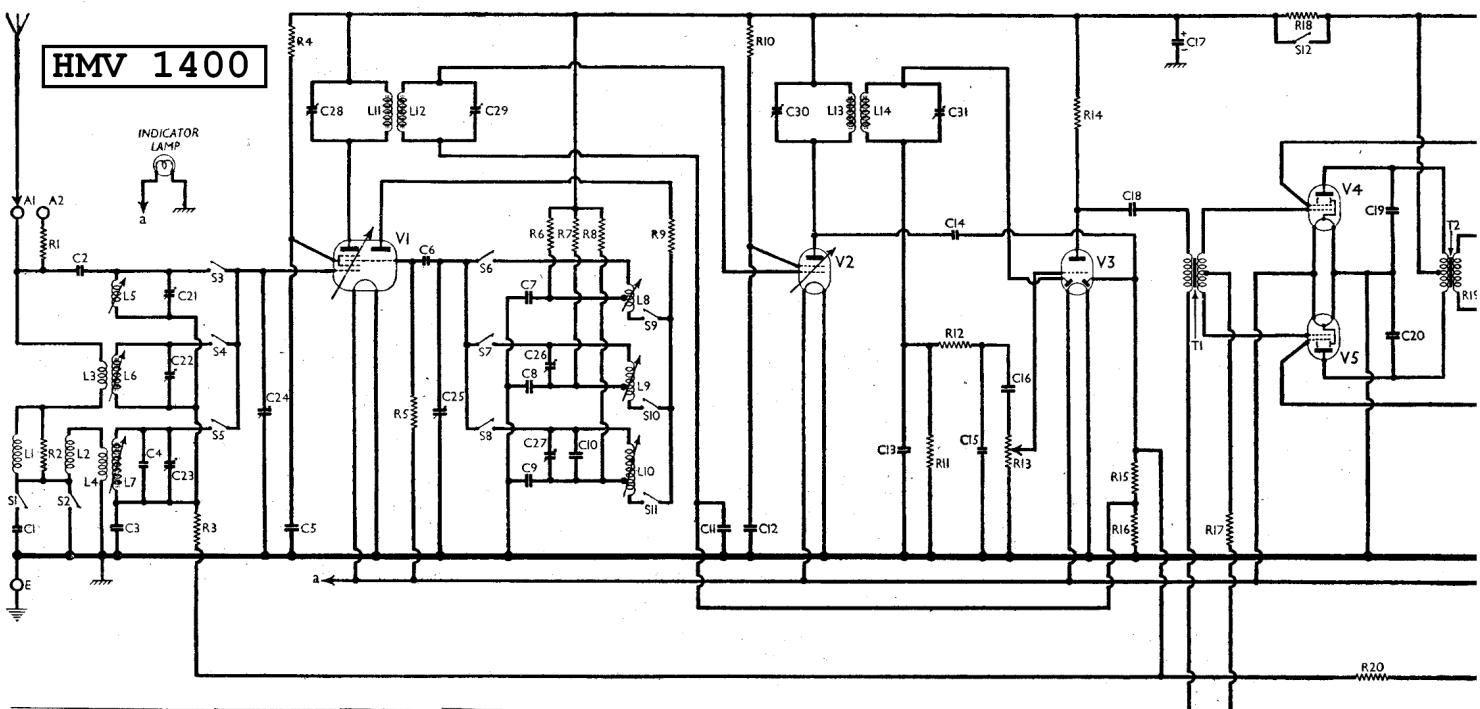


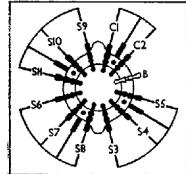
HMV 1400



RESISTANCES		Values (ohms)
R1	A2 aerial series	230,000
R2	L1 shunt resistance	7,500
R3	V1 hexode CG decoupling	2,300,000
R4	V1 SG HT feed	50,000
R5	V1 osc. CG resistance	50,000
R6	V1 osc. anode SW HT feed	15,000
R7	V1 osc. anode MW HT feed	50,000
R8	V1 osc. anode LW HT feed	50,000
R9	V1 osc. anode stabiliser	100
R10	V2 SG HT feed	35,000
R11	V3 signal diode load	500,000
R12	IF stopper	50,000
R13	Manual volume control	2,000,000
R14	V3 triode anode load	100,000
R15	V3 A.V.C. diode load resistances	2,300,000
R16	V3, V5 CG's decoupling	350,000
R17	Battery economiser resistance	230,000
R18	T2 sec. artificial load	10,000
R19	T2 sec. artificial load	50
R20	V1, V2 fixed GB and V4, V5 GB potential divider	2,300,000
R21	V1, V2 fixed GB and V4, V5 GB potential divider	230
R22	V1, V2 fixed GB and V4, V5 GB potential divider	400

OTHER COMPONENTS		Approx. values (ohms)
L1	Image suppressor coils	9.5
L2	Aerial MW coupling coil	33.0
L3	Aerial LW coupling coil	0.4
L4	Aerial SW tuning coil	1.6
L5	Aerial MW tuning coil	0.1
L6	Aerial LW tuning coil	2.0
L7	Aerial LW tuning coil	10.0
L8	Osc. circuit SW coil	1.0
L9	Osc. circuit MW coil	2.8
L10	Osc. circuit LW coil	3.6
L11	1st IF trans. (Pri.)	4.0
L12	(Sec.)	4.0
L13	2nd IF trans. (Pri.)	4.0
L14	(Sec.)	4.0
L15	Speaker speech coil	4.0
T1	Intervalve (Pri.)	350.0
	trans. (Sec., total)	5,500.0
T2	Output (Pri., total)	5,500.0
	trans. (Sec.)	650.0
S1-S11	Waveband switches	0.3
S12	Battery economiser	—
S13	HT circuit switch	—
S14	LT circuit switch	—
S15	GB circuit switch	—

Switch	SW	MW	LW
S1	—	C	—
S2	—	—	—
S3	C	—	—
S4	—	C	—
S5	—	—	C
S6	—	—	C
S7	—	—	C
S8	—	—	C
S9	—	—	C
S10	—	—	C
S11	—	—	C



The S1-S11 switch unit, as seen from the rear of the underside of the chassis.

CIRCUIT ALIGNMENT

IF Stages.—Switch set to LW, turn battery economiser switch anti-clockwise (maximum HT), and gang and volume control to maximum. Connect signal generator to control grid (top cap) of V1, via a 0.1μF condenser, and chassis. Leave existing top connector in place.

Feed in a 405KC/S signal, and adjust C28, C29, C30 and C31 in turn for maximum output. Repeat these adjustments.

RF and Oscillator Stages.—When gang is at maximum, pointer should be horizontal. Owing to the flexible nature of the gang condenser mounting, the chassis must be horizontal during alignment, otherwise the scale indication may not be correct. Connect signal generator to A1 and E sockets.

LW.—Switch set to LW and tune to 225m on scale (black spot).

Feed in a 225m (1,333.3 KC/S) signal, and adjust C26 and C22 for maximum output.

Tune to 530m on scale, feed in a 530m (566KC/S) signal and adjust inductance trimmers of L9 and L6 for maximum output. A screw beneath the chassis adjusts L9; L6 is reached through a hole in the chassis deck, and a special tool (E.M.I. Service, Ltd., Stock No. Q2827) is necessary. It consists of a pointed rod of insulating material with a rubber bush.

The point should be located in the hole in the paxolin coil mounting strip, with the rubber bush bearing on the coil core. The core may now be rotated by turning the tool.

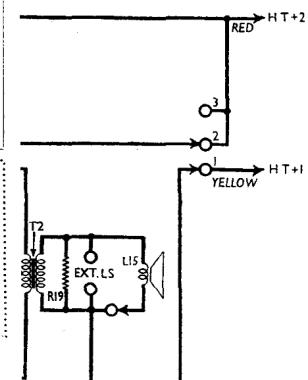
Repeat the LW adjustments.

LW.—Switch set to LW, and tune to 1,100m on scale.

Feed in a 1,100m (272.7 KC/S) signal, and adjust C27, then C23, for maximum output.

Tune to 1,900m on scale, feed in a 1,900m (158 KC/S) signal, and adjust inductance trimmers of L10 and L7 for maximum output.

The core of L7, reached through a hole in the chassis deck, has a hexagon head for adjustment. L10 is adjusted by a screw beneath the chassis.



CONDENSERS		Values (μF)
C1	Part of image rejector	0.00005
C2	Aerial SW coupling	0.00015
C3	V1 hexode CG decoupling	0.05
C4	Aerial circuit LW fixed trimmer	0.00005
C5	V1 SG decoupling	0.1
C6	V1 osc. CG condenser	0.000075
C7	Osc. circuit SW tracker	0.005
C8	Osc. circuit MW tracker	0.00055
C9	Osc. circuit LW tracker	0.0003
C10	Osc. circuit LW fixed trimmer	0.00016
C11	V2 CG decoupling	0.05
C12	V2 SG decoupling	0.1
C13	IF by-pass	0.0001
C14	Coupling to V3 AVC diode	0.000075
C15	IF by-pass	0.000075
C16	AF coupling to V3 triode	0.1
C17*	HT circuit reservoir	8.0
C18	AF coupling to T1	0.1
C19	Fixed tone correctors	0.0015
C20	—	0.0015
C21†	Aerial circuit SW trimmer	—
C22†	Aerial circuit MW trimmer	—
C23†	Aerial circuit LW trimmer	—
C24†	Aerial circuit tuning	—
C25†	Oscillator circuit tuning	—
C26†	Osc. circuit MW trimmer	—
C27†	Osc. circuit LW trimmer	—
C28†	1st IF trans. pri. tuning	—
C29†	1st IF trans. sec. tuning	—
C30†	2nd IF trans. pri. tuning	—
C31†	2nd IF trans. sec. tuning	—

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 X24	{ 114 Oscillator	0.7 50 1.25	50	1.1
V2 Z21	114	1.3	88	0.5
V3 HD23	55	0.5	—	—
V4 KT2	114	0.9	114	0.25
V5 KT2	114	0.9	114	0.25

* Electrolytic. † Variable. ‡ Pre-set.

Repeat these adjustments, then tune to 1,400m on scale, feed in a 1,400m (214.3 KC/S) signal, and re-adjust C23 for maximum output.

SW.—Use a 100Ω non-inductive resistance in parallel with the output of the signal generator, and a 40Ω resistance in series with the high potential lead. Switch set to SW, tune to 30m on scale, feed in a 50m (6 MC/S) signal. Adjust wire loop inside L8 to receive the signal, then adjust loop inside L6 for maximum output. Use a strip of insulating material with a slot in it as a tool.

Tune to 18m on scale, feed in an 18m (16.67 MC/S) signal, and adjust C21 for maximum output.