, ZS's 2AZ, 2CI, 6HX and 6GV (Between 1915-2000, except 6GV who was logged at the unusual hour of 0130).

● **28 Mcs.**

Good news this month—"ten" is opening up! And we have some very fine DX to record! R. G. Cousens heard PY1dh, VQ2fr (1400), ZS1bf (1800), ZS5bs (1200). On 'phone CE1AH (1735); LU3BQ, 3EQ, 2DH (between 1535-1610); PYiJP, 1FO, 2QK (1715-1755); TG9PB (1810), VK6LW (Q5 R5/8 at 1015), VP6YB (Q4 R4/7 at 1650); VP9F (1720), VQ2FR, 3EDD, 3TOM (1725-1745); VU2AQ, CQ, PK (1200 and 1745); XZ2YT (Q5 R5/7 at 1200), ZE1JB (5-5/8 at 1600) and ZS's 1AX, 1BV, 1P, 1T, 6EG, 6EQ, 6FN and 6S (at 1310 and between 1605-1800).

D. L. McLean adds OQ5BL (1605), PY2KG, SU1HF, VP6YB (1630), VP9F (1440), ZS1AX iCN, IT and 5BE. Also several W5, 6, etc.

Finally, I have before me ten sheets of reports from our old friend Geoff. Johnson (West Bromwich)!! You want a mag. all to yourself, O.M.! Geoff. reports that during September very little DX came through, and those signals that did push through the noise level were subject to severe QSB. The best ones heard were OD2ac, ZS1bn, ZS1t, ZE1jj, HC1fg, ZC6fp and CX1fy. VS9AP was Q5 R8 on some occasions. The Latins were best around 2200-2330 and the ZS's between 1400-1430. Towards the end of the month, and during early and mid September, conditions varied considerably. VU2bc, VP9R, VP9F (1600), ZS's, 5bs, 5bz, 5cu (around midday), and several Latins were logged during this period. As the month progressed so conditions became more variable, with one day hardly anything on the band and the next with the DX romping in! Some interesting ones were NY4cm (569 at 1430), XU3BQ, OQ5BL, XE1da, TG9jk (all around 1800), ZD4ab (449 at 1030), XZ2YG, PZ1A, VU2lj (only using 7 watts!) and VK3pg.

● **Gossip**

GW8WJ writes in to break the news that he worked KL7bh (Ankorage) on 14 Mcs., using only 8 watts. The KL was only using 20 watts, and the QSO was 100 per cent. Just goes to show what CAN be done on QRP! High power merchants please copy!

G2DHV, George Haylock, built up the "Stand-by Top Band TX" described in our July issue, and has worked GI, GM and GW on it! Nice work, O.M.

S/Ldr. H. Pain, at ZB2A, says the TX is doing nicely, which is supported by a log of stations worked. He says that there is a pirate on 14 Mcs. using ZB2A's call, so be on the alert! Apparently there is soon to be another ham call on the air from the "Rock," operated by a "naval type"!

Plenty of dope in a nice letter from Jim Mann, VP9D. He wants reports, and his QRA is in this month's "Reports Wanted" section. Jim says that VP9F is the most active ham out there (uses 100 watts), followed by W8SIR/VP9. The island's oldest ham (and one of its oldest inhabitants!) VP9R, Bill Redman, is also active. Bill won the A.R.R.L. DX championship as far back as 1923! The following are now active: VP9C, F, G, H, J, R, X. There are also the following "experimental" stations VP9D, K, O, W and Y.

S. D. Percival, ex-I1TL, is willing to send reports of ISWL members to any I stations, providing he knows the QRA. He has most of them. His QRA is Hill-Rise, Danemore, Welland, Worcs. (And don't forget to enclose postage!)

● **Query Corner**

Dealing firstly with last month's queries, we find a number of points cleared up. Martin Harrison says that, as we suggested, FG3FP (and not FT) is in fact Frank Petrucci—W2LFI. The initials FP speak for themselves! Martin says . . . but why the prefix FG?" We agree that it is rather strange seeing that FG is the prefix for Guadeloupe! The prefix should, of course, be FF8, which is the official one for French West Africa.

Regarding YP1AA, J. Bowes-Taylor says he is operating from a ship in the Black Sea. We might have known! YI1CX, it appears, is operated by a Serviceman from Habbaniya.

Now here are some new puzzlers. Martin Harrison offers P1ZZ (14 Mcs. mornings, in English), ZB3Q (heard around 2000 on 14 Mcs.) and PR1AB (uses 20 watts and heard using English at 2010). All we know about the latter is that he is supposed to be in "the Balkans."

J. Bowes-Taylor logged OP2C (RST357) at 2040 on 14 Mcs. What say? YI6C, which may have puzzled a few readers appears to be at R.A.F. Shaibah, British Forces, Iraq. John Clarke asks about UA0KAA. This is on Dixon Island, and is operated by the U.S.S.R. Meteorological Station located thereon. D. W. Weddell queries YO5WZ, LB9O, LH2A, EK1AZ and K1LMO. The LB is genuine (in Norway), the EK is quite O.K. (Tangier), and may we suggest that LH2A was LA2A misread? Regarding the YO and K1—we just don't know! This reader suggests we publish a comprehensive list of amateur prefixes as an aid to beginners. Well, in our new "Listeners Annual" you will find all the information you need concerning ham and commercial prefixes.

D. Parker heard HS3YU on 14270 'phone. Has anyone any data? M. Harrison asks what island PK2cl is on. PK2 is Central Java area, O.M.

● **QSL's Received**

A. J. Slater: CO8MP, ZD4AC, LU6AJ, LU7FW, OA4M, ZB2A, CO2LY, PY2AY, PY2HV, YV5AB, YV5AN, VS1BF, VS1BV, VS2BF, VS2BE, VO6F, VU2AD, CO2MA, CE3CT, W1IAV/KV4, HK1AC, CE3AG, XE1AC, W7HRV, W7HIA, W0AIW. Very fb, O.M.!

J. G. Watkinson: HB9DQ, LU6AJ, CO2MA, XACP and W1GOU.

J. Clarke: XACP, LU6AJ, CX2AK, VS4JH, FM8AC and CE3CT.

● **QRA's**

Here are some topical QRA's and some requested by readers: FM8AC: Robert Martinon, P.O. Box 260, Fort-de-France, Martinique. VE8MK: J. A. Warwick, Clyde River, N.W.T. ET1C: c/o Radio Broadcasting Station, Addis Ababa. HK3BI:: Apartado 1047, Bogota. KP4CE: Radio Laboratory, University of Porto Rico, Porto Rico. YV5ABQ: Apartado 1047, Caracas. ZS2CI: Box 688, East London, South Africa. VO6F: T. G. Ling, Goose Airport, Goose Bay, Labrador. KL7BA: Box 988, Juneau, Alaska. YI6C: R.A.F. Shaibah, British Forces, Iraq. HK3CX: Apartado 1139, Bogota. EL5B: Mike Cywan, A.P.O. 524, c/o Postmaster, New York. EA9AI: Dr. Mora, Melilla, Spanish Morocco. OQ5AV: Box 77, Katina, Leopoldville.

● **The "Dreamboat"**

The Super-Fort. "Pagusian Dreamboat," has been one of the most interesting news items of the month. G8IG worked it when over Alexandria. J. Bowes-Taylor reports hearing it at 0800 (488) when in QSO with G3DO. D. L. McLean also heard it and says that QSL's should be addressed to Lt. Col. Shannon, 4418 North 15th, Philadelphia. R. G. Cousens reports it on the HF end of the 14 Mcs. band working G8KP. It was then 15000 feet over Reykjavik, Iceland. Reception was Q5 R8. Incidentally, the operator was W3QR.

● **Readers Reports Wanted Corner**

G3AKA: 3505 and 7153 kcs. CW: c/o S.W.N.

G2ATV: 1.7 and 3.5 Mcs. CW: c/o S.W.N.

G2DHV: 1825 and 7200 kcs.: 28 Longlands Road, Sidcup, Kent.

G6MN: 59610 kcs. CW: "Castlemount," Worksop, Notts.

VP9D: 14018, 14020, 14045 kcs. and 28 Mcs.: J. A. Mann, R.N. W/T Station, Daniel's Head, Bermuda.

ADDING A B.F.O. STAGE

By "CENTRE TAP"

WHILE this article is written primarily for constructors who wish to add a B.F.O. to the "Basic Superhet" described in the July issue, much of it is equally applicable to almost any receiver.

Firstly, perhaps, it should be explained that with a straight receiver C.W. signals can be received when the detector is oscillating weakly and the slight difference in the frequencies of the tuned circuit and the incoming signal used to provide the beat note. This usually provides satisfactory reception as the signal strength is not greatly affected, but it is better practice to use a separate valve as an oscillator. Actually more or less any sort of oscillatory circuit can be used to beat with the signal, and often in emergency a Servicing Oscillator or a Heterodyne Wavemeter has been employed for this purpose.

For the sake of beginners it might be explained that in C.W. transmissions, R.F. energy ONLY is used and no audio signal is carried on it. Modulated C.W. (MCW) is sometimes used, although not in amateur practice as it does not give the range that C.W. does, and it is easily distinguishable by it's definite musical tone.

To produce a note when receiving C.W. it is necessary to generate another frequency, which, when mixed with the signal will produce a beat note within the audio range. This is precisely what happens when we set the detector in a straight set slightly off frequency. In the super-het circuit a beat note can be obtained by "mixing" with the intermediate frequency, and by making this second frequency variable the resultant beat note can be changed in pitch. This in itself is of great advantage. The note is varied to suit the listener and the pitch made distinctive to read more easily through a noisy background or even against a jamming signal of a different note.

Screening

The circuit used is shown in Fig. 1, and it will be seen to be a conventional arrangement using a triode valve. It is of the greatest importance that none of the output of the B.F.O. is allowed to feed back to the input of the I.F. amplification or overloading will result. It is equally important that adequate shielding is used to prevent harmonics of the B.F.O. getting to the R.F. stages. For the best results the B.F.O. and I.F. voltages should be of the same order and methods of ensuring this are afforded by control of anode voltage and the size of output coupling.

The *Wearite* coil used is No. B-FO and it is already tapped up from the low potential end. When tuned by a 125$\mu\mu$F. capacitor (C1) it will provide a note up to 5,000 cycles. Those who may wish to have this pre-set can do so by mounting a suitable capacitor on the coil itself and the manu-

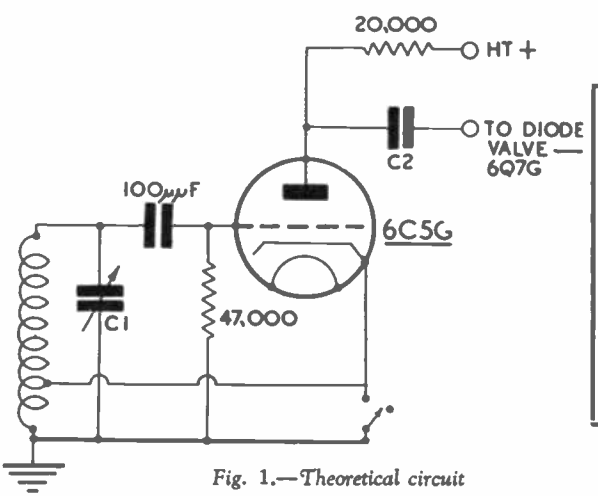


Fig. 1.—Theoretical circuit

THE "BASIC SUPERHET"

Designed and described by "Centre Tap."

THE BASIC RECEIVER:— July issue (Vol 1, No. 7).

ADDING AN R.F. STAGE:— September issue (Vol. 1, No. 9).

ADDING A B.F.O.:— This page.

facturers recommend a total capacity of 118$\mu\mu$F. to give a 1,000 cycle note. This note is somewhere around "top C" in the soprano voice and is generally favoured for easy readability.

On/Off Switch

The switch provided in the cathode circuit leaves the valve ready for instant action at all times, although if desired the H.T. can also be cut by using a D.P.D.T. switch when the stage is not in use.

With the average layout a good position for the unit would be behind the panel and in front of the valve 6Q7G. The anode voltage should be kept as low as possible consistent with sufficient audio output. The suggested value 20,000 ohms will normally be found about right but can be increased or decreased to suit individual cases. A further method of controlling the output is afforded by the coupling capacitor C2 which is of very small capacitance, 2 to 5$\mu\mu$F. This can most conveniently be done by twisting the two insulated ends of the leads together to ACT as a capacitor, making sure there is no possibility of a direct connection. The idea is illustrated in Fig. 2, and a little experiment can be

Fig. 2

made with the length of the overlap (dependent chiefly on the thickness of the insulation) until the most suitable size coupling is found. Once found, a dab of polystyrene or other suitable fixative on each end of the insulation will ensure it remaining permanent.

From our Mailbag

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

Dear O.M's

Was rather amused to read, in an evening newspaper, that the "Hams are at war with the B.B.C."!! The reason, it appears, is because the amateurs are "interfering" with B.B.C. broadcasts on certain frequencies. Really! On the 7 Mcs. AMATEUR band, the following B.B.C. broadcasting stations operate:—GRS, GRM, GRT, GWL, GSW, GWI and GWN. What would happen if hams started operating on the B.C. bands!! Whilst on the subject, why are so many service stations still operating on frequencies allocated to amateurs—such as the famed FA9 on the 3.5 Mcs. band?

A paragraph in the previously mentioned report that rather appealed to me was that, although certain men from the Services could be granted exemptions from the Examinations, it was seen to that "not too many exemptions were granted"!

Sincerely Yours,

J. Clarke (Brentford)

Sir,

I notice that considerable criticism is being published in readers letters regarding the R.S.G.B. and newly licenced amateurs.

First of all the R.S.G.B. has upwards of 12,000 members. Nearly all licenced hams belong to the R.S.G.B., as do most potential licencees. Representation is extended to district and town representatives. A. W. Mann asks who and what are the R.S.G.B. advisory committee. The answer is simple—they are the voice of the majority of British hams.

I would point out to A. W. Mann that the days of experiment on all except the high frequencies are almost past. The war, with its terrific concentration of ideas, inventions, etc., gave sufficient proof of that.

Regarding power, I don't exactly see who it should concern more than other hams. If the "Short Wave News" correspondents wish to talk of power let them start with the "commercials"—those stations who they consider to be real DX—using umpteen kilowatts beamed to England.

Lastly, concerning REAL amateur radio, as Mr. Mann puts it, if he looks into a dictionary, he will doubtlessly see the meaning of the word "Amateur." and he will see the connection, and be so much the wiser.

Yours faithfullyy,

E. G. Kendall, G3APA (Coventry)

"Radio Canada"

STATION DESCRIPTION No. 6.

CONSIDERATIONS for a Canadian International Short Wave Service began as far back as 1934, when the Canadian Broadcasting Corporation first studied the idea of such a project. In 1937, a proposal was put forward to the Federal Government, and accepted, for a short wave service to be administered by the C.B.C. and financed by the Dominion budget. Owing to the peculiar difficulties of short wave transmission in Canada, the selection of a suitable site was made with great caution. For example, the site had to be far enough East to protect the beam from absorption or distortion by the North magnetic pole, which lies in Canadian territory on Boothia Peninsular, and is a big bug-bear for Canadian radio engineers. Also, the soil and site had to fulfill certain specifications of a technical nature to ensure proper transmission. Eventually the salt marshes of the Tantramar River, near Sackville, were found to meet all the requirements, and plans for the construction of "Radio Canada" on this site were submitted in 1938.

It was not, however, until September 18th, 1942, that the project was formerly authorised by the Government, and the necessary funds provided. Wartime conditions hampered progress, but owing mainly to the ingenuity of C.B.C. craftsmen, the first test transmission was aired on December 19th, 1944. This transmission was followed by a cable from the B.B.C. to the effect that the new voice of Canada was the strongest signal to be heard in Europe from North America. Success ! !

Coverage

Regular daily programmes commenced on February 25th, 1945, in four languages: English, French, German and Czechoslovakian. In June, Dutch language transmissions were added, and in July, on a test basis, Portugese and Spanish. Plans are under way to include Flemish and the Scandanavian tongues. Special feature programmes have been radiated to 17 countries, including U.S.S.R., Mexico, Australia, Egypt, Palestine, Brazil, etc.

During the war, priority was given to domestic network relays in English and French, for the benefit of Canadian troops serving overseas. The Canadian Armed Forces wanted news from home and cheerful entertainment; Nazi-occupied countries required accurate details on world events; Germany had to be aware of the futility of Nazi ambitions. "Radio Canada" fulfilled these requirements. In the post-war world, Canada, as one of the leading countries of the world, can now introduce herself more widely to other nations by direct information on her cultural, political and economic life.

Design

The Sackville station, built on the salt marshes of the Tantramar, is one of the most modern in the world. Incidentally, Tantramar is an Indian word to describe the noise of the wild fowl that congregate in the area. The programme and administration headquarters are located in Montreal, with some 600 miles of specially-balanced land lines linking the studios to the transmitters.

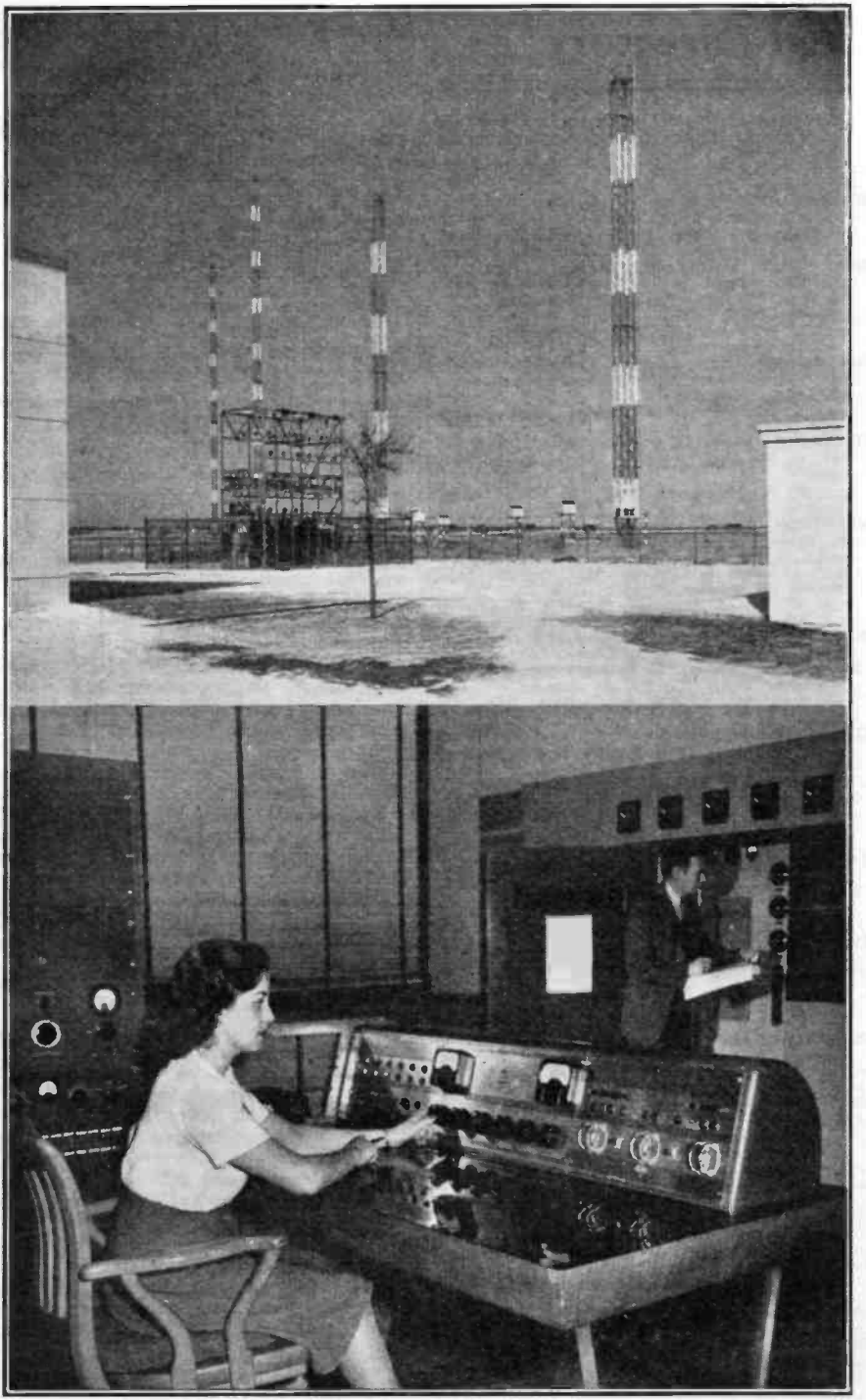
The aerial curtains are supported by steel towers, varying in height from 170 feet to almost 400 feet. The aerial system comprises three arrays of intricately designed aerials which may be reversed so that, in effect, six directional beams can cover nearly every corner of the globe. For instance, the beam covering Britain, Western Europe and Russia can be reversed to cover Mexico, Central America and New Zealand. The two transmitters, each of 50,000 watts power, can operate simultaneously on different frequencies or directions, and are housed in a functional two-and-a-half storey building of reinforced concrete. The switching of frequencies can be done in roughly fifteen minutes by means of remote controlled switches right from the transmitters' consoles.

Channels

The following channels are assigned, though all may not be in use at any given time :—CHLA, 21700 kcs.; CKNC, 17820 kcs.; CKCS, 15320 kcs.; CHTA, 15220 kcs.; CKCX, 15190 kcs.; CKLX, 15090 kcs.; CKEX, 11900 kcs.; CKRA, 11760 kcs.; CHOL, 11720 kcs.; CKXA, 11705 kcs.; CHMD, 9640 kcs.; CKLO, 9630 kcs.; CHLS, 9610 kcs.; CHAC, 6160 kcs.; CKOB, 6090 kcs.

Reports

Reception reports of a constructive nature are welcomed and should be addressed to : Canadian Broadcasting Corporation, P.O. Box 189, Montreal.



(*Above*) *Some of the Aerials.* (*Below*) *One of the Control Panels*

Club Directory

BIRMINGHAM (B.S.W.L.): Meets at Hope and Anchor Hotel, Edmund Street, the first Monday of each month.
Sec.: G. Hodgkiss, 30 Towyn Road, Moseley, Birmingham, 13.

BOURNEMOUTH: Meets on the second and last Tuesday of each month at the Lodge Room of the Branksome Arms Hotel, Commercial Road.
Sec.: J. F. Squires, G2DBF, 80 Victoria Road.

BRADFORD: Meets every Monday evening at 1374a Leeds Road, at 7.30, a morse class being held from 7.00-7.30. Has three rooms, and holds club call G3NN.
Sec.: V. W. Sowen, G2BYC, 6 West View, Eldwick, Bingley, Yorks.

DUBLIN: (Practical Amateur Radio Constructors Club): Meets every Friday. Seeking permanent club room. Has library.
Sec.: T. Keogh, 8 New Ireland Road, Rialto, Dublin.

EDGWARE: Meets at 20 North Parade, Mollison Way, on the first and third Wednesday of each month.
Sec.: P. A. Thorogood, G4KD, 35 Gibbs Green, Edgware.

GRAFTON: Meets every Monday, Wednesday and Friday at Grafton L.C.C. School, Eburne Road, Holloway, London, N.7, from 7.30-9.30 Club's call-sign is G3AFT. Has canteen. Subscription 2/- per term.
Sec.: W. H. C. Jennings, G2AHB, 82 Craven Park Road, London, N.15. ('Phone: STA 3891).

HOUNSLOW: Meets on the 2nd and 4th Wednesday of each month at Grove Road School. Subs.: Life members £5, ordinary members 10/- per annum, under 21's 2/6 per quarter.
Sec.: A. Pottle, 11 Abinger Gardens, Isleworth, Middx.

KINGSTON: In formation.
Sec.: J. Hughes, 12 Hillingdon Road, Ashford, Middlesex.

LIVERPOOL (B.S.W.L.): Meets every Wednesday at St. Barnabas Hall, Penny Lane. Starts at 8 p.m.
Sec.: T. W. Carney, G4QC, 9 Gladeville Road, Aigburth, Liverpool, 17.

MAIDENHEAD: Meets monthly at the "Toc H" behind the Technical Institute in Marlow Road.
Sec.: J. F. Squires, G2DBF, "Crendon," Lock Lane, Cox Green, Maidenhead.

MEDWAY: Meets at 207 Luton Road, Chatham.
Sec.: S. Howell, G5FN, 28 Rosebery Road, Gillingham.

N. MANCHESTER: Meets Mondays at 8 p.m. in the Stand Grammar School for Girls, Higher Lane, Whitefield.

READING: Meets the second and last Saturday of each month at Palmer Hall, West Street, at 6.30 p.m. Annual Sub.: 10/6.
Sec.: R. G. Nash, 9 Holybrook Road.

ROMFORD: Meets each Monday at Mawney's Road Schools at 8.00.
Sec.: R. C. E. Beardow, G3FT, 3 Geneva Gardens, Whalebone Lane North, Chadwell Heath.

SALISBURY: Meets every Tuesday at 85 Fisherton Street, commencing 7.45. Club room and workshop available to members ANY evening. Subscription 12/- per annum, or 3/- per quarter.
Sec.: C. A. Harley, 85 Fisherton Street, Salisbury.

SLADE: Meets on the fourth Friday of each month at Broomfield Road, Slade Road, Erdington, at 8 p.m.
Sec.: L. A. Griffiths, 47 Welwyndale Road, Sutton Coldfield.

SOUTHEND: Meets fortnightly at the Art School, Victoria Circus.
Sec.: B. C. Leefe, G5XI, 16 Carlton Drive, Leigh-on-Sea.

SOUTH SHIELDS: Meets every Friday (7 p.m.) at St. Paul's School.
Sec.: W. Bennell, 12 South Frederick Street.

STOCKPORT: Meets every Monday (7.45) at the Textile Hall, Chestergate. Annual subscription £1, junior members (under 21) 5/-.
Sec.: G. Wood, 121 Garners Lane, Davenport, Stockport.

WATFORD: Meets on the first Tuesday of the month at The Carlton Tea Rooms, 77a Queens Road.
Sec.: J. C. Warren, 29 Market Street.

WEST BROMWICH: Meets fortnightly (7.30) at the Gough Arms.
Sec.: G. Johnston, G2BJY, 22 Lynton Avenue.

WEST MIDDLESEX: Meets on the second and fourth Wednesday of each month at the Labour Hall, Southall, commencing 7.00.
Sec.: N. Priest, 7 Grange Road, Hayes, Middlesex.

WHITEFIELD: Meets every Monday (7.30) at the Stand Grammar School, Higher Lane, Whitefield.
Secretary: E. Fearn, 4 Partington Street, Newton Heath, Manchester, 10.

NEW CLUBS

ABERDEEN: An amateur radio club has been formed, to be known as the Aberdeen Amateur Radio Society. The Temporary Secretary, A. G. Anderson, B.Sc., 87 Braemar Place, Aberdeen would welcome applications from enthusiasts in the Aberdeen area.

STOURBRIDGE: The first meeting of the Stourbridge and District Radio Society was held at King Edward VI School, Stourbridge, on September 3rd, with 32 members present. The Society will welcome any radio enthusiast and anyone wishing to join should apply for particulars to the Secretary, D. Rock, G8PR, Flat 1, Block 1, Summerfield, Kidderminster.

WANSTEAD & WOODFORD: This club, the Wanstead & Woodford Radio Society was formerly known as the Woodford Radio Society, and now meets every Tuesday at Wanstead House, Wanstead, at 7.30. The Secretary is F. C. Judd, G2BCX, 111 Maybank Road, South Woodford, E.18.

Catalogues Received

A well-printed and produced catalogue from **Stratton & Co., Ltd.**, of West Heath, Birmingham, illustrates a number of interesting Eddystone components, many of them of post-war design.

A very comprehensive range of short wave components, kits, and instruments is shown in the revised catalogue (price 6d.) received from **Berry's (Short Wave) Ltd.**, of 25 High Holborn, London, W.C.1.

The Denco catalogue is designed to take extra pages, issued from time to time by **Denco (Clacton) Ltd.**, of 355-9 Old Road, Clacton-on-Sea, Essex, to those on their mailing list. The lists cost 6d., and contain information on the low-loss components using polystyrene insulation which are a speciality of this firm.

I.S.W.L. NOTES

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London W.9

Subscription :
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MONTHLY NEWS

WE are off to a flying start ! Though the founding of the I.S.W.L. was only announced in our last issue, the membership is already encouraging, and is steadily increasing. It is obvious that such a society was needed ! It is evident, too, that readers are not joining simply to get a new number to add after their names ! No, our members are most definitely an active crowd, and if the interest keeps up, then we will have a League that really has some life in it !

Since the I.S.W.L. is sponsored by "Short Wave News" the question will arise "who is going to run the League ?" Well, it is our contention that a League should be run by its members, though in actual fact few of them really are. The usual procedure is for the members to elect a Council, who decide on matters of policy for a given period, after which a new election is held. Sounds all right in theory, but our experience—and we have some practical knowledge of this !—is that those nominated for election are rarely known to the majority of members. Sometimes, when in office, the Council will sound the members on a question of policy, but all too often the decisions made represent merely the views of the Council, plus personal friends, and not those of the majority of members.

We have an alternative system, and we are going to try it out right away ! We propose that all major questions be put direct to the members themselves, who will write in and give their views, the decisions made to comply with the majority vote. The objection that some members will not be bothered to write in, will arise. Agreed, but at least they WILL have had the opportunity, and cannot complain should they be displeased with the final decision. Anyway, let us know how you feel about it.

As far as the "pen and ink" side is concerned, we have a cosy office at HQ, and will be pleased to accept offers from London members who care to come along and lend a helping hand. We should like to point out, for the benefit of those who have "had some," that there will be no question of being asked to perform such tasks as addressing hundreds of envelopes ! We've been caught on that one ourselves, and have invested in an Addressograph machine to take care of that problem !

Next month we will publish our first list of I.S.W.L. county representatives, and further details of the League progress. If you have not yet joined the I.S.W.L.—send along that shilling right now !

In our next I.S.W.L. notes we will give details of the first members' services to be put into operation. Now here are a few points—prompted by our mailbag !

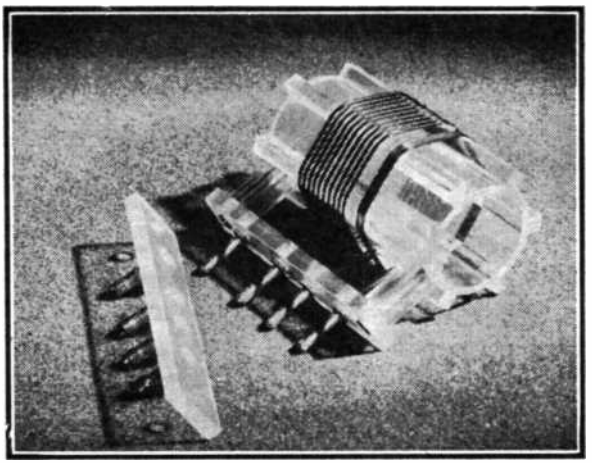
(a) We are not, at present, issuing application forms for membership.

(b) I.S.W.L. members stationery is NOT yet ready. We are working on it now, and as soon as it is printed a notice will appear on this page.

(c) We have no connection whatsoever with any other society.

(d) DX news should still be addressed to "Monitor" (Broadcast) and "CQ" (Ham).

That's all for now, so cheerio till next month !



Component Review

Denco Type 1 Plug-in Coils

The heading illustration this month shows one of the type "1" plug-in coils and holder which are being manufactured by this well-known firm, and which are available from most retail shops catering for the Amateur. We have, as a matter of interest, used these coils in the "*S.W.N. T.R.F. Receiver*" described in this issue, on page

Both two and three-winding types are made, and there are eight ranges covering frequencies from 1 to 125 Mcs. This coverage is based on a tuning capacitance of 100 $\mu\mu$F. for ranges 1 to 5—covering 1 to 34 Mcs., and of 50 $\mu\mu$F. for ranges 6 to 8—covering 30 to 125 Mcs.

The formers are 1$\frac{1}{8}$ins. in diameter, except for those used on ranges 1, 7 and 8, which have a diameter of $\frac{3}{8}$in. The material employed for the holders and formers is polystyrene, and the latter are ribbed, so reducing losses to a minimum. The 4-pin coils cost 3s. 6d., and the holders 1s., while the 6-pin types retail at 4s. 6d. the coil and 1s. 6d. the holder.

World News

U.S.A.

In spite of almost solid opposition from the radio industry, the F.C.C. has set aside for one year every fifth class "B" FM channel tentatively allocated to any area in the December 19th allocations set-up. The reserve channels, ninety in number, will be withheld from assignment through June 30, 1947. Reservations will leave the door open to qualified applicants not now in a position to seek an assignment.

Westinghouse Radio Stations, Inc., have been granted a construction permit for a television station at Boston. Westinghouse radio activities started 25 years ago, with the establishment of WBZ, and now includes BC band, International SW broadcast and FM.

(*G. Calkins—S.W.N. Correspondent*)

Palestine

The Amateur Radio Society of Palestine, though progressing favourably, and having recently formed Chapters in Haifa and Jerusalem, has not yet succeeded in obtaining any transmitting licences. All ZC6 stations to be heard on the air are definitely pirates, and the P.M.G. is taking steps to trace these stations. At present, any infringement of the current regulations is considered a very serious offence, and anyone having in his possession anything connected with radio transmitting is liable to be interned for a period of six years minimum.

(*Reuben Sokolovsky—*
S.W.N. Correspondent)

NEW CORRESPONDENT

Hungary: Peter Somssich, HA8S, kindly accepted this position. His photo apears in this month's "Ham Bands."

My Favourite Receiver

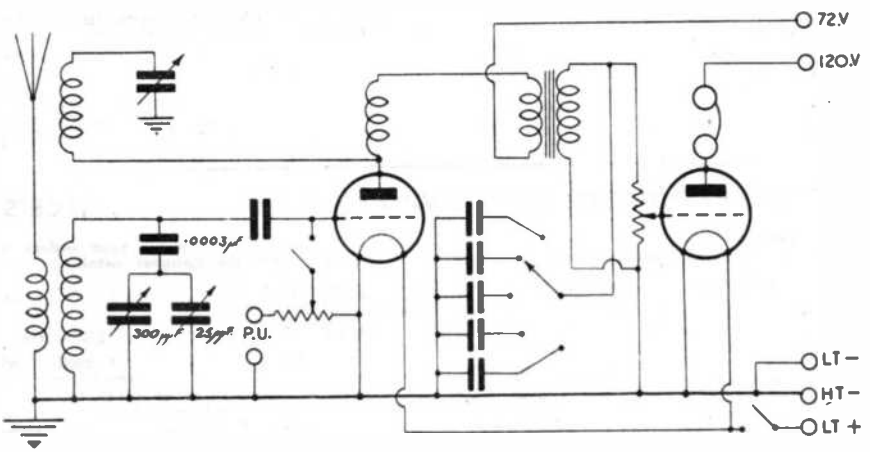
THE receiver was originally built from parts out of the "junk box" about 8 years ago, this accounting for the many rather odd sizes and values of some components.

The coils are 2½in. diameter, 6-pin plug in type, and the variable capacitors are 300 μμF.—with series capacitors to bring the effective capacitance down.

By experiment, the grid capacitor giving the best results was found to be .002 μF., and despite the omission of a grid leak results have been very satisfactory. No grid bias is used, and the connecting wires are not particularly short, some of the grid leads being over 4in. long! The switched capacitors in the output stage comprise the tone control, the values being .001, .002, .003, .004 and .006 μF.

The RX has now been rebuilt, but the same components are used, and as Stan says "it still looks like a heap of junk"!! The surprising thing is that signals from all parts of the globe have been received consistently, including:—ZL, VK, ZS, VE8, XU, etc. On the second day of listening on the original set, VR6AY, on Pitcairn Island, was received, and during the first six months of listening over 100 different countries were logged!

(Editorial Note.—Regarding the omission of the grid-leak, the value of this component is usually around 3/4 Megohms but would be much smaller with a capacitor of the size mentioned. The required resistance could very easily be—unwittingly—in circuit through poor insulation either on the valveholder or in the material forming the case of the capacitor.)



No. 8: S. Garner

SHORT ENDS

Not for us: There is to be an increase of 40 per cent. in the paper allocation for periodicals, commencing with the period beginning this month. The increase, however, is confined to those firms who were publishing before the war, which means that we cannot increase our circulation or enlarge the magazine at present. We must ask our readers to bear with us, and we assure you all that, as soon as the opportunity arises we will go full-speed ahead with all the new ideas we are at present forced to keep "on the shelf."

Correction: In a recent advertisement of Measuring Instruments (Pullin) Ltd. in this publication, the price given for the M.I.P. Series 100 Multi-Range Test Set was £8. This should have read £8 10s.

New Band: Permission has been granted for British Amateurs to use a new amateur band, between the frequency limits of 2300-2450 Mcs. Maximum power must not exceed 25 watts. Frequency Modulation may be used on this new band, but pulse operation is not permitted.

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.

REPORT PADS ! 50 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.

WANTED URGENTLY.—A Communications Receiver. Full details and price please, to G2BNH, 366 Gillott Road, Edgbaston, Birmingham.

ALUMINIUM CHASSIS made to any size, plain or punched for valveholders, also panels, screens, etc. Any quantity. Nead, 13 Bence Lane, Darton, Barnsley, Yorks.

ENTHUSIASTS LOOK, take advantage of this new dial that is offered for your benefit. Ex-R.A.F. EF50's all tested O.K., with holders, £3 doz. Special offer for gross lots, suit clubs, etc. Resistances and condensors 25/- gross assorted. Send for super bargain list. Definitely NO CALLERS. Mail only to :—15 Dragon Square, Chesterton, Stoke-on-Trent, Staffs.

WANTED—Radio papers, periodicals, magazines exchanged, QSL's and stamp collectors, radio amateur correspondents wanted OK2RR, Otakar Halas, Bratislava 9, Post Box 34.—Czechoslovakia.

WANTED : SX24 or other communications receiver and Scott or Midwest. Also good price given for 8mf. wet electrolytic and No. 1 " Short Wave News." Urgent. Box—1009.

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

FOR SALE—Practical Wireless, Jan., 1945—Nov., 1946, also few 1944 (30 copies). 22/-. G. A. Ball, 165 Wigan Rd., Ormskirk, Lancs.

SALE—or part exchange for camera. 30W. Amplifier—£7. Pair KT33C's—10/-. 955, 9004 acorns —15/- each. 832 " door knob—35/-. 6C4 midget triode—7/6. 12 inch speaker (P.M.)—Offers. Box 1007.

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.

BOOKS for the ham! The most comprehensive stock of radio books in the country, including many now out of print. Write, or call, for complete list. (Price 1d.):—Dept. S.3, THE MODERN BOOK CO., 19-23 Praed Street, London, W.2.

DUPLICATING and typing to requirements at reasonable rates. Club Secretaries—let me duplicate your news-sheets! Send for tariff of rates to: H. Lister, 19 New Street, Pocklington, York.

CALLING ALL HAMS and home constructors. Write for general list, or state your requirements. You will find there is little I cannot obtain. Whitley Radio Service Depot, 5 Exchange Bldgs., Whitley Bay.

LABGEAR PRODUCTS NOW AVAILABLE FROM VALLANCE'S

We are pleased to announce our appointment as agents for Labgear, and welcome your orders and enquiries for this high grade equipment. Here are a few lines from the Labgear catalogue :—

TRANSMITTING CONDENSERS

Recommended for low and medium power transmitters. Aluminium end plates and fixing brackets. Plates of brass, plated bright nickel and rounded edges accurately assembled for uniform air gap. Insulation in mycalex with long leakage path.

Bearings of hard brass, phosphor bronze contacts. Single section and split stator types. Air gaps 0.10in. for 4,000v. Peak and 0.05in. for 1,500v. Peak working.

4,000v. Peak Working—100 m.mfds. single section, £2 10s.; 50 m.mfds. single section, £1 15s.

1,500v. Peak Working—50 m.mfds. single section, 14s. 6d., 50 plus 50 m.mfds. split stator, £1 2s. 6d., 100 m.mfds. single section 17s. 6d., 75 plus 75 m.mfds. split stator £1 4s. 6d.

INDUCTANCES

For Plug-in frequency changing, suitable for oscillators, frequency multipliers and power amplifier stages. Constructed of hard drawn copper wire, silver plated and mycalex base. Spacers where necessary are of distrene. Types available are for single-ended or double-ended amplifiers, either plain or with a fixed coupling link. Plugs and Sockets are of ample current rating. Base for above in mycalex.

60 Mc. single-ended with fixed coupling link 7/3; 60 Mc. Push-Pull double-ended 8/1; 28 Mc. Single-ended stage with fixed coupling link 9/3; 28 Mc. Push-Pull double-ended with fixed coupling link 10/1; 14 Mc. Single-ended with fixed coupling link 10/3; 14 Mc. Push-Pull double-ended with fixed coupling link 11/1; Base for above 5/-.

POWER AMPLIFIER COILS 150 watts

Double-ended type for split stator tuning with swinging coupling link in the centre for correct anode loading. Inductances of silver plated hard drawn copper, spaced where necessary with distrene; all insulation in distrene, plugs and sockets of ample current rating.

Base for above range complete with swinging coupling arm made in distrene complete with stand-off pillars for base mounting. The swinging link may be controlled from the front panel with a suitable expansion spindle.

28 Mcs. double-ended P.A. Coils suitable for up to 150 watts, complete with centre adjustable link coupler. Plug-in interchangeable type £1; 14 Mcs. double-ended P.A. Coil with swinging coupling link as Type DSL/28 £1 5s. 6d.; 7 Mcs. Double-ended P.A. Coil with swinging coupling link as Type DSL/28. £1 10s. 6d.; Base for double-ended inductances £1.

Other Labgear lines include :—

Crystal Calibrators, Cathode Ray Viewing Units, VFO Exciters, Stabilised and High Voltage Power Supply Units, Preselector Units, Rotabeam Directional Antenna Systems, Noise Silencer Units, Absorption Wavemeters, Racks and Panels, Transmitting Chokes, Neutralising Condensers, Aerial Feeder Spreaders, etc.

VALLANCE'S, 144 Briggate, Leeds 1

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