MARCONIPHONE JUBILEE CHASSIS

Circuit.—The combined oscillator first detector, MX40 plain (V1), is preceded by a band-pass aerial coupling with special I.F. suppressor coils.

Bias is partly controlled by A.V.C. and by cathode resistance Coupling to the following valve is by band-pass I.F. transformer (frequency 125 kc.).

The I.F. valve, VMS4 met. (V2), is biassed in the same way as V1, and is followed by another band-pass I.F. transformer.

The second detector and I.F. valve, MHD4 met. (V3), utilises one diode for L.F. purposes and the other for amplified A.V.C. The L.F feed to the triode grid is through R11 to VR2 the volume control, to VR4 the tone control and then through the H.F. stopper R34 to the grid. The cathode resistances are R32 and R24. Coupling to the output valve is by resistance capacity filter.

The output valve, MPT4 (V4), is compensated by a choke and condenser across the primary of the output transformer, and is biassed by a potentiometer in the common H.T.– lead.

Mains equipment consists of : transformer, full-wave indirectly heated MU12 rectifier, with the speaker field in the negative H.T. lead for smoothing.

Special Notes.—To reach the pilot lamp undo perforated plate on the bottom of the cabinet and slacken the holding screw on the lamp bracket.

The noise suppressor circuit is operated by VR1 at the back of the set. By increasing the initial bias on V1 and V2 the virtual delay action of A.V.C. is increased, while the switch (controlled by push-pull action of volume control spindle) is "out" when VR1 is connected into the circuit.

In this position the A.V.C. on V2 changes over to the potential of the signal rectifier.

Quick Tests.—Voltages between the following terminals on speaker panel and chassis (they are all labelled) :—

Red, 240 volts; yellow, V4 anode, 2[illegible] volts.

Voltage between green (+) and grey (–), 115 volts.

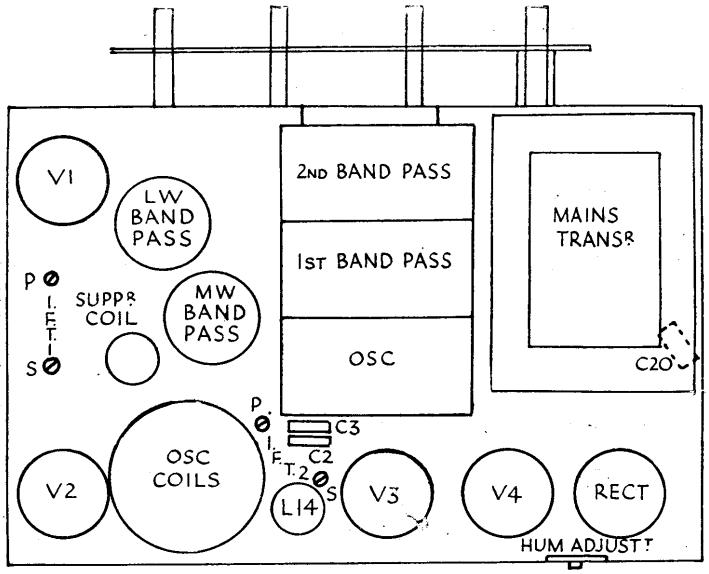
This latter is the voltage drop across the 2,000 ohm speaker field.

Removing Chassis.—Remove the knobs. These have self-threading screws, which are loose when knobs are "off."

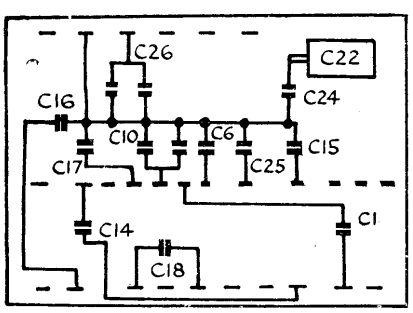
Remove four screws from underneath and free the speaker cable from its spring clips.

General Notes.—The resistance panel is

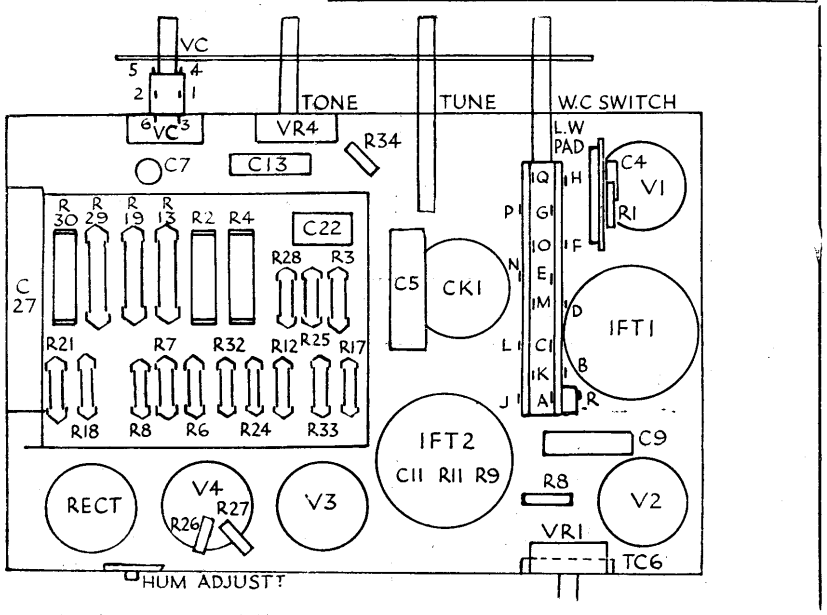
(*Continued on opposite page.*)



As the above diagram shows, the intermediate-frequency transformer trimmers are accessible from the top of the chassis of the Marconiphone Jubilee models.



Above are the connection details of the condenser block which is actually mounted underneath the resistance panel seen in the under-chassis layout given on the right.



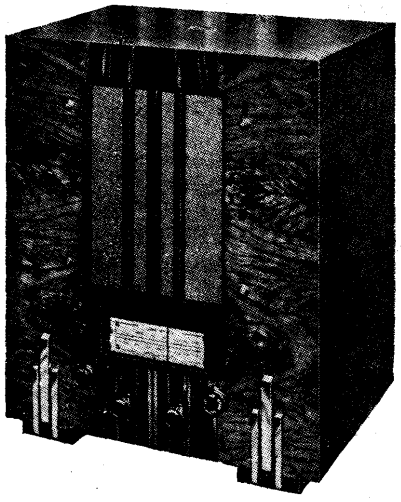
VALVE READINGS

No signal. "Q" knob out (*i.e.*, silent).

Valve.	Type.	Electrode.	Volts.	M.A.
1	MX40 plain(7)	anode ..	220	1.4*
		aux. grid.	80	
		osc. anode	120	1.5 to 2
2	VMS4 met.(5)	anode ..	220	8
		screen ..	75	
3	MHD4 met.(7)	anode ..	95	1.5
4	MPT4 (5) ..	anode ..	215	25
		aux. grid ..	170	4-7

* 3.3 M.A. with increased sensitivity.

MARCONIPHONE 264 CHASSIS (Cont.)



The table model, type 264, of the Marconiphone Jubilee range of receivers. The same chassis is also used in the model 297 console and the model 287 radio-gramophone.

mounted on the condenser block and the condensers can be traced by counting the terminal tags shown on the diagram. The resistances also help as an indication to which condensers they are attached.

The long wave padding condenser for the oscillator (T.C.S.) is mounted on the panel at the side of V1 and is adjusted from the side.

The wave-change switch is of the same type of construction as that of the model 296, and contacts can be cleaned by using a thin nail file.

Condensers included in the block are: C1, C6, C8, C10, C14, C15, C17, C24, C25 and C26. In the diagram C22 is included to act as a point of reference.

Replacing Chassis.—Lay the chassis inside the cabinet, replace holding screws and knobs and clip the speaker cable.

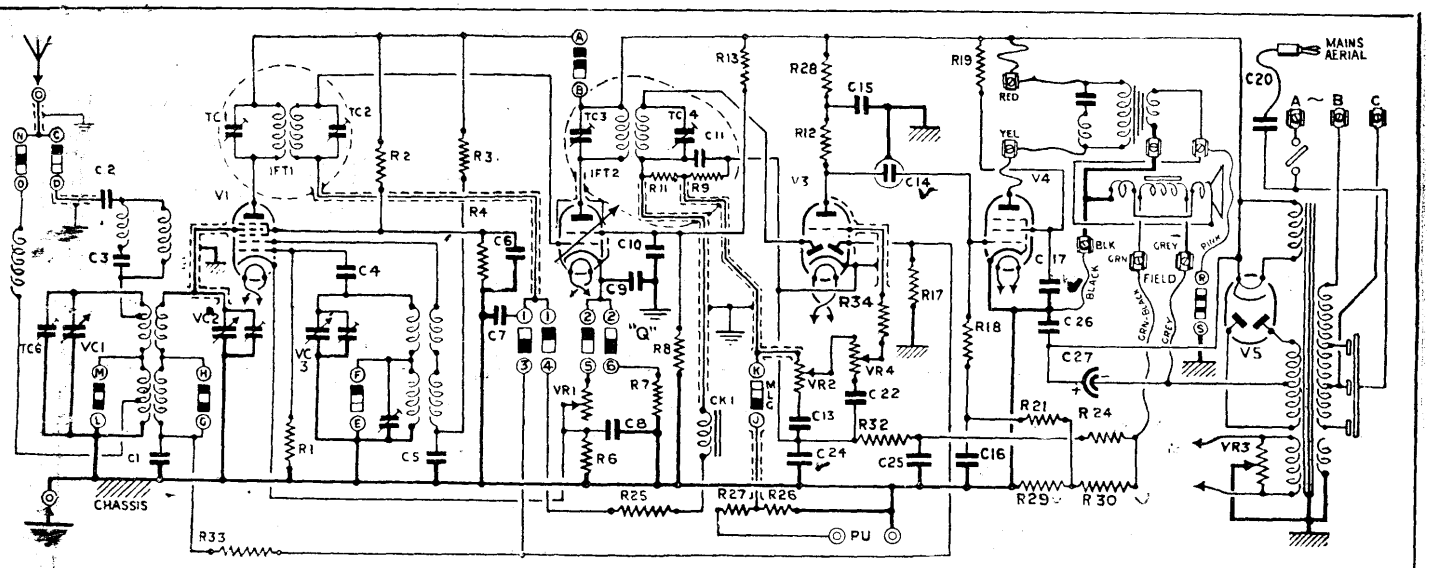
CONDENSERS

C.	Purpose.	Mfd.
1	Decoupling V1 grid *	1
2	Aerial coupling on M.W. ..	.0005
4	V1 osc. grid	.0001
5	V1 osc. anode decoupling ..	.5
6	V1 aux. grid by-pass*	1
7	Decoupling V2 grid from A.V.C.	.035
8	Decoupling V1, V2 bias * ..	.5
9	V2 cathode by-pass	.25
10	V2 screen by-pass*	3
11	H.F. by-pass from diode ..	.0001
13	Low potential end of V.C. ..	.1
14	L.F. coupling V3 to V4* ..	.1
15	Decoupling V3 anode*	1
16	Decoupling V4 grid*	1
17	V4 aux. grid by-pass*	1
20	Mains aerial	.00035
22	Part of tone control circuit ..	.0005
24	Decoupling bias for A.V.C.* ..	1
25	Decoupling bias for A.V.C.* ..	2
26	H.T. smoothing*	4
27	H.T. smoothing	8

* In condenser block. Part No. 19544D.

RESISTANCES

R.	Purpose.	Ohms.
1	V1 osc. grid leak	50,000
2	Top part of V1 aux. grid. ptr. ..	23,000
3	Decoupling V1 osc. anode ..	50,000
4	Lower part of aux. grid ptr. ..	23,000
6	Fixed part of V1 cathode bias ..	500
7	Fixed part of V2 cathode bias ..	100
8	Lower part of V2 screen ptr. ..	23,000
9	Diode load	230,000
11	H.F. stopper from diode ..	50,000
12	V3 anode L.F. coupling ..	50,000
13	Top part of V2 screen ptr. ..	35,000
17	A.V.C. diode load	500,000
18	V4 grid leak	230,000
19	Voltage dropping to V4 aux.grid	10,000
21	Decoupling V4 grid	150,000
24	Part of V3 cathode (A.V.C.) resistance.	23,000
25	Decoupling A.V.C.	50,000
26	Across pick-up	35,000
27	Across pick-up (series with C26)	23,000
28	V3 anode decoupling	23,000
29	Part of bias ptr.	250
30	Part of bias ptr.	750
32	Part of V3 cathode (A.V.C.) resistance.	35,000
33	Decoupling A.V.C. to V1 ..	500,000
34	H.F. stopper V3 grid	230,000



A noise suppressor circuit which, through V.R.1, adjusts the bias on V1 and V2, is a feature of the Jubilee circuit.