

# MARCONIPHONE

## 571, 572, 573

## HMV 456, 457, 458

Five-valve, plus rectifier and cathode-ray tuning indicator, three-waveband superhet for operation from AC or DC mains, 105-225V, 40-100 cycles (40-60 cycles for radiograms). Models 571 and 456 are table types, 572 and 457 radiograms, 573 and 458 automatic radiograms. Marketed by the Gramophone and Marconiphone Companies, Hayes, Middx.

SIGNALS are fed via C1 to the aerial tuning coils L1 (SW), L2 (MW) and L3 (LW) which are tuned

by VC1 section, the triple ganged condenser. Signals are fed direct to the grid of the HF pentode V1, which incorporates tuned anode circuits L4, L5 and L6.

C5 is a blocking condenser which isolates VC2 section of the ganged condenser from the HT circuit and C6 couples the signals to the grid of the heptode frequency changer V2.

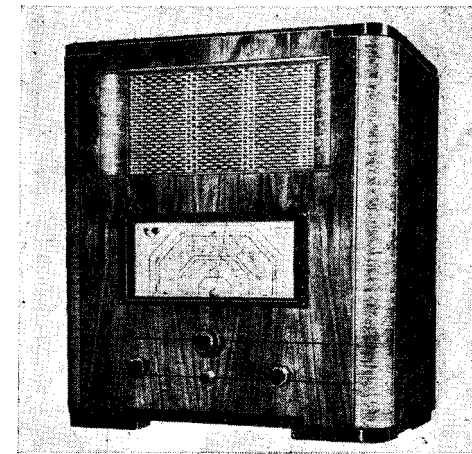
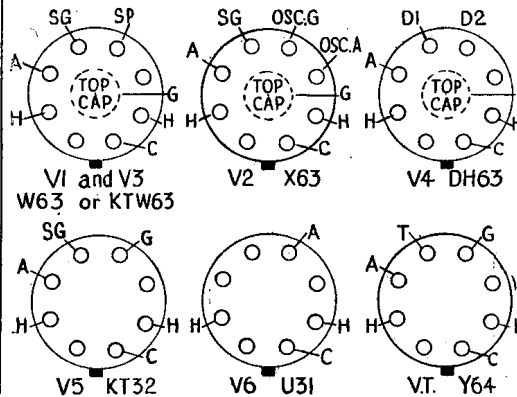
### VALVE READINGS

Taken on 225 v AC mains. No aerial and no signals.

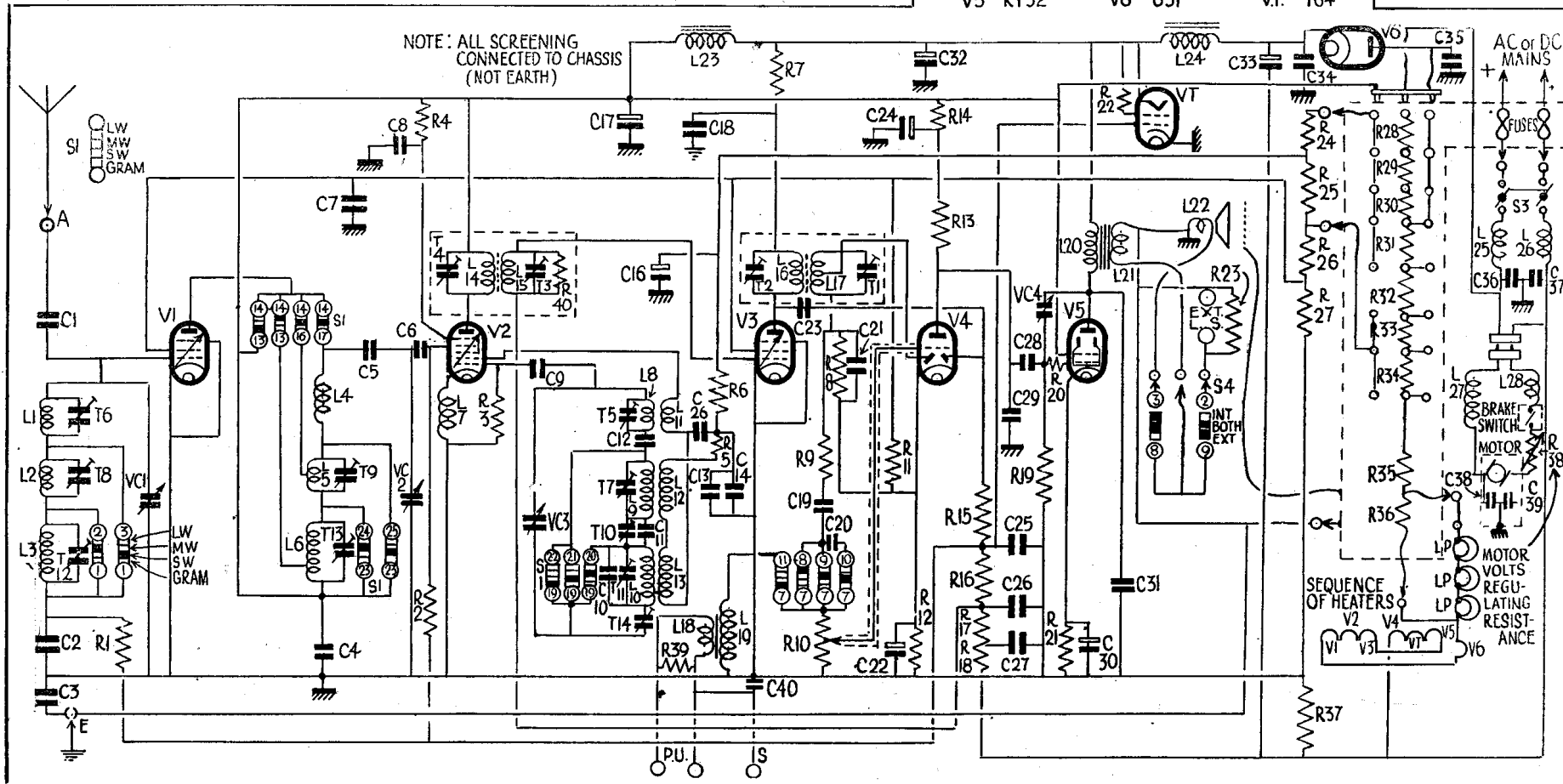
V	Type	Electrode	Volts	Ma
1	KTW63 or W63	Anode	135	3.8
		Screen	75	1
2	X63	Anode	135	2.5
		Osc. Anode	110	3
		Screen	75	2.4
3	KTW63 or W63	Anode	125	4
		Screen	75	1
4	DH63	Anode	75	.7
		Cathode	1.1	—
5	KT32	Anode	140	54
		Screen	135	4
		Cathode	6	—
6	U31	Cathode	157	80
T.1 Y64		Pilot lamps, 6-8 v, .15 amp M.E.S. Fuses, 1.25 amp each.		

L7 is a short-wave frequency stabilising coil in the cathode circuit of V2; the oscillator circuits employ tuned-grid coils L8, L9, L10, tuned by VC3. R3 and C9 are the grid leak and condenser. Anode reaction coils are L11, L12 and L13.

Continued overleaf



This is the Marconiphone 571 version of the six-valve and tuning indicator, three-waveband AC-DC superhet which was also issued in the HMV 456 range.



### RESISTORS

R.	Ohms	R	Ohms
1	75,000	21	100
2	500,000	22	500,000
3	50,000	23	50
4	35,000	24	1,500
5	100	25	1,500
6	1,000	26	3,500
7	5,000	27	15,000
8	500,000	28	64
9	100,000	29	54
10	2 meg.	30	61
11	100,000	31	62
12	1,000	32	40
13	75,000	33	55
14	35,000	34	37
15	750,000	35	17.5
16	750,000	36	68
17	230,000	37	23
18	500,000	38	250-1,500
19	350,000	39	15,000
20	50,000	40	750,000

### CONDENSERS

C	Mfds	C	Mfds
1	7.5 mmfd	21	.0001
2	.05	22	.50
3	.005	23	.75 mmfd
4	.1	24	.1
5	.1	25	.1
6	.35 mmfd	26	.1
7	.1	27	.1
8	.05	28	.035
9	.50 mmfd	29	.0005
10	.15 mmfd	30	.50
11	.350mmfd	31	.0023
12	.0035	32	.32
13	.005	33	.16
14	.4	34	.05
15	.0001	35	.05
16	.4	36	.01
17	.8	37	.01
18	.05	38	.02
19	.005	39	.02
20	.001	40	.005

# HMV 456 : MARCONI 571

Continued

The tuning indicator grid is fed from the DC potentials across R15 and R16.

The automatic volume control diode of V4 is fed from the anode of V3 via C37, the load resistance being R25.

LF signals are resistance-capacity coupled by R23 and C45 to the primary, L26, of the inter-valve transformer. C42 in the anode circuit of V4 is switched into circuit in the contrast position of the variable selectivity control to increase the bass response.

On gramophone the output from the pickup is fed across R16, from where it is taken via R15 and C40 to the volume control.

From the inter-valve transformer secondary L27 the LF signals are fed via grid stoppers R26, R27 to the grids of the output pentodes V5, V6 working in push-pull and the output transformer L28, L29 couples the valves to the low-impedance energised loudspeaker in which L30 is the speech coil, L31 the hum-bucking coil and L32 the field coil. A variable tone control network comprising R31, C47 and VR is connected across L28.

The high-tension circuit follows the usual lines with a full-wave rectifier V7 supplying the HT which is smoothed by L32, C50 and C51.

## GANGING

**IF Circuits.**—A damping circuit comprising a 30,000 ohm resistance in series

## WINDINGS

L	Ohms
1	.1
2	5.9
3	14
4	.1
5	5.5
6	14
7	.1
8	.1
9	5.5
10	4.2
11	1
12	2
13	3
14	6.3
15	6.3
16	6.3
17	6.3
18	172
19	280
20	160
21	.9
22	5
23	550
24	66
25	2.5
26	2.5
27	5
28	.5

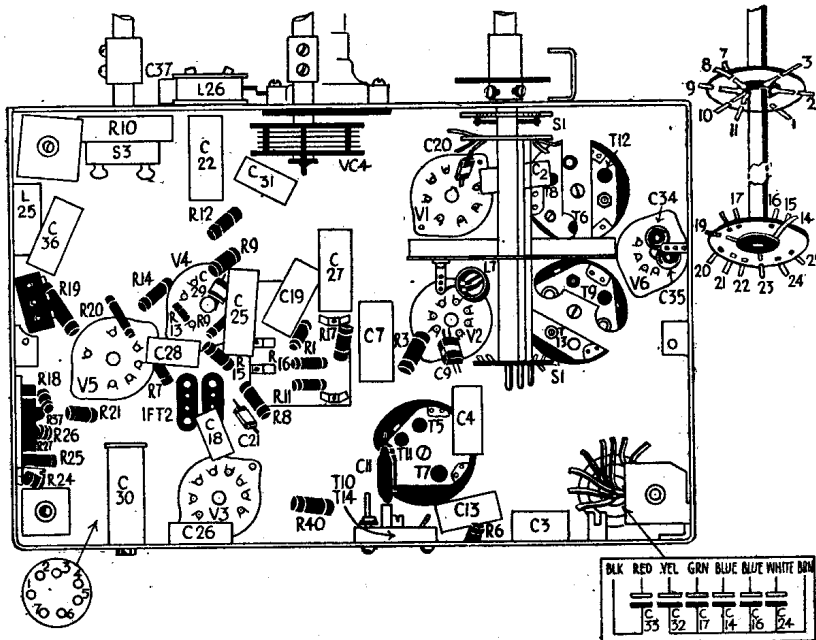
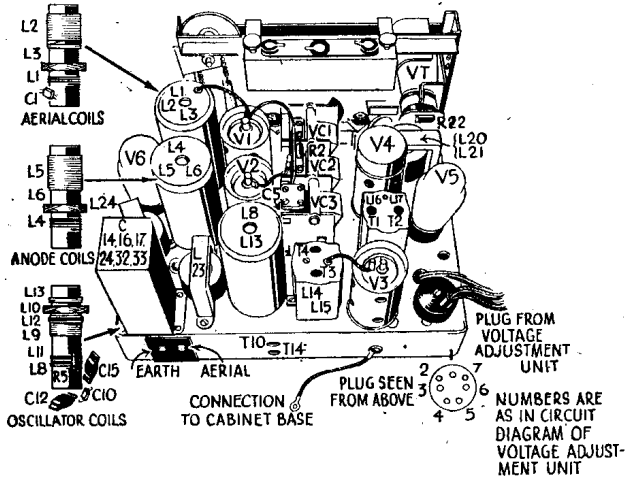
with a .05 mfd condenser must be connected across the winding of an IF transformer when the other winding is being trimmed.

Inject a 465 kc signal into the control grid of V3. Adjust T1, T2, T3 and T4 in that order for maximum output.

**SW Band.**—Check tuning pointer. With gang condenser at full capacity the centre of the pointer should coincide with the top of the medium or long wave lines on the scale.

Switch to SW, volume control at maximum, tone control to low and variable selectivity switch to normal.

Continued on page viii



300 m. Inject a 300 m signal and adjust T8 and T9 for maximum output. Check calibration on 500 m.

**LW Band.**—Switch to LW and tune receiver to 1,500 m. Inject a signal of this wavelength and adjust T10 for maximum output, and then T11.

**Press-button Circuits.**—Connect the aerial and earth to the receiver and tune in the required station on the manual tuner.

Press the button allocated to that station and adjust the oscillator screw above the button so that the index mark coincides with the wavelength required. Adjust carefully until greatest output is obtained, using the tuning indicator as a guide.

Adjust the trimmer below the button to give still greater output and re-adjust oscillator screw to obtain best results.

**Note.**—Any adjustment of the trimmers across the manual tuning circuits will affect all the settings of the press button circuits and these must be re-adjusted after any ganging has been carried out.

# HMV 456 : MARCONI 571

Continued from page vi

Tune receiver to 18 m and inject a signal of this wavelength into the aerial and earth sockets. Adjust T5, T6 and T7 for maximum output.

**MW Band.**—Switch to MW and tune receiver to

viii—RADIO MARKETING SERVICE ENGINEER