

SHORT WAVE NEWS

Vol. 1.
No. 5.
MAY, 1946.

In this Issue :

ON THE HAM BANDS.
BROADCAST NEWS.
AROUND THE SHACKS.
MY FAVOURITE
RECEIVER.
"RESONANT LINES"
CLUB NEWS.
WHEN TO LISTEN.
STATION LIST.
AND
THE M.I.P. AC/DC MULTI-
RANGE METER.
RADIO BRAZZAVILLE.



"ICI BRAZZAVILLE"
(Description within)

A
SHORT WAVE PRESS
PUBLICATION.

1/3

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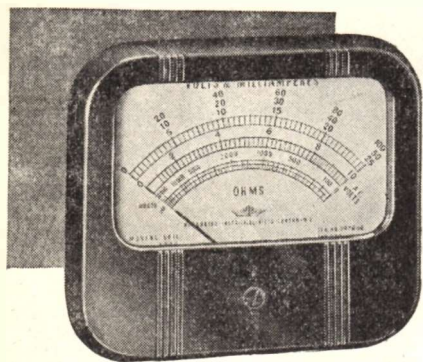
9 a.m. to 5.30 p.m.

EVERY DAY except Thursdays (9 a.m. to 1 p.m.)

Staffed by : G3AD - G8ZD - SPIHH/SP2HH.

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This attractive $3\frac{1}{2}$ " scale instrument has separate coloured scales for resistance, and 10v. A.C. ranges. All components can be obtained to build this modern multi-range testmeter. Price (1 ma. movement) - £4.9.0

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SHORT WAVE NEWS

Vol. I. No. 5.

Annual Subscription, 16/.

May, 1946

Editor : ARTHUR C. GEE, G2UK.

Asst. Editor : W. NORMAN STEVENS

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

The Prestige of the British Amateur.

A SHORT while before the war, your Editor was fortunate enough to visit South America and to meet there a number of prominent amateur and Radio Club officials. One of the most interesting observations made on that tour was that the prestige of the British amateur was of a very high order. Everywhere one went, one was told that for politeness, comradeship, operating technique and quality of signals, the British stations took the lead.

There is little doubt that the tradition will be carried on by the newcomers to the transmitting fraternity, particularly if we remember that our British character is sufficiently attractive to make imitation of others unnecessary, and that, contrary to what our natural humbleness often makes us believe, the British way of doing things is genuinely admired by the rest of the world.

We Go Overseas

Proof of the interest being shown by other countries in British ways and methods came home to us, last month in a very practical way when we received our first export order. Readers will be interested to learn that the first batch of the "Short Wave News" is already on its way to the Middle East for re-sale. We also have regular readers in Canada, Denmark, Sweden, India, Bermuda, Turkey, and doubtless our distributors could add more countries to the list. We feel very gratified that within a few months of "opening shop" we are spreading the tradition of British amateur radio throughout the world.

Buy British Gear.

British equipment is also held in high esteem. Great interest was always shown in photographs of ones gear. The slogan "Buy British because its Best" was realised to be no idle boast, but a statement based on fact. British radio manufacturers never had any real opportunity to get into their stride with amateur equipment before the war, but now we see most encouraging signs for the future of amateur radio in the interest which many manufacturers and distributors are showing towards catering for the transmitting and receiving home-constructor.

The Paper Situation.

It may not be generally realised that, whereas publications that were in existence before the war are allowed a generous percentage paper quota, all new publications, such as the "Short Wave News," get only a meagre paper allocation. This "rationing" makes the production of a presentable periodical most difficult, and the balancing of circulation against size of the magazine is a constant problem. It is particularly galling to us to be constantly receiving orders for more and more copies, orders that we cannot possibly meet. And it is even more disheartening, perhaps, to see the editorial desks laden with bright ideas for articles which we cannot make use of for want of space. However, we trust that readers will bear with us in the knowledge that we are, and will be, doing out utmost to improve our magazine in all its aspects. Readers will have noticed that we now have a better quality paper, which takes the illustrations much better. Time will tell !

A.C.G.

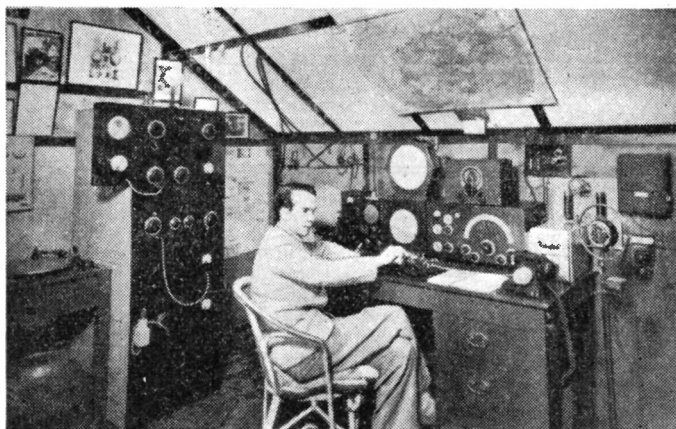
NOTICES

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.



Around the Shacks.

No. 4: G8IG.

MR. C. G. ALLEN, G8IG, of Bromley, Kent, is no new-comer to amateur radio, and served in the 1914-18 war as a sea-going Radio Officer in R.N. Transports. In 1923 he was operating under the call G2MI, which he allowed to lapse. After resuming radio activities, he was issued with his present call-sign, and until the 1939 "close down" had succeeded in Working All States of the U.S.A. on telephony. The certificate from the A.R.R.L. is endorsed with the words "4th W.A.S. award in Great Britain." Other certificates of note held by G8IG are the B.E.R.T.A.—W.A.C. phone and CW for 14 Mcs. and 28 Mcs., and W.B.E. phone and CW.

Since the restoration of licences, G8IG established the first post-war international contact by working LA8C on January 19th of this year. Noteworthy is the W.A.C. in 4½ hours, and W.B.E. in 5 hours 20 minutes on 28 Mcs. on March 9th, details of which are shown below:—

0845	W5KDA	Okinawa
1100	VK4LP	Queensland
1138	XABY	Greece
1203	SU1USA	Cairo
1230	W3BDL	Mount Arlington
1300	HK4AX	Medellin
1405	VE4EK	Winnipeg

The photograph above shows a portion of the shack at 8IG. The 28 Mcs. transmitter was under construction when the photograph was taken, so is not shown. The line-up is 6L6 Tritet (7 Mcs. crystal),

TZ20 doubler, into a T55 final with a pair of TZ20's in Class B in the modulator.

Various aerial arrays are used—A 3-wave (28 Mcs.); a 2-element 8JK beam, fed with 600ohm tuned line; and under construction a 4-element rotary beam for 28 Mcs., and, mounted on the same structure, a 3-element rotary for 14 Mcs. This revolving structure weighs 3 cwt., and is mounted on a 35 ft. lattice tower. It will be motor-driven with shack control. An elaborate direction indicator fitted in the shack will give visual indication of beam position, which is achieved by a light strip of illumination appearing on a great circle map.

The transmitter shown in the photo is the 20 meter rig. The gramophone recorder adjacent to the TX, has been used for recording the signals of stations worked—an ideal form of QSL! On the operating table are shown a modulation indicator, a phone and CW monitor, and a McMichael 385 receiver converted for the amateur bands. Above the table is a world-wide clock, the aerial switching unit, and a portion of the keying filter. Throughout the station, wide use has been made of relays, making for quick and efficient operation.

An interesting souvenir at G8IG is an inscribed microphone. This was sent by the Australian Broadcasting authorities when Mr. Allen flew over London in 1928 with the late Squadron Leader Bert Hinkler, picking up a programme from Australia, so establishing an all-time record for aircraft reception. The microphone is the one actually used in Australia for this historic transmission.

On the Ham Bands.

Greetings from
GREECE!

TO G8RC
 QSO ON 28 Feb '46
 AT 1230 CET
28 MCS 05
 QSA 4 3/69x
 REMARKS many thanks for qsl

LIEUT. G. A. WOODS (ROYAL SIGNALS)

XACD
 ATHENS GREECE

QSL TO 67 STATION PARADE
 HARROGATE ENGLAND

input 50 watts

G. Woods
 R. G. B. EX. G 6 WD.

Owing to the indisposition of "CQ," who is unable to contribute his usual article this month, your Assistant Editor has had to step into the breach. I apologise for what must be a rather scrappy article, but it must be understood that it has had to be rushed out at the very last moment!

First of all, thanks to G8RC for loaning us the QSL of XACD, which we reproduce above. As we have noted doubts in certain quarters regarding XACD, we trust this will dispel those doubts!

● 58 Mcs.

We are surprised that so few readers have shown interest in this band, and would appreciate more reports. D. W. Heightman, G6DH, of Clacton, writes that he is at present working with a long-wire aerial, 60 ft. horizontal and 38 ft. vertical, end fed, 50 ft. high. Frequency used is 58,552 Kcs. G6DH's first post-war QSO was with G6VX, Bromley. Other contacts include G2MV. G6CW has been heard with R4 signals (120 miles), G5MA with R5, and G2AUK. A schedule is run with G5BY, South Devon, on Tuesdays, Thursdays and Fridays; at 2130 BST 5BY sends; at 2140 6DH sends. G6DH is on 58 Mcs. each evening from 2130 and any day that conditions are OK for ionospheric reflections on the band.

● 28 Mcs.

Although newly licensed, G2BJY, of West Bromwich, has been putting in some good work on "ten." He has worked PK4DA on several occasions, both on CW and phone, around 1500. Amongst the stations heard by 2BJY are VU7BR, KA1ZU, KA3TF, ZS1CX, LI3JU (Libya), VQ2PL, ZS1CK, VK3KX, VK3MC, ~~VK4KU~~, VK4HR, LU7AZ, PY2KB,

PY5AN, all on CW. On phone he has logged PY2KT, SU1MW, etc.

G6DH, during the period of March 14th-4 April 14th, has truly worked some fine DX. QSO's include XU1YO, XZ2DF, VU7BR, XU1YM, CR9AG, (Macao), OQ5BQ, ZD4AC, ZS1AX, ZS6NX, ZS6W, KA1JM, VK2DI, W6QKB, W9WUG (both in KB6), G6CU/ZC2, OA4M, LU4RI, LU9EV, CE1AH, etc. Besides this list of stations worked, we have a list of calls heard, which includes such items as VU2BG, VU2AA, EP1C, ZS2AL, ZS6FN, LI3JU, ZS6DG, VQ4ERR, VQ6MI (British Somaliland), OQ5AE, KA3CB, KA1AK, KA1EF, KA1AW, VK2GU, VK5HN, VK5BR, VK2AKR, etc., etc.

Lionel Howes of London, N.W.6, sends in an interesting log of stations, all on phone, which includes SU1RC, SU1USA, SU1CX, ZS1AX, ZS2CI, ZS6FC, ZS4AF, EP1C, CE1BN, and ZD4AC.

From the above logs, it will be obvious that DX has been literally pounding in these last few weeks, though there have been periods of poor conditions. At the time this article is being penned, the band is quite "dead" and has been for some days.

● 14 Mcs.

Good old "twenty"! No one can complain at the conditions for 14 Mcs. during the past month. The afternoon often provided interesting signals from Asia, such stations as VU2AA (now on his way back to England), VU2CH, VS1FB, VS7QB, and VS2ON having been entered in my log-book. Last month "CQ" mentioned that HS1QC would soon be back in Ceylon. Well, on April 21st at 1825 VS7QC was putting out a 559 signal! During the early evenings the band is lively, but not really exciting, as most of the signals are of

European origin. The SM's are now, officially on the air, and one evening I logged 12 of them in succession! By 2100 GMT, most of the locals have disappeared, and the Latin Americans start coming through.

Brazil is easily the most prolific country. PY1GJ is very consistent on CW (Box 463, Rio de Janeiro) with his 400 watts. Has also been heard on phone on several occasions. PY1AD (Box 2353, Rio de Janeiro) is heard extremely well on phone, and other 1st district stations include PY1FO, AEB, HP, AB, and CE on phone, and PY1ABB,, DC, DH, CK, DC, and DW on CW. The 2nd district is also well represented, with our old friend PY2ET (Alberta Guisard, Taubate) well to the fore. PY2AC follows closely behind with good signals on phone and CW. Other notables include PY2OE, AJ on CW and PY2LU, GU, MC, and UG on phone. District 4 is best heard via PY4BR (Box 89, Bello Horizonte) on CW and PY4BI on phone. PY6AW and AO, both on CW are the sole representatives of their area, whilst PY9AC and PY9AE, on CW and phone respectively, speak for district 9.

Argentine has also been much in evidence. Their call-signs are not allocated with any special significance attached to the prefix numeral, so an LU1 and LU9 might both be in Buenos Aires. The most persistent station seems to be LU6DJK who continues to push out his CW signals as he did before the war. On phone we have, of course, the ubiquitous LU6AJ, who, with his 1,000 watts and 3-element rotary beam, is the most consistent DX station on the band today. His QRA by the way is 1573 Sante Fe Avenue Buenos Aires, though I imagine he is not very interested in reports! Other stations noted for consistency have been LU8EE, 8EN, 7CD, 2DM (Jack Powell, Videla 461, Quilmes), 1BC and 5EA on CW, and LU3AQ (from which station 6AJ often operates) 4AD, 6KE and 3EB on phone.

Venezuela makes up in quality what she lacks in quantity! YV5ABY, ABX, AE, ABE, ABA, AN, AP, are a few of the Caracas stations to be heard every night. 5ABY runs 1,000 watts, and a three-element rotary beam. His QRA (and also 5ABX's) is Box 1247. YV5AN can be reached at Box 1666. The other part of the country is not heard so well, though 1AN, 1AV, and 4AA have been logged.

Cuba has been easily receivable too. Havana can be heard via CO2LY, CO2RZ, CM2BC, CO2BA, CO2BZ, etc. Others coming in well include CO7CX (QRA OK in Call Book), CO8MP, CM8BC, etc. Here is an interesting point that I would like to mention. In pre-war days Cubans used

CO for phone and CM for CW, but now, although all phone stations are using CO, some of the CW merchants are using the prefix CO. Any offers?

Apart from Cuba, the West Indies has not yielded must in the way of DX. Have heard no HH, HI, etc., although FM8AC, in Martinique has been heard very consistently in the late evenings.

Over to Central America, we note much activity from Mexico. Although no phones have yet been heard, many CW stations are being received, including .XE1AM, 1AG, 1CN, 2RK, 3AD 3DX (a phoney?). Costa Rica's contribution includes TI2RC, OA, PA and RU on phone, and 2EP on CW. The "rare" country of Guatemala has been heard through TG9RV on phone and TG9FG on CW.

And here are some final notes . . . Best Chileans CE1AO, 3CT, 3FG, 3AG on phone, and 1PA, 3FM on CW. Uruguay well heard through numerous stations including CX2CO, 3CL, 3CN on phone and 1CX, 1CY, 1FY, 4CZ on CW. Sole Ecuadorean station here has been HC1FG, 558 at 2240. HK4AF and HK1AB putting out fine signals, and the veteran OA4R of Lima heard on many evenings. Paraguay well on the map by virtue of ZP6AB who is received very well both on phone and CW.

● Tail Notes.

The Belgian Congo is again waking up. Amongst others, we hear OQ5AQ, 5BQ and 5BR, the latter being at Box 196, Leopoldville.

G2DUP writes to say that hams in the Channel Islands are now being issued with the prefix GC. We are pleased to see that this pre-war dispute has been settled, and we see visions of GC's being swamped out with QSL/SWL cards from "new country" enthusiasts!

It is reported that, amongst other channels, the new Swedish frequencies for amateurs includes a section around 15 metres. Coming after the rumours of a new 15 metre band, this news is interesting, but should not be taken too seriously until official news is forthcoming.

Have just received a fine letter and post-war QSL card from Mrs. Dorothy Hall, W2IXY, of Springfield, New York. W2IXY is operating three rigs on 28 Mcs. phone, 42, 92 and 600 watts. The DX aerial is 6 half-waves in phase, and a 14 Mcs. rotary Johnson "Q" is also used at times. "Dot" says she has so far worked 24 countries without much effort, quite a feat. All SWL reports have been answered, but in future if postage is not included, then SWL reports may find themselves in the WPB! Which we agree is fair enough.

The M.I.P.

AC/DC

Multi-Range

Meter.

●

Constructional Details
of the Instrument as
built in our Workshops



In our last issue there appeared in the **Component Review** a brief description of the Series 35 Foundation Instruments manufactured by Measuring Instruments (Pullin) Ltd. This firm has designed a multi-range meter around these movements, and a blueprint is available from all Pullin distributors. All the other components necessary to complete the instrument can be obtained from the same sources, with the exception of case and dials. No provision is made for these as it is felt that they are best left to the individual choice of the user. Nevertheless, we ourselves feel that it is just these two items which make all the difference to the final appearance and, while this does not matter so much as the accuracy of the finished meter, it is a fact that the serious constructor does take a pride in achieving as near as professional finish as is possible. Maybe one of our advertisers will feel it worth while to rectify this omission, and to produce an instrument case and suitable dial plates*. The case need not be drilled, so that it could be used for other types of meters, or even other apparatus such as field strength meters, frequency meters,

small portable receivers, and so forth. One point should be noted, and that is that such a case should be of aluminium or other non-ferrous material, otherwise there is a risk of introducing slight inaccuracies in the readings obtained.

THE CIRCUIT. A theoretical circuit of the instrument is given at Fig. 1. The resistor numbers are identical with those used in the blueprint mentioned previously. No actual values are given here, as these will depend on the sensitivity of the movement chosen as a foundation. The blueprint lists the various movements available, from 1 mA. full scale deflection to 50 μ F F.S.D., together with the values of resistors and the recommended rectifier arrangement to suit each particular case. It should be noted here that these Pullin instruments must be used with the recommended *Westinghouse Instrument Rectifiers*, the

* (We are informed that a case to the dimensions given in this article, and made of bright aluminium with all holes drilled, and with a removable back, can be supplied by Messrs. J. H. B., 16 Marion Road, Norwich, Norfolk, at 10/6 post paid.)

scales and component values having been chosen to suit this condition. This applies particularly to the 10 volt A.C. range.

THE DIRECT CURRENT RANGES are unaffected by the sensitivity of instrument, and have been chosen as being those most suitable for general use. The following are the ranges available:—0.2.5 mA., 0.10 mA., 0.25 mA., 0.100 mA., and 0.500 mA. Normally, meter shunts are the great stumbling block when the average constructor comes to build a multi-range instrument, as the shunts usually work out at some awkward low value beyond his capacity to measure with any attempt at

accuracy, and recourse has finally to be made to the *Trial and Error* method with all its disadvantages and final feeling of "Something being not quite right." In this instance, however, not only have the correct values been calculated, but ready wound resistors with a very high degree of accuracy are available, and the cost is certainly not excessive. No provision has been made for alternating current readings; they are rarely wanted by the average user, and complications are introduced by reason of the fact that for higher ranges of alternating current it is necessary to use a special current transformer.

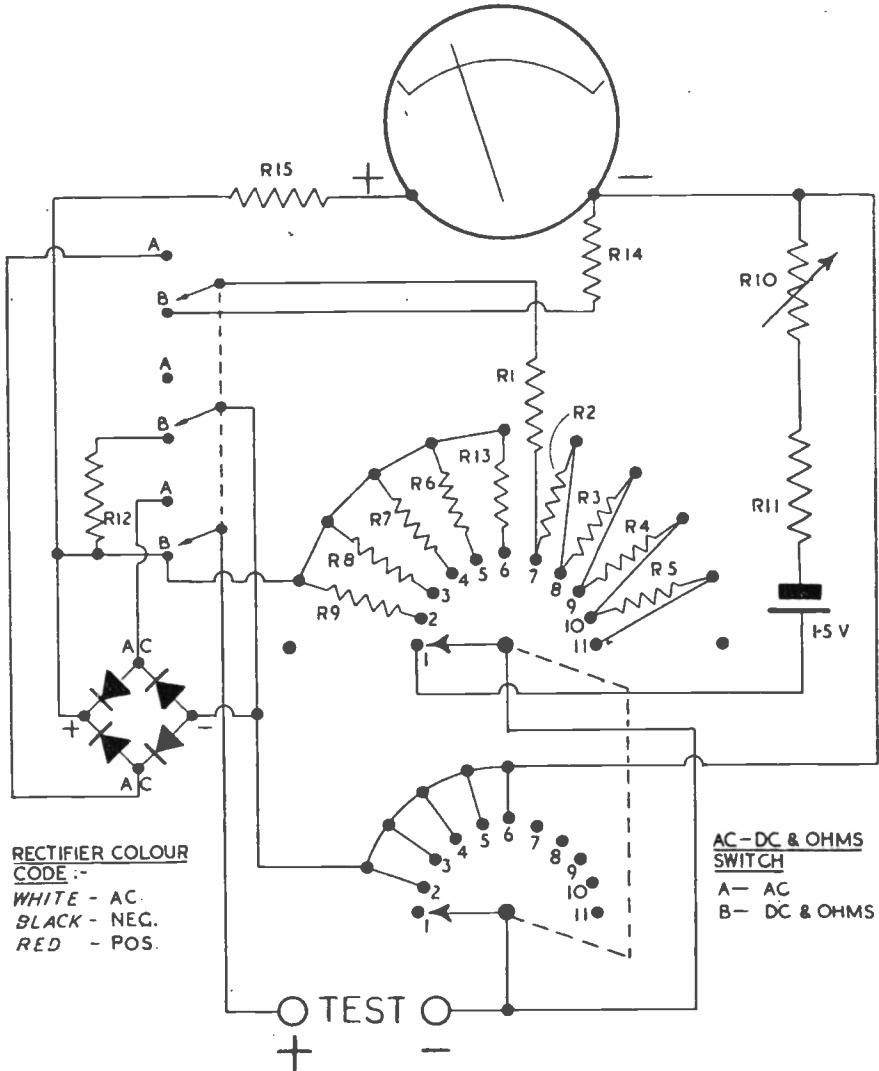
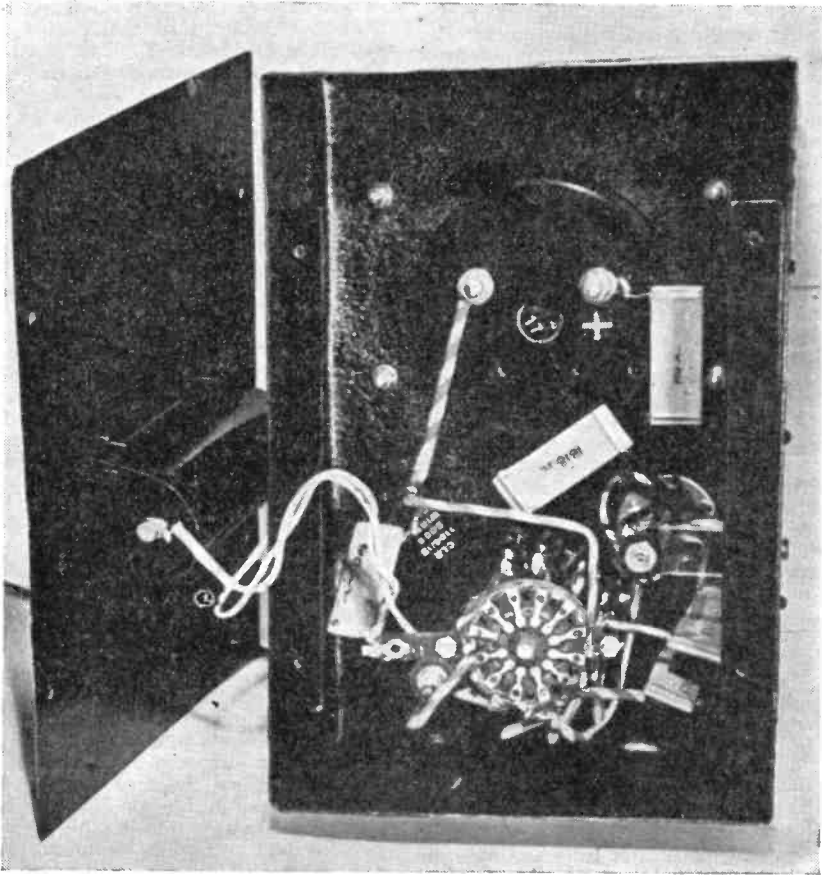


Fig. 1. Theoretical Circuit.



VOLTAGE RANGES. On both A.C. and D.C. ranges are available of 0-10, 0-50, 0-250, 0-500, and 0-1,000 volts. Here again, the exact values are obtainable, with a tolerance of $+0.1\%$ on values of 50,000 ohms and under, and $+1\%$ on higher values. All voltage ranges are read on the upper black scale, with the exception of the 10 volts A.C. range. A special scale in red is provided for this, as on low voltages the impedance of the rectifier becomes an appreciable part of the total, and in consequence the scale shape becomes distorted.

OHMS RANGE. A resistance range is available, using an internal 1.5 volt cell, and readings are taken on a green scale calibrated directly in ohms. The range depends on the sensitivity of the movement, and varies from 0-100,000 ohms in the case of an 0-1 mA. meter to 0-2 megohms for an 0-50 μF movement. Though the latter range is greater, the accuracy of reading is, of course, correspondingly less.

CONSTRUCTION. We have built up this instrument, using the specified components. The result, as shown in the illustrations herewith, is a really professional looking job. The accuracy, we might add, is also in keeping. For the case, we were fortunate enough to obtain a black crackled chassis measuring 9 ins. x 6 ins. x 3 ins. Two lengths of angle brass screwed to the inside of the longer sides provided a fixing for the back, which was made from an obsolete panel. A housing for the 1.5 volt cell—used on the resistance range—was made out of thin sheet tin, with an ebonite end plate and paxolin cover plate. This is clearly discernible in the second illustration. The cell "clips" into position, the negative connection being made from a strip of springy phosphor bronze sheet. Fig. 2 gives all hole dimensions and positions to suit our layout. The four meter fixing holes are rather awkwardly placed from a "measuring off" point of view, and probably the best way of

doing this is to first cut out the large centre hole, and then to insert the movement after having put a drop of paint on the ends of the fixing screws. It sounds rather crude, but is very effective.

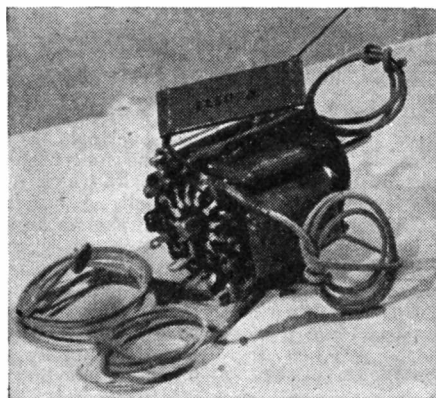
The dial plate is next item, and this—in the absence of a commercial alternative—has to be home made. Fig. 3 shows the arrangement we produced out of sheet aluminium, the markings being put in with a scribe and letter stamps, as described in the B.S.W.L. Meter article in our February issue. This article, by the way, brought forth a rebuke from one of our readers, who said that such a method was hardly within the powers of the average constructor. Our opinion is to the contrary. A set of "Imperial" letter and figure punches can be bought from the local tool stores for some twenty shillings, and their use is not confined to one job only. And where is the constructor who cannot use a hammer? Admittedly the first consideration when building apparatus is the working performance of the finished gear, but to some extent this depends on the workmanship put into it. A workman proud of his skill will look not only to his soldered joints, but also to the appearance. Conversely, a poor exterior almost invariably hides a similar inside. In any case, the result of using this method is certainly better looking and far more durable than anything in the nature of painted lettering or celluloid marked with indian ink!

ASSEMBLY AND WIRING. The movement, the AC/DC and Ohms switch, zero-ohms potentiometer and test terminals can be mounted straightaway. The range selector

switch has been specially designed for this instrument, and is of the Yaxley pattern and made by Messrs. J. & H. Walter Ltd. Two wafers are provided, but one of these is a dummy as far as switching is concerned, and serves as an anchorage for the current shunts and voltage multipliers. These are wired up with the switch as a complete unit, leaving only five leads from this section to be connected after it has been mounted in the case. The unit is shown in the third illustration; the black resistors are Welwyn 1% tolerance voltage multipliers, and the grey resistors are "Spot-On" 0.1% tolerance current shunts and the 10 volts range multiplier.

The range switch can now be mounted in the case and the remainder of the wiring completed with the exception of the rectifier. This should not be mounted until later, to enable easy access to the A.C./D.C. and ohms switch. An anchorage has to be provided for R.11, where it is connected to the battery lead; and for this we used a strip from a resistor panel. Finally, the Westinghouse rectifier can be mounted and wired. These rectifiers are supplied with 3 ins. long flying leads, and are tapped 6 BA for fixing to an insulated panel; for the latter, we used a piece of scrap polystyrene.

The above sequence of operations applies particularly to the instrument built by us, enabling the most comfortable construction in rather cramped quarters—at least around the switches—imposed by the size of the case. Operation is very simple. Direct current is read on the top black scale, with the range switch set to the appropriate position and the other switch set to "DC and Ohms." The same setting of the latter switch gives DC voltage and Resistance readings. Voltages are read on the top scale, with the range switch set accordingly, and resistance is read directly on the green scale, the range switch being set to "Ohms." It is here necessary first to "short" the test prods, and to adjust the "zero set" control until the meter reads exactly full scale. A.C. volts are read by setting the range switch to the appropriate setting, and the other switch to "A.C."



Range-Switch Assembly.

Answers to Radio Crossword No. 4

Across: (1) Dust. (3) Rays. (6) Ion. (8) Dials. (9) Globe. (10) Plate. (15) Input. (16) Volta. (17) RMS. (18) Site. (19) Skin.

Down: (1) Diode. (2) Stray. (5) Steel. (6) Insulator. (7) Negatives. (11) Lists. (12) Spout. (13) Flick. (14 and 4) Lamination.

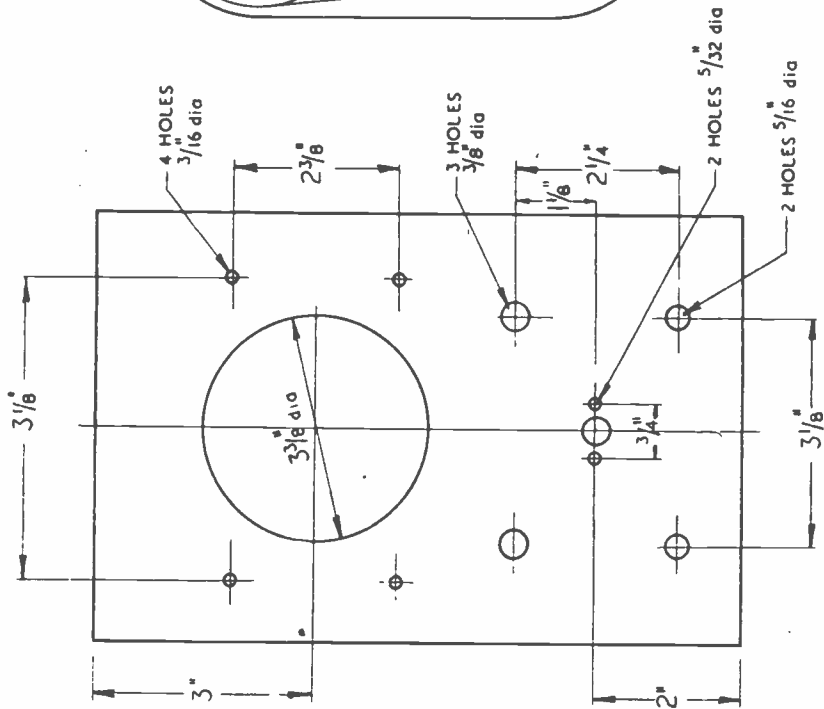


Fig. 2. Drilling Dimensions.

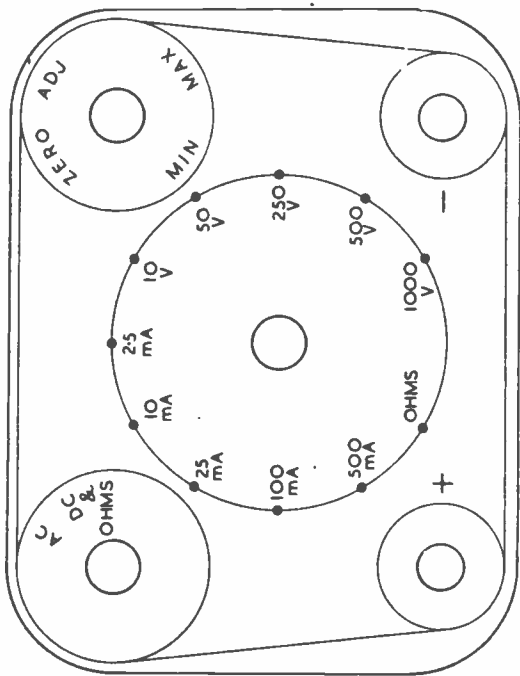


Fig. 2. Suggested Panel Layout.

Around the Broadcast Bands.

Monthly survey by "Monitor"

All times are given in G.M.T.

MORE reports, please! All notes on short-wave BC reception, DX or local, are very welcome at your scribes QTH. Also, readers, have you any ideas, criticisms, or comments to make on the general make-up of this feature. Any letters will be greatly appreciated. For the benefit of new readers, the address is: "South View," Upper Drive, Angmering-on-Sea, Sussex.

● **From my log-book**

6005 kcs. (49.96m.): HP5K, Colon, Panama. Fair signal, R5, with English news at 0305. Slogan is "La Voz de la Victor." Verifies with attractive card. QRA is Apartado 33, Colon.

6620 kcs. (45.3m.): TG3, Guatemala City, weak signal at 2345.

6175 kcs. (48.6m.): HI9T, Puerto Plata, heard at R7 with Latin-type music at 2230.

9980 kcs. (30.06m.): Mexican station heard around 0200 with R4 signals. Heavy fading. Call sounded like XEXA.

11850 kcs. (25.31m.): CE1185, Santiago, R4 at 2350 with call "Radio El Mercurio." Power is 3½ kW.

● **Station QRA's**

Here are this month's station addresses for the QSL collectors:—

LRX, LRXI: Radio El Mundo, Calle Maipu 555, Buenos Aires.

HP5A: Apartado 954, Panama City.

ZOY: Broadcasting Department, P.O. Box 250, Accra.

KRHO: O.W.I., P.O. Box 3740, Honolulu, Hawaii.

CSW: Emissora Nacional, Ministerio das Obras Publicas a Comunicacoes, Rua do Quelhas, Lisbon.

PCJ: Radio Omroep, Herringzand Nederland, Wereld Omroep, KRO Studio Emmastract 52, Hilversum, Postbus 100, Holland.

ZPA3: Radio Teleco, Azora 56, Asuncion.

YV1RO: Radio Trujillo, Calle Independencia 200, Trujillo.

HI2T: La Voz de Yuna, J. A. Trujillo M, Monsenor Nouel.

● **Radio Club de Mozambique.**

The following is the present official series of channels operating from Lourenco Marques:—

CR7AA, 5863 kcs., 51.15m.; CR7AB, 3493 kcs., 85.94m.; CR7BD, 15243 kcs., 19.68m.; CR7BE, 9710 kcs., 30.88m.; CR7BK, 759 kcs., 396m.; CR7BU, 4925 kcs., 60.91m.

The most powerful of these stations is 7BE which is still being heard from time to time with varying signals. Power is 10 kW. The other channels use between 300-600 watts. The above information was received direct from CR7BE (Caixo Postal 594, Lourenco Marques) accompanied by one of the finest QSL cards I have ever seen.

● **"Ici La Suisse"**

An official programme sheet from the Swiss station at Schwarzenburg gives the following schedules (sent in by T. Moss). To Europe, North America and the Near East:

G.M.T.	Call	Freq.	W/L
0540-0640	HEI2	6345	47.28
1000-1200	HEI2	6345	47.28
1215-1300	HEF4	9185	32.66
1800-2215	HEI2	6345	47.28
To Eastern Europe and the Middle East:			
2010-2030	HEK3	7380	40.65
To the Far East: (Wednesday and Thursday)			
1500-1630	HBF	18450	16.26
	HEI5	11715	25.61
To Japan: (Monday)			
1500-1630	HEI7	15320	19.59
To Latin America: (Daily except Saturday)			
2145-2215	HEK4	11960	25.08
2330-0100	HEF4	9185	32.66
	HET3	7360	40.76
To North America: (Daily except Saturday)			
1920-1950	HEF5	10405	28.83
0130-0300	HEK3	7380	40.65
	HEI2	6345	47.28
To Australia:			
0800-0930	HEI5	11715	25.61
	HBZ3	14465	20.74
To South Africa: (Daily)			
2050-2125	HEF4	9185	32.66
(Saturdays)			
1500-1540	HEI5	11715	25.61
	HEK3	7380	40.65
1540-1620	HEI5	11715	25.61
1620-1700	HEI5	11715	25.61
	HEK3	7380	40.65

Anyone wishing to write to the Schwarzenburg stations should address their letter to:—Radiodiffusion Suisse Service des Ondes Courtes 30 Neuengasse, Berne, Switzerland.

● **Notes from the U.S.A.**

In response to a letter to the Colombia Broadcasting System requesting programme data, I received a very courteous reply together with copious notes and best wishes for the continued success of "Short Wave News." Thank you, CBS! The European Service of the CBS uses the following channels:—

WCBN, 17830 kcs., 16.8m.; WCBX, 15270 kcs., 19.6m.; WOOC, 15200 kcs., 19.7m.; WOOW, 11870 kcs., 25.3m.; WCRC, 11830 kcs., 25.3m.; WCRC, 11825 kcs., 25.3m.; WCBN, 9650 kcs., 31.0m. (N.B. It will be noted that several non-CBS stations carry the European Service.)

Here are the times of programmes of interest, i.e., English language, music, etc.:

- 1044 Sign-on of WCRC (11825), WCBX, WCBN (9650), WOOC and WOOW.
- 1045-1100 Music feature. (All stations).
- 1100-1115 English feature (WOOW and WOOC).
- 1130-1145 Music from America. (All stations).
- 1230 WCBN (9650) signs off.
- 1245 WCBN (17830) signs on.
- 1300-1315 American Newsletter. (WOOC and WOOW).
- 1315-1330 English feature. (All stations).
- 1400-1415 Music. (WCRC, WCBX and WCBN).
- 1415-1430 Recorded feature. (WCRC, WCBX and WCBN).
- 1430-1445 English news. (WCRC, WCBX and WCBN).
- 1445-1500 English news. (WOOC and WOOW).
- 1500-1530 E. Lawrence orchestra. (WCRC, WCBX and WCBN).
- 1530 WCRC (11825) signs off.
- 1530-1545 English feature. (WOOC, WOOW, WCBX and WCBN).
- 1545 WCRC (11830) signs on.
- 1615-1630 English feature. (WOOC and WOOW).
- 1630-1645 Concert Hall (WCRC, WCBX and WCBN).
- 1745 WCBN (17830) signs off.
- 1800 WCBN (9650) signs on.
- 1900-1915 American Newsletter. (WCBN, WOOC and WOOW).
- 1915-2000 A.F.R.S. (WCBN, WOOC and WOOW).
- 1900-1930 Music feature. (WCRC and WCBX).

- 2045 WCBX (15270) signs off.
- 2000-2130 A.F.R.S. (WCBN, WOOC and WOOW).
- 2115-2130 English news. (WCRC).
- 2130 WCRC (11830) signs off.
- 2130-2145 A.F.R.S. (WCBN, WOOC and WOOW).
- 2145 WOOC (15200) and WCBN (9650) sign off.
- 2200-2215 English feature. (WOOW).
- 2230-2300 Music feature. (WOOW).
- 2300 WOOW (11870) signs off.

The CBS Latin American Service operates to the following schedule:—

- WCRC 11830kcs. 25.3m. 2200-0400 GMT
- WCBX 17830kcs. 16.8m. 2100-2315 GMT
- WCBX 9490kcs. 31.6m. 2330-0330 GMT
- WCBN 6060kcs. 49.5m. 2330-0600 GMT

● **News in English.**

Good steady signals during English news transmissions are reported from:—

Leopoldville: 17770 kcs. 1330-1430 and 1630-1715.

HVJ, Vatican City: 17445 kcs. 1525.

SDB2, Motala: 10780 kcs. at 1730.

KRHO, Honolulu: 17800 kcs. at 0000.

Incidentally, KRHO is a very variable station. Your scribe is proud of being the first British SWL to report reception of this station, and has a fine card to that effect. KRHO also operates on 6120 kcs., and uses 100 kW. on both channels.

● **Readers Reports.**

Australia has been testing over two new channels from 0800-0830 in the 16 and 19 metre bands respectively, over VLC9, 17840 kcs., and VLC11, 15210 kcs. These stations were beamed on Britain and signals were well up to the usual standard (Tilly and Forrest).

C. G. Tilly reports a San Francisco station on 15270 kcs. at 2205 with an R7 signal. He gives the call as KCBA, but I feel this is really KCBR which packs a 200 kW. punch! The same reader also reports CR6RC, 9470 kcs. at Angola, R7-8 at 1930-2030, but badly heterodyned. Doubtless you will think me provocative, but I believe the call here should be CR6RA. The calls are difficult to get right as the Portuguese colonies have a habit of changing their call-signs around every so often just for variety! Anyway, the Loanda short-wave station uses only 250 watts. (*The station is listed as 6RC—believe 6RA is the MW station.—Ed.*)

D. McLean reports a 19 metre Australian with BBC relay at 2040, signals being R9. Has anyone identified this one? My list gives VLA6 on 15200, VLG6 on 15230, VLC4 on 15315, and VLG7 on 15160 kcs.,

(Cont. on p.134)

Resonant Lines.

By Centre Tap

Aurora Borealis

FIRST the sun-spots and now the Aurora Borealis to interfere with short-wave communications. The recent display seen in many parts of the country was one of the most widespread and brilliant of recent years. With my usual luck I didn't see anything of it—somehow I never seem to get a seat at any of the free shows!

The magnificent spectacles of draped curtain effects or coloured fans are normally only visible in the regions of the near-Arctic, but as the recent display was some hundreds of miles above the earth, it was seen in most parts of this country. Reports from the West of England speak of a beautiful pale green effect. As the Aurora usually occurs nearer the earth's surface, the curvature of the earth prevents it being visible from this country.

Bargains

The presence of dumped surplus radio parts is now becoming more marked in the shops. If the buyer knows his stuff, many bargains are to be picked up, and no doubt many readers have already had a holiday buying up bits and pieces at a fraction of their original cost. Unhappily, some of it was dumped owing to defects, and some deliberately damaged before being sold as scrap. When one considers the fantastic scale on which radio equipment was produced during the war, it is surprising there is not still more of it about. I often wonder how much of it would be sold if offered at normal prices.

Wanted

I have not yet got the old Shack to my liking. Up to the moment time has been the chief limiting factor, and once or twice I have been stuck for the want of a particular part. Probably I am a bit fussy, but then I have found that the majority of hams are. There are two urgent "wants" that don't look like being satisfied just yet. They are:—

- (1) Good-looking dials, with real slow motion, having unmarked scales for self-calibration.
- (2) Transfers for marking panels with such titles as "AVC on/off," "BFD on/off," "Selectivity," "R.F. Gain," etc.

Getting towards normal.

The re-appearance of the "Short Wave Magazine" is another reminder that things

are gradually coming back. Maybe in the not too distant future we shall once again see half-a-dozen or more radio journals running concurrently as in the good old days of nearly twenty years ago, up to about 1934, when home construction dwindled to tiny proportions. All the Old Timers will recall "Modern Wireless," "The Wireless Magazine," "The Wireless Constructor," "World Radio," "Popular Wireless" (which ran as a weekly for about 15 years), and "Amateur Wireless" (combining with "Practical Wireless" in 1935), to say nothing of the "Wireless World" of over 35 years standing, which was an old-timer before many readers were born!

QRM

Have recently heard from, or run into, several sufferers from man-made static whose views agree most heartily with those I have already expressed in this column. One, at least, has tried every known remedy without success. Happily, at my new QRA, I am not bothered, but from past experience I have every sympathy with them.

It is strange that if I cause a nuisance to my neighbours by leaving my radio on full blast, I am liable to be hauled before the Beak, but apparently I can set up enough electrical interference to create a far greater nuisance without restraint! After all, it would be merely common justice to compel those who cause the trouble to be responsible for curing it, and not for the innocent party whose listening is made unbearable by it, to suppress it as best he can.

It's that Blonde again!

I have always felt annoyed at hearing people owning BC receivers fitted with a short-wave band, speak of them as their "All Wave Sets," when at the best they can only be described as extra waveband receivers. Now, an optimist I hear of is seeking a design for a set tuning from 0 to 2,000 metres! Wise Guy thinks he will need a wire with no inductance for the O-metre end, but the Dumb Blonde says that must be the band used by the strong, silent men she hears so much about!

Centre Tap

M.O.S.

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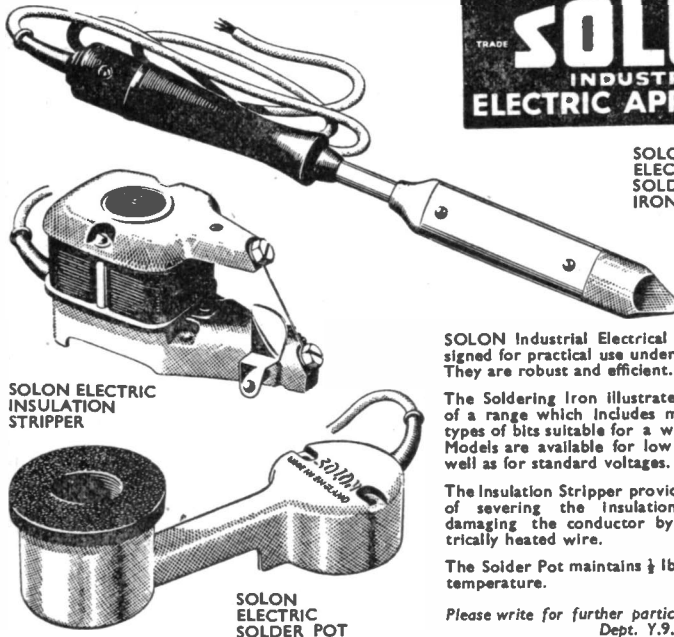
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BROADCASTING STATION LIST.

Part 3: 11760 kcs. - 9660 kcs.

THIS list has been compiled by the Signal Survey Section of the British Short-Wave League, and contains only stations that are operating on regular or irregular broadcasting schedules. Stations not in use, channels not in use at the time of going to press, and stations under construction are not included.

Frequency	Call	Location	Slogan	Power (watts)
11760	VLG8	Melbourne, Australia		2000
	VLG10	Melbourne, Australia		10000
	VUD7	Delhi, India	All India Radia	100000
	VUD10	Delhi, India	All India Radio	
	XGOY	Chungking, China	The Voice of China	35000
11750	GSD	Daventry, England		50000
	—	Komsomolsk, U.S.S.R.		
11740	COCY	Havana, Cuba	RHC Cadena Azul	1000
	KROJ	Los Angeles, Calif.		15000
	HVJ	Vatican City	Radio Vaticano	25000
	CE1174	Santiago, Chile	Emisora Nuevo Mundo	
11730	GVV	Daventry, England		
	—	Paris, France		
	WRUL	Boston, Mass.		50000
	WRUW	Boston, Mass.		20000
	KGEX	San Francisco, Calif.		50000
11720	—	Leopoldville, B. Congo	Radio Congo Belge	10000
	PRL8	Rio de Janeiro, Brazil	Radio Nacional	50000
	CHOL	Sackville, Canada	Radio Canada	50000
	CKRX	Winnipeg, Canada		2000
11718	CR7BH	Lourenco Marques	Radio Clube de Mozambique	300
11715	FGA7	Dakar, Senegal	Radio Dakar	
	HE15	Berne, Switzerland	Radio Suisse	25000
11710	VLG3	Melbourne, Australia		10000
	VUD3	Delhi, India	All India Radio	10000
	WLWS2	Cincinnati, Ohio		75000
	WLWK	Cincinnati, Ohio		50000
11705	CBFY	Montreal, Canada		7500
	SBP	Motala, Sweden		12000
11700	HP5A	Panama City	Radio Teatro Estrella	1000
	GVW	Daventry, England		
11695	XGOO	Shanghai, China		
11685	HVJ	Vatican City	Radio Vaticano	25000
11680	GRG	Daventry, England		
11635	—	Moscow, U.S.S.R.	Radio Centre, Moscow	
11145	WOOW	New York, U.S.A.		50000
	WCBN	New York, U.S.A.		50000
11090	—	Ponta Delgada, Azores	Emissora Regional	1000
11040	CSW6	Lisbon, Portugal	Emissora National	10000
10865	CR6RH	Luanda, Angola	Radio Club de Angola	
10840	KWV	San Fransisco, Calif.		10000
10780	SDB2	Motala, Sweden		10000
10770	—	Leningrad, U.S.S.R.		
10730	VQ7LO	Nairobi, Kenya		1500
10600	Z1K2	Belize, Br. Honduras		200
10445	RRD	Moscow, U.S.S.R.	Radio Centre, Moscow	
10400	YSP	San Salvador, El Salvador		

SHORT WAVE NEWS

Frequency	Call-sign	Location	Slogan	Power (watts)
10350 ...	LQA5	Monte Grande, Argentine		
10338 ...	HEO4	Berne, Switzerland	Radio Suisse	25000
10260 ...	XGAP	Peiping, China		
10220 ...	PSH	Rio de Janeiro	Radio Nacional	12000
10135 ...	HH3W	Port-au-Prince, Haiti		125
10000 ...	XGOL	Yungan, China	Fukien Broadcasting Station	200
9980 ...	—	Brazzaville, F.E.A.	Radio Club	600
9958 ...	HCJB	Quito, Ecuador	The Voice of the Andes	700
9940 ...	HNF	Baghdad, Iraq		5000
9915 ...	GRU	Daventry, England		
9909.3 ...	ZTJ	Johannesburg, S. Africa		200
9897.5 ...	KROJ	Los Angeles, Calif.		15000
9880 ...	—	Moscow, U.S.S.R.	Radio Centre, Moscow	
9860 ...	—	Moscow, U.S.S.R.	Radio Centre, Moscow	
9855 ...	KWIX	San Francisco, Calif.		50000
	WNRA	New York, U.S.A.		50000
9825 ...	GRH	Daventry, England		
9810 ...	—	Vienna, Austria	Radio Vienna	800
	XGOY	Chungking, China	The Voice of China	35000
9790 ...	TGWA	Guatemala City	La Voz de Guatemala	10000
9755 ...	ZRO	Pietermaritzburg, S. Africa		600
9750 ...	WLWR1	Cincinnati, Ohio		175000
	WNRA	New York, U.S.A.		50000
	KCBF	Delano, Calif.		50000
9748 ...	—	Leopoldville, B. Congo	Radiodiffusion National Belge	50000
9740 ...	CSW7	Lisbon, Portuga	Emissora Nacional	10000
9730 ...	XGOA	Chungking, China	Central Broadcasting Station	4000
9728 ...	CE970	Valparaiso, Chile	Radio Cooperative Vitalicia	1500
9720 ...	PRL7	Rio de Janeiro, Brazil	Radio Nacional	50000
9718 ...	YAK	Kabul, Afghanistan		
9713 ...	—	Leningrad, U.S.S.R.		
9710 ...	CR7BE	Lourenco Marques	Radio Club de Mozambique	10000
	OAX4K	Lima, Peru	Radio Goicochea	250
9705 ...	FZF6	Fort-de-France, Martinique	Radio Martinique	1500
9700 ...	CP25	La Paz, Bolivia	Radio Sucre	250
	KCBR	Delano, Calif.		200000
	WRUS	Boston, Mass.		50000
	WLWL1	Cincinnati, Ohio		75000
9690 ...	HJCAB	Bogota, Colombia	Radiodifusora Nacional	2500
	GRX	Daventry, England		
9683 ...	LRA1	Buenos Aires, Argentine	Radio del Estado	7000
9680 ...	VLW6	Perth, Australia		2000
	VLC2	Shepparton, Australia		
	VUD6	Delhi, India	All India Radio	10000
	EQC	Teheran, Iran	Radio Teheran	14000
	XEQQ	Mexico City	La Cadena Azul	1000
9675 ...	GWT	Daventry, England		
9670 ...	WRCA	New York, U.S.A.		50000
	WNBI	New York, U.S.A.		50000
9660 ...	LRX	Buenos Aires, Argentine	Radio el Mundo	7500
	VLQ3	Brisbane, Australia		10000
	GWP	Daventry, England		

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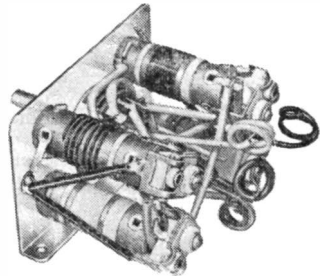
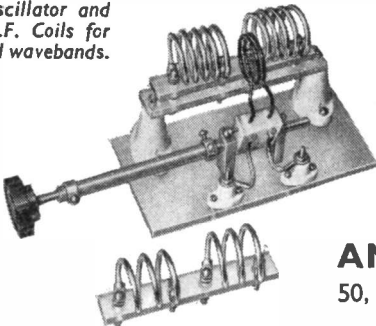
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From Our Mailbag.

Dear Sirs,

Have just received March issue of the "News." Congratulations on such a first-class magazine for the SW fan. The sections "Around the Shacks," "Ham Quiz," "On the Ham Bands" and the crossword will all keep me in touch with a hobby I've had little chance to "get going" in.

Yours faithfully,

P. N. Pitt, BSWL 2173, BRS 8464.
(India Command).

* * *

Dear O.M's,

Congratulation on the Short Wave News—so far a great achievement. May I suggest that, having given us a beginners RX and a communications RX, you give us a receiver suitable for the *average* constructor, such as a battery TRF3 with high performance.

Yours sincerely,

E. J. King, BSWL 1937 (London., N.8.)

(We have not forgotten readers such as yourself. A series of constructional articles is on the way. Ed.)

* * *

Dear Sirs,

I should like to see published, for the benefit of young fans, something dealing with Mcs. and their equivalent in metres, as I have been asked several times by would-be amateurs. Trusting we shall have your help in this matter.

Respectfully yours,

F. J. Webb, BRS 2286 (Leamington Spa)

(We always encourage the use of frequencies in our Editorial pages, but realise that some readers have not yet been converted! Accordingly we will publish a short series of abacs, the first of which appears on page 131 of this issue. This will be followed by a similar abac for the range of 1.5 Mcs -30 Mps, both of these abacs being useful for calculating inductance and capacitance needed to resonate at a given frequency. The third chart will be purely a wave-length/frequency conversion chart and will cover from 1.5 Mcs to 31.5 Mcs. Ed.)

Dear Sir,

May I take this opportunity of registering my opinion about the cover of your magazine? The colour which has appealed to me most so far, has I think been blue, not for any particular reason, but for its general bright appearance! Green follows as a second, for the same reason.

Yours faithfully,

P. Woodhouse (Birmingham, 29).

* * *

Dear Sirs,

I have just finished reading the 4th issue of the "Short Wave News," and am pleased to say that the quality is fine and each issue seems to be better than the last. The mystery of the changing colour scheme has been solved. I consider that the orange and black is very effective and should be permanently used.

As a suggestion would you consider publishing a 1-v-2 battery RX on the unit principle? The RX to have a tuned RF stage and SG detector.

I am having trouble with hand-capacitance effects on my 0-v-1, and suggestions from readers would be very welcome. I have tried anode by-pass capacitors, varying the detector voltage, inserting RFC's in the phone leads, and inserting grid stoppers, but with very little effect.

Yours faithfully,

N. Whitehead

(71 Bridgefield Street, Rochdale)

* * *

Dear Sir,

Re your experiment in changes of colour, I suggest that you continue the present system, as apart from the fact that Variety is the Spice of Life, a contrast in appearance is pleasing to the eye. This system would also provide an aid towards easy identification of a particular issue.

Secondly, may I suggest that the material in "Monitor's" invaluable articles be sub-divided into separate countries, not merely continents? All the best.

John Hawkins, BSWL 1206 (Harrowgate).

(We would like to thank the above, and all the other readers, who have written in with suggestions regarding our cover colour scheme. It would appear that there is no particular preference, and so for the time being we will continue with the present system. Ed.)

“ICI BRAZZAVILLE”

Station Description : No. 1.

ON the banks of the River Congo, in French Equatorial Africa, lies the capital of the Middle Congo. Its name is Brazzaville, a city with a population of only 2,000 “whites,” and across the river, in Belgian Congo, lies Leopoldville. Brazzaville itself, whilst having very little history, is proud of the fact that for three years it was the capital of all the Free French territories. After the fall of France in 1940, General de Gaulle decided that the Fighting French must have a powerful and reliable radio system to stimulate and foster the cause of liberty. On August 30th, 1940, a convoy sailed out of Liverpool carrying with it General de Gaulle and the first units of the F.F.I. The departure of the expedition had been kept secret, as had its destination and cargoes. The end of the voyage was Brazzaville, and the secret cargo of the packet-boat “Westerland” consisted of the first equipment for the now famous radio station “Radio Brazzaville.” A Service of Information was formed whose duty it was to find the personnel, equip the transmitter, and until the arrival of qualified technicians, to extemporize. Their success is now past history. On the 5th of December, Radio Brazzaville commenced its regular transmissions, and the telegram sent to General de Gaulle on December 16th said “Plan radio propaganda now in force. Seven transmissions per day; two in morse, three for listeners in North Africa and Syria, and two for local listeners.” Radio Brazzaville was born—due to the initiative of the leader of the F.F.I.

Having spoken of the foundation of Radio Brazzaville, perhaps a word or two about the local station existing previously will not be amiss. This station was operated by the local radio club and was granted permission to broadcast in April 1936. From then until June, 1940, regular transmissions took place, under the direction of Doctor Bizien, the founder, who was a well-known speaker on the programmes. The Radio Club still transmits programmes of a local nature, using the frequencies of 9980, 8500, 7035 and 5858 kcs.

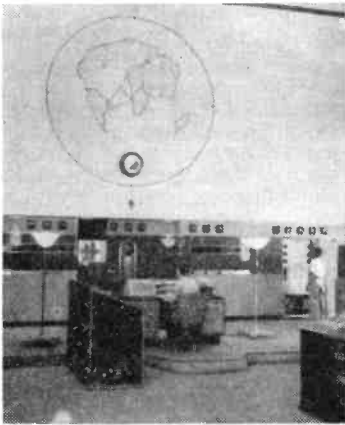
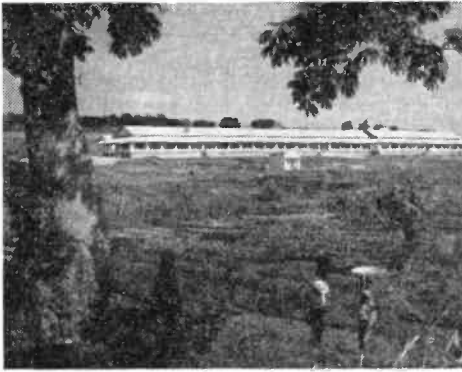
When the first “Radio Brazzaville” was installed, the power was but 5 kW., and therefore the range was somewhat limited, but as soon as the higher powered trans-

mitters were put into operation appreciative letters from all corners of the globe began to pour in. Today, programmes are radiated in French, English, Portuguese, and Greek, on the following frequencies:—17527 kcs., 15595 kcs., 11970 kcs., 9440 kcs., and 6180 kcs. The power used is 50 kW. except on 11970 kcs. (6 kW.), and 17527 kcs. (600 watts). English programmes are on the air at the following times:—1215 GMT (17527, 15595, and 11970 kcs.); 1845 and 2045 GMT (17527, 11970, and 9440 kcs.); 2215 and 2330 GMT (11970 and 9440 kcs.) The two latter programmes are beamed to North America.

Six aerials are employed at Brazzaville, which can beam signals to Paris, Madagascar, Syria, North America, South America, and Indo-China, respectively.

On the opposite page, we show various views of the station and its environments. The photograph at top (left) shows the studio building. This long, single-storied building has a frontage of some 500 feet, and is surrounded by the veranda. The studios are connected to the transmitter, situated near M’Pila, by a subterranean cable nearly two miles in length. At top (right) we show a technician at work tuning up one of the transmitters. The two central photographs show views of the master control, one a general view and the other a close-up. The bottom left-hand picture shows part of the veranda on the studio building, with the local market-day apparently in full swing! Finally, we show a close-up of the sound control, with the lady operator. Incidentally, the cover illustration this month, which may have puzzled some readers, shows the musical instrument which gives the interval signal.

Radio Brazzaville is always pleased to receive useful reception reports and constructive criticisms that may lead to improvements. A monthly programme sheet is published and may be obtained on request. During the war, postal services have been rather erratic, with frequent cases of delays and non-delivery of letters from the station to listeners, so that many who have written may have had the impression that the reports were not appre-



ciated. This is not so, as all letters received are answered. We are informed that quite a few letters were collected and held by the censor, and are still trickling through—some of them dated as far back

as 1943! Readers wishing to send reception reports should address their letters to: —“Radio Brazzaville,” Poste National Francais, Ministere de L’Information, Brazzaville, French Equatorial Africa.

When to Listen.

All times in G.M.T.

THE following tables have been compiled by the British Short-Wave League, and indicate an approximate schedule of peak reception times for long distance signals throughout the year. It must be clearly understood that the times quoted are merely a guide to the most favourable times of reception, and that it is possible to receive signals outside of the hours indicated. For example, seasonal irregularities cannot be predicted and often produce erratic and "freak" reception. During winter months, frequencies

above (and sometimes below) about 12,000 kcs. often suffer from complete or partial fade-outs after darkness sets in. It is also possible to hear North American signals at excellent strength, with South Americans completely absent, and vice versa. The 28 Mcs. amateur band, too, is well known for its eccentricities as those readers who listen on this band are aware! However, the tables will provide a good all-round general guide as to what to expect in the way of DX signals.

DECEMBER—JANUARY—FEBRUARY

		28,000— 18,000 kcs.	18,000— 12,000 kcs.	12,000— 5,000 kcs.
North America (Eastern)	... ..	1200—1900	1200—2400	2100—0900
North America (Western)	... ..	1500—1800	0600—1000	2400—0900
			1600—2200	
South America	... ..	0800—1700	1800—0900	2100—0800
South Africa	... ..	0700—1800	1500—2100	1700—2200
North Africa	... ..	0800—1800	0800—2100	1500—0900
Far East	... ..	0800—1500	0800—1800	1600—2100
Near East	... ..	0900—1500	0700—2000	1500—2400
Oceania	... ..	0900—1200	0700—1000	0600—0900
			1300—1900	1800—2100

MARCH—APRIL—MAY

North America (Eastern)	... ..	1200—2000	0500—0900	2100—0900
North America (Western)	... ..	1500—1800	1800—0200	
			0500—1000	0400—0900
			1700—2000	
South America	... ..	0900—2000	1900—1000	2000—0800
South Africa	... ..	0800—1700	1600—2100	1800—2200
North Africa	... ..	0900—2000	1000—2200	1700—0900
Far East	... ..	0700—1200	0700—0900	1700—2100
			1400—2000	
Near East	... ..	0900—1500	1000—2000	1700—2200
Oceania	... ..	0900—1300	0600—1000	1800—2200
			1500—2200	

JUNE—JULY—AUGUST

North America (Eastern)	... ..	1300—2000	2000—0900	2200—0900
North America (Western)	... ..	1600—1900	0400—0800	0500—0800
			1600—1900	
South America	... ..	1000—2000	2000—0900	2100—0800
South Africa	... ..	1000—1700	1600—2100	1900—2400
North Africa	... ..	0900—2000	All day	1900—1000
Far East	... ..	0800—1300	1400—2100	1800—2200
Near East	... ..	0800—1400	1100—2400	1800—2400
Oceania	... ..	0800—1300	0400—1000	0500—0700
			1600—2200	1900—2300

SEPTEMBER—OCTOBER—NOVEMBER

North America (Eastern)	... ..	1500—2100	1800—0900	2200—0800
North America (Western)	... ..	1700—1900	0500—1000	0400—0700
			2100—2400	
South America	... ..	0900—2100	2000—0900	2100—0700

SHORT WAVE NEWS

South Africa	...	...	...	...	0800—1800	1500—2100	1900—2300
North Africa	...	...	...	...	0800—2000	All day	1800—0900
Far East	...	...	...	...	0800—1400	0700—0900	
						1500—2000	1900—2100
Near East	...	...	...	...	0800—1500	1200—2000	1900—0300
Oceania	...	...	...	...	0700—1200	0500—1000	0500—0900
					1400—1700	1500—2200	1800—2100

COUNTRY GROUPING

North America (Eastern); Eastern U.S.A.; Eastern Canada; West Indies; Central American States, etc.

North America (Western); Western U.S.A.; Western Canada; Alaska; Mexico. South America: All States South of Panama.

South Africa: Union of South Africa; Madagascar; Mozambique; Rhodesia; all

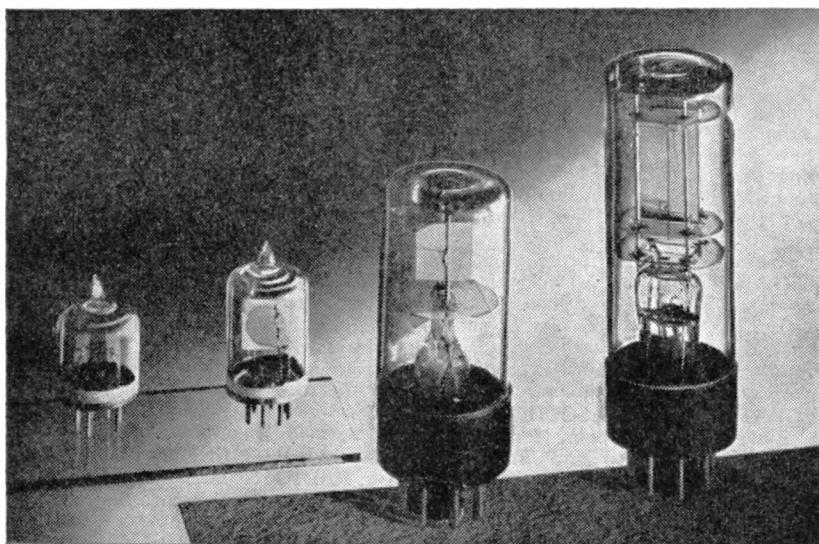
countries South of equator.

North Africa: Egypt; Sudan; Morocco; Algeria; Tunisia; Liberia, etc.

Far East: Japan; China; Malaya; India, Thai; Indo-China; Siberia, etc.

Near East: Iraq; Iran; Palestine; Syria, Arabia; Afghanistan, etc.

Oceania: Australia; New Zealand; Phillipines; Pacific Islands, etc.



SOMETHING NEW IN QUARTZ CRYSTALS

At the recent Physical Society's Exhibition, we were shown on the stand of Messrs. Standard Telephones and Cable Ltd., a range of High Stability Quartz Crystal Units which immediately captured our attention.

These quartz crystals are enclosed in hermetically sealed vacuum or gas filled glass containers mounted on valve bases so that a small robust plug-in unit is obtained. The crystals themselves are plated and wired to two of the valve base pins, the crystal being supported by its connecting wires.

This range of crystals was developed for special purposes during the war and crystals mounted in this way can be had to cover 4 Kc/s to 20,000 Kc/s. It was immediately apparent that a 14 Mc. crystal for amateur radio transmitters becomes a practical proposition in this form and being sealed in a strong glass container is protected against the inevitable breakage which these fragile crystals suffered before. We understand from S.T.C. that they are considering introducing a range of these crystals specially designed for amateur use and we shall keep readers informed of developments in this direction.

Club News of the Month.

BRADFORD SHORT WAVE CLUB

The club was formed in 1935, and made steady progress until the outbreak of war. In 1938 a transmitting licence was granted, with the call-sign of G3NN. Meetings were held in the club's own premises, made available through the good offices of one of the members. The club has now been revived and has already held two meetings, and the secretary will be pleased to supply would-be members with full particulars of future activities.

Secretary: V. W. Sowen, G2BYC, 6 West View, Eldwick, Bingley, Yorks..

BRITISH SHORT-WAVE LEAGUE

We are pleased to note that the League's QSL Bureau is now functioning once again, under the management of L. J. Le Breton. This Bureau, well-known throughout the world, handled 5254 cards from its inception until the outbreak of war.

The Translation Service is also making headway, and the addition of a new department (Oriental languages) brings the total number of languages covered to 19.

A new series of the ever popular Set Listening Periods (SLP's) has commenced. Each contestant receives a complete summary of the results of these informative surveys.

The special dedicatory programme over TAP on April 14th was well received at 2130-2200, and its success has prompted the decision to arrange for further similar broadcasts.

Secretary: A. C. Cheffins, 17 Bedford Road, Alexandra Park, London, N.22.

GRAFTON RADIO SOCIETY

The above society is being formed and will meet on Thursdays and Fridays at 7.30-9.30. The meeting place is at the Grafton L.C.C. School, Eburne Road, Holloway, London, N.7.

Amateur Transmitting facilities will be provided, and regular weekly morse classes will be held. Radio theory and practical work will be a feature, and a section for SWL's will provide an opportunity for members to "get together." The society is indeed fortunate in having secured first-class premises and the use of a Canteen which will enable members to obtain light refreshment at cost price. The membership fee is very moderate, namely, one shilling per term, or three shillings per annum. The school is situate immediately by Nag's Head Junction, being very convenient for travelling from such districts as Islington, Holloway, Finsbury, Dalston, Tottenham, Harringay, Highgate, etc.

Readers of "Short Wave News" may be assured of a sincere welcome.

Secretary: W. H. C. Jennings, A.M.I.R.E., 82 Craven Park Road, London, N.15.

MEDWAY AMATEUR TRANSMITTERS SOCIETY

The M.A.T.S. is one of the largest provincial ham radio societies in the country, and after six years is in full swing again. New comfortable headquarters have been obtained and meetings will in future be held at The Co-Operative Workers Welfare Club, 207 Luton Road, Chatham.

During the past month more full tickets have been issued to members, and now the society has fourteen fully active stations. It is hoped that the societies' own station will soon be disturbing the ether! At a recent District Meeting G2IG delivered a talk dealing with aerials and UHF phenomena. Future lectures include such items as Letcher Wire Experiments, C.R. Tubes, and Modulator Equipment.

Secretary: S. Howell, G5FN, 28 Rosebery Road, Gillingham.

SLADE RADIO SOCIETY

At the meeting of March 22nd, a film was shown to the society explaining the working of the C.R. Tube and its applications for Meteorological research. This was followed by a demonstration and discussion of two commercial and one home-built Oscilloscopes. On April 26th the feature was a lecture on Amplifier Design. Future talks include one on Moving Coil Pick-ups which will be delivered by Mr. Jones.

The membership has been increased by 18 in the past month.

Secretary: L. A. Griffiths, 47 Welwyn-dale Road, Sutton Coldfield, Birmingham.

SOUTHEND & DISTRICT RADIO & SCIENTIFIC SOCIETY

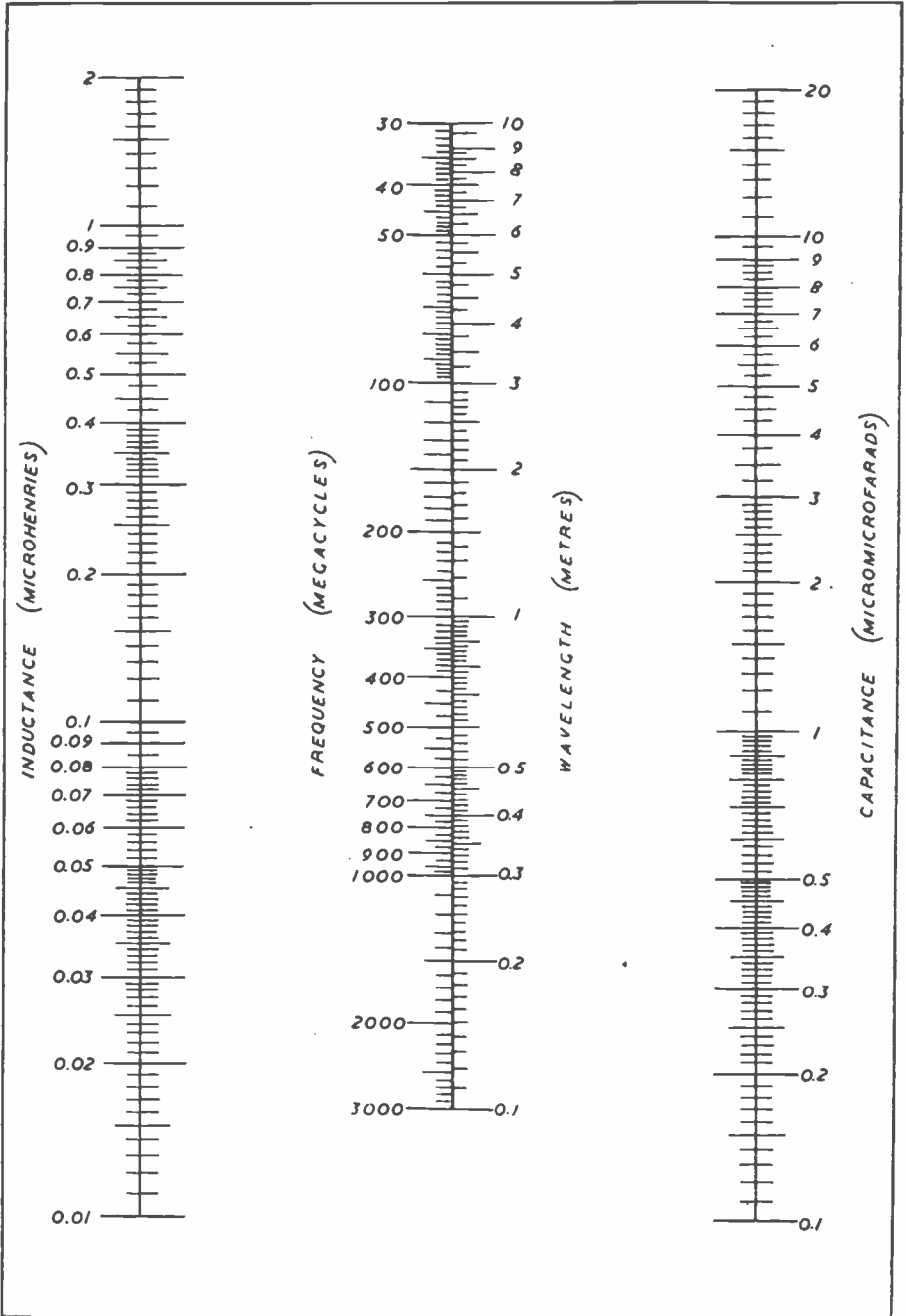
An interesting lecture was given by Mr. H. W. Finch on Valves, in which various applications of new valves were discussed. At the last meeting, Mr. L. G. Pugh gave some useful hints on the construction of receivers for DF field days. Arrangements are under way for society field-days later this year.

Secretary: J. M. S. Watson, G6CT, 23 Eastwood Boulevard, Westcliffe-on-Sea Essex.

WATFORD & DISTRICT RADIO & TELEVISION SOCIETY

The above society has recommenced its activities, and invites all who are interested in amateur radio to attend the meetings, which are held regularly at The Carlton Tea Rooms, 77a Queens Road, Watford, on the first Tuesday of each month.

Secretary: J. C. Warren, 29 Market Street, Watford.



RESONANT FREQUENCY CHART

30-3000 Mcs.

"SHORT WAVE NEWS" COPYRIGHT

SHORT ENDS.

Coincidence

C. H. Andrews, G2HF, send us the following cutting from *QST*:—

"W1JFG was wandering around the Somerset town of Wellington and was disappointed at finding it was early closing day. Looking in a radio shop window, Willard found a dozen QSL cards displayed, accompanied by a memo that G2HF would appreciate a call in person if any of the senders of the cards were in the town. The first card displayed was W1JFG's!"

The XYL's "IF"

(With apologies to Rudyard Kipling)

If you can keep your head when all about you
Are signs that he's rebuilding once again;
If you can trust yourself when he ignores you,
To "reheat"—or eat alone—and not complain;
If you can wait and not be tired by waiting,
Or go up to bed for nights on end, alone;
Or bear that screeching pitch and oscillating,
And yet not look too pained, or raise a moan.
If you can feed the gang and still have rations,
Or walk for miles to see a QRA;
If you enthuse about sunspot conditions,
And not refer to your wet washing-day;
If you're contented in the shack while you knit,
And forget your dream of deep chairs or the Pet;
Your's is the Earth and everything that's in it,
And—what is more—you'll keep your HAM,
my dear!

M.B.G.

Our next issue

The June issue is a feature issue, dealing with Quartz Crystals. Most of the firms who made frequency control plates during the war, are now making special lines to suit the ham's pocket. Our special issue will carry details of most leading manufacturers' products in this field. In addition, we are including an authoritative article by Dr. S. O'Hagen, G2CR, whose writings on the subject are well known. This article should be read by all who are taking up amateur transmitting for the first time.

Back Numbers

Just a reminder that we can no longer supply any back numbers. Don't blame us, it's the paper rationing! We already have a lengthy waiting list for No's 1, 2 and 3 and there seems to be no point in adding to the list, as in all honesty, we can see no hope of meeting any further requests. Sorry! A regular order at your newsagent or an annual subscription is the only way of ensuring your copy each month.

Trade Catalogues

We have received the new price list from Messrs. Norman Rose, who have now moved to a new address: 53 Hampstead Road, London, N.W.1. The list carries a large range of components ranging from Output transformers to wander plugs.

Messrs. Tunggram have now issued a new booklet giving their complete list of available valves, and a useful 28 page section of comparative tables. These booklets may be obtained from local radio dealers.

A letter from Messrs. Stratton & Co., Ltd., states that the new "Eddystone" catalogue will shortly be available.

This month's Howlers

Single-phase current is measured in cycles; three phase current in tricycles.

An **O-v-O** is similar to an RX, but smaller.

Mutual Conductance is an understanding between the grid and anode.

The **Shortest Distance** between two points is called a short circuit.

DX is a station heard by everyone else, but never receivable when visiting their shacks.

An **Electro-Magnet** is like an ordinary magnet, but electrocuted.

"LEARNING THE CODE"

In the above article, appearing in our March issue, we stated that the Brimar valves 25Z6 and 25L6 could be used as a substitute for the 70L7GT. Messrs. Standard, Telephones and Cables Limited point out that these two types are now unavailable and suggest that types 35L6GT and 35Z4GT could be used as these combined are an exact replacement of the 70L7GT.

DX Bands

We learn from the RSGB that portions of the 7 and 14 Mcs. bands may possibly be open for use by British amateurs early in June.

RADIO AMATEUR'S CALL BOOK

All hams licenced since the publication of the last "Call Book" and all hams who have changed their QRA are invited to contact the publishers who are now preparing the first post-war edition. Address all communications to:—Radio Amateur's Call Book Magazine, 608 South Dearborn Street, Chicago, Illinois, U.S.A.

My Favourite Short Wave Receiver.

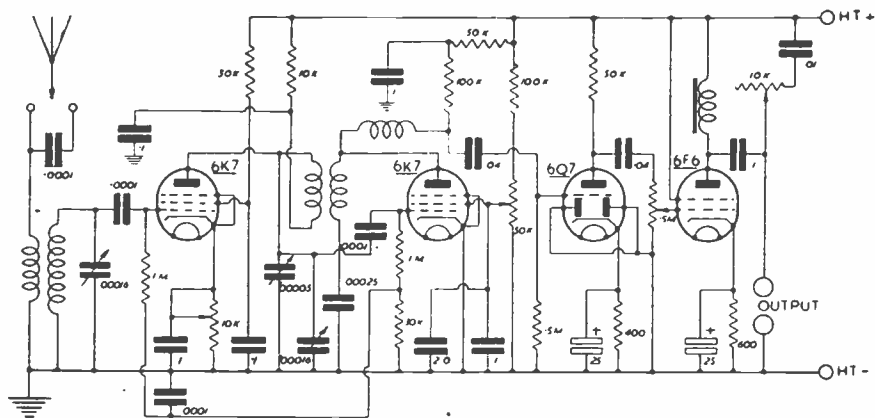
No. 3: R. E. Dauben

THIS month we present the third in our series of articles describing the receiver operated by the other fellow. For the benefit of new readers, the following summary is given. We see that so-and-so has had a fine log published, but what do we know of his receiver beyond the fact that it is described as an 8v. S'het or a 1-v-2? We therefore invite readers to submit details of their favourite receiver, together with a circuit diagram. The description should run to around 750 words there is no need to worry unduly about grammar or the form which the description takes, we'll see to that end of it. The circuit diagram can be a rough pen or pencil sketch, the one important thing being to make sure there are no mistakes and to see that all component values are given. The block will be presented to the contributor, and can be used by him on the back of QSL and SWL cards, etc.

This month we show the circuit used by BSWL 2026, of Taunton. Only the receiver side is shown, the power pack—which is quite conventional—being housed in a separate cabinet. Two alternative aerial inputs are provided; as a point of interest, this reader uses a 15 ft. rod aerial. The

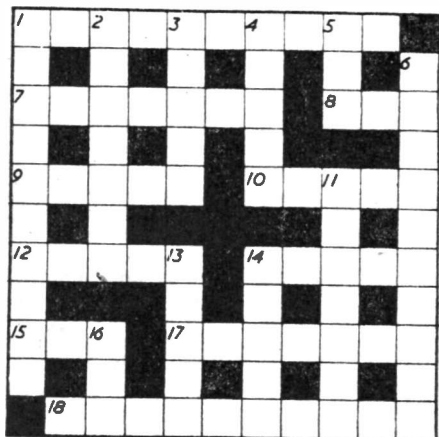
6K7 R.F. stage is quite normal, except that it is A.V.C. controlled, an item not often found in receivers of the "straight" variety. The A.V.C. voltage is obtained from a tap on the detector grid leak. Tuned anode coupling is used between the R.F. and detector stages. Both stages use Raymart 4-pin coils with ceramic holders. Reaction is controlled by varying the voltage applied to the screen grid of the detector, a 2uF capacitor being shunted across the usual 0.1 uF R.F. bypass capacitor to take care of any "noisiness" in the potentiometer. The detector is resistance-capacitance coupled to the 1st audio stage. Here a double diode triode is used, the two diode sections being earthed. The same coupling is again employed between the 1st and 2nd A.F. stages, the grid leak in this case taking the form of a potentiometer gain control. Choke-capacitance coupling is used for the speaker or phones.

BSWL 2026 has received quite a lot of DX on this receiver, and offers further information to interested readers who send an S.A.E. to his QRA—1 Honiton Road, Trull, Taunton, Somerset.



RADIO CROSSWORD No. 5

By H. Lister



Clues Across:

1. In perfect tune?
- 7 & 8. Condenser type. (two words, 7, 3)
9. These have caused some curious noises in receivers.
10. Alternative to 12 across?
12. This receiver does not exist—yet!
14. —and most peculiar ones, to the layman, in many log-books.
15. Where to get 11 down.
17. This describes the theoretical circuit.
18. Needed at "the other end" to hear the second part of 6 down.

Clues Down:

1. Interval signals?
2. Many Hams have a spare-time radio one.
3. Seen on some dials.
4. Fixers for the "hook-up" man?
5. American radio network (abbrev.)
6. The naval op. with a message—or the emanations of early transmitters. (two words, 6, 4)
11. The Ham calls 'em "tickets."
13. Connections shouldn't be, usually.
14. One measure of a wave.
16. Simple short-waver.

I listed them as London and Paris in the February issue. Since then I haven't had a moments peace! I quote Mr. Shorbridge "As from November 15th, 1945. AFN stations on 6080/8565 kcs. were taken over by AFN Frankfurt with 50 kW. power." So there you have it folks! I had several other letters ticking me off over this—but it was all for the good of the cause!

Acknowledgements.

C. G. Tilly, BSWL 319 (Bristol); M. Forrest (Salisbury); M. Shorbridge (Kensington); D. McLean, BSWL (Yeovil); T. Moss, BSWL 1713 (Topsham).

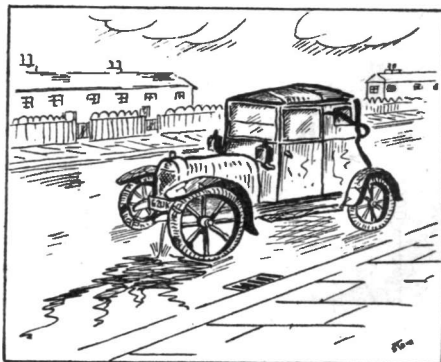
COUNTRY PANEL

No. 1: Honduras Republic

This month we introduce a new feature, the first of the series being Honduras Republic which boasts three short-wave outlets.

- HRN: Tegucigalpa, 5875 kcs., "La Voz de Honduras," 750 watts. Fair signal around 0030, but subject to severe CW QRM.
- HRP1: San Pedro Sula, 6350 kcs., "El Eco de Honduras," 350 watts. Heard on rare occasions.
- HRD2: La Ceiba, 6235 kcs., "La Voz de Atlantida," 200 watts. Has not been logged by your scribe.

RADIO TERMS
ILLUSTRATED



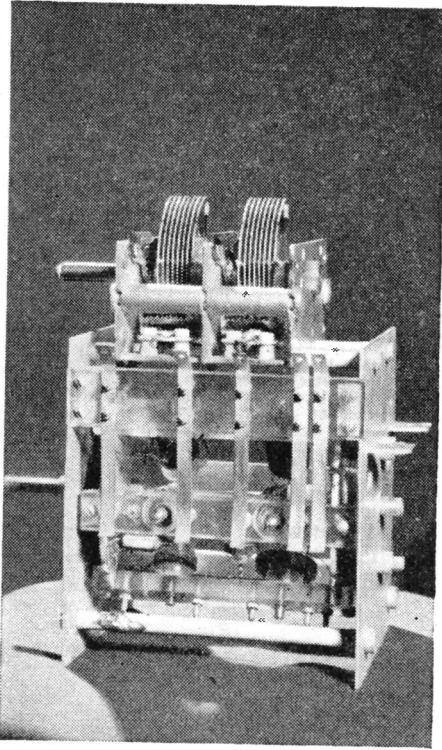
Leaky Grid.

(BC News.—Cont. from p.119)

but I wouldn't hazard any guesses as to which it was! (Then there is VLQ3 on 15315 kcs.—Ed.)

Also from the same reader comes a report of regular signals from Luxembourg in the 49m. band, and AFN on 6080 and 8565 kcs. Talking of these AFN channels,

Component Review.



The Denco Type CT1. Coil Turret.

DENCO

CONSIDERABLE interest has been shown in the new coil turrets being manufactured by Messrs. Denco (Clacton) Ltd., some details of which are given below. Three types are at present being produced, designated as C.T.1., C.T.2. and C.T.3., the first of which is shown in the accompanying photograph.

Type T.C.1. A highly efficient tuning unit for use in superhet receivers with an I.F. of 1.6 Mcs. All coils are fitted with adjustable dust iron cores for alignment purposes, the insulation throughout is polystyrene, and all contacts are silvered. Close tolerance fixed Ceramic capacitors

are used for the necessary parallel or padding capacity. The unit can be supplied with or without the recommended two-gang 300 uuF Ceramic variable tuning capacitor. Four ranges are provided covering 0.15-0.7 Mcs., 0.55-1.6 Mcs., 5.0-11.75 Mcs., and 11.5-25.0 Mcs. A fifth position of the turret shorts the mixer signal grid for gramophone reproduction.

Type T.C.2. As above, but for use in superhet receivers with an I.F. of 465 kcs.

Type T.C.3. A three section turret for communication or advanced receivers, employing one R.F. stage and an I.F. of 1.6 Mcs. Capacity band spreading will be available, and the turret will cover 0.15 to 35 Mcs. approx., in six ranges.

These turrets will be available with plain coil formers, so that they can be wound for special purposes such as signal generators, frequency meters, etc.

LABGEAR

The range of equipment produced by this well known firm is being extended to cover Amateur requirements. The following gear is now in production:

(1) High voltage transmitting variable capacitors, 4,000 volt peak, 100 uuF single section, and 50 plus 50 uuF split stator.

(2) 1,500 volt peak, 50 or 100 uuF single section or 50 plus 50 or 75 plus 75 uuF split stator. All with mycalex insulation, plated brass vanes, and aluminium end plates to the higher voltage types. These latter can be supplied fitted with a coil base for plug-in coils.

(3) Plug-in 100 watt, self-supporting coils of small dimensions for 7, 14, 28, and 60 Mcs. With or without fixed coupling link.

(4) As above, but suitable for higher power amplifiers, with swinging links for aerial coupling.

(5) Transmitting chokes. Inductance 1 mH., current rating 350 mA. D.C. resistance 4 ohms, self capacitance 3 uuF.

(6) High voltage power pack—Junior model. Output 1,000 volts at 250 mA., can be tapped down to 750 volts. Complete with smoothing, voltage indicator lights and switches. For 19 ins. rack and panel mounting or in a cabinet, the panel finished in black crackle paint.

(7) Crystal Calibrator. Complete with built-in power supplies and 100/1,000 kcs. crystal.

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, Workshop, Notts.

RADIO INSURANCE. A special policy prepared by an amateur for amateurs. Radio equipment can be covered against ALL RISKS excluding accidental damage. The cost is only 10/- per £100. Public Liability indemnity up to £1,000 is included without additional premium. For full details write:—P. L. Gibbard, 5 Bird-in-Hand Court, 76 Cheapside, London, E.C.3.

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.

VIBRAPACK—12 volt input, 300 volt 100 mA. output. Suitable for QRP Tx. Offers of cash or exchange to: G6LH, Stickney Rectory, Boston, Lincs.

WANTED URGENTLY. New or used Record Changer, complete with motor and pick-up. Also second-hand rack model HRO receiver.—Thomas, Polstreng, Camborne, Cornwall.

WE ARE NOW in a position to undertake the publication of Trade Catalogues, Brochures, Descriptive Folders, etc. Send your requirements for quotation to:—Amalgamated Short Wave Press Ltd., 57 Maida Vale, Paddington, London, W.9.

GUARANTEED Ham supplies! Eddystone, Raymart, QCC agents. Large stocks. "Sifam" meters. Chassis, etc., to order. Lists—Stuck's Radio, 72 North Street, Sudbury, Suffolk.

FOR SALE.—B.T.S. 3-valve Trophy A.C. S.W. Receiver. What offers?—A. Jenkins, 61 Burton Road, Kingston-on-Thames.

SPECIALISED APPARATUS FOR THE AMATEUR

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