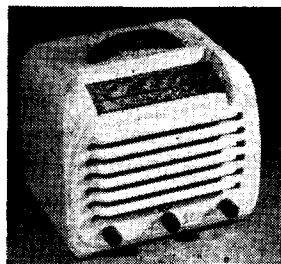
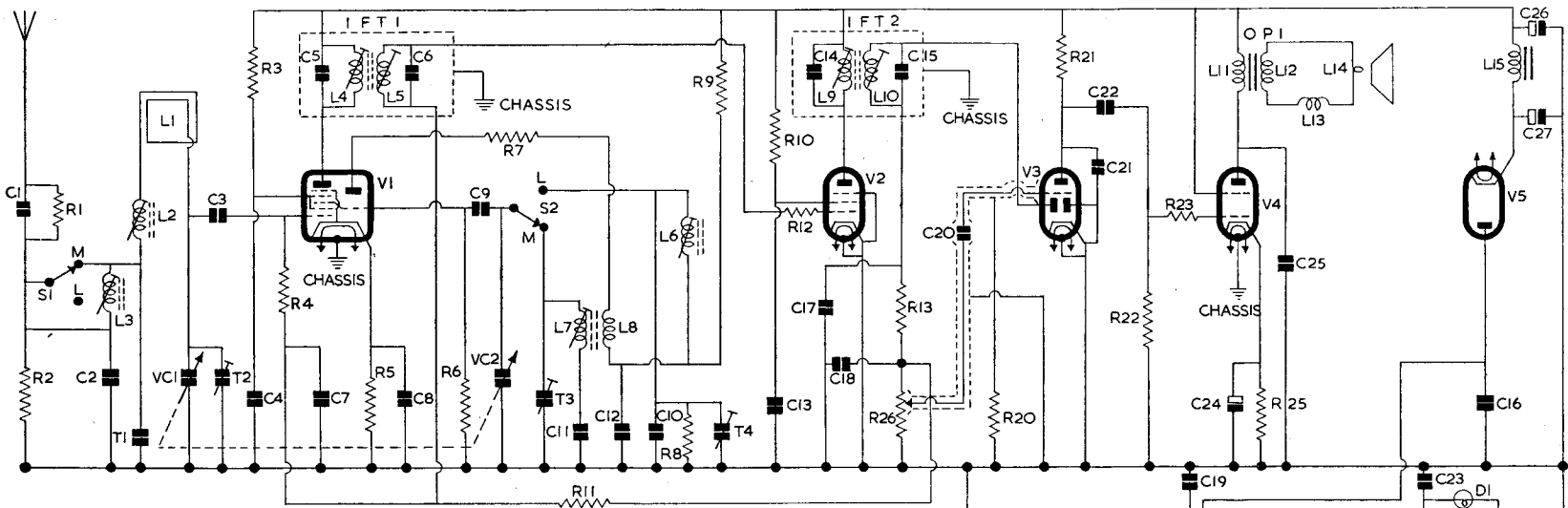
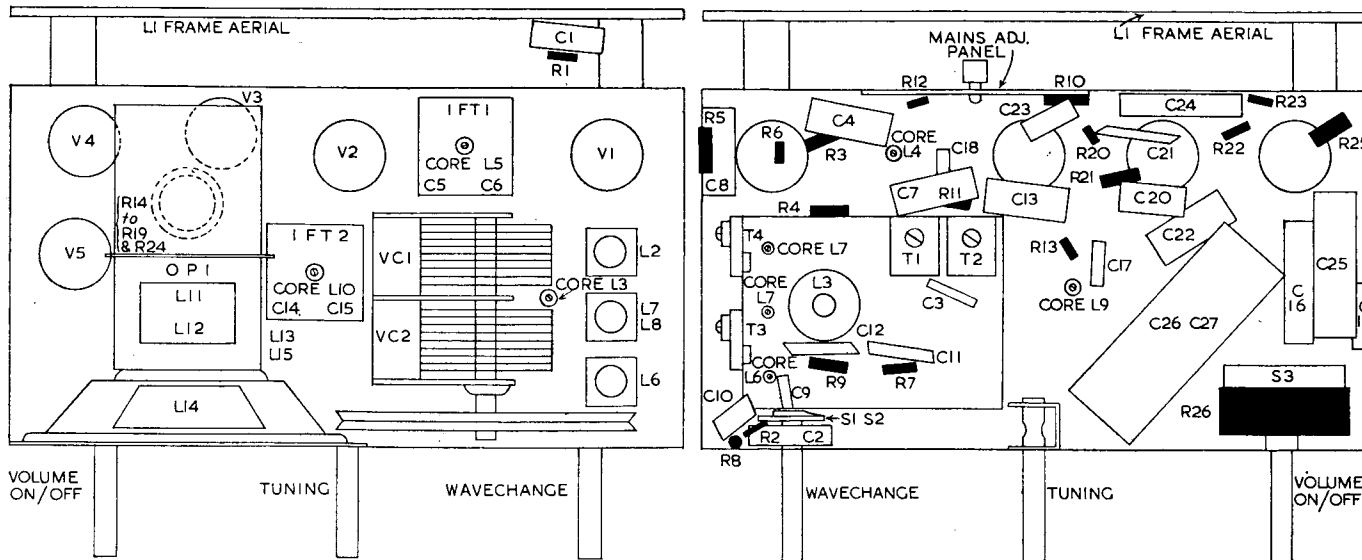


# MARCONI TI5/DA



Five-valve two-waveband portable superhet for operation on 195 to 255 volt AC/DC mains. Housed in moulded plastic cabinet fitted with carrying handle. Manufactured by E.M.I. Sales & Service Ltd., Hayes, Middlesex.



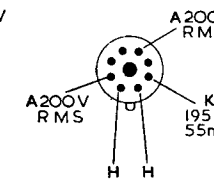
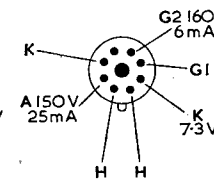
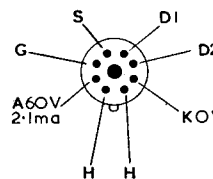
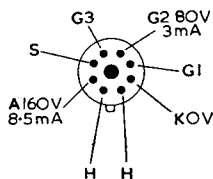
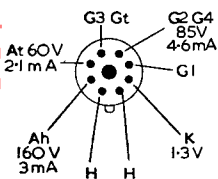
V1 — X145

V2 — W145

V3 — DLI45

V4 — N145

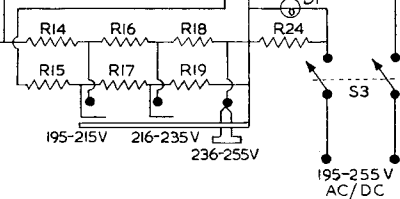
V5 — U145



DIAL LAMPS



5V-15 A



## RESISTORS

R	Ohms	Watt
1	1m	1/8 W
2	22k	1/8 W
3	15k	1/8 W
4	470k	1/8 W
5	150	1/8 W
6	47k	1/8 W
7	3.9k	1/8 W
8	47k	1/8 W
9	22k	1/8 W
10	33k	1/8 W
11	1.5m	1/8 W
12	10k	1/8 W
13	47k	1/8 W
14	650	1/8 W
15	175	1/8 W
16	200	1/8 W
17	120	1/8 W
18	200	1/8 W
19	120	1/8 W
20	50	1/8 W
21	3.3 m	1/8 W
22	47k	1/8 W
23	220k	1/8 W
24	10k	1/8 W
25	270	1/8 W
26	500k	Potentiometer fitted with DPST switch

## CAPACITORS

C	Mfds	Type
1	.001	Tubular 750V
2	.0033	Tubular 750V
3	100pF	Tubular Ceramic
4	.1	Tubular 350V
5	100pF	Silver Mica
6	100pF	Silver Mica
7	.047	Tubular 350V
8	.047	Tubular 350V
9	100pF	Tubular Ceramic
10	82pF	Silver Mica
11	390pF	Silver Mica
12	180pF	Silver Mica
13	.1	Tubular 350V
14	100pF	Silver Mica
15	100pF	Silver Mica
16	.05	Tubular 1,000V
17	100pF	Tubular Ceramic
18	100pF	Tubular Ceramic
19	.0022	Tubular 750V
20	.01	Tubular 750V
21	220pF	Silver Mica
22	.1	Tubular 350V
23	.0022	Tubular 750V
24	20	Electrolytic 12V
25	.02	Tubular 1,000V
26	32	Electrolytic 250V
27	32	Electrolytic 250V

## INDUCTORS

L	Ohms
1	1.25
2	1.75
3	13.5
4	10
5	10
6	6.8
7	4
8	3.5
9	1
10	10
11	300
12	.15
13	.6
14	3.5
15	570

## MARCONI T15/DA—Continued

**Aerial.** An internal frame aerial L1 is fitted to the rear of the receiver chassis. On MW band, L1 with loading coil L2, is tuned by VC1 and trimmed by T2. On LW band a further loading coil L3 is switched in by S1. L1, L2 and L3 are then tuned by VC1 and trimmed by T1.

Signals developed on aerial circuits are fed through C3 to g1 of triode-heptode frequency changer V1. AVC is fed to g1 through R4 and decoupled by C7. Cathode bias is provided by R5 decoupled by C8. Screen g2, g4 voltage is obtained from R3 decoupled by C4.

L4, C5, which form the primary of IFT1, are in the heptode anode circuit of V1.

**Oscillator** is connected in a tuned-grid series-fed HT circuit. L7 (MW) and L6 (LW) are the tuned coils switched by S2 to oscillator tuning capacitor VC2 and, through coupling capacitor C9, to g1 and g3 of V1. T3 (MW) and T4, C10 (LW) are trimmers and C11 (MW) C12 (LW) are padding capacitors. R8 is LW damping resistor.

Leak-condenser bias is provided by R6, C9. Anode reaction voltages are developed across L8 on MW band and capacitively across C12 on LW band. R7 is series limiter resistor and R9 oscillator anode load resistor.

**IF amplifier** operates at 465 kc/s. L5, C6, the secondary of IFT1, feeds signal to g1 of V2, through stopper resistor R12. AVC is applied to g1 through L5, from R11, and is decoupled by C7. No cathode bias is provided for this valve as its cathode is connected to chassis.

Screen (g2) voltage is obtained from R10 and decoupled by C13. Suppressor (g3) is strapped to cathode and connected down to chassis. L9, C14, which form the primary of IFT2, are in the anode circuit.

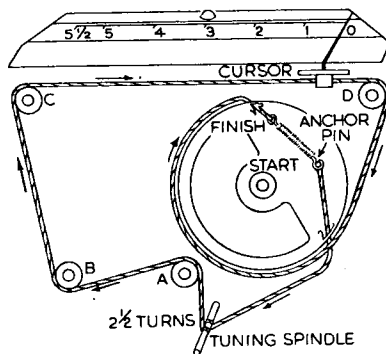
**Signal rectifier.** L10, C15, the secondary of IFT2, feeds signal to one of diodes of V3. R26, the volume control, is the diode load resistor. R13, C17, C18 are an IF filter.

**Automatic volume control** voltages are obtained from the signal rectifier diode—the other diode being strapped to cathode which is at chassis potential. R11 is AVC feed resistor and C7 is decoupling capacitor.

**AF rectifier.** C20 feeds rectified signal appearing across volume control R26 to grid of triode section of V3. R20 is its grid leak and negative bias for grid is developed on C20. Cathode is connected down to chassis. R21 is the anode load resistor and C21 anode RF bypass capacitor.

**Output stage.** C22 feeds signal, through stopper resistor R23, to g1 of V4, the pentode output valve. R22 is its grid resistor. Cathode bias is provided by R25 and decoupled by C24. Screen (g2) voltage is obtained from HT line direct. L11, the primary of OPI, the output matching transformer, is in the anode circuit of V4. C25 provides a fixed degree of tone correction. L12, the secondary of OPI feeds signal to a 4-inch energised loudspeaker L14. L13 is a hum-bucking coil.

**High tension** is provided on AC mains supplies by an indirectly heated half-wave rectifier V5. Its anode voltage is obtained from mains dropper resistor R14 to R19 and R24. L15, the loudspeaker field coil, together with C26 and C27, provide choke-capacity smoothing of the HT supply. C16, C19, C23 are RF filter capacitors.



Heaters of V1-V5 are series-connected and obtain their current through mains dropper resistor R14 to R19 and R24. D1, the dial light, is shunted across R24. Tappings are provided on the dropper resistor to allow connection of 195 to 255 volt mains supplies.

**Removal of chassis.** Remove the card back panel (held in place by four screws). Pull off the three control knobs. Remove the two insulators from the underside of cabinet and unscrew the four chassis bolts. Chassis can be withdrawn by pulling on the two pillars to which the frame aerial is fixed.

**Condenser and drive.** Use only the correct high grade flax fishing line in renewing this drive. Supplies of this cord may be obtained from E.M.I. Sales & Service Ltd., Spare Parts Division, Sheraton Works, Hayes, Middlesex. Approximately 36-in. of cord is used.

Replace chassis in cabinet, tune in a station at about middle of scale and clamp pointer to cord so that it reads the correct wavelength.

### TRIMMING INSTRUCTIONS

Apply signal as stated below	Tune Receiver to	Trim in order stated for Max. Output
1) 465 kc/s to g1 of V1 via .1 mF. Check to see that right hand edge of pointer coincides with "0" on calibration scale. Adjust, if necessary, by slackening screw securing pointer slider to cord	MW Band, gang at min.	Cores of L10, L9, L5, L4
2) 1.563 mc/s to Ae socket via dummy aerial	MW Band, gang to min.	T3
3) 529 kc/s as above ..	Pointer to 1/16 in.	Core L7
4) 1.427 mc/s as above	Pointer to 4 17/32 in.	T2
5) 588 kc/s as above ..	Pointer to 13/16 in.	Core L2. Then repeat (2) (3) (4) (5)
6) 333.3 kc/s as above	LW Band, gang to min.	T4
7) 150 kc/s as above ..	Pointer to 3/16 in.	Core L6
8) 300 kc/s as above ..	Pointer to 4 1/16 in.	T1
9) 162 kc/s as above ..	Pointer to 1/4 in.	Core L3. Then repeat (6) (7) (8) (9)

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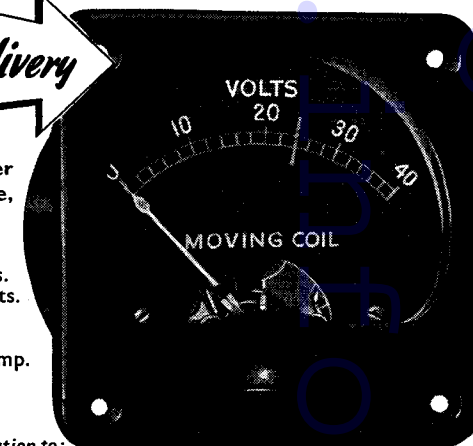
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