

Short Wave News



For Transmitter and Listener



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Editorial

QRM (Mark 1)

WHILST patiently awaiting inspiration for this Editorial, a letter arrived from a reader in which he asks about the T1154 surplus transmitter. It appears that this reader wondered if "it would be safe for me to get this transmitter or is it too high powered." The reader has no call sign and merely asks "how much is the licence fee?" In the past, we have often received letters from readers who have purchased such gear and sought information on their range and operation. One such reader had a walkie talkie and asked if it would reach his pal, some 45 miles away, so that they could "have a chat." Another one had a type 37 Oscillator and did not know how to fit in a key jack or how to tune the TX up!

From this it will be obvious that many ex-WD transmitters are falling into the hands of enthusiasts ignorant of the Post Office regulations or enthusiasts determined to pirate at all costs. The whole point is: what can be done to put these misguided people on the right track? From the mail-bag it appears that about 50 per cent. realise that a licence is required but are not prepared to obtain one (or cannot obtain one). The others do not even realise that a licence is necessary (probably due to being in contact with others who are illegally transmitting). A few realise that a licence is required but think that it is merely a matter of paying a fee and that's that!

One way out would be to restrict the sale of such transmitters to those who could produce a transmitting licence, but this

would be rather unpractical from the retailers point of view and would also be open to abuse since all that would be necessary for a non-transmitter to obtain one would be to borrow a licenced hams ticket. One would have thought that readers of short wave journals should by now have realised that there were such things as radio examinations, Morse tests and so forth. We would appreciate readers' views on this subject. What would you do, chums?

QRM (Mark 2)

Another type of QRM is mentioned in a letter from reader Malcolm Mackenzie. He says "If short wave listening is to become popular in towns, the cutting down of electrical interference is necessary. Cars, machines, and what-have-you all contribute their quota of QRM. Switzerland made the fitting of interference suppressors obligatory about 1937; I think the state paid for fittings to existing machines and new machines had to be produced with suppressors fitted." We reported in our November issue that the Radio Industries Council were preparing for a big drive to make interference suppression compulsory and we now hear that London Transport is fitting suppressors to all their petrol-driven vehicles. So, perhaps we are now experiencing the beginning of the end of such QRM, though extensive legislation will be necessary before we are free from man-made QRM. Unfortunately it is only the dyed-in-the-wool short wave fans who take the matter seriously, apart from certain organisations, and it will take a whale of a lot of pressure before we arrive at those distant days when noise limiters can be discarded!

W.N.S.

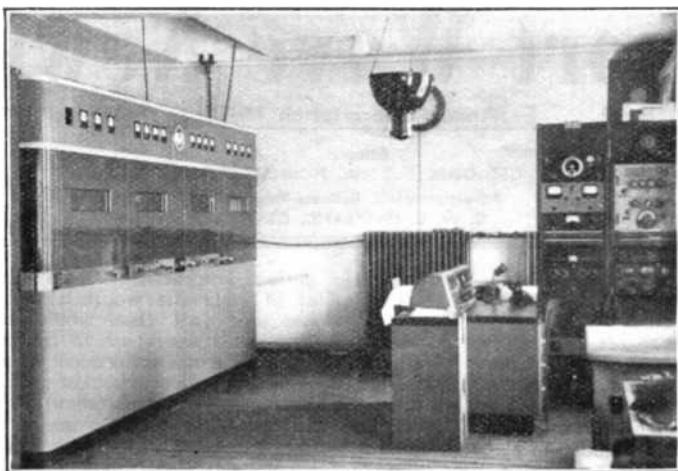
NOTICES

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

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.



Control desk and transmitters at A.F.N.

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.)

FIRSTLY your scribe would like to thank all the many readers for sending along news, schedules, etc., over the past month. We hope to include as many as possible in this survey and others next month. All matter regarding this column should be addressed to Monitor c/o "S.W.N." to reach your scribe by the 5th of the month latest and please don't send those "Ham" reports to me but to my colleague "CQ" who very aptly, takes care of that department. Now for the month's news.

● Australasia

Australia. Star reporter Sidney Pearce (Berkhamsted) using a Sky Champion RX lists the following VK DX: VLH4 Melbourne 11880 kcs. and VLG6 15230 kcs. have been often heard signing on with ABC National Programme at 2000 but apt to fade out at 2100. VLH3 9580 kcs. has been logged with fair signals from 1300 to usual close at 1400. On Xmas Day this station took a special BBC programme from 1400-1510.

Radio Australias transmissions have been heard via VLC7 now using 11810 kcs. instead of 11840 during BC to East Coast of USA 1300-1415 and for Brit. Is. 1430-1500. 1st BC to Brit. Is. is 0700-0815 via VLB3 11760 kcs. heard R7-8, VLC9 17840 kcs. to 0745 weak signals, and VLA9 21600 kcs. not received. BC for West Coast of USA heard from 1500 over VLB9 9615 kcs. and VLA8 11760 kcs. and for South Africa from 1515 over VLC 15200 kcs. (R6-7) -VLG4 11840 kcs. not heard with any intelligibility due to QRM. BC from 2000-2115 R7-8 over VLB9 and in parallel until 2130 VLC and VLA8. Latter fades out early. VLB11 15160 Radio Australias latest

transmitter has been heard with good signals from 2130-2315 but lately not often receivable. R6 on January 1st. VLG6 15230 kcs. was also good from sign on to 2200 but now often R4 and soon fades out.

John M. Simpson sends along a very nicely laid out report of DX heard at his QTH. In it he mentions hearing VLQ3 Brisbane Queensland on 9660 kcs. relaying a BBC play and 1 o'clock News at 1300 signals being R6 QSA4. Reports by the way for VLQ transmitters should be sent to Postmasters General's Department, National Broadcasting System, Brisbane, Queensland. Reports are always appreciated. Power 10 kW. While on the subject of the rarer Australian DX stations readers may be interested to know the frequencies and schedules of some of these.

D.O. French of Norwich sends the following data:

Weekday transmissions over VLR Melbourne 9540 kcs. 2230-0830, Sat. 2045 and 2230-0715. VLR2 6150 kcs. 2000-2215, 0845-1400. Sat. 0730. VLH4 Melbourne 11880 kcs. 2000-2315. Sat. starts 2045. VLH5 15230 kcs. 2330-0815. VLH3 9580 kcs. 0828-1400. VLG6 Melbourne 15230 kcs. 2000-2200. VLQ3 Brisbane 9660 kcs. 2000-1400. VLW7 Perth 9520 kcs. 2030-1600, 2200-0145. Sat. starts at 2045. Sun. 1030-1400. VLW3 11830 kcs. 0330-1015. Sat. 0200-1015. Most of these stations have been heard in this country over the past six months and reported by readers although conditions for Australians has fallen off somewhat recently. VLH3 has been listed by Simpson this month and logged at 1300 with relay from BBC of News and time signal. J. W. Hughes of Rochdale also lists VLQ3 R3-4 QSA4 QRN at 2045 with World News probably from BBC.

Australian Research Expedition to Antarctica

News has come in from various sources regarding this and the following is of note: Base stations will be on Macquarie and Heard Islands for communication with Sydney according to Graham Hutchins, DX Editor of Radio Australia. Allocated frequencies are: Macquarie Is. VJM 9940 kcs., VJM2 12255 kcs., VJM3 15845 kcs., VJM4 19255 kcs. Heard Is. VJH 9940 kcs., VJH2 12255 kcs., VJH3 1584 kcs., VJH4 19255 kcs. According to Americas "Radio News" three Victoria "Hams" have left Perth on the 3000 ton LST for Heard Is. to set up and operate base stations and will operate on the Amateur Bands.

New Zealand. Frequencies of the new Wellington Shortwave Service which will come into force shortly are as follows: ZL1 6080 kcs., ZL2 9540 kcs., ZL3 11780 kcs. ZL4 15280 kcs., also ZL5 17770 kcs. and ZL6 25800 kcs. Tests carried out during Nov. were over ZL2, ZL3 and ZL4. Service may open on two of these freqs.

● **Asia**

French Indo China. Radio Saigon 11780 kcs. heard R6-7 with news in Eng. at 1400 but suffered severe QRM from Radio Wien (Pearce).

Ray Aldridge of Amersham also reports them at 1400-1430 with YL announcer. This YL announcer went to school at Berkhamsted . . . even in same road as Sidney Pearce!

Ceylon Radio SEAC Colombo 17770 kcs. often R6-7 around 1230. Generally signs off at 1615. On Saturday, December 27th signed off at 1430. (Pearce). Heard on 6075 kcs. at 0115 QSA4 R3-4. (Aldridge). 15100 kcs. channel heard QSA5 R9. Announced as "Forces Broadcasting Station" and at 1545 remarked it was 0815 EST. Musical programme 1535-1600. (Simpson).

Palestine. Jaffa. "Asharq-al-Adna" 6780 kcs. heard R8 QSA4 with CW intermittent at 1620-1650 giving recorded music "Argentina" and "Black Eyes" amongst them. Also logged at 1545 with bad CW QRM . . . woman reading news/talk in Arabic. Gave call several times . . . "Asharq-al-Adna" (Simpson). This reader has also heard a station giving same call on 9640 kcs. with all announcements in Arabic and Eastern type music. This is Jaffa O.M. which has been testing on this frequency recently in the early evenings. Reported with R5-9 QSA4-5 signals.

India. Pearce lists VUD2 Delhi 3495 kcs. at 1530 with news in English. He says this station is stronger than VU's in the 60m. band. Aldridge also mentions this of VUD2. VUB2 Bombay 4880 kcs. strong at 1615 with talk in English.

● **Central America/West Indies**

Trinidad BWI. VP4RD Port of Spain sends Air Mail letter stating that they will operate on 6085 kcs. from December 1st, 1947 from 2200-0300. (Pearce). Heard on 9625 kcs. at 0015 R4. (Aldridge). F. W. Hardstone of Streatham, S.W.16, has also had an air mail letter from VP4RD stating change in freq. QSL cards are being sent later they state. Air letter was received in 3 days! Wish all stations verified as soon O.M.!! Hope to visit London at Easter O.M. at QRA at Wandsworth, S.W.18, so maybe I shall have the pleasure of meeting you and some of the "Boys" in this district, then.

Haiti FWI. John Simpson reports HH3W Port-au-Prince 10135 kcs. Comes on the air around 2305 with musical programme to 2330. Heard R7 QSA4 with occasional QRM.

Dominican Republic. Old Timer Bob Iball in Workop sends along another nice log of stations heard at his QRA and gives some interesting data on HI2T Trujillo City operating on 7350 kcs. Bob has heard them 0415-0500 when they sign off. QSA5 R7. He says that they put in a very constant signal. Yes O.M. certainly the best signal from the West Indies at least at the present moment. Have logged them at my QRA after 2300 with QSA5 R8-9 signals on my Phillips 680A RX. Bob logged them as early as 2245 with some QRM on their Freq. Announces as "La Voz del Yuna programma en Radio National" and mentions transmission as experimental. Identification signals: Trumpet. Lions roar, advert. for Alka Seltzer, deep toned chimes and announcements to the tune "Beer Barrel Polka." Uses mainly the Trumpet and deep toned chimes also call "La Voz del Yuna Trujillo en Capital Republica Dominicana." This station has recently moved from 6485 kcs. O.M. and believed to be using new TX and larger power. Location also changed. Was Monsignor Nouel. Another Old Timer Dr. T. B. Williamson (St. Albans) in his DX report this month mentions HI8Z Santiago de los Caballeros heard at around 0000 on 7220 kcs. with heavy intermittent CW QRM. He says they have a nice signal when in the clear being QSA4 R7. No interval signals or slogan are used just announces as "HI8Z Santiago D.L.C." T.B.W. is hearing a Latin American station near 6505 kcs. around 0045-0130 with R5 signals and heavy CW QRM. Uses 3 descending chimes as interval signal and mention of "La Voz de —" Any offers?

● **Africa**

Union of South Africa. ZRK Capetown 5882 kcs. heard with fair signals from 2030 when CW QRM is not heavy. (Aldridge).

ZRB Transvaal operates on 9110 kcs. and

is a new station there writes Jean Beauvoir of Natal. He sends the following interesting data on this station. It transmits meteorological information for the benefit of aviators and farmers. These broadcasts are known as Aeromet and given at 0530, 0730, 1005, 1200 and 1400 Mon. to Fri. and at 1030 Sats. Second freq. is 6210 kcs. expected to go on the air in very near future. Reception reports are welcomed and should be addressed to: Officer Commanding 64th Waterkloof Air Station, P.O. Odonata, Transvaal, S.A. B. B. Wakeford in Gloucester also sends in news of this station.

Belgian Congo. Bob Iball sends in schedule of Radio Congo Belge Leopoldville The Belgian National Broadcasting Service.

First transmission: 9380 kcs. over OTM3, 6282 kcs. over OTM5. 0500 News in French, 0510 News in Flemish, 0520 Music, 0600 News in French, 0610 News in Flemish, 0620 Music, 0700 Close.

Second transmission: 11720 kcs. over OTM2 and OTM5. 1015 Music, 1030 News in French, 1037 News in Flemish, 1045 Music, 1130 News in French, 1037 News in Flemish, 1145 Music, 1230 Close. Third transmission: Over OTM3 and OTM5. 1600 News headlines in Fr. and Flemish, 1605 Music, 1645 News in Portuguese, 1700 Talk: Mon/Thurs. The Voice of France, Tues/Fri. The Voice of America, Wed. The Voice of Gt. Britain, Sat./Sun. Interlude. 1715 Music, 1800 News in Flemish, 1815 Music, 1845 News and Press Review in Fr. 1900 News headlines in Flemish, 1905 Music, 1955 News headlines in Fr., 2000 Close.

Transmissions over OTC2 9745 kcs. are as follows:

- 1st 1800-1900 Dutch—"Belgium calling the Netherlands and S. Africa."
1900-2030 French—"Belgium calling France, Switzerland and the French Union."
2030-2145 English—"Belgium calling Gt. Britain and the British Territories in Africa."
2145 Close.
- 2nd 2200-2300 Portuguese—"Belgium calling Brazil."
2300-0000 French—"Belgium calling Canada, The West Indies and Latin America."
0000-0030 French—"Belgium calling her Countrymen in the World."
0030-0100 French—"Dutch calling her Countrymen in the World."
0100-0200 Spanish—"Belgium calling Mexico, Central and S.Am."
0200-0400 English—"Belgium calling the United States of America and Canada." Close Down.

● South America

Brazil. PRE9 Fortaleza 15165 kcs. heard at 2030 with QSA5 R8 signals in Natal by J. Beauvoir. Heard by your scribe at 2059 when closing with station identification and four chimes. QSA5 R9-5 with deep QSB.

Chile. CE1185 Santiago heard on 11850 kcs. around 2245-0100 with R6 signals. Can be recognised by heavy carrier hum. Sometimes has slight heterodyne. Heard with records of Tino Rossi, call preceded by 3 descending chimes "CB138 y CE1185 Radio el Mercurio, en Santiago." (Williamson).

Colombia. HJDE Medellin 6145 kcs. QSA4 R7 at 2315 with recordings of swing music. Bad QSB. (Simpson).

● QRA Section

Many more addresses are needed for this section so please send along any topical ones you may have.

Tashkent: "Radio Tashkent," Tashkent Radio Broadcasting Commission, Tashkent, USSR.

Maccasar: "Radio Maccasar," Strandweg Zuid 2, Maccasar, Celebes.

● QSL Section

Your scribe from PJC2 (7250 kcs.) VLB4. Sidney Pearce: Radio Italia (Busto Arsizio No. 3 and 4), VLH4, VLH5, VLA5, VLC7, VLB10, VLA7, VLC11, Warsaw (6215 kcs.), HI3T, VUM2, CR7BD, Radio Malaya (4825 kcs.), Radio Stuttgart (6180 kcs.), Radio International Tangier (FB folder QSL card) and CHLS. (Vy FB O.M.) J. Beauvoir: ZRD AFN (Munich) VLB9. Bob Iball: OTC (folder type card with a SWL depicted in front of a huge RX and speaker with spectacles on the end of his nose and smoking a cigarette with the appropriate words "This is the Belgian National Broadcasting Service in Leopoldville Belgian Congo" coming from the speaker! CFRX sends a postcard size card in pale blue with map of Canada in red. In the foreground is a layout of Torontes downtown and harbour as seen from the Bay. R. Aldridge: VP4RD, OTC2, OTC5, VLC9, VLA6, FZI (11 and 9 Mcs. Two different cards). J. Hughes: :NAVE.

● Acknowledgements

Sidney Pearce BSWL 336 (Berkhamsted, Herts), J. Hughes ISWL/G30 (Rochdale, Lancs.), J. Beauvoir (Jacobs, Natal, S.A.), Dr. T. B. Williamson ISWL/G127 (St. Albans, Herts), Radio News (U.S.A.), J. Simpson ISWL/G879 (London, N.W.6.), Bob Iball ISWL/G941 (Workshop, Notts), E. Strangeway (Malton Yorks), P. E. Woolmer ISWL/G116 (Grantham, Lincs.), B. B. Wakeford ISWL/G26 (Lower Tuffley, Gloucester), F. W. Hardstone ISWL/G1086 (Streatham, London, S.W.16.), D. O. French ISWL/G1426 (Norwich, Norfolk).

V.H.F. News

Whither 144 Mcs.?

ONE of the most topical subjects of conversation amongst the VHF fraternity at present, is that of what use shall be made of the 144 Mcs. band and what results may be expected on it. Experience in America suggests that long distance communication up to 500-600 miles may take place through tropospheric propagation similar to that experienced over here on 60 Mcs., but ionospheric propagation such as sporadic E and F2 layer reflection is unlikely.

In spite of all that has been learnt about 144 Mcs. during the war, there is no doubt a good chance that amateur activity may bring to light further little known features and the dyed-in-the-wool VHF enthusiasts are planning to tackle 144 Mcs. with the same methods as they used to such good effect on 60 Mcs. High gain beam aerials, multistage transmitters and super-heterodyne receivers are already being constructed for this frequency.

Shall we start too much of a storm of abuse at ourselves, if we suggest that at least part of the presumed 144-146 Mcs. allocation might be put to its more obvious function as an "across-town" communication channel? Due to the expense and complexity of the 60 Mcs. gear in current use, not more than 250 of Britain's transmitting amateurs made use of that band since its post-war reallocation. Our mail bag frequently contained letters asking for descriptions of simple inexpensive VHF gear which would enable some experience to be gained on these frequencies at a reasonable cost. Knowing the strong feeling against the use of self excited oscillators and superregen receivers, we have refrained from publishing descriptions of this type of gear.

The question has arisen afresh over 144 Mcs. Several correspondents have asked whether we will publish articles describing this type of simple gear for 144 Mcs. We know that in many instances, this type of gear was used on a limited scale on the 60 Mcs. band, by amateurs who used it with discrimination and did not cause interference to their more seriously minded colleagues. There is a lot to be said for the use of superregen receivers and simple oscillators. Their simplicity would encourage far more people to try their hand at VHF work. This type of work would soon catch on for local "across-town"

QSO's, because of the ease and cheapness of construction. In this way much of the "across-town" QSO's which clutter up 7 Mcs. would cease and this band would then come into its own as a DX band. Another point is that both FM and AM can be received on the superregen receiver. This would give a great stimulus to FM work on these higher frequencies—a branch of work neglected by amateurs in this country. Those who wish to be further assured of the merits of the superregen are advised to read the two articles on this type of receiver by "Cathode Ray" in the "Wireless World" for June, 1946, and for January, 1947.

We do feel that some effort should be made to divide 144-146 Mcs. into two parts so that the large number of those who wish to use the band for its obvious use as a purely local band may do so without interfering with the more scientifically minded minority whose activities are no doubt more praiseworthy. What do you think about it? Let's have your opinion even if it is only a rude remark on a post card!

The Month's Activity

If anything, activity on 60 Mcs. seems to be on the increase. The recent five metre contests have no doubt stimulated increased interest and the lack of anything exciting on 50 Mcs. has made the VHF enthusiasts look to 60 Mcs. again. Activity seems to be pretty generally spread over the country and a number of new call signs have been heard. G3APY recently worked fifteen counties in a week! Conditions have been fair for this time of the year.

There has been no DX activity on 50 Mcs. On this point G6DH says: "It would seem that we are just about at, or just past, the sun spot maximum and contacts, if any, which take place in the next few weeks may be the last for several years—except those by Sporadic E in the summer."

Reports Wanted

There must be many SWL's who listen on 50 and 60 Mcs. We would appreciate reports on signals they hear and notes on any interesting observations they may make. Once again we would recommend the VHF's to the listening fraternity. We can assure them that they will get an acknowledgement of any report they may send to VHF stations and we should be most grateful for calls heard, etc. Please send in by 16th month. With the coming of the Sporadic E season, activity on 60 Mcs. will increase and it is well worth including the VHF's in your listening programme for the coming months. So you SWL's get going on 50 and 60 Mcs. and let us have reports on what you hear.

1 Mcs. Frequency Sub-standard

A simple, compact and accurate unit

By C. Ranft, G5RF

" . . . where the sending apparatus is not crystal controlled there shall be kept at the station, and used whenever necessary . . . a reliable frequency meter of the piezo-electric crystal type or other type approved by the Postmaster General, for measuring the sending frequency to an accuracy of not less than ± 0.1 per cent." Thus the G.P.O.

There it is—no "ifs" or "buts," so what are we going to do about it? If you want to be awkward you can get on with building one of the "other types"—you might see what you can do with a tuning fork and about 500 doublers to start with!

However, the answer for the ham is usually a frequency meter of reasonable precision and a crystal calibrating unit.

What follows, then, is a description of a rapid method of achieving the latter, and that in a form which gives precision of a far higher order than required by the rules. Having managed this, the frequency meter need only have "short term" accuracy providing it can be corrected at will to the crystal calibrator. An accuracy of ten times

greater than necessary was aimed at, 0.01 per cent. or 1 part in 10000.

No credit is claimed for the circuit—my thanks to the guidance of the RSGB Handbook, though the frequency adjustment idea is tacked on to the handbook circuit, but some details of layout, components used and the practical problems of higher orders of frequency precision, may be of interest.

It will be seen that the circuit is a conventional C.O. using the screen as the oscillator anode and taking the output off the actual anode. The only coupling to the oscillatory circuit being the electron stream inside the valve, anode loading conditions therefore cannot practically affect the oscillator.

The frequency of 1000 kcs. was decided on as interest is confined at 5RF to the 28 Mcs. band, where things do not have to go wildly wrong for variable frequency devices to slip 100 kcs—1000 kcs. was regarded as being safer. In any case, getting the 300th harmonic out of a 100 kcs. crystal sounded a little tricky, though it can be done. The valve used is a 6J7G—being easily pro-

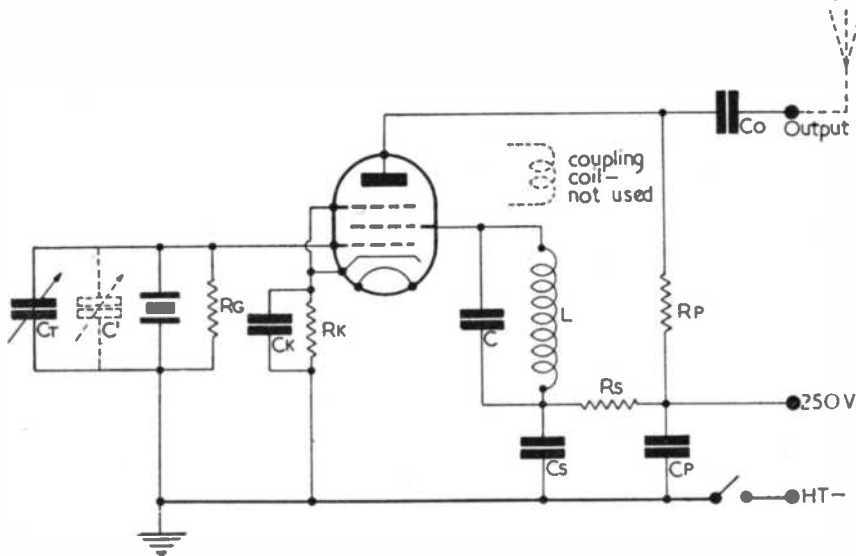


Fig. 1. Theoretical circuit.

- | | | | |
|--|--|---------------|---------------------|
| L. Denco Maxi-Q coil. Range 2 (Yellow or blue) | CT Philips-Mullard 3-30 concentric trimmer | μF | RG 2 Megohm, 1 watt |
| C. Erie Ceramicon N750K, 71 μF . | Ci See text | | RK 350 \sim |
| | CS, CK, CP 0.01 μF mica | | RS 22 K \sim |
| | CO 0.001 μF mica | | RP 250 K \sim |
| | | | Valve 6J7G |

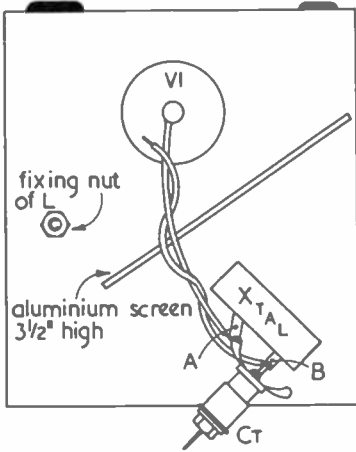


Fig. 2. Plan view of unit. A is grid lead and fixed plates of CT are soldered to tag of crystal holder here. B is wire of C¹ (see text), and moving plates of CT are soldered to tag of crystal holder here. This tag is earthed at chassis

reducing the circuit capacitances—not easy, so keep these as low as possible.

If one is content with the accuracy demanded by the G.P.O. the foregoing is of only academic interest—but if one knows for certain that one can adjust one's crystal to exactly the desired frequency—one gains confidence if nothing else.

It is of practical interest to note that the Salford plate and one by Standard Telephones of unknown percentage accuracy can be interchanged in this unit with very little adjustment of the trimmer.

Assuming the above to have been taken care of, the controlling factors for high accuracies are:—(1) Temperature, (2) Mechanical stability, (3) Component variations. Dealing with these in order:—

(1) Variations in room temperature over the last 18 months (and goodness knows they have been wide enough!) have not been observed to make any difference that can for certain be attributed to them, so we can forget that one. We are then left with heating of the crystal due to idiotic oscillator plate voltages—the answer is obvious, and radiated heat from valves and components. The answers here are to use resistors of safe wattage ratings and to keep the valves as far away as possible from the crystal. As there can only be two valves including the rectifier, put the latter somewhere else, i.e. feed the power from an external source. As we cannot put the oscillator valve somewhere else, we must prevent its heat reaching the crystal, hence the aluminium shield in the layout drawing.

Ventilation must be as good as possible, therefore the unit was not put in a box so that the air circulated freely—this solution is a gift for the hurried and the lazy, like the writer.

curable. Power comes from the receiver.

A word about accuracy. It is not difficult to make a crystal oscillate at a nominal 1000 kcs. but on listening to a high harmonic—say 15 Mcs.—some error will nearly always be noted. Crystal manufacturers grind their plates to 1000 kcs. as measured in their own apparatus and for the plate to oscillate at exactly 1000 kcs. the conditions of the manufacturers' apparatus or their recommendations must be duplicated—this is mainly a question of getting the capacitance across the crystal right. Hence the trimmer CT and C in the circuit. H.T. volts must be approximately right, though reasonable differences can be accommodated with the trimmer.

Figures given by Salford Electric (G.E.C.) for their standard 1000 kcs. plate are of interest. If all (don't forget the valve) capacitance across the crystal does not exceed 20 $\mu\mu\text{F}$ and using a variable trimmer of a maximum capacitance of 60 $\mu\mu\text{F}$, 0.02% of frequency variation (in a negative direction) can be obtained. If all capacitances across the crystal can be made as low as 12 $\mu\mu\text{F}$, 0.03% of variation becomes possible—thus it would appear, assuming the latter minimum capacitance, that for exact accuracy the plate must be ground to no lower a frequency than 1000 kcs. and no higher a frequency than 1000 kcs.—0.03% = 1000.3 kcs.

Crystals can nearly always be pushed a little lower in frequency by adding to the circuit capacitance but any pushing in the other direction can only be achieved by

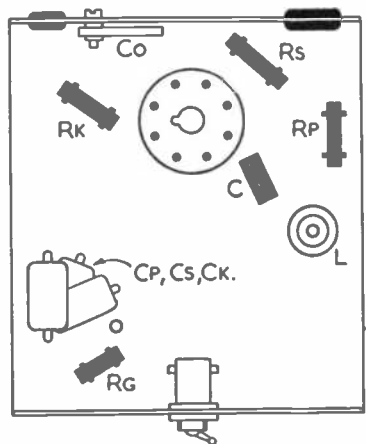


Fig. 3. Under chassis layout.

(2) Mechanical stability. This appears the most important factor met with. It was found that the only way the frequency could be altered (and this only ± 500 c.p.s. at 30 Mcs.) was by bashing it! It was found that the vibration due to operating a toggle switch was enough to produce some change so no on-off switch is used. The switch shown is left on—the juice comes on with the receiver. Oscillation is stopped by the crude but rapid and effective method of touching the "hot" end of the trimmer—this of course is only necessary when searching within a few kcs. of the band edge.

The purists will now ask—what about C1? Oddly enough this is not responsible for any instability—both the grid lead and the wire wrapped round it are thick and rubber covered and only represent a μF or two so any slight mechanical change would produce an infinitesimal capacitance change. C1 was only put there to move the trimmer adjustment more nearly in the middle of its travel. In practical cases it could probably be omitted.

It is the writer's opinion that any error due to mechanical changes can be attributed to minute movements of the crystal plate in its holder and/or minute rotations of the trimmer, the latter not being sealed to allow of adjustment. Remember we are discussing very small errors and no aspersion is being cast on the manufacturers of the items in question.

(3) Answer—use reliable components.



Fig. 4. Sketch showing how crystal holder is made from an old "Clix" valveholder.

The coil. Very often difficulty is met with in getting the right coil/capacitor combination for resonance at the right frequency, so this information is given to save that trouble. With the $71 \mu\text{F}$ capacitor the coil specified produces a handy output and the adjustable iron core will give a crude form of output control—the output going up as resonance is approached as core goes into the coil. I don't think resonance is reached (in fact for maximum output more inductance is required) but if this is done output will probably be excessive, especially on frequencies lower than 28 Mcs. Adjustment of this inductance does not materially affect the frequency, and from maximum to minimum inductance any frequency change can be easily taken up with a half turn on CT.

Output. It is difficult to say anything about this as it depends on so many variable factors. At G5RF, for 28 Mcs. a satisfactory signal is obtained by having an "aerial" of insulated wire on the unit about 2 feet long with the end hooked round one leg of the low impedance receiver aerial feeder as it divides to meet the aerial terminals. It will be necessary to depart from this to a greater or lesser extent depending on the band in use (obviously output on harmonics goes up as the harmonic number goes down), receiver sensitivity, etc.

A convenient place for the unit is right alongside the Rx where one can reach out and shut it down when tuning over the Xtal frequencies.

Performance. This has been very encouraging and I would feel quite lost (and indeed would be) without the unit.

Frequency stability both long term and short term is of a very high order.

The frequency is checked daily whenever WWV can be heard and over the last 18 months no error greater than 100 c.p.s. at 15 Mcs. or 200 c.p.s. at 30 Mcs. has been noted. This is ± 1 part in 150000 or about 0.0007% which is more than adequate for amateur requirements.

Frequency drift is as near zero as makes no difference. From the moment of switching on until after an hour's running, 10 cycles drift at 30 Mcs. is the most that has been met with.

Adjustment. Assuming the deed to have been done and the outfit to be oscillating, all we need now is a half decent signal from WWV. The 30 Mcs. signal is quite hearty during the day at this time of year. Later in the day the 25, 20 and 15 Mcs. signals come in most days. The 30 Mcs. signal is the best bet just now as the 25 and 20 Mcs. ones are not so strong whilst the 15 Mcs. signal, though strong, suffers from QRM.

The signal from WWV takes the form of a continuous carrier modulated with a 440 c.p.s. tone plus a series of something-or-other microsecond pulses (they sound like clicks). The tone is keyed every five minutes with a morse figure group of the time in Eastern Standard Time. At the hour and half hour a voice announcement is made. After the ten and fifty minute morse time group the letter "N" or "W" is sent. This is a radio propagation report, "W" meaning "warning of ionosphere storm" and "N" "all clear."

Having located one of these signals, there will be an audio beat note between the xtal unit and WWV as heard in the receiver

(Continued on p.37)

Q.R.P. CLUB

by G2SO

THE star station this month appears to be G6ZN of Horbury, Yorks. The results that this operator obtains with a genuine three watts, and under, is really amazing. In the recent RSGB Top Band Contest he received 94 points with a Hartley oscillator, and an end-fed 270 foot aerial. During November last on 1.8 Mcs. he had some splendid contacts with OZ1W (RST559), OK1HB (RST589), GI, GM and GW, and also a host of other OK stations. On eighty metres with the same TX and similar power several contacts resulted including OK, OZ, LA, SM, etc. G6ZN mentions that in the Winter of 1945 on 3.5 Mcs., and an input of one and a half watts he had a QSO with W3QV, surely an achievement in these days of high power. Transmissions have been made by this operator recently with real flea power. In a QSO with G3PU of Weymouth on 1.8 Mcs., and an input of 3 watts, a report of 599 was obtained, reducing the power to 0.25 watts the RST was 55/89, and finally reducing still further to 0.018 watts 349 was given by the receiving station. The high voltage(?) used in this test was a 9 volt grid bias battery. (High Power phone stations please copy!) The distance from Horbury to Weymouth is approximately 315 miles, not bad for this frequency. Two other contacts with GM3BXV and GM2HDH using 0.25 watts have resulted in RST459 and 449. There appears to be no end to the possibilities of further low power QSO's and DX from G6ZN.

Another station that always crops up when the question of low power is discussed is that of G3XT of Saxmundham, Norfolk. In a recent letter to the writer he mentions that he has always been interested in this subject, and to date with 5 watts (and in most cases an input of one watt) on 7 Mcs., he has had 755 contacts, and 21 countries, including most of the European countries. Doubtful contacts have been made with OH, UB and VK, but no definite QSO obtained. As 3XT says the transmitters at this station are usually in the state of construction or destruction, but he has used several kinds of transmitters including single valve VFO, CO, CO/FD and CO/PA, either all mains or batteries. For his low power contacts he has used 66 ft. end fed, 132 ft. end fed or Windom and VS1AA aerials.

G2AJU comes into the news again with his three watts on eighty, obtaining

RST338 from UB5KBI at Kiev about 1300 miles, and interesting contacts with LA2EB and LA4JA who are at the Fanaraaken Met. Observatory in Norway. These two stations use 5 watts to a self excited rig. With 2 watts phone on this band 2AJU has certainly had a nice contact with OZ2JA, but remarks on the high power phone stations that flit around anywhere on the band regardless of the QRM that they are causing. Here the writer wishes to add his piece with regard to this much discussed subject. Is there any hope of a sensible band planning scheme? This has been mentioned from time to time, and I have heard several stations say that they will stick to any such scheme, but I have noticed that the very station that promises is the station that causes all the interference to the CW man, and especially the QRP operator. From the remarks overheard on the air, it does seem to me that from the descriptions given of gear used, and final amplifiers, etc., that the 150 watt licence issued by the GPO is insufficient. Perhaps in a low power article of this description a discussion on high power is hardly "the thing," but it does certainly need some clearing up.

In conclusion please send the writer news of any interesting contact with genuine low power. Numerous stations are known to be operating QRP so please "don't hide one's light under a bushel."

(SUB-STANDARD—Continued from p.36)

N.B. Do not mistake the 440 c.p.s. for the beat note! The trimmer is then rotated till the beat note comes to zero—this is very easy when the 440 c.p.s. is being radiated as beats of even 1 c.p.s. can be heard taking the form of a variation up and down of the volume (not the pitch) of the 440 c.p.s. note.

This trimmer rotating should be done with a trimming tool or even by pushing the thing round with a piece of anything non metallic as the proximity of the hand to the crystal holder provides enough capacitance to shift frequency as much as 50 c.p.s. at 30 Mcs.!

When all is done, and it emphasized that construction and components must be first class, you will have a precise instrument, and if you are not exactly able to set up in opposition to the National Physical Laboratory and Greenwich Observatory, you will have achieved such substandard accuracy that standard frequency transmissions mean something.

The Klipheuvcl Short Wave Station

Station Description No. 15

SOUTH AFRICA is a country with two official languages, English and Afrikaans so that, soon after the South African Broadcasting Corporation began to operate as a public utility company in 1936, the Board of Governors decided to inaugurate a separate programme for Afrikaans-speaking listeners. The first difficulty to be overcome at that time was the finding of a suitable transmitter at short notice. It was preferable that the station should operate on short waves, for Afrikaans-speaking people live mostly in country districts where they cannot be reached by the medium wave services.

It was fortunate for the S.A.B.C. that Cable and Wireless of South Africa, Ltd. had just been installing new transmitters for their commercial telephone and telegraph services to England. They thus had available a surplus 5 kilowatt short wave set in their station at Klipheuvcl, a small village near Cape Town. While negotiations were proceeding for the hire of this transmitter, the S.A.B.C. studios in Cape Town were being reorganised to handle two entirely separate programmes. New control desks, amplifiers and speech equipment were installed. Meanwhile aerial systems for 31 and 49 metres were being tested by Cable and Wireless engineers at Klipheuvcl. Post Office engineers checked the special broadcast line between Cape Town studio and the new transmitter.

October 25th, 1937 was a day that will long be remembered in the annals of broadcasting in the Union, for Klipheuvcl then went on the air with the first separate Afrikaans or "B" programme. The "B" programme for the Johannesburg group was radiated on short waves soon afterwards on December 1st, 1937. Listeners all over the Union began to tune in to Klipheuvcl, on 31 metres daytime and 49 metres at night. For the first time their own radio programme could be enjoyed by families on lonely farms for whom, indeed, the programme soon became a source of entertainment, education and, perhaps most important of all, market information.

But before long it became evident that this station, designed for national coverage, was reaching out to unexpected places, and reception reports began to flow in from all over the world. The clearest and most reliable reception seemed to be obtained on the Western coast of North America. There, listeners on the point of retiring for the night, listened in to physical culture exercises, broadcast on the following morning! The bugle call even intrigued listeners

in Latin America who wrote remarking upon the "toque de clarin." One aged gentleman in California complimented the S.A.B.C. on the excellent "setting-up" exercises, which enabled him to tune his system up just before going to bed.

Listeners on the Western seaboard of the U.S.A. heard the station in the early evening, but reports also came from enthusiastic operators on the Eastern coast who had to sit up to a quarter of an hour before midnight E.S.T. in order to hear the opening call.

During the war the volume of letters from overseas listeners declined to a mere trickle, but from 1945 numerous requests for QSL cards began again. Although most of the letters now come from within the Empire and in particular from England and Australasia, listeners in Scandinavia are also well represented.

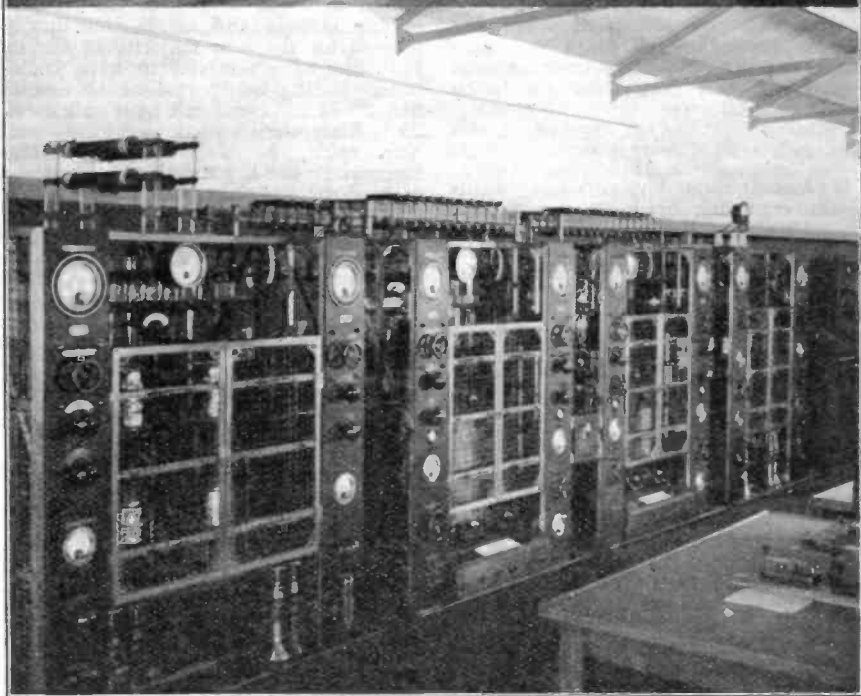
Within the Union the Klipheuvcl station still gives excellent service and on October 25th this year it will celebrate the end of its first decade as a broadcaster. When it is considered that before this the transmitter had completed nearly a decade on commercial traffic, we may indeed pay tribute to it for the outstanding work it has done for listeners in the Union of South Africa.

The transmitter normally allocated by Cable and Wireless to the Cape Town short wave service of the S.A.B.C., is a standard Marconi SWB.1 Telephone Transmitter, primarily intended for short wave commercial traffic. High power choke modulation is used and the final modulated amplifier has an input power of 7 kilowatts. A power of 5 kilowatts is delivered to the aerial circuit.

The programme arriving over the G.P.O. line is taken to Speech Input and Monitoring equipment. After that it is dealt with by Sub-Modulator stages and finally by a high-power Modulator using two CAM.3 oil-cooled valves.

The constant-frequency drive circuit is followed by three R.F. amplifiers and the complete circuit is duplicated for the two station frequencies of 9606 and 5882 kilocycles. The final modulated R.F. amplifier uses two CAT.2 oil-cooled valves.

The transmitter output travels along a copper concentric feeder and through impedance transformers to one or other of the two aeriels. Both aeriels are five-eighth-wave vertical cage systems, with their lower ends a quarter-wave above ground. Radiation is strong at low angles above the ground.



(Above)—The station building at Klipheuwel, with the 300 ft. towers which support the beam aerials. On the right is the valve store and in the centre the power house. (Below)—A front view of the 5000-watt station.

Resonant Lines

By Centre Tap

WITH present day paper restrictions I have had no opportunity in post-war years of referring to points raised in letters from readers, and this, I believe, is the first chance I have had of finding space to even mention them. Despite a very busy life I have succeeded in keeping to my resolution of replying to them individually by post with reasonable promptitude praying for the day when more space will be available. Editorial correspondence too, has suffered under the same difficulties and minority views, grumbles and the points of more limited interest cannot always receive the attention they deserve. While this must retard the spread of changing viewpoints on present day conditions or the expression of unconventional ideas on the many controversial aspects of amateur radio, as they become more numerous something must be done so I offer no apology for allowing other people to "run away" with the column this month. I use the word amateur in the preceding sentence in its widest sense although one of the most controversial issues is still the conditions governing the grant of transmitting licences. That however must wait for another day if both sides are to be fairly presented.

Praise

It is pleasant these days to receive words of praise regarding firms who give good "after-sales-service" and in this connection a bouquet must be handed to Avo for repairs at very reasonable (almost nominal) cost to their instruments which have sustained damage in instances of momentary carelessness. Other firms too seem to merit honourable mention in this respect or for prompt attention—perhaps we are returning to the good old days when one's "esteemed favours" were really valued!

Manufacturers Please Note

Some time back I wrote of the demand for full vision dials for self-calibration. Two well-known models have been available for some time now but readers have come back for more. There is now a call for a model with a hinged escutcheon to enable calibration to be made without dismantling.

Other readers want to have variable capacitors with a bandspreader built in and driven by a shaft well away from the "setter" spindle to enable a good slow motion dial to be used. This idea has been used on at least one well-known American communications receiver and the style

could well be developed for use on factory made broadcast receivers with any pretensions of offering a usable DX short-wave band.

Grumbles Dept.

Two points upon which many readers have touched concern valves and QSL-ing. Undoubtedly there is a widespread feeling of irritation at the increasing difficulties caused by individual manufacturers using meaningless type numbers for valves of standard types and the perpetuation of obsolete bases. Next to the servicing engineer it is the amateur who has to bear most of the inconveniences although the dealer has considerable ground for complaint too, but nobody seems to pay much heed to the protest of any of them.

The question of QSL-ing, or rather, the failure to do so, has long been a sore point with the SWL but many hams seem to be having their troubles in this respect nowadays. One writes "I was back on the air within a month or two of the restoration of our licences and ample time has now elapsed for the vast majority of the cards I should have received to have come to hand. During one period of 12 months I find I sent 153 cards and have only received 85." After some caustic comments on the ham spirit, he adds "It may interest listeners to know I have received only two SWL cards and these from a strictly value standpoint were neither worthy of a veri. I gather they were newcomers to the hobby (neither were DX) but regarding it as an obligation to the spirit of amateur radio I replied direct at my own expense. Friends who have had less DX luck than myself have far more SWL reports, simply because they allow their QRA's to appear in the Call Book. A week ago I had one SWL card, from Germany, of typical Teutonic thoroughness covering no less than five occasions with a mass of detailed information. I can hardly think that even the most selfish of hams who hadn't the courtesy to reply to me, could fail to be moved by such a painstaking effort. I was tempted to write to the German listener and enquire his percentage of replies." If the reader does write to find out, we should all like to know the answer.

Another ham says he gets a very low percentage from F, OZ and SM amateurs and wonders if it is because his cards don't reach them. He finds the I's are 100 per cent. Personally I consider Italian hams as the world's keenest QSL collectors—they

(Continued foot of next page)

Radio Melange

A pot-pouri of current topics

REPORT FROM HONG KONG

By R. W. A. McKichan

("S.W.N." Correspondent).

THE Hongkong Amateur Radio Transmitting Society is once again active.

It was re-started in 1946, but as most of its members were in the services who were too quickly transferred, it died a quiet death—or went into hibernation, to be more accurate. It has now been rejuvenated largely due to the activity of VS6AJ (ex-G2PQ) and is attracting nearly all the licenced amateurs and would-be hopefuls to its meetings. These have been concerned rather largely so far with the constitution of the society and letters to and from the P.M.G. here. The attitude of the G.P.O. here, very adamant, is that no one, no matter what licences he has held in the past, may operate their first year on anything but 25 watts and under, CW. This applies also to holders of pre-war VS6 call signs.

(RESONANT LINES—Cont. from p.40)

never seem to come "over" a couple of times before they are looking for another contact—but they are certainly meticulous in QSL-ing.

For myself I leave card writing to irregular intervals and then reply to all received and those from the log who I think likely, irrespective of whether they have requested one or not. Checking over for one year (ending October last) I find the received percentage roughly 80 with perhaps a few slow ones to come, which I suppose is about right as I must send a fair number of unwanted cards due to lack of method. There are some rare birds who never QSL at all. I know of one, licensed since 1928, who has sent only one and that he got his junior op. to draw especially for a local ham who after co-operating in numerous tests with him twitted him about it.

Finally a reader writes "We made such first-class radio stuff during the War. Why aren't we doing it now?" Perhaps we are—for Export only!

Puzzle Corner

The consumption of Transmitter, Modulator and Receiver in a certain Shack, measured in pairs is found to be—

Transmitter and Receiver ...	240 watts
Transmitter and Modulator ...	240 watts
Receiver and Modulator ...	200 watts

What is the consumption of each? Answer next month (in case anyone finds it hard.)

An English licence, permitting the holder, who had just arrived in the Colony, to work CW or 'phone up to 150 watts was shown to the G.P.O. authorities, who merely had to say that "conditions were different here." This appears to be the keynote of the P.M.G.'s letters in reply to requests for more power and 'phone operation, but in no way is it explained why "conditions are different here." This matter will not be dropped, the P.M.G. locally being one step in the ladder.

Local activity is on the increase with about 15 VS6 call signs having been allotted, and the VSB- series has now been started. One of the most active of the local stations must be VS6AC, an R.A.F. signals unit club with Don Addison as chief op., which has been having plenty of success, particularly on 28 Mcs. This band has been opening up as far as G's are concerned recently, and many have been pouring in S9, particularly between 8 and 11 p.m. here—1100-1400 hours at home. The Americans in Japan, Okinawa and the Phillipines still pour through on 14 Mcs. with their kilowatt stations, and the early morning here is the best time for DX on that band.

There are very few (if any) pirates active who work the amateur bands as such. Mainly they are merely interested in contacting other stations in China to work exchange or other rackets.

NEW AMERICAN RECEIVER DESIGNS

WE recently received from the National Company Inc., particulars of their current models of National receivers. Whilst of course, these are not available in this country, we feel sure our readers will be interested to learn of the trend of receiver design in the U.S.A.

The NC-173 is a 13 valve superhet covering 540 kcs. to 31 Mcs. plus 48 to 56 Mcs. It is intended for amateur, commercial and general use. The external appearance is very distinctive, giving an impression of strength and solidarity. Separate directly calibrated dial scales with associated control knobs are provided for general and bandspread tuning. Calibrated bandspread tuning is provided on all main amateur bands from 6 to 80 metres. The circuit consists of one RF stage, first detector and separate stabilized high frequency oscillator, two IF stages, a diode 2nd detector, an audio limiter, a high gain audio stage and an audio stage plus AVC amplifier, a stabilised BFO, a voltage regulator and rectifier

stages. A crystal filter is connected between 1st detector and 1st IF stage.

The NC-2-4OD, is designed for radio amateur work but also gives general coverage from 490 to 30000 kcs. Calibrated electrical band-spread is provided on 80, 40, 20 and 10 metres, nearly 100 per cent. of the tuning dial being covered on each range. The circuit includes a series noise limiter, crystal filter, S meter, gramophone or mic pick-up circuit, AVC, BFO, tone control and a 115 to 230 AC change over switch which is a new feature in American receiver design.

The HRO7 continues this line of famous receivers first introduced in 1934. A thoroughly modernised cabinet gives this new receiver a very striking exterior. The time-proven features of past HRO's have been combined with new laboratory circuit features, which result in a truly new model. Outstanding features of this new HRO7 are; automatic adjustable-threshold noise limiter for use on CW or phone, improved HF oscillator, voltage regulator, front of panel tone control, lever type handles for the coil sets, slide-rule type calibration on coil sets, bandspread on 11 metres, accessory connection socket, radio gram switch. The famous micrometer type tuning dial is retained as are the plug-in coil sets. The miniature type valves are employed in this new HRO, a 6C4 HF oscillator and an OA2 voltage regulator. The accessory connector socket permits connection of such accessories as FM adaptor, crystal calibrator, record player, microphone or HF converter.

The NC-46 is a development of the old NC-44. This new version has 9 valves in place of the original 7. Coverage is 540 to 30000 kcs. as before, and the receiver is recommended for use in DC districts and on ships where 115 volts is available.

ONE GREETINGS MESSAGE EVERY SECOND

Re-organisation of Cable and Wireless Central Telegraph Station led to 14 per cent. improvement in average handling time of Christmas and New Year Greetings messages this year. Up till late on New Year's Eve, Greetings telegrams were being transmitted overseas at an average rate of almost one per second.

During the 48 hours preceding Christmas 170,000 messages were handled—20,000 more than in 1946; 697,000 messages (including 147,000 Greetings) were handled in the Station from December 19th to 29th.

SPECIAL ISWL Broadcast

A special half-hour dedicatory programme has been arranged to be radiated over the Boston short wave stations, the details being:

Date: FEBRUARY 29th (Sunday)
Time: 2030-2100 GMT (1530-1400 EST)

Channels:

WRUL (15290 kcs., 19.62m.)
WRUL (11730 kcs., 25.58m.) and
WRUW (17750 kcs., 16.90m.)

The programme is due to the good work of Charles Southall, ISWL/W3-990, who will be speaking over the microphone during the broadcast. All correct reports will be verified by a special QSL card for the occasion and should be sent to ISWL Dedicatory Programme, Radio WRUL, 133 Commonwealth Avenue, Boston, Mass., U.S.A.

There are the details and we hope that every BC enthusiast who can get near a receiver on the 29th will make a special effort to tune in to one of the Boston channels. We also trust that all those who listen to this very special programme will send along a good comprehensive report to the address given above.

Here's hoping for favourable reception conditions!

Don't Forget the Date

(LANGUAGES—Continued from p.43)

Welsh, Burmese, Javanese, Tamil, Portuguese, Bulgarian, Gaelic, Cantonese, Kananese, Chuvash, Maltese, Magyar, Catalan, Chinese, Kirghiz, Ostiak, Cypriot, Lettish, Dutch, Kuoyu, Korean, Greek, Estonian, German, Amharic, Malay, Albanian, Lithuanian, White Russian, Georgian, Manchu, Czech, Swedish, Ukranian, Guyarati, Maori, Slovene, Norwegian, Afrikaans, Hakka, Marathu, Serbo Croat, Danish, Arabic, Hansa, Persian, Quechua, Siamese, Swahili, Telugu, Uzbek, Ruthenian, Sinhalese, Tagalog, Turkish, Wenli, Yakut, Zulu and last but not least—English!

Due to space limitations it is not possible to give further details but members of the ISWL can obtain further information through the appropriate Translation department.

Languages of World Broadcasting

By M. Preston

ISWL Translation Service

DURING a session of DX listening, the average listener is frequently baffled by the number of strange tongues which are to be heard from every part of the globe. As the major broadcasting countries (i.e., U.S.A., Britain, U.S.S.R., France, China, Holland and India) transmit in over 90 different languages and dialects the confusion can be well imagined. As an instance, you may receive a transmission in Chinese and conclude that it emanates from Chungking; it is quite possible, though, that it is actually being broadcast from any one of several countries outside China. With these points in mind, however, it is quite possible to identify the source of origin and the language used. Due to the exigencies of space restriction it is not possible to make an exhaustive analysis but the following information will considerably assist in easier identification of the more uncommon languages.

Europe

Magyar, Finnish, Polish, Russian, Serbo-Croat and Catalan. Magyar is spoken in Hungary and is akin to Finnish, being in the Altai group of languages. It is very fiery and the final definitive is usually "dz" or "tz" thus producing a staccato note. Finnish is a very unusual tongue and once heard will be remembered as the words are drawn out and delivered in a distinct monotone. The Lahti stations always preface announcements with "Lahden Vleisradioasema," the station direction. Polish, Russian and Serbo-Croat are very similar and belong to the Slav group. Russian is, however, a very musical tongue and some intonations are as liquid as Italian. Identification of the Moscow stations is easy, the call being "Govonit Radio Moskva Stantstye." Catalan is heard from one country only—Andorra—and is very similar to Spanish but with slightly more guttural emphasis.

Outside Europe

Outside of Europe, the languages used are numerous and, in the case of Indian tongues, very difficult to identify. Ankara, Turkey, is always a good signal and announcements are prefaced by the call "Radyo Daireshi Muduruigu Ankara." Turkish is similar to Arabic but not so guttural. The script, incidentally, was Romanised by direction of Mustapha Kemal and is considerably easier to learn than the Arabic characters which were formally used. Arabic which is spoken from the Atlas

Mountains to Central Turkestan, in various dialects, is exceedingly guttural and can be identified by the word formations such as "wah," "allaa" and "atil." Hindustani is heard chiefly from All India Radio stations and is the lingua franca of that country. It sounds similar to Arabic but the gutturals are not so fully emphasised. Other Indian tongues to be heard are Gugarati, Marathi, Tamil, Pushtu, Bengali and Sinhalese. However, these are very similar to the ordinary ear and present considerable difficulty in identification.

Chinese, heard mostly from Chungking and Delhi, is unmistakable. The sibilants are pronounced with a clipped monotone and the intonation is slow and deliberate and exceedingly rhythmical. Japanese on the other hand is much harsher, the most common word formations being "gai" and "itchi." In the case of Chinese and Japanese it will be noted that the consonant "H" is pronounced sibilantly as "Z."

In Africa the major native tongues are Swahili and Hansa. They are, however, rarely heard on the air except from purely local stations. They are a branch of the Bantu mother tongue and are remarkable for the pronunciation of consonants, which are produced with the tongue against the teeth giving a clicking note to the speech.

Other languages not dealt with are Tagaleg (Philippines), broadcast also by the American West Coast stations, Quecha (spoken in Peru and heard over HCJB, Quito), Malay—in which tongue the BBC gives a weekly newsletter, Burmese (heard from Rangoon and Saigon) and Afrikaans, or the "taal" of South Africa which is practically the same as Dutch.

Languages on the air

The present Babel on the air is a direct outcome of World War II in which both sides vied with one another in propaganda and news bulletins in every major language. The "Deutscher Rundfunk" were particularly very enterprising and even broadcast in Gaelic for Eire and bulletins were directed to India in nearly a dozen languages.

At the present time, the following languages may be heard on the air:—French, Polish, Flemish, Armenian, Italian, Finnish, Icelandic, Begali, Japanese, Hindustani (Arabic Morocco), Hindustani (Arabic Sudan), Spanish, Rumanian,

(Continued previous page)



International Short Wave League

Monthly Notes

A resume of the QSL Bureau's activities

ONCE again we have to break the news that we have dozens of cards for members who have not sent along S.A.E.'s to collect their QSL's. It amazes us that members should take all the time and trouble to write out reports and mail them off and then be too lazy to claim their cards at the Bureau! Several cards are still here after the two previous announcements for claimants to come forward. Maybe, this, the third time, will prove lucky. Without more ado, here is the list of members for whom we hold cards:—

ISWL's G30 (3rd time of asking), 137 (3rd time), 162, 328, 347 (3rd time), 358 (3rd time), 405, 407, 419, 469, 641, 647, 667, 701, 710 (3rd time), 734, 811, 815, 824, 847, 950, 962, 1019, 1068. Also GM968, GM1015.

We have, in addition to the above, cards for the mysterious "H 15 39 RS," SWL "HA6AG," "SWL 007" and a card from W7DV addressed simply to "Bert"!! Any offers?

Now for some details of the most interesting cards that have come in recently. VQ4ERR again sends along a nice batch but this time they are special SWL reply cards. OI2KAF and OI2KAJ send nice cards, the latter welcomes reports. OE9AD has a red on green card, 11AHL in Sardinia is a good one and has a red and purple map of the island on a pale blue background. Other Europeans of note have been XAGL (with regimental badge—a modified XACI QSL), XAGI (with a Romulus and Remus motif), OZ5P and OZ5FY, the latter with a fine drawing of a four-master, SM5HK, whose yellow, green and white effort looks like a design for a pair of pyjamas! SM7VF (a plain but neat card with a Vikin ship), HA4AB (a really beautiful card this one), YR5X has a comic card, XADW, whose card shows the Coliseum in Rome, a really superb effort from OZ6AA—a very commendable photographic card. A quick round-up of other Europeans who have sent batches in reveals I1LQ, I1VS (with coloured sketches), I1LA, I1PQ, I1TP (which has another of those mystic signs!), ZBIQ (one card only) HA2C (in Hungarian National colours), LX1AJ, OH2QM, etc.

Of the DX cards one of the best is that of VQ3EDD which is yellow on white with a photo of a massive aerial tower. The card states "Under the shady palms of Dar

es Salaam—The Haven of Peace." VK4KH obliged with a fine multi-coloured card (six to be exact), with kangaroo, kookabura, map, etc. ZL4DU produces a light and dark blue card with a NZ map superimposed. That of VS2BJ is very nice with tiger and palm trees for local colour. The W's are numerous and the most interesting were W2EYY, complete with four photos showing the "Robinsons" (the original?) Elsa, Robbie, Rickey and Gregory; W6SRU, one of those thick 'uns, red card black letters; W6PDB, red and black with photo of lion cub; W6SAI, particularly effective modernistic card; W8HUD, silver on orange, tends to be rather "mushy" though; W9RUK, black photo type, quite good. In the running were W2NQS, W7DV, W3IXN, W6KUT, W3GAU, W3HRW, etc.

OQ5BW and OQ5AR represent the Congo, the former's card is red and black on buff and features a rather sad looking elephant. A few have come in from ZC1AL, which are blue on white with regimental badge. "The Arab Legion is inscribed and on one of them we noted a chad with the words "Wot, no IRC!" Then there was VK3XQ, with VK flag and Union Jack, very nice one. A prize for neatness should go to VP9T, one of the best seen for some time. To wind up we must mention LU5AD (very fb), ZS6BV, PY2HV, CN8AU, CN8BA, C1CH (complete with map of China showing districts), EA9AI, PY6AG and J4AAÿ (with coloured sketches of local scenes).

LOCAL NEWS

New Chapter at Ipswich

Yes, this month we see yet another Chapter formed. Though only recently formed quite good attendances have been recorded and an open invitation is extended to members in the vicinity to drop in at the meetings, where a cordial welcome is assured. Meetings are at present held every Monday evening commencing at 8 p.m., the rendezvous being 11 Royal Hospital School, Ipswich. Officers of the Chapter are J. E. Dean (Chairman), H. W. Dean (Hon. Sec.), Mr. Blaxall (Hon. Treasurer and Morse Instructor), J. Cowles, G2AJU, (Technical Advisor) and D. G. Garrard (Printer). Mr. Garrard is hoping to be able to produce a small club magazine. A three-valve morse oscillator is available and we understand it will be put to good use! A QRA service has been established. The subscription has been fixed for the present at

1/- per month. Members or interested readers may obtain further information from the Secretary at 11 Royal Hospital School, Ipswich.

Activities at Swansea

The recently inaugurated Swansea Chapter is going great guns. Meetings are held every Wednesday, commencing 7.30, at Vivian Road, Social Centre, Vivian Road, Sketty Cross, Swansea. The Secretary, W. H. Longhurst, GW3AAO, is anxious to hear from local members who have not yet taken advantage of the facilities offered. So, what say you Swansea-ites? Drop a line tonight to 3AAO at 82 Gower Road, Sketty, Swansea.

The Watford Group

The first meeting of the Chapter was held in late November and since then steady progress has been made. For members in the neighbourhood there is a good opportunity not only to meet the "locals" but to avail themselves of constructional facilities since a good clubroom is there for the use of members. A programme of constructional work is being planned. At present meetings are held every Monday, starting at 7.45 p.m. Please support the Chapter, O.M.'s. Full details may be obtained from the CR: R. W. S. Halsey, 7 North Approach, Watford.

Clifton Amateur Radio Society

Or in other words—the S.E. London Chapter of the ISWL. (Sec.: W. A. Martin, 21 Brixton Hill, S.W.2.) As forecast last month, the change in clubroom has come about, and, in the words of the Sec. it is an "R9plus" affair. The club is indebted to member Norman Moore for securing the fine premises, which comprise a ground floor and a large cupboard in the basement for storage purposes. Everything is laid on, including a coal fire, so the Chapter is feeling very comfortable these days. For the benefit of those yet to take the plunge and join the club, meetings are held every Friday from 7.15 p.m. A representative programme would sound something like:—Half an hour Morse practice, one of a series of lectures covering the syllabus of the Radio Amateurs Exam., announcement of the Listening Periods, checking of logs for the preceding week, and so on. Apart from club business the remaining time is devoted to general rag-chewing and this is followed by an adjournment for tea-swilling! Please note the new HQ: 225 New Cross Road, S.E.14. This is right opposite the New Cross tram depot. Just one important point: Will intending visitors please tap on the front ground floor window and not ring either of the two bells on the front door. (As the CR says—don't knock twice and ask for Joe!)

CQ Birmingham Members

From the Birmingham Chapter comes a complaint. It appears that the attendances are noted for containing just the "regulars" each meeting. Notices posted to other members in the Birmingham area resulted in TWO replies only. To us it seems rather bad manners to ignore the efforts of those trying to build up the strength of the Chapter. We realise that it may not be possible for all members to get to the meetings each time, but at least it is surely only common courtesy to acknowledge letters from the Chapter officials. The meetings are interesting, the atmosphere congenial and the regular attenders full of enthusiasm. So, why the apathy from the rest of the members? Come on, O.M.'s, you can do better than that surely! If you are a Birmingham member, get out your pen right now and drop a line to the Secretary. Even if you find it difficult to attend meetings you can let him know "what's cooking." The address is G. S. Moore, 42 Fern Road, Erdington, Birmingham, 24.

Good Turn Dept.

One of our very first members was Kenneth Joel, GI-129, of Belfast. Last year, Ken cut his finger and a germ entered—going straight to his spine. As a consequence, Ken is now in hospital and is partially paralysed. Our friend is in hospital in Yorkshire, away from his family, and naturally finds the time rather heavy. HQ sent off a batch of books to Ken, but we would like to make a special request to all members to rally round and help out a fellow member by sending along any radio books they do not need. So, dig out those books, O.M.'s, either text-books, magazines or what-have-you, and send them along to Kenneth Joel, Ward A/B, Pinderfields Emergency Hospital, Wakefield, Yorkshire.

Press Stations

Bernard Elvey, G330, writes in to offer help to any members who want gen on such things as press stations and the like. This, in fact, constitutes YET ANOTHER Query Service for the good old League! The same rulings will apply to this service as to the similar ones already in operation, but for heavens sake DON'T forget to enclose a S.A.E.! The QRA is B. A. Elvey, Malvern Meadow, Kearsney, near Dover, Kent. As an aside, we would like to mention that the next edition of the "Annual" will contain a section on such stations as compiled by the American expert John Young, W3-821.

My Favourite Receiver: No. 15

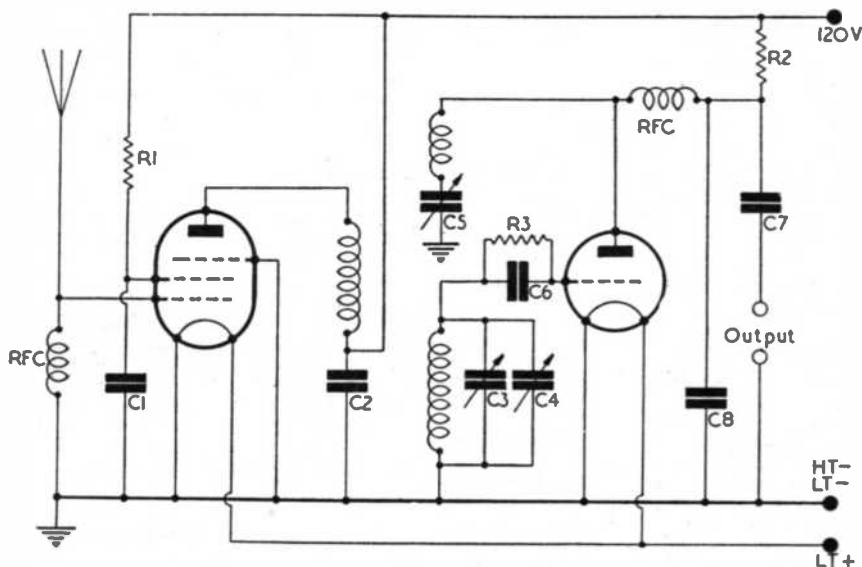
By W. A. Gorman, ISWL/GM968

AS the owner says, this receiver is simple to construct and is easy on the pocket. It is slightly unusual inasmuch as it employs an RF stage but has no audio stages. It is, then, a 1-v-0. The RF stage uses a Z21, 4-pin straight pentode, which is coupled to a PM2HL detector—a medium impedance triode. Reaction is carried out in the conventional way by means of the capacitor C3 and is smooth in operation, though, of course, some shift in dial setting is noticed with variation of the

reaction control as is usual in this type of receiver. The receiver is built on a die-cast aluminium chassis and with the exception of the chassis and cabinet was built entirely from "surplus" gear. The valves finally chosen were selected after many similar types had been tried out.

The receiver is now used in conjunction with a 5-watt amplifier (also constructed from surplus gear) and with a 10 ft. indoor copper mesh aerial the results claimed are equal to, or better than, the average commercial 5-valve superhets. With a good outdoor aerial, of course, the amplifier could easily be dispensed with. Alternatively the output from the 1-v-0 could be fed into an existing receiver at the pick-up sockets.

Interested readers who have any queries may write to the owner at 15 Northburn Street, Glasgow, Glasgow, C.4.—and don't forget the S.A.E.!



R1 22 K~
R2 100 K~
R3 3 M~
C1, C2, C7 0.1 μ F
C3 160 μ F

C4 15 μ F
C5 200 μ F
C6 50 μ F
V1 Z21
V2 PM2HL

THE ANNUAL

Following the preliminary announcement in last month's issue concerning the 1948 Edition, we must point out that the retail price was incorrectly given as 2/6. The price of the new edition will be 3/6 (U.S.A. members 75 cents.) The increase in price over last year's edition has been necessitated by two factors (1) the larger size of the

new edition and (2) the considerable increase in printing expenses that have occurred since last year.

Next month we hope to be able to announce that the book is available, but please do not send any cash, or write to book orders, until we have definitely given the O.K.

On the Ham Bands

Conducted by "CQ"

● Readers News

This month we decided to lump all news together in one section instead of by bands. We would like readers' views on this change over.

Frank Barrett, W2-1087, of Brooklyn starts the ball rolling. Frank is a postman and we wonder how he feels delivering other peoples QSL's! He says his favourite feature is Ham Bands, remarking "Yes sir, they don't come any better than 'S.W.N.'." Thanks, O.M. A nice list of G calls as received in W2 is listed in the usual section. Frank also sends a list of "coupon-snatchers" amongst which we see G2IS, G2PU, G2AMG, G6IA, EI2L and EI3Q. What's holding you back, O.M's?

Martin Harrison, G54 (Darlington) has a bind. It is against those SWL's who send reports to stations that have requested reports but do not enclose return postage. "I call this taking advantage," says Martin. Amen. The observation that many hams will not avail themselves of QSL Bureaux for outgoing cards and therefore adding unnecessarily to their expenses is also raised. We have noted this fact and it seems crazy that certain stations will persist in sending single cards (time after time) to the ISWL Bureau! The 14 Mcs. log looks fine, with MD5LR, OY3igo, Raem, UD6ae, UQ2ad, VU2LU, ZC6JR, ZE1JX, ZL2BT, ZS1AX and 6JC.

Hold it blokes! Here is a 7 Mcs. DX log. Martin has heard CM7rs, FA3ww, HH2cw, UA6sd, UB5kbi, UC2bb, VE1gt, 3ns and VQ3wcp (at 2230 on 7080 kcs.) Also nearly 50 W's.

Derek Sellen, G1450 (Ipswich) is one of the "wun-toob" brigade and has heard on his little RX: CR7bb, bc; EP1al, KL7it, OQ5av, OX3gf, mg, rg; UO5ad, VP8dj, VQ3alt; YI2fdf, ZE2jn, ZD4at, ZL2gx, qm, 3kr; ZS5yf, 6fn, kk. How's that for a battery 0-v-0?

T. W. Jones (Birmingham) sends along his first effort. His "black list" consists of only two stations, viz VO2AF (again!) and KH6CT. All other reports, he says, have been acknowledged 100 per cent, with or without coupons. The answer is, of course, sending worthwhile reports. J. T. W. recently sent a period report (covering several weeks) to VE4IF and it took three hours to write out. Mass reporters please copy! Our friend quotes a letter from HH2CW which appeared in QST, extracts of which are "... get 15 SWL cards every 3/4 days. As far as reports go they don't mean much and most of them are very funny." 2CW went on to say that the Haiti PO will not accept IRC's and that he

has a large box full of them! The 14 Mcs. log includes: J2AJA, VE8BC, MB, OG; VP2GC, VU2LU, ZC1AF, ZL2BT. PZ1fm, VQ2hc, ZS6ec, oy. On 7 Mcs. he heard CO6av, FA8bg, PY2aj, qw; UC2cb, UR2ac, VO1an, 3z, etc. The DX on 3.5 Mcs. was FA8bg, VE1kf, W1gku, njm; MB9AU, VE1GR, GI, DZ, JK, LR, MB; VO1AB, 1I, 6J, and many W's.

A. H. Onslow, G1555 (Hove) says his CW is still on the up-and-up, though nothing sensational to report. He has noted the number of EA's now to be heard on both phone and CW. His latest crop of QSL's brought his total to 94 verified countries, and 47 States verified. Bert mentions the new one C9JW who is at the Bank of China and wonders if he used bank notes for QSL's! Matter of fact, we had a QSL from YR5AH recently which is in fact a banknote overprinted! The best catches on 14 Mcs. were UB5bc, ki, UD6ad, bm, UC2cb, kda, UL7bs, UQ2ad (got a beam up O.M.?) Bert also sends along a 3.5 Mcs. list which includes FA8bg, YU7kx; VE1GR, LR, PX and lots of W's.

D. L. McLean (Yeovil) sends along his usual massive effort (13 pages this time!) D. L. M. says that in response to Bert Onslow's query he has logged the interesting ZS6OL in Bechuanaland—on 28 Mcs. phone at 1635 last October. This station is now believed to be QRT. D. L. M. is another who likes to send good reports, all of them are kept for a month or more, and the results are well worth the extra trouble. His monthly lists of QSL's received speaks for themselves. W5MTJ said "I really appreciate a card like yours because it shows some work and interest on your part. SWL's put down one report but yours is the most descriptive I have ever received." W5MMK said "Tnx for your very thoughtful report, very nice to give comparative QRK's of other W's," etc. The best reward was from a certain W5 who sent a 5lb. food parcel!!

EA7BA was heard to say that QRA's for all EA stations shown in pre-war Call Books still held good and reports should be so addressed. KA1CB was heard calling "CQ all G's" and saying that as Great Britain had not yet signed a treaty with the new Phillipine Republic the hams there were forbidden to QSO with G's! Here is a selection of the DX heard by D. L. M.

3.5 Mcs.: VE2LV, RF, 3ART; VO2AV, 6J and very many VE1 and W calls.

14 Mcs.: EA7EDZ (Rio de Oro), KA1KM, OQ5BW, 5CA; ST2CH, VQ2PL, 4NSH; ZC6JF, JL, JM, JR; ZE1JS, JX, 2JN; ZL2BT, GX; ZS1AX, B, GR, T, 2CI, 5Q,

6AF, CY, DY, FC, GI, GN, JO and U (ZS's heard between 1700-1930).

28 Mcs.: C1CH, CS, JC; CR9AG, AM; KG6AAF, MD7RJ, ST2CH, JF, KC, MP; VK2ADC, 6FL, HL, KW, MU, RU; VP2GB, 3TR; VQ4GWB, NSH and masses of VU, ZL, ZS, etc.

P. Barratt and M. Bulley (G889) of St. Neots send along a joint log, using a simple one valve Hartley RX. Despite the simple receiver, more DX has been logged on 28 Mcs. in two months than was previously heard on 14 Mcs. in two years! The best were: CR9AG, AM; KG6AAF, AD, CG, BE, BT; VP4TT, TU, TZ; VS7RS, VU2CD, LJ, 7JU; ZC6JL, NF; ZL2BN, 3JA, JO, KH, LE, LG; ZS1P, BV, 6FC and many J's.

A. J. Slater, G1650 (Southwick) has decided to concentrate on 7 Mcs. and on CW in particular. He has so far logged W, VE, VO, MD1, MD5, FA8 and CT2 on 7 Mcs. so the prospects look favourable. Two new countries were added, on 14 Mcs. CW, in the form of UB5kad and PXLc (rather a doubtful one that O.M.), bringing the total to 145. Al had a letter from VK3MC which is worth quoting. This was in reply to a report (made out on SWN forms). "... would like to thank you for the first decent SWL report I have ever received. Most of them just have 'working so and so on 14 Mcs. at such and such a time' and are of no value at all." 3MC says he gets dozens of reports and just cannot reply as they never give useful information. Such a report was enclosed and the "data" it contained was "Date: 15th July, BDST: 1030. QRM and QSB: slight. QRN and CONDX.: Bad. WX: Warm. (Also details of RX and Aerial were given.)" The check report said "To VK3MC on 14 Mcs. band. Also heard on 14th July at Q5 R9." If this is representative SWL report then the sooner the reporters get browned off with receiving no replies the better!

Don Robertson, GM1051 (Wick) found 14 dead and so had a bash at 7. The results were surprising to Don as he logged VO2bf, VE8nb (2215), VO2r, ZS1er (2250), PY2ck, lafs; ZD3b (2225), PY2qw, ZL311 (1000), OX3sf (2000), KZ5nd, ZL4ft (0915), ZL3ha, HH2lr, VE7aer (0920), VK2ke, CM6ah, and lots of W's including Ospy, 7cww, Oopk, 6bpd, 6zcv, 7hul, 9lua, 9bgn, 5fvn, 0cnd, 6tkx, 7cwe and 5jlu. Also well over 100 East Coast W and VE's. Who said 7 was not a DX band?

A. E. Lincoln, G289 (Grimsby) heard W1AHH, 0I2H and 4HSE/ON4 on 3.5 Mcs. 28 Mcs. produced KZ5NB, 5SW; MD7IJ, OA4AK, ST2MP, TH; SV0AC, VP4TAX, 6KM; VU2CD, VK6RU, XZ2KM and ZE2JI.

B. Cole, G687 (Grimsby) has a nice 14 Mcs. CW list, which includes: CR6ai, 9an;

ET3af, VP2ks, 9d; VQ4raw, VU2sj, ZL2gx, cu; ZS1fn, 2x, 6dy, ew, fn, j, ob. Also many VK's and K's. Tnx for nicely laid out log. O.M. (RX: R1155N and 20 ft. indoor aerial).

Charles Southall, W3-990 (Philadelphia), finds that 14 Mcs. goes dead around 2000 EST, but has compiled a nice list of DX. In one year's listening Charles has heard 89 countries. The best for last month were CP5EC, D4AVF/EL, ET3AB, HH2ib, 3VE; NY4CM, DZ; VP2GB, YNIHT, YV8AG, ZD3B, ZS6AZ, 6GR.

Deniss Rickers, GW1048 (Wrexham), has an idea. He says that in everyday life we have Spivs, so why not call spivvish hams by the title of "Spams"! We feel quite pleased at this apt name for spiv-hams but suggest that they are hardly as savoury as the name might suggest! Denis has been checking up on some of these gentry, one example of which is quoted in our Lids dept. Whilst tuning around the band, Denis heard a GM say that the saddest thing he could think of was a ham without an exclamation mark on his typewriter. Food for thought here!

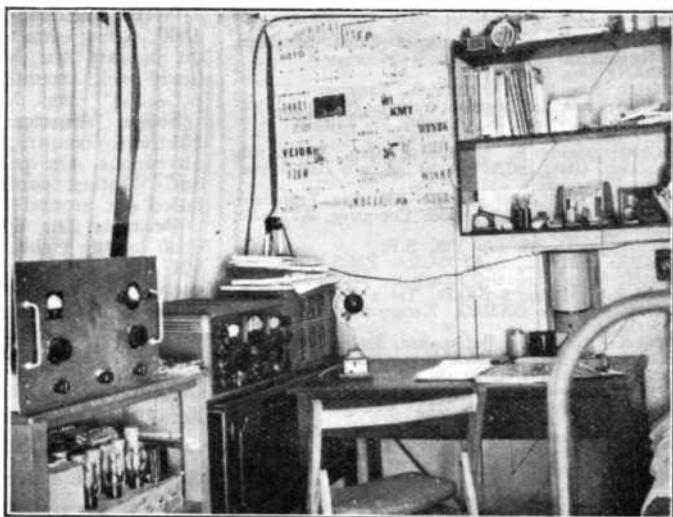
W. J. Vigar, G549 (Tooting) draws attention to the fact that cards sent abroad in sealed envelopes should be stamped 3d. G549 says he sees large numbers of cards being taxed due to insufficient postage being affixed and thinks that many recipients on having to pay double excess postage must think twice before replying.

J. H. Endersby, GW703 (Old Colwyn) remarks on the number of US/Canadian weather stations which sprout amateur stations. He heard one of them, VE8MB, talking about temperatures 20 degrees "below" and 24 hours of darkness. To G407, Bert says look out for W7ILL (Wyoming), W0FGR and RMF (Missouri) and W0AVT (N. Dakota). The 14 Mcs. phone log at GW703 includes AR8AB, CE1AR (heard when band almost completely dead—2330), HK3BH, MD5PC/MD1, VE8MB (Mansel Is.), 8NB (Resolution Is.), 8NW (Baffin Is.), VK6FL, VP2DE, VU2LU and ZC6JM.

R. W. Ainge, G219 (Crewe), has a new 3-element rotary close spaced beam on a 21 ft. steel mast and it seems to be doing the trick on 28 Mcs. A selection of the DX is W2WMV/C9, J9ABX, W6PJN/KG6, MD7RJ, ST2JE, VK6RU, 6KW; VQ4GWB (?), VP4TT, TAX, 6ZI, KM, SO; VU2QV, BG, CD, LJ, 7BR; YV6AO, ZC6NK, KL, ZD2KC, 4AL; ZS1P, 2AF, 5Q, CD, 6FC and 6KS. G219 finds that the band opens at about 0830 and "still roars in at 1830."

Apologies to many readers for omission of their news which has unfortunately to be held over till next issue.

A view of the station ZC6FP, which is described by the op. as "The Bedside Ham Station." Well, we certainly agree that it looks a nice comfortable set-up.



Ten Metre Review

By C. Ranft, G5RF

OUR good friend "CQ" has agreed to give "independent status" to 28 Mcs. gen as readers will have noticed from the previous few issues and devotees of the band will agree that this is a Good Thing. I think that a word of explanation on the aims and limitations of this section are indicated at this stage.

The aim is to give as near as possible a survey of conditions on the band rather than a catalogue of stations heard, unless the latter are of rarity or habitually outstanding, etc. The limitations are chiefly space available and the time available for checking the band. Since space is restricted, for the time being, to about a column, English scholars will have to be content with "telegrams."

Apart from week-ends, time is limited at 5RF to varying periods around 0700-0845, 1320-1350, and some evenings after 1800. Therefore if I say "no VK's were noted," this means "no VK's were heard at week-ends or during the week at the times indicated above." Which amounts to the same thing for the average bloke working normal hours. It is pointed out that my main interest is CW, even if ten IS a phone band, and I apologise in advance if the reviews have a CW bias; an eye will, however, be kept on the phone boys.

Any particular choice stations heard or worked will be listed at the end, with QRA's and frequency where possible, in a section called "Crafty Corner." Frequencies, unless quoted as "approx" will be within plus or minus 5 kcs. Call signs will **always** be OK, doubtful clients will not be listed. No list of DX worked will be given as it is felt that this would not be of general interest. The reviews will take the form as below though modifications will be considered if enough similar requests are received. An attempt will be made to explain the reason for such conditions as are described in the General section, in terms of Maximum Usable Frequencies, ionospheric disturbances and seasonal changes. Finally, here is the gear as used at 5RF:—

Aerials: Lazy H, beamed 60 degrees/240 degrees (NE/SW approx.)

RX: Home-made (RF/Mixer/Regenerative IF/IF/Det-AVC-Audio/BFO. Headphones normally used, but 6K6 output used when listening on speaker.

TX: VFO-FD-PA, 100 watts input CW; 50-75 watts input phone.

And now to this month's review of the band.

General

Conditions have not greatly altered since last time. We are still in the midwinter "trough" and as was to be expected the very high MUF's have fallen somewhat. Further, a period of ionosphere disturbance

Topical DX QRA's

CAJW: Wei Tsu Ye, Bank of China, Moukden, Manchukuo.
CR2AN: Box 504, Macao.
EK1DI: Box 179, British P.O., Tangier.
HF2LR: Box 153, Port-au-Prince, Haiti.
IIRC: J. Carmauli, S. Giovanni 29, Trieste.
I6ZJQ: Box 247, Asmara, Eritrea.
J2GHQ: Major R. M. Lantz, Gen. Accounting Section, GHQ, SCAP, APO 500, c/o Postmaster, San Francisco.
JSAAJ/ISLQK: APO 929, c/o PM, San Francisco.
J8AAW: III Signals Service Company, APO 235, c/o PM, S.F.
J9ABO: APO 239, c/o PM, S.F.
KG4BE: G.R.A.L., APO 234, c/o PM.S.F.
MD1H: Royal Signals, Benghazi, MELF6.
MD5LR: H Mess, 5 B.O.D., Tel a Kabir, MELF.
OX3MG: Radio OX3MG, Kangerdlugssuaq, East Greenland.
PK5LK: Air Strip, Balikpapan, Dutch Borneo.
ST2CH: c/o RAF Station, Khartoum.
VP2AA: AACCS Detachment, APO 855, c/o PM, Miami, Florida.
VP3TR: Atkinson Field, APO 857, c/o PM, New York.
VQ4GWB: Box 4012, Nairobi, Kenya.
VQ4NSH: Box 571, Nairobi.
VU2DS: Major Hewitt, I.E.M.E. Training Centre, Katni, C.P., India.
VU2EJ: c/o 25 Knighton Grange Road, Leicester, England.
W6YOT/Cs: 4 Communications Section, Fleet Marine Force Western Pacific, c/o Fleet Post Office, S.F.
ZD1BD: Capt. S. B. Duke, Royal Signals, Sierra Leone and Gambia Signals Squadron, Freetown, Sierra Leone.
ZM6AH: Box 57, Apia, Samoa.
 (Acknowledgements to D. Robertson, P. Barratt, D. L. McLean and A. H. Onslow for several of the QRA's listed.)

occurred early in January, the worst day being the 3rd.

Very long paths (e.g. VK2-5, ZL and Pacific) have been extremely unreliable, remaining open only for very short periods. Paths through the North Auroral Zone (such as W6-7, VE5-7, KL, KH, etc.) have been almost continuously interrupted. Short Skip conditions in Southern Hemisphere have not helped out DX results either.

Europe: Outside 1000 miles well received daily. Usual semi-local Europeans and G's (by scatter)—sometimes at very high QRK's.

Asia: Nearly every morning (around 0800) VU and V57 phones well heard. Asiatics on longer and more northerly paths (KA, J8, etc.) have been heard later—even up to 1230—but with no reliability and often for only short periods, occasionally with echo. On some mornings these latter have arrived with the "early birds," usually on days when ZL's have appeared at the same early hour.

Africa: "Middle" Africans (ST2/ZD2) have sometimes appeared as early as the VU's, but South Africa has only done so on a few occasions and then with low QRK's. Though erratic, the peak hour remains 1500.

North America: Most reliable from 1230-1800. A few even managed to come through on January 3rd. Many Carribean stations heard well around lunch time, usually on poor "W" days. W6-7, VE5-7 very poor.

South America: Good signals from Northern countries, mornings and early afternoons. On poor "W" days Southern and Western parts well received as W's faded out around 1900.

Oceania: ZL: For a short time around 0830 on the right days. No ZL1's. Eastern VK very poor and unreliable—sometimes early mornings but few and weak. VK6, better but also unreliable. VK5KL, Darwin, quite consistent but this is more like PK for "condx" purposes. Long Route unworkable.

Crafty Corner: CR7VAL, 28150 kcs. Aeradio, Quelimane, Mozambique.

● **DX QSL's Received**

J. N. Trye: CT1PW, HA4AB, K9AAAY, VE3AIU, VK30P, VQ3EDD, W6GCX, W6MI, W6VJQ, W7JIW, W7KNO, W7PEY.

A. E. Lincoln: OE9AB, W5LWU, EL5A, EL5B.

D. L. McLean: AR8AB, J2GHQ, 5AAJ, 8ACS, 9ABX; KW6AC, LU2DS, 3BAC; OQ5BR, VK5NR, 6DF; VE4RP, 5SY, VS2BU, VU2DS, 2EJ, W6ELW, 6PXP, 6SA, 6YOT/C6, 7FTV, 7IIX, 7ITN; XE1SE, XE3D, ZC6FP, ZD1BD, ZL2GX, 4FO; ZS6BG, 6CM; ZD4AL.

A. H. Onslow: TF3EA, AR8AB, VP3HL, W5CNK.

C. G. Tilly: W6CJE, 6YNN, 6WVP, 6VTV, 6LRN, 6KUL, 7FTO, 7GBU, 7KJG, 7KOE, 7PA, 7TLY; VP6LN, VK6FL.

● **Odd Jottings**

Nice 'uns heard lately include FE8rv (Cameroon), VS9aa (Maldive Is.), AR8BC, FE8ID, W2CDJ/PK3, W4VOY/VS9 . . . Martin Harrison heard OQ5LL/ON4 on 14 Mcs. He took a poor view of the suffix! . . . HA2C writes to say that reports to HA's should now be addressed to HA2C, Dezzo Felkai, Bethlen utca 50, Rakospalota. The old QRA now defunct . . . G2FDY/YI is now signing the call YI2FDY . . . Data via Bert Onslow: J9AAW is now J8AAW . . . KS4AE now QRT and in KA-land . . . via QST: W3LTK is on 14100 kcs. and is in the Antarctic . . . LB4qa is on board a Whaling ship . . . QSL from KX6USA says "Bikini Scientific Resurvey, 1947" and shows photo of the shack on the island . . . C3yn (Foochow) is ex-second op at AC3SS and also ran various XU6 stations . . . Don Robertson heard a W talking about an active PJ on 28 Mcs. Also heard LY1BC and D3AAJ . . . EK1DI is ex-G4DI.

Nice Types

A monthly record of prize lids

The G station who makes a habit of going on the air with an F call-sign.

G2---, in West London, who called a G4, saying "If you don't come into this QSO with myself and G5---, I will come down on top of you and blot you out."

D4---, using a BC610 on 14 Mcs., who said "No idea how it works, O.M., I just switch it on."

G3---, who came out with "Sorry, O.M., but I cannot keep it too long as the G.P.O. might hear me and I am not licensed for phone yet."

G8- (London area) who put up a new aerial. He laid it along the garden, tuned it up and started taking readings. After spending all the morning making adjustments, he took the afternoon to go around and get a mast. With the aerial hooked up on the mast (presumably taking another few hours) he was amazed that the readings were entirely different!

● G Calls heard Overseas

Frank Barrett, W2-1087 (Brooklyn, N.Y.) 28 Mcs. phone. G2ACK, AEW, BB, BOZ, BUJ, FB, MQ; 3AAM, BLT, FJ, JO; 4GD, GN, GS, OO; 5BY, DF, TP; 6BW, KI, YR, ZH; 8DT, IG, SW, SY, TL, TH; GI3JC, GM5FT, 8AT; GW3QN, 4CC, 5VX. 14 Mcs. phone: G2JG, 3AC, DO, GI8UW, GM3YS, 5PH.

Waldemar F. Kehler (Schleswig-Holstein) RX: 0-v-1. 1.8 Mcs. CW: G2jf, pt, kfn, rk, tn, zn, acz, aqb, aua, fix, fsh, hdt; 3fj, jv, md, na, pu, pv, vw, aal, ack, ald, amf, auk, awq, azt, bej, bfn, bgr, bni, bqb, bra, btl, bzf, cbo, cwc; 4dv, yt; 5ih, mm, nf, ri, sk, uf, zx; 6hg, jv, kc, kr, ll, pr, xb, zn; 8nf, qj, si, tp, xg; GM6sr, GW2bg.

Charles Southall, W3-990 (Philadelphia): 14 Mcs. phone: G2AK, 5BQ, 6AG.

P. Sleutel, PY-1040 (Sao Paulo). RX: SX28A. 28 Mcs. phone: G2AK, CX, EC, GL, MJ, QV, QW, SB, SY, FKO, HAP; 3BJ, BX, CG, VO, XC, ZO, ALD, AVK; 4GD, HW; 5BM, TP, YU; 6HL, JF, PA, TO, XN; 8BP, TH, UG, WL; GM8RG.

● Query Corner

In reply to Reg Vincent's teaser (ER8J), G3XT writes to air his view that the station was obviously an F8 (EO, AM or WT) since bad morse spacing would result in any of these calls sounding like ER8J. Unfortunately, O.M., the query was for a PHONE station, so your scribe still holds good to EI8J.

DX PREDICTION FOR MID-FEBRUARY to MID-MARCH

(7 and 14 Mcs. through courtesy of Geoff Hutson, G6GH. 28, 50 and 60 Mcs., with acknowledgements to Denis Heightman, G6DH. Times in G.M.T.)

7 Mcs. Conditions

0700-0800—W, ZL.

2000 —W.

2100-2400—W, KP, CM.

14 Mcs. Conditions.

0700-1000—ZL, VK, J.

1400 —PK2, J, KA.

1500 —W6, PK, J. C.

1600-1700—W6, Africans.

1800-1900—Africans.

2000-2100—W1, PY, LU.

2200-2400—PY, LU.

28 Mcs. Conditions

0730-1300—Far East.

0700-1600—Near East.

0730-1400—Australasia.

0930-1300—Europe (over 1000 miles)

0730-1730—Africa.

0930-2000—S. America.

1130-1930—N. America.

50 Mcs. Conditions

It is expected that during the second half of January and in mid-February, further 50 Mcs. DX openings will occur to N. America between 1300-1700. The MUF to the Near East may reach 50 Mcs. in the mornings (0800-1200) on peak days. The best times are unreliable as these openings depend on spasmodic bursts of solar radiation.

Peter Wood says he logged "MA8J" and what about it? Cautiously we suggest that this is surely LA8J misread. Any other ideas anyone?

H. P. Bull asks for data on XAMC (Trieste) heard on 14 Mcs. phone. What exactly do you want to know OM?

Martin Harrison heard KC5i (this is not C5ik) on 14 Mcs. OE3WX was logged and said he was an American undercover. Can anyone oblige with data on these two? Martin also heard EA8EDZ in addition to the EA7EDZ johnny, so that tip may solve a few queries. Finally, the QRA of RAEM is sought. (Suggest the usual Box 88, Moscow, O.M.)

Set Review

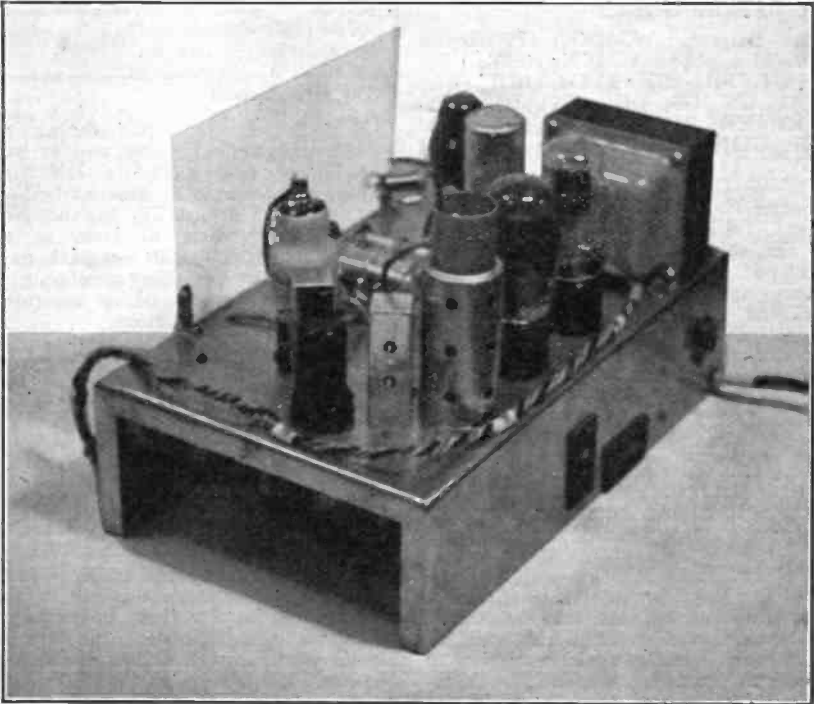
The "Hambander" Communications Receiver

RADIOVISION (Leicester) Ltd., 58-60 Rutland Street, Leicester, have already earned a reputation of giving good value for money with their V55R Communications receiver and the series of "Expander Units" which go with it. The latest addition to their range of receiving equipment is one which we feel will earn even greater praise than their earlier products.

There has always been a demand for a reasonably priced communications receiver designed specifically for amateur band use and in producing their "Hambander" receiver, Radiovision have made a big step forward in producing the right type of job at the right price.

The "Hambander" Communication Receiver covers all the amateur bands from 10 to 160 metres, including the new 21 Mcs. band. This range of frequencies is covered in five bands. The actual range covered in each band is as follows:—Range 1, 32-20

Mcs. Range 2, 21-14 Mcs. Range 3, 10.5-7 Mcs. Range 4, 4.6-3.2 Mcs. Range 5, 2.6-1.7 Mcs. The various ranges are selected by a five position switch. Some idea of the amount of band spread given on each amateur band can be had from the following data:—On range 1, the 28 Mcs. band occupies 20 degrees of the 180 degree dial and the 21 Mcs. band occupies 10 degrees. On range 2, the 14 Mcs. band occupies 20 degrees. On range 3, the 7 Mcs. band occupies 25 degrees; on range 4, the 3.5 Mcs. band occupies 60 degrees and on range 5, the "top band" also occupies 60 degrees. The dial itself is graduated in megacycles and there is a secondary small graduated dial which can be seen in the photograph, shown in Radiovision's advertisement, just above the tuning knob, which is graduated 0-100 continuously, enabling accurate logging of stations on each band to be made. There is a reduction of 40 to 1 between the main control knob and the



Rear view of the "Hambander" with cabinet removed

condenser spindle, which thus affords extremely good slow motion tuning on every amateur band. Both the range dial and the vernier dial are illuminated by diffuse lighting from behind, a feature which adds very greatly to the ease of handling of the receiver.

The other controls provided include, Volume Control with AC on/off switch, BFO on/off switch, pitch control, send/receive switch, Aerial compensator, Noise limiter and R.F. gain; their relative positions being apparent from the photo. A phone jack is provided on the front panel and sockets for speaker are at the rear, as are the aerial and earth terminals and AC mains voltage selector plug. The speaker transformer is built into the receiver, a 2-3 ohm speaker being used. The receiver includes its own power supply.

The valve complement is as follows:— Frequency changer, X61M; I.F. amplifier, 6SG7; det. AVC, and audio 6Q7. Output KT61. BFO L63. Rectifier U50. Alternatively the American equivalents of these valves may be used. The noise limiter makes use of a CG1-C or IN34 crystal diode. Iron core coils are used throughout.

As will be seen from the illustrations, the receiver is very attractive in appearance, being finished in black crackle and lettered in silver. It is very handy in size, its 14½ by 9 by 8½ inches taking up little room on the bench. This compactness was a feature which appealed to us especially.

Coming now to performance, we entirely agree with the makers' claims that "second channel" broadcast interference is entirely eliminated on 20 metres and that the receiver's performance on 10 metres really is "startling." It is as lively a receiver on 10 as we have handled for some time, the bandspread on this band is quite adequate and tuning as easy as could be wished. On 14 Mcs. both DX and local phone could be brought up to full loud speaker strength

without difficulty and the performance on CW DX was also really good. Similarly performance on 7, 3.5 and 1.7 Mcs. called for no adverse comments at all. We tried the receiver out with a variety of aerials ranging from a T with 66 ft. top, a tuned 14 Mcs. doublet and a 6ft. length of wire slung up round the shack and came to the conclusion that whilst the signal/noise ratio was of course better with the longer matched aerials, with the 6ft. length of wire, the receiver gave perfectly satisfactory results on all bands including the "top band." The aerial compensator control really does balance up for the different types of aerial which may be used.

Radiovision are able to offer this receiver at an inclusive price of £22/10/- plus 10/- packing and carriage. At this price, this receiver really is very good value for money. The makers are able to give delivery in approximately seven days at the moment and we agree with them that there will be a terrific sale on this line which is, as they say, a first class proposition at the price asked.

Pirates

We have had several reports from readers who have heard "G2ATV" operating on 7 Mcs. with shocking phone transmissions. 2ATV would like to point out that he has never operated 7 Mcs. phone and has, in fact, been off the air for several months. G3AYA is also suffering from the activities of a pirate on 7 Mcs. phone.

Bottle Swapping Section

Member GM1133 has the following valves: 15D2, 9D2, 8D2, 4DI. They are all in good condition, but are in the market for swapping with the following: X24, Z21, HD24, PT2. Anyone interested in the exchange, please write to H. E. Kingsland, 6 West Albert Road, Kirkcaldy, Fifeshire.

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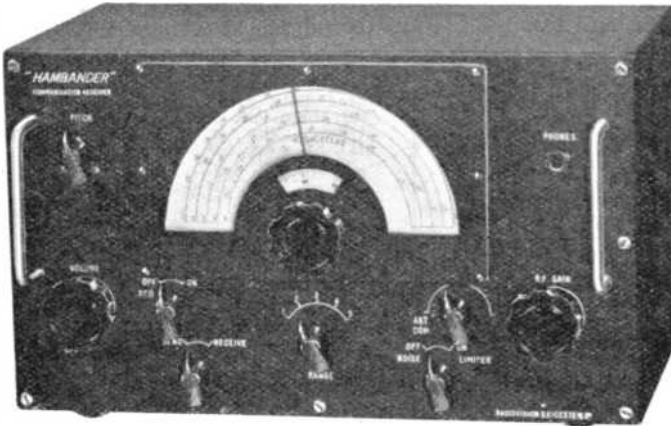
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