

Short Wave News

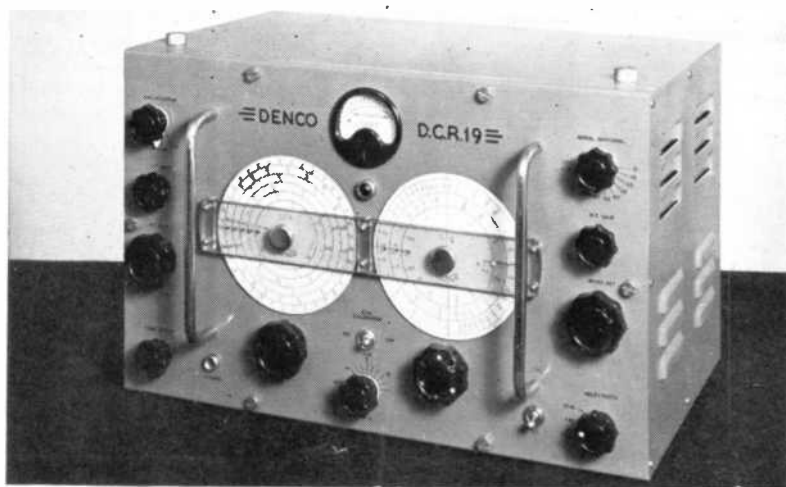
1/3

Vol. 4 No. 9
Sept., 1949



AN AERIAL TUNING AND CHANGE-OVER UNIT

Described by
"CENTRE TAP"
in this issue



THE DENCO DCR 19 sets a new standard in moderately priced Communications Receivers

6 ranges 0.175-36 Mcs. ● Sensitivity better than 1 μ V ● Xtal calibrator
Write NOW for descriptive leaflet Xtal filter ● Noise limiter

DENCO (Clacton) LTD., OLD ROAD, CLACTON, ESSEX

Besides the SWN, the Amalgamated Short Wave Press publish two other monthly periodicals.

Television News

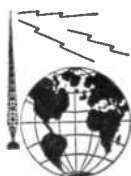
is an attractively produced magazine devoted to the entertainment side of television. It is for the television enthusiast what the film magazines are for the film fans. Each month, the life stories of television stars and personalities are featured, illustrated with large photos on art paper. Comments on past and future programmes keep the viewer up to date with the views of the critics, and 'behind the scenes' stories give televiewers an intimate knowledge of what goes on to produce the programmes they see in completed form on their screens. This magazine is becoming a favourite with yl and xyl readers, and a copy will be read with great interest in every home with a televisor. Order a copy through your bookseller or write direct to us. Price 1/-.

Radio Constructor

Many readers of SWN are already subscribers to this popular monthly. To those who have not yet seen a copy, may we say that it deals with all aspects of radio construction in the home. Receivers for all frequencies, amplifiers, television and electronic gear of all types are dealt with. Just starting its third volume, this periodical reached its maximum circulation within a few months of the first number appearing. Latterly we had to close the subscription list, such was the demand for it. We are now able to take subscribers again—16/- per year. Single copies can be obtained from your bookseller at 1/3, or by writing direct to us.

The Amalgamated Short Wave Press Ltd.

57 Maida Vale, London, W.9



Short Wave News

Vol 4 No 9

Annual Subscription 16/-

September, 1949

Editorial Offices: - - 57 Maida Vale, Paddington, London, W.9
Tel. CUNningham 6579

Advertising: - - - SHORT WAVE NEWS
15 Charterhouse Street, London, E.C.1
Tel. HOLborn 8655

Contents

... from the month's S.W. BC programmes - - -	218
Radiolympia Preview - - -	219
A Low-power Vibrator Unit. By S. T. Smith, G2BSI - - -	222
On the Ham Bands, by Les Coupland, G2BQC - - -	225
V.H.F. News - - -	227
An Aerial Tuning and Change-over Unit. Centre Tap- - -	229
Around the Broadcast Bands, by "Monitor" - - -	230
QRP Club Notes, by Mal Geddes, G2SO - - -	233
Radio Monte Carlo - - -	234
Holiday Letter from "Centre Tap" - - -	237
Running an ISWL Chapter, by A. F. Baldwin - - -	238
Around the Shacks, C. J. Goddard - - -	240
ISWL Monthly Notes - - -	241
... from our Mailbag - - -	245

Editor

ARTHUR C. GEE
G2UK

Editorial

JUDGING from our correspondence, we gather most of you thoroughly approve of the recent improvements to the magazine. Now, having got the magazine looking really nice, we are making a drive to expand our circulation. We still get letters from new readers expressing surprise that they have remained so long ignorant of our existence. Paper shortage has been the primary cause of that. Now that things have improved a little, we hope the magazine will reach many new readers. Please tell those friends who have had difficulty in getting copies that they may now do so if they place a regular order with their newsgents.

We are now reaching the time of year when interest in our hobby reaches its peak. Though there can be no doubt that for a great many people SW radio has no "close season," it cannot be denied that each autumn finds enthusiasm increasing. We at HQ are now at work on several ideas with a view to catering more effectively for the reader during these coming months, and we take this opportunity of thanking those enthusiasts who have sent in their suggestions. The first improvement will be seen next month, when we introduce a new Amateur Band feature. This will be followed in due course by ISWL inter-chapter contests. The two contests previously held were so encouraging that we shall now be running two regularly each year, one for Amateur Band and one for Broadcast stations, and a cup for each is being presented by G2UK and G2ATV. Of this, more anon.

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

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

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

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

Our monthly publication "RADIO CONSTRUCTOR" is devoted to the practical side of radio.
For viewers we publish "TELEVISION NEWS" monthly.

. . . . from the month's Short Wave Broadcast Programmes

(All times in GMT.)

MONTE CARLO.

49.71 m., 6035 kcs., 30.65 m., 9785 kcs.

This station continues to put good programme-level signals into the British Isles. Programmes of music, etc., available from 0700 to 2315. Symphony Concert, Sundays 2045 by the Monte Carlo Opera Orchestra. "Monte Carlo Calling," a programme in English by Evelyn Barnard, 2200 hrs. Sundays.

LEOPOLDVILLE, OTC.

Belgian Congo International Goodwill Station, 50 kw. 30-71 m., 9767 kcs. 1930-2030, "Belgium calling Gt. Britain and British Territories in Africa, 1930, opening announcement. 1932, News: 1945, Amongst Friends programme. 1952, Music, 2020 Talk or special feature. 2027, News headlines. 2030, End of English programme. This programme is repeated to USA and Canada from 0200 to 0400 GMT. Every Wednesday, English programme devoted to DX'ers and Radio Amateurs, giving Short Wave News and Radio Club information. Preview of programmes for week broadcast Sundays at 1945 for UK and 0215 for USA. (Acknowledgements to ISWL GM2704).

AUSTRALIA

(Times given are WAT=GMT-8).

ARGENTINE. RADIO BELGRANO.

LRV. 9545 kcs. 31.73 m., 2315-0300. English programmes to USA.

RADIO SPLENDID.

LRS. 11880 kcs. 25.25 m., 1930-2230. English programme. (Acknowledgements to ISWL GM2704).

RADIO LUXEMBOURG, S.W.

6090 kcs. Relays LW programmes, 1630 Sundays, Sam Costa Show. 1700 Latest records. 1730, Pin-up Princess for a Day, Stewart MacPherson. 2030, Request programme. 2100, Jack Jackson show.

HALIFAX, CHNX.

6130 kcs. Weekdays 1100-0415. Sundays 1300-0415. Amos and Andy Sun. 0030. Evening Reverie 0705. Guy Lombardos show, Mon. 2400. Symphony Hour, Tues. 0730. Opportunity Knocks, Wed. 0730. Fun Parade, Thurs. 2330. Ford Theatre, Fri. 0200. Spotlight Review (Spilke Jones), Sat. 2400. Twenty Questions, Sat. 0700. Life Begins at 80, Sat. 0730. (Acknowledgements to Roy Patrick ISWL G699).

TIMES OF TRANSMISSION

Call Signs.	Monday to Fridays	Saturdays	Sundays	Wavel'gths metres	Freqs. kcs.
VLW5	6.00—10.15 a.m.	6.00—10.15 a.m.	6.45—10.15 a.m.	31.21	9610
VLW3	10.30 a.m.—6.00 p.m.	10.30 a.m.—6.00 p.m.	10.30—6.30 p.m.	25.36	11830
VLW5	6.15—11.30 p.m.	6.15—12.00 p.m.	6.45—11.30 p.m.	31.21	9610
VLW2	6.00—10.15 a.m.	6.00—10.15 a.m.	6.45—10.15 a.m.	48.94	6130
V LX3	10.30 a.m.—6.00 p.m.	10.30—6.00 p.m.	10.30 a.m.—6.30 p.m.	31.22	9610
V LX2	6.15—11.30 p.m.	6.15—12.00 p.m.	6.45—11.30 p.m.	48.94	6130

A very comprehensive series of broadcasts in English is radiated from these stations. Details can be had by applying to Australian Broadcasting Commission, Box 190D, GPO, Perth, W. Australia. (Acknowledgements to R. F. Pilkington, ISWL—G1717).

RADIO NACIONAL de ESPANA.

32.02 m., 9369 kcs. English programmes daily 2090-2030.

THE VOICE OF AMERICA

Numerous frequencies in 13, 16 and 19 m., bands direct and via relays from Europe in 19, 25, 31, 41, and 49 m. bands. Music 1545-1600, 1645-1700. Programme Preview and Music, 1600-1615. News and Commentary, 1615-1645, 1730-1800, 1900-1915, 2045-2100, 2130-2215. Cross section USA, Wed. 1700-1730. Here Are the Americans, Mon. 1700-1730. Invitation to Learning, Fri. 1700-1730, Tell it Again, Sat.

1700-1730. U.N. Review Sun. 1700-1730. Make Believe Ballroom, Sun. 1730-1800. Youth Forum, Sat. 2000-2015. Radio University, Sun. 2000-2015. The week in the USA, Sun. 2045-2100.

There is a weekly amateur radio feature by ARRL radiated over most of the stations at 2045 Sats.

CBC INTERNATIONAL SERVICE.

GMT.	Frequencies		
	Call Sign.	Mcs.	Metres
ø1435-2145	CKNC	17.82	16.84
ø1435-1630	CKCX	15.19	19.75
x1632-2255	CKCS	15.32	19.58
	ø Saturdays and Sundays 1515.		
	x Saturdays and Sundays 2235		

English programmes:—News for UK, 1600-1615. "Speaker," 2110-2115, a five minute

commentary on various topics. "Out of the City," descriptions of beauty spots accessible from the major cities of Canada; Saturdays 2110-2115. "Prairie Schooner" a programme of Canadian pioneer music, Sundays 2115-2145. "Cross Section" a series of interviews with Canadians in all walks of life, Sundays 1615-1630. "Listeners Corner," programme highlights for the coming week and reading of the best letter received from listeners in the previous week, 1630-1645 Sundays. "Canadian Chronicle" news and feature items, twice daily 1615-1630, 2115-2130. "Midweek Commentary," an expert in politics, business, or journalism, etc., comments on Canada's part in world events, Wed. 2145-2200.

The Editor would appreciate comments from readers to help improve this feature, and keep it up-to-date. Spare programme schedules, etc., would be appreciated of those broadcasters who are putting signals of programme value into this country.

Radiolympia Preview

Electronic Bells will Greet Mr. Morrison

MR. HERBERT MORRISON, M.P., Lord President of the Council and Deputy Prime Minister, is to open the 16th National Radio Exhibition ("Radiolympia") at Olympia, London, on the afternoon of Wednesday, September 28.

A peal of electronic bells will greet Mr. Morrison when he enters Radiolympia and he will afterwards be invited to operate them from a keyboard in the control room.

The Royal Navy, the Army and the Royal Air Force are to exhibit their radio and radar equipment at Radiolympia for the first time since the war. The Department of Scientific and Industrial Research, for which Mr. Morrison is the responsible minister, the various research establishments of the Ministry of Supply, the GPO and the Ministry of Civil Aviation are all to give popular demonstrations and the Board of Trade is to have offices adjoining the Radio Industry Council's rooms for the reception of overseas visitors.

Many new models of radio and television receivers—some of the latter for the new Midlands station—are promised by manufacturers and the public will see rehearsals and performances in the BBC television studio, or on the screens of television sets of every make which will be working side by side in communal viewing halls.

Mobile and "business radio," transmission of newspaper photographs by radio, the use of radar

and other navigational aids and electronic industrial equipment will also be demonstrated by leading manufacturers.

Patron of Radiolympia is H.M. Queen Mary who, it is hoped, may visit the Exhibition on the special invitation day, Tuesday, September 27.

**RADIOLYMPIA, 1949, PREVIEW
(September 28 to October 8)**

**RADIO RECEIVERS AND
RADIOGRAMPHONES**

His Master's Voice (Stand 57) radio receivers include special models for the reception of FM transmissions. Others in the range include table models with twin loudspeakers and separate bass and treble controls. Autoradiograms will also be shown.

What is claimed as the smallest all-wave superhet in the world will be shown by *A. J. Balcombe Ltd.* (Stand 44).

In the range of receivers by *Marconiphone Ltd.* (Stand 48) will be a personal superhet about the size of a camera and weighing only 4 lbs., including batteries, and a transportable AC/DC receiver. Autoradiograms will have many new features such as the mounting of the gramophone mechanism in a special pull-out drawer for easy access, and new lightweight pick-ups.

"Plus-a-Grams," manufactured by *J. and A. Margolin* (Stand 102) will be seen in a new line of metal models in various colours.

A "handbag" type portable radio weighing 10½ lbs., to be shown by *Roberts' Radio Co. Ltd.* (Stand 96), has a detachable waterproof carrying cover with a zip-fastener. The set is claimed to operate satisfactorily even when being carried totally enclosed in the cover.

There is an increasing tendency to regard a radio as part of the design or furniture of a room. *R. N. Fitton Ltd.* (Stand 80) have produced a model combined with bookshelves. In their radiograms special attention has been paid to record storage, the cheapest model holding 150 records. The lightweight pick-ups, designed for high fidelity reproductions, put less than 1 oz. needle pressure on the records.

The *General Electric Company Ltd.* (Stands 38 and 175) will be showing models in plastic or polished hardwood cabinets, and an export five-valve superhet model with six wavebands and bandspread tuning, working entirely from a six-volt accumulator.

TELEVISION RECEIVERS

Among the *Marconiphone Ltd.* (Stand 48) television receivers will be combined radio models using aluminised cathode ray tubes, providing bright clear pictures that can be viewed in a room with normal lighting.

The *General Electric Company Ltd.* (Stands 38 and 175) range of receivers includes flat-ended cathode ray tubes, claimed to cut out distortion at the sides of the picture due to the curvature of the glass.

A model designed to fit into the corner of a room will be featured by *R. N. Fitton Ltd.* (Stand 80). Two new models, a table and console, with 12-inch cathode ray tubes will be released for the exhibition. They are designed for use within the high field strength area of the transmitter, but pre-amplifiers can be supplied to build up performance in areas of more difficult reception.

Bush Radio Ltd. (Stand 66) will be showing models adaptable for either the London or Birmingham television areas by changing the vision chassis which has been designed as a complete unit plugging into the main chassis.

Projection television receivers to be shown by *A. J. Balcome Ltd.* (Stand 44) provide an unusually large picture from a tiny cathode ray tube.

Metro Pex Ltd. (Stand 10) will be showing a range of optically correct magnifying lenses for fitting over the screen of a television receiver.

AERIALS

A new indoor television aerial which can be used either as a "V," inverted "V," "L," "T" or vertical dipole will be shown by *Wolsey Television Ltd.* (Stand 13).

Several aerials of special design will be exhibited by *E.M.I. Sales and Service Ltd.* (Stand 67), including anti-static types, radio relay aerials and

equipment for providing central installations for blocks of flats and other large buildings.

Belling and Lee Ltd. (Stand 25) will show a comprehensive range of aerials including a newly designed multi-array television aerial for fringe-areas.

Television and short-wave aerials for indoor and outdoor use, and car aerials are to be displayed by *Antiference Ltd.* (Stand 64). Aerials for FM reception will also be shown.

A range of television aerials by *Aerialite Ltd.* (Stand 62) are made by a simple method of assembly, claimed to cut labour, enabling them to be sold at a low price.

TELEVISION TRANSMITTING

A public demonstration of a television system will be given by *Marconi Wireless Telegraph Co. Ltd.* (Stand 174). Two Marconi Image Orthicon cameras will be in action, and visitors will see televised scenes from the exhibition in a monitor installed in a viewing tunnel.

COMMUNICATIONS

A reduced scale model of a microwave radio link to be shown by *Standard Telephones and Cables Ltd.* (Stands 60 and 173) will show a typical repeater station with a tower 200 feet high operating automatically with surveillance over a service channel and monthly visits by maintenance personnel. Transmission is limited with type of equipment to "line of sight"—roughly 30 miles—but repeater stations can increase this range. The same firm will also show a UHF radio link and co-axial cables.

A wide range of communications equipment will be shown by *Marconi Wireless Telegraph Co. Ltd.* (Stand 174) including a demonstration of the uses of VHF radio. It will show how news stories and photographs are transmitted from the scene of a story to the news room of a national daily newspaper. Lightweight radio equipment for civil aviation services will also be shown.

SOUND REPRODUCTION AND RECORDING

Automatic record changers and record players will be shown by *Garrard Engineering and Manufacturing Co. Ltd.* (Stand 79), including a radiogram unit floating on spring suspensions. A marine version of this unit will demonstrate playing a record with the unit tilted at angles up to 90 degrees. Battery-operated record changers will also be shown.

Gramophone motors to be shown by *A. R. Sugden and Co.* (Stand 207) are adjustable for speeds of 78, 45 and 33 1/3rd rpm. Complete recording equipment with moving coil cutter head for microgroove recordings will also be shown. The cutter head records on lacquer discs at 250 grooves per inch, and to fully modulate it only 1 watt is required.

A variable speed gramophone record reproducer to be featured by *Electrical and Radiological Instrument Co. Ltd.* (Stand 181) has speeds of 24, 33 and 78½ rpm. Intermediate speeds can be obtained by a micro-speed control which also takes care of any abnormal voltage vibrations. This unit can play any type of record from the standard 12-inch to the latest long playing microgroove recordings.

Birmingham Sound Reproducers Ltd. (Stand 81) will demonstrate a complete disc recording and control bay, including a new studio electronic mixing control console for professional studios.

Tape recorders will be shown by a number of firms including: *Lee Products (Great Britain) Ltd.* (Stand 157), *Wright and Weaire Ltd.* (Stand 63) and *The General Electric Company Ltd.* (Stands 38 and 175).

A pick-up with a diamond point, based on an entirely new conception of converting mechanical vibrations into electrical energy, will be featured by *The Lowther Manufacturing Co. Ltd.* (Stand 165).

Feature of the *E.M.I. Sales and Service Ltd.* (Stand 67) display will be the Royal microphones, each engraved with the date and occasion on which they were used. They are usually kept in a fireproof safe and special precautions will be taken for their safety during the exhibition.

Celestion Ltd. (Stand 87) will show a selection of loudspeakers with chassis diameters ranging from 2½ inches to 18 inches, and handling power from ½ to 40 watts.

The "Bafflette" speakers by *Richard Allen Radio Ltd.* (Stand 49) will include a new console model with an 8-inch loudspeaker to be released during the exhibition. It is a high fidelity model using a magnet of 14,000 lines per sq. cm. in a 0.45-inch gap.

Loudspeakers by *British Rola Ltd.* (Stand 87A) are fitted with a device for dustproofing the voice coil and magnet gaps.

Loudspeaker replacement cone assemblies by *A.W.F. Radio Products Ltd.* (Stand 203) are made in a range covering most popular commercial loudspeakers. Each assembly is complete with voice coil, spider, lead wires and fixing segments, and is mounted on an individual tray, colour coded for easy identification.

Equipment to be shown by *E.M.I. Sales and Service Ltd.* (Stand 67) ranges from three-watt mobile amplifiers to 200-watt rack types for industrial use, and a console for use in a concert hall.

A new amplifier by *Birmingham Sound Reproducers Ltd.* (Stand 81) is a portable 30-watt model with two microphone inputs, each with its own fader, and a separate gramophone input.

COMPONENTS

Suppression of domestic electrical appliances will be demonstrated by *Belling and Lee Ltd.* (Stand 25).

The new "Micromite" electrolytic capacitors, the smallest and lightest made by *The Telegraph Condenser Co. Ltd.* (Stand 75), are of non-corrosive, all aluminium construction, hermetically sealed and protected by a cardboard tube. The reduction in weight and size has been made possible by using high gain etched foil.

New miniature metallised paper capacitors for application with miniature valves will be shown by *A. H. Hunt Ltd.* (Stand 17). They are particularly useful for decoupling at frequencies up to and exceeding 100 Mcs., their effective inductance equalling that of a straight wire of equal length, and an approximate diameter of ¼-inch. These capacitors measure 7/16-inch (11.11 mm) in length and 3/16-inch (4.75 mm) in diameter.

Capacitors for use in suppressing electrical equipment will be shown by *Dubilier Condenser (1925) Ltd.* (Stand 82), together with ear mounting drilitic capacitors available in a full range of the usual capacitance and voltage values in single, dual and triple forms.

THIRD AMATEUR RADIO EXHIBITION

The Third Annual Amateur Radio Exhibition, organised by the Inc. Radio Society of Great Britain, will be opened at 2.30 p.m. on Wednesday, November 23rd, 1949, by The Baron Sandhurst, O.B.E. The Exhibition will remain open until November 26th, (hours 11 a.m. to 9 p.m.).

The venue is the Royal Hotel, Woburn Place, London, W.C.1 (nearest Underground

station, Russell Square. Bus routes 68 and 77 pass the door).

Twenty-five concerns have reserved space including the G.P.O. who are to stage a special exhibit.

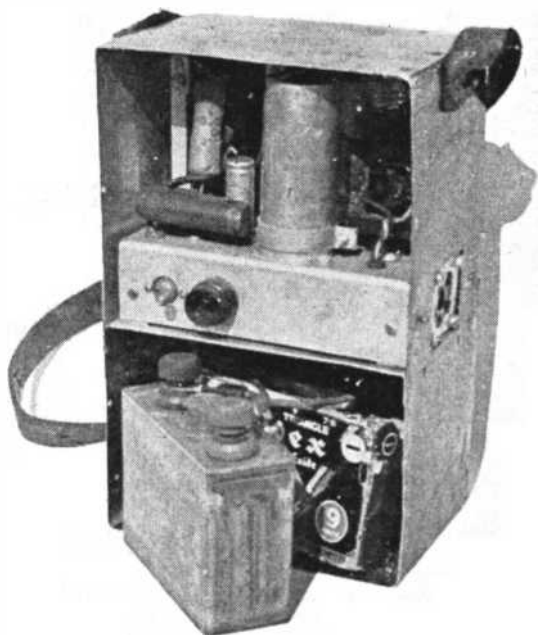
Admission will be by catalogue purchased at the door or 1/3 on application to the Society (New Ruskin House), Little Russell St., London, W.C.1.

A Low-Power Vibrator Unit

By

S. T. SMITH

G2BSI



The Unit used with the Tx described in "Portable on the Norfolk Broads" last month.

A MAJOR difficulty with small, portable radio equipment, is its power supply.

Batteries are both bulky and expensive, also the shelf life of most dry batteries is very limited. Rotary transformers are not warranted unless the power required is over 20 watts, as they are inefficient and heavy. Probably the most effective is the vibrator power supply. The author found this particularly so during D/F competitions as, at first, ordinary HT dry battery and LT accumulator were used, they proved satisfactory until dropped! or became damp when crossing a stream. The author can assure the reader that an HT dry battery becomes very heavy after two hours lugging across fields, streams, etc.

It was decided to build a vibrator power unit with the following considerations:

- (a) Supply all the power necessary for the D/F receiver, i.e.
2 volts @ 0.35 amps DC—heater supply,
9 volts DC—bias,
125 volts @ 10 mA. DC—HT.
- (b) Size to be as small as possible.
- (c) Weight kept to absolute minimum.

The circuit (Fig. 1) is conventional but worth explaining. The 2 volt supply to the valve heaters and the vibrator transformer is from a small 2 volt jelly acid type accumulator. The jelly acid type is recommended for portable work and, if this type is not obtainable, the acid from an ordinary accumulator can be jellied by adding a suitable quantity of water-glass; the correct amount is best discovered by experiment first.

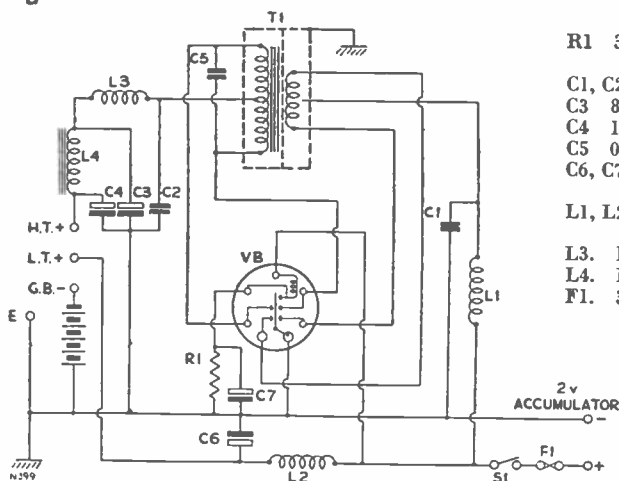
The heater supply is taken from the accumulator via L2 and C6 decoupling. The bias supply comes, in the author's case, from a bias battery but an additional winding could be added to the transformer and a small metal rectifier used. The vibrator transformer was wound on an old LF choke bobbin, size 1 inch by $1\frac{1}{4}$ ins. by $\frac{3}{8}$ inch using a 1 inch stack of laminations. The winding details are:—

Primary—28-0-28 turns 20 swg. Enam.

Secondary—1880-0-1880 turns 40 swg. Enam.

Allowance being made for losses, this will give 125 volts HT and as will be noted, the turns per volt are 14, which is necessary to ensure good efficiency. The Pri/Sec. insulation should be able

Fig 1



R1 380Ω ¼ watt.

C1, C2 0.1 μF 350V working
 C3 8 μF 350V working electrolytic.
 C4 16 μF 350V working electrolytic.
 C5 0.02 μF, 1000V working (see text)
 C6, C7, 50μF 12V working electrolytic.

L1, L2 H.F. choke, 30 turns,
 20 swg. ½ inch former.
 L3. H.F. choke 5-10 mH
 L4. L.F. choke 9H at 10mA.
 F1. 3 amp fuse.

to withstand 1000 volts. A copper screen should be inserted between the Pri. and Sec. and, if possible, also around the completed bobbin.

The input waveform to a vibrator transformer is a square wave, i.e. DC on, then off, then on again in opposite phase.

The polarity of the voltage is the same but, due to the centre tapped transformer, the phase is reversed. The waveform is not absolutely square, due to the inductance of the transformer; the secondary waveform is similar but of increased amplitude, due to the transformer ratio and to the fact that an inductive circuit is being "broken." The high voltage induced when the voltage to a large inductance is "broken" can be felt if you apply a low voltage (2 volts DC will do), to a large inductance, e.g., the primary of a mains transformer then, holding the transformer leads, "break" the voltage! The voltage waveform at the secondary of a vibrator transformer is very spiky (due to the inductance as explained) and, in this case the amplitude is in the region of 1000 volts. The buffer capacitor C5 will smooth this spiky waveform and in doing so will:

- (a) Improve the efficiency of the unit.
- (b) Reduce contact wear (reduces sparking).
- (c) Most important, prevents breakdown of the transformer, which should not be run without this capacitor. The value of C5 will vary with each transformer and its value is determined by either adjusting it for minimum current or minimum sparking at the contacts, if it is visible.

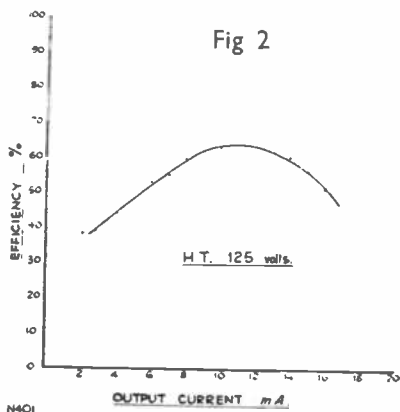
The vibrator used in the author's unit, was a synchronous type, i.e., it rectifies the output of the transformer, and was a Warranty type R76 2 volt (as used in the W.S. No. 58, the Canadian

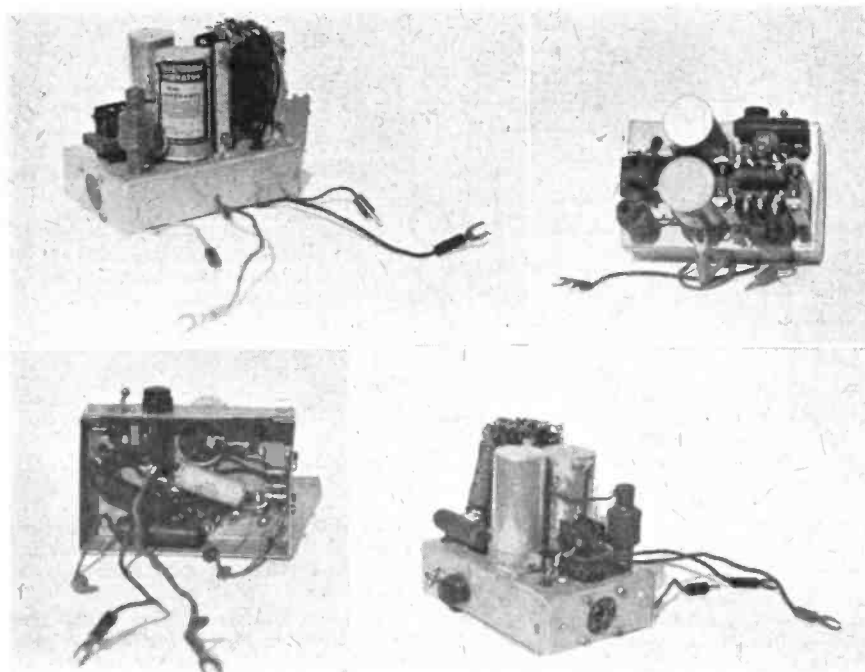
walkie-talkie), R1, C7 is a hash suppression circuit and is peculiar to the R76 vibrator, the values are adjusted for min. hash noise in the receiver.

A graph of Efficiency/Output of the author's unit is shown in Fig. 2. It is noted that its maximum efficiency is only 63 per cent.

$$\frac{\text{Output watts}}{\text{Input watts}} \times 100 \text{ per cent.}$$

This is to be expected as the operating output power is only 10 mA by 125 volts = 1.25 watts and the losses of such a transformer must be almost as much. For transformers designed to give an output of say, 15 watts (broadcast receiver 60 mA at 275 volts) an efficiency of 75 per cent. may be expected.





*Various views of the Unit showing constructional features.
Below, the completed Unit, with case closed.*

The unit should be constructed sturdily and as small as possible and the accumulator should be in a separate compartment, under the vibrator unit if possible in case any acid should be spilled. The author favours aluminium for constructional work as it is both lightweight and easy to work.

A bias battery was used as this was much cheaper than an additional winding on the transformer plus rectifier and smoothing.

The unit was found to work extremely well and, although there was some hash noise, it was not enough to annoy and made no difference to taking a bearing. There will always be a certain amount of hash noise if directly heated valves are used, also if the filament supply is from the same source as the vibrator supply.

Two final points, screen the power leads from the unit to the set and, if a fuse is fitted, remember to take a spare.



On the Ham Bands

Conducted by

Les Coupland G2BQC

CONDITIONS have certainly been bad. I have never known such a long spell. However, they are improving. Sunspots seem to be the trouble.

VP5AL is active in the Caymen Islands. 4X4BX is handling the cards for 4X4. VR5PL will be active there for a further 3 years and his Box Nr. is now Nr. 45. VP5XX is on the Caicos Islands. SHG1 is an Ionospheric station in Northern Sweden. Fred Pilkington hopes to be MM on the Norfolk Broads for a week or so. As you will see by his log, W. J. C. Pinnell has been in DL for a spell. YX2FK has been heard on 14 Mcs.; he is supposed to be on Kuwait. Bill Head would like to know how the feeling is regarding an ISWL Convention in the near future. Well OB I will see what the Ed has to say when I see him. W. Nicholl raises a query as to how to get in touch with Gs heard on 1.7 Mcs. Well OB I suggest you obtain a copy of the Amateur Radio Call Book, it lists the QTHs of most licensed hams. VK1ADS will be on Macquarie Island for a further year and asks for QSLs via his home QTH—his home call is VK3ADS.

DX QTHs

YK1AA : P.O. Box 35, Damascus, Syria.
YJ1AA : Ron Palmer, Port Villa, New Hebrides.
ZK2AA : c/o P.O., Niue Is., South Pacific.
FO8AA : Radio Club, Oceania Papete, Tahiti.
VK1ADS : 93 Princess St., Kew, E.4, Melbourne.
VK9FO-GM-YT : c/o Dept. of Civil Aviation, Norfolk Island.
VR2BL : Nadi Airport, Fiji Island.
VP5XX : via W4LVV.
XZ2FK : Frank King, Morton Air Service, c/o B.O.C., Rangoon, Burma.
VR5PL : Noel Mortensen, Box 26, Nukualofa.

East London Group—Gear used.

A. F. Baldwin, G193. Rx Hambander Q5er V55R pre-selector. Antenna 14 Mc. dipole E to W, 136 feet longwire N to S.
A. C. V. Seymour, G2526. Rx Eddystone 640—Antenna 60 ft. longwire.
A. T. Cheesley, G2533. Rx Hambander—Antenna Folded Dipole and longwire.
D. Tovey, G536. Rx 1155 and BC348—Antenna 33 ft. wire.
W. J. Wills, G1640. Rx Eddystone 504—Antenna 30 ft. indoor wire.

1.7 Mcs.

D. L. McLean, Yeovil. Phone G2AWL, 2AYV, 2GD, 2XQ, 3AMV, 3CCP, 3CXZ, 3CUM, 3DHH, 3DUQ, 4OK, 5FJ, 5PB, 6GU, 6JJ, 6LB, 6LL, 6OA, GW2DDX, 3VL, 4FW, 8SU.

Bill Winchester, G2152. G2ABB, 2ACK, 2CX, 2KT, 2LC, 3AQM, 3BMD, 3CLX, 3CTN, 3DYQ, 3DXA, 3JC, 4FN, 5WL/P, 6OA, 6UJ, and GW3CKD. All on phone.

W. Nicholl, GM2704, Dundee. CW, g2hnb, 3ars, 3bej, 3bxe, 3mag, 5of, 6zr, and on phone; G3ART, 6UJ, GM2CID, 3BEB, 4HR, 6SR, Rx-R.1224A.

W. J. C. Pinnell, G1832/DL (Brunswick). Phone: G2ACV, 2FLK, 2FXK, 2NV, 3CTN, 3DBD, 3E1W, 6IO, GM3BQA, 8FM, GW2BG, and on CW, g2aku, 2aop, 2exw, 2hnb, 2hw, 2jf, 2kf, 2og, 3adj, 3ars, 3art, 3bej, 3bex, 3dq, 3daw, 3dxa, 3eae, 3ebg, 3ekt, 3epk, 3fnl, 3lp, 3pu, 4fb, 4jb, 5xb, 6dv, 8fg, gm8fm, gw3cdh,

A. F. Baldwin, Leytonstone, heard the following on CW: f9va, g2atg, 2dtq, 2sc, 3ip, 3nt, 4qc, 5ri, 6zr, 8od, gm2hik, gw8su, oklzb, and Phone: G3BYV, 3JT, 3WQ, 4QC, 5SK, G13ALT.

C. J. Goddard, Coventry. Phone: G2MU, G3BQB, G5LO. CW: G3BGD, 3BQB, 3BVJ, 5SK.

3.5 Mcs.

Don Robertson, GM1051, Wick. The only station heard in the DX line on this band was ZS5YF and, strangely enough, GB1RS.

Fred Pilkington, G1717, Littleport, uses a R.1155A and logged W2YFZ, W3DJ and W4DL at 0430 GMT.

W. Nicholl. Phone: DL7AN, MB9BM, OZ9AA, PAøJA, øIU, SM7AEB, VE1KF, VO2BL, W1EKN, 1PLK, and 2HS.

Bob Henly, Brighton, PY2OM, VO2BL, VE2JAM.

7 Mcs.

Don Robertson heard ha4sa and tf5tp which may be phoney.

W. Nicholl, also north of the Border, lists the following on CW: ctley, ei2t, la1mb, 3wa, 7y, mg2kg/mr, on4pg, oz7es, sm3ep, 5arp, tg3ev, (?), ub5bd, wlaw, and zc6pr.

A. F. Baldwin, Leytonstone. CW: co2pd, lu7az, ox3xf, vp4taq, wøgek, 4adn, 6az, and z4hii.

Bob Henly. ZC6PR, CT3AA, VO1AK, LX1CP.

C. J. Goddard, Coventry, ha3w, sl5ab, ua1cf, ua4kcd, uc2ba, zc6pr, on CW.

14 Mcs.

This band has, as usual, produced the best DX logs.

East London Group, ISWL. Phone: AR8AB, CQ2DW, EA8MC, HH2X, HK4DF, KG4AA, KZ5AD, MI3SC, MP4BAD, TI2HP, VE8MI, VP6MU, 9FF, VQ2JC, VS1BJ, XE1CQ, ZC1AL, and on CW: ea8tm, um8kaa, z12aw, 4hv, and uo5ac.

D. Burney, G1715, Tring, has sorted out some nice DX. He lists the following on phone: YS2SA, VP2LA, UQ2AB, ZP2AE, CPIAD, TG9RB, 9HM. He uses an AR88 and 66 feet antenna.

A. F. Baldwin, G193, Leytonstone. CW: cplaq, ea8mc, fe8ab, fy8rf (14070, 1810), kh6cd, kl7lg, kr6as, ks4ai, kz5pa, ul7kaa, um8kaa, uo5ac, vp5ar, zd1au, lz1, 3cc, and on phone: CQ2DW, HK1FE, KZ5AO, MI3SC, TI2HP, VE8MI, VP5AX, 9WW, XE1CQ, and 4X4AA.

D. L. McLean vk5NP, has had a good time on 14 Mc. phone with AR8AB, EA8AE, 8CO, 9AI, FQ8SN, HC1FG, 1KM, 1KW, HH3L, HK3IR, K5FAJ, mobile airborne (5000 feet over Chicago, Ill.), MD2AC, MP4BAC, MT2E, OQ5BW, OX3BF, ST2AN, TA3FAS, TG9RV, TI2GG, VE5GA, 7AAD, 7ZM, 8AW, 8SB, VK2AGW, 2TE, 3ASD, 3BH, 3VC, VP4TAI, 4TB, VQ4ERR, XE1AC, 2KN, YS1ES, 2AG, ZE1JX, ZL3CV, 4HP, 4X4AA, 4AR, 4BA, 4BC.

Bert Endersby, GW703, Old Colwyn, also lists some good DX on phone: HZ1AB, JA2BL, 2CK, KA1AI, M13SI, 3ZZ, VE8MB, VE8SF, VK2AGU, 3EE, 3SW, VQ4AC, 4AJ, 4IMS, 4NJ, 4NSH, and ZD4AX. RX BC 348L with two-stage EF54 pre-selector.

L. F. Robinson, G523, New Addington, uses an Eddystone 640 with half-wave doublet and lists, CPIAD, HP1LL, 1LO, KA1AI, KG4AA, KP4MP, PJ5KO, UA6SF, VE8BZ, VP4LG, 5KS, 6RS, 8AB, XE1AC, 1WW, all on phone.

Don Robertson, lists some good ones on CW: CT3ab, 3av, EA8bc, 8DM, 8FF, F18fv, FF8gp, JA2ab, KH6cd, KL7bd, 7gg, KP4cc, LU7bh, MD4gc, M13ab, OQ5ra, PY7ws, TF3js, TF5tp, (anyone got any gen on these TF5's?), UAøkfd, øksb, økga, UH8kaa, UN1ab, VE4gu, 7vo, 8aw, 8ny, 8sd, VK5ll, 7nc, VQ4ktf, 4ss, VS7nx, 7rf, YR5kaa, ZL4ga, ZS6tc, and ZB1ay.

C. J. Goddard, G2227, Coventry, still uses his Decca AC5 and lists the following phone: CO8MP, CX2CL, EK1MD, HK1BZ, M1B/San Marino, MF2AA, MD2AF, MP4BAC, OX3DF, 3MC, PY1AKQ, 6GD, TA3BS, 3FAS, VP4TB, 9GC, ZD4AB, and on CW: CX1fk, HE1hm/Liechtenstein, LZ1lau, (?), PY4nk, SVøun, UA3bu, 6kht, UB5bb, UC2af, UG6ab, UO5kd, UP2aa, UQ2ak, VS1da, ZB2g, and ZC6dz. A further log lists the following: AR8BO, CM2MW, CN8MZ, CX2CO, EK1AD, FA9WU, KA1AI, KP4BI, KP4EZ, LU4BH, 4JJ, MF2AA,

MP4BAC, MI3ZZ, PY1AIU, 2AK, TA3FAS, UA3AM, VK3HW, 3VA, VO2MD, VP4TB, YV4HH, ZC1AL, 4X4BC. CW: EA8bc, FA8tm, KG6fa, MD2go, TA3gvu, UB5az, UC2bc, U19kba, UO5kaa, VQ4krl, VS7nx, ZD4ad, ZS6ua, RX Decca AC/5 Transuperhet.

M. Dransfield, G1731, Purley, logged HZ1KU, KP4JF, MD2AC, M13CT, MP4BAD, MT2E, OQ5RU, OX3MC, PK4WU, VQ2GW, 4CUR, VS1AX, 7VR, 9AH, XY2FK, XZ2FY, YK1AB, ZB1AR, ZD4AD, XZ2JG, ZL4HP, ZS3D, 6JW, and 4X4BA, all on phone.

John St. Leger, Cambourne, heard the following on CW: AC4ak, AP2n, 5b, CR6aw, 7bb, EA8dd, FE8ab, HC2jr, KZ5ch, MD7hv, OY3igo, UD6ah, UH8kaa, VP8ak, VS1aw, 1cw, 1da, 2ch, 7cc, 7nx, 9al, VU2gj, YK1ab, and ZD4ad. Rx 0-V-1. Sorry OB about your QTH. We think we have it right this month. AC4ak is thought to be genuine.

W. J. C. Pinnell, CW: FE8ab, KG6fa, KV4a, MD7we, MP4bad, OQ5ra, ST2tc, UAøfb, UJ8af, 8kba, VS1ew, ZD2rgy, and 4am.

Ian Glen, GM3036, Strathkinnes, Fife, sends in a short list heard on phone: CX1CG, MF2AA, PY2CK, 4BU, EK1DI, 1RW, HI6EC, TA3FAS, and LU4BH.

Arthur Looney, G2959, Liverpool, 14, uses a 1-V-1, and this is his first log, so welcome to the section. Phone: EK1MD, CN8AI, 8MZ, 8EA, PY2CK, UA3DL, EK1LD, 4X4BC, OX3GD, PY2AJ, AG2AB, TA3FAS.

Fred Pilkington, AG2AB, EK1DI, ET3AM, HK3IR, MF2AC, OA4M, OX3GG, VK3BH, 5RN, 6DD, VP6MO, XE1AC, YM6AC, (?) CPIAD, HC1FG, TG9AD, VP7NR, and UA3AF.

W. Ferrar, G2475, Coventry. CN8AI, EK1DL, FA9UP, KP4DR, MP4BAC, TA3FAS, VE8MB, VS1CW, VP4TB, VQ4CUR, ZC1AR, ZS6DY. Rx Hambander.

W. Nicholl uses an Ultra U434 and heard the following on phone: AR8BC, CN8EI, CO8MP, E17M, EK1DI, 1MD, HC2KJ, HI6EC, K1WAB, LU4GJ, TA3FAS, TI2PG, UA3AM, VP4PD, 6IS, YN1LV, YV1AN, and numerous W stations.

28 Mcs.

D. L. McLean seems to be the only one to have heard anything on this band. He lists the following on Phone: AR8AB, CE2CC, 2CL, 3CZ, 3IX, 5BH, CN8AH, CX2CL, 4CS, HZ1KE, KP4EZ, KZ5AU, LU1DV, 3DH, 3EJ, 4CD, MF2AA, M13AB, OQ5AO, 5LL, PJ5KO, TG9RB, TI8AB, VP6SD, ZP5BL, and 4X4AB.

DX QSLs RECEIVED

Don Robertson, TF3ea, W3mde, 3nih, øgbz, 5ivz, 4ubr, 5mry, 1qxq, 4kvx, 2lbk, 8rnc, 4ba, 8pqq, K4usa, KP4hv, DI2lm, PY7ws, ON4lg, CX3aa.

VHF NEWS

Les Waine, W9dxn, 7kgp, EK1ar, KL7pj, HC2jr, HB9el, TF3xn, LU8tp.

D. L. McLean, CM2mg, CP5ez, 5fa, ET3ah, FF8gp, G6qb, JA2bj, 2my, KZ5fz, OQ5pp, P11l, PK4KS, PY2jj, VE5fa, Wøyty, ZS2at, 6ra.

D. Burney, FT4as, ZS3d, EA4fc, CO7rq, 7gm, H16ec, 8wf, AR8ab, VS9aj, ST2an, KL7ew, 7ll, HH3dl, CP5fb, NY4ba, EK1dp, ZD2s, VK9gw, ON4ma, LU8ua, YV1ad, KP4fj, VE8bc, 8nq, VK4do, 6mk, ZL1ha, ZS1ax.

W. Ferrar, CO8MP, EA3TY, GW2HPG, IS1AHK, AEW, LA8XA, ON4BG, PY1EH, 7DD, TA3GVU, ZD4AB, ZBIAR.

Leonard W. Ross, Almondsbury, Glos., has about the best VHF listening station we have heard of to date. Besides keeping watch on the lower frequency bands with the aid of a Marconi H2813 covering 150 kcs. to 23 Mcs. and an R208 converted to cover 10 Mcs. to 60 Mcs. he has the following gear:—

50 Mcs.—R208 (6AK5 preselector) $\frac{1}{2}$ wave dipole N-S.

60 Mcs.—R208 with RF26 Unit. $\frac{1}{2}$ wave dipole N-S.

70 Mcs.—RF27 Unit, and a $\frac{1}{2}$ wave dipole E-W.

144 Mcs.—RF27 Unit, 6AK5-6J6-6J6-6C6 (osc.) converter. 954-954-955 (osc.) converter. 1147A (modified) $\frac{1}{2}$ wave dipole N-S. SCR 522 (modified) with 4 element rotary.

For 420 Mcs. he has another 1147A and a converter using 2C40-955-955 (osc.) and a 7 element rotary. And to complete the station there is a TU270A, a klystron oscillator and a parabolic aerial for 2300 Mcs. This station must take some beating! He sends us the following notes on the various VHF bands:—

50 Mcs. This band is not so good as it was a year or so ago, although ZS1P was received in mid-June.

60 Mcs. Nothing has been heard on this band since it was closed to G's. Len adds that he thinks some SM's, etc., are still on the band.

70 Mcs. This band is not generally known to be inhabited by hams. As a matter of fact the F's are licenced to use it and several have been heard. It is very easy to get on the band as an unmodified RF27 does the trick nicely.

144 Mcs. This band seems to me to be even better than 'five.' I have had results up to about 220 miles at present. It is easy to go portable on 'two.' I recently took the 522 out and with the aid of a temporary two element beam managed to log stations at over 100 miles.

420 Mcs. No results as yet although it is hoped that G3EHY and G3YH will be on the band soon.

2300 Mcs. I have the assistance of a local ham on this band. Gear is ready for the Rx, and the Tx should be on the air in about two months.

Leonard says that he will be very pleased to supply anyone who needs the QTH's of about 300 144 Mcs. stations together with their frequencies. He would like to hear from any station who would pass on his frequency to him for his list. So please send along the gen via the Editor.

THE LADDER

Rung	Name	Countries	States	Zones
1	E. A. Hardwick (Misterton, Soms.) ...	144	40	35
2	D. L. McLean (Yeovil) ...	138	48	35
3	M. Preston (London) ...	130	48	38
4	W. Head (Torquay) ...	127	48	37
5	C. G. Tilly (Bristol) ...	127	44	36
6	G. V. Haylock (Lewisham) ...	114	43	39
7	D. Robertson (Wick) ...	107	46	35
8	A. J. Slater (Southwick) ...	97	45	33
9	E. W. J. Field (Watford) ...	96	42	33
10	A. H. Onslow (Hove) ...	94	47	—
11	D. Burney (Tring) ...	93	48	35
12	E. Caffey (Yarmouth) ...	89	48	33
13	A. Levy (Belfast) ...	83	12	29
14	L. H. Waine (Yeovil) ...	68	47	30
15	R. Masters (Portsmouth) ...	65	43	30
16	L. F. Robinson (New Addington) ...	64	20	28
17	J. N. Trye (Nuneaton) ...	58	14	20
18	P. Bysh (London) ...	56	28	22
19	A. L. Higgins (Bridgend) ...	51	9	24
20	W. J. C. Pinnell (Sidcup) ...	50	10	27
21	D. G. Garrard (Ipswich) ...	45	22	13
22	D. Shallcross (Borowash) ...	45	20	15
23	K. Trautner (Lueneberg) ...	45	—	23
24	P. Godfrey (London) ...	36	2	19
25	S. Pritchard-Hughes ...	34	8	16
26	D. J. West (Bristol) ...	33	20	18
27	G. de Cramayel (Lausanne) ...	33	20	17
28	J. Edwards (Birmingham) ...	32	26	16
29	W. A. Ferrar ...	31	5	12
30	J. Goddard ...	27	30	30
31	M. Dransfield (Purley) ...	27	7	15
32	F. Finn ...	23	4	11
33	W. Hamilton ...	21	8	12
34	M. J. Powell (Pontypool) ...	20	5	6
35	C. Webster (Hull) ...	18	4	9
36	D. J. A. Appleby (Wells) ...	17	1	5

DIPLOMAS

	Grade	Classification
A. Boyce, W1796	4	B.C.
W. Winchester, G2152	2	B.C./Phone
J. Whittle, G31	2	C.W.
D. Barnfield, G1047	2	B.C.
P. Sissons, G1770	1	Phone
E. Caffey, G1462	10	Phone
"	2	B.C.
F. Pilkington, G1717	2	B.C.
C. A. Tooke	7	B.C.
J. H. Moody, G824	7	Phone
F. L. Rogers, G2632	10	Phone

L. A. Whitmill, Harrow Weald, Middx., sends in a fb log of last month's listening. Speaking of conditions generally he says that the 2nd and 3rd of July were particularly good for G dx. When conditions are good, no difficulty is experienced in receiving signals from as far away as Hull or Torquay, though so far, no Welsh stations have been heard. July 25-30 produced some very poor conditions. The following have been heard:—G2ABN, AJ, ANT, MV, NH, PU, XC, XS, XV, and YC. G3AEX, ALD, BLP, BOB, CCP, DAH, DBM, FP, OK and RI. G4AU, CG, CI, DC, HT, KD, LU, OO, and ZU. G5AA, BC, CD, DT, GX, KH, MG, OO, RD, TP, YM, WP and XA. G6DT, JK, JK/P, LR, NB, NB/A, NB/P, NF, VX, WT, XM/P and YP. G8IP, KZ, SK, SM and TS/P.

Les Coupland, G2BQC, Boston, Lincs., using a 6AK5, 6AK5 Rf's., VR91 mixer and 9002 osc., built into the I.F. and audio stages of an I132A receiver, has logged the following:—G2BUJ (Wiltshire), G5MA (Surrey), G3ALD (Hull), G5BD and G5WP, G8WW (Coventry), G2KG (Chelmsford), G6VX (Hayes) and G8JO (? Durham).

L. A. Yaxley, G2FLC, Cheverley, Suffolk, reports that he worked HB9GS on ten recently, who says that HB9GV has been operating on two atop a mountain, with a four element beam and 50 watts. He is hoping to work G's and is keeping special watch for them. Len has not been able to put much time in on the band recently but he has worked G8SY, 2HCG, 3CJY and 4MW and heard 6XV, 3BLP, 3DAH, 3AKU, GM3OL, 5JU and 6YP. He says that the Type 27 unit is still working well.

R. J. Appleby, Clacton-on-Sea, has been adding a noise limiter to his Rx and changing the I.F.s. to 1.6 Mcs. So his listening time has been limited. New calls heard include:—G2VA, 2CPL, 3ANB and 6VX. He now has a beam working well and is very surprised at the difference it has made, particularly when it was perched upon a pole outside the shack. It is now 35 ft. high. Two Dutch sigs. have been heard—PAØPN and PAØAD. Auto QRM is proving very troublesome now that the holiday season is in swing.

Arthur Simons, G5BD, Mablethorpe, Lincs. has been working the Continentals in a big way. He has worked PAØON, PN, AD, LU, UHF, DT, ON4IF, MVL and he has heard PAØUN, IK and HA. He has recently worked G5BY in Devon, a distance of 285 miles—his best so far. His sked with G5WR has been maintained 100% for 84 days!

W. J. Crawley, G2IQ, Sheffield, reports that the recent occasional cold spells brought conditions down, though even under poor conditions, the London stations have always been audible. He remarks that those using stacked arrays are the most consistently heard up his way.

Bill Parker, GW2ADZ, Llanymynech, Montgomeryshire, reports that in general conditions

have fallen off considerably compared with the conditions during the hot weather in July. However Aug. 18th gave conditions really good up to 150 miles, sigs. being generally up to S9. He had 6 QSO's at 170 miles and heard several more dx stations in difficult localities. Activity seems to Bill to have fallen off this month—possibly because of the holidays. One of his best QSO's was with G3AGA in Penryn, Cornwall—about 220 miles. He was 579 at times.

Bill Miller, Glasgow, says that there does not seem to have been much Dx excitement up their way though two metres activity is still very much alive. The RSGB Glasgow meeting is to be a two-metre show, with the OM—GM5VG—helped by all the two-metre talent, putting on a show of equipment. Bill remarks that 6J6 converters are very much in vogue just now.

W. H. Tanser, G3BJQ, Rugby has heard the following new stations this month:—G3BOB, 2AJ, 5BM, 5RP, 5MA and 3DA. He says that E18L is known to be active in Dublin. He remarks that he has had his call since Jan. 1947. Apologies for our remark last month OM.!

Bill Overland, G2ATV (Paddington, W.9.) has now started operating on two, with a BC 625 transmitter and three element rotary beam. So far, results have confirmed his expectations that the QTH would prove unsuitable for other than local working and the best distance so far achieved is Bromley, Kent. Most stations are received as reflections from a telephone exchange opposite the QTH. Stations worked so far are: G4DC, 2ABN, 6YP, 3AEX, 8KZ, 5IB, 6VX and 3CWW. 2ATV is active most nights on CW and phone, before TV and would appreciate SWL reports, his present QRG being 144072 kcs.

Order your next month's *Short Wave News* NOW. It helps your bookstall, it helps us, and it will ensure that you are not disappointed.

STRAYS

There has been some confusion about the position in Trieste. Our information is that all calls commencing AG2 are members of the U.S. Forces, and MF2 of the British Forces.

Similarly, SL calls are members of the Swedish Forces in Sweden. These can often be heard wkg Hams on 80 metres.

NEW COUNTRY. CR5UP is the call of the only active station in Portuguese West Africa. He was first heard towards the end of August, and the QTH is Senor Pias, St. Ome, Portuguese West Africa. Can be heard on 14120 kcs fone, from 2100 GMT onwards, mostly wkg W's.

AN AERIAL TUNING AND CHANGE-OVER UNIT

By "CENTRE TAP"

(Our Cover photo shows the completed Unit)

THIS Unit forms the constructional basis for a wide range of aerial couplings, suitable for use with medium and higher powered transmitters. Various combinations of parallel and series tuning with high or low capacitance or impedance circuits, can be readily obtained.

A thermo couple meter and a manually controlled DPDT Send/Receive switch have been included to still further extend its usefulness. Separate plug-in coils are used for the various amateur bands and connections to the pins are via miniature spade connectors to enable quick wiring changes. With these interchangeable connectors any one of many combinations of aerial coupling can be arranged within a matter of a couple of minutes.

with a QRP rig. With medium power and QRO gear a suitable shunt must be connected across the meter. The actual "reading" is unimportant—with thermo couple meters the readings are a comparative indication rather than an actual measurement.

Listeners are apt to overlook that nearly all the characteristics possessed by an aerial as a radiator (current and voltage distribution, resistance, impedance and directional properties)

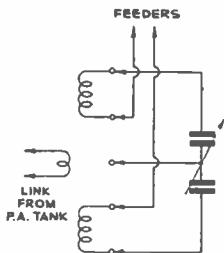


Fig. 1

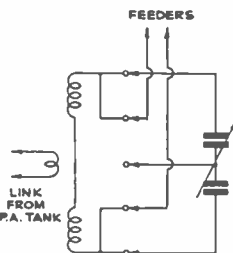


Fig. 2

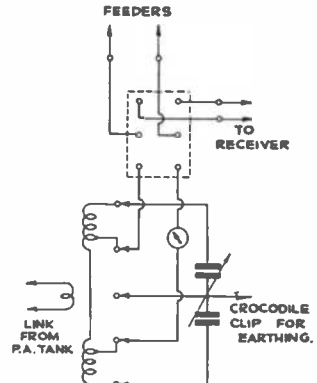


Fig. 3

It is not possible in this restricted space to give all the possible combinations, but two specimen arrangements are shown in Figs. 1 and 2. Others will readily suggest themselves, or in the case of the newly licensed amateur, are to be found in the usual handbooks. An arrangement of the full wiring of the unit with the thermo couple meter and the change-over send/receive circuit in use, is illustrated in Fig. 3.

It will also be found useful to link an aerial so that the change-over can be employed to compare two receivers under identical conditions by simple switching for both single wire or dipole antennas. By switching backwards and forwards two sets can be tested side by side through their entire tuning ranges. The performance of two antennas can, of course, be similarly compared in the same way.

Some amateurs will prefer the switch change-over to be made by relay but the writer favoured the manual arrangement which permits a very wide range of occasional uses as well as its primary use as a standby for operational work.

The thermo couple meter chosen is an 0.5 amp which is essential (owing to the cramped lower end of the scale with meters of this type) to more easily note deflection changes when used

apply equally when used for receiving purposes. The better pick-up is of course quite obvious, but the enormous signal-to-noise-ratio improvement must be tried to be believed.

The tuning capacitor should be a twin gang or a split stator of 200 μ F per section and suitable coil sizes are given in the following table:—

Band	Diameter of coil	No. of turns
1.7	2½	48
3.5	"	35
7	"	18
14.0	"	12
28.0	1½	10

The length of the windings is 2½ ins. and between-turn spacing is adjusted accordingly, except in the case of 28 Mcs. coil where the length is 1½ ins.

The tappings for the feeder connections when used as in Fig. 3 (low impedance output) will vary from two turns upwards depending on the band and coupling required for proper loading (maximum "draw" at the correct current rating of the final valve) and must be determined by test.

Around the Broadcast Bands

A Monthly Survey by "MONITOR"

All times are given in GMT
(For EST subtract five hours ;
for AEST add ten hours)

● Asia

China. Hong Kong. ZBW3, 9520 kcs. relays stations ZBW and ZEK. The following is the latest schedule :—

Weekdays—0330-0430. 1000-1130 : 1215-1415 (Sundays 0330-0430 only). ("Radio Leopoldville DX Session" per J. Fairs.)

R. Brinkley of Thorpe-Le-Soken in Essex asks about this station and would very much like to log them. Yes, R.B., you can hear ZBW occasionally around 1400 though QRM is very heavy near their frequency and OLR has a nice tuning note right on top of them around this time! Anyway, OM keep plugging on ZBW's channel and you'll get them sooner or later, like your humble Scribe who did log them after many months of listening! We have their letter Veri. Good Luck with ZBW OM and let's know when you hear them.

Siam. Bangkok. The Overseas Broadcasting Station operates as follows :—

0000-0100 on 6010 7105 11650 kcs.

0900-1130 on 6010 11650 kcs.

1200-1530 on 6010 7105 11650 kcs.

QRA . . . The Overseas Broadcasting Station, Publicity Department, Bangkok, Siam. ("R. A." DX Session per J. Fairs.)

From the same source comes news of another Siamese station operating on 7005 kcs. approx. and heard from 0900 to close at 1200 on Mondays to Saturdays (not operating Sundays). Has Six 'pips' time signal. Any news of this one would be appreciated by your Scribe.

Pakistan. Dacca. "Radio Pakistan" Dacca heard on new frequency of 15335 kcs. from 15275 kcs. with QSA4 R4-6 signals giving Eastern type music and call "Radio Pakistan Dacca" at 1515 and again at 1530. Time signal is Westminster type chimes. Present schedule : 0130-0300, 0530-0730, 1100-1630. Often suffers QRM from Manila on 15330 kcs. plus a little Russian jamming. (J. Fairs.)

● Australasia

Australia. R. Brinkley reports VLB3 11760 kcs. at 0830 carrying the programme for listeners in New Zealand and Asia also to the Allied Forces in Japan. Roy Savill lists "Radio Australia's" transmissions over VLG6, 15230 kcs. with very good QRK. "Music for Strings" opened the programme and was followed by a

Choir recital from St. Patrick's Cathedral in Melbourne at 2210. VLB6, 15200 kcs. was heard R9 at 2200 with chimes from the GPO Melbourne followed by Piano duets by Arthur Young and Reginald Forsyth. The weekly Sonata recital followed at 2220. At this time strength fell to R7. VLC11, 15210 kcs. was also heard at R9 with newscast and close at 2200.

Sidney Pearce reports the French transmission to Tahiti and Europe, etc. R8 from sign on at 0600 to close at 0645 over VLA8, 11760 kcs. and in parallel over VLG6, 15240 kcs. (Sats. replaced by VLC, 15200 kcs.). For New Caledonia R7 signing on with "March Lorraine" and French at 0800-0845 over VLC4, 15320 kcs. also in parallel from 0745-0845 with VLG3, 11710 kcs. (not heard). From July 18th, Broadcast to the British Isles at 0700-0745 . . . VLC9, 17840 kcs. replaced VLC10, 21680 kcs. while VLB3, 11760 kcs. and VLA6, 15200 kcs. still carry same programme at 0700-0815.

Sidney tells me that the recent heat-wave plus some fruit gathering greatly curtailed his listening for July. If it was peaches, pears, or strawberries OM then I'd be right there with you! Any samples. Hi?

Now back to DX, our Old Friend Roy Patrick says that VLB2 on 9650 kcs. has been putting in a hefty signal into Morcombe with its evening transmissions beamed to the British Isles. Roy states that he has listened to them nightly and greatly enjoyed the "National Fair" BC also the "Breakfast Session" at 2115. P. E. Woolmer has heard VLC9 at 2245 with QSA4 R6 signals.

New Zealand. Wellington. J. Fairs sends in the only report from this part of the World stating that "Radio New Zealand's" BCs can now be heard on a new frequency of 9780 kcs. over ZL2 at 1400. Moved from 9540 kcs. and ZL3 is now on 11810 kcs. and closes 1130. (R. A. DX Session per J. Fairs.)

● Africa

Belgian Congo. J. Fairs reports that "Radio Congo Belge" OTM2 has apparently moved from 9380 kcs. to 9400 kcs. as it has been heard by him on this latter frequency. QSA4 R5-6 with bad CW QRM. Time?

Northern Rhodesia. ZQP ceased transmitting on the 9700 kcs. channel on July 1st and a new frequency of 7220 kcs. replaces it. It will be

higher powered and should be received well in England at night says J. Goddard, who reports and also states that reports for this station should be sent to:—

P.O. Box 209, Lucca, Northern Rhodesia.

Spanish West Africa. Fernando Po. "Radio Atlantica" will shortly be on the Air using the following frequencies:—8800, 11600, 17600 kcs. and will give regular BCs in English, French, Spanish, German and Portuguese. QRA:—"Radio Atlantica." Fernando Po., Spanish West Africa. (Goddard.)

Azores P.W.A. CS9MB Ponta Delgarda. 11090 kcs. has been heard QSA4 R8 with News at 2015 in Portuguese (CW QRM from RHC). Closes at 2030 after "Radio Nacional do Azores" half-hour chimes and the Nation Anthem... "A Portuguesa." (East London ISWL Group.)

Portuguese East Africa. CR7BE Lourenco Marques of the "Radio Clube do Mozambique" on 9705 kcs. has been logged by Jack Fairs on his Murphy 6SH plus a 18 ft. Vertical Antenna. At 1610-1700 they were heard QSA4 R4-5 with intermittent QRM from Moscow on 9710 kcs. which was (fortunately!) transmitting at $\frac{1}{4}$ hour intervals. Heard in the clear from 1615-1630 and from 1645-1700 with musical programme.

Portuguese West Africa. Angola CR6RL "Radio Clube do Angola" Launda. 9470 kcs. has been heard several times around 1845-2100 varying from QSA2-3. R2-3 to QSA4 R4-5 and always with bad QRN. QRM from TAP in Ankara, Turkey on 9465 kcs. and sometimes from Russian "Jammer" on 9490 kcs. also CW though usually a clear channel from 2030 to close at 2100. Closing announcement includes "Radio Clube do Angola" followed by Anthem. (J. Fairs.)

Sidney Pearce reports CR6RB Benguela 9165 kcs. "Radio Clube do Benguela" who sends him QSL card which mentions on back... "Detalhes absolutamente Correctos," which we think speaks for itself. FB OM. Schedule given as:—1115-1200, 1730-1900. Frequencies: 9165 kcs., 7041 kcs.

Canary Islands. Tenerife. EAJ43 "Radio Clube de Tenerife" Santa Cruz de Tenerife has been heard on 7515 kcs. approx. with R7-8 signals daily from sign on at 2100. At 2150, after recorded programme, gives World News in Spanish and signs off at 2200 after programme details for next BC, with "Viva Franco, Muy Buenos Noches" and Spanish National March. (Pearce.)

● South America

Brazil. Idris Griffiths, at the RN W/T Station at Scarborough, Yorks., sends along a letter Veri he has received from the Announcer in English, Miss Janet S. Swaton (we think it's Miss, so that's why we are putting it in!) of "Radio Jornal de Commercio," Recife, Pernambuco also two nice

photos (one of which we publish this month). Idris reported the nightly programme for N. American Listeners entitled "About Brazil" given at 0130. This station greatly appreciated the report sent by this reader as, as they say, "don't often receive a report from listeners in England to this programme." Frequencies of ZYK2 and ZYK3 are 6085 kcs. and 9565 kcs. respectively. (Re the QRA of our Rep. in Brazil and also the other matter. Your Scribe has sent this on to the Editor.)

Ecuador. HCJB Quito. 5990 kcs. has been heard at 0415 and closing at 0530. Signals QSA5. R8 (Woolmer).

Chile. CE1174 Santiago. 11740 kcs. heard QSA4-5 R3-5 with rapid QSB. Call at 2200 as "Radio Nuevo Mundo Santiago." (Fairs.)

Argentina. Pearce reports "Radio Splendid" Buenos Aires who sends him schedule by Air-mail of SRI's transmissions in English as... over LRS 11880 kcs. 2230-0127. News is given at 2233, 2330, 0030 and 0122. Pearce also received a Pennant Souvenir! Other Servicio Radiofonico Internacional BC in English is from LRY "Radio Belgrano" on 9455 kcs. from 0215-0600. The SRI BC from LRU 15290 kcs. from 0200-0600 is in Spanish according to schedule sent.

Roy Savill has had a QSL from LRX1 Radio El Mundo Buenos Aires (6120 kcs.). He says the card is the one of the MW TX I.R.I. and station is owned and operated by Editorial Haynes Ltd., Publishers of "El Mundo" (Illustrated weekly), "El Hogar" and "Mundo Argentino" (weekly) also "Selecta" (monthly Fashion Magazine). Their card claims that their Broadcasting plant is the largest in South America with seven studios with individual controls, high fidelity equipment, acoustic treatment and air conditioning. QRA:—Calle Maipa 555, Buenos Aires.

Uruguay. CXA3. 6075 kcs. Montevideo heard QSA4 R7 giving station call as "Radio Ariel" and three gong notes in descending scale at 2215. (East London ISWL Group.)

Dutch Guiana. PZH5 Paramaribo. 5757 kcs. has been heard by Woolmer at 0050 with programmes in Dutch only. Very severe CW QRM marred listening. Closed at 0130 with Dutch National Anthem.

● Six QRA's

Compiled for your interest by Sidney Pearce:—
COBC "Radio Progreso" San Jose, 104 Havana, Cuba.

TIPGH. "Alma Tica," Apartado 800, San Jose, Costa Rica. C.A.

ZYE7. Radio Ecuadora de Parnaiba, Caixa Postal 31 Parnaiba, Pioui Brazil.

TGDA. Independencia No. 8, Guatemala City Guatemala C.A.

DZH3/DZH5 (ex KZPI/KZOK). The Philippine Broadcasting Corporation, 4th Floor, Roces Building, Manila, Philippines.

TGTO, Radio Internacional, 5a Avenida Sur No. 9, Guatemala City, Guatemala C.A.

● Europe

Greece, J. Goddard of Coventry says that the station operated under the call-sign JJOY and belonging to the US Corps of Engineers can be heard on 8000 kcs. and an English transmission is from 1400-1600 with News and Viewpoints. Your reports to: 7, Phemestockua St. Athens, Greece. (Thanks Jack for putting the QRA in block letters. Other readers please note when sending in addresses).

Monaco, Monte Carlo can now be heard on 9785 kcs. and gives English at 1100-1300 daily. (Goddard). P. E. Woolmer of Grantham Lincs., has heard them on 6035 kcs. at 2130 signals QSA5 R9. Roy Savill also logged them and mentions that the 9 Mc. transmission is a better signal than the 6 Mc. being more free from QRM in the evenings anyway. (Glad to hear someone gets QSA5 reception these days, OM!) Sidney Pearce lists the two freqs. heard in parallel with recorded Dance Music at 2100-2200s on Sundays with announcements in English and French. Signals R7-8.

Spain, Balaeric Islands. Sidney Pearce sends in some good news for you "Country" chasers in Emisora Radio Minorca, Mahon, in the Balaeric Is. Heard R7 on 7445 kcs. approx. from sign on at 1900. Programmes are chiefly recordings Pearce states. Sign-off is usually near 2030 with announcement "Muy Buenos Noches" "Viva Frahco Arriba Espana" followed by Spanish National Air. On occasions has been heard after 2100 and as early as 1830. Gives call as "Aqui or Transmite Radio Minorca." Since July 25th, has moved to near 7510 kcs. with sign-on at 1830 . . . off 2030.

Vatican City. HVJ The Vatican Radio gives English from 1815-1830 and now heard over

11740 kcs. (R8), as well as on 5970 and 9640 kcs. approx. Gave announcement that English at 1500 is radiated in the 19, 25 and 31 metre Bands. French is heard from 1845 on 5, 19 Mc. channels also 6190 kcs. freq. (Pearce). P. E. Woolmer lists "Radio Vaticano" on various frequencies. At 1500 they were heard on 15095 kcs. QSA5, R8 with English News also on 9660 kcs. Further English BC's at 1545 on 17450/17840 kcs. and at 1815 on 9660/5970 kcs. Programmes are preceded by a Carillon "Christus Vincit" and the announcement is heard "Laudetur Jesus Christus, this is the Vatican Radio."

Holland, PGD Hilversum 6025 kcs. transmits the "Happy Station" programme of Eddie Startz at 2100-2230 on Sundays and Wednesdays: 0300-0400, 1500-1700, also 0830-1000 on Tuesdays. These are recorded broadcasts beamed to many parts of the World (Woolmer).

Bulgaria, Sofia. "Radio Sofia" 7670 kcs. was heard at 2020 and again at 2145 with English BC. Announcements state: "This is Radio Sofia calling in the Anglo-American Service of the Bulgarian Broadcasting System." (Woolmer). Roy Patrick now at Sunny Morecambe (we know it Roy but it wasn't so sunny the day I was there on the 'Prom' back a while!), lists the English transmissions from "Radio Sofia" as:—

2020-2030 ... 2145-2200 Daily.

Switzerland, HBQ, operated by The United Nations Radio in Geneva on 6672 kcs. has UNO News in English weekdays (not Sundays) at 1830 to about 1840. Heard QSA5 R8. Six gong notes and call "This is the United Nations in Geneva broadcasting on 6672 kcs. in the 44 metre Bands." (Jack Fairs, Redcar).

Eire "Radio Eirean" Dublin has new 100kw. Tx under construction and should be testing (beamed to N. America) before October next. Watch freqs. 17840 and 9595 kcs. (DX Session "R.A." per J. Fairs.)

Finland. New frequency of approx. 9550 kcs. heard QSA5, R8 in parallel with OIX4 (15190), giving Musical programme and closing at 1300. (Fairs.)

● Honour Roll

It is good to see that more interest is given this month by readers of the "over 10" Class. The following is the present state of the table:

1. Sidney Pearce (Eng.)	... 115
2. Rex Gillett (Australia)	... 107
3. A. Cushen (N. Zealand)	... 100
4. Dr. T. B. Williamson (Eng.)	85
5. E. Field (Eng.)	... 62
6. A. V. Wilkinson (Eng.)	... 52
7. A. Levi (N. Ireland)	... 50
8. Roy Savill (Eng.)	... 28
9. Jack Fairs (Eng.)	... 24
10. Roy Patrick (Eng.)	... 22
11. Fred Pilkington (Eng.)	... 17
12. P. E. Woolmer (Eng.)	... 15

The Editor invites contributions dealing with general matters of SW interest as well as constructional articles. Photographs of SW BC stations, amateur stations and short-wave gear, radio club functions, etc., suitable for publication are also welcome. All communications to:—The Editor, "SWN," 57 Maida Vale, London, W.9

● QSL Section

Verifications received by readers over the past month:—Roy Savill has found the following to oblige him LRY, LRS, LRX1, VUD, Vienna and 6 "Voice of America" Stations (USA). Jack Fairs has the "cards" of CR7BE (9705) VLB3 (11760) plus Booklet entitled "Know Australia" also letter from DX Editor of Radio Australia namely Graham Hutchins, WRUL and WRUX, came thru for the Special ISWL BC of May 28th, PRA8 (6015), Baden-Baden (6321), LRS (11880), plus cloth Pennant for wall decoration! (Mind it doesn't hide up the cards Jack!) Radio Luxembourg (15350). Ernie Field: WGEX (17880) red white and blue cards are now being sent out by "The Voice of America" says Ernie who received this one after waiting 17 months for their QSL! VLG3 (11710) CKNC (17280). Sidney Pearce's Mailman dropped the following thru the letter-box . . . LRS2, HC4EB, CR6RB, YVMA (ex YV1RV), PRA8, XEWW, VLR, TGWB, VLA11, VLC3, VUH4, VLB, VLB9. P. E. Woolmer from LLG, LLN, KWID, SBO and Radio Luxembourg. Roy Patrick: Radio Norway (9610), Radio El Mundo (6120), Radio Sofia (7670), Tirana (7850), OTC. W. Nichol: Radio Switzerland CKNC, CKCS, CKCX, CHOL (glad to hear you had the four cards OM. QSL's from Radio Canada come thru very well Bill), WRUL for ISWL BC from Chas. Southall, our Rep. in that part of the USA who personally sent along a letter to W.N. stating he would be coming over to this Country in the Summer of '50 and hopes to meet as many ISWL Members as possible. BCNU Charles. Jack Fairs in a second list has CXA19 (card depicts Bucking Bronco. Travel brochure of Montevideo also), YDC (15150), PLD6, (17630), Radio Belgrade (6140), ZYK3 of "Radio Journal do Commercio" in Recife (9565) . . . via Air-mail. Roy Savill: Warsaw iii, LLG Hamburg, Budapest.

● Acknowledgements

The Editor and "Monitor" wish to thank all readers who have sent in items of news for this month's article. 73DX. Monitor.

QRP Club Notes (continued)

W7DXZ (559), Tacoma, Washington, and SVØAJ (549), Near Athens. On 80 metres with $\frac{1}{2}$ watt G3DRC (459), Worthing, G3BFT (599) Birmingham, and another 3 watter G3BEC (579) of Yeovil. With 0.0063 watt on "Top Band" G3DKO (439-20 miles) GM3ATV (649), Banff and with 0.0006 watt G2CTC (539) Leek. Incidentally, 6ZN says that GM3ATV is the most Northerly Ham in the British Isles active on 1.8 Mcs. Using his Hartley on 3.5 Mcs. during N.F.D. 6ZN had 80 contacts, including 60 portable stations, and the following countries: EI, G1, GD, GM, GW, and numerous G's better than some other portable stations.

QRP CLUB NOTES

BY
MAL GEDDES
G2SO

LOW power contacts from a boat on the Norfolk Broads! Thus spent G3BS1 and G3AXN of Southend-on-Sea for a week in May last (see SWN Aug.—Ed.) The transmitter-receiver used was a WS18 Mk III, consisting of MO-PA input 2 watts phone or CW, and 4-tube receiver. Power Supply vibrator from 20 volts. Aerial 66 ft. long, fixed from tree about 30 ft. high to 0 ft. Despite this aerial the following stations were contacted on 1.8 Mcs.

G2BYF 558 (Sheerness) G3EQX 467 (Southend-on-Sea) G3HK Camb. (578), G3EXY (578) Gloucester, and G3EER (449), Kingston-on-Thames. Nothing outstanding in the way of DX, but useful contacts from the Broads during the evening period!

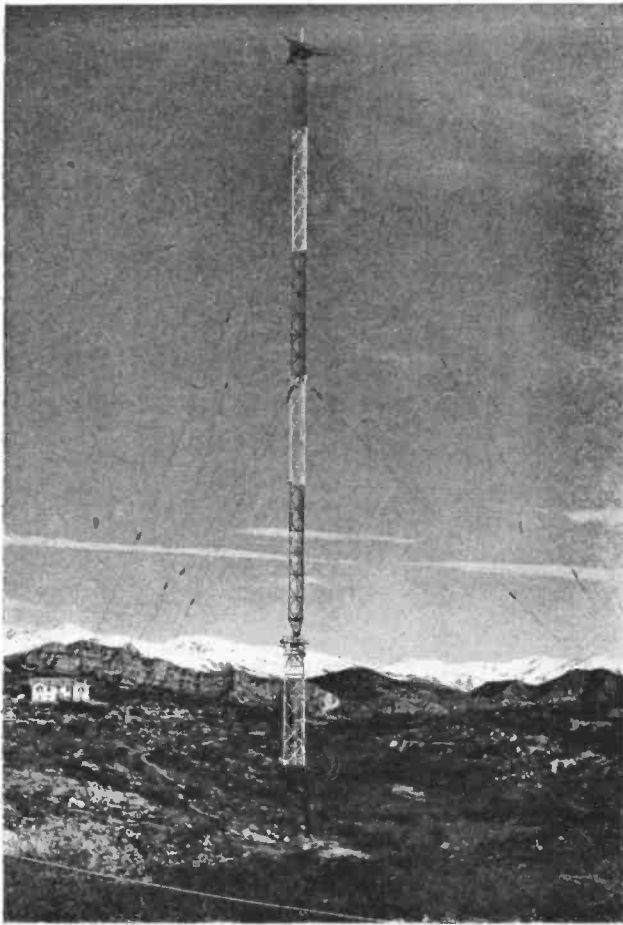
G3EDW (Rayleigh, Essex) has been on 1.8 Mcs. with a Clapp oscillator and an aerial of 115 ft. end fed. With an input of .18 W, he has had numerous semi-local contacts, including G3AMJ (589), Southend, G5VQ (579), Westcliff-on-Sea, G3AMF, 569 (25 miles), G2JF (549) (32 miles), etc. With Clapp oscillator on 3.5 Mcs. numerous G stations and on 7 Mcs. EF50 Clapp, EF50 FD and 6-v-6 power/doubler 5 watts input F8 (599X), PAØ (589), G13 (579), and GM (579) plus stacks of G's.

Using this rig on 14 Mcs. the following have been QSO'd. DL, GM, SM5 (569), OZ (569), OK3 (569), etc. G3EDW is now trying for still lower power and real QRP.

Once again, G2AJU of Stutton, Suffolk, sends in a nice letter with lots of interesting contacts on 1.8 Mcs. phone and CW, using a watt and under. He recently worked GW5BI with this power, and received RST459 on CW and Q3, S4 on phone. Not bad for 190 miles with 1 watt. Also on same frequency DL2HK (449), G2CXW 439, Burnley, Lancs.), G2AFV (3/53/59), Barnsley and numerous other stations with solid contacts. G2AJU says that he has now been on "Top Band" long enough to prove that despite very low power on this band useful contacts can be obtained. He hopes to get on 3.5 and 7 Mcs., in the near future.

G6ZN in a recent letter says that he has not been very active lately, but despite his remarks he has had some real DX on 14 Mcs. with his usual 3 watts, including W4FKH (449) Memphis, W8KVF (459), Ohio, W2HMN (249), New Jersey,

(Continued at foot of previous column)



**STATION
DESCRIPTION
No. 20**

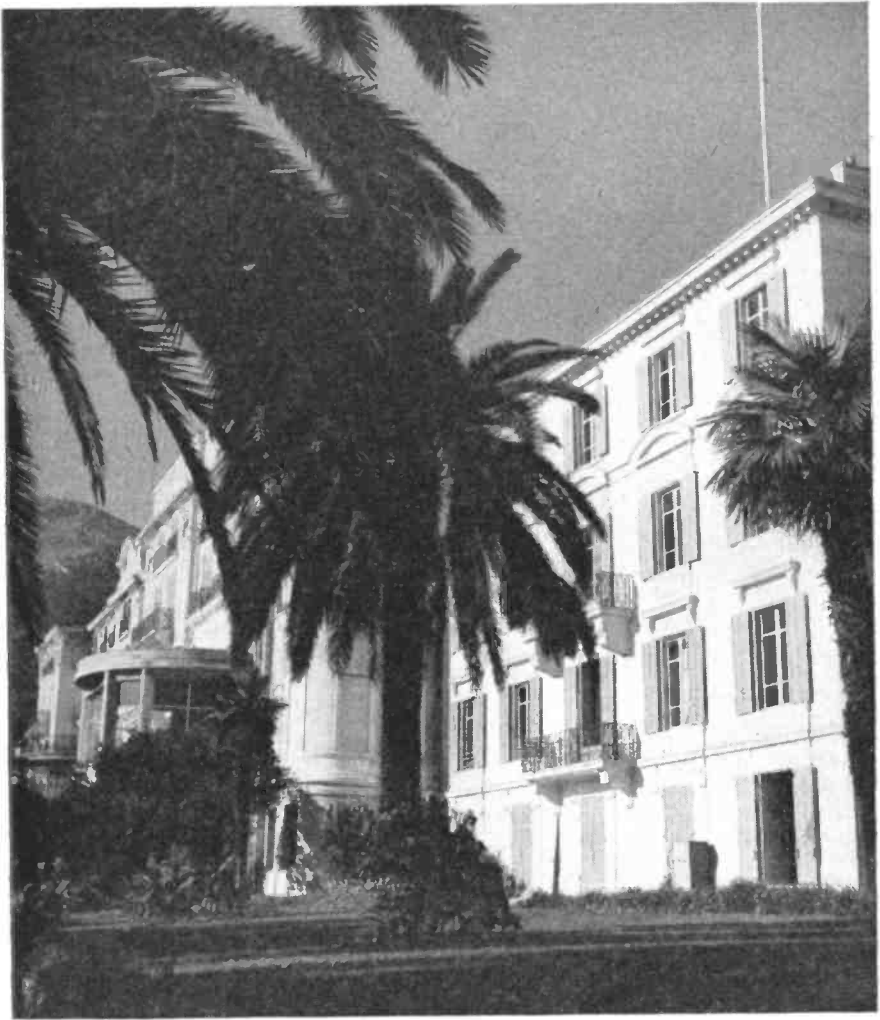
RADIO MONTE- CARLO

THE broadcasts of Radio Monte-Carlo on 6035 and 9490 kes. need no introduction to our SW BC fans, as they are well received in this country, and the programmes are of good entertainment value. There is also, as many readers will know, a medium wave channel allocated to this station, viz., 959 kes. The three channels radiate a total transmitter power of 170 kW—120 on the medium wave, and 25 each from the short wave transmitters.

Radio Monte-Carlo is a commercial station owned by the Pan American Broadcasting Company, and every facility is provided at the studios for presenting advertising material in as attractive a manner as possible. The general standard of the programmes is on a high level, facilities being available for accommodating first-class orchestras; dramatic and light theatrical

shows; pre-release movie reviews; on-the-spot interviews, and outside reporting of social, cultural and sporting events. A huge library of the world's best recorded music is maintained, and turntables are available for 33 1/3 and 78 rpm. vertical and lateral cut electrical transcriptions and recordings. It is reckoned that the three stations cover a population of some 250 million persons in possession of 25 million radio sets, so Radio Monte-Carlo can justly claim a gigantic "selling potential."

The complete station is accommodated in two groups of buildings; the studios, offices and administrative building being in Monte Carlo itself, whilst the transmitters are situated on a plateau 2,500 feet up on Mont Agel. The studios are connected with the transmitting station via underground cables. Special attention has been

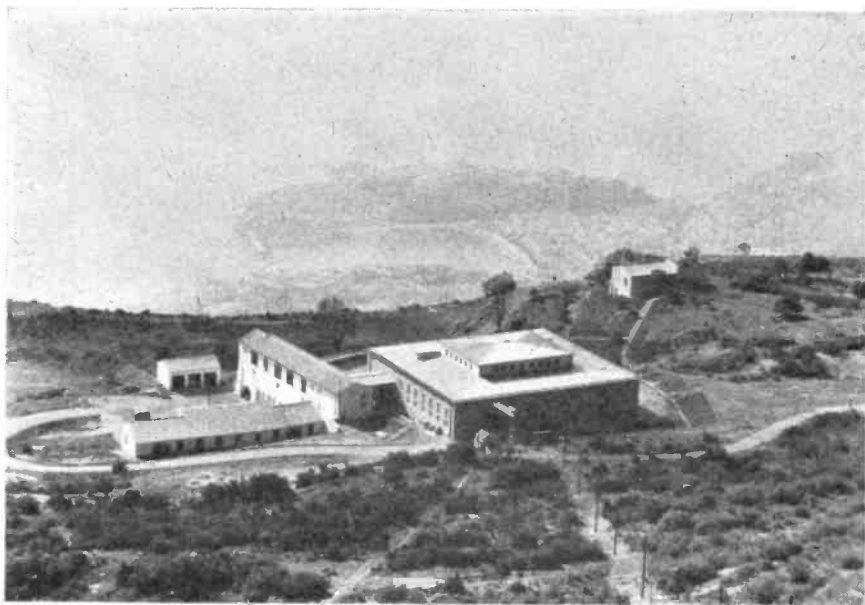


The Administrative Buildings and Studios

paid to the acoustic properties of the studios, of which there are seven, and at the same time the comfort and appearance of each has been kept in mind, so that in spite of exacting technical requirements the studios present an agreeable interior.

The electro-acoustic equipment was supplied by the Societe Francaise Radio Electrique, and the very latest ideas have been incorporated.

An outstanding example is the replacement of the usual programme control equipment cubicle by three small rooms for each programme. These rooms constitute a small control centre, into which all the various programme level controls, playing desks, magnetic tape recorders, etc., are placed. Thus the technician responsible for the programme has everything he needs to hand. He can listen to the programme on a loudspeaker,



The Transmitting Station on Mont Agel

and thus accurately adjust the levels of the various microphones or pick-ups. As these control rooms are completely sound-proof, he is untroubled by any other programmes being performed elsewhere.

The equipment at the transmitting station consists of four transmitters, viz., the 120 kW medium wave transmitter, and the two 25 kW short wave transmitters. The transmitters were supplied by the Compagnie Francaise Thomson-Houston, and work on the push-push principle.

Tremendous difficulties were encountered in building the station because of the mountainous nature of the country, particularly when it came to providing the power supplies and means of connection with the studios. In effect, the underground cables practically traverse the mountain itself. A 30,000 volt cable supplies power from the Houte-Bordina power station situated in Monaco. Both the power and the telephone cables follow the same course and are run through the same underground tunnel. It was feared that there might be considerable induced hum produced by the power cable in the telephone cables, but preliminary tests and subsequent results showed such fears were quite unfounded.

In spite of the difficulties encountered in its design and construction the final appearance of

the transmitting station has proved to be extremely pleasing.

The two short wave transmitters feed aerials designed to cover a maximum distance of 3000 kilometres. They consist of groups of horizontal and verticle dipoles, and a great number of short wave listener reports have confirmed that this radius of audibility is being maintained both by day and night.

The Director of Programmes is required to maintain the station's slogan, viz., "Radio Monte-Carlo, le poste de la qualite." Thus we find such musical features as "Romeo and Juliette" by Berlioz, "Fidelio" by Beethoven, Humperdinck's "Hansel and Gretel," and so on, included in the programmes. The station orchestra has been under the direction of such eminent conductors as Archamband, Toni Aubin, Hans Hang, H. Tornasi, G. Sebastian, etc. In the realm of Dramatic Art, an equally high standard is maintained and variety enthusiasts are also well catered for. Comprehensive News Bulletins are broadcast throughout the day.

To sum up, this station is run on the lines of the great chains of American stations such as A.B.C., etc., as a commercial venture, but at the same time maintaining a high-class, cultured style of programme presentation.

Holiday Letter from 'Centre Tap'

Dear Readers,

Even on holiday radio won't let me alone! It is my own fault really. I went along to see a couple of old timers and we had a long and interesting rag-chew, adjourning from Shack to tea-table, back to the Shack and then to the local. By closing time, reminiscences and yarns stirred such a feeling of nostalgia within us that we were all three wishing the clock back a quarter of a century. Oh, for the good old days when hams were hams, was the theme song.

"Where are the outstanding stations to-day?" was the lament. I think the answer must be that it is so easy to get on the air with a first-class transmission that there can be no outstanding stations.

In the good old days, ninety-five per cent of the time was spent in building or modifying the receiver or the transmitter. Of the remaining spare moments at least half was spent in tuning up, which consisted of probing around for RF with a loop and flashlamp bulb. Meters were mighty expensive things in those days and only a plutocrat would have thought of building one in. One amateur whom I knew by repute long before I actually met him, could actually measure frequencies. Only the old timers will know the respect, almost reverence, in which one so well equipped and highly accomplished was held. On hearing of him or his kind, one would hold one's breath and vaguely wonder if he might be induced to calibrate a cherished slice of non-descript crystal, and if so, what was the right approach. No swoon-girl ever admired her heart-throb crooner with half the deference which we ungrudgingly accorded one who could measure frequencies!

From this the bright-eyed youngsters of to-day must not think that the average ham of yesterday was slow and dull, or even that he found life dull. True it took him months to get his first European contact, but he not only earned it when he did it, for was it not entirely by his own efforts? HE had built the receiver and HE had conjured up the transmitter out of all sorts of unlikely parts, while in quite a number of instances he had to "brew" his own currents to drive it.

To-day, by using commercial and ex-WD gear it is commonplace for a newly licensed amateur to WAC within a day or so of receiving his ticket. He doesn't have to work for it. To the old timer WAC really meant something—a final reward for months, perhaps years, of patient contriving.

The home-brewing of current was an essential for a great many amateurs and it was, perhaps, because they had no nice AC piped right up to the front door that the "Shack" really was a Shack and not a room in the house.

For the home generation of current the Shack had to be as far as possible from human habitation. The Optimists would try treading away on bicycle pedals geared to the generator and even if phone working had been more general they would have had precious little breath for talking. Brass pounding isn't so easy either when you have to work hard with both feet to keep the revs. up, so the junk heaps were eagerly turned over in search of old motor-cycle engines.

Being air-cooled they ran hot and made a lot of noise while the exhaust gases had to be led away somewhere. Despite bitter opposition one would finally get the gear into the house during the winter months. With lengths of piping and yards of tape one tried to let the exhaust escape up the chimney, when both noise and smell were liable to travel down your neighbour's chimney. As his animosity had long since been aroused through a spot of BCI you might, if lucky, get away with nothing worse than a solicitor's letter!

With the simple Det.-LF broadcast receivers of those days and the usual practice of tapping the TX aerial straight off the tank coil, BCI was a certainty.

Although my old Editor 5GQ, I believe, has long since related the story, I remember 5XH telling of the gas engine he used in his garden Shack. It consisted of a shed with a corrugated iron roof upon which his angry neighbours were wont to hurl bottles, bricks and old boots, when he disturbed their broadcast reception. What with the heat and noise of the engine together with a bombardment of missiles bouncing on the roof, operating was a trying business, and to WAC under such conditions with the home-made parts that had to be used was a vastly different matter to doing it on the super streamlined stuff available to the modern amateur for a few pounds.

In those days an ECO would have most certainly meant the QSO would have finished up miles outside the band and one daren't dream of anything other than crystal control. The vibration set up by a petrol engine was always liable to rattle the crystal from between its plates. They were simply sandwiched between two plates of brass and we used to experiment with different thicknesses for the upper piece to get a better weight pressure.

Thinking of crystals reminds me of the subject which I had originally intended to write about, namely, the portable rig I have brought down with me. For economy of space, weight and current consumption it is crystal controlled with a switched bank of crystals mounted in the manner illustrated in the Petersen Radio Co. advertisements appearing in current U.S. radio journals.

(Continued on page 244)

Running an ISWL Chapter

An account of the organisation of a very successful ISWL Chapter—the E. LONDON CHAPTER



By

A. F. BALDWIN

Some of the E. London Group ISWL, Amateur Division, at HQ Station. Back row left to right:—A. F. Baldwin G193, A. T. Cheesley G2533, T. W. Eaton G1687, G. F. Butcher G2056. Front row left to right:—A. C. Seymour G2526, J. Lepper G1388, W. J. Wills G1640, D. Tovey G536

IT had long been decided by the author that the formation of a radio club exclusive to SWL's, both Amateur and Broadcast, would be not only something of an innovation, but a desirable addition to the flora and fauna of local radio circles. Most clubs attempt to cater for all radio interests, and in the writers' personal opinion this cannot successfully be carried out to the satisfaction of all. Ideally, the proposed club would be composed of keen SWL's only, both beginners and old-timers, the only condition of membership being an active interest in the hobby and the club.

With these principles in mind, the ISWL Headquarters was approached during January 1948 for permission to form a Chapter within the Leytonstone area. This was subsequently granted. Local members were circularised, and by the end of February the total strength stood at five, not a very high figure, but at least it was the first step. From the outset it was decided to dispense with rules, regulations, and payments, as accommodation and refreshments were free, the last mentioned item being supplied by the XYL. At first one meeting sufficed for both Amateur and Broadcast listeners, but as time went on it became increasingly clear that the two interests were clashing. It was therefore found necessary to divide the Chapter into two separate formations (1) Amateur Division and (2) Broadcast Division, each with its own organisation, Chairman, and meeting night. Activities at this time for both sections consisted of SLP's and broadcast band surveys.

By May of the same year the membership had grown to ten, and additional activities included morse classes, and the forwarding to "Monitor" of Broadcast reports every month. This, coupled with the construction of a club Rx kept the boys busy, and interests in the group became more apparent. With the author's QTH as HQ Station, and nine other listening posts, E. London was covered with an active network of keen SWL's. This inaugural year was notable for winning the first ISWL DX Contest, the full account of which appeared in the January '49 edition of Short Wave News, and will not therefore be repeated here. Inspired by this unexpected success, the Chapter continued to run smoothly, members supporting the various activities current at the time. New schemes and members have been added slowly since that date.

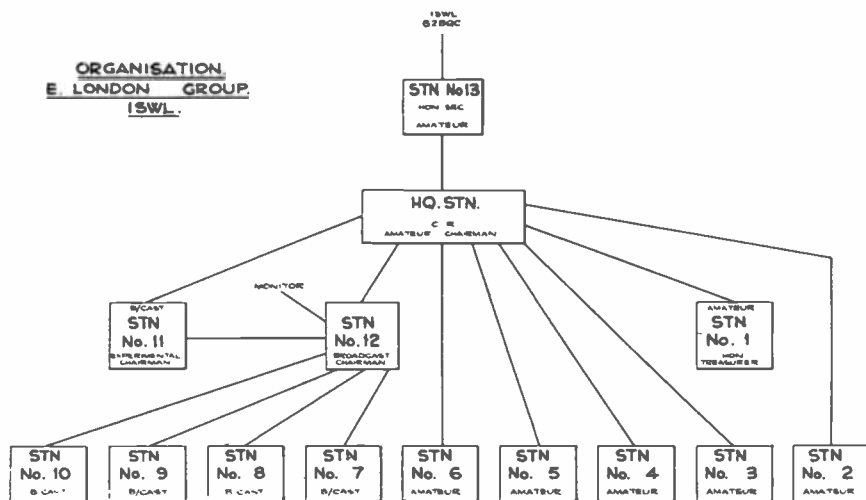
Present Scheme

During the past month a complete re-organisation has been undertaken, necessitated by the winning of the second ISWL Contest, increased support, and other ISWL undertakings. The title of the Chapter has been changed to "E. London Group ISWL," for it was found that the old name was a misnomer in so far as only two members resided in Leytonstone! The present heading, we feel, is more correct.

Group Divisions

Amateur Division

This division of the Group meets fortnightly on Wednesday evenings. Activities include (1) SLP's on the various amateur bands, both CW



and phone (2) preparation and issue of up-to-date prefix lists (3) issue of "OP AIDS"—a small folder containing current information of prefix locations and alterations, active DX, Zonal boundaries and general information calculated to assist an active operator (4) the monthly collating and forwarding to G2BQC, of Amateur band news and calls heard (5) ten minutes lectures on operating technique both CW and phone, QSL'ing, compiling of good period reports and other topics of interest to active ops. Last but not least, the keeping of a graph, showing number of countries and zones logged during the year. From the last mentioned item, much information, statistics, etc. will be extracted at the end of the year, and the results of this exhaustive survey will be forwarded to HQ for possible publication, thus placing valuable data in the hands of all ISWL Chapters.

Broadcasting Division

Meetings are held fortnightly on Monday evenings. The following activities are current (a) Broadcast band surveys. These are set twice monthly, and most of the spectrum is covered. The current survey is from 6 to 7 Mcs., target stations being Kol Yisrael on 6835 kcs., and an unknown South American on 6960 kcs., approx. (b) upkeep of the official ISWL Broadcast stations index file, with information gathered from results of the surveys and other official worldwide services, (c) the monthly forwarding to "Monitor" of selected items from members' logs for publication (d) the issue of an "OP AID" similar to that used by the Amateur section, and containing information on broadcasts in English, schedules, frequencies, DX notes, etc.,

and (e) the discussions and dissemination of broadcast news.

Group Sections

These sections are applicable to both the above divisions, the members being both Amateur and Broadcast enthusiasts.

Experimental Section

The work of this section is co-ordinated by its own chairman, various experimental projects being carried out simultaneously. Currently there are four members collaborating on indoor antenna design, a subject of much importance to our well-being in this area. Meetings are held fortnightly on Wednesday evenings, when results are discussed and various antennas tried out using oscillators and actual stations against an Rx equipped with an "S" meter. In conjunction with this a further two members are busy in the Group workshop working on a cheap, simple, wide-band RF amplifier, using various valves and circuits. It is hoped that when these two parallel experiments are successfully concluded, E. London members will benefit by several "S" points! Already completed and on record are a preselector, Clapp oscillator, six positional audio filter, a switchable capacity coupled antenna control panel, complete with coloured indicator lights, an IF regeneration circuit, and a noise limiter stage. A special file of these circuits and results is kept at Group HQ for the use of members.

CW Section

This section also meets fortnightly on Thursday evenings, when Morse classes are held, and talks

(Continued on page 244)



AROUND THE SHACKS

No. 32

C. J. GODDARD, ISWL G2227

THE photo shows the "shack" of G2227 (BRS-18017) of Coventry. John has been a Short Wave enthusiast since 1944, the main interest then being on the Broadcast Bands. When Amateur licences were restored in 1946 attention was turned to the "Ham Bands" and these have remained the prime interest on the Short Waves ever since. 7 Mcs. was an old favourite until 2227 was attracted by DX, and made a "move" to 14 Mcs. early in 1948. At this time he decided to overhaul his Decca 5 valve Rx. (seen in photo) and this has since become the main receiver. During the war years, the set in question travelled all over England and Wales with an RAF unit, and did a lot of "work."

The gear seen in the illustration shows the "Decca Transuperhet" in the foreground, which has either 'phones or loudspeaker output; the headphones being a pair of 2000Ω, which originally belonged to an old 1-v-1, the speaker being a Celestion 6 inch. The controls, which include slow motion drive, are on the front panel, "set in," which gives the set a pleasing appearance. Frequency ranges covered are 25.7 Mcs., 7.5 —

3 Mcs., and 1,600-500 kcs. The Decca gives an excellent performance on 20 metres.

The Rx below that is an old battery 2 valve set, and is a standby when power cuts are imminent. It is also useful for field days, and DF work.

Above the receivers can be seen the Great Circle map, on the left, and an Ordnance survey map of the surrounding district. On the writing table is a book rack, which houses call-book, atlas, and log books. A large book-case on the opposite wall takes care of a technical library and a large stock of radio magazines, including *Short Wave News*, *R.S.G.B. Bulletin*, *QST* and *Radio Constructor*. The cup which is seen in the window is the "G2YS Trophy" for receiving which the operator holds for the current year.

The present aerial system employs a 33 ft. long wire, running NE-SW, end on to PY. The writer has just reached his century on 20 M 'phone and CW, and has 30 zones "marked off."

John hopes to have his "ticket" some day, and says it will be good to work some of the DX that he hears.



International Short Wave League

MONTHLY NOTES

Sponsored by "Short Wave News"

ANNUAL SUBSCRIPTION 1/-

H.Q.: 57 MAIDA VALE, W.9

OBJECTS

To bring together the short wave enthusiasts of the world regardless of race, creed or politics, to their mutual benefit.

To foster and promote international goodwill through the medium of short wave radio interest.

To provide facilities which will enable enthusiasts to carry out their hobby to the greatest advantage to themselves and their fellow enthusiasts.

CHAPTER ACTIVITIES

WITH the coming of shorter evenings our interests turn from outdoor activities to considering the possibilities of social and club arrangements for the coming winter. And those readers who are members of an ISWL Chapter may well wonder what schemes can be put into force to increase the enjoyment possible from their Chapter membership.

Ideally, of course, every Chapter should try to get some club headquarters, where meetings, lectures, social get-togethers, etc., can be held. This is not always possible, particularly where the Chapter membership is small. Accommodation is limited, too, these days, but do not forget, to try the local Youth organisations, who can usually be contacted via the Education Department of the local authority. They can often make a room available or suggest possible accommodation. Failing suitable accommodation, excellent social gatherings can be enjoyed by each member offering to entertain the Chapter in his own home, in rotation. If meetings are held once a month—which seems to be about the most suitable lapse of time—then with ten or twelve members, it is only the task of each member to provide hospitality once a year. Even in these days of food shortages, tea and sandwiches can usually be found, and an enjoyable evening had, chin-wagging and inspecting the shack. The writer has very many pleasant memories indeed of such gatherings, both before and since the war, and infinitely prefers this type of club gathering to the more formal ones held at club HQs. So why not work such a scheme into your Chapter's winter activities? You will be surprised how many people can be got into even the smallest of modern living rooms!

It is a very good plan to get some form of team activity going in a Chapter. It keeps members together, and encourages a healthy competition between the members themselves and between their Chapter and others. In this number we publish an account of the work carried out by the East London Chapter. In spite of this being a small Chapter in numbers, they have got themselves extremely efficiently organised, and this article should inspire other Chapters to start something similar. Their band monitoring

scheme is an excellent idea, and besides producing a really interesting activity, actually produces results of real value, as their "Op Aids" and logs are gladly welcomed by such of our contributors as 2BQC and Monitor, and thus are read with great interest by all our readers. Similar monitoring schemes could well be put into operation by other Chapters, when the results obtained in different parts of the country should make interesting comparison.

The first Chapter to organise a comprehensive monitoring system for the VHF's would certainly reap a rich reward in thanks from the VHF fraternity. There is no need to have a single receiver at an HQ, though this is undoubtedly the ideal. If each member offers to monitor a band for a certain period on a certain night, using his own gear, and the 'watches' are co-ordinated by the Chapter leader, it should be possible to ensure a fairly continuous watch being kept on the particular band that members agree shall be their monitored band.

These ideas are just mentioned as suggestions for Chapter activities. Some of our ISWL members seem to imagine that they should enjoy the fruits of a well-organised club without without making any efforts themselves to help their Chapter. Once a Chapter is formed, it is essential too that fairly frequent social or other more formal gatherings should be held. Otherwise it is obvious that interest will flag and the membership will drop away.

And finally, is it too much to ask that someone in each Chapter should make it his duty to send the Editor a note each month, outlining very briefly what their particular Chapter has been doing? It puts your Chapter on the map; if regular notes appear, it encourages new members to come along, and it makes for rivalry between Chapters. So next month, can we have a good batch of reports in, please? A post-card will do, just to let us—and other ISWL members near you—know that you are active. Tnx. OM's.

A. C. G.

CHAPTER NEWS

Bristol: (Sec.: N. G. Foord, 71 Brynland Avenue, Bristol, 7.)

This Chapter has arranged a number of interesting visits during the past season, including one

to the BBC Transmitter at Clevedon. A further visit is to be made to the GPO radio station at Portishead on September 17th. Attendance at some of these visits has not been as good as it might be, so come on, chaps, you have a most energetic Secretary, and your club membership officially stands at the fine figure of 50. So give him your support this coming winter season. OM's. You have the makings of one of the best Chapters in Bristol.

Apologies for the mistake we printed last month. The Chapter Secretary is, of course, Norman Foord, whilst Dudley West is the Glos. County Rep. Incidentally, Dudley is very anxious that other S.W. England members should contact him, with a view to exchanging ideas for Club meetings and friendly dx competitions, etc., between S.W. England Chapters. His address is, 9 Novers Park Drive, Novers Park, Bristol, 3.

At the first visit to the G.P.O. Radio Station at Portishead, a most enjoyable time was had, the party being shown round by G3BIX, who is one of the staff there. The Engineer-in-Charge is also an amateur—G2SC.

Congratulations are extended to Roy Emery ISWL 2254 on getting his ticket. Roy has been giving some of the members CW practice. Congrats also to Sid Marsh of Bath, who is a member of the Chapter, on getting his ticket. His call is G2CZU.

Derby & District Amateur Radio Society (Hon. Sec.-Treas. :—F. C. Ward, G2CVV, 5 Uplands Av., Littleover, Derby.)

An ISWL Chapter is being formed within this Society and Mr. Shallcross, 161 Victoria Avenue, Borrowash, Derby, has kindly taken on the job of Chapter Secretary. Mr. Morgan is unable to carry on as County Rep., so we ask all ISWL members in the vicinity of Derby to contact Mr. Shallcross and to attend the Derby Society's meetings. A very good programme has been arranged for the winter. The programme for September and October is as follows :—Sept. 14th. Open Evening, members' discussion, A night with the Club transmitter. Commencing 7.30 p.m. in Room 4, 119 Green Lane, Derby. Sept. 20—24. The Soc. will be demonstrating items of home-constructed apparatus on a Stand in the Model Engineering Exhibition to be held in the Queen's Hall, London Road, Derby. Sept. 28. Lecture and Dem. "The Hammond Electronic Organ." Corden St. Mission Hall, Peartree Road, Derby. 7.30. Oct. 12. Television Series—J. Goodwin, Esq., Room 4, 119 Green Lane, Derby, 7.30. Oct. 26. Transformer Winding—W. A. Mead, G5YY. Place and time of meeting to be announced later. Social evenings are held monthly at the Post Office Social Club, 50a Sadler Gate, Derby. Sept. 8 and Oct. 6 at 7.30—M.C., C.M. Swift Esq.

Scottish News. (Sec. and Rep.—J. Thomson, 17 High Street, Inverleithen, Peeblesshire.)

Now that winter is in the offing it is hoped that all members will get together to enable some

activity to be launched. Next month it is hoped to give details of a small competition to be run to see just what sort of a show we lads up here in the Thistle country can do to put a team or two into the next ISWL competition, so get those Rx's fixed up and get ready. Both BC and Ham bands will be catered for, so let's have a good show and see if we can't get a winner when the next ISWL contest is on.

Clifton Amateur Radio Society (S.E. London Chapter) (Sec. : W. A. Martin, 21 Brixton Hill, S.W.2.)

The highlight of the month was the Field Day, won in fine style by Messrs. W. Wooller and R. Poppi. The second team, captained by J. Theobald, G3EMQ, also did very well. The third team, Messrs. J. Lambert, G3FNZ and C. Bell came home without hearing any signals and were third, by accident! The WX behaved very well, and an enjoyable day was had by all.

An ambitious programme is planned for the autumn, and the A.G.M. will be held at the end of the month.

Birmingham : (Sec. : G. Pennington, 114 Birmingham Road, Rowley Regis)

Will new ISWL members please contact the Secretary at the address above, and will old members support the Secretary in arranging a good winter programme. There are enough of you to make a nice little Chapter, so keep up the good work, OM's.

East London : (Sec. : W. G. Wills, 24 Watermead House, Homerton, E.9.)

Attendances at meetings has been pretty fair, considering the counter attractions of the summer months. Fall in good DX conditions, etc., but all members are really keen. The "op aid" is a very popular and helpful gen sheet, so Frank Baldwin is continuing this as a regular feature. He is being ably assisted by Mr. Seymour and Mr. Eaton. The series of lectures by Frank Baldwin is to continue, and more classes have been formed to try and convert some of the 'phone only' boys!

South West Essex Radio Society : (Sec. Leslie C. Barratt, 367 Rush Green Road, Romford.)

The Club has been closed for a few weeks whilst the members are holiday-making, but will reopen on the third Tuesday in September at 8 p.m. The Club has maintained a small but steady membership during the past twelve months, and has built a TX for 80 metres (CW) and a VFO for which we have been fortunate in securing a very nice rack. A small battery Tx for top band (phone) has been built, and some surprisingly good results have been obtained. The less advanced members have not been idle, various two and three valve battery and mains sets having been constructed, which are usually stripped down again after a few weeks and rebuilt to a different circuit. A preselector, Clapp oscillator and volts/ohm meter are among other equipment which has been made.

During the coming session, we hope to construct a modulator for the 80 metre Tx, and build a Tx for top band (phone and CW); also an oscilloscope. The club has been using Frank Pardy's call sign, G3DZJ/A, but hopes to have its own call soon.

The *Radio Constructor* is well read and thumbed in the shack, some of the members still having difficulty in obtaining it. We find the articles suit the majority of the members, being good practical stuff, with something of interest for everybody from beginners to the licensed members. During the last session the less advanced members constructed three of the "My Favourite Receiver," from this magazine.

A welcome will be extended to any new members who care to come along on a Tuesday evening during the coming months.

E. London Group—CR's Report TR's Meeting

A Meeting of TR's was called and held at Group HQ on Tuesday 12-7-49. With myself in the chair the business commenced at 2000 BST. TR's were each given a card containing the QTH's of members living within their areas of jurisdiction, and it was decided that each should endeavour to visit non-Chapter members' shacks with a view to persuade some support.

It was resolved to form TR's into an E. London Group, ISWL Council members having one vote each, with the CR as Chairman, and having the casting vote. This council would act as an advisory body on all matters concerning the E. London Area, it being felt that this was a democratic way of conducting our affairs.

After a most interesting discussion of the ISWL in general, the meeting closed with refreshments, etc. at 2230 hrs. BST.

New Members "Get Together" Meeting

The details of this meeting were laid out in last month's report to HQ. Six new members were enrolled on the Group books, but to date only two have continued to support us!!! Altogether I must report that it has been most disappointing. I therefore ask HQ to print in the ISWL notes the following notice, please:—

E. London Group ISWL

Will E. London members not active in the above Chapter kindly contact the CR:—A. F. Baldwin, 28 Wallwood Road, Leytonstone, London, E.11, either by postcard or phone, LEY 6594.

The present E. London TR's are as follows:—

			Appointed
S. Woodford, E.18			by
J. Smith, G2357 ...	...	...	HQ
Forest Gate, E.7			
P. W. Smith, G2021 ...	...	...	CR

Homerton, E.9			
W. J. Wills, G1640 ...	...	...	CR
Leytonstone, E.11			
T. W. Eaton, G1687 ...	...	...	CR
Leytonstone and Walthamstow			
A. C. V. Seymour, G2526 ...	...	...	CR
Plaistow, E.13			
A. D. Horsell, G1686 ...	...	...	CR
Highbams Park, E.4			
G. F. C. Butcher, G2056 ...	...	...	CR

GENERAL NEWS

John Whitehead, G1323, 6 Abbots Tilt, Hersham, Walton-on-Thames, Surrey, writes:—"Many thanks for the prominence you gave my letter on QRP RX Section in the July SWN. You have assisted the proposed News Sheet to a bumper send-off! I have to-day had the pleasure of posting to Alec Jotcham 14 new applications for membership of his section, and his enthusiastic reaction towards the News Sheet is most gratifying

"One of these new section members, J. H. Carter (ISWL G.1716), has even offered to make us a shield in oak (10 ins. x 8 ins.) suitably inscribed and mounted on two tier base, with space for inscription of winners' names, to be competed for annually for the best development (of assistance to QRP receivers) by a member during the year. I am hoping to get out No. 1 of the News Sheet next month, and if the chaps continue to rally round as they have done so far, we shall be well away."

Jolly good work, John, and here's to more support for your section. The Challenge Shield is an idea we might develop in other ISWL activities, too.

New Chapter Proposed :

A. R. T. Williamson, ISWL/GM766, 14 Coronation Road, New Stevenston, Motherwell, Lanarkshire, is to be congratulated on enrolling five new members. Both he and they are members of the Wishaw and District Radio Club. With two further ISWL members of this club, they are starting an ISWL Chapter within the club. Good work, OM's. Would other ISWL members in the area contact Williamson at an early date please?

Change of Address : Evert Kaleveld, Veron's Holiday Bureau Manager, has changed his address. New QTH is: E. Kaleveld, PAØXE, Class de Vrieselaan, 153, A. Rotterdam, Netherlands.

Evert has been able to fix up several ISWL members with holidays through the ISWL Exchange Holiday Scheme this year. He is able to give SWN and RC readers details of German valves and radio gear, if they will communicate with him direct at his new QTH.

QSL BUREAU NEWS

Just to remind readers of the QSL Bureau arrangements, here is a brief summary of the procedure, further details of which can be obtained from the ISWL leaflets.

The Bureau caters for both Amateur and Broadcasting stations. It is the only one in the world to cater for the Broadcast listener. Any member may avail himself of its services. Incoming cards are handled free. All you have to do is to keep a supply of SAE's, sufficient in size to accommodate the average size QSL at the Bureau. For outgoing cards, a charge of 2/6 per year is made to cover postage charges. Address all letters re QSL Bureau affairs to:—ISWL QSL Bureau (Broadcast or Amateur Section) as the case may be:—57, Maida Vale, Paddington, London, W.9.

As an indication that good cards are coming in through the Bureau, the following have been handled recently:—FQ8SN, JA2AC, W6UZB/MM, CR7AH, ST2AM, ZB1KQ, CT1UF, VP6SB, ZB1AR, CT1QM, HA5BD, VE2FT, EA5BC, TF3AB, EA2BL, ZL4HP, YK1AB, LU5GA, PY1ACY, VS6AE, LU5EZ, 4X4AD, KG6DI, and EA3AEB. These were amongst cards received by the Bureau between the 1st and the 8th of August.

Is Your Number Here ?

The following members have cards waiting for them at the QSL Bureau, but no envelopes:—G36, 136, 170, 173, 217, 255, 329, 347, 407, 415, 486, 501, 555, 638, 647, 670, 710, 760, 815, 847, 858, 866, 889, 893, 950, 1009, 1019, 1036, 1079, 1156, 1232, 1296, 1386, 1435, 1450, 1459, 1483, 1504, 1552, 1553, 1556, 1568, 1584, 1585, 1685, 1686, 1724, 1729, 1756, 1854, 1860, 1904, 1984, 2025, 2057, 2105, 2217, 2242, 2290, 2315, 2317, 2345, 2357, 2376, 2385, 2406, 2523, 2568, 2594, 2654, 2692, 2875, 2912, 2966, 3162, 3367, G1-395, 483, 552. GM-766, 786, 1069, 3036.

Will members please try to keep SAE's at the Bureau. They should have the ISWL numbers marked on them in bold print at the top left-hand corner. If you send them to us in batches of three, marked 1, 2, 3 respectively, you will know when you have received your last package, without us having to tell you. All ISWL, QSL cards should bear their ISWL number in fairly large type, as this helps their recipients to return their card to the correct ISWL member.

We also hold cards for the following "unknown" members. This is the sort of thing which happens when cards do not bear their ISWL number clearly:—G-SWL-415, G-SWL 'Arncliffe House,' Clifford Tooke, GPZ-C21, BRS21, 4-384 (?G384) from G3FIC, GPZ-S27, ISWL 009 (Italia) from SM5AGB, G-SWL-01716 from CT1UF, BRS17346, Roy A. Hawley, E. W. Field, W. F. Alldrift of Stafford. Who says stations do not QSL to SWL's? Looks as though some even take the trouble to do so when the SWL does not write his address legibly on his report.

C.T.'s HOLIDAY LETTER

(Continued from page 237)

With this the crystal sockets are wired directly on to a multi-position Yaxley type switch so you can flip through a wide frequency range a la VFO. An eleven positioned switch and eleven crystals occupies only $3\frac{1}{2}$ inch square panel space and takes less than 3 inches in depth. That is, if you use the $\frac{1}{2}$ inch spaced holder size.

It is strange how many G amateurs seem to prefer the $\frac{3}{4}$ inch spacing. A dealer recently told me that $\frac{3}{4}$ inch crystals fetch nearly twice the price of the $\frac{1}{2}$ inch size in the ex-W.D. market. Even those who buy the latter enquire if there are any $\frac{3}{4}$ inch holders in stock so they can re-mount them!

On expressing my surprise I was assured that this was most certainly so, despite the fact that the crystals were made to the same standards and had identical activity figures, etc. Needless to say I jumped at the offer of the $\frac{1}{2}$ inch size at the 50 per cent less rate. They were just what the Doctor ordered and hence the compactness of my eleven channel "VFO."

Still it is queer, if patently true, that amateurs who still use crystals insist on the larger size even at double the price!

Well, it is time to pull the big switch but before going QRT I should add that if any reader, like me, just can't keep away from the hobby even when holiday making, I hope he will find equally enjoyable company handy to his holiday QTH.

Yours fraternally,

"Centre Tap."

RUNNING AN ISWL CHAPTER

(Continued from page 239)

given on Amateur CW technique, abbreviations and the Q Code, etc. A Clapp oscillator is used, feeding into an Rx tuned to the 3.5 Mcs. or 7 Mcs. CW bands, thus simulating actual operating conditions, complete with QRM. Ops. are required to tune in a station calling CQ, zero beat the oscillator, and answer his call. In this manner we hope to put more CW ops into future contests, etc.

It is hoped that the foregoing account of this Group is of interest to others, and that TR's struggling to form Chapters will gain from us some hints on the subject of SWL groups. Our membership, small but keenly active is now 14 in all.

PLEASE MENTION "SWN" WHEN WRITING TO ADVERTISERS

. . . . from our MAILBAG

Dear Sir,

Enclosed is my subscription of 16/- for a further year's supply of "Short Wave News."

I am glad to see that you now have more paper and although I would rather have a bigger SWN I agree that it is much more fair to print more copies until such time as there is sufficient paper to meet all needs.

Good luck to SWN.

73s,

M.J.J.S., Winchester

Dear OM's,

Thank you for reminding me regarding the expiration of my subscription, renewal of which I enclose.

Thanks for the high standard of and interesting articles in the "Short Wave News." It is still my No. 1 magazine of the month.

Thanks,

I am yours, vy 73,

W. J. Gendros, Swansea

Dear OM's,

I have been completely satisfied with progress to date and please continue the good work with the "Radio Constructor" and "Short Wave News." These two Journals are fine work and helped me to obtain a pass in the R.A.E., May 1949, the result of which I received last week.

73,

H. M. Yale, Neasden,

N.W.10

Dear Sirs,

I feel you won't mind a few remarks from a junior reader, so here goes:—

The New Cover. I like it, especially the colour. But, I myself would prefer to have the contents outside. My reason is that sometimes when talking to my pals one of them says that there was a very good article on so-and-so in the *Short Wave News*. Which one? He doesn't know. Never mind—it's no trouble to run through the pile and just scan the covers—but when you've got to open them all and then close them, all sorts of complications arise—not to mention bad language when a cover gets torn in the rush! I also think it would be better to have the photographs inside—gives them some protection from dust and dirty hands.

B.C. Programme Schedules. I think this is a very good idea and extremely useful. I myself have changed from 100 per cent. Ham to 90 per cent. Broadcast and as I don't want these DX stations I would like to know what to expect from some of the stations that can be received at S9. Then I can relax for the rest of the evening—when I've washed up the tea things!

Life Membership. I heartily support Bill Winchester's idea. It would save a lot of paper and probably time and cash.

General. I very much like the Diplomas and I think that "Newcomer's Corner" is marvellous. Before that came along, a very enthusiastic 11-year old SWL would take up a large quantity of my out-of-school time by pestering me with

questions on receivers, transmitters, modulators, workshop practice and hundreds of other things and I think after a short while his opinion of my intellect greatly diminished! He didn't seem to understand that I had been a listener for an even shorter period of time than he! Still, such is life, and to whoever writes that wonderful page, 88's, and thanks for rescuing me and saving my reputation! (The honours go to Bill—2ATV. Ed.)

Also 73 to the rest of all you hardworking gentlemen and I hope you're not too bored with my epistle.

Thank you.

A. P. Bull, G1498.

Reading.

Dear OM,

. . . . Whilst on the subject of membership, I notice in the August edition of the *SWN*, that Bill Winchester has suggested a life membership subscription. Bill just beat me to it and I imagine it will do your hearts good to know that members are prepared to back you for life! I am all for it and would suggest 35/- as being a reasonable sum.

I like the idea of having a different photo on the front cover every month. Should you ever run short of subjects, it might be a good idea to use the "Round the Shacks" photo on the cover with the station description inside. Incidentally this would provide a few more square inches of space inside the mag. as the photo takes up a good part of a page.

Congratulations on passing the 3000 mark in ISWL membership. In conclusion, may I say I am more than satisfied with progress to date, and remain a staunch supporter,

Bill Hamilton (GM871)

New Stevenston,

Motherwell.

Dear Sirs,

These few lines may be interesting news for your magazine and for amateur transmitters and SWL's. I am a keen SWL and have just been allocated the receiving call sign of ZEL-1-A by the Radio Society of S. Rhodesia. The 'ZE' represents a listener in S. Rhodesia, number '1' the Mashonaland area and letter 'A' the personal allocation.

On Wed. 10th Aug. 1949, between 7 p.m. and 7.40 p.m. Rhodesian time, I logged 13 stations on ten metres: G4IN, 3CLR, 2TR, 3RW, 3AWY, 6OU, 2DTQ, 2BXB, 3DHF, 8RO, 6GS, 8TY and F8GM. The Rx is a Hallicrafters Echophone Commercial Model EC-1A, six tubes, three bands AC/DC range 550 kcs.-30 Mcs. The antenna—an Antiference 16 ft. centre fed dipole. So here's hoping to hear more news from G land when the ten-metre band really opens up. So now all you amateurs turn your beams to the south and we'll be listening.

Yours sincerely,

Arthur E. Day,

Salisbury,

S. Rhodesia.

These are in Stock . . .

- The Radio Amateur's Handbook. By A. R. R. L. 1949. 15s. 6d. Postage 1s.
 Radio Valve Data—Compiled by Wireless World. 3s. 6d. Postage 3d.
 Pulses and Transients in Communication Circuits. By Colin Cherry. 32s. Postage 9d.
 Vade Mecum 1948 Edition. By P. H. Brans. 2 vols. 19s. Postage 6d.
 Reference Data for Radio Engineers. By W. L. McPherson. 5s. Postage 5d.
 Television Receiver Construction. 10 Articles from W. W. 2s. 6d. Postage 2d.
 Television and F-M Receiver Servicing. By Milton S. Kiver. 16s. Postage 9d.
 Principles and Practice of Radar. By H. E. Penrose. 42s. Postage 9d.
 Everyman's Wireless Book. By F. J. Camm. 8s. 6d. Postage 6d.
 Introductory Radio—Theory and Servicing. By H. J. Hicks. 19s. 6d. Postage 9d.
 Standard Handbook for Electrical Engineers. Knowlton. 72s. Postage 1s. New 8th Edit.
 Television Receiving Equipment. By W. T. Coeking. 12s. 6d. Postage 5d.
 Radio Engineering. By F. E. Terman. 42s. Postage 9d.
 Radio, Television and Electrical Repairs. R. C. Norris. 10s. 6d. Postage 9d.

We have the finest stock of British and American radio books in the Country. Complete list on application

THE MODERN BOOK CO.

19 - 23 PRAED STREET - LONDON - W.2

TELEVISION

T-H PRODUCTS

present

MODEL E.S.3 TWIN-DECK TELEVISOR for the Home Constructor. Uses VCR97 tube (NOT radar conversion). Send large S.A.E. for illustrated brochure.

T-H PRODUCTS

92 LEATHWAITE ROAD, LONDON
 Phone : BATtersea 4889 S.W.11

TO MEN OF OPPORTUNITY

EARN UP TO £5 A WEEK
 IN YOUR SPARE TIME



SEND for details of our agents appointment scheme under which many are already turning their spare evening hours into cash by selling the New Look Tele-Filter to other Television Owners in their neighbourhood.

Send for your New Look Tele-Filter today and ask for details of our Licensed Agents' Scheme.

NEW LOOK PRODUCTS (ENGRS)
 CRANLEIGH SURREY

ERSIN MULTICORE SOLDER

Whatever your soldering job, you can be certain of freedom from H.R. and dry joints by using Ersin Multicore Solder—the high-speed, precision solder used by the majority of Radio and Television Manufacturers. Contains 3 cores of flux, no extra flux required.

Workshop sizes
4/10.-6/9d. each
& below, Handy
Carton 6d. (suff-
icient for 200
average joints)



MULTICORE SOLDERS LTD.

Mellier House, Albemarle Street, London, W.1
Tel. REGent 1411

1000's and 1000's
of "VERIES" and
SWL/QLS CARDS

have been supplied for Hams in
many Countries by :

G 6 M N

who knows your requirements

Printer of QSL'S
since 1925

Send for Samples to :

G 6 M N

CASTLEMOUNT,
WORKSOP, NOTTS.

The Inexpensive Televisor

*Costs you less than any other
if you buy now*

R1355 RECEIVER as recommended in the "Radio Constructor" for the construction of inexpensive television. Complete with RF unit type 25, 42/6 plus 5/- carriage.

TYPE 6 INDICATOR (new) also specified £3/19/6 plus 15/- carriage in wooden case. 7/6 refund allowed on return of case.

MAINS TRANSFORMER giving 350-0-350, 6.3 and 5v. Post free £1.

E.H.T. TRANSFORMER to give 2,500 volts and two 4 volt Secondaries. Very well insulated. Post free £2/7/6.

E.H.T. RECTIFIER. Post free 8/-.

SMOOTHING CONDENSERS 8 mfd. 450 volts working. Each 1/9.

DATA BOOK giving full modification instructions and parts required for the Inexpensive Televisor. Post free 1/8.

6 VALVE SUPERHET TR1196 can be adapted for Broadcast Receiver. Full of useful components complete with valves, mod. sheet and circuits, etc. Post free 30/-.

INSTRUMENT CO.

244 Harrow Rd. W.2

Telephone :
CUNningham 0508

3/6 VALVES 3/6

Send for our Lists of These
and Other Bargains

CONDENSERS TRANSFORMERS SPEAKERS

Magnifying Lenses 5" from 25/-
Magnavista Lens stocked
(Price List on application)

Manufacturers and
Ex-Government Surpluses

DUKE & CO.

219 ILFORD LANE
ILFORD 0295 ESSEX

MAIL ORDER SPECIALISTS
DISTRIBUTORS OF BERNARDS BOOKS
Trade Enquiries Invited

SMALL ADVERTISEMENTS

Readers' small advertisements will be accepted at 2d. per word, minimum charge 2/-. Trade advertisements will be accepted at 6d. per word, minimum charge 6/-. If a Box Number is required, an additional charge of 1/- 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

FOR SALE: HAMBANDER RECEIVER, WITH MATCHING SPEAKER as NEW. £13. 10. 0. Heckley, 312 Blackhorse Lane, Walthamstow, E.17.

VHF VALVES: CV139 EQUIVALENT EC91. THE EARTHED GRID HF TRIODE, New, Unused, just the tube for 145 Megs. 10/6 post free. C. Luxmore, 14 Lake View, Wingate, Durham.

WANTED: Power Unit, type 234A. State condition, price. **SALE: R.107 perfect, £11. 10. 0.** Hardwick, Providence Cottage, Misterton, Somerset.

MAINS TRANSFORMERS. One of each. All 230V primaries 600-0-600V at 350mA. 10/- 700-350-0-350-700V at 800mA, 6.3V at 10 amp, 6.3V at 10 amp, 6.3V at 10 amp, also 5.0V at 3 amp, 5.0V at 3 amp. £3. 500-0-500V at 120mA, 2.0-2V at 3.5 amp, 2.0-2V at 4.0 amp, 2.0-2V at 4.0 amp, 10V at 1 amp. 10/- Box 1072.

FOUR 125 watt transmitting triodes, Type 211, with Jumbo holders, 12/6 each. Four PT15 transmitting pentodes each 6.3V heaters. A pair in push-pull will give 150 watts. 5/- each. Box 1073.

832 VHF TX valves, New and unused. Any number available. £1 Box 1073.

IKONTA CAMERA. 521/16 3.5 Lens, eight speeds, 1 to 1/3000th sec. 12 exp. on 120 film. Complete with ever-ready leather case, all in good condition. £25. Twelve inch Cathode Ray Tube. VCR131. Green screen. Similar to VCR97, electrically. Complete with rubber mask. £6. C2ATV, 86 Dibdin House, Maidstone, W.9.

EHT UNIT giving 12 kV at 2mA on 7kV at 4mA, using Westinghouse pencil rectifiers (type H196). Similar to "Westehk" unit. Only requires 350-0-350V input from your time base transformer. Fully smoothed. Similar to EHT unit described in July 1949 issue of Radio Constructor. £3.

Bendix Aircraft Corporation Transmitter, type TA12C. Complete with six valves, 6SK7, 6SK7, 6SK7, 807, 807-807. Covers 80 and 40 metre bands, and suitable for 20 and 10 metres when modified. Will give 150W input to antenna on CW. Three separate VFO's combined. Very compact (15x10x10 ins.) and only requires external power supplies and modulator to go on the air. Bargain £5.

AC Battery eliminator giving 150V 120V variable and 80V at 30mA input 230V AC. 12/6. RF24 unit brand new. 7/6.

Back numbers of "Radio Craft" (about 100) all in tip-top condition. Suitable for clubs etc. All at 6d each, or will accept offer for the lot. Box 1074.

KLYSTRON TUBES—one of each. Type 723A, 1200-3750 Mcs. Type WL417A, approx. 10,000 Mcs. New and unused. Data available. Offers. Brand new and unused 800 W transmitting triode by RCA Type Complete with data sheet £3 Official manuals (not copies) of the following equipment available: 1155 RX, £1: 1154 Tx, 10/-; 201-A Rx, 5/-; AR88LF Rx, 10/-; BC-221 Freq. meter, 10/-; BC-733 Rx (RC-103), 10/-; BC-1206 Rx, 2/6. J. B. Nunn, 12 Midland Terrace, London, N.W.2.

TRADE

QSLs and G.P.O. approved log books. Samples free. Atkinson Bros., Printers, Elland, Yorks.

50 VOLT DRY BATTERIES. Ideal for Radios, etc. 36 cells. Price 6/- each including carriage. Gerrard Trading Co., 21 Bateman Street, W.I. Telephone: GERARD 1123.

G6MN for the "best" QSL's and approved log books, send for samples. G6MN, Bridge Street, Workshop, Notts.

DUKE & CO. CLIENTS. Stamps only please when sending for lists of valves, from 3/6, and receivers. 219 Ilford Lane, Ilford, Essex.

INDICATOR UNIT APN4. This American Unit contains Cathode ray tube, type 5CP1, 14 valves 6 SN7, 3 of 6SL7, 6 of 6H6, and 1 of 6SJ7. ONLY 79/6 (curr. etc. 12/6).

RADAR RECEIVER R.3084. An ideal unit for constructing a superhet TV, suggested details being supplied with every set. Contains a 30 Mcs. IF Strip, 2 valves EF 54, 1 of EC 52, 7 of EF 50, 1 of VU 39A, 1 of HVR 2, and 1 of EA 50. Brand New in makers cases. ONLY 75/- (carriage 10/-).

RECEIVER RDF 1. A 1½ metre receiver which can be converted for TV or VHF work. Has variable tuning, 1 valve 5Z4, 1 of EC 52, 5 of SP61, 2 of P61, 3 of EA50, 1 of EB34, and 1 of CV63. ONLY 49/6 (carriage 5/-).

RECEIVER R.1132A. A superb VHF 10 valve Communications Receiver covering 100-124 Mcs. Incorporates large 180 degrees slow motion dial, and 0-5 mA. tuning meter. Valves are 1 each P41, 7475, EB34, EF52, 6J5G, 2 of SP41, and 3 of EF39. Complete with circuit diagram, parts list and calibration chart. Requires normal power supply for 6v. valves. ONLY 79/6 (carriage 10/-).

RECEIVER TYPE 25. The receiver portion of the TR/1196. Covers 4.3-6.7 Mcs., and makes an ideal basis for an all-wave receiver, as per "Practical Wireless" August issue. Complete with valves types EF36 (2), EF39 (2), EK32 and EBC33. ONLY 25/- (carriage 2/6).

INSULATION TESTERS. Ex-R.A.F. testers by "Record," giving readings up to 20 megas. at 500v. pressure. Brand New. ONLY £8. 10. 0.

ARE YOU CONSIDERING BUILDING A TELEVISOR? If so, why not send for our 26 page publication showing how to do so from Ex. Govt. Radar Gear. The price is only 7/6, and this will be refunded if the two main Radar Items are purchased within the ensuing 14 days. A complete itemised price list is supplied with each copy, or on request. Remember, by using Radar Gear you use a Precision Factory Made Vision Strip built regardless of cost to give maximum sensitivity.

S.A.E. for lists please. C.W.O.

U.E.I. CORP.

The Radio Corner, 138 Gray's Inn Road, London, W.C.1
(Phone: TERminus 7937)

No Shop keeps all you want—

we keep more than most.

That's why people say—

"You'll probably get it at

SMITH'S

of Edgware Road"

Pay us a visit and see for yourself—

H. L. SMITH & Co., Ltd.

287-9 EDGWARE ROAD :: LONDON, W.2

Near Edgware Road Met. and Bakerloo

Phone Pad 5891 :: Hours 9-6 (Thurs. 1 o/c)

Henry's

Radio Component Specialists

We have the most comprehensive range of Radio Components of every nature

Our reputation is your guarantee

If unable to call, please send stamp for current price list

5 HARROW ROAD, W.2

PADDington 1008/9

(Opposite Edgware Road Tube)

GARLAND RADIO

AGAIN AVAILABLE, 200 uA 2 inch square meters 2/6 (plus 6d. post). 150 uA 2 inch square meters 2/6 (plus 6d. post).

ANOTHER TRANSFORMER BARGAIN. Primary 0-200-230-250v. Secondaries 300-0-300v at 90 mA, 6.3v at 3A, 5v at 2A. 11/6 (plus 1/- post).

INERT CELLS. 1.5v, size $4\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$ ins. 3/- per doz., 21/- per 100.

NIFE CELLS. 7 amp-hour, $5\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$ ins. 2/6 each, 25/- per dozen.

NEW BOXED VALVES. 9001, 9002, 9003, 3A5, 6SS7, 6SG7, 12SG7, 12C8, CV66, 2X2, 5/- each. 6SH7 2/9 each.

SPECIAL ITEM. 6K7G, 6K8G, 6Q7G, 6V6G, 5Z4G, 32/6 per set.

ROTARY CONVERTERS. Input 23/24v DC, output 230v 50cps 75 watts. Brush holders slightly transit damaged, but electrically sound, 15/- each (plus 5/- carr).

MOTOR ALTERNATORS. Input 220v DC, output 80v 2,000cps 500 watts. Enables immediate use of much ex-govt. equipment, £2 (plus 15/- carriage).

Please include carriage or postage in all cases. Send 2½d. stamp for complete list.

4 DEPTFORD BRIDGE, LONDON, S.E.8
Phone: TIDeway 3965

for S.W. broadcast fans . . .

"The World Radio Handbook for Listeners"

This 100 page handbook was fully reviewed in these pages last September. It is a reference book published in several languages giving the most extensive information on SW broadcast stations available in this country. Every advanced SW BC listener should have a copy of this very well produced and illustrated Handbook. We are agents for the English edition, which we can supply at 6/9 post paid.

"These You Can Hear"

This is an excellent little publication for the newcomer to SW listening. It contains useful information on the best times to listen, the division of the SW spectrum, tuning procedure, etc., together with descriptions of many of the world's most famous broadcast stations, each description being well illustrated. It is well calculated to fire the imagination of the new SW BC listener. Get one for yourself or that friend who with a little further persuasion would come into the fraternity of SWL's. Price per copy, post paid, 2/3.

Both the above obtainable from —

The Amalgamated Short Wave Press
57 Maida Vale, London, W.9 LTD.

METAL WORK

with a Difference !

If you want a well-made, attractive and robust cabinet for that receiver or transmitter; if you need a chassis for a modulator, amplifier or converter; in fact, if you need any metalwork at all for your ham requirements

YOU CAN DO NO BETTER THAN TO WRITE US FOR AN ESTIMATE

All metal work "made to measure"

For full details and address of nearest agent, contact—

L. J. PHILPOTT (G4BI)

(E. J. PHILPOTT)

Chapman St., Loughborough Tel. 2864

Largest stocks,
best selection,

CLYDESDALE

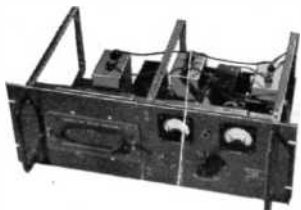
and Bargains in Ex-Services Radio and Electronic Equipment

New, Unused Rack mtg.
R1481 V.H.F. R/T RECEIVER UNIT
Frequency 65-86 Mcs.
A 10 valve superhet, with 4/VR53
(EF39), VR54 (EF34), VR57 (EK32),
2/VR65 (SP62), VR65 (P61), VR67
(6J5C) plus, stabilizer VS70 (7475),
"S" meter, screened B.F. section,
B.F.O., etc., etc., in enclosed chassis,
size 19x10½x11 ins. finish dark
grey. Circuit supplied.

CLYDESDALE'S PRICE ONLY

£4 19s. 6d.

Carriage Paid Each
Also a few R1132 Recvrs. (freq.
100-124 Mcs.) finish light grey.
Dimensions, etc. as R1481, available
at the same price.



Special Offer Receiver and Power Unit

CLYDESDALE'S PRICE ONLY

£4 10s. 0d.

Carriage Paid Each

£8 19s. 6d.

Carriage Paid Both units

● Special Bargain List ●

Prices slashed to clear stocks.

- Radar repeater Amp. AN/APA-1,
now only 49/6.
- Master Oscillator type M1-19467-A
now only 79/6.
- Crystal Multiplier type M1-19468
now only 39/6.
- Mobile U.H.F. Receiver R28/ARCS
now only 37/6.

All New in sealed maker's packing.

- C.R. Indicator Unit A.S.B. series
now only 49/6.

New but not in maker's packing.

VOLT-OHMMETER, Brand New.
Portable. E336, with sling. Scale
0-5,000 ohms, 0-60mA, 0-1.5V, 0-3V.
Range 0-500 ohms, 0-5,000 ohms,
6mA, 60mA, 1.5V. In black plastic
case, size 3½x3½x2½ ins.
Instructions on back.

CLYDESDALE'S PRICE ONLY **16/6** Each Post Paid

E517. Johnson "Jumbo" valve-
holder for CV57, CV174, CV1293,
etc. H.V. porcelain base, with retaining
clamp, 3½x2½x2½ ins.
CLYDESDALE'S PRICE ONLY **2/6** each
25/- per doz. Post Paid

Ex. U.S.A.A.F., Brand New in Maker's
carton.
**SCR-720 BLOWER, WITH SHUNT
MOTOR.**

Made by ILG Electric Ventilating Co/
Western Electric, etc. 27 volts DC 1.5A,
1/50 h.p. 3,000 r.p.m. continuous running.
Multi-bladed fan, outlet dia. 2½ ins.
Size overall 7x5x6 ins. mnt. size 7½x
5x4 ins., with fixing screws, aluminium
construction.

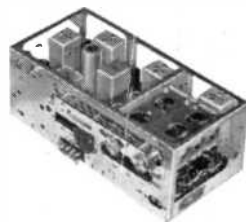
CLYDESDALE'S PRICE ONLY **17/6** Each Post Paid

NEW — UNUSED

Units of the SCR-522 (TR5043) for experiments on 2 metres TV and Radio
Telephone wavebands.

BC-624-A. RECEIVER UNIT CHASSIS

Frequency, 100-156 Mcs. with 11 valves :-3/12SG7's, 12C8, 12J5, 12AH7
12H6. Three/9003, 9002.



Complete chassis (less Xtals) with 3/12 Mcs.
I.F.T.'s. Relay, etc. designed for operation on
predetermined Xtal frequencies, but easily
altered for continuous tuning. Power require-
ments (external) H.T. 300V, D.C. 75mA.
L.T. 24V, D.C. 3A. Dimensions 15½x7½x
6 ins. Circuit supplied.

Plus BC-625-A. TRANSMITTER UNIT
CHASSIS, partly stripped, but containing many
useful parts, R.F. section in good order, no
valves, modulation trans. or Xtal switch.
Dimensions as Receiver.

CLYDESDALE'S PRICE ONLY **37/6** Paid Carriage

Brand New, in Maker's carton
ROTARY TRANSFORMER,
(by HOOVER.)

Type HT31. Input 11.5 volts.
Output 250 volts, at 125mA Dia.—
5½ ins. long x 3 ins. dia. cylindrical.
CLYDESDALE'S PRICE ONLY **25/-** each
Post Paid

Brand New
**HIGH VOLTAGE ROTARY TRANS-
FORMER** (by HOOVER).

Type HT32. Input 11.5 volts D.C.
Output, 490 volts, 65 mA. Dimensions
5½ ins. long x 3 ins. dia. cylindrical.
CLYDESDALE'S PRICE ONLY **25/-** each
Post Paid

Brand New
**RECEIVER AND UNITS OF SCR-269
RADIO COMPASS**
(by BENDIX AVIATION CORP.)

Comprising:
BC-433-G, 15 valve s'het recvr.
Covers Med. & Long Wave, 172-1500
metres, in three switched bands.
Power Input 115V. 400c/s (if con-
verted to 200/250V, 50cs, power
requirements would be 300-350V.
150mA, 6.3V. 3A, 5V. 2A). In metal
case 8½ ins. x 21 ins. x 12 ins.

Plus—
BC-434-A Control Box, with "S"
Meter, etc. in metal case 7½ ins. x
4 ins. x 7½ ins.

Plus 2 Flexible Tuning Drives, Mc-124
Plus Service Instruction Book, for
SCR-269.

Radio Compass Equipment.

Conversion Data Supplied.

CLYDESDALE'S PRICE ONLY

£6 6s. 0d.

Carriage Paid Per Set

Set of "Radio Compass" (SCR-269-G)
Circuits available at 2/6 per set.
Post Paid.

CLYDESDALE SUPPLY

Send now for new Illustrated Lists.

Please print Name and Address.

2 BRIDGE STREET
GLASGOW - C.5

Phone: SOUTH 2706/9

BRANCHES IN SCOTLAND, ENGLAND AND NORTHERN IRELAND

London: Printed in Great Britain by the London Counties Press (H.J.), 161, Tottenham Lane, N.8,
for the Proprietors, Amalgamated Short Wave Press Ltd., and published at 57, Maida Vale, Paddington,
London, W.9.—September, 1949.