

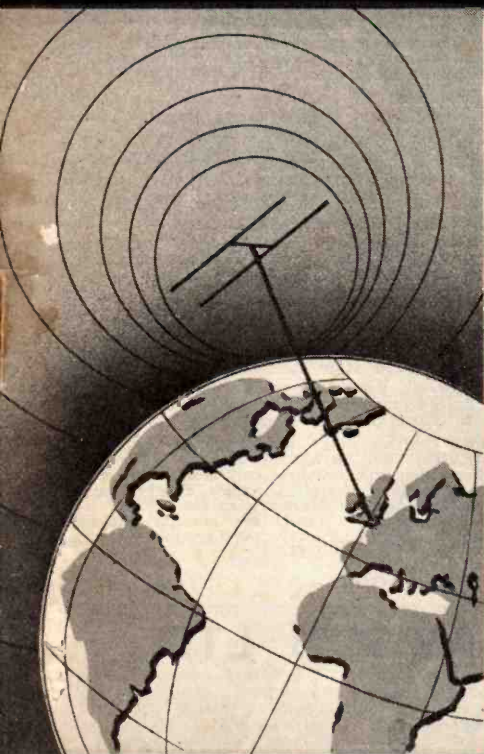
Short Wave News

1'3

Vol. 3 No. 1

January, 1948

For Transmitter and Listener



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Short Wave News

Vol 3 No 1

Annual Subscription 16/-

January, 1948

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Editorial

ONE always feels when writing the editorial for the first number of a new volume, that the occasion is a rather special one. It is always a pleasure to look back on a successful year's work, and it is even more enjoyable to ponder the possibilities for the coming year. A year ago we promised our readers that we would maintain the standard of the "S.W.N." during the year to follow, no matter what difficulties cropped up, and we expressed the hope that by the time Volume Three came along, we should be able to produce much thicker and many more copies. We can truly say that our promise has been kept and even if our pleasure at being able to justly say this is tempered by our disappointment that our hope for more paper has not come about, we do feel very proud of our magazine's progress during the past year.

We have always prided ourselves on a steady improvement in the "News" and an adaptability enabling us to adjust its contents to the changing requirements of our readers. We start off this volume with—in our opinion—one of the biggest improvements we have so far made—a new cover. The cover for our companion magazine, the "Radio Constructor" has been so favourably commented upon, that we asked the artists who designed it to suggest a cover for the "News." We think you will approve the change as much as we do and agree that it carries the "News" on a step further toward the magazine we want it to be.

We have tried throughout the past year to model the "News" on the suggestions and criticisms of our readers. Readers correspondence is the main link between editorial staff and readers and we congratulate ourselves that our readers do not hesitate to write to us, thereby showing

that the friendly atmosphere we try to create in the magazine is being appreciated. We have been able to adjust the space allocated to various features and to introduce new material as a result of our readers' help and suggestions and we look forward to a continuation of this spirit of co-operation.

The coming year is not likely to see any drastic changes in amateur radio. The current rumour for the introduction of the new amateur frequency allocations gives the probable date as 1st September, 1949 for those frequencies below the 28 Mcs. band and 1st January, 1949 for the 28 Mcs. and higher frequency bands. So present operating conditions are not likely to change during the coming year and it is thus a little early to plan for the new 21 Mcs. band. The VHF fraternity will doubtless spend some time getting ready for extending their activities and we would suggest that those amateurs who are seeking new fields to cover and have not yet tried 60 Mcs. do so this coming summer. The experience they will gain on this band will prove most valuable in enabling them to jump to the higher frequencies later on.

The broadcast short wave listener should not find many changes either. The Atlantic City Conference was called to consider the whole radio communication spectrum—not the amateur bands only as some amateurs seem to imagine! It is not expected that the new frequency allocation for broadcasting will be worked out much before the middle of 1949, so no drastic changes are likely yet awhile.

We cannot foresee what difficulties the "crises" which we are told are to beset us during the coming year, will make for us. We managed to get over the power cuts and strikes of last winter and we feel confident that we can overcome the worst that 1948 can bring. So here then, is to another useful year's service to the radio enthusiast.

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.

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

CHEQUES and Postal Orders to be made payable to "Amalgamated Short Wave Press Ltd."

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

V.H.F. News

CONDITIONS on 50 Mcs. have dropped off considerably since Nov. 22nd. The excellent DX conditions of that date tailed off slowly until by Dec. 1st the band had closed as far as transatlantic DX was concerned. On the 22nd, G5BD worked W1GJZ, W1KHL, W2AMJ, W2BYM, W5AJG and W5ZZF. The latter two were on phone and 5ZZF was using an input of only 15 watts. On Nov. 23rd, G5BD heard W0IFB, W2BQK, W1CLS, W1HDQ and W8MVG, but nothing was worked. On the 24th, W1PUJ, W1AEP, VE1QZ, W2BYM and W1AF were all contacted. Nothing was heard on Nov. 25th, but on the 26th, W2RTX was worked. On Nov. 27th, W2RGV, W2RTX, W2RLV and W2SYR were QSO'd. Nov. 30th produced W1HDQ's signals, but no contact was made.

W2AMJ worked G5BY on Dec. 1st, after which 50 Mcs. closed for DX.

On the twenty-eighth day after Nov. 22nd-Dec. 19th, G5BY heard forty W stations but no contacts were made. More W's were heard on Dec. 24th, when 5BY heard W8MVG and on Christmas Day, F8YZ in Nancy heard fifty Americans. Again no contacts were made.

This seems an appropriate place to draw the attention of SWL's once again to the valuable work they could do on the high frequencies. Keen listeners are urgently required to keep watch on these higher frequencies so that no openings go unobserved. We are constantly receiving letters from dissatisfied SWL's saying that reports they send to DX stations on the lower frequency bands produce no reply and we just as often get complaints from DX transmitters that they become snowed under with useless SWL reports. If SWL's would give more attention to the VHF's, they would be assured of appreciation and they would find little difficulty in getting cards back. That DX is to be found on the VHF's quite unexpectedly has been proven during these past few weeks. One SWL who is putting in good work on the VHF's is J. E. Denton, ISWL G1400, of 28 Bismark St., York. He submits the following log of 50 Mcs. signals heard on Nov. 22:—

1400	GMT	W2AMJ	Q5 S5
1410	..	W1GJZ	Q5 S8
1415	..	W1AF	Q5 S7
1418	..	VE1QZ	Q5 S8
1425	..	W1HDQ	Q5 S7
1427	..	W2BQK	Q5 S7
1430	..	W1EIO	Q5 S7
1440	..	W3OR	Q5 S8

1450 .. W1CLS Q5 S7
1550 .. W5VY Q5 S8

All these stations were calling G's or PA's—and working them! Three FM stations were also heard on 48 Mcs. and FM stations were heard between 44-46 Mcs. being QRM'd by police and weather transmissions. His receiver is an Eddystone "504" plus the three stage converter described in the Eddystone Manual. The aerial used was a V doublet cut for ten metres located inside the roof space, connected to the receiver by thirty feet of twin feeder.

Many SWL's fight shy of VHF work because they imagine the gear required is complicated and expensive. This is not the case, many of the stations who have done outstanding work using converters only. A VHF converter is not much more difficult to build than the larger versions of the straight receiver.

Our request last month for SWL's prepared to record MUF's has produced at least one reply! There must be more SWL's interested in the VHF's than this, so come on some of you and get down to some useful work! Just because you have no transmitter there is no reason to imagine you cannot do a really useful job of work. One prominent VHF enthusiast once remarked that the least useful of the gear in his shack was his transmitter! The time he spent on the air he always felt might have been better spent listening.

We hear that the 50-54 Mcs. band permits issued to leading VHF amateurs in this country are likely to be extended to April, so the next few months should see considerable activity on this band.

60 Mcs. Activity

The excellent DX conditions which have prevailed on 50 Mcs. have somewhat eclipsed 60 Mcs. and activity continues to be at a low ebb. The R.S.G.B. Five Metre Contest on the 6th/7th Dec. stimulated interest somewhat. G5BD heard 14 stations and worked 11 of them. G2BMI (Middlesex) heard the following stations during the contest:—G2MR (Surbiton), 2WS (Kent), 2AJ, 2HN (New Malden), 2FK, 2CIW, 2LK, 2KG (Chelmsford), 2MC (Pinner), 2CF, 2YL (Walton on the Hill), 3BLP, 3CU (Tooting), 3BRP, 3BWS, 3NR (Chiswick), 4NT/A (High Wycombe), 4IG (Beckingham), 5PY (Clapham Park), 5MA (Ashstead, Surrey), 5LQ (Chiswick), 5WP (Woking), 6VX (Hayes, Kent), 6FO, 6YU (Coventry), 6LK (Cranleigh) and 8SM (Molesey, Surrey). Others known to be active in the contest were:—G2ADZ, 3BXC, 3ABA, 3APY, 3AAN, 4AP, 4JO, 5LY, 5US, 6QU, 6LX, 8TS, 8PX, 8OL, 8WV.

Quite a few of the above have been heard since the contest, together with 2CUA

(Continued on p.3)

Q.R.P. CLUB

by G2SO

THE writer has recently had a very interesting contact on 3.5 Mcs. with an Old Timer (Vintage 1928), with real low power, namely G2BY of Cheltenham. During this contact 2BY mentioned that during one week-end recently he had contacted stations in PA, G, GC and GM with an HT of 40 volts, and in fact whilst in contact with myself he reduced his power to 8 volts at 2 mils. which according to my calculation amounts to real QRPP, i.e., 0.016 watt! The writer was receiving his signals at RST449, and perfectly readable until a G fone station came up on our frequency, and exit 2BY. This station has been on CW and Telephony with 150 watts, and has been active lately with low power apparatus for a change! His transmitter consists of a 6L6 crystal oscillator only, with a half wave aerial on 3515 kcs.

G2AJU sends an interesting letter, and says that he is also interested in low power work, and with an input of 5 watts on 3.5 Mcs. has contacted D2, LA, OZ, PAo and SM on fone and cw. His rig consists of 6L6 ECO and an 807 power doubler, loosely link coupled to a half wave aerial against ground, only 18 feet high. The modulator uses two PX4's and the usual carbon mike. G2AJU was recently in contact with G5HH of Reading who was reported RST549 whilst using one-fifth of a watt, and also worked GM4GK and GM4FK, both stations using less than a watt.

G3BEC of Yeovil, Somerset, is at present in "digs," and finds Ham Radio rather restricted, but hopes to have a watt or two going very soon. His local Club, using the call G3CMH, is active each Wednesday night on Top Band, and is using a transmitter similar to that used by G3XT, another well-known low power operator.

G3BGR (Welland) has been using QRP on 7 Mcs. recently, and says that owing to the heavy QRM on that band, QSO's have been few and far between. He has, however, had better results with same TX on eighty. He is at present in the process of building a Hartley for 1.7 and 3.5 Mcs.

G3BKM (Cleckheaton, Yorks) also used a five watt CO on 7 Mcs., but here again found that low power on that band is pretty hectic. Consequently he converted the CO into ECO and went on to 1.7 Mcs., his first contact on that band being with G6ZN who was the winner in the "Short Wave News" QRP Contest. With 3.2 watts on this band his best DX was with G2JL of Penzance. He has also operated same TX on eighty, and with same input his best contact being with GD3UB (IOM).

The writer recently had an interesting QSO with G4AI of the same town, who was using a 6L6 osc., with another 6L6 as Modulator on 1.7 Mcs. telephony, and this station was using an input of just under 2 watts; not bad for telephony! The signal strength was quite good, but at the time of contact the modulation was very low. 4AI hopes, however, to increase this in the near future. His signals will be heard around 1795 kcs.

It does appear from above remarks that the best bands for serious low power work are undoubtedly the LF bands, although, without the high power telephony stations on forty, that frequency would be quite good for semi-DX contacts.

Please do not forget to send the writer any "gen" on real low power work, as it is only with the aid of information from the readers of this magazine, that this section can be successfully built up. So, how about it, O.M.'s?

MY FAVOURITE RECEIVER

Judging from correspondence this would appear to be one of our most popular features. We were again sharply reminded of this fact shortly after the October issue when Jack Fisher dropped us a line to inform us that the number of enquiries about his "all dry" receiver had reached such proportions that he had to prepare a special duplicated series of leaflets to send to interested readers! In view of the special interest taken in this receiver Jack has written a complete constructional article and it is appearing in the January issue of "Radio Constructor."

The "Favourite Receiver" in the December issue, by A. Baldwin, has also caused a stir. The author writes to say that he has received "shoals of letters." He has courageously answered every one who enclosed return postage but has had to draw the line where no postage has been enclosed. Which brings us to having to remind readers that it is only fair to supply a S.A.E. where such information is sought. So, in future, when you write for further details of Favourite Receivers, please make sure that you send along a S.A.E.!

("V.H.F. NEWS"—Cont. from p.2)

(London), 3NR (Chiswich), 6OH (Ascot), 6OT (Southgate), 8RS (Reading), 4LU (Oswestry), 5MQ (Liverpool), 5AA and 5UM (St. Albans). From which it will be seen that activity on "five" is if anything on the increase. 2BMI asks when the ban on "five" commences. For the answer see this month's Editorial.



Cast rehearsing the Saturday feature "Radio-Reel" at Radio Australia

Around the Broadcast Bands

Monthly survey by "MONITOR"

All times are given in G.M.T.

(For EST subtract five hours; for AEST add ten hours.)

REPORTS and any news for this column should be addressed to: Monitor c/o "S.W.N." to reach your scribe not later than the 5th of the month. Overseas readers news and views are always welcome so let's hear more from you wherever you may be.

How many Countries have you heard and how many verified? Broadcast stations only. If you have 50 Countries or more, drop a line to your scribe. If support is sufficient we will run a monthly list of DX "honours." Now for the month's news:

● Asia

India. Sidney Pearce (Berkhamsted) on his Sky Champion reports the following batch of stations from this part of the world:

VUM2 Madras 4920 kcs. with R7-8 signals in the afternoons. Gives News in English at 1530 and talk at 1545. Closes at 1700 with chime for 1030 IST. VUB2 Bombay 4880 kcs. R7 afternoons from around 1500. Gives occasional talks in English and closes at 1730 with clock for 11 p.m. IST. VUC2 Calcutta 4840 kcs. heard R6 from 1600 to sign off at 1700. No English heard. VUD Delhi 4860 kcs. News in English at 1530 followed by Hindustani until close at 1600. Also logged on 6190, 17760, 11870 and 9590 frequencies.

From Kenya Colony R: F. B. Featherstone of Nakuru reports VUD2 on 9590 kcs. and VUD4 on 9670 kcs. giving news at 1530. Both R9 signals. R. V. Aldridge (Amersham) lists VUM2 at 1600 at R4.5 also VUD9 11870 kcs. at 1400 with news in English R7. This reader mentions that he recently met one of our star reporters . . . Sidney Pearce. As you say O.M. he

certainly does not miss much in the way of DX and a first class op. D. O. French (Norwich) logged AIR on their 15160, 11870, 9590 and 7240 kcs. with news in English at 1430 and western music at 1445. Arabic is given at 1615 on 11, 9, 7 Mcs. freqs. and also on 6190 kcs.

Old Timer Bob Iball (Workshop) sends his a lengthy log of DX heard and lists VUD8 21510 kcs. at 0415-0450 with R8-3 with quick deep QSB. Not usually heard at this time on 21 Mcs. O.M. although can be heard on 17 Mcs. around 0430.

Malaya. Singapore. 6770 kcs. heard R6 QSA4 with QSB to R3. Peaks to R7 at times. 1350-1440. Programme consisted of Orchestra music, Radio Newsreel and news at 1415. (Iball). 9690 kcs. freq. logged at 1415 giving news and "Radio Newsreel" re-broadcast. Signals were R7 QSA4. (Aldridge). "Radio Malaya" heard on 6045 kcs. at 1435 R7. (Featherstone).

Burma. Rangoon 6035 kcs. logged R7 at 1430. (Featherstone).

Ceylon. Bob Iball reports Radio SEAC Colombo. 17770 kcs. with R8-9 QSA5 signals from 1930-2030 with request records presented by Phil Deacon. 15120 kcs. channel heard at 0700-0800 R9. (Featherstone). Pearce has heard them on this latter freq. at 1830-2030 with their Sunday broadcasts to British Isles. Very strong signals. Announces as on 17770 kcs. in parallel but often heard on 17820 kcs. (Were on this freq. but have now returned to 17.7 Mcs.) D. O. French has logged them on 17.7 Mcs. and says that they recently announced that they were on 17.82 Mcs.!

French Indo China. Saigon 11780 kcs. heard with English news at 1350. R9 sig-

nals. (Featherstone). Pearce states in a recent letter to your scribe that the YL announcer at Radio Saigon gives the following on a QSL to him "went to Berkhamsted School for Girls 1931-36 and lived in your Street!" Yes must have been a bit of home from home. Sure is a small world O.M.! On QSL freqs. were given as follows: 11780 and 6160 kcs. Latter replaces 6190 kcs. channel. Times: 0045-0100, 1330-1430, 1000-1045. Sends QSL card via Air Mail.

Indonesia. R. V. Aldridge lists YHN on 11000 kcs. at 1415 R5 with programme of Native songs. This is "The Voice of Free Indonesia" in Djokjakarta. QSLs with attractive card.

PMA Batavia 19330 kcs. reported by the same reader at 1700 with R8 QSA4 signals giving news in English. D. O. French has heard them around 1600, one Sunday. Has clock chimes, call "Radio Batavia" in 3 languages on ½ hour. Mentions Bandoeng and gives messages from the Dutch Forces.

Palestine. Damascus "Radio Damash" operates on 12000, 6000 and 7500 kcs. at 0500-0600, 1200-1300 and 1600-2000 according to Radio Australia's DXers Prog. says D. O. French.

Jaffa. "Asharq al Adna" is testing on 9640 kcs. Schedule is as follows:

1st transmission 0345-0545 on 6790, 6170, 6135, 3320 kcs.
2nd transmission 0930-1300 on 11720, 9640, 6790, 3320 kcs.
3rd transmission 1430-2030 on 9640, 6790, 6135, 3320 kcs.
(D. O. French—R.A. DXers Prog.)

● **Australia**

Bob Iball reports VLC11 15160 kcs. R6 QSA4 with QSB to R4 at 2210. Severe QRM by WRCA on LF (R9). VLG6 15240 kcs. R6-7 QSA5 at 2210 and VLH4 11880 kcs. R4 QSA4 at 2045-2200. Both carrying ABC National Programmes which included News, Light and Choral Music. Uses three gong strokes as intervals signal and call given as "VLG6 and VLH4." VLB10 11740 kcs. has been logged by R. F. B. Featherstone at 0710 with R9 signals. Pearce reports VLC 15200 kcs. with R7 signals evenings with BC to British Isles. 2000-2130. VLB9 9615 kcs. to 2115 and VLA8 11760 kcs. in parallel. VLB3 11760 kcs. has been heard with strong signals at 0700-0815 giving BC to British Isles in parallel with VLA6 15200 kcs. also to 0745 over VLC9 17840 kcs.

The ABC station VLQ3 Brisbane Queensland has been heard from 2000 with R6 signals. VLH4 R6 also logged at 2000 in parallel with VLG6 and sometimes peaks to R7. VLQ3 also heard by R. V. Aldridge with chimes at 2000 from Melbourne Post

Office clock followed by news R6. This reader also mentions VLG10 11760 kcs. at 1330 R6 giving news cast.

● **Africa**

Libya. Benghazi on announced freq. of 11850 kcs. but using 11820 kcs. relays MW station. Schedule: 0500-0615, 0900-1100, 1300-1600, 1815-2100. Reports are requested to: Forces Broadcasting Station, Benghazi, M.E.L.F. (D. O. French—R.A. DXers Prog.)

French West Africa. Douala. "Radio Douala" now operates 1800-2000 on 7950 kcs. (French).

Union of South Africa. Our Representative in Natal J. Beaunoir sends along schedules of SABC Shortwave transmissions as follows:

Johannesburg "A"

Freq.	Daily	Sundays
6095 kcs.	0445-0630 1620-2100	0555-0610 1620-2100
4373 kcs.	same. Also 1400-1600 1610-1620	same 0815-1610 1620-2100
9870 kcs.	0815-1210 1400-1600	0815-1610

Johannesburg "B"

6007 kcs.	0445-0630	0555-0610
9523 kcs.	0815-1210 1400-1540	0815-1540
4895 kcs.	1550-2100	1550-2100

Capetown "B"

5880 kcs.	0445-0630 1600-2100	0555-0610 1600-2100
9610 kcs.	0815-1210 1400-1545	0815-1545

Durban "A"

4878 kcs. Same as for Johannesburg "A" and "B"

Aldridge reports Capetown on 5.8 Mcs. freq. Heard at 2045 with BBC news relays and chimes at 2100 from Johannesburg(?) Town Hall. R4 QSA4 signals with heavy CW QRM at times. (ZRK O.M. not ZKR as you list.) Pearce has heard this station with R6 signals with programme in Afrikaans around 2030, news from BBC at 2045 and sign off at 2100 with 2 National Anthems after Epilogue.

Belgian Congo. Leopoldville. BC to British Isles now 2030-2145 and given over OTC2 9745 kcs. also simultaneously on 9780 kcs. No mention of the latter is made in announcements. (Pearce).

Logged at 2030-2100 on 11645 kcs. R7-8 QSA5 and on 9.7 Mcs. channel R6 QSA5. News in English at 2030-2045. (Iball). R. F. B. Featherstone lists OPM4 Leopoldville on 11720 kcs. at 0700-0730 with R9 signals.

● **West Indies**

Trinidad, BWI. VP4RD Port of Spain heard at 2330 R6-8 on 9630 kcs. (Aldridge). ISWL/G1089 of Kingsbury NW7 (am not sure of your name O.M.) a newcomer to this column reports this station heard most evenings at his QTH with R5 QSA3 signals. He says that he has a QSL from "Radio Trinidad" dated September 27th (Nice going O.M.) Yes we should like to have the card for this column or any cards that you think will be "sharp" enough to use. A. V. Wilkinson (Manchester) states that they are very well heard there with R8 QSA5 signals until 0000. Sponsored programmes by Trinidad and Tobago Electric Co. . . H.M.V., etc. "Fun Parade" feature at 2330, News at 2355 (Home news). Gives direction as "Radio Trinidad at the crossroads of the Caribbean." RX SH6.

Dominican Republic. HI2T Trujillo City 7350 kcs. heard at 0115 R4 QSA4 using four chime interval signal and call "La Voz del Yuna en Ciudad Trujillo." Also heard from 2315-0100. Has bad QRM from Moscow to 0000. R7 QSA5 when in the clear. (Wilkinson). Your scribe has heard them at 2345 with very strong signals giving call. They are the strongest signal from the West Indies to date. Station identification is given every 15 minutes. No English announcements.

HI2A Santiago del los Caballeros heard on 6785 kcs. from 2230-0100 R5 QSA4 giving call as "La Voz de Re-election" every 15 minutes. Talk on "Radio Network in Dominican Republic" at 0015-0030 and typical Latin American musical programmes.

● **South America**

Peru. OAX4Z Lima 5895 kcs. heard announcing as "Radio Nacional del Peru" at 0400. R5 QSA4. (Wilkinson).

Ecuador. HCJB Quito 12455 kcs. logged at 0415-0445 with R5 QSA5 signals. Organ music and Service. Announced as "This is HCJB Quito Ecuador . . . known as the Voice of the Andes." (Iball).

Chile. CE1180 Santiago 12000 kcs. heard with gong and slogan at 0000. (ISWL/G1089).

Colombia. Pearce states that in a letter veri via Air Mail from Radiodifusora Nacional, Bogota dated October 24th, mention is made that they hope to be heard much better with their new stations using new frequencies including 11670 kcs. after 2 months.

● **Miscellany**

Our Country Panel feature has been taking some hard knocks lately—due to pressure

of space. However, we hope we have made up for the omission in recent months by the inclusion this time of one that has been long needed, that of the Netherlands East Indies, though its very size has precluded its incorporation in the usual place.

Photos of readers shacks and unusual QSL cards will be welcomed for future use in this portion of the mag. Both must be well defined if they are to be used for reproduction purposes. As mentioned previously we also need data on countries verified, taking the definition of "country" from our accepted list in the "Annual." Send along your claims and we will run a Country Ladder. Nothing under 50 countries need be considered I am afraid as the inclusion of all-and-sundry would make the lists unnecessarily lengthy. If the 50-and-over brigade are not so numerous as we believe then we will lower the entry limit.

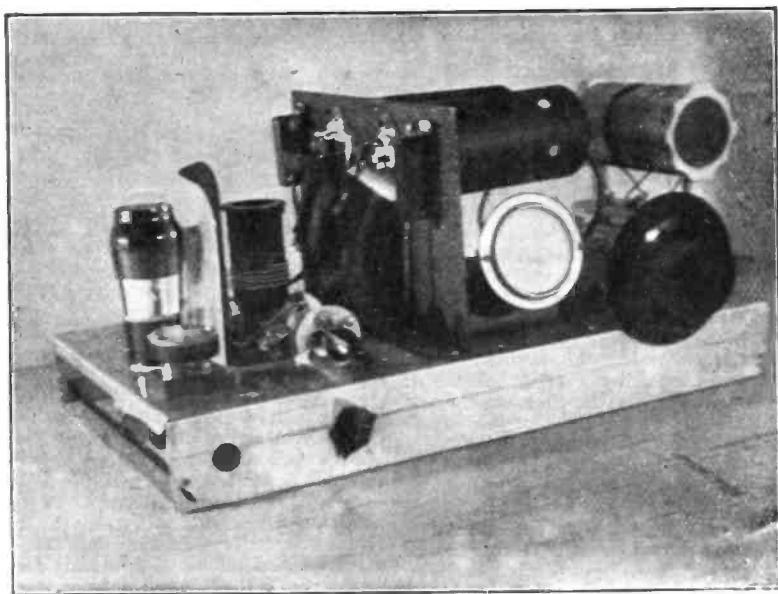
Finally, attention is drawn to the **Reporting Contest** which is announced on page 26 of this issue. Here is a chance to show your worth as a reporter and at the same time, if you are lucky, earn a reward for your efforts!

● **QSL Section**

Verifications received by readers over the past month: Sidney Pearce from PZR (11322 kcs.), TGWA (9760 kcs. Air Mail), OAX4J, CR6RN, XGOY (7153 kcs.), HEI5, TPR (Danish Brigade Group in Germany 6235 kcs.) ISWL/G1089: ZRK, VLA8, VP4RD, ZFY, Madrid, TAP, Radiojant, FZI (new card. Nice drawing of Eastern view), HCJB, OTC. R. Aldridge: HER5, VQ7LO. A. V. Wilkinson: CE1180 (gives invitation in English to visit their studios!), CJCX, TAP, TGWA, HER3, Radio Omdurman, HH2S (nice work, O.M.), VUD4, OTC, ZFY, HJDE, HCJB (after 9 months wait!), WRUL, WRUW, WLWR, VLG, VLQ, VRR5 and XGOY. VLA7 obliged your Scribe. QRA's from verifications are always appreciated for this column, so send along any with your next list of QSL's received O.M's.

● **Acknowledgements**

R. F. B. Featherstone (Nakura, Kenya Colony), Sidney Pearce BSWL336 (Berkhamsted, Herts.), D. O. French ISWL/G426 (Norwich), A. V. Wilkinson ISWL/G666 (Manchester 14), Bob Iball ISWL/G941 (Workop, Notts.), J. Beauvoir ISWL Rep. (Jacobs, Natal), R. V. Aldridge ISWL/G85 (Amersham, Bucks), ISWL 1089 (Kingsbury, London, N.W.7.)



100 Watts with Three Valves

By G2UK

Introduction

THIS small transmitter, using three valves only, will give an output of 100 watts with a HT voltage of 750. By using suitable crystals and coils, operation can be had on 3.5, 7 and 14 Mcs. and at reduced input on 28 Mcs. A perusal of the circuit diagram will show that a 6V6 tritet oscillator is used to drive a pair of 807 tetrode valves operated in push-pull. 807's are proverbially easy to drive, and after a little experimentation it was found that a 6V6 in this type of circuit gives ample excitation when used to double the crystal frequency, to drive the 807's to 100 watts. On 28 Mcs., using a 7 Mcs. crystal, somewhat less drive is obtained, but an input of 50-60 watts should be obtainable on this band if careful adjustments to P.A. bias and oscillator tuning are made.

In order to make the transmitter compact and suitable for installing in as small a cabinet as possible, the 807's are mounted horizontally. This has the added advantage that the metal partition from which they project, also serves as a screen between the grid and anode circuits, adding considerably to the electrical stability of the unit. By capacitively coupling the 807's to the tritet oscillator, instead of using the more conventional link coupling, a tuning capacitor and grid coils are eliminated from the design, thus helping to produce compactness and simplicity of operation.

For the benefit of those readers who are not familiar with the tritet type of crystal oscillator, it may be well to outline briefly its characteristics. Essentially it is a crystal oscillator in which both the grid and anode circuits are tuned. By so doing, the anode can be tuned to two or three times or even four times the frequency of the crystal and a reasonable amount of R.F. be obtained for driving the following stage. We thus have a very flexible arrangement; one which will give us a number of frequencies using one crystal only. For instance, with a 7 Mcs. crystal in the grid circuit, the anode can be tuned to give output on 14, 21 or 28 Mcs. With a 1.8 Mcs. crystal, output on 3.5, 7 and even 14 Mcs. can be had. With a 3.5 Mcs. crystal output on 7, 14 and perhaps 21 Mcs. can be obtained. It will be seen there fore that this transmitter is extremely versatile. One point in passing. The anode and grid circuits in a tritet oscillator should never be tuned to the same frequency or severe feedback may result which may overheat and crack the crystal.

By shorting out the tuned circuit in the grid circuit however, the tritet becomes a conventional pentode oscillator and the anode can then be tuned to the crystal frequency. Reference to the circuit will reveal that if one of the vanes on the variable capacitor C, are slightly bent so that when tuned "full-in" it touches it's opposite

number, the coil and capacitor will be shorted out. This modification to the grid capacitor is usually incorporated in the tritet oscillator, so that even greater versatility is obtained.

Circuit.

Going over the circuit in detail, we see that a tuned circuit consisting of C, L, is connected between the crystal and the earth. The other plate of the crystal is connected to the grid of 6V6 and also via 100000 ohm resistor R1, to earth. In the cathode, a resistor R2 of approximately 500 ohms, by-passed by a capacitor C2 of 0.01 μ F, connected with the non-earthly side of the tuned circuit C, LI. On the anode side, the tuned circuit is made up of C2, L2. L2 is unusual in that the HT supply is taken to its centre, not to one end as is usually the case. This is done to make both ends of L2 "hot,"; i.e. of the RF potential, so that RF drive can be had to drive each 807 in proper phase. The screen of the 6V6 draws its current from a voltage divided circuit made up of R3 and R4, suitable values of each being indicated on the circuit diagram. By-pass capacitors C4 and C5 complete the circuit.

Turning to the amplifier stage, it will be seen that the two 807's are arranged in a conventional push-pull circuit. The anode circuit is quite normal; a centre-tapped inductance L3 being connected across the anodes of the two valves and tuned by a split-stator variable capacitor C11. No particular comment is needed on this part of the circuit. The grid input is a little unusual however. Two capacitors C6 and C7 are connected to each end of L2 and a resistance network consisting of R5, R6, R7 and R8 is arranged to give drive to the grids of the 807's and provide a suitable inlet for the bias voltage. Suitable values for capacitors and resistors are shown on the circuit diagram. The two 807 cathodes are strapped together and earthed via R9 and C8. The screens draw their currents from the main HT supply dropping resistor R10. They should each have a small antiparasitic choke, indicated at X in the diagram, wired in close up to the screen pin on the valve holder and a by-pass capacitor C9 and C10 similarly connected close up to the screen pin on each valve holder.

Aerial coupling is by a two turn link wound round the centre of the former on which L3 is wound, suitably spaced and insulated from it. The transmitter can be keyed by breaking either the HT to the tritet, the cathode of the 6V6 or the cathode of the 807's and unless readers have their preference, born by experience, they are advised to try all three methods seeing

which gives the smoothest and most click free keying.

Construction

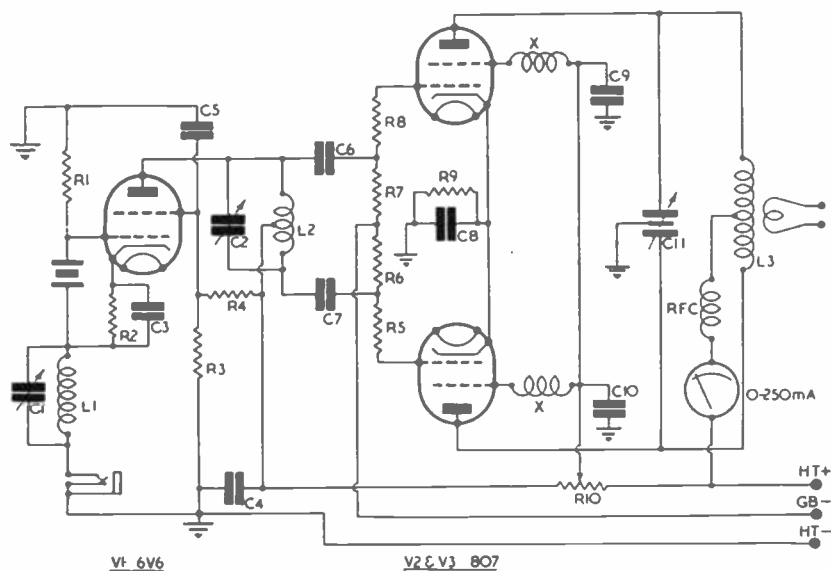
on a chassis 18in. x 10in. x 21in. deep. The screen holding the 807 screening cans is 9in. x 6in. and the 807 screening cans should be 3in. x 2½in. diam.

Provided components of the values shown are used, everything should work correctly. It is unnecessary to specify any particular type of component. In the rig illustrated in the photograph, most of the components are of ex-service origin. The two variable capacitors C1 and C2 are of the small receiving type. Inductors L1 and L2 are wound on standard four pin formers. All the various resistors in the tritet section can be of two watt rating and the capacitors should be of the type suitable to stand the voltage, i.e. they need not be of more than 350 volts working rating in the tritet section. In the PA section R5, R6, R7, R8 and R9 can all be of two watt rating. R10 the main HT dropping resistor should be of the wire wound type with easily adjustable taps. One of say 30000 ohms total resistance and 15 to 20 watts rating will prove suitable. C8, C9 and C10 should be of about 350 volts working. The two antiparasitic chokes inserted at X are made up by winding ten turns of 18 swg wire on a quarter inch former—a short length of polystyrene rod or a 1 inch stand off insulator will do well. The ten turns should be spaced out to cover a length of ¾ inch.

The variable tuning capacitor C11 should be of 50 to 60 μ F each section. Any good make of split stator will do, designed for a working voltage of 750 volts. The inductance L3 is wound on a transmitting inductor former.

The first step in construction is to get together all the components and a suitable chassis and screens. In addition to the screens already mentioned a small screen about four inches high is needed to screen the anode and grid tuned circuits in the tritet. This screen can be seen in the photo located between the 6V6, inductor L1 and the crystal and inductor L2 and its tuning capacitor. It should be about 8 inches long and slightly curved to fit in comfortably.

The general arrangement can be gathered from the photograph. Layout is not critical, the only points to note are that L2 should be located symmetrically between the two 807's bases, so that the grid leads carrying capacitors C6 and C7 are about the same length. Variable capacitor C2 must be insulated from the chassis. It is mounted above the chassis close to L2. C1 is located beneath the chassis close to the pins of the base holding L1. L1 is located immediately



V1 6V6

V2, V3 807

C1 100 $\mu\mu\text{F}$	C5 0.01 μF	C11 50-50 $\mu\mu\text{F}$	R4 20000~
C2 100 $\mu\mu\text{F}$	C6, C7 200 $\mu\mu\text{F}$	R1 100000~	R5, R8 2000~
C3 0.01 μF	C8 0.01 μF	R2 500~	R6, R7 20000~
C4 0.01 μF	C9, C10 0.002 μF	R3 50000~	R9 100~

behind the 6V6 and can only be seen with difficulty in the photo. An extension spindle is needed to connect C1 with the knob on the front of the chassis. All the resistors and capacitors for the triode section are mounted beneath the chassis. Those associated with the grid circuit of the 807's are mounted on the screen carrying the 807's.

Coil Data

The versatility of this transmitter has already been mentioned and the fact makes it difficult to specify the complete set of coils which could be wound up for different combinations of crystal frequency and anode tuning inductance. As a guide, a 7 Mcs. crystal should have a coil wound with 10 turns of 18 swg tinned copper, spaced on a threaded standard former, in the grid circuit, i.e. L1. For 14 Mcs. output L2 should be similarly wound with 5 turns of the same wire. L3 should be wound with 12 turns of 14 or 16 swg tinned copper wire spaced evenly on the former with a gap in the centre of about $\frac{1}{2}$ inch. In the gap wind a two-turn aerial coupling link, insulated with systoflex. If the former is provided with a five pin base, the link and the ends and centre tap of L3 can all be anchored in place without difficulty.

Coils for other frequency combinations can be wound up using multiples of the

windings just given, or for the lower frequencies, suitable wire sizes and turn ratios can be had from reference to the current radio handbooks.

Power Supplies.

- Filament—6.3 volts. 2.5 amps.
- HT—750 volts, 250 mA.
- Bias—90 volt receiving type HT battery.

Operation.

First check over the wiring and make sure all is correct. Then connect up filament supply, switch on and check voltages at the various filament pins. If correct, plug in valves. Now temporarily remove the HT lead to the 807's by disconnecting at the meter terminal or any other convenient spot. If possible tune up with reduced HT to the triode stage. Plug in crystal and suitable coils in L1 and L2 positive. Turn C2 to about mid capacitance. Place a loop lamp indicator over L1 and tune C1 for resonance which will be indicated by the loop lamp glowing. Now place loop lamp over L2 and tune C2. Several positions will be found at which a glow is obtained in the loop lamp indicator. These are all various harmonics and the 14 Mcs., or whichever is required, must be sorted out by means of an absorption wave meter, such as that described in the June number of "Short Wave News."

(Continued on p.11)

Radio Melange

A pot-pouri of current topics

New Developments in the Recording of Oscillograph Traces

THE value of being able to photograph cathode ray tube traces needs no emphasising to our readers. However, it is not quite so easy to do as one might imagine.

During the late war, Messrs. Avimo Ltd., designed special cameras which would record from any standard type of oscillograph. Avimo Ltd., have now produced a series of recording cameras with built-in cathode ray tubes, so that as many as fifteen traces may be produced at the same time.

A practical application of this instrument is the Photo Acoustic Recording Unit recently ordered by the Ministry of Supply. A six channel camera is connected to six combined photocells and microphones by means of which the sound and flash of a bursting shell can be recorded. The recording units can be 2000 feet from the target area.

Our illustrations show both camera and photo-cell/Microphone Pick-up Unit.

The applications of such an instrument to radio problems are many, particularly in the realms of ionospheric research where multiple cathode ray tube recordings of a continuous type are required.

Radio "Flying Squads" for UNESCO

The Programme and Budget Committee of the Unesco Conference now in progress in Mexico City has approved a recommenda-

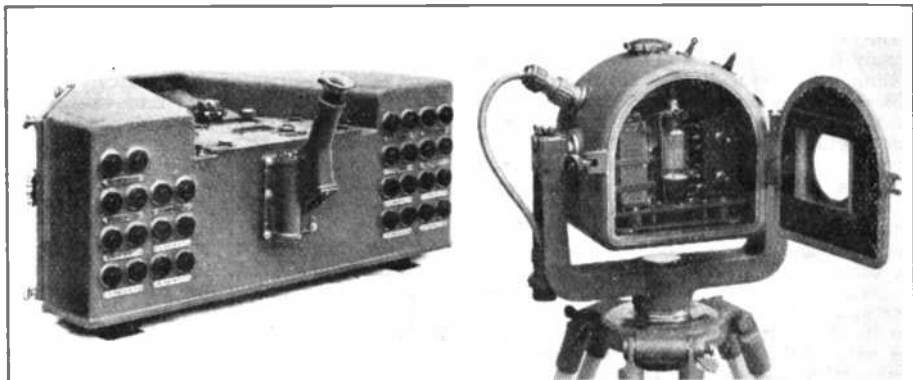
tion that there should be Unesco "Flying Squads," composed of the World's leading radio experts, to maintain contact with the national radio networks and to encourage programmes directed at maintaining peace, and those of a scientific or cultural nature. Another resolution adopted was for a survey in 1948 of the results obtained in certain countries of the use of radio as an instrument of education. A further resolution was that Unesco should have its own recording studios so that it could initiate a number of top-line programmes on the subjects of education, science and culture.

Prominent Amateur Helps Pitcairn Island

Arthur O. Milne, G2MI, Hon. Editor of the R.S.G.B.'s "Bulletin," tells in the November number of that journal, how the amateur station VR6AA, on Pitcairn Island, was helped by his practical action recently.

Nelson Dyett, until recently, operator of this station, told 2MI that he was in a fix as the station was run from an oil engine and the cost of fuel was becoming prohibitive. He asked if the ARRL or the boys in England could help in anyway. He had no objection to putting in several hours a day on the air or to QSLing, if the oil question could be solved.

Arthur Milne points out that in the past it has been the Americans who have come to the aid of Pitcairn and he felt that it was time we did something for our own Colonial outposts. With the help of his brother, a



AVIMO Fifteen Channel Camera which records 15 oscilloscope traces side by side. A similarly designed camera is used with the Photo Acoustic recording unit

AVIMO Photo-cell/Microphone unit, part of the apparatus designed specially for the Ministry of Supply to obtain light and sound measurements

prominent Civil Engineer in Australia, 528 gallons of Diesel oil were purchased from the Vacuum Oil Co. of Auckland, N.Z. and sent off to Pitcairn, The New Zealand Shipping Co. generously made no charge for the shipment. The cost of the oil was £30 of which £15 has already been donated. Anyone who cares to associate himself with this gift is invited to send his donation to 2MI, 29 Kechill Gdns., Hayes, Bromley, Kent. Any surplus cash will be sent to N.Z.A.R.T., with a request to supplement the supply as required. 2MI has also sent VR6AA 500 QSL cards. We now hear that Nelson Dyett left Pitcairn at the end of December, his place being taken by another ZL amateur. We repeat this story in the hope that some of our readers may send something to 2MI for his very practical help in keeping VR6AA on the air and ensuring that the QSL's are there if you can win one! So how about a whip-round at your next I.S.W.L. meeting?

Report from Belgium

From Victor Trechter

("S.W.N." Correspondent)

THE Belgian Government has finally agreed to allow the licensing of new amateurs, although, to the best of my knowledge the dates for the examinations have not been fixed. Quite a number of licensed hams are not transmitting at the moment. On the other hand, there are an enormous number of "pirates," not in the accepted sense of the word but people who eagerly awaited the end of hostilities to take the examination only to be bitterly disillusioned when Belgium remained the only country in Western Europe which did not issue new licences.

Many new-comers "borrowed" call signs of inactive amateurs, whilst others used three-letter call signs which are legally reserved for "private experimental stations." So when you hear any call between ON4AAA-ON4ZZZ you can be almost certain to be receiving a "pirate."—"almost certain," since some industrial stations are operating within that series of calls. Three classes of licences will now be issued, with respective maximum powers of 35, 75 and 150 watts.

The position here is such that many English and American ex-service receivers and transmitters, which I have never seen in England, are available and the German gear is sold by weight at ridiculously low prices. Commercial sets are available, such as the Hallicrafts S38, which sells at around £25. The authorities have now discovered that the S38 includes the 120-160m. trawler band and since it is forbidden to listen on

these bands there is talk that the manufacturers will have to omit this range if the sets are to be sold here!

However, the Belgian amateur is not in a very enviable position. The government will not recognise the National Society (though a member of I.A.R.U.) and unsympathetic officials are making things rather difficult. Now that new licences are being issued again perhaps the outlook will be brighter in the future.

South African News

From Jean Beauvoir

("S.W.N." Correspondent)

The Union Defence Force will shortly be on the air with their new transmitter. The principal object of the station will be to issue instructions to the Active Citizen Force auxiliary air squadrons. To stimulate interest, the proposal is to radiate musical programmes between all official information.

Permission has still to be obtained from the Postmaster General, who no doubt will grant the necessary permit. The transmitter is a modern one with an output of 5000 watts, thus making it just as powerful as Lourenco Marques or Johannesburg, both of which of course are audible in Great Britain. The U.D.F. station will operate on a frequency of 7445 kcs. (40.3 metres). There will be a definite schedule of transmission though this has not yet been decided upon. Information will be forwarded at the earliest opportunity.

("100 WATTS WITH 3 VALVES"—

Continued from p.9)

Having identified the correct harmonic, connect up bias battery using about 90 volts bias to start with. Reconnect the HT to the 807's. Switch on again and read the current indicated in the meter. Tune C11 until this meter shows a marked "dip" down in reading. Testing L3 with the loop lamp or a neon should show a brilliant glow indicating RF oscillators. Connect up the aerial coupler and tune up, when the anode current should again rise. By adjusting the bias, the tuning of the tritet and the taps on R10 to give optimum voltages on 807 screens and 6V6, tune up for maximum output.

In conclusion, apologies for the rather poor photograph, which is however good enough to show the general arrangement. And when you have finally got things working well, how about getting a nice little cabinet to take the TX. It really will make an attractive little unit then and will impart quite a professional finish to the versatile little transmitter.



International Short Wave League

Monthly Notes

Annual Subscription 1/-

First Again!

YES, this month we add yet another service to those already available to ISWL members. It is a service which the fraternity has needed for some time but which no one seems to have provided. To come to the point we can now offer members a Query Service dealing with **Surplus Radio Gear**. We all owe a big vote of thanks to member Ron. E. Hare who has so kindly come forward to offer his services to the League. Here are some details which prospective enquirers should carefully note:

(1) Queries will be dealt with concerning data on surplus radio gear.

(2) Complete circuit drawings cannot be undertaken.

(3) There may be some delay with replies in certain instances due to the fact that some obscure gear may take considerable research to trace.

(4) There is no charge for this service, though a S.A.E. must be enclosed with any correspondence. Also your ISWL number must be quoted.

(5) QRA of the service is R. E. Hare, 22 Osborn Gardens, Mill Hill, London, N.W.7.

CHANGE OF ADDRESS—PLEASE NOTE

Translation Service (Oriental): now M. Preston, 15 Temperley Road, London, S.W.12.

BC Station Query Service: now Leicester Telecommunications Laboratory, ISWL Query Department, 36 Woodstock Road, Leicester.

AND STILL MORE!

Exeter TR: now E. G. Wheatcroft, 34 Lethbridge Road, Exeter.

Hampshire CR: now handled by the ex-Portsmouth TR: R. Masters, 62 Battenburgh Avenue, North End, Portsmouth. Local members please copy.

S.W. London: now B. Ganly, 165 Ravenslea Road, Balham, S.W.12. Will local members please contact Mr. Ganly concerning formation of a Chapter?

Local Notes

S.E. London. Our Chapter in S.E. London (Clifton Amateur Radio Society) makes steady progress and records good attendances. Morse classes are held every week now and half of the Chapter strength will be sitting for the next Amateur Exam. It must be the gypsy in 'em—another change of club room is contemplated! The club

now holds regular listening contests amongst its members which prove to be very popular. (Sec.: W. A. Martin, 21 Brixton Hill, London, S.W.2.)

Hertfordshire. Good news from the county this month. Under the guidance of the TR the Barnet Chapter is now doing well. Meetings are held on the 1st and 3rd Thursday of each month and from what we gather there is plenty to interest the members. Programme for the winter includes the construction of a 60 Mcs. portable receiver complete with portable rotary aerial, regular listening contests, instruction in radio construction work, talks by members and the "usual rag chew." Though the club is 100 per cent ISWL, any interested reader in the neighbourhood is assured of a warm welcome at any meeting. Details may be obtained from the address below.

Watford is another area to boast a Chapter, thanks to the efforts of the CR. Next month we hope to be able to give full information of the new club's activities but any members who are interested in joining the Chapter should write at once for details to the CR. (Sec. Barnet: F. Randall, 15 Windsor Road, Barnet. Sec. Watford: R. W. S. Halsey, 7 North Approach, Watford).

Surrey. Following the precedent set by Essex, the CR is now reorganising his county into districts. The first appointment is that of G. Lovelock for North East, who is anxious to form a Chapter. Members in the area are invited to contact him at the QRA given in this month's list of new representatives. The CR is anxious to hear from members willing to act as representatives, so what say O.M's.

(Sec.: G. E. Smallbones, 31 Bramshaw Rise, New Malden.)

New Representatives

South Wales: W. D. Lyons, G8GT, 123 Malpas Road, Newport, Mon.

Edinburgh: J. Stirling, Home House, Duddington, Edinburgh.

N.E. Surrey: G. Lovelock, 8 Monks Road, Banstead.

Co. Kerry: M. Nunon, Caherslee, Tralee, Co. Kerry.

Bandon: E. O'Driscoll, The Glue Yard Farm, Bandon, Co. Cork.

Wanted! Representatives for Cornwall, Gloucestershire, Leicestershire, Northumberland, Nottinghamshire and Wiltshire. Also a TR for Liverpool. Any offers?

Are you a BC fan? If so, you will want a supply of the new BC Station Record Cards (actual size 6" x 4"). With the aid of these index cards a flexible file of BC stations can be made complete with all relevant data. These cards may be obtained from HQ at 3/- per 100, post paid. We are now preparing a companion index card for use by amateur band listeners and licensed hams. Details will be announced at the earliest opportunity. Whilst on the subject of League supplies, we would like to mention three-colour ISWL lapel badges are now on order, though delivery is not expected for a few months.

Freq:	Kcs.	STATION:
LOCATION:		
SLOGAN:		
OTHER FREQ's:		
SCHEDULE:		
STANDARD TIME:		DISTANCE:
ENGLISH PROG's:		
IDENTIFICATION SIGNAL:		
POSTAL ADDRESS:		
REPORT SENT: QSL REC'D:		
FIRST HEARD:		POWER:

This is a "SHORT WAVE NEWS" Record Card
 An amalgamated Short Wave Press, Ltd. 57 Maude Vale, London, W.9.

Parlez vous Anglaise? Our Oriental Language translator informs us that in recent months he has received requests for translation of copy in Italian, Catalan, Flemish, German, etc. Please note that the only European languages that this section handles are Finnish, Magyar and Russian, apart of course from the Oriental tongues.

Service: A letter from PCJ expresses appreciation to F. H. Vincent, ISWL/W882 who sent the station a complete recording of a North American beamed transmission, as received in Beaver Falls, Pa. This is the SWL at his most useful advantage. Are there any other members who are using recording apparatus? Is so please drop a line to HQ.

Junior Op. Congrats. to joint-CR's Mr. and Mrs. P. A. Pyatt on the arrival of a son on November 2nd. Local members please note the new QRA (yes another one!) —No. 1 Woolley, near Bath.

Esperanto: Ken Goodley, Essex CR, wonders if any members are interested in this universal language. If anyone would like an Esperanto section please contact Ken at 34 Blenheim Avenue, Valentines Park, Ilford.

The QRP SWL: Alec Jotcham, Devon CR, puts forward a suggestion to form a section for the "low power listener." He says that the transmitters have their QRP club now so why not a section for the SWL who relies upon one or two valve receivers for his DX-ing. This idea has possibilities and we would appreciate comments from members interested in the subject.

SUBSCRIPTION REMINDERS

Though we send a renewal reminder slip to each member as subscriptions become due, many members are lax in forwarding on their dues. It would be greatly appreciated if members would please let us have their "bobs" as soon as possible as this will save us considerable bookwork. Thanks, O.M's.

Subs. due this month are from members in the block 443-515. Next month's renewals are due in from members 516-664. Whilst on the subject there are still a few overdue up to the number 442.

MORE LOCAL NEWS

Preston/Southport. TR Claude Aspinall wishes to draw readers attention that weekly meetings are now being held at Southport Technical College, each Thursday evening, in addition to "unofficial" meetings practically every evening at his home QRA. The Chapter already boasts a membership of 32 which is excellent progress. Anyone living within reach of the Chapter is invited to contact the TR at "The Willows," Fermor Road, Tarleton, near Preston, for fuller information.

Yorkshire. (Report from the CR—P. Lumb, 25 Pearl Street, Starbeck, Harrogate). York Chapter is now firmly established and holds meetings at the TR's QRA every second Tuesday in the month, Morse classes are to be arranged and most members are giving talks on matters of interest to the SWL. At Rotherham, the TR is busy trying to find a room for meetings and for use as a workshop. Meetings are irregular at the moment but we hope to have more details soon. Sheffield is the least fortunate, as only the TR and one other member are at present active! However, they get together frequently and hope soon to increase membership and stimulate enough local interest to form a Chapter. Offers of co-operation from the above mentioned districts would be highly appreciated.

Essex. Regular meetings at Dagenham commenced on January 7th at Valence House, Becontree Avenue, Dagenham. Meetings will be continued at present every Wednesday from 7-10 p.m. Details may be obtained from the CR: K. R. Goodley, 34 Blenheim Avenue, Valentines Park, Ilford.

The Sun and Radio

By P. J. Jooste

Secretary ISWL Astro-physical Section

(Editorial Note: The sun is of great importance in our radio work, solar activities producing most of the variations we experience on the short wave bands. In order to allow a greater appreciation of what really happens we have arranged for a series of articles to appear from time to time dealing with some aspects of this intriguing subject. The first article is in the way of a preliminary, dealing as it does with some factual material about the sun. Further articles will explain such matters as fade-outs, atmospheric disturbances and so forth.)

THE sun is 92,900,000 miles (or 149,500,000 km.) distant from the earth and at this distance it takes a radio wave $8\frac{1}{2}$ minutes to do the journey. Other figures about the sun are that its diameter is nearly 110 times that of our planet, its mass is 330,000 times larger whilst its volume is well over one million times that of Mother Earth. In consequence, the attraction of gravitation at the surface of the sun is about 28 times the attraction of the earth on bodies at its surface. A man under attraction so great as this would weigh two or more tons and would be crushed beneath his own weight! The weight of a body, of course, being simply the pull of gravitation on it.

When astronomers speak of the sun they mean the whole body of the sun—inside and outside; we can only see its surface, which is known as the photosphere, or light-sphere, because it is the part that radiates light and heat. When the sun is observed through a telescope we see that its surface presents a mottled appearance like grains of rice. This effect is probably caused by the matter of the photosphere as it cools off, continuously falling back into the still hotter interior of the sun and being replaced by gaseous matter arising from inside.

Dark spots occasionally appear on the surface of the sun. The number of these so-called "Sun Spots" vary regularly, rising to a maximum approximately every eleven years. At the beginning of the cycle the spots begin to appear in high latitudes of the sun and gradually break out nearer the equator as the years pass. On the eleventh year of the cycle the spots again appear in the higher latitudes. This eleven-year cycle of disturbances in the sun manifests itself in other ways.

When the sun is totally eclipsed by the moon, the shape of the Corona may be observed. This is an exceedingly rare envelope of gas extending half a million miles from the sun's surface and its shape varies during the eleven-year sunspot cycle. At maximum, it is equally radiated in all directions whilst at minimum it appears as a pair of "whiskers" on the sun's

equator, with a wisp of hair on the North and South Poles.

The eleven-year cycle is also manifested by effects observable on the earth—magnetic storms which affect compasses and radio fade-outs with which every ham is familiar. These occur when spots are visible on the sun, but they sometimes happen when no spots are visible. This will be dealt with in a later article.

Aurorae are also closely related to the sunspot period. As the sun revolves on its axis, the spots are carried with it, passing round the sun to appear at the same apparent position as seen from the earth in approximately 27 days. The time of rotation varies for different latitudes, for at the region corresponding to the equator the period of rotation is 25 days; at latitude 30 it is 27 days; in the region corresponding to our polar region the period is $35\frac{1}{2}$ days. Sometimes a spot is found to move in latitude whilst crossing the sun's visible surface and differences like this go to show that spots are not firmly attached to the sun's surface but are more or less drifting having movements of their own. It is the high-speed particles shot out from these spots which indirectly cause radio fade-outs by their effect on the ionosphere. It is now known that the moon also causes ionospheric disturbances.

There is evidence that the earth's average surface temperature is lower by about a degree when sunspots are most numerous. Measurement shows that there is also most probably an eleven-year variation in the rate at which the sun radiates heat and light. Now, when light falls on an object it creates a pressure—the brighter the light, the greater the pressure. Ordinary light produces very little pressure but the bright light from the intensely hot matter at the sun's centre (40,000,000 degrees centigrade) actually produces an upwards pressure of some hundreds of thousands of tons to the square inch. The internal light of the sun is not of the same wavelength as visible light but rather similar to that of

(Continued at foot of next page)

My Favourite Receiver: No. 14

By H. Armour, ISWL/G325

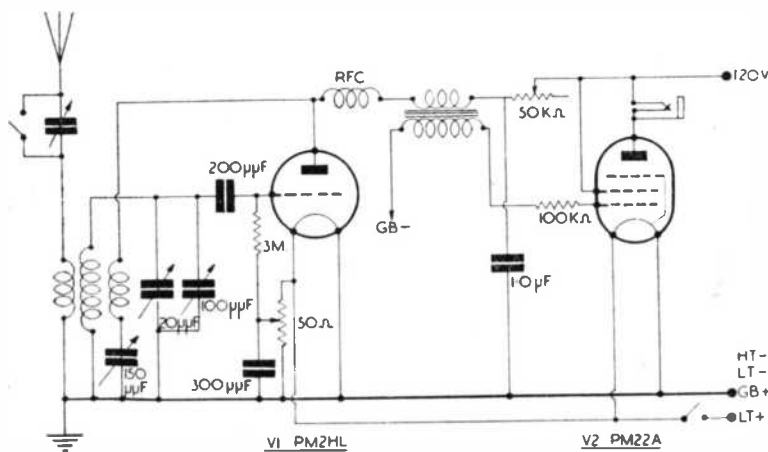
THE receiver shown herewith has proved so successful and productive of such fine results that it has become the favourite of G325 though it is of comparatively simple design. The circuit is a straightforward 0-v-1 with but few "refinements." One point of interest is the potentiometer in series with the HT line, which is by-passed with a $1\ \mu\text{F}$ capacitor. Careful adjustment of this potentiometer will allow for the ideal HT voltage to be selected under all working conditions and since it does to some extent control the amount of regeneration it could easily be used as an actual reaction control.

Another item of interest also concerns regeneration, and that is the potentiometer

in the filament circuit. It will be found that by using this to control regeneration a great improvement will be affected. This potentiometer should be adjusted to give best results and then left strictly alone.

When the original receiver was tested, a high pitched whistle (LF instability) was encountered which made final adjustments to tuning in weaker stations rather troublesome. The $100\ \text{K}\sim$ resistor inserted in the grid circuit of the output valve cured this trouble.

The set is built on a chassis measuring 10in. x 7in. x 2½in. and the panel is 11in. x 9in., both of which are of 18 swg sheet copper. Provided that reasonable care is used in assembly, and layout, loudspeaker reception at fair volume can be obtained on very many transmissions. Altogether, considering its size, the receiver can be well commended as an easily built DX-puller-in. Interested readers who have any queries are invited to contact Mr. Armour at "Lorain," Green Lane, South Wootton, Kings Lynn, Norfolk.



X-rays. Matter bombarded by X-rays, which themselves exert a pressure on it of hundreds of thousands of tons per square inch, and when raised to a temperature of 40,000,000 degrees C are thoroughly reduced. The atoms are broken down to a fraction of their normal size and take up much less space. The reason for this is that the matter can still go on behaving like a gas even if its density is thirty times that of water. Another curious quality of gas in this condition is its opacity and the external gas of the sun is extraordinarily

opaque unlike the translucent air of the earth's atmosphere. The remarkably sharp edge of the sun's disc is proof of this fact.

Radiations are a form of energy weight. This property of radiation enables it to exert pressure on the bodies it strikes. Anything that radiates is losing energy and consequently weight. Powerful radiators like the sun lose much weight, in fact it loses 300,000,000 tons of matter every minute—some stars lose even more than this, and it should be remembered that the sun itself is actually a very small star.



AROUND THE SHACKS

●
No. 13. VSIBX
●

AT present the call VSIBX will not be heard on the air, as the operator, Victor Thorne is now back in G-land. However, he expects to be back in Singapore some time between April and June, 1948, and so it may not be long before we hear the familiar call again.

First interest in amateur radio started in 1934 when the hobby of DX listening received much attention. From then until the outbreak of war a variety of home-built receivers were used, ranging from an 0-v-0 to an 8 valve SH. Apart from DX, experimenting with various circuits and aerials took up much time. During the war, Victor decided to try for his ticket at the earliest possible opportunity and this came whilst in Singapore.

VSIBX was first licensed in August, 1946, and operated from the Naval Air Station, about ten miles north of Singapore city. The station started off with three home-built transmitters, for 7, 14 and 28 Mcs. The first two were very similar and used 807's (of Jap manufacture!) and the ten metre rig was a conventional three-stage, rack built effort with 6L6 (Tritet), 807 (DB) and push pull 834's, running at around 100 watts. Several types of aerials have been used, ranging from dipoles to large fixed beams and a three-element rotary for 28 Mcs. The receiving side was ably taken care of by a Marconi CR100.

Like many of us, VSIBX has a great prejudice against 'phone and therefore he is a 100 per cent. CW man. Owing to the scarcity of adequate accommodation, the transmitters were remotely controlled from about fifty yards distant. Later on, when conditions improved, all the gear was gathered together into one shack, a corner of which is shown at the heading of this article.

The location was excellent as the shack was on a hill and the ground of thick clay. Many will be envious of the six 80 foot metal masts that were available, as Victor says, "to solve the aerial question." DX working was the main interest, although

time could always be found for chinwags with old pals like G2QO, 6ZO and 5LI. In due course VSIBX qualified for the BERTA, WAC and WBE certificates on 28 and 14 Mcs., with 44 States and 99 Countries worked. (Tough luck you couldn't get the extra one O.M.!) An effort was made to WAC on 7 Mcs. but South America proved to be the stumbling block. Whilst on the subject of 7 Mcs., it is of interest to note that one of IBX's colleagues, VS1AF, worked exclusively on that band. His best DX was Wo, which is pretty good going from Singapore. 1AF spent a great deal of his operating time calling G stations but never succeeded in obtaining a QSO although he had quite a few contacts with other Europeans. Probably the G's were busy working cross-town!

POINTERS FOR THE S.W. REPORTER

No. 3: Judging Modulation

When reporting 'phone signals, listeners should try and give some idea of the depth of modulation. Without some form of modulation percentage meter it is rather difficult to give a report quoting the percentage of modulation with any degree of accuracy. You may hear some phone station say to another "Your percentage of modulation is about 60 per cent. old boy." Such a report, unless a cathode ray, or other type of modulation meter is in use, is just humbug and of no value at all.

It is possible, though, to sort out a grossly undermodulated signal from a grossly overmodulated one. If you hear a phone signal, the speech of which is distorted badly and which is spreading several degrees more than the average for your receiver then the chances are that the signal in question is heavily overmodulated. If on the other hand, you tune in a strong carrier which, when you put the BFO on, is estimated to be around R8-9 but the speech of which, without the BFO on, seems only R6-7, then the signal suffers from lack of modulation.

On the Ham Bands

Conducted by "CQ"

● 14 Mcs. News

WITH rather erratic conditions it is not surprising to see a decrease in the amount of DX in members logs this month. Though signals have reached very high strengths at times, fading has been troublesome. A notable point has been the prominence of North-South signals (OX, ZS, etc.) and lack of punch from East-West. However, for those that searched much of interest was to be found.

A. Baldwin, G193 (Leytonstone) has been fortunate with the DX, including C7tk, FQ3at, HH3ld, J2imr, uau, 3aad; KAlabt, ab, hr, 6fa; KH6ij, KL7ll, mv; KM6aa, KP4bl, kp; OQ5av, OX3md, 5jj; UH8af, VE7hc, 8ay, og; VK2zc, 4rf, 6ru; VP8ai, VS7ac, VU2bf, gi; XZ2dy, ZC6aa, ZD4ab, am; ZL1mr, 4ck; ZS6gl. On phone CO8MP, HC1AQ, HK1FQ, HZ1AB, LU5AD, OX3BD, PY4IK, TI2KW, XZ2HP, YV5AB, ZB1AE/MM, ZC6JL. G193 mentions that YV5AB uses 150 watts to a 3-element rotary six ft. high! Also that ZD4AM is looking for G contacts on 14 Mcs. during early mornings.

Leslie Waine, G328 (Yeovil) says "how about printing some logs from the 'straight' boys for a change?" Leslie opines that we have too much from some of the "big-job boys" who just twiddle the knobs. He also gets browned off with seeing the regular ones mentioned each month. G328 winds up by stating that this does not mean he wants preference himself, but rather that he would be interested to see more logs from other fellows with simple gear which call for more operating skill. First of all, many of the "regulars" use straight receivers. In order to make the situation clear in future will contributors please state the type of RX used on their reports and this data will be published together with their news each month. Now about seeing the same names each month. The point is that this feature is intended to convey news and views of DX and is not intended to be the medium of self-glorification. Therefore the best news is picked out each month for inclusion, irrespective of what gear the contributors use. Leslie is right in that the owner of a small receiver is often a more skilled operator than some who have multi-valve jobs. The new Monitor Sessions, however, will be a good test of this and it will be interesting to see exactly how the straights will fare against the supers. It's up to you to prove your case!

A. H. Onslow, G1555 (Hove) is one of the energetic ones who get up at 0600 when "anything from the Pacific may pop up,

and usually does." Some examples last month were W9IYQ/KJ6, KX6AF and KP6AB. Not to mention "J's by the dozen." Bert has improved his CW and logged three new countries, viz.: UQ2ab, UB5bk and UA9kua. Other interesting pieces of news from G1555 are I3KTA who gave his QRA as Radio Club of Italy, Box 260, Rome; a comic QSL from the 15-watt TG9JK and the logging of KG6AD, AG, AI, AV/VK9. Bert compliments ZL2BT for his consistent signals, having sent him a report for 17 mornings out of 22.

J. H. Endersby, GW703 (Old Colwyn) comments on the poor evening conditions generally, though VK's have been well received on a number of occasions particularly 5RR in Adelaide. The Far East supplied XZ2DG and the Middle East I6ab and MD2c. James has been listening on 21 Mcs. and finds that it is already occupied, having logged UA4fc, F8jv and OH6nz. He recommends WBU (21260 kcs.) as a good "marker." Has anyone else heard anything interesting on this band?

D. G. Garrard, G632 (Ipswich) does not complain about conditions but mentions plenty of QSB and QRM. His best DX was CO8MP, HH2LD, HZ1AB, MD9AI (MB?), OQ5CL, OX3BD, BG, GC, GF; ST2AM, ZC1AL, 6AH, JC, JL, JP; ZS1DS and 1GR.

A. J. Slater (Southwick) with others remarks on the amazing signals of VK7AZ who has been R9 plus when no other VK's could be heard. 7AZ only uses 10 watts, which all goes to prove the importance of the aerial system (in this case a 3-element rotary). LZ1AB was heard to say "I will send my card with my QRA on it," which seems to ring a bell somewhere! Interesting ones logged were C1JC, HI6EC, KA7GC, KL7IT, VP9F, VU2EJ, VS1CD, ZE2JN, ZS1GR, 4D, 6BY, GR and many Pacific stations. CP5EP responded with a QSL by registered air mail within a fortnight. Nearly a record! Also on the QSL side, four cards from W-land brought the total of States verified to 41. Has anyone got the lot?

R. Vincent (Enfield), short and sweet, comes up with MD1F, TF3EA, VP5AS, VS6BE(?), VU2BK, VS2BU, YN1HB and ZS6FN. A trip up to 3.5 Mcs. produced the interesting XPAoWZ which was operating mobile at an exhibition on Walcheran Island.

C. Southall, W990 (Philadelphia) logged these in 24 hours: CP5EP, EL5A, KL7KO, MD2C, OX3GG, MC; PZ1L, TI2VMB, VP9L, VK7AJ, ZL2BT, GX, JD.

● 28 Mcs. News

A. J. Slater reports the usual run of DX and just one new country, MD7RJ. Two other nice ones were KG6AW/VK9 (Admiralty Islands) and W2WMV/C9 (Moukden). Amongst the fine log we see CR9AG, EL2A, 5A; J9AAI, AGT; MD6AR, ST2JF, VP4TT, 6HI, HR, ZI, 9F; VQ2DH, VU2CD, LJ, 7BR; ZD2KC, 4AL; ZL1CD.

D. G. Garrard pulled in, amongst others, CP4CO (is this VP4TO?), J9AII, NY4AB, OQ5BA, ST2JF, VP4TAI, VQ4BYE (surely 3PYE?), VU2BF, LK, 7BR; ZE1JZ, ZL1CD, 2BM, 3JC; ZS1DC, P, T, 2CI, 4H, 6BG, CY, LF, U.

D. Robertson, GM105 (Wick) is now all on his lonesome as GM3AJX (13 miles away) is QRT and the nearest 28 Mcs. ham station is 2UU nearly eighty miles distant! Don reports conditions as very fb with no dead days at all, signals coming in daily from 0900-2000. The pick-of-the-bunch are J8AAA, 9AAD, AFG, ABK, ASA; KV4AD, PK2RK, VP4TT, TU, TV; VS1CA, W2WMV/C9, ZL2RP, 3HZ. Also four VK, 59 Wo, 8 W6 and 12 W7.

J. H. Endersby found the band dead on many evenings with occasional breaks when such DX as ZS2CI and KH6AR came through. Stations of note were VK2GU around 1200, ZS4H (1600) and VQ3EDD (1230). With WoZKB, James logged his 46th State and now needs only Nevada and New Mexico.

R. Vincent had C1CH, J9AAS, MD5KW, AF; VP4TT, TAX; XZ2YT, ZC6LF, JP; ZD2KC, ZL2JA, ZS1T, P, 2CI, ZZ.

A. Levi, G138 (Belfast) reports CR9AG, AM; EK1BI, EL6A, MD5LR, 6AR, 7RJ; VK6MU, HH, FC, HL, RU; VP4TZ, 5RS, 6CDI, 9F; VQ2JM, XZ2DM, KM; ZE1JB, ZL4BN.

● Black List

Dear, dear! We might have known better than to start this section. E. A. A. Hardwick blacklists OQ5BR and now John Theobald says he has a QSL with appreciative remarks thereon. John also knows someone who not only got a card but had his IRC returned from VO2AF! We have also received, during the month, more long lists of non-QSL'ers. Reference to the back issues show that a good proportion of those black-listed have definitely obliged with cards at various times. So, where do we go from here? Your scribe feels personally that Black List should be dropped as it only tends to confuse the issue. Let us know who you have cards from and they will be listed in the QSL section. Also let us know about stations who categorically state that they cannot reply to listener reports. Otherwise . . . Finally, Bill Harris reports a card from YR5X after a 14-month wait.

Ten Metre Review

(Up to December 18th)

By C. Ranft, G5RF

Again conditions have been controlled by excessive rather than low MUF's. Daytime MUF's have reached very high figures over many paths resulting in poor conditions due to absorption along the route, though at end of period the usual midwinter drop has occurred tending to improve conditions over long routes on 28 Mcs. and also in an earlier closing of the band. On most mornings, opening has been about 0730 for VU-VS7, though sometimes ZS and/or ZD4 beat them to it.

Europe. Nothing much under 1000 miles by normal propagation, though many "pre-skip" signals were heard by DX-scatter.

Asia. VU2CD and VS7PS audible very early on most days—sometimes 0700. CR9AG, VS6AC, VS6AE well received rather later lasting till mid-day.

Africa. Rather shaky, apart from North. On a few days as early in the period, workable early as 0700. Peak for ZS/ZE occurs at 1500-1600 but communication usually difficult due to North American QRM.

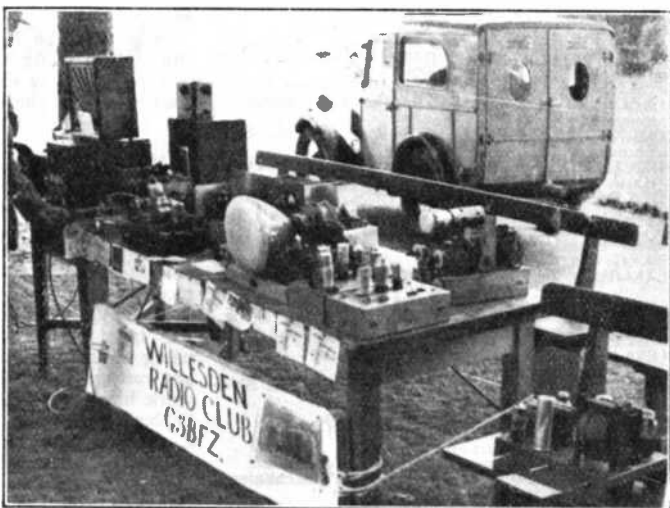
North America. Just like clockwork from 1230 onwards. Signals lower about November 12th and December 15th. Early in the period, VE4/5/6/7, W6/7 fairly easy, peaking around 1800.

South America. Below par. On poor W days, has been heard just as the W's are going out (1800-1900), e.g., Dec. 6th, when CE3AB, 3AE, LU7BU were all good S7/8 signals for a limited period. However, most days produced some signals from 1030—when they could be sorted out from the QRM. VP4 was the easiest.

Oceania. VK not so good as early winter, usually fading before noon. Occasionally appeared as early as 0830. ZL was workable many mornings peaking around 0800-0930. ZL1AX was the most consistent signal accompanied frequently by violent echo. Tests with this station proved that when echo is present it is possible to work via the South or North Pole route at will. Late evening long route QSO's have been out of the question.

Crafty Corner. W2WMV/C9, Mukden, 28040 kcs. EP1AL, "somewhere in Persia," 28030 kcs. VU2QV, Karachi, Pakistan, 28350 kcs. UH8AA and UH8AF, Ashkabad, Turkmanistan, 28050 kcs.

Part of the show of members' gear put on by the Willesden Radio Club (G3BFZ) at the Willesden Hospital Carnival. The Club also had a tent, with Tom Vallard in command, in which visitors were invited to put forward radio queries



● Gossip

Harry Pain once again sends along his budget of news from XZ. XZ2YT has now left for Blighty, leaving only 2DN and 2HP to represent Mingaladon; the former is on 28 Mcs. exclusively and the latter on 14 Mcs., with 24 watts. Harry still has a big batch of QSL's for the operator of VU2PB and cannot trace his present whereabouts. Can any reader help, please?

Radio Station ST2AM must look something like Victoria Station during the rush hour! Nearly all the original crew are back home and the personnel is constantly on the move. Johnny Davis is the latest one to return to G-land. Before he left, Johnny tried his hand at 28 Mcs. but all he could hear were inter-W QSO's. He asks if they use 10 kW. inputs these days. Well, we heard of a pre-war W7 who stated on his card that the input was 7 kilowatts!

Another ex-ST2AM op is Reg Holland, who now holds the call G3BPE. He is all in favour of our newly-formed QRP Club and deplores the present trend to higher power, reckoning that the QRO boys are not amateurs in the true sense of the word, as with so much "joy" in the sky-wire they are bound to get out. The real ham is the fellow with just a handful of watts, says Reg. If only more people would hold that view! Reg is now on 7 Mcs. and would like to see more reports of activity on this band. Well, we are willing if only . . .

Whilst on the subject of 7 Mcs., let's see what Miss Pat Wright (of G3CCA) has to say about it. On morning on 7 Mcs. five G 'phones on the CW end of the band were having a "round-table" QSO. They were all complaining about how bad conditions

were, interspersed with such prize remarks as "OK, Harry, on your toothache. Yes, George, I will see you on Tuesday. O.K., Fred, I cannot hear Alf as conditions are so bad this morning." Underneath this gibberish were dozens of W stations, 38 of which were identified and five of them worked—despite the "bad conditions." More would have been worked but for these 'phones working local in the CW portion of the band. Pat says she thinks these merchants are very un-civilised, which is a pretty good summing up. It had been intended to place the five offenders in the Lids Section but maybe they deserve a little space all to themselves. (Who said "how deep?")

G2FAY is one of those rare people—he looks for DX on forty metres! With 25 watts input he has hooked W4kvx, W5bdl, ZL1lz, and lashings of East Coast W's. Other interesting ones have been UA3kka, UA3tl, UQ2bd, and other Europeans. The receiver, by the way, is the old favourite—the Eddystone "All World Two," and the aerial a half-wave Hertz. Has nobody else had any luck with DX on 7?—

● Query Corner

Business is slack this month. A. Baldwin submits the info that PX1C is a definite phoney. The same reader asks about I6AB and KX6AF. The former is ex-11AHC/I6 and can be reached through either RSGB or ARI. The latter is presumably at Bikini Atoll. A. H. Onslow wants the gen on I3KTA. No can do, O.M. John Clarke says what about LZ1SV on 3.5 Mcs. To us he is just another ZA2LA, whom we worked on that band some time back.

● **Topical DX QRA's**

C1KC: Box 77, Shanghai, China.
 C7TK: Box 52, Peiping, China.
 C7LP: Box 150, Peiping, China.
 CR9AN: c/o Post Office, Macao, via Hong Kong.
 H1EC: E. C. Corrie, Barahona, Dominican Republic.
 HS1LN: (via W6WLG) 811 Page Street, San Francisco.
 HHZCL: C. Lebreton, rue Rigaud 55, Fetiam-Ville, Haiti.
 HHZLD: Box AD5, Port-au-Prince, Haiti.
 HRICE: c/o Consulate, Tegucigalpa, Honduras.
 JSAA5: 315 Composite Wing, APO 929, c/o PM, San Francisco.
 JSAA6: 1st Infantry, APO6, c/o PM, S.F.
 KALABU: No. 6D Santiago Street, Manila, Philippines.
 KAIWV5: 81302 Service Det., Cavite Navy Yard.
 KA6FA: Box 392, Iloilo.
 KH6LF: Box 1377, Honolulu, Hawaii.
 KB6AA: H. C. Robinson, Canto Is., Phoenix Group, South Pacific.
 KC6AF: Major General F. H. Griswold, HQ 20th Air Force, APO 235, c/o PM, S.F.
 MD6AR: c/o R.A.F., Habbaniya, Iraq.
 PK3CK: 5 Slamet Street, Sourabaya, Java.
 ST2JF: R.A.F. Khartoum, Sudan.
 ST2MP: c/o Posts and Telegraphs, Khartoum.
 VK9BI: Arnel Wilkey, c/o DCA, Finschhafen, Territory of New Guinea.
 VP4TZ: APO 869, c/o Postmaster, Miami, Florida.
 VP4TAE: Navy 117, FPO, New York, N.Y.
 VP5AS: APO661, c/o PM, Miami, Florida.
 VP6HR: H. Reece, 6 Avenue, Belleville, Barbados.
 VP6JC: c/o Telephone Company, Bridgetown, Barbados.
 VS3AF: Box 803 No, Banio, Malaya.
 VS2CB: c/o Telecommunications Dept., Kuala Lumpur.
 VU2RV: c/o No. 2 High Speed Wireless, Eastern Command Signals, Ranchi, Bihar, India.
 YA3B: Box 5, Kabul, Afganistan.
 (Acknowledgements to A. J. Slater. A. H. (mslow, Arthur Levi and Charles Southall for several of those listed).

● **Odd Jottings**

YA3B claims to be OK in Afganistan (see QRA list). We await the arrival of a QSL with much interest! . . . If you want Spitzbergen, listen for LA4LA. QSL to Inguar Solberg, Jorgen Moesgt 1, Oslo . . . YR5Q says QSL to HB9AG, MD1D via RSGB and VS4VR via VS2AL . . . Has anyone any data on EA8CR? Or PZ2K? . . . From the RSGB Bulletin we hear that these frequencies are being used by the services in the Thames area: 1740, 1780, 1870, 1875 and 1930 kcs. Don't clutter up these frequencies with QRM, O.M's . . . Also from the "Bull": G2MI received this letter from the U.S.A. "Dear G2MI, I have never heard you on the air, but would be very grateful if you would send me one of your QSL cards so I can complete my collection. Thank you very much"!! As a matter of fact, 2MI is not the only one we know who has had a letter like this. We had one at the office some time ago from a reader in London! . . . MX3YT is said to be on from Manchukua. Anyone got him yet? . . . We also hear that HZ1AB is now on from Bahrein . . . FG8AB is another one worth chasing up . . . Prefix of Netherlands New Guinea is now PK7 and not PK6.

● **GO2HEL**

Some months back we made reference to the station using the above call-sign, which was reported by G2SO. The station insisted that it was in the Orkneys and that GO was the new prefix. We labelled the station an "ether polutor" and classed it with the usual run of pirates. Now we doff our caps to the operator for we know the full story. GO2HEL called on us in person the other day!!

Here is the story. A certain enthusiast, conscious of the stupidity of many amateurs, most particularly the VFO DX-at-all-costs brigade, thought he would put his views to the test. So, GO2HEL came on the air, using around THREE WATTS. He not only got out but actually had G's lining up to work him. In fact he would not have had a better response to his CQ's if he had been a genuine AC4! All he had to do was to call CQ and he was set for the evening, and all with QRP. He says that most of the people he worked were genuinely "sold a pup" even when he gave his "QRA" as Radio GO2HEL, Ohbois, Ubinad, Lafter, Orkneys (!). Having proved his point, GO2HEL is now off the air. To us it just goes to prove that the dyed-in-the-wool DX brigade let their hobby blind their sense of humour—if any. Next time you hear a queer call, why not think before being caught hook, line and sinker?

● **Consistency Poll 2**

The Poll on South American stations showed that in most countries a definite station was the "star," with many readers agreeing on these independently. The final results were:—(Sequence is 14 Mcs. 'phone, 14 Mcs. CW and 28 Mcs. 'phone). Argentina: LU6AJ, LU7bh, LU3DH; Bolivia: CP5EA, —, —; Brazil: PY7AD, PY2aj, PY2QK; Chile: CE3AG, CE4ad, CE1AH; Colombia: HK3DD, HK1ck, HK3AB; Ecuador: HC1JW, HC1pc, HC1FG; Guiana (Br.): VP3LF, —, —; Paraguay: ZP6AC, ZP6ab, —; Peru: OA4M, OA4m, —; Surinam: PZ1A, —, PZ1M; Trinidad: VP4TJ, VP4taa, VP4TAX; Uruguay: CX2AX, CX1fb; CX1DB; Venezuela: YV5AB, —, —.

As many readers have requested listening periods of a competitive nature, the Consistency Poll will now be superseded by monthly Monitor Sessions. These sessions will not be for the easy DX but will be designed for the more elusive stations and often on bands that have been neglected for their DX yield. Here are the details of the first session:—

Monitor Session 1

Date: January 31st. Time: 2100-2230 GMT.
 Band: 14 Mcs.

Target: Stations within the Asian continent. Phone or CW.
 Deadline for logs: This office, first post, February 3rd.

Monitor Session 2

Date: February 7th. Time 1800-2000 GMT.
 Band 14 Mcs.

Target Stations within the African continent. Phone or CW.

Deadline for logs: This office, first post, February 10th.

Well, there we are, O.M.'s. If these sessions are to be a regular feature it is up to you to see that the support is sufficient. We will be covering all bands in due course and suggestions on selection would be greatly appreciated.

● **DX QSL's Received**

- J. **Beanoir, ZS516:** VK6FL, LU3DH, CZ2AX, VS7ES, ZD6DT and ZS5DF.
- A. **H. Onslow, G1555:** W6VKV/16, CT1NT, ST2KA, TG9JK.
- C. **Southall, W990:** CE1AU, VK3IK, HI6EC, VK2AG and XAFX.
- A. **J. Slater:** CP5EP, ST2KA, ZD6DT.
- D. **Robertson, GM1051:** ZS2DY, KH6GF, VQ5JTW, MD1D, ZL2GX, PY2CK, ZS6LF.
- D. **G. Garrard, G632:** ZC1AL, YR5X.
- C. **G. Tilly, G282:** VS7IT, AR8AB, W6VKV/16, UA3CA, C1JC, PK6XX, W3GZT/19.
- L. **H. Waine, G328:** W6QNW, oORE, ZEP; VE3BGM, 4IF; VU2BV.
- R. **Baldwin, G828:** J8AAB, VU2RW, KH6GF, KP6AP, SV1WE, VK2ZC, VK4KH and J8ASC

Nice Types

A monthly record of prize lids

G6 (up North) who QSY'd to 6900 kcs. "to get out of that CW" on the LF end of the 7 Mcs. band.

G5, in North West London, with clicks tuneable every 50 kcs. around the band. Also known as a notorious "swooper."

G8, not 1000 miles from Darlington, who said that he does not use CW as it is only used by beginners who don't know any better.

The humourist who is using the call of SP1V on 14 Mcs. phone!

G8 who "stood fascinated" as he watched a 15 amp plug burst into flames and melt! Who said QRP?

Coming Shortly!

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Amalgamated Short Wave Press Ltd

57 MAIDA VALE, PADDINGTON, LONDON, W.9

Quarterly DX Prediction

JANUARY to MARCH, 1948

Issued and prepared by the Leicester Tele-communications Laboratory, Monitoring Dept., near Leicester, England

Introduction:

For the purpose of these predictions it should be noted that four major communication circuits are used extending to (a) North America, (b) South America, (c) South Africa and (d) Australia. Reference to the Great Circle Map centred on London will show that the Australian circuit covers Asia and Japan.

It should be understood that to forecast these communication circuits for a period of three months the data is liable to slight errors particularly in relation to the "disturbed periods."

The Preceding Period:

During the month of October the daytime M.U.F. in this area (Northern) increased so that by the end of that month and the beginning of November the Noon (1200) GMT measured M.U.F.'s were around the 50 Mcs. region. This enabled V.H.F. communication to be established

on the (a) circuit and with this high M.U.F. value British stations heard the American and Canadian Stations on 50 Mcs. During the second week in November the circuit (c) was open for V.H.F. communication.

Ionospheric storms prevented the full use of the 28 Mcs. band for most part of the above period, otherwise reliable communication would have been maintained on all circuits.

With the Night-time M.U.F. being much lower a certain amount of "DX" was heard and worked during the late evening period on frequencies as low as 7 Mcs., but at the time of preparing this report (Mid-December) the low night-time M.U.F. make 14 Mcs. communication rather difficult on most circuits during the "late"-early evening.

There was very little ionosphere storminess during the period under discussion except for a very bad spell on the (a) circuit during October.

Prediction for January:

DURING January the M.U.F. should decrease slightly in the day-time and increase during the hours of darkness, this change being due to the "Mid Winter" effect and will be noticed during the early part of the month. Towards the end of the month the day-time M.U.F. will increase from its preceding value.

Communication to all parts of the world and on all circuits should be possible by using the higher frequencies during the day-time (i.e. 14 and 28 Mcs.) and the lower frequency bands during the night period (7 Mcs. for all circuits and 3.5 Mcs. for circuit (a)).

Ionospheric disturbances are usually not very severe during January and only minor storms should prevail during the first three weeks of the month with perhaps a little storm of greater intensity during the 4th week in the month the duration of which will not be greater than 48 hours.

the early hours of the morning on all circuits and very good "DX" should be recorded during this period.

Ionospheric Storms are not of great intensity during February and those which occur will cause slight trouble during the night-period. These are likely to occur during the 1st, 2nd and 3rd weeks of the month, the stormy period during the 2nd month is likely to be of greater intensity than the rest.

Prediction for March:

During March the M.U.F.'s should show a great increase during the night period with a slight decrease noticed during the day period. It is during March that large amounts of Ionospheric storminess is usually recorded, these may make communication very difficult of the lower frequency bands, but on the other hand may result in the communication being maintained on the (a) and (c) circuits by using the higher frequency spectrum (above 50 Mcs.)

The 28 Mcs. band should for (b), (c) and (d) circuits during the Noon period (1200) GMT with the (a) circuit "open" from the late afternoon until early evening.

The 14 Mcs. band should maintain good communication during all parts of the day, and for times see the summary for all circuits. In the 7 Mcs. the (a) circuit will not be "open" until around Mid-night, but stations in the Pacific area (d) should be able to be worked during the periods extending from early morning to noon (1200) and from early afternoon until mid-evening—all times GMT.

Prediction for February:

During February the M.U.F.'s should continue to maintain the increase which commenced towards the end of January, this increase will be recorded in both the day-time and night-time frequencies and communication should be easy over all circuits.

The 28 Mcs. band should be "open" for all circuits during the periods of day-light and early evening.

The 14 Mcs. band should be workable on all circuits with the (a) circuit "open" until well after Midnight (2400) GMT.

The 7 Mcs. band should be used during

Summary of 60 Mcs. Predictions for the same Period:

In the early part of this report details were given of the great increase in the M.U.F. which enabled good communication to be maintained during October-November period around the time of the M.U.F. recorded period.

It should be pointed out that under this heading the 50 Mcs. band will now be included as well as the British 58 Mcs. band due to the request of overseas users of these Predictions.

The M.U.F.'s will not reach such a high value as during the preceding period, but during the end of January the "W" stations should maintain communication on 50-54 Mcs. band with the Pacific area.

During February spasmodic reception may be recorded on the (a) and (c) circuits of the "G" transmissions, and during the stormy periods of March more records on 54 Mcs. should be broken and on spasmodic days reports may be made of 58 Mcs. reception on the (a) and (c) circuits.

Inter "G" working should present little difficulty during the period covered in this report except during severe Ionospheric storm periods.

Summary of conditions for all circuits

Time	GMT Frequency	Circuit No.	Month
0000	14 Mcs.	(a) (b)	Jan. & Feb.
	14 Mcs.	(a) (b) (c)	March
	7 Mcs.	(a) (b)	Jan. & Feb.
	7 Mcs.	(a) (b) (c)	March
0600	3.5 Mcs.	(a)	Jan. & Feb.
	14 Mcs.	(a) (c) (d)	January
	14 Mcs.	All circuits	Feb. & March
	7 Mcs.	(a) (b) (d)	Jan. & Feb.
0900	7 Mcs.	(a) (b) (d)	January
	28 Mcs.	(b) (c) (d)	January
	28 Mcs.	(b) (c) (d)	Feb. & March
	14 Mcs.	(c) (d)	Jan., Feb. & March
1200	7 Mcs.	(a)	January
	7 Mcs.	(d)	Feb. & March
	28 Mcs.	(b) (c) (d)	Jan. & Feb.
	28 Mcs.	All Circuits	March
1500	14 Mcs.	(d)	January
	14 Mcs.	All Circuits	Feb. & March
	7 Mcs.	Local Only	Jan., Feb. & Mar.
	28 Mcs.	(a) (b) (c)	Jan. & Feb.
1800	28 Mcs.	(a) (b) (c)	March
	14 Mcs.	(a) (c)	Jan. & Feb.
	14 Mcs.	(a) (c) (d)	March
	28 Mcs.	(b) (c)	January
2100	28 Mcs.	(a) (b) (c)	Feb. & March
	14 Mcs.	All Circuits	January
	14 Mcs.	(a) (b) (c)	Feb. & March
	7 Mcs.	(c)	January
2100	7 Mcs.	(c) (d)	Feb. & March
	28 Mcs.	(b)	January
	14 Mcs.	(b) (c) (d)	January
	7 Mcs.	(a) (c)	January
	7 Mcs.	(c) (d)	February
	7 Mcs.	(c)	March
	3.5 Mcs.	(a)	January

Binding for Volume Two

Readers who are desirous of having their copies of Volume Two bound will be pleased to hear that arrangements have been made with the same firm who did such an admirable job of Volume One. There has, however, been a slight increase in the cost this year.

Copies will be bound in cloth covered boards with the name and volume number printed on the front cover and spline. Covers of the magazines may be bound in or taken out as desired. Please remove covers if you do not wish them to be bound in with the volume. The price for binding is 8/- post paid.

Readers wishing to have their copies bound should send the twelve magazines, well packed and including the index enclosed with this issue, to the following address:—

J. R. Dunne,
19 Helmsdale Road,
Streatham, London, S.W.16.

The International Short Wave Club

Several members of the ISWL have written to say they have received circular letters from the above club, which claims to be the **only club to cater for hams all over the world** (sic). We wish to make it perfectly clear that the ISWL has no connection whatsoever with this, or any other, organisation. If the secretary of the ISWC reads this notice we should like to point out humbly that the ISWL has members in 50 countries in all continents, that the BSWL has overseas membership and that the RSGB is rumoured to have one or two members throughout the world!

Thank You

The Editors, Staff and Contributors of "Short Wave News" and "Radio Constructor," not to mention the ISWL, take this opportunity to thank all those kind readers who sent along Xmas cards and greetings. They came from all over the world and were of all shapes and sizes (one or two were specially hand painted!) and we really did appreciate them. Sincere thanks to all of you and we reciprocate your kind wishes for a successful future.

Country Panel

No. 15: Netherlands East Indies

(The position regarding the Javanese stations has been rather fluid for some time and it has been difficult to tie down definite channels for many of them. We have, however, prepared a complete list of stations currently operating. This has been the

result of much research and caused not a few headaches! Readers who are able to elaborate or who consider they can add to the information are invited to co-operate with us.)

Freq.	Call	Location	Schedule
2084	YBJ2	Djokjakarta	2230-0000, 0430-0730, 0930-1530.
2236	YDB	Batavia	Weekdays: 2230-0130, 0330-0530, 0730-1530 Sundays: 2330. (Sat.): 0630, 0730-1530.
2335	—	Kebumen	
2380	—	Bandoeng	1100-1500
2510	YDH	Semarang	Daily 1130-1500
2602	YDD	Batavia	Weekdays: 2230-0030, 0430-0715, 0930-1600 Sundays: 2230-0715, 0930-1600
2651	—	Malang	
2888.5	—	Purwokerto	
2970	—	Bandoeng	Daily 1100-1500
3015	—	Batavia	Daily 1130-1555
3024	YDA	Bandoeng	2330-0100, 0430-0715, 1000-1530 (on Sat. to 1630)
3183	—	Djarkarta	Afternoons, irregular
3240	YDI	Soerabaya	Weekdays: 2300-0100, 0430-0715, 0930-1515 (on Sat. to 1530)
3350	—	Solo	
3370	—	Soerabaya	
3410	—	Madiun	
3532.5	—	Pekalongan	
3630	—	Magelang	
3750	—	Kediri	
3797.5	—	Tjilatjap	
3986	—	Pati	
4000	—	Garut	
4120	—	Tegal	
4215	—	Purwokerto	
4363	—	Djokjakarta	Heard around 1200
4370	YDI2	Soerabaya	Daily 2230-0100, 0430-0600, 1030-1430
4600	—	Salatiga	
4630	—	Djember	
4724	—	Modjokerto	
4860	YDD2	Batavia	Same as YDD
4890	YDZ	Biak	
4910	YDB2	Batavia	Same as YDB
4930	—	Solo	
4950	—	Soerabaya	Daily 1000-1400
5030	YFAIO	Macassar	2230-2330, 0400-0630, 1000-1430
5085	—	Bandoeng	
5145	PMY	Bandoeng	1130-1330
5455	—	Batavia	0900-1330
5480	YCN	Pontianak	Daily 1045-1230, usually on YCN2
5620	YBJ	Djokjakarta	Same as YBJ2
6040	YDD	Bandoeng	Weekdays: 2230-0030, 0430-0715, 0930-1600 Sundays: 2230-0715, 0930-1600
6175	YDA2	Bandoeng	Same as YDA
6366	YDB3	Batavia	Same as YDB
6650	YCN2	Pontianak	Same as YCN
6720	PLT	Bandoeng	
6748	PMH	Bandoeng	1130-1330
6940	—	Padang	
7100	YDA3	Bandoeng	0415-0700, 1130-1330
7420	—	Soerabaya	

SHORT WAVE NEWS

Freq.	Call	Location	Schedule
7567	—	Soerabaya	
7997	PMD	Bandoeng	2330-0100, 0430-0715, 1000-1530 (On Sat. to 1630) Not used Sun. Mon.
8090	YCN3	Pontianak	Same as YCN and YCN2
9250	YFA4	Macassar	Same as YFAIO
9360	—	Raja	(Indonesian only)
9555	YDD3	Batavia	Same as YDD
9675	YDB4	Batavia	Same as YDB
9865	PLU	Bandoeng	1230-1400, 0000-0100
10060	PLY	Bandoeng	Same as PMD
10260	PMN	Bandoeng	1130-1330, Not used Sun. Mon.
10365	PLS	Batavia	1330-1430-1600. Sun. from 2330
10680	PLQ	Bandoeng	
11080	—	Macassar	
11001	YHM	Batavia	0900-0930, 1030-1230, 1400-1430, 1530-1600
11030	YDH2	Semarang	As YDH
11100	—	Semarang	
11440	PLO	Batavia	To U.S.A., Daily: 1430-1500
12273	—	Bandoeng	
13600	PMS4	Soerabaya	As YDI2
14555	—	Soerakarta	
14630	PLJ	Bandoeng	
14945	—	Batavia	
15145	YDC	Batavia	Same as PLS
15210	PLF	Soerabaya	
15310	YDB	Batavia	
15960	PLG	Bandoeng	1240-1415
17630	PMW	Batavia	Daily 1700-1800
18135	—	Djakarta	
18600	PLA	Batavia	As PMA but Sat. 1200-1300
19345	PMA	Batavia	To Netherlands, daily 1600-1645, Eng. 1645-1700

Trade Notes

RADIOVISION (Leicester) Ltd.

This firm has now released a further addition to its range of ham equipment, namely "The Hambander." The coverage is from 10-160 metres and the price is £22/10/- plus 10/- carriage and packing. No purchase tax is payable on the receiver, since the medium waves are not covered. From the specification, the receiver would appear to be a very fine piece of apparatus and we will shortly be testing a model, a review of which will appear in an early issue.

STRATTON & CO., LTD.

We have been informed by the manufacturers of "Eddystone" short wave equipment that they are now receiving orders for their "640" Communications Receiver from the United States. This is indeed a very gratifying state of affairs when Britain is supplying such receivers to the "home" of communications sets. Congrats, Eddystone!

H. L. SMITH & CO.

(289 Edgware Road, London, W.2.)

A very useful line for the transmitting fraternity is now available from the above firm in the shape of ex-WD variable inductors. Two types are available, though both are very similar. Type 1 consists of a 17 turn coil of 10 swg silvered copper wire, outside diameter being 3 inches. The inductance is varied by means of a wiper which rotates inside the coil. In addition to the direct reading dial, a vernier attachment gives a 0-360 reading. The unit is housed on a stout fibre assembly. Type 2 inductor is the same as Type 1, except that the assembly is of moulded bakelite and is smaller in overall dimensions. Apart from this, the drive is better and an independent course tuning attachment is provided. Of the two, we feel that Type 2 is the better "buy" though both units are well worth the moderate prices asked: 3/6 for Type 1 and 5/6 for Type 2.

Announcing the "SHORT WAVE NEWS"

BETTER REPORTING CONTEST

OUR Editorial of last month commented on the forthcoming contest to encourage a better standard of SWL reporting. We have pleasure in announcing the full details of the contest herewith. The results obtained from the entries will give us valuable material from which to base further activities in the interests of reporting procedure. Briefly, we have selected a given broadcasting station on which contestants are to base their reports. The report which is deemed to be the most useful from the station's point of view will gain for its entrant one year's free subscription to "Short Wave News" whilst the next best will be rewarded by a half-yearly subscription. Here are the rules and conditions of the contest:—

- (1) The station selected is "Radio SEAC" on 17770 kcs.
- (2) The report is to cover any times within the week February 7th-13th inclusive.
- (3) Reports are left entirely to the discretion of the entrants and may cover

any length of time within the prescribed period. They may take any form, either on standard reporting forms or otherwise.

- (4) Entries are to reach this office by February 20th.
- (5) After checking, all reports will be forwarded to "Radio SEAC" with an explanatory letter.
- (6) Entries will be judged by a board of expert BC enthusiasts and the winning reports will be decided with regard to usefulness to the station.
- (7) Winning entrants will be notified by post. The best entry will gain one year's subscription to "Short Wave News" and the second best six-month's subscription.

IF YOU ARE A BC LISTENER PLEASE SUPPORT THE CONTEST. THIS IS THE PRELIMINARY TO FUTURE ACTIVITIES IN THIS DIRECTION SO GOOD SUPPORT IS ESSENTIAL. THANKS, O.M's!

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

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BARGAIN. 38 set with 4 valves £1, also 4v. BCL set, speaker, midget, £10 or offer. W.B. speaker, 10in. with transformer, 30/- H. G. Swan, 452 Worsley Road, Rothamham.

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HALLICRAFTER SX25 12 tubes, V.F.B. Snip £40. Eddystone 504 New, 2 RF, 3 IF, Bargain £49. R101 coils wanted urgent. Taylor, Shoemaker, Lake, I. of W.

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"These You Can Hear." A quality production, on art paper throughout, and lavishly illustrated, for the beginner to Broadcast Station listening. Price 2/3 post-paid, or 2/- from local booksellers. Amalgamated Short Wave Press, Ltd., 57 Maida Vale, London, W.9.

SPARES!

At the request of many of our customers we are making available to users of R1155, R1116 and MCR1 receivers the following accessories:—

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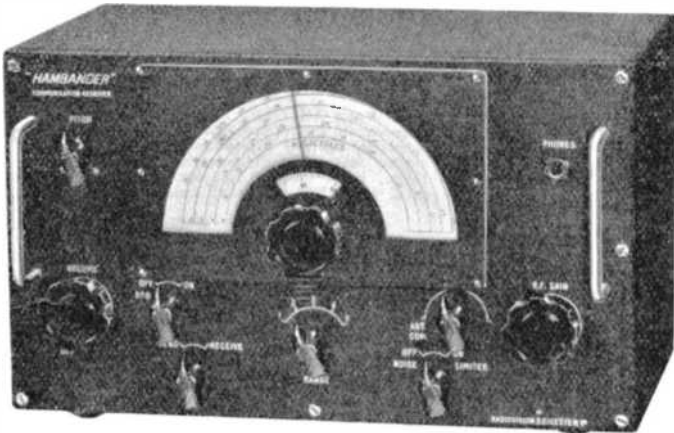
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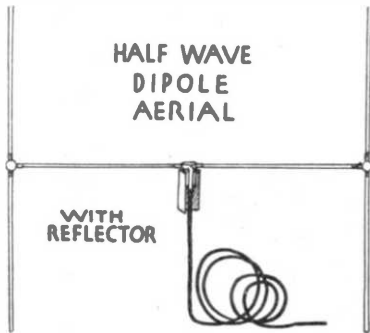
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