

REGENTONE A.C.-D.C. TRANSPORTABLE

CIRCUIT.—The aerial input circuit consists of three frame aerial systems, the short wave section being separate to those working on the medium and long bands. The signal from the frame aerial is applied to the grid of V1, a triode hexode frequency changer.

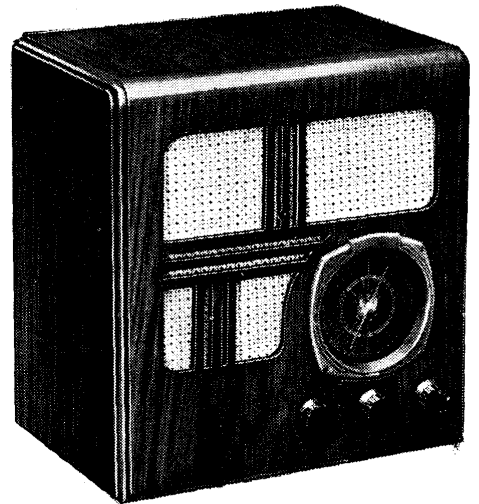
The signal, converted to the I.F., passes via an I.F. transformer tuned to 470 kc. to V2, an H.F. pentode. Another I.F. transformer feeds the strapped diodes of V3, a double diode triode. Coupling to the grid of the triode section is via C36. V3 also provides A.V.C.

V3 is resistance capacity coupled to V4,

an output tetrode. Tone control is obtained by a variable resistance and condenser in series between the anode of V4 and chassis.

Mains equipment consists of a voltage adjustment resistance, a half wave rectifying valve V5, electrolytic smoothing condensers and smoothing choke.

Chassis Removal.—Remove the wood screws securing the back of the cabinet and the three control knobs (grub screws). Then remove the two wood screws securing the chassis to the rear of the sides of the cabinet. The chassis can then be removed to the extent of sundry leads. For complete removal the leads to the



This small-size transportable by Regentone of Worton Rd., Isleworth, Middx., contains an A.C.-D.C. five-valve superhet and sells at £9 17s. 6d.

speaker and frame aerial must be unsoldered. The colour of the leads to the frame aerial from the front of the set to the rear are: red, blue and black.

Special Notes.—The mains adjustment device is located at the rear of the chassis and takes the form of a common socket adapted to be bridged by a metallic contact to one of four sockets marked with the various voltage values.

There are two dial illuminating lights. They fit into screw-in holders, and are rated at 6.2 volts .3 amp.

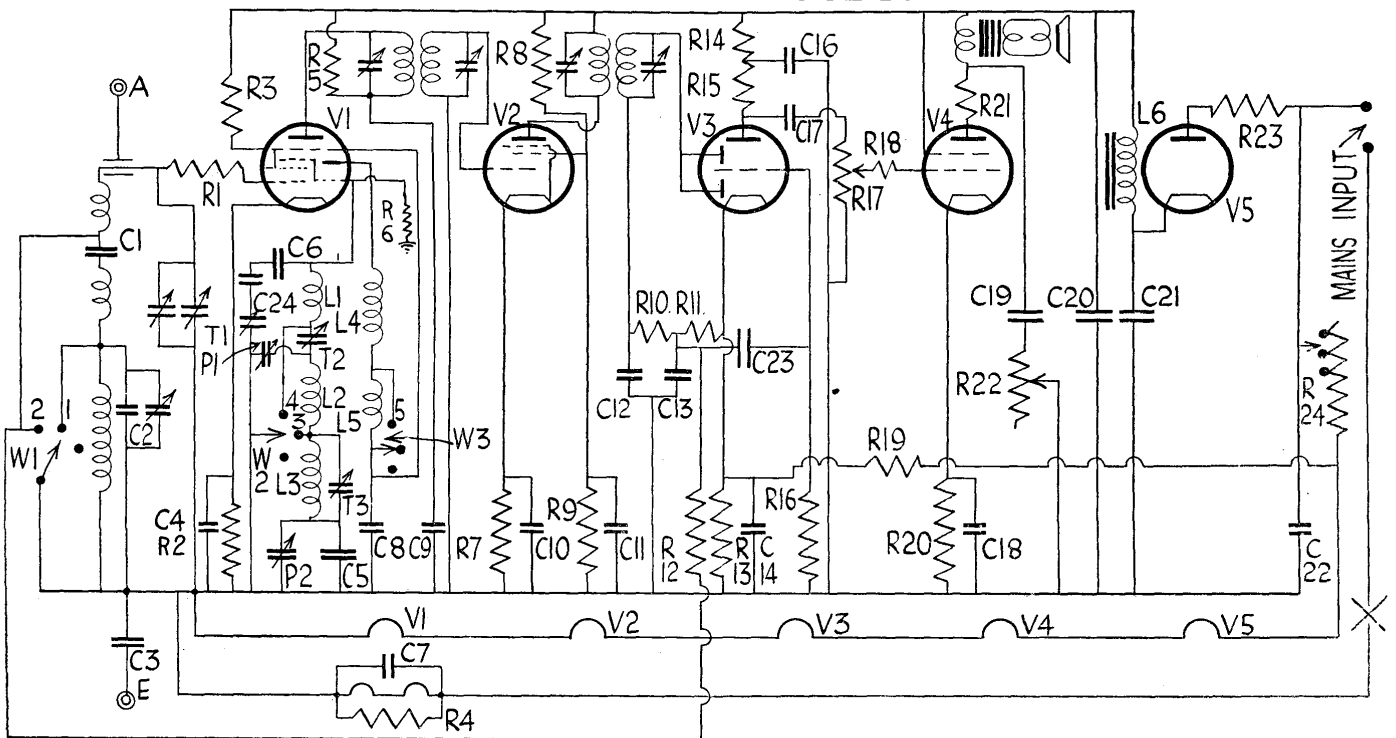
A socket is provided for coupling an external aerial to the receiver, which is very necessary for the short wave band. The tone control is at the rear of the chassis.

CONDENSERS

C.	Purpose.	Mfds.
1	A.V.C. isolator	.1
2	L.W. aerial fixed trimmer	.00004
3	Chassis isolating	.1
4	V1 cathode bias shunt	.1
5	L.W. osc. fixed padder	.00025
6	Oscillator grid	.00004
7	Dial lamp shunt	25
8	V1 screen and osc. anode decoupling	.1
9	V1 anode decoupling	.1
10	V2 cathode bias shunt	.1
11	V2 screen decoupling	.1
12	H.F. bypass	.0001
13	H.F. bypass	.0003
14	V3 cathode bias shunt	.02
15	Mains suppressor	.0001
16	V3 anode decoupling	2
17	L.F. coupling	.01
18	V4 cathode bias shunt	50
19	Tone control	.05
20	H.T. smoothing	24
21	H.T. smoothing	8
22	Mains shunt	.1
23	L.F. coupling	.01
24	Osc. S.W. fixed padder	.002

RESISTANCES

R.	Purpose.	Ohms.
1	V1 series grid	50
2	V1 cathode bias	200
3	V1 screen and osc. anode decoupling	15,000
4	Pilot lights shunt	140
5	V1 anode decoupling	1,000
6	Oscillator grid leak	25,000
7	V2 cathode bias	140
8	V2 screen potr. (part)	20,000
9	V2 screen potr. (part)	20,000
10	Demodulator diode load (part)	50,000
11	Demodulator diode load (part)	500,000
12	V1 A.V.C. decoupling	1 meg.
13	V3 cathode bias	2,000
14	V3 anode decoupling	10,000
15	V3 anode load	100,000
16	V3 grid leak	500,000
17	Volume control	500,000
18	V4 grid stopper	50,000
19	Mains suppressor resistance	1 meg.
20	V4 cathode bias	160
21	V4 anode stabiliser	50
22	Tone control	25,000
23	Rectifier safety resistance	50
24	Mains adjustment resistance	670



Three wavebands are covered by the Regentone Transportable. It incorporates frame aerials and provides for the connection of an external aerial and earth.

Circuit Alignment Notes

I.F. Circuits.—Connect an output meter across the primary of the speaker transformer and a service oscillator between the top of grid cap of V1 and earth. Switch the set to medium waves, the gang condenser to maximum, tone to "high" position, and volume control to maximum.

Tune the oscillator to 470 kc. and adjust first the trimmers of I.F.T.2 and then I.F.T.1 for maximum, reducing the input from the oscillator as the circuits come into line to render the A.V.C. inoperative.

Signal Circuits.—Disconnect the service oscillator and place it near enough to the chassis to obtain an audible signal. If sufficient volume cannot be obtained, connect the oscillator leads to a coil and inductively impress signal on the frame aerial. Do not use too loud a signal.

Short Waves.—Tune set and oscillator to 20 metres (15 mc.) and adjust T1 for maximum response. The short-wave padding is fixed.

Medium Waves.—Tune the set and

oscillator to 250 metres (1,200 kc.) and adjust T2 for maximum.

Tune set and oscillator to 500 metres (600 kc.) and adjust P1 for maximum, simultaneously rocking the gang. Repeat both operations.

Long Waves.—Tune set and oscillator to 1,300 metres (230 kc.) and adjust T3 for maximum.

Tune set and oscillator to 1,900 metres (158 kc.) and adjust P2 for maximum, simultaneously rocking the gang. Repeat both operations.

Replacement Condensers

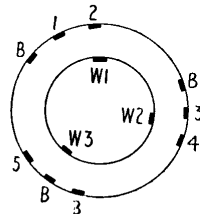
TWO exact service replacement condensers for the Regentone A.C./D.C. Transportable are available from A. H. Hunt, Ltd., of Garratt Lane, Wandsworth, London, S.W.18. For the block containing Cs 16, 20 and 21 there is unit list number 2517 at 7s. 6d. For C18 there is unit 2915 at 1s. 9d.

BATTERY CHARGING

A PRACTICAL manual on the construction, charging, care and maintenance of automobile, motor-cycle, radio, aviation, electric vehicle, medical and other similar batteries "is the comprehensive description given on the title-page of *The Battery Book*, a neat little volume written by Harold H. U. Cross, and available from Odhams Press Book Dept., Arne-street, Long Acre, London, W.C.2, at 5s. 4d. post free.

There is a 25-page chapter on charging, and this ranges from the simple principles to various practical chargers from the largest to the smallest types. However, the book does not attempt to review the apparatus that is available.

(Continued in next column.)



The single switch bank as seen from the front of the set.

Regentone on Test

MODEL A.C.-D.C. Transportable.—For 100-115 and 200-250 volts (40-100 cycles), A.C. or D.C. mains. Price £9 17s. 6d.

DESCRIPTION.—Three-band, four-valve plus rectifier, universal transportable.

FEATURES.—Full-vision scale with coloured wavebands. Frame aerials with short wave separate as to plane and winding. Controls for tuning, wave selection and combined volume and master switch. Tone control at back of cabinet. Sockets for external aerial and earth.

LOADING.—50 watts.

Sensitivity and Selectivity

SHORT WAVES (16-50 metres).—Output very low with self-contained aerial, but with external aerial good performance. Normal gain and selectivity and satisfactory handling.

MEDIUM WAVES (200-550 metres).—With self-contained aerial, excellent gain and selectivity and all main stations easily received. Outside aerial enables weaker transmissions to be obtained without difficulty. Gain and selectivity both representative.

LONG WAVES (900-2,000 metres).—Somewhat similar performance to medium waves with excellent sensitivity on frame aerial. Strong whistle between Luxembourg and Droitwich.

Acoustic Output

Very good for a small transportable receiver. Crisp, clean attack, good middle reproduction, definite low-note radiation. Overall balance pleasing. Very little colouration on speech.

A special chapter on repairing radio and cellulosed case batteries contains some good practical tips and also notes on the diagnosis of faults and treatment of sulphation.

A section on service station repairs also contains a good deal of practical information especially for those handling the larger types of accumulator.

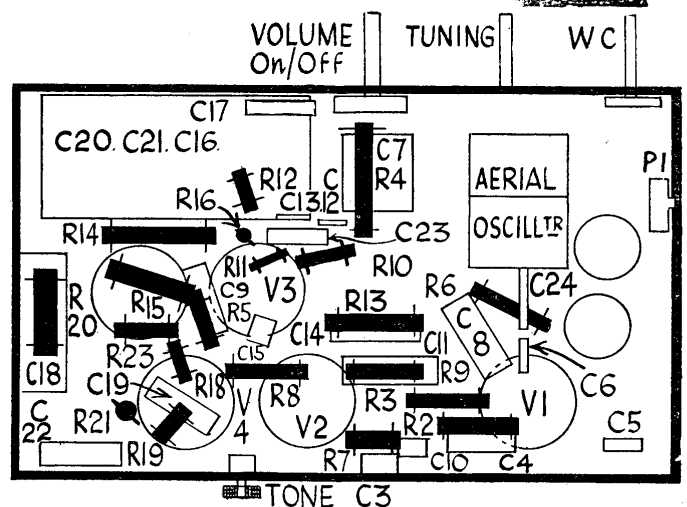
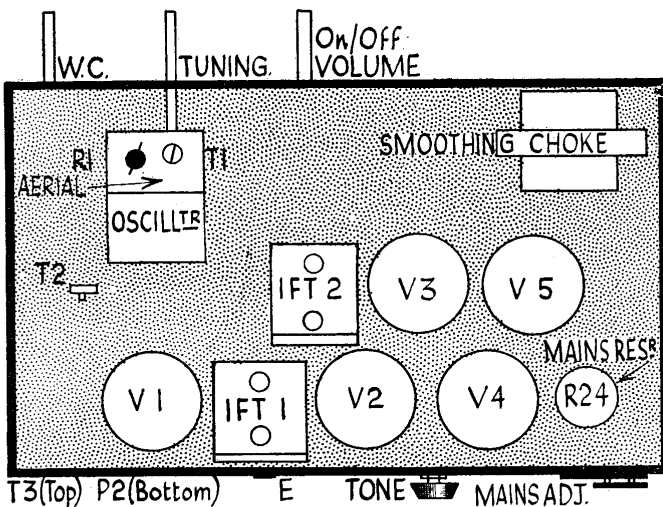
WINDINGS

Winding.	Ohms.	Winding.	Ohms.
L2	3.2	L6	24.5
L3	3.5	I.F.s (each) ..	5.7
L4	2	Speaker trans.	
L5	2.7	prim. ..	296

VALVE READINGS

No Signal. Volume maximum. 230 volt mains A.C.

V.	Type.	Electrode.	Volts.	Ma.
1	Cossor. 202 STH.	Anode	209	1.1
		Screen	80	4.2
		Oscillator anode	80	4.3
2	13 VPA	Anode	210	8
		Screen	90	2
3	202 DDT	Anode	80	1
4	402 OT	Anode	180	37
		Screen	210	7
5	40 SUA	Cathode	230	—



These two diagrams show where the components are situated on the chassis and indicate the positions of the trimmers.