

Short Wave News



I'3
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March, 1948

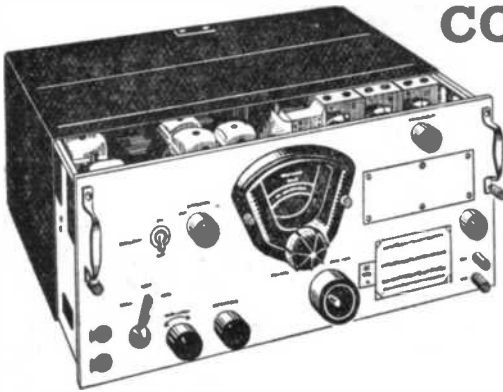
For Transmitter and Listener



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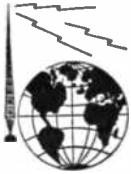
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Short Wave News

Vol 3 No 3

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March, 1948

Editors:
ARTHUR C. GEE, G2UK W. NORMAN STEVENS, G3AKA
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Short Wave Broadcasting

QUITE a furore is developing over the question of whether or not Short Wave Broadcasting is of value. An editorial in a recent number of "QST" (Dec., 1947) started the ball rolling, by condemning short wave broadcasting in terms so severe that one could not help feeling their outlook was sadly over biased. Over this side of the water, a correspondent in the February "Wireless World," takes a similar view, in a letter, "about the appalling waste of frequency channels, not to mention public money, that is being expended on short wave broadcasting throughout the world." This correspondent quotes an interesting statement made by Brig. Gen. Stoner, Chief Communications Engineer, United Nations, that "of the 300,000,000 people throughout the world, who daily listen to some form of broadcasting, less than 3 per cent. hear any form of direct short wave broadcast."

The ever expanding requirements of short wave broadcasting became painfully obtrusive during the recent Atlantic City Conference. Apparently a battle royal was waged between those nations with large commercial interests and those with big political aims, the former wanting more channels for fixed, maritime and aeronautical services; the latter wanting more for broadcast.

American opinion appears to regard short wave broadcasting as a failure, in fact at times they seem to regard it as a definite menace. An editorial in the American Amateur radio journal "CQ" for Dec., 1947, discusses at some length the question of the new "shared" amateur bands. This editorial is one of the most forthright we have read for a long time. To quote:—"We cannot question the right of other services to adequate space in the radio spectrum, but we do question, along with many Government officials and private citizens, the value of international high frequency broadcasting. To share say a portion of 160 with Loran and then interfere with this service would be criminal. To share 40 and interfere with Radio Spain or someone of their ilk, would be doing all radio listeners a service."

It is very interesting to read such authoritative figures as those quoted by Brig. Gen. Stoner. Our own estimate made in "These You Can Hear"—was "5 per cent. or less." In that publication too, we outlined our views on the unpopularity of short wave broadcast listening and gave our views on overcoming some of them. We quite agree with the prevailing opinion that too much short wave broadcasting is taking place, and too few listeners are using it. In our opinion not enough attention has been paid to popularising short

Editorial

wave broadcast listening to the man in the street. We also agree that some nations are using these frequencies for quite the wrong purposes. National characteristics have an appeal of their own and if used properly can do much to enhance a nation's prestige. If a nation would use its short wave broadcast frequencies to radiate programmes aimed at portraying its national character, culture and background; short wave broadcasting would be as valuable a service as the travel book or film. It is when short wave broadcasting is used for disseminating political doctrine, religious dogma or commercial adverts that it begins to loose caste. To quote "QST" again, we do not want to see radio frequencies turned over to "syrupy voices selling coffee, purgatives and national ideologies."

"Wireless World" commenting on its correspondent's views says:—"We are by no means convinced that HF long range broadcasting represents what is inherently a misuse of valuable channels. But it is perhaps overdone; some of it is ineffective and some is put to base uses. Those who are laying claim to channels and those responsible for the conduct of services must regard themselves as being under an obligation to justify themselves and see that they have a good case to present."

These are views with which we entirely concur.

A.C.G.

V.H.F. News

S.W.L. Reports

OUR recent suggestions that SWL's should devote more time to the VHF's seem to be producing some results. Several letters have come in on the subject, but most fail to give what we want, viz., a log of V.H.F. stations heard. However, Reg Vincent of Enfield, comments that so far he has heard G8SK, 8BV, 6JI, 6LL, 5VY, 6VX, 6PO, 6OT and 2MI. He uses an 0-v-1 receiver and this fact alone gives us encouragement. Reg is just the type of SWL we like. He is prepared to make the most of limited gear and get results from it. Let's hear from some more of you 0-v-1'ers on the VHF's. Let's see if we can get some really good SWL activity on 60 Mcs. this summer. Sporadic E propagation will be along soon and then the excitement will start.

Comment

Some interesting comments have come in with reference to our remarks last month on the use to which 144 Mcs. shall be put. Jim Bramhill, G2BMI, says "... re 144, given the ideal (and plenty of spare cash) I suppose the best one could do would be to have c.c. and a superhet." He then gives various suggestions of TX line-up, but says finally, "... but in any case, all the above would be most difficult to achieve for the beginner ... for myself—in the meantime, much to everyone's disgust, I am pushing ahead with a long lines oscillator." With regard to receivers, he continues:—"Again (unlimited cash) I suppose a superhet is best—failing that a small converter of some sort for attaching to the normal superhet would be the next best thing—and could, I think, be constructed quite cheaply—almost as cheaply as a superregen. At the moment, I hope my present 1-v-1 will go up to that frequency! All in all, I think at the beginning (ignoring those people with plenty of cash and gear) the best idea would be a converter with a long lines oscillator for trying out the band." Continuing Jim says:—"As I see it, at the moment, the main use for 144 would be for local QSO's ... incidentally I think the top band would be most useful for making initial contacts. I should think it must be most disheartening to build something for these VHF's and to have no one to conduct tests with."

Our old friend Ted Williams, G2XC, leaves no doubt about his views on 144 Mcs. He writes—"I cannot agree that there

is little experimental work to be done in the field of propagation of these waves. I myself have quite a number of points to investigate and it would be regrettable if this work was impaired by the letting loose of unstable Tx and Rx gear on the band." Continuing he says:—"... it is with some alarm that I view the prospect of cleaning up the muck on 7 Mcs. by sweeping it on to the V.H.F.'s As to dividing the band into a section for unstable ragchewing equipment and another for serious work, would the self-excited rigs manage to stay in the right half of the band or even in the band at all? I am all for encouraging serious minded amateurs to come on to the V.H.F.'s for their local work, but it must be done with equipment of at least as high a standard as they would use on the lower frequencies."

Well there you are. That is two opinions. Thanks Jim and Ted for your views. Let's hear some more—from both sides too, please.

Sunspot Activity

G6DH mentions some interesting facts about recent sunspot activity. Apparently 1947 is now regarded as the year of maximum activity and sunspot activity is now definitely on the wane. In fact it is dropping quicker than was expected, and conditions on the higher frequencies are far worse than had been predicted. MUF's up to 48 Mcs. had been predicted for this month, but the average turned out to be nearer 36 Mcs. At times it has in fact been barely halfway up the ten metre band. The events during the coming year are certainly going to be very interesting indeed and they may not be quite as predicted.

The Month's Conditions

No DX activity has shown up on 50 Mcs. so far (mid February). As already mentioned, MUF's have not been up to predicted values.

Activity on 60 Mcs. is being quite well maintained, tropo conditions on February 13 were particularly good. G5BD, 4LU and 5LJ enjoyed a very fine three-way S9 phone QSO that evening. Activity in Lincolnshire is increasing. G4OF (Gainsboro'), G3BUR (Bassingham), and G2CR (Winteringham) being the latest recruits to the band. In the London area the following have been heard:—

G2AJ (Hendon), 2MV (Kenley, Surrey), 2YL (Walton-on-Thames), 2BR, 2WS (Shortlands), 2HDY, 2CIW, 2FZR (Surbiton), 2KV, 2GL (Streatley, Berks.), 2XC (Portsmouth), 2BML, 2BMZ (Torquay), 3CWV (Hendon), 3BLP, 3ABA (Sutton-in-Ashfield), 4IG (Beckingham), 4AP (Swindon), 4KD (Edgware), 5PY (Clapham Park), 5MA (Ashstead, Surrey), 5RP,

(Continued on p.59)

Q.R.P. CLUB

by G2SO

BEFORE commencing this month's Notes I should like to point out the fact, that, to enable me to compile said notes, I must first obtain the necessary information from you fellows who are interested enough to read them. I do appeal to all readers interested in low power working to send on to me any details you may have in this connection, and let me have them as soon as possible after having received the "Short Wave News." Do not leave this information to the other fellow, otherwise it will never get done.

Having got the above off my chest here goes:—I have noticed from numerous contacts that I have had on 3.5 Mcs. with OK stations, that a very high percentage of these stations are invariably using very simple gear, usually comprising an electron coupled or crystal oscillator only, and that the input varies from between two to five watts, and yet they manage to contact several DX countries on that frequency, and in fact on most frequencies. Unfortunately, in this country at the present moment we have access to ex-Government surplus gear at a cost of a few pounds, enabling one to come on the air with high power if required (and much to the annoyance of the QRP transmitter) that one is apt to forget what can be done with low power. In Czechoslovakia however, and perhaps in several other European countries affected by the late War, gear is difficult to obtain, making it hard in these countries to operate with modern equipment, so that the operator is forced to operate with QRP, and also to discover exactly what can be done with same.

It has been suggested to me that another QRP Contest should be arranged through the medium of the "S.W.N.", and before going on with details, I should like to know just how many fellows would be prepared to enter one. I should be glad to receive calls of any interested operator, so please drop me a card via the magazine and if the response merits it I shall endeavour to think of some new ideas for another contest. The price of a 120 volt HT battery these days is perhaps a little high for many fellows (it is in my case!) so perhaps some other method of supply could be arranged. Any ideas?

For the benefit of those low power transmitters who are active, and need a listeners' report, I would like to mention a letter that I have received from H. R. Lodge, 13

Warwick Road, Worthing, Sussex, who would be pleased to stand by for any tests with genuine QRP stations. Any fellow interested, please communicate with the above direct.

A month to go by without a mention of G6ZN would hardly be considered, so congratulations are sent to this station for being the winner of the RSGB Low Power Contest held a short time ago. His score was extremely good, and although no DX was worked, it was in fact an inter-G and D2 contest only, a considerable number of stations were contacted. 6ZN mentions that since the results of this contest were proclaimed he has been snowed under with requests for the circuit of his Hartly TX. I have therefore written to him and suggested that the necessary information is published in the "News." He has at present in course of construction a new transmitter, which should be on the air by the time that this is in print.

As one can see these notes are somewhat scanty this month, so do please submit any gen as soon as possible.

PRICE INCREASES

Owing to the additional purchase tax imposed on new supplies we have unfortunately had to increase the prices of two of our most popular lines—Report Pads and ISWL letterpaper.

The new prices are 2/9 post paid for the Report Pads and 5/- post paid for 100 sheets of ISWL letterpaper. For U.S.A. readers the new prices will be 65 cents. and \$1.20 respectively.

These advanced prices are not increases in the actual goods but merely the addition of postage. In the past, we have paid the postage on these goods but in future this item will have to be borne by the purchaser.

It has been our policy to keep all prices down to their lowest possible level, but we have had no alternative in the two cases cited to make a small increase.

(V.H.F. NEWS—Cont. from p.58)

5RD (Sunbury-on-Thames), 6VX (Hayes, Kent), 6XM (Farnboro'), 6LX, 6OH (Ascot), 6JK, 8OH, 8RS (Reading), 8SM (Molesley, Surrey), 8PX (Oxford), 8WV (Bletchley, Bucks.). For this excellent log, we have to thank Jim Bramhill, G2BMI. Now come along some of you SWL's. Let's see if you can do as well.

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.)



Reading the news from "Radio Australia"

VERY little response has been given to my "honours" list mentioned in the January edition. Only two readers have come forth with more than 50 Countries listed. Don't forget to state exactly the number of Countries heard and verified. What about some of you old timers getting the ball rolling? If you have any doubt about any Country counting for the Honour Roll just put it on your list and your scribe will use his blue pencil if it's incorrect! We must have readers' full support if we are to carry on with this list. It's up to you O.M's.

Please send your lists on a separate sheet to your reports. Address all correspondence for Monitor, c/o "S.W.N." to reach me by the 5th of the month latest.

Now to the month's survey of readers reports:

● Africa

Tangier. Sidney Pearce (Berkhamsted) has logged "Radio Africa" Tangier on 7080 kcs. with excellent signals evenings until sign off with French and Spanish announcements at 2200.

"Radio International" also in Tangier and operating on 6200 kcs. was often heard with R7 signals from 1900 with programmes in Arabic. A newcomer to this column Leslie Lewis of St. Leonards-on-Sea, says he has received amongst others a QSL card from the latter being of the Christmas type

with "Greetings from Radio International" on front and sketch of old Tangier inside. Programmes are given in these languages: French, Spanish, Arabic and English. (English daily at 2000). Power 1 kW. QRA: Radio International, 34 Rue Goya, Tangier, Tangier I.Z. Schedule: 1300-1600, 1900-2400.

Union of South Africa. Capetown 5882 kcs. heard with fairly consistent signals around 1930 but fades out after 2000. In November was heard best from about 2030. Has had CW QRM (Pearce). Ray Aldridge (Amersham) has heard them with R5-6 signals when relaying BBC news at 2045. (Many thanks for the dope on the "S" meter O.M.)

Portugese West Africa. Mozambique. Lourenco Marques. John Simpson sends along Frequencies of transmissions given by the "Radio Clube de Mocambique" as follows: CR7AA 6130 kcs., CR7AB 3490 kcs., CR7BD 4920 kcs., CR7BE 9580 kcs., CR7BF 4850 kcs., CR7BG 740 kcs.

CR7BJ 9645 kcs. has been heard at 1600 QSA5 R8 by this reader.

Sidney Pearce lists CR7BF although nearer 4830 kcs. and often R7 at 1800 with bad CW QRM. He states that best reception is from CR7BJ.

E. Strangeway of Malton, Yorks has logged CR7BJ at 1645 with dance music followed by News at 1700 in Portugese. Sigs R6 with QRM.

Portugese East Africa. Mozambique. A. V. Wilkinson (Manchester) says conditions have not been very favourable during the month at his QRA. He lists CR7BJ Lourenco Marques on 9645 kcs. at 1645 Q4 R5 with QSB. Programme of recordings with chimes and direction at 1700. "Radio Clube do Mozambique." Suffers heavy QRM from HVJ at 1800. Uses both male and female announcers. Aldridge reports them R8 and closing at 2000. He also lists CR7BU 4820 kcs. with R5 signals plus heavy CW QRM.

● Asia

China. Chungking XGOY heard at 1450 on 9635 kcs. with recorded programme of Western dance music and requesting reports. QSA3 R5 (A. Baldwin, London). Pearce has heard them on their 6140 kcs. channel with R6 signals at 1400 with news in English and "Symphony Hour" at 1515 when signals are generally R7 with some QRM. R. Aldridge also records them on this freq. with news and dance music until 1415 when news in Mandarin may be heard. Has YL and Male announcers.

Heard at 1440 on January 1st with New Year Greetings for Listeners and "Songs from the Films" with male English announcer. (Wilkinson). 6140 kcs.

Philippines. Manila. KZRH 9640 kcs. Heard at 1500 Q5 R6 with request recordings and New Year Greetings. Uses 3 chimes signal and direction as "Radio Philippines Station KZRH Manila." Heard once at 1445 Q4 R7 with "Klim" products feature and call as "Voice of the Philippines PBC" and mention of RCA. R8 QRM from "Radio Italia" wipes out signals at 1545. Also heard evenings at 2130 with 5.30 time signal, weather forecast for the Philippines. Q4 R6 once at 2100 with feature "Around the Wheelhouse" (Wilkinson). R5-6 ruined by QRM from Rome (Aldridge).

Japan. Tokyo. Pearce lists JOAK on 9650 kcs. at 2200 with news in Japanese followed by recordings. Signals were R5-6. Call "JOAK."

Iran. "Radio Azerbaijan" Tabriz. Letter veri gives schedule as follows: 11960 kcs 1000-1130, 6090 kcs. 1430-1830. Uses Arabic and English and gives English news bulletin at 1800-1810 (Pearce).

Lebanon. "Radio Beirut" FXE 8036 kcs. apparently has changed schedule times. English BC now ends at 1600 then native programme, French from 2015 to sign off at 2130. (Pearce).

India. All India Radio Delhi. VUD8 heard on 21510 kcs. at 1000. News in English, programme summary and music. Transmission beamed to Africa and Middle East and reported by Sidney Pearce on his Sky Champion.

P. E. Woolmer (Grantham) sends in a very neat log and in it I see he has logged VUD2 on 9590 kcs. with R8-9 signals in the afternoons around 1500. This reader states that this was the best transmission in January at his QRA from AIR. G. Anderson (Whitby) lists VUD7 9627 kcs. Q5 R8 at 1540 in parallel with VUD9, VUD9 11870 kcs. Q5 R7 1530-1545 also heard by latter reader, using a post-war HMV 4 valve RX.

Celebes. "Radio Macassar" YFA4 9355 kcs. approx. often R5 with dance recordings from round 1430 but suffers bad CW QRM. Heard one Sunday R6 with classical music at 1330 (Pearce). D. O. French (Norwich) states that "Sleepy Lagoon" seems to be their interval tune. Heard at 1355 with clock striking 10 followed by Hawaiian music. AFRS recordings distributed by the YMCA. Announcements in Dutch. (Please lay out your lists in order of Country O.M.)

Indonesia. Batavia. "Radio Batavia" sends schedule of transmissions in English for January. This is sent in by E. W. Jordi, London, S.W.7.

Transmission 1. To Malaya, Australia and New Zealand: 15150 kcs. 1030-1100 News from Indonesia, music and occasional commentary.

Transmission 2. To America, Malaya and Australia: 11440 kcs. (to West Coast of U.S.A.) 15150 kcs. (to New Zealand also) 1430-1500 News from Indonesia, music and regular commentaries.

Transmission 3. To British Isles. 19340 kcs., 15150 kcs. 1700-1730. News commentaries and a musical programme from Indonesia.

Transmission 4. To the Middle East. 17630 kcs., 1700-1730. Followed by ½ hour transmission in the Arabic language of news and commentary.

Radio Batavia also gives programmes in Dutch on the 15-17-19 Mcs. frequencies at 1630-1700 and 1600-1630. News and commentary and in the latter Forces Programme.

Malaya. British Far Eastern Broadcasting Service, Singapore. 6770 kcs. transmission generally R6 at 1400 with Burmese programme, 1415 News in English, generally good R7 during period before sign off at 1635 after programme summary. Much intermittent CW QRM. Also heard on 9690 kcs. and 11770 kcs. On 21720 kcs. at 1000 with R5-6 signals with news in Eastern language (Kuoyu) followed by recordings. Closes abruptly at 1030 on this frequency. Signs on at 0900 with programme summary and news, etc. in English with news repeated at 0950. (Pearce).

Syria. Damascus. 12000 kcs. heard with R5-6 signals when signing on at 1600. Fades out before close at 2000 (Pearce).

Korea. JVKH or JBHK Korean Broadcasting System operates on 7950 kcs. from 1100-1330 with Korean and English calls every 15 minutes. (DX Prog R A).

Palestine. Jerusalem FBS 7220 kcs. sends schedule with QSL. On Sundays and Wednesdays special broadcasts are directed to the British Isles from 2110 but are now ended (Pearce).

Ceylon. Colombo. "Radio SEAC" heard R5-6 at 1600 on 3395 kcs. with news from BBC followed at 1610 with programme summary for next day and sign off at 1615. Sunday BC to the British Isles from 1830 using their 100 kW. transmitter on 9520 kcs. received R8 with terrific QRM in parallel with 15120 kcs. channel (Pearce).

● **Australasia**

Australia. The following alterations in schedules of Radio Australias transmissions as from February 1st are:

To West Coast of U.S.A.: 0430-0545 VLA7 17800 kcs., VLA4 15320 kcs., VLG10 11760 kcs., VLB5 21540 kcs. (for Africa). 1500-1615 VLC3 11760 kcs., VLB9 9610 kcs.

For British Isles: 1400-1500 VLG10 11760 kcs., VLA6 15200. Both stations carry full transmission now. (Pearce).

BC to Forces is now heard over VLB10 11740 kcs. which replaces VLB4 11810 kcs. at 0830 and heard R7 (Pearce).

Bob Iball of Workshop has logged the National Broadcasting Stations in Brisbane via VLQ3 on 9660 kcs. from 1100-1200 and 1215-1315. Signals were Q4 R4-6. News was heard at 1100 and 1300 also a tribute to Richard Tauber and Dance music.

VLH3 9580 kcs. was heard at 0915-1015 and 1315-1335 with programme of light music, play and news at 1315. This is the Melbourne transmitter of NBS.

B. W. Govey of Buckhurst Hill, Essex lists the evening transmission to the British Isles and heard over the following:

VLB9 9615 kcs. Q5 R9, VLA8 11760 kcs. Q5 R7, VLC (not B O.M.) 15200 kcs. Q4 R4 200-2130. VLB9 closed at 2115. Your scribe heard VLC at 2015-2040. 2015 "Appreciation of Australian Cricketers" (Very clear channel R7-9 signals), 2025 Vera Bradford (Piano), 2030 News in English (R6-4). Gradually fades out around 2100 and QRM came up. RX Sky Champion and indoor aerial 16½ ft. E.-W.

Ernest Field of Watford tells me he has just returned to SW listening and now has a Sky Champion like a lot of the boys in Herts! He has logged 78 Countries so far. Yes O.M. Spanish Morocco and Vatican City count as separate countries. This reader mentions some alterations to "Radio Australia's" schedule as follows: British Isles/Europe 0700-0815 over VLB3 11760

kcs. replacing VLB10. 2200-2315 VLG6 15230 kcs. replacing VLG7. South America: 2145-2315 VLC10 21680 kcs. replaces VLC9. West Coast of U.S.A.: 0430-0545 VLC9 17840 kcs. replaces VLC7.

● **Europe**

Vatican City. HVJ gives news in English daily at 1500 and talks 1815. Freqs. 9660 and 5970 kcs. (Field).

Spain. Radio National de Espana, Madrid 9368 kcs. gives English programme daily at 2000-2030. Power 40 kW. Sends QSL showing interior of transmitter control room. (Lowis).

Holland. Radio Nederland Wereldomroep, P.O. Bo 137 Hilversum operates on the following frequencies:

PCJ 15220, 9590 kcs., PHI 17770, 11730 kcs., PGO 6020 kcs. English programmes are radiated at 1000-1050 (6, 15, 17 Mcs.) weekdays to Australia and New Zealand.

1730-1820 (6, 9, 11 Mcs.) Weekdays to Gt. Britain and S. Africa. 0200-0250 (6, 9, 11Mcs.) not Mondays to N. America. Sends QSL card in red white and blue with bright colouring and shows a photo of transmitting aerial on one half and letters PCJ and details on other half. (Lowis).

Roumania. Radio Roumania Libere Bucarest 6210 kcs. has been heard from 1900-1930 with Q4 R5 signals. News in English at 1900 followed by talks in English and musical prog. Slogan "Long live the Roumanian People." BCs nightly in English but suffers QRM from Warsaw. (Iball). (Sorry I can't help you on your interference O.M. We all get it at times, hi!). Ray Aldridge lists Bucarest on 9250 kcs. with news in English at 1715.

● **North America**

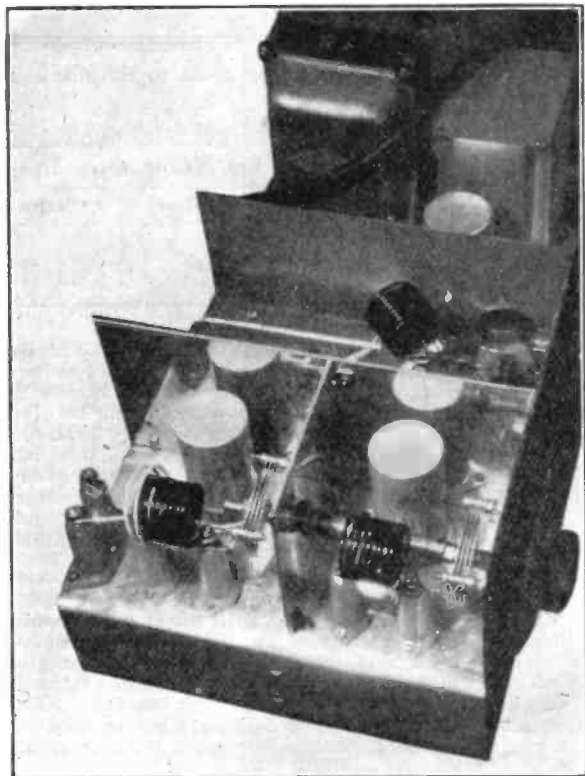
Canada. CBFW Quebec 6090 kcs. heard at 2315 QSA5 R9 with details of programmes, including "Magic Carpet." (J. Simpson) ("Annual" will be on sale sometime in March O.M. Suggest you send your order now as demand will sure to be very heavy . . . to HQ).

CJCX Sydney Nova Scotia 6010 kcs. around 2310, advertising "Zig Zag" Cigarette Papers and also pipe tobacco. Signals QSA5 R7. (J. Simpson). J. W. Hughes and R. Aldridge have also logged this station. R8 at 0015. Aldridge says it is good any night and can be heard after 2300.

Newfoundland. VONH St. Johns. 5980 kcs. heard QSA4 R6 at 2245 giving sponsored programme by Cheese manufacturer. CW QRM often R9 on this freq. (Simpson).

U.S.A. (West Coast). J. Simpson has heard the following Californians: KWID San Francisco 11900 kcs. QSA4 R6 at 1035 with recorded music, and World News at 1100. Rapid QSB.

(Continued on p.80)



A Converter for the Basic Superhet

●
*Another addition to this
popular receiver*

●
Described
by Centre Tap

WHILE of especial interest to constructors of the Basic Super-het this Converter can, of course, be used in conjunction with any type of receiver whether straight or super-het and will give an excellent performance below ten.

Although many receivers, both commercial and home-built include the ten metre band in their tuning range, their performance frequently tails off considerably both in selectivity and sensitivity, and any well-designed converter can be depended upon to give very much superior results. Converters used with a straight receiver become a super-het combination with the receiver proper behaving as the IF and AF stages, and in front of a super-het circuit the double superheterodyne effect is obtained. If the Receiver has a B.F.O. this will, of course, be used in the normal way for CW reception and in the case of the straight set the detector should be just oscillating when used for CW.

The Service Converters, the 24, 25 and 27 have in recent months been fairly widely available at very reasonable prices and no doubt many readers have used these successfully after minor modification. The converter described is basically on similar lines

but employs essentially "amateur" components and home wound coils. A few words for those who may not be familiar with the Services types.

The types 24 and 25 are pre-tuned to five spot frequencies (from 30 to 45 Mcs., and can be made tunable by removing the switching and replacing with a three-gang variable capacitor of 15 μF per section. They can, of course, be "tuned" within limits in their existing state by varying the tuning of the Receiver with which they are used. Valves SP61 and SP41 are used respectively throughout each, and a heater supply HT of 250 volts at 30 mA are required. This could be drawn from receiver itself if capable of the load. The type 27 uses two EF54's with an EC52 as the oscillator and is tunable from 60 to 80 Mcs. with a slow motion drive.

Construction

It will be seen from the circuit that the Converter follows conventional lines and that valves having a good performance at the higher frequencies are employed. This is of great importance for those wishing to ensure high efficiency on the 5 metre band

and below. Also of great importance is the need for good quality low-loss components, adequate screening, short and direct leads, plus rigid chassis work.

If desired, an EF54 can be used in the R.F. stage but as the Converter will normally be used at full gain with the controls of the main receiver determining the volume, an EF50 was preferred to minimise the number of valve types and to save a further control which is quite superfluous if the main receiver is fitted with an RF gain. Incidentally the EF54 is not of the variable mu type although it is often used as such by amateurs and behaves very well with this system of control. A small value variable resistor, not greater than 5000 ohms, is advised.

The coils are home wound and mounted on stand-off insulators although plug and socket mounting could be arranged if preferred for slightly easier interchangeability. The important thing is to keep the wiring in the tuned circuits as short and direct as possible to reduce stray capacities to a minimum. The main receiver is tuned to 1.5 Mcs. and the oscillator coil dimensions given below are for an output of that frequency. This was chosen for its suitability for occasional use with an ordinary BC set, being the shortest wave length normally fitted to commercial receivers, i.e. 200 metres. The coils are wound with 14 gauge

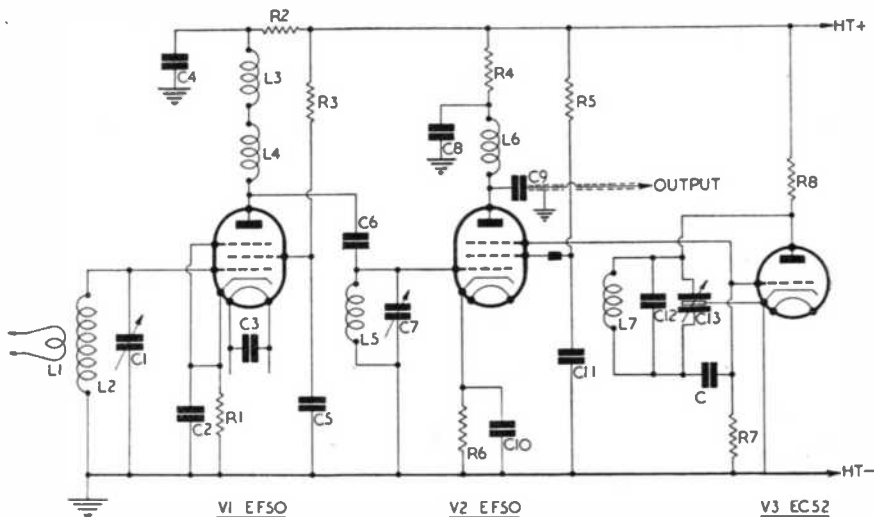
wire with a spacing equal to the diameter of the wire.

Mcs.	Number of 1 in. diameter turns		
	R.F.	Mixer	Oscillator
1.58	3	3	4
28	10	10	10

It will be noted that the RF and mixer stages are tuned by separate capacitors ganged together. This was because a 2-gang capacitor with a wide spacing between the sections (enabling good "balance" of the circuits) is not readily available, but it also has the advantage of enabling any slight capacity differences in the circuits to be adjusted. These stages are not sharply tuned and can easily be controlled by direct drive.

The Mixer

The second valve, the mixer or frequency changer, is also an EF50 and it will be seen from the circuit that suppressor grid injection from the triode oscillator is used. There is no reason why another EF50 strapped as a triode should not be used for the oscillator stage to make the unit an all

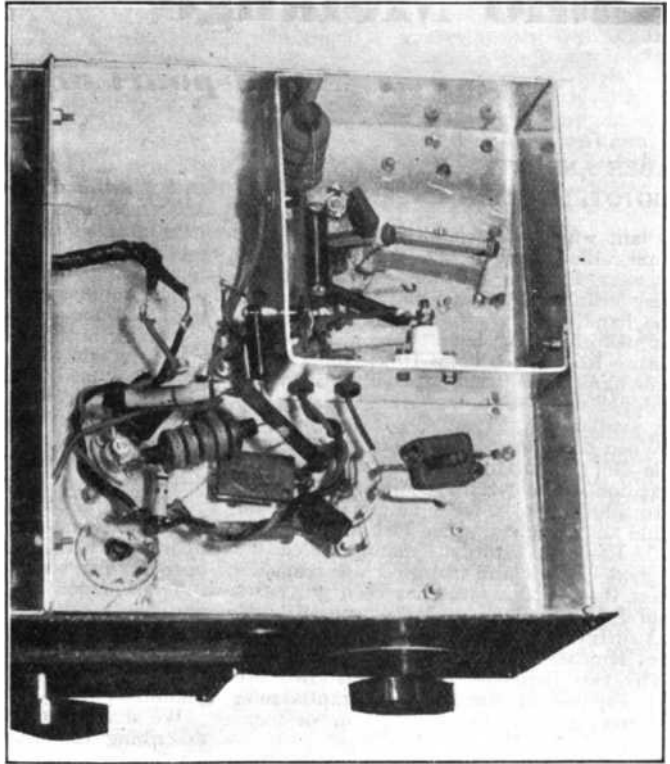


- R1, 6 350~
- R2, 4 470~
- R3, 5 4700~
- R7 27000~
- R8 22000~

- L1, 2, 5, 7—See text
- L3, 6 RFC
- L4 VHF Choke
- C1, 7 15 μμF
- C2, 4, 5, 8, 10, 11 0.001 μF

- C3 500 μμF
- C6, 12 10 μμF
- C9 300 μμF
- C13 See text
- C 50 μμF

View of the RF portion of the converter as seen from below; chassis. Note the screening and positioning of components on this view and also on the top view shown on page 63. Both points should be carefully noted.



EF50 effort and reduce the need for carrying a range of spare types. The normal triode in this range is the EC52 and all these types are fitted with loktal bases and the pin connections are given in the following table.

VALVE	PINS								
	1	2	3	4	5	6	7	8	9
EC52	H	G	C	A					H
EF50	H	SG	A	SUP.	S	C	G	S	H
EF54	H	A	SG	C.S.	S	G	S	S	H
				SUP.					

Abbreviations—A Anode, C Cathode, G Control grid, H Heater, S Shield, SG Screen grid, SUP Suppressor grid.

The oscillator tuning is critical and a really good slow motion drive is required. It will be noted that it is tuned by a split-stator capacitor C13 in parallel with a fixed capacitor. If the converter is primarily intended for use on the amateur bands a 15 x 15 $\mu\mu\text{F}$ will be more suitable although a little initial experiment in adjusting the

oscillator coil (by opening or closing the spacing between the turns) may be necessary. 25 x 25 $\mu\mu\text{F}$ will, of course, given wider coverage and the bands will be found more easily.

In locations where 60 Mcs. signals are rare an oscillator will be helpful.

Output

The output of the Converter is arranged for 1.5 Mcs. as already mentioned. This, of course, can be either above or below the signal frequency but it is more usual to arrange the oscillator frequency to be higher than that of the signal. If for any reason it is desired to use a different output frequency, suitable allowance must be made in the number of turns used for the oscillator coil.

The input to the Converter is arranged for coaxial feeder from a dipole aerial although a simple aerial may be used. The output is fed to the aerial terminal of the main receiver via a short screened lead. An unscreened lead would risk picking up unwanted signals around that frequency and

(Continued on p66)

Radio Melange

A pot-pouri of current topics

CABLE AND WIRELESS PLAN PHOTOTELEGRAPH EXPANSION

Plant which will enable the exchange of more radio pictures between Britain and Overseas Empire and foreign countries is being installed by Cable and Wireless Ltd., who handle all overseas phototelegrams in the United Kingdom. The Company's Picture Room at Electra House on Victoria Embankment is being almost entirely re-equipped now that new machinery is becoming available.

When complete the installation will provide for simultaneous transmission and reception on five radio channels.

In addition to several units designed for Cable and Wireless at the Post Office Dollis Hill Research Station, manufactured by General Electric and installed last year, the latest type of apparatus has been purchased from Edouard Belin of Malmaison, France, and further modern machinery is on order from Muirhead's of Elmer's End, Kent.

The two Belinograph units installed are each capable of simultaneous transmission and reception at the rate of four or more

pictures an hour, according to size. This equipment is designed to operate at 60 and 120 revolutions per minute. The design permits of reception in normal lighting, the receiving cylinder being contained in a lightproof cylinder which can be loaded in a dark room for reception and subsequently unloaded for developing the film.

The forthcoming Muirhead apparatus will similarly provide for full operation in normal lighting and will incorporate many new mechanical features.

To cope with the new equipment, the photographic dark room has been equipped with special tank developing facilities for processing received photographs.

Cable and Wireless are shortly opening six additional phototelegraph services—mainly with Empire countries—and plan to open further services in the future.

Transmission of a radio picture between any two countries takes about 10 minutes. Press and other photographs, diagrams, charts, documents, letters and even cheques can be transmitted overseas by phototelegraphy.

We shall shortly be publishing an article describing the new Muirhead apparatus.

(BASIC SUPERHET—Cont. from p65)

similarly, the Converter must be housed in a screened cabinet. It will also be noted that both a SW and an USW choke are included in the anode circuit of the RF valve. Either separate or a combined SW-USW choke may be used, but in either case the latter must be connected to the valve.

Operation

The reception of CW signals has already been dealt with and while it has been mentioned that the tuning of the RF and mixer stages is not unduly critical this control must be kept in step with the oscillator tuning or signals will be missed. When both dials are in step there will be a considerable increase in "background hiss." The oscillator drive then can be used alone giving a bandspread effect, and final adjustment made on the RF and mixer dial when a required station is found.

The aerial coupling coil for the 28 Mcs. band consists of two turns of wire closely coupled to the RF coil although it may be found with some aerials a single turn will be an improvement. A single turn coupling should be used for the 58 Mcs. band.

SOUTH AFRICAN NEWS

From Jean Beaunoir

From a tiny farmhouse 15 miles outside of Queenstown, Natal, a CQ call was sent out. That signal, from a 45 watt transmitter, heralded the return to amateur radio of South Africa's first YL ham, ZS2AA. It all began in 1937, when with a flea-powered rig of 2½ watts, Mrs. S. R. Hayes went on the air on CW. In 1940 her TX was sealed under wartime regulation and now she returns to the air with her new higher powered rig.

In Natal, we will all miss Gustav Larsen, ZS5DN, who passed away recently. He had been seriously ill with tuberculosis for some time, though to the end he carried on his hobby as though nothing was wrong. Though he knew he had not long to live, he did not mention the fact to the many hams he contacted daily. Shortly before the end Gustav made a recording of his voice and sent a farewell message this way to his mother and sister in Durban. Amateurs in South Africa and Rhodesia observed a one-minute silence after the announcement from the SARRL.

The new UDF radio station, ZRB, is now on the air. The power is officially stated to be 5000 watts and the schedule will be from 0400-1600 GMT daily (except Saturdays and Sundays). In addition to keeping the No. 1 City of Pretoria Squad (SAAF) informed of flying times and similar data, the station will also relay suitable SABC programmes. Frequency is 7445 kcs. (See January issue "S.W.N.")

FROM THE U.S.A.

Reported by Grove Calkins

Large scale television is about to make its commercial debut according to a recent report issued jointly by the RCA and Warner Brothers. The screen is said to offer a new form of direct projection from the face of the tube to a brighter type screen. The life-size projection will give its audience day and night baseball, boxing and many other important events televised in the course of the season.

FM production is on the increase, Arthur Freed, treasurer of the FM Association reported. Between 15-20 manufacturers who have produced only AM receivers up to the present, expect to start work on turning out FM sets before long. According to the same report, more than 700 FM stations will be in operation within the next few months and 80 per cent. of the country's population will be within range of at least one FM station.

NOTES ON THE "D" LAYER

By P. J. Jooste

DURING the past 20 years, long wave radio signals have been received after reflection from a layer of ionisation considerably lower than the more well-known E layer. The reflections from this layer only occur by day and are confined to the regions extending 30 degrees north and south of the equator. They have, however, been observed on a few occasions in localities in England and Canada.

The height of the D Layer is about 30 miles, and this figure has been reached by data accrued during over 3,000 observations. In the comparatively dense atmosphere at a height of 40-60 miles, the recombination of atoms and electrons must be very rapid once the sun has set and the ultraviolet rays no longer maintain an ionisation level capable of reflection. Meteors and meteoric dust, which ionise the E layer by night, have lost their ionising power by the time they reach the lower D Layer.

Another type of radiation being observed is cosmic noise. During two recent ionosphere disturbances, a dip was noticed in

the general level of cosmic noise, then back again until it was relatively high to that of solar noise. (Solar noise being recorded on "S" Meter). The expected high burst of solar noises was delayed by 3/4 minutes in the first case and entirely suppressed in the second. Incidentally, radiation from the sun is now being recorded up to as high as a few centimetres and cosmic radiation is the subject of considerable research these days.

TRANSPORT FLEET RADIO SERVICE

American telephone companies are going ahead with a programme of mobile radio telephone services for road users, particularly in respect to motor transport fleets. By means of the radio link, drivers can contact within a few seconds their headquarters or with any of the States 27 million telephone subscribers. At present the fee for a vehicle phone is £3/10/- per month and the charge for a one-minute local call is 4d. Charges will be reduced as the scheme expands. The idea originated in St. Louis in 1946 and was introduced by the Bell Telephone Co. Thousands of cars and lorries are now using the service, with a chain of radio stations making it possible. The Bell company's aim is to instal the service in every city with a population in excess of 100,000.

The advantages to commercial motor transport are many, most particularly the fact that orders received after a lorry has left the depot may be executed en route. Transport can be diverted and instructions changed. Emergencies can be reported back to headquarters and disputes settled on the spot.

The mobile system employs normal telephone lines for part of the connection and radio telephony link for the remainder. A caller wishing to converse with a dashboard-equipped vehicle merely asks the exchange for "mobile service" and the call is put through to the mobile service control centre which handles all such calls in its area. Special staff is employed to deal with these calls. The mobile control centre dials the required number and radio signals are radiated which cause a light or a buzzer to operate on the vehicle concerned. The drivers reply is picked up by the nearest receiver in the area and is then relayed via telephone line. A "push to talk" button is the only control the driver has to use.

The control centres use transmitters of around 250 watts whilst the vehicles use 25 watt units provided by the telephone company.

(By courtesy of the Editor of "The Leyland Journal").



International Short Wave League

Monthly Notes

Annual Subscription 1/-

Swansea (Sec.: W. H. Longhurst, 82 Gower Road, Sketty; Swansea).

Local Chapter meetings are still progressing nicely. Members recently paid a visit to the local Auto-Exchange at the G.P.O. and a "return visit" is contemplated to take in the gear missed on the first occasion! Another future visit will be to a Post Office Carrier System station. The club is also turning its attention to the new local police VHF system.

North West London (Sec.: F. Wells, 8 Evangelist Road, Kentish Town, N.W.5.)

The North West Chapter has now been named "The North West Radio Frequency Club" and has its own official emblem on the notepaper which to our unaccustomed eyes looks like a dipole rampant! The club shack at 41 Ingham Road, N.W.6, is becoming more homely, thanks to the efforts of the Chairman—Mr. E. R. Cooper. Classes on morse are being held and a course on radio theory is in progress. It is hoped to start work on a club transmitter very soon. On Saturday, February 14th, the Chapter was "at home" to the Willesden Radio Club and a good time was had by all. Gear on show included a 145 Mcs. transmitter and two VHF super-regenerative receivers constructed by members. Members in the locality who have not yet "joined up," and there ARE some, are cordially invited to contact the secretary for full details of the Chapter's activities.

Southwick (Sec.: J. Short, G3BEX, 112 Southwick Street, Southwick, Sussex).

The first meeting of the Southwick & District ISWL Chapter was held at the "Kings Head," Fishersgate, on January 21st at 7.30. The general comment seems to be "Trust Short to find a pub as HQ!" However, the Chapter seems to be getting along nicely and invites all local members to join in the activities. Full details will be sent on application to the Sec., so what say fellas?

Birmingham (Sec.: G. Moore, 42 Fern Road, Erdington, B'ham, 24).

Further to our notes last issue, we are pleased to hear that the fortunes of the Chapter are now improving. We are particularly pleased at this news since Birmingham was our first Chapter to be formed.

Attendance is improving and it is suggested that meetings be held fortnightly instead of monthly. Recent highlights have been a talk by Mr. Trobridge on the construction of a multi-range meter, followed by a discussion; Answers and explanations on the questions of the last Radio Amateurs' Exam., conducted by Mr. Priscott; The formation of regular DX contests for members. Other future activities will include Brains Trusts, Query Bees, Contests and short talks by members. Meetings are still held at the Chamber of Commerce, commencing 7.30. If not already a member, drop a line to the Secretary for future meeting dates.

South East London (Sec.: W. A. Martin, 21 Brixton Hill, London, S.W.2.)

The Clifton Amateur Radio Society is still digging in nicely at their clubroom and good progress is being made on the club receiver. Though the club has nothing to grumble about with regard to attendance, which is exceedingly good, 21 non-Chapter members were circulated recently. One replied! The Sec. says "I wonder why some people join the League. Maybe they like the certificate!"

Ipswich (Sec.: J. E. Dean, 11 Royal Hospital School, Ipswich.)

Club night is now every other Monday, until the membership warrants weekly meeting. Jack Cowles, G2AJU, has given some very interesting talks. Derek Sellen, the one-valve expert has now lost count of the number of countries heard—last count was 74. Members still needed to bring up the strength of the Chapter—so how about it you local readers?

Essex (Sec.: K. R. Goodley, 34 Blenheim Avenue, Ilford.)

Meetings have been held Valence House, Becontree Avenue, Dagenham, every Wednesday since the inauguration. After a shaky start, membership is on the increase. Present facilities include Programme of lectures, Basic Tuition, Morse Practise, Local News-sheet. Future attractions will be Slow Morse Transmissions over G3BNI, Travelling Folder, County Field Day, Visit to Alexandra Palace. Now that things are getting sorted out, a new committee has been elected as follows: K. R. Goodley (Gen. Sec.), P. F. T. Redman (Tech. Sec.),

W. S. Wilkinson, S. Rådcliffe and D. Coppendale, G3BN1 (members).

Yorkshire

Meetings are held regularly at Rotherham every second Thursday and talks are being arranged. G4BD and G2MN have been contacted and 4BD has already contributed one talk. ISWL/G925 has started a series of "Round the Shacks" talks.

Great things at Sheffield! A combined meeting with Rotherham was held on February 12th and a new Chapter was formed, to be known as the Rotherham-Sheffield Chapter. This will not, however, mean the cessation of the existing Rotherham group but it does mean that much friendly rivalry will appear. A dance is to be held to raise funds and this will be combined with a display of ham gear. A library is to be formed. One thing of particular interest is that members have passed a resolution to place all surplus gear at the disposal of the Chapter—for the construction of club equipment. Listening Periods have also recently been commenced. (Sec., Rotherham: W. B. Kendal, 13 Fraser Road, Rotherham).

(Sec., Sheffield: J. Blakely, 85 Sandford Grove Road, Sheffield.)

The CR Yorks appeals to all Yorkshire members to force forward and assist in the formation of new Chapters and meetings and to act as Town Representatives. These are urgently needed so please write as soon as possible to P. Lumb, 25 Pearl Street, Starbeck, Harrogate.

Scotland (Sec.: J. Thomson, 15 Chambers Street, Innerleithen, Peebles.)

A meeting has been held in Glasgow to discuss the formation of a Chapter and it was wholeheartedly agreed to go ahead with the plans. Edinburgh has little to report though it is hoped to get some form of local activity in action before long. Scotland is a large area and as such needs plenty of individual support if meetings are to be held to suit the convenience of most members. Therefore, it is essential that all members who can help should come forward at the earliest date. Your CR will always be pleased to hear from you, O.M's.

Devon (CR: A. Jotcham, 119 Exeter Road, Dawlish).

Apart from the meetings at Plymouth little news is to hand this month, and even the Plymouth Chapter appeal for more new members. The CR is doing a great job in trying to stimulate interest but if there is to be any measure of general success this work must not be one-sided. TR's are urgently needed for Devon towns, in order

to take some of the work off the CR's hands. Offers should be sent to the CR at the address given in the heading.

NEW REPRESENTATIVES

Bedfordshire: J. T. Lawrence, 29 Beau-desert, Leighton Buzzard.

Mansfield (Notts): F. S. Atkins, 11 Lord Street, Mansfield.

Sussex: J. Short, 112 Southwick Street, Southwick.

Taunton: F. R. Freman, G3AVX, 23 Bridge Street, Taunton.

Poole (Dorset): Mr. and Mrs. Moody, "Noss Mayo," Alverton Avenue, Poole.

RESIGNATIONS

Three Representatives have unfortunately been forced to resign their positions with the League, namely A. S. Berry (Guildford), S. Beharrell (York) and J. E. James (Cinderford). We thank these members for their good work in the past and trust they will keep in touch with the League in the future though they may not take an active part in local work.

IN MEMORIUM

It is with deep regret we announce that C. F. Collins, VQ4-489, our Representative for Kenya Colony has passed away after a long illness, patiently borne. M. Bird, G428, of Stockport, Cheshire, is another member we shall all miss.

CHANGE OF ADDRESS

Will members please note that the German/Dutch Translation service is now at the following new QRA:—C. Jakes, The Chant, Halbeath, Dunfermline, Fifeshire.

QRP RECEIVER SECTION

The recent note about a proposed section for "QRP" listeners, i.e., those who rely entirely on very small battery receivers for their DX'ing, has had sufficient response to make it clear that such a section would be appreciated. Our CR for Devon, Alec Jotcham, first raised the matter and conveyed his willingness to run the section. What form this takes will depend entirely on the requests of readers and it is suggested that those who are interested should drop a line to Alec and tell him all about it. Let him know what receiver you use, what DX you have heard and what ideas you may have for the section. If a reply is expected, please enclose a S.A.E. The address for your data is:—A. Jotcham, 119 Exeter Road, Dawlish, Devon.

CLYDESDALE

GM3BL
GM3ASM

FOR BARGAINS IN EX-SERVIC

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Or packed in a stout wood case (non-returnable) Carriage Paid **28/6** each



CO-AXIAL CABLE

Coil (12 yds.) first-class co-axial cable approx. 80 ohms, at special price **7/6** per coil, post free.

Brand New—R.1224A RECEIVER

Battery superhet with 5 valves, 2/VP23's, FC2A, HL2, 220PA. Three wavebands, 30-300 metres (9.0-1.0 Mcs.) R.F. Stage, Muirhead dials, 2 output choke capacity and 600 ohms line, in grey finish wood case 14 $\frac{1}{2}$ in. x 9 $\frac{1}{2}$ in. x 8 $\frac{1}{2}$ in., with circuit. Batteries required: HT 120 Volts, GB 9 Volts, LT 2 Volts.

CLYDESDALE'S PRICE ONLY **£5 15s.** each Carriage Paid
Circuit and data for R1224A at 1/3 post paid.



Brand New—STABILIZED H.T. ELIMINATOR

Type A.1. Input 200-250 Volts. Output stabilized 120 volts, 30 mA. Double smoothing V.S.110 Stabilizer, housed in ventilated metal case 11 $\frac{1}{2}$ in. x 7 $\frac{1}{2}$ in. x 6 $\frac{1}{2}$ in.

CLYDESDALE'S PRICE ONLY **47/6** each Post Paid

Brand New—EX-U.S. NAVY SA-4A/APA-1 ANTENNA SWITCH

Motor driven aerial switch for 24V. with all necessary co-axial plugs, etc.

CLYDESDALE'S PRICE ONLY **14/-** Post Paid

Brand New—EX-U.S. NAVY AN/APA-1 AIRCRAFT RADAR EQUIPMENT

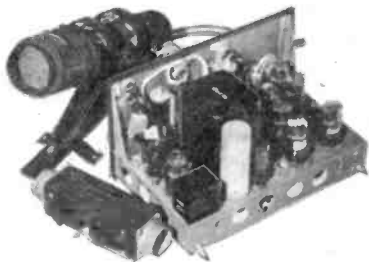
Comprising: Cathode Ray Indicator. Adjustable case with 3 BP1 CRT. Repeater Amplifier with 11 valves. 7/6SN7G's, 6H6, 6G6G, 2 x 2X2/879, 6X5GT plus other VHF gear. Control Unit and Instruction Book for 110/115V. 400/2400c/s.

CLYDESDALE'S PRICE ONLY **£4 17s. 6d.** Carriage Paid

Packed in wood box.

Brand New—

Set of plugs for AN/APA-1. CLYDESDALE'S PRICE ONLY **7/6** Post free



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CLYDESDALE'S
PRICE ONLY **£5 19s. 6d.**
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EX-U.S. NAVY

I.F.F. RECEIVER/TRANSMITTER

Types ABK (43AAX) 12v. and ABK1 (43AAY) 24v. for 158-186 Mcs. with 10 Valves, Pioneer Dynamotor etc. in metal case 12in. x 12in. x 8in. used, good condition.

CLYDESDALE'S
PRICE ONLY **33/6** each Carriage and Packing Paid
Circuit available at 1/9 post free.

EX-R.A.F.

THE WELL-KNOWN R.1155 RECEIVER

A Communications Receiver for 18.0-7.5 Mcs., 7.5-3.0 Mcs., 1500-600 kcs., 500-200 kcs., 200-75 kcs. 5 Wavebands with 10 Valves, S.M. Tuning, calibrated Dial etc. Complete receiver unit in metal case 16in. x 9in. x 9in. Power supply required 210v. 60 mA. Smoothed D.C. 6.3v. 3.5a. A.C. Tested in operation before despatch.

CLYDESDALE'S
PRICE ONLY **£15 15s.** Carriage and Packing Paid
Circuit available at 1/3 post free.
Circuit for an A.C. Mains and Output Unit at 6d. post free.

HIGH VOLTAGE CONDENSERS

Transmitting Ceramic Hanged Pot Type

750 pf. 15 K.V.D.C. Wkg. 3in. long, 1in. dia. max.
750 pf. 15 K.V.D.C. Wkg. 3in. long, 1in. dia. max.
500 pf. 15 K.V.D.C. Wkg. 3in. long, 1in. dia. max.
500 pf. 15 K.V.D.C. Wkg. 2in. long, 1in. dia. max.
0.0015 mfd. 4 K.V.P.K. Mod. max. 3in. long, 3in. dia.

25 pf. 4 K.V.D.C. Wkg. 2in. long, 1in. dia. max.
All at **3/11** each Post paid

36/- per dozen

EX-U.S.A.A.F. B.C.348 RECEIVER

A Communication Receiver, covering 200-500 kcs. and 1.5-18.0 Mcs. in 6 switched bands, 8 Valves plus voltage Stabilizer. Vernier tuning control, Crystal filter, noise limiter, A.V.C., M.V.C. and B.F.O. Controls. Complete and tested in operation before despatch.

For A.C. Mains 200/250 Volts operation. For D.C. 28 Volts operation
CLYDESDALE'S
PRICE ONLY **£32 10s.** each Carriage and Packing Paid
Circuit available at 1/3 post free. Carriage and Packing Paid

ELECTROLYTIC CONDENSERS

Aluminium Can Types

4 MFD. 350 V.D.C. W.K.G. single hole fixing
At **3/6** each, 36/- per dozen

8 MFD. 750 V.D.C. W.K.G.
At **8/6** each, 80/- per dozen

50 MFD. 12 V.D.C. W.K.G.
At **1/6** each, 13/6 per dozen

200 MFD. 12 V.D.C. W.K.G.—
At **2/6** each, 20/- per dozen
All post paid

METAL CASED

8 MFD. 750 V.D.C. at 140 degrees F. 600 V.D.C.
at 160 degrees F. Size 4in. x 4in. x 2in.
At **6/-** each, 55/- per dozen

8 MFD. 500 V.D.C. at 140 degrees F. 400 V.D.C.
at 160 degrees F. Size 4in. x 3in. x 1in.
At **5/-** each, 45/- per dozen

8 MFD. 400 V.D.C. Wkg. 4in. x 3in. x 1in.
At **4/6** each, 40/- per dozen

1 MFD. 2000 V.D.C. at 140 degrees F. 1500 V.D.C.
at 160 degrees F. Size 4in. x 2in. x 1in.
At **3/-** each, 30/- per dozen

1 MFD. 750 V.D.C. at 140 degrees F. 600 V.D.C.
at 160 degrees F. Size 2in. x 2in. x 1in.
At **1/6** each, 13/6 per dozen

1 MFD. 600 V.D.C. "Aerovox" Ceramic S.O. ins.
Size 2in. x 1in. x 1in.
At **1/6** each, 13/6 per dozen

0.5 mfd. 2000 V.D.C. Wkg. 4in. x 2in. x 1in.
At **2/6** each, 20/- per dozen

0.3 mfd. 1500 V.D.C. Wkg. 2in. x 2in. x 2in.
At **2/-** each, 17/6 per dozen

0.25 mfd. 2000 V.D.C. at 140 degrees F. 1500 V.D.C.
at 160 degrees F. Size 2in. x 2in. x 1in.
At **2/6** each, 20/- per dozen

0.1 mfd. 3000 V.D.C. Wkg. 2in. x 2in. x 1in.
At **3/11** each, 36/- per dozen

All post paid
All tested before despatch

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On the Ham Bands

Conducted by "CQ"

Dear readers,

Owing to pressure of business, your scribe has reluctantly been forced to relinquish his role of ham band commentator. A few words, firstly, on the history of the non-duple "CQ." From February-September, 1946 "CQ" was G3AKF, Brian Taylor, his termination of scribe being due to the fact that the Army found his services indispensable! From October, 1946 and onwards, the feature has been run by the present scribe—myself. Now, with so many commitments in the way of editorial duties, I am unable to put the necessary time into the feature. It has been very enjoyable for me to receive all your letters and information and I trust that the results have been of interest and use to you all in your DX hunting. My successor will be Les Coupland, G2BQC, whom I hope you will give all the support you can. Owing to the new schedule for the magazine, please note that the very latest date for readers contributions is the 10th of each month.

To conclude, may I once again say "thanks" to all who have helped to make this feature a success. Cheerio, 73 and good hunting!
G3AKA.

● Readers' News

A. J. Slater, G1650 (Southwick), says that he is fed up with "parking the RX on 14 and 28 Mcs. and logging a string of DX" and has migrated to 7 Mcs. Here are some of the things Al has heard: EA8mm, KP4kd, MD5zc, OX3me, UB5ba, bc, kab, kau, kba; UC2ac, VE3agx, VK3qh, zc, VO2r, VQ8aa, W6waw/HZ, ZC6cl and ZS2ec. These were all heard between 2000-2350. Al wants a 7 Mcs. monitor session "to increase interest in a band where DX is a bit harder to find." OK, it will be arranged. On 14 Mcs. conditions have not been so good down in Southwick, with ZL2BT often the only DX phone station on the band. Short skip has often swamped out the DX, though excellent ZS signals were heard around 1900 (sometimes with KH6, W6/7, VE7) just before the band closed. The 28 Mcs. band produced a few good ones like AR8AB, CR9AG, AM; OQ5AR, ST2CG, JF; VP2GB, 6CDI, JC; VU2AF, LJ; W6PJN/KG6, XE1CQ, ZC6NF, ZD2KC, 4AH; ZL3CX, 4AO, CN; and ZS's. W6PJN/KG6 was outstanding with his R9 plus phone signals. Finally, Al notes that EDZ is now signing EA8EDZ and that I6ZJ is now using the call MI6ZJ. (No-one seems to want the MD3 prefix!)

D. Robertson, GM1051 (Wick) says that conditions on 28 Mcs. have been "deadly"

with nothing much until 1500 and then only the "regulars." However, Don has a few nice ones, including VS7AC, VP4TU, CR9AM, ZS6AW, VU2LJ, ST2JF, ZE1JB, ZL1OF, VK3FT, ZL7KN and VS7SV. On 14 Mcs. we have KL7it, ng; MD3ab, VP2aa, VK51d, VQ3hjp, VU2sj, ZL2gx, ZS1au, fh, eo, 2en, cu, 5u, bs, 6a, cz. On 3.5 Mcs. Don had a really nice one in the form of ZL1bq (RST339 at 0830). Anyone else had a ZL on this band? Overheard was the fact that ZK1am is active on 3548 kcs.

J. E. Endersby, GW703 (Old Colwyn), has been listening on 3.5 Mcs. and heard lots of W and VE calls. 14 Mcs. produced such items as HH2CW, VE8MB, 8OE, 8PA; VP2GE, VU2BH and ZD3B (at 2000). VE8PA said that the station was one day's travel by dog team to the nearest trading post! On 28 Mcs. Bert logged EL5A, HC2OA, VP2GB, KP4FW/VP3, VP6KM, ZS1T and 6FC. Bert reports hearing that HE1WA is active on 14 Mcs. phone around 14310 kcs.

A. H. Onslow, G1555 (Hove), has been busy building a receiver for VHF and has not had much time for DX. On 7 Mcs. he logged PX1c (what, that one again!), UB5kbc, OX3me, UQ2bd, UA3bd/UP2, UA0SI and UB2an (Would say this was UB5an though a "2" does not sound much like a "5"). The 14 Mcs. band supplied a catch by way of FR8AB (Reunion Island). Also KH6KH/KB6 and OY8LA (see Query Corner). Bert says that to those who did not get ZS6OL, there is another one in Bechuanaland—ZS6NU. On the subject of SH versus TRF, Bert says that he is not against straights but plumps for a Super every time. "Why crawl, when you can walk" is his sentiments.

Martin Harrison, G54 (Darlington), logged CO2pc, FA9jn, KP4cp, UA6ld, 4fc, UB5Kba, UC2ad, UD6bm, UI8ab, VO2bf, W9uit, ZC6sm, 6bk, 6a and many others on 7 Mcs. On 14 Mcs. we note HH31, MD5am, NY4cm, UC2cb, UN1ao, UQ2ab, VE7hc, 8nq; VP4tz and VK3mc. Finally, Martin heard W1IIM, 4BOL and VE1GR on 3.5 Mcs.

D. L. McLean (Yeovil) is still hearing the DX on 28 Mcs. His list this month includes: HH1HB, J9AGT, KG6AE, 6CJ, KZ5FW, VK5AE, 6MG; VP2GB, 4TT, TZ, 6CDI, FO, HR, JC; VQ2DH, 3EDD, 4HRP; VS7AC, PS; VU2AF, BF, CS, DG, GB, LJ; ZD2KC, 4AH, AL, AS; ZE2JA, JN; ZL3JO, ZS1T, 6FC, GI, IH, KS, U, YH. On 14 Mcs.: ET3AD, 3AE; KL7UM, VP2KS, 4TAX, TE, 6JR; VQ2AG, 4HGB, NSH; VU2LU, VA; ZE1JI, JR, JS, 2JN,

JV; ZD3B, ZL2BE, BT, GX, 3CV, ID, 4FO; ZS1AX, CN, DF, DH, DJ, GR, T, 2AF, 4D, H, 5Q, 6AB, DW, DY, U.

Dave Potter, G1552 (Birmingham) comments on the fact that last month he heard just VO2's one night, VE1's the next, W3's the following, etc. and asks "why"? Well, O.M., it's all a matter of "skip" and the group effect is nothing new. Listen in the early mornings on 14 Mcs. or through the day on 28 Mcs. and you will hear areas coming in and then fading out in definite groups. Dave's log for 20 includes MD2B, 5LR, VK3HS, 3XN; VU2LU, ZC1AL, 6NS, ZE1JN, 2JN; ZS1BD, 1DJ.

E. W. Field, G962 (Watford) had a letter from Hallicrafters Co., in which they stated that the Gatti-Hallicrafter Expedition to the Mountains of the Moon has been assigned the call VQ5GHE. Frequencies will be those assigned to British hams in East Africa, viz.: 1.8-2 Mcs., 7-7.3 Mcs., 14-14.4 Mcs., 28-30 Mcs. and 53.5-60 Mcs.

Stan Herbert, G3ATU (Sunderland) has been knocking off some good DX. On 14 Mcs. he worked ZC6jp, W7kic, 7fnk, 7lwf, VE7aad, MD1j, VE8mt, 8mb, UH8af, VK5js, VS9et, VU2sj and on 28 Mcs. the scalps were CE3ab, HK3ab, VP6dm, J9aar, HZ1ab, HH1hb, VU2qv, VK5ae, VS6ae, ZC1af.

Conrad Tilly (Bristol) sends along an enormous list of phone DX. Using a pin we shut our eyes and picked out AR8VA, C4HF, CR7AF, AU; ET3AF, 8 KA's, MD2C, OQ5CA, 17 VK's, VQ2BK, DH, HC, JM, PA, PL, 3ALP, 8AD; VS7GM, PW; 17 VU's, ZL1HY, 2GX; 13 ZE's (1), and 36 ZS's. Also on 14 Mcs. Conrad logged EA7EDF, I6AB, VK7AZ and AR8BM. Some interesting ones were heard on approx. 6800 kcs. and are Army TX's: VQ4RGL, RKE, RKU, RKM, RLU and RNA. Can anyone supply further info. on these?

● DX QSL's Received

A. J. Slater: HH2LD, W9ARE, W0PRZ, ZL1GI.

D. Robertson: CN8BA, OQ5BA, W6VKV/16, PK2DL, KL7AD, J9AA5, C1JC.

A. H. Onslow: HC1JW, ZL4HQ, KP6AB.

L. H. Waine: VE4LF, W5CNK, 6PXP, 9HRV, OCXB, 0DHN.

E. A. A. Hardwick: YI2WM, VU7AB, ST2KA, OQ5BR, UA1KBB, VS1BJ, VS2BU, VS7PF.

C. G. Tilly: OQ5AR, W0GZD, 6JC, 7GTA, 0PRZ, 6QZH, 7IWN, VK2CE, XAFG, W6AL, VE3BKL, VP3HL.

D. L. McLean: CN8BH, HK4EB (15 watts. 1st European report), KZ5NB, NY4CM, OA4BB, VE4SH, VE6WS, VE7ABD, VE7AJ, VE7MQ, VK2DI, VK2NG, VK4HA, VK5LK, VK6HL, VP4TU, W7ADH, W7FTV, W7PA, XE1FU, ZS1DO, ZS2AQ.

● Topical DX QRA's

AR8BC: S. Chaeb, rue Kader, Beirut, Lebanon.

C7AT: Box 51, Tientsin, China.

CM9AA: 306 Consulado, Havana, Cuba.

EA7AV: Conte Portella, Ministerio Marine, Madrid, Spain.

EA7BA: Radio EA7BA, Sagasta 33, Cadiz, Spain.

ET3AT: Box 858, Addis Ababa, Ethiopia.

J9AAW: APO 331, c/o Postmaster, San Francisco, Calif.

J9ABX: APO.

KG6CJ: APO 264, c/o PM, San Francisco.

OX3GE: APO 858, c/o PM, New York.

OX3GF: APO 859, c/o PM, New York.

PK3CK: Slametstrasse 5, Soerabaya, Java.

PK4VD: G. K. Van den Pol, SMI Stb 160717012

LTD 76, A Pem, Santar Veldpost, Medan, Sumatra.

PK4ZZ: E. v. d. Capellen, Emmalaan 11, Palembang.

ST2GE: Dr. F. G. Elvins, Sudan Medical Service, Khartoum.

VE8NB: Resolution Island, N.W.T., via Churchill, Manitoba.

VP2KS: Radio VP2KS, St. Kitts, Leeward Islands.

VP4TT: Radio VP4TT, Waller Field, Trinidad.

VP7AD: APO 857, c/o PM, Miami, Florida.

VP4TM: P.O. Box 431, Port of Spain, Trinidad.

VP9E: P.O. Box 11, Mangrove Bay, Bermuda.

VQ4GDF: P.O. Box 79, Nairobi, Kenya.

VQ4HRP: P.O. Box 1010, Nairobi.

VS4BJ: Cpl. E. J. Bailey, Signals Regt. R.A.F., Labuan Island.

VS4AZ: Luk Yui Kwang, 204 Nathan Road, Kowloon, Hong Kong.

VS6BA: 109 Austin Road, Hong Kong.

VS7AF: P.O. Box 72, Colombo, Ceylon.

VS7PS: P.O. Box 349, Colombo.

VU2CS: L. W. Ford, 12 Commercial Row, Darjeeling, India.

XZ2KW: K. R. Woolton, c/o BOC Ltd., Rangoon, Burma.

ZS5DF: "Carsdale," Empangeni, Zululand.

(Acknowledgments to D. L. McLean, L. M. Jones (W4-1152), D. Robertson and R. Brooks for several of those listed.)

These stations ask for QSL's via the RSGB:

VU2DG, ZC1AF, ZC6AH, ZD4AS.

● G Calls Heard Overseas

R. F. B. Featherstone, Nakuru, Kenya.

(RX: Hallicrafters S40-A3; 28 Mcs.: G2ABB, ACT, BB, BOZ, CBA, DPZ, DYV, HHV, HP, HQ, IG, IN, SB, VJ, WJ, ZB, 3AEX, AZJ, BF, BJJ, BWC, DAH, DO, HU, MY, VO, YM, 4CY, GE, HP, IT, JH, KC, KG, QG, 5GW, LB, RN, RF, UX, ZT, 6BQ, EB, FK, GS, JC, JL, LX, NV, PB, RY, 6VQ, WF, WG, WT, YL, 8DU, IL, JB, LO, MN, SY, TH, UR, VB, VZ, GI6WG, GM3AVA, AXO, BEA, KC, GW5XN, 8MQ, 8NP.

28 Mcs. CW: G2lb, 3bhe, 5rf, wr, 6yl, 8bw, GM3axu.

14 Mcs. phone: G3BM, 6BC, 8SY.

A. Teeter, ISWL/W2-790, Rumson, New Jersey. (National 183). 28 Mcs. phone: G2IT, XK, ACT, CUA, HFI, 3BH, BM, II, UK, BMF, 4CY, JZ, ML, ND, 5KS, 6RD; GM8MN, GW5XN.

P. Sleutel, ISWL/PY1070, Sao Paulo. (National NC173). 28 Mcs. phone: G2AJ, DT, DX, PU, XV, ZJ, ABZ, 3BJ, BK, DT, TT, WW, AFR, AHU, 4GP, KJ, TL, 5DT, HB, HV, UX, 6TD, 8BP, JG, JM.

Ten Metre Review

Mid January-Mid February

By C. Ranft, G5RF

MUF's over all paths have remained lower than expected and no appreciable improvement since mid-winter has occurred. In general, conditions have been inferior to last year. Even so, there has been plenty of DX, though even if we have, as is suggested, passed the maximum of the sunspot cycle, we might have expected better conditions. As is usual in poor conditions extra paths and paths traversing the Auroral Zones have been most affected. One is tempted to the theory that present poor conditions are the price of extra high MUF's of last Autumn.

Europe: As last report. Since appeals by G2MI (RSGB Bulletin) fewer G phones have been infesting the CW end of the band—two at least however are still “tearing it up.”

Asia: On most mornings the VU and VS7's have been first in, around 0730. A little later VS6AE was good. In a recent QSO, he reported severe “firecracker” QRM on 5RF's signals—due to celebrations by local Chinese! HZ1AB continues a fine sig. We deplore the fact that he sometimes finds it necessary to use 400 watts phone in the CW band.

Africa: On most mornings conditions to middle Africa have been good, but lack of activity in general prevents many QSO's. ZS has peaked as before, around 1500, though they have been workable some days from 0830 onwards at intervals. The Hallcrafters-Gatti station, VQ4EHG, has been a good signal on phone and CW. Prize for best CW operator of the month goes to the YL—ZS6KK. “SXMFT” (T7 note) is not a Greek aeroplane but simply ST2FT!!

North America: Feb. 3rd-6th a very bad patch, but otherwise the usual hefty signals. W4 and the Caribbean area at some mid-days has been the only DX audible. The W/VE Contest now producing the expected din!

South America: Generally below par. The northern part better. More reliable in the mornings than in the evenings.

Oceania: Recently ZL's have improved a lot in the early mornings, which may mean better things to come. VK's have been scarce. VK2ADC on phone seems to manage it when others don't. VK6RF tells me that the band has been dead for days on end in Perth this month. Long route evening QSO's “out.”

Crafty Corner: FQ3AT/FE, 28055 kcs. CW. (Believe OK).

MONITOR SESSIONS

Session 1: January 31st 2100-2230 GMT.
14 Mcs. Asia.

Well, we were certainly unlucky on No. 1! We anticipated that it would not be easy to get those Asiatics but what we did not anticipate was the terrific “short skip” which swamped out most signals that savoured of DX. The band was full of Europeans and North Americans, but NOT ONE reader heard anything from Asia. To us, these sessions, being more difficult than the usual run of such periods, are much more interesting, and these are the sentiments of most of those who wrote in.

Session 2: February 7th. 1800-2000 GMT.
14 Mcs. Africa.

Several readers wrote to say that, though they listened intently, no signals were to be had from Africa. Now, this is most interesting because many readers heard quite a lot, which goes to show something or other! (Most likely to do with aeriels.)

A. J. Slater: CN8BF, 8BP, 8BV; EA8EDZ, FT4AD, 4AI; MD5JH, MI6AB, ZE1JS, 2JV, ZS1A, 1DU, 1GR, 2AG, 5Q, 6CY, 6DW, 6DY, 6JF. CW:—ZS1hc, 6ew.

H. Ablitt (RX: R208): CN8BV, FT4AI, MD5AM, 5JH; ZE1JS, ZS1DU, 6JF, 6DY.

T. Pimblett (RX: V55R): CN8BV, FA8CC, MD5AM, ZD1BD, ZS6DY.

E. J. Clarke (RX: 1-v-2): CN8bq, FT4an, OQ5av, VQ3hjp, ZE1je, ZS1ah, eo, 2en, 5bs, 6jl.

E. Coates (RX 504): CN8BF, FT4AI, MD5AM, JH; ZS6DW.

F. Randall: CN8BV.

The next two sessions will be as under:

Monitor Session 3

Date: March 27th. Time: 0730-0900 GMT.
Band 14 Mcs.
Target: Stations from Australasia and the Pacific area.
Deadline for logs: This office, first post, April 2nd.

Monitor Session 4

Date: April 3rd. Time 2030-2200 GMT.
Band 7 Mcs.
Target: Any stations outside of Europe.
Deadline for logs: This office, first post, April 9th.

● Query Corner

Al Slater has a teaser. He logged OY8LA on 14 Mcs. recently, who gave his QRA as Kmid Laegring, Box 35, Thorsavn, Faroes. Said his power was 20 watts on 14100, 14290 and 14302 kcs. A friend of Al's states that the station is most decidedly a pirate, though Al says the signal characteristics point to the fact that his is definitely from that area. Can anyone shed any light, please?

Bert Onslow also heard OY8LA and also another doubtful character—viz.: SP5OQ on



Gerald Farrance, ISWL/G353, representative for Somerset, logging what we hope is some good DX

28 Mcs. Personally, we don't know the gent. Martin Harrison logged these specimens: D1ab (14100 kcs.), YU5zu (7170 kcs.) and YU7bc (14050 kcs.) Quite!

● **Odd Jottings**

If you want Zululand try for ZS5DF (QRA in usual dept.) . . . M1A says that M1B is on the level . . . XAFG states that British stations in Trieste will soon be on with an MD prefix (last two notes from Martin Harrison) . . . J. Mason reports hearing this from LA2UA—"Will all SWL's hearing these transmissions please refrain from sending reports of any description as LA2UA is unable to QSL" . . . Bert Onslow advises that those who missed ZS6OL to listen for a new 'un from Bechuanaland, namely ZS6NU . . . Fred Randall had a QSL from C1JC together with a letter and returned IRC. A pal of Fred's sent a report to HB9AG and instead of receiving a QSL got a tirade of abuse. A letter went back to 9AG pointing out that, like the best things in life, the air was free. After this, back came a QSL card with profuse apologies!! . . . VU2DG and ZCIAF are soon to QRT and all cards should be sent to RSGB (D.L.McLean) . . .

BAND PLANNING

We have received from the RSGB a statement concerning a Band Plan drawn up by the Society and submitted to all IARU societies in Europe. Copies have also been sent to IARU HQ, WIA (Australia), NZART (New Zealand) and SARRL (South Africa). As we received this just before going to press it has not been possible to comment on the scheme in this issue. However, our views will appear at the first available opportunity.

DX PREDICTION FOR MID-MARCH to MID-APRIL

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

7 Mcs. Conditions

- 0600—W4, W5, ZL.
- 0700—W4, ZL, VK.
- 0800—W5, VK.

14 Mcs. Conditions

- 0700—W6, W7.
- 0800—J.
- 1400-1500—VK, J, KA, W6.
- 1600—Asians.
- 1700-1800—W7, Africans.
- 1900—Africans.
- 2000-2100—W1, etc.
- 2200-2300—PY, LU.

28 Mcs. Conditions

- 0700-1400—Far East.
- 0700-1730—Near East.
- 07700-1430—Australasia.
- 0800-1600—Europe (Over 1000 miles)
- 0700-1800—Africa.
- 0900-2200—S. America.
- 1100-2030—N. America.

The above are average conditions; on disturbed days wide variation will occur, particularly over the Far East, Australasian and N. American routes.

50 Mcs. Conditions

There is some possibility that further Trans-equator contacts may take place, during March. Also during reach 50 Mcs. Best times are unpre-March the MUF to the Near East may dictable.

Nice Types

A monthly record of prize lids

G8-- (Surrey) who makes a habit of "working" stations that are not at the other end. Must like to hear his own voice!

The second op at G2-- who came to the mike during a QSO with a UA3 on 28 Mcs. and said "Hello Molotov. Has your curtain gone rusty yet?"

The gang at the tea party on 14 Mcs. The story went thus: G6-- was working G8-- and they were complaining profusely about a station causing QRM on their signals. After the QSO, G5-- came on and called the G6, kindly informing him that he was the cause of the QRM, so what. The G6 replied that if this QRM continued he would have no alternative but to "have tea with somebody." Whereupon the G5 said that he too was in a position to have tea with somebody. (We hope they both take sugar!)

G2-- in North London who on one evening on 14 Mcs. frantically called "CQ KZ5." Approximately 15 seconds after his AR he was heard replying to a W2's CQ. Obviously not so fussy when it comes to the pinch!

Contributors Please Note

Offerings for "Ham Bands" should reach this office, at the latest, by the 10th of each month. Long lists of calls heard, though welcome, should be "pruned" in order to contain only those stations of more unusual nature. We prefer to have just a few stations, with some interesting data about them, rather than lengthy lists of the more common stations "sans gen." Please keep all logs on separate sheets of paper from any accompanying letter and list your stations in alphabetical order of frequency. This helps us enormously. Also, please send details of your receiver and aerial. This will, in future, be included at the heading of your individual report. Once data on your receiving gear has been published you have no need to repeat the information again, unless, of course, some change is made.

We especially invite co-operation in the various sections of "Ham Bands," such as DX QSL's received, Topical QRA's, Nice Types and Monitor Sessions. This is the sort of information we need most of all.

THAT PIRATE AGAIN

Last month we reported a phoney phone station on 7 Mcs. using the call G2ATV, stating that the genuine 2ATV had never used phone on this band. It is now reported that our pirate friend has shifted frequency to 14 Mcs. Sorry, O.M., but we are afraid that the trouble you have been put to in adding a doubler stage has been wasted. You see, 2ATV has not yet been on phone on ANY band and is unlikely to do so for some considerable time as he is now rebuilding his station. Guess the only thing you can do now is either to learn code or else use someone else's call. (Or alternatively you could perhaps have a shot at the exam, and get a genuine call—or is that beyond your prowess?)

GOOD NEWS FROM HUNGARY

Peter Somssich, HA8S, writes in to say that the new Hungarian Short Wave Radio League has held an inaugural meeting on February 26th. New headquarters were decided upon and many important items discussed. It is now definite that the Hungarian amateurs will be officially licensed and new call signs should be heard on the air within a month. The new president of the League is Dr. I. Antalffy (HA4H), with K. Sautos (HA6I), I. P. Valko, I. Zelenka, I. Zentai as committee members and M. Andor as QSL manager.

ISWL

GERMAN TRANSLATION SERVICE REPORT OF ACTIVITIES

From its inception until January 29th, 1948, the following items have been translated for ISWL members by the service:— From Germany, 215; Norway, 63; Holland, 27; Belgium, 61; Luxembourg, 14; Switzerland, 1; British Zone of Austria, 82; Hungary (via Austria), 4; Yugoslavia, 2; Albania (via Austria), 1; Turkey, 7; Andorra, 4; Spain, 19; Portugal, 2; Africa, 62; Belgian Congo, 3; South Africa, 2; Canada, 1; Great Britain, 119; British Empire, 22.

The manager, C. Jakes, says that its heavy going at times—the figures certainly prove this! He complains that many do not send reply postage, so please O.M.'s try to remember this in future if you have been guilty in the past. It is intended to survey the scene of all the ISWL services in turn, one each month, in order to show members what is being done for them by the various department managers.

Now Available:

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OUR COMPANION JOURNAL

Those readers who are interested in the constructional side of radio will find much of interest in the pages of "Radio Constructor." Though some theoretical articles are included, the bulk of the text is in the form of constructional matter. In the past all types of short wave gear has been described, with receivers and transmitters well to the fore. The March issue contains a very useful Button Base TRF3 which is designed for use on the 14 Mcs. band and which should appeal to the DX fan. The same issue contains an article on modifying the well-known R1155 receiver. Other features include a Versatile Test Instrument, a new type of indoor Aerial—The Fork—and, a regular feature, Centre Tap's monthly article.

In each issue at least one receiver is described and transmitters are almost as frequent in appearance. If you have not already seen a copy, do so at once! A word of warning, though. As with the "Short Wave News," supplies are strictly limited so you may have some difficulty in obtaining your copy.

CQ!

Paging Mr. Jack Leppard! Last we heard of you, O.M., you were leaving Habbaniya for G but we have no home QRA. Your old colleague A. R. Tungate, ex-Y1ZAT, is after your blood for some of the remarks you made about him in the Around the Shacks article. Please let us have your QRA, or alternatively drop a line to Albert at 432 Watlington Road, South Benfleet, Essex.

RESONANT LINES

ANSWER TO LAST MONTH'S POSER

The consumption of all three is 330 watts (half of twice the consumption of all of them). From this figure the individual consumption of each can be found. Thus, Transmitter 130, Receiver 110 and Test Equipment 90 watts respectively.

CHANGE OF ADDRESS

VP9D, otherwise Jim Mann, has recently changed his QRA. Jim is ISWL Representative for Bermuda and is the QSL Bureau manager for the islands. The new address is:—J. A. Mann, Watts Farm, Southampton, Bermuda.



AROUND THE SHACKS

No. 14. C. SOUTHALL, ISWL/W3-990

CHARLES was one of those who began to take an interest in radio at an early age, his first interest in electricity came when he was only 7 years of age. When he was 12, he obtained his first short wave receiver, an Army surplus set. Since then (1946) intense interest in DX'ing has resulted in Charles becoming a dyed-in-the-wool short wave fan. Besides radio, the chief interests at W3-990 are soccer and sports in general, and he thinks that soccer is the best competitive game in the world (Charles is school team captain and plays at outside right). Swimming and tennis are also favourites. Back to radio, Charles likes to correspond with other DX-ers throughout the world, is "monitor" for "Radio News" short wave section, an associate member of the ARRL and has proved to be a very keen and active Representative for the ISWL for the city of Philadelphia.

The shack houses some nice gear as will be seen from the photo. At the back of Charles is a receiver under construction and the power pack for the BC348 receiver (next along the line). Next to the BC348 is an aerial tuner, followed by a generator. Both of these last two items are for use with the Mark II receiver itself alongside. The object on top of the generator is a

control box and a world-time slide rule. Atop the Mark II receiver is an intercom unit, which is connected very conveniently to the kitchen downstairs! Alongside of this unit is the speaker for the BC348.

The table in the foreground accommodates a file (extreme left), a typewriter, a wire recorder and a MW receiver. Charles is well stocked with literature, it seems, as we can see the Call Book, Radio News, QST, CQ and Short Wave News displayed on the table, with back numbers stowed away in the bookshelves.

Activities are confined mostly to the 14 Mcs. ham band, as 3.5 Mcs. is too crowded in the evenings and the morse on 7 Mcs. is too fast for Charles at present. The 28 Mcs. band is erratic, but its fascination is taking hold. Besides hams, a great interest is taken in BC stations, QSL's having been received from all over the globe.

Charles soon hopes to obtain his transmitting ticket and we wish him all the luck in that project. Correspondence is sought from readers who have similar interests to Charles and who are around his own age. The QRA is 124 West Springfield Avenue, Philadelphia, 18, Pa.

A Survey of World Broadcasting

Part I

By M. Preston (ISWL Translation Service)

THE following survey of broadcasting systems and their languages is intended as a working guide for the newcomer to short wave listening. Starting off near home, Europe offers a multiplicity of short wave stations—from Iceland to the Ukraine. Our own BBC radiates programmes to all corners of the earth, using a total of 43 languages in so doing. However, these services are well-known and it would be pointless to delve too deeply into a lengthy description.

In Scandinavia, the countries of Norway, Denmark and Sweden all use short wave outlets and in addition to their native tongues, also broadcast in English. France uses many frequencies and radiates in more than fifteen languages, special emphasis being stressed on beaming programmes to her numerous colonies in Africa and the Pacific area. Recognition can be made by the interval signal of a trumpet call at frequent intervals, and the call "Radio-diffusion Français." Spain operates several transmitters, many of which operate around 7 Mcs. Broadcasts are in English, French, Portuguese and Arabic. Italy has now resumed SW broadcasting and transmits in several tongues, though Arabic is not used. In pre-war days, Arabic programmes were a forceful medium of propaganda in Italian hands in her efforts to disrupt Islamic unity (especially against British interests). The tiny country of Andorra possesses a powerful transmitter, which can be heard on 5996 kcs., and though the main languages used are the native Catalan and French, English programmes may often be heard during the evenings.

Among the pioneers of SW radio were the stations of PCJ at Hilversum in Holland, and today this station transmits in several languages with particular emphasis on the Netherlands East and West Indies.*

Switzerland possesses a very efficient broadcasting system with transmitters situated at Berne. Programmes are radiated in several languages, in addition to the "local" tongues of French, German, Italian and Romansch. A special programme is also beamed to North America. Berne is the centre of the International Bureau of Telecommunications and their list of frequencies for broadcast, aircraft, shipping and

Government service stations is used by every radio organisation in the world.

Catholic listeners are served by the Vatican radio station HVJ which uses several wavelengths and broadcasts in many languages; features including services from St. Peter's, Rome and missionary reports from every country.

The countries of Central and Eastern Europe all have their short wave outlets, Czechoslovakia (OLR, Prague) being the most active. However, this group, consisting of Yugoslavia, Hungary, Austria, Poland, Czechoslovakia, Bulgaria, Rumania and Albania, all have a strong leaning towards the USSR and the Slav ideology. Amongst the most enlightened countries is Finland—with the highest literary rate in Europe. The transmitters at Lahti broadcast in several languages, including English. The Russian scale of broadcasting is very large and more than sixty frequencies are used, mainly from the Moscow transmitters. Programmes are radiated in over fifty languages and are devoted mainly to foreign news bulletins and talks on every aspect of Soviet life, particular emphasis being given to industrial and scientific achievements. As the experienced SWL will agree, the multiplicity of the Soviet frequencies, particularly those around 7 Mcs., are a great hindrance to identifying weaker stations who use adjacent channels.

Pride of place in Australasian broadcasting goes to the Commonwealth transmitters at Sydney, Melbourne and Perth, which beam programmes of great interest to all parts of the world. These programmes are very well received in this country and feature talks on Australian life, musical items, and sporting events (particularly cricket and racing). The call of the Kookaburra bird usually prefaces transmissions from Sydney and is unmistakable. Foreign broadcasts are made—in Chinese, Malay, Siamese, French and Dutch for listeners in S.E. Asia. These stations may be heard on various frequencies most of the day.

New Zealand formerly broadcast an experimental transmission on 7 Mcs. but is now going ahead with plans for the installation of a more ambitious short wave system with higher powered transmitters and directional aerials. In the Philippines, there are several transmitters, mostly under the control of the U.S. Army; the most widely heard being KZRH (9640 kcs.) between 1300-1630 GMT. These stations also

(Continued on p80)

* The English programmes, conducted by Eddie Startz (honorary member of the ISWL) are announced as from the "Happy Station" and may be heard on Sundays and Wednesdays at 100-2230 GMT on 6020, 9590 and 11730 kcs.

(AROUND THE BANDS—Cont. from p62)

KCBR Delano 15330 kcs. QSA3 R4 at 1115. World news at 1100-1115, sports news at 1115-1130 followed by account of a ball game which was very badly QRM from CW.

KCBR 9700 kcs. QSA4 R5 appeared to be in parallel with the 15 Mcs. channel, and heard signing off with Nation Anthem at 1430.

Hawaii. KRHO Honolulu 9650 kcs. consistently R6-7 signal over Xmas holidays says Sidney Pearce from around 0900 until 1100 with Eng. programmes, then Eastern programmes. News at 0930.

News and Press opinions 1045-1100. R6 signals with QSB. (Strangeway). J. Simpson reports them from 1100-1505 when station closes with Anthem. Announces identity every ½ hour and relays news from New York 1045-1100. Russian and Chinese are also transmitted on this freq. Bad QSB around 1400-1500. P. E. Woolner of Grantham whom we welcome to this column has heard KRHO announcing freq. at 0945 and relaying "The Voice of America." Signals were QSA5 R4-5.

● South America/West Indies

Colombia. Ray Aldridge sends in HJCW "Emisora sur America" Bogota on 4940 kcs. and heard at 0130 with R7 signals," also HJAP "Radio Colonial" Bogota 4930 kcs. at 0150, HJCF 6240 kcs. R5 to 0300. Has anyone a QSL from this station asks this reader.

HJCT Bogota 6199 kcs. heard at 0030 Q4 R5 with QRM. Uses 3 gong note and call as "Radio fusora National en Colombia en Neuvo Grenada" followed by World news and recordings. (Wilkinson).

Brazil. PRL7 Rio de Janeiro 9720 kcs. Q4 R5-6 at 1930-2100 with Rhumbas. Call "Radio National en Rio de Janeiro Brazil." (Ibaoll). PRA8 Recife 6015 kcs. Q5 R5 at 2315. QRM. (Wilkinson).

(WORLD B'CASTING—Cont. from p.79)

radiate local programmes in Tagalog, Igorolte, and Filipino, the principal local tongues.

In the Fiji Islands, there is a station at Suva. It is, however, of very low power and extremely difficult to receive in this country. Hawaii provides several SW outlets from the powerful station at Honolulu, the best bet being KRHO on 17800 kcs. The Pacific presents the opportunity to try for some real DX stations, amongst them being stations at Port Moresby, French Oceania and the Marianas.

Further instalments of this series will deal with other continents and will appear in future issues as space becomes available.

Venezuela. Ray Aldridge has been doing some good work on the 3 and 4 Mcs. bands and has logged the following:

YV1RU Maracaibo 3440 kcs. "Radio Maracaibo" R6 at 0100; YV3RS Barquisimeto 3580 kcs. "Radiofusora Occidental" R8 at 0130; YV5RN Caracas 4913 kcs. R8 at 0120; YV3RN 4994 kcs. R5 at 0040; YV1RX 4770 kcs. R4 at 0200; YV1RY 4752 kcs. R3 at 0200.

Curacao. Willemstad PJC1 7250 kcs. often R6-7 signal when signing on with chimes and Anthem at 2300, followed by Childrens' Hour and recordings. News in Dutch at 0030 (Pearce). Sends FB QSL card showing mp of Curacao with aerial mast across which are letters "CUROM" and PJC2. Power 3 kW. Schedule: 1630-1730, 2300-0230 Daily 1330-1730, 2300-0230 (Scribe). Ray Aldridge says they are R5 at 2300 improving at 2400.

Suriname. PZH5 Paramaribo 5845 kcs. Q3 R3 at 0100. (Wilkinson).

British Guiana. ZFY Georgetown. 6000 kcs. heard at 2300 until close at 0045. Usually an R7 signal Q5 says reporter P. E. Woolmer. Iball says they are Q3 R6 at his QRA at 2330-2400. Bill says that they suffer from bad CW QRM. A. Baldwin heard them once at 2310 giving a message for a person in Venezuela . . . "Operation successful, patient improving." Programme review at 2315 and Music from America at 2345. Signals Q4 R6.

● QSL Section

Verifications received by readers over the past month: Bob Iball: ZFY (letter veri, new cards shortly). A. V. Wilkinson: HI2T (IRC returned attached to card), EQB (verifies by Registered post), VP4RD (with schedule as 2200-0300 6085 kcs.), BFEB5 Singapore, FXE. Sidney Pearce: Radio Tabriz, CXA10 (same as for CXA6), HH2S, VUD2, VUD4, VUD8, VUD9, Singapore (9 Mcs.), Radio Malaya, XEQQ (by Air), XGOY (15 Mcs.), Capetown (5 Mcs.), CPl5 and Jerusalem. (Nice going Sidney).

E. J. Field: VLC9, VLB8, VLB9, VLA6, VUB10, VLC11, Radio SEAC (15 and 17 Mcs.), HER3, HER4, PCJ, SBT, SBU, TGWA, WNRX, WNBI, WGEO, FZI, Radio International Tangier, WNRA, CKNC, TAP, VUD8, WOOC, WRCA, WOOW, WRUW. (FB O.M.). Your scribe from PJC2, VLA7, HI2T, TGWA.

● Acknowledgements

Sidney Pearce BSWL336 (Berkhamsted, Herts.), D. O. French ISWL/G426 (Norwich, Norfolk), E. J. Field ISWL/G962 (Watford, Herts.), B. W. Bovey ISWL/G536 (Buckhurst Hill, Essex), G. Anderson (Whitby, Yorks), L. Lewis (St. Leonards-on-Sea, Sussex), R. Aldridge ISWL/G85 (Amersham, Bucks), A. V. Wilkinson ISWL/G666 (Rusholme, Manchester), P. E. Woolmer ISWL/G116 (Grantham, Lincs.), Bob Iball ISWL (Workop, Notts.), A. Baldwin ISWL/G193 (Leytonstone, London, E.11.)

My Favourite Receiver: No. 16

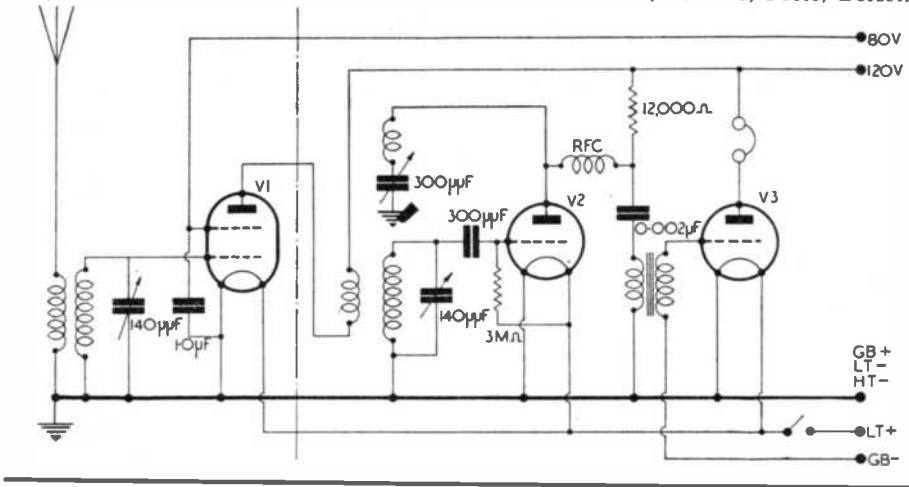
By D. H. Tonks, ISWL/G267

THE receiver is a 1-v-1 and though conventional and straightforward has proved to be the "favourite." The RF valve is of the screened grid type, though an HF pentode would probably be equally as satisfactory. Experiments were carried out, by means of a potentiometer, in variation of the screen-grid current to this valve though this was later disbanded as hardly "worth the candle." The deletion of this control improved quality and strength and in any case had the advantage also of simplifying the panel—which was getting a little overcrowded! The coils, both in the RF and detector stages, are Ray-mart plug in types, though, obviously, other similar coils could be used. Despite trying various valves in the detector stage the trusty triode was finally reverted to, an HL2. When a screen-grid valve was tried, instability resulted, but perhaps I was unlucky!

Various values of grid leak were tried, 3 Megohms being the final choice with the HL2. This value may, of course, need modifying if other valves are used. The coupling between the detector and output stages was new to me when the set was built and some adjustment was necessary before the values for the resistor and capacitor were selected. The output stage was also subject to experiment. Both triode and pentode were tried out and once again I selected the triode, a PM2 in this case. One reason was that with a pentode the amplification obtained using headphones proved to be tough going on one's eardrums.

A dial lamp was originally in use but after discovering just how much LT is consumed it was hastily removed as the current was more important for the valve filaments. The receiver functions well with almost any reasonable aerial system—I should know as I have six to choose from. Using a long aerial does not damp the receiver, due to the "buffer" effect of the RF stage.

The receiver is housed on a chassis measuring 10in. x 8in. x 3in. with the panel 12in. x 10in. Readers who want further information may write to me at: "Armagh," Shottsford Road, Oakdale, Poole, Dorset.



Binding for Volume Two

For the benefit of those who did not see the notice in the January issue, we would like to mention that readers who require their copies of Volume Two bound should send their magazines to the following address:

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

The complete set of magazines, together with index sheet should be sent, well

packed, and with instructions concerning the covers. These can be either bound in or removed. Copies will be bound in cloth-covered boards, similar to those of Volume One, with the title and volume number printed on the front cover and spine.

The cost of binding is 8/-, including postage.

Club Members

Please Note

The following has been "lifted" from the bulletin of the New Zealand DX Club and to us seemed so typical of certain customers we have met in the past, and who no doubt still exist, that we thought readers might like to have a quiet smile as we did. The effort is directed against those hangers-on of clubs who are so well-known to conscientious members:

The Club's Ten Commandments

1. Don't go to meetings.
2. If you do go, go late.
3. If the weather is cold, do not think of going.
4. When you attend a meeting, find fault with the President and other officers.
5. Never accept office—it's so much easier to sit back and criticise.
6. If you are appointed to a committee, don't go to a meeting. If not appointed, get peeved about it.
7. Don't hurry about paying fees—wait until you receive two or three notices.
8. When your opinion is asked at a meeting, reply that you have nothing to say, but after the meeting tell everyone just how things should be done.
9. Do nothing more than necessary. When others do the lion's share, tell everyone that the club is run by a clique.
10. Don't bother about getting new members. Let the old members who do the other work do that too.

QRM (Mark 1)—IT'S CURE

It has been interesting reading all the letters that have been received in response to our Editorial in the February issue on the subject of pirates. H. Crawford (Bury, Lancs.) says that many of those who go on the air without a ticket do so because they get "bitten by the bug" by reading an article on a transmitter and then go right ahead. This reader suggests that it should be stressed every month in the "News" that a licence is required to transmit and pointing out the harm that is done to the amateur radio hobby by pirates. G. A. Ensor (Mill Hill, N.W.7.) suggests that the answer is to revise the conditions of issue of the licence. He says, "In my opinion, if a man can prove he knows the fundamental principles and is an expert

operator he should be given a licence and not merely because he can answer technical questions. To pass the exam, obviously does not make the expert operator, otherwise one would not hear such appalling operating that we do at the present time. "Well, though we agree that there are many poor operators, we fail to see how someone can prove to be an expert operator before he gets his ticket. Officially, he should not have been on the air! Regarding knowing only the fundamental principles, is that not the subject of the exam, papers? Mr. Ensor goes on to ask "I wonder how many pre-war AA licence holders today could pass the technical test?" The answer to that should be highly interesting! This reader, who says he is not personally interested in a "ticket" considers that a licence should be granted if the applicant can prove he can build a simple RX and TX and can operate them expertly.

Claude Aspinall (Tarleton, Lancs.) is surprised at the "number of gumps at large." He has met a licenced ham who knows nothing about the technical side, having obtained an exemption through his job in the Forces. This is the cause of much trouble, says Claude and suggests that everyone should have to sit the exam., "qualifications" or not. Regarding SWL's-cum-transmitters he thinks that they have no excuse as they could easily learn the theory through the medium of text-books, classes or correspondence courses. A special form, permitting the purchase of ONE surplus TX, for attenders at classes is put forward as an idea to stop any Tom, Dick or Harry from getting on the air. A better suggestion is that radio dealers should display a prominent notice to the effect that a licence is required for transmitting and stating the penalties for misuse.

John Clarke (Brentford, Middx.) thinks that it is up to the conscientious SWL's and transmitters of every area to make a combined purge of their districts with DF gear. If clubs would organise such expeditions, the number of pirates would diminish considerably, remarks John.

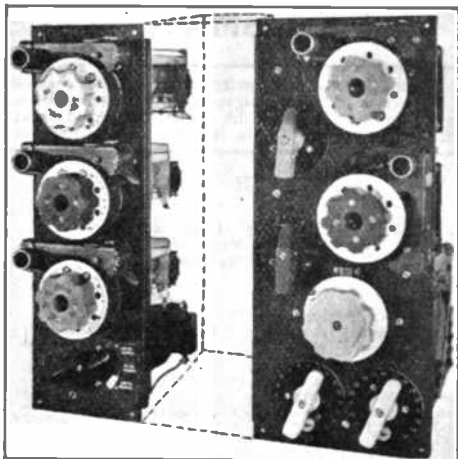
THE WRUL BROADCAST

As those who listened to the ISWL Programme over the Boston stations on February 29th will know, the special broadcast was an outstanding success. A full report will be appearing in the April issue. We owe a vote of thanks to Charles Southall who did so much to bring the programme about and it is appropriate that his shack description appears in this issue on page 78.

Component Review

●
**Universal Electrical
Instruments Corp.**
●

THE T1154 TRANSMITTER



DURING the war years communications played a vital part in the co-ordination of all parts of the Services, most branches relying to a great extent on a particular type of equipment that lent itself to their requirements. In the R.A.F., one item that was relied on to a great extent was the T1154 transmitter. This was used mostly as airborne equipment in planes of Bomber and Coastal Commands as a general purpose transmitter. In conjunction with the well-known R1155 receiver, this transmitter formed the communications link between the aircraft and its ground station. With the advent of peace and the ready availability of much ex-Service equipment, it was not unnatural to find that the T1154 found its way into many ham shacks. Many have used these transmitters without making any modifications and the result has been poor transmissions. With a little ham ingenuity, however, the T1154 can become a very efficient and versatile transmitter for the amateur bands. Since many of those now reposing in the amateur's shack are in a damaged condition, it is interesting to note that replacements are now available, brand new, from Messrs. U.E.I. Corp., of 138 Grays Inn Road, London, W.C.1.

U.E.I. are offering complete right hand and left hand sections, as shown in the photograph, which comprise the Master Oscillator and Output Stages respectively. These units are being sold separately and can be easily inserted into an existing T1154. The valve section (which is the centre portion of the transmitter) cannot be supplied, although a leaflet is available which shows the theoretical circuit and other details so that the constructor may build his own valve section if desired.

The left-hand panel comprises the Master Oscillator Tuning Unit, covering 10-5.5 Mcs., 5.5-3 Mcs. and 500-200 kcs. The component complement in the unit consists of the coil-capacitor assembly. The right-hand panel consists of the PA stage coil-capacitor assembly and aerial matching unit and covers the same range of frequencies as the MO unit.

These units may be said to have a three-fold appeal. (1) To those who already possess a T1154 and need replacements, (2) To those who wish to obtain the units and build their own valve section and (3) To those who obtain the units with the idea of "stripping down" for the components.

Those who aspire to (3) will find much of interest. In the MO unit, the main components are the three variable capacitors, all of which have slow motion drives and have automatic click stops for spot frequency switching. All have vernier attachments. Two of the capacitors are single sectioned, whilst the third is a split stator type. Three fixed coils and a three-way four-bank rotary switch make up the bulk of the components in this unit. The PA section has two variable capacitors, also fitted with a click-stop arrangement. Two coils are included, one of which has switched tappings that are used for adjusting the matching to the aerial. Also included in this section is the PA circuit for the low frequency range and this consists of dust cored coil tuning with two heavy-duty geared switches.

Altogether it will be seen that these units are quite an attractive proposition to the transmitting amateur and the price is reasonably fixed at 24/6 each unit (plus 3/6 carriage) or alternatively 49/- the pair (carriage paid).

SMALL ADVERTISEMENTS

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

PRIVATE

HALLICRAFTERS Sky Challenger 9 tubes; Xtal Filter; 550 kcs. to 38 Mcs.: £28 Carriage paid. EF50's 5/-. Stamp Enquiries. BM/SHANK, London, W.C.1.

SALE—9v. Double Superhet, Denco CT3 6 Band Turret EF50 RF, 2 mixers, 2 IF's, BFO, etc. Steel cabinet. First offer over £12. Owner posted overseas. Also power pack for above 350v., 120 mA., 6.3 v., 5 A., 6.3 v., 5 A., and four neon stabilised outputs, 150mA meter, 5 jacks, and switches. Steel cabinet. First over £8. Welch Langtree Cottage, Woodgreen, Hants.

FOR SALE—Eddystone "All World Two." 2 Morse instructional records. What offers? 22 Tilney Avenue, Boston, Lincs.

WANTED URGENTLY: AC gram motor, must be in good running order. Price must be reasonable. Offers to: E. J. Clarke, 39 Boston Park Road, Brentford, Middx.

SALE or EXCHANGE. 56/28 Mcs. Converter with built in power pack, £15. Vibrator H.T. Unit. 6 volt in, 6.3 and 130 volt, 30 mils. out, 35/-. RK20A 30/-. PT15 10/-. Cyldon .0001 variable 5/-. ditto, split-stator, 7/6. "Stonehaven," Horncastle Road, Boston, Lincs.

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G5GX

10/15 WATT PHONE/CW TRANSMITTER
TYPE SW 15/5

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FREQ. RANGE—Plug in coils for 160, 80 and 40 metre bands.

CIRCUIT—Pierce oscillator using SP61 valve driving 6L6 PA. Modulator consists of 6J5, 6J5 and 6V6.

CONTROLS—Phone/CW switch, PA tuning, Audio gain, key jack and phone jack. The modulator is intended for use with a crystal microphone.

METER—Moving coil milliammeter, reads the anode current of the PA.

POWER SUPPLY—Any power supply with 6.3 volt heaters and 250-350 volt HT.

HOUSING—The transmitter is housed in an Eddystone black crackle steel cabinet.

DIMENSIONS—10in. wide, 6in. deep, 7in. high.

DELIVERY—5-7 days from receipt of order.

PRICE—£17/10 without power pack, but with crystal and coil for one band.

Extra coils 5/- per band.

Power pack £7/10/-.

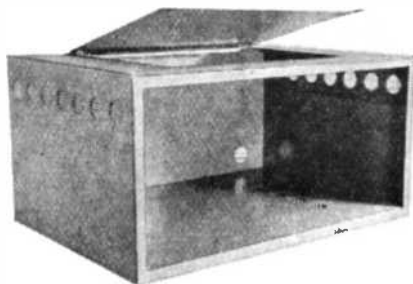
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(Phone—Terminus 7937)

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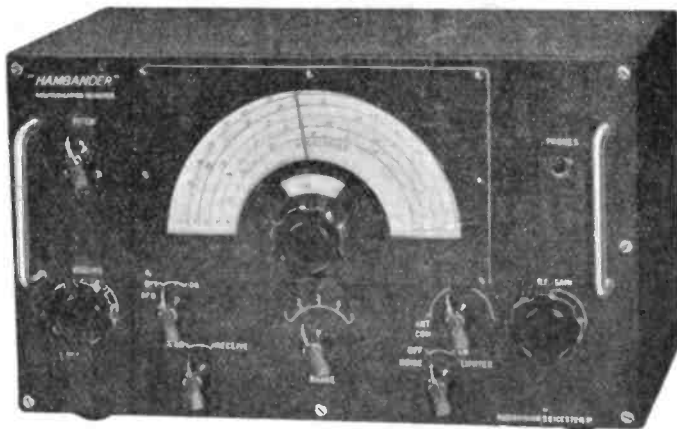
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