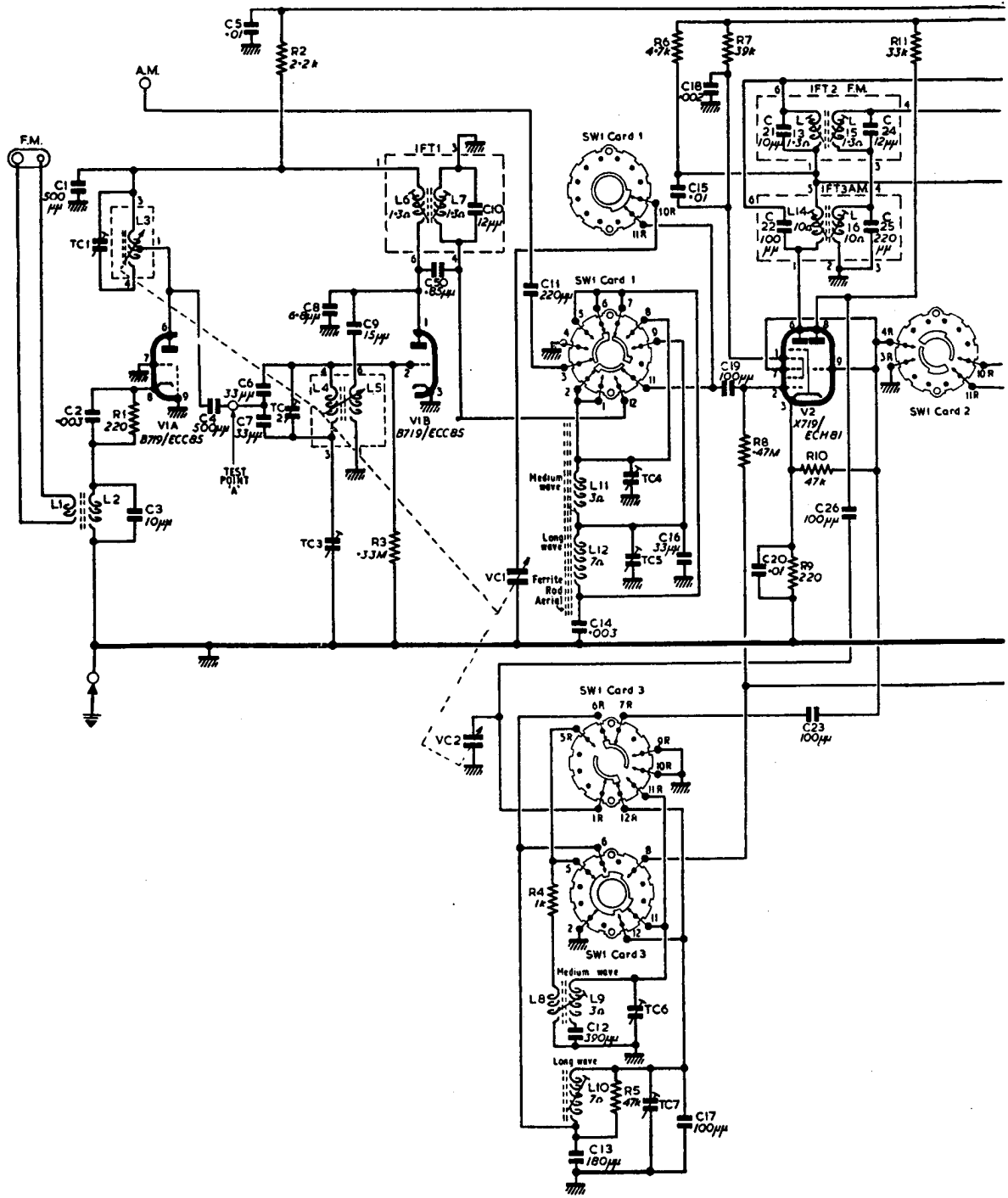


# H.M.V.

# Model 1128

**General Description:** Six-valve (including rectifier), three-waveband (including V.H.F.), combined A.M./F.M. table receiver with ferrite-rod aerial.

**Power Supply:** A.C. mains, 195-255 volts, 50-60 c/s. Consumption 60 watts.



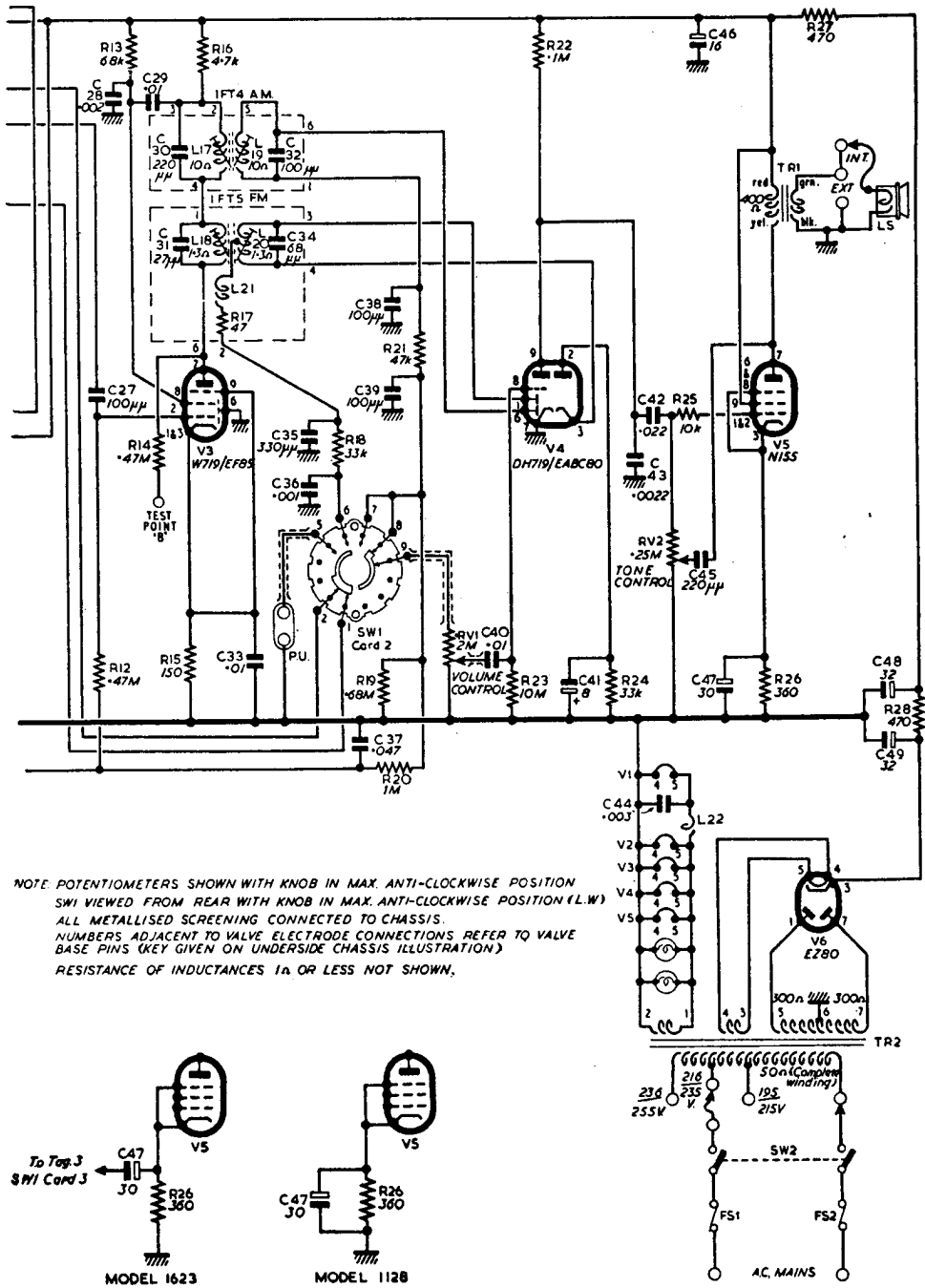
CIRCUIT DIAGRAM—

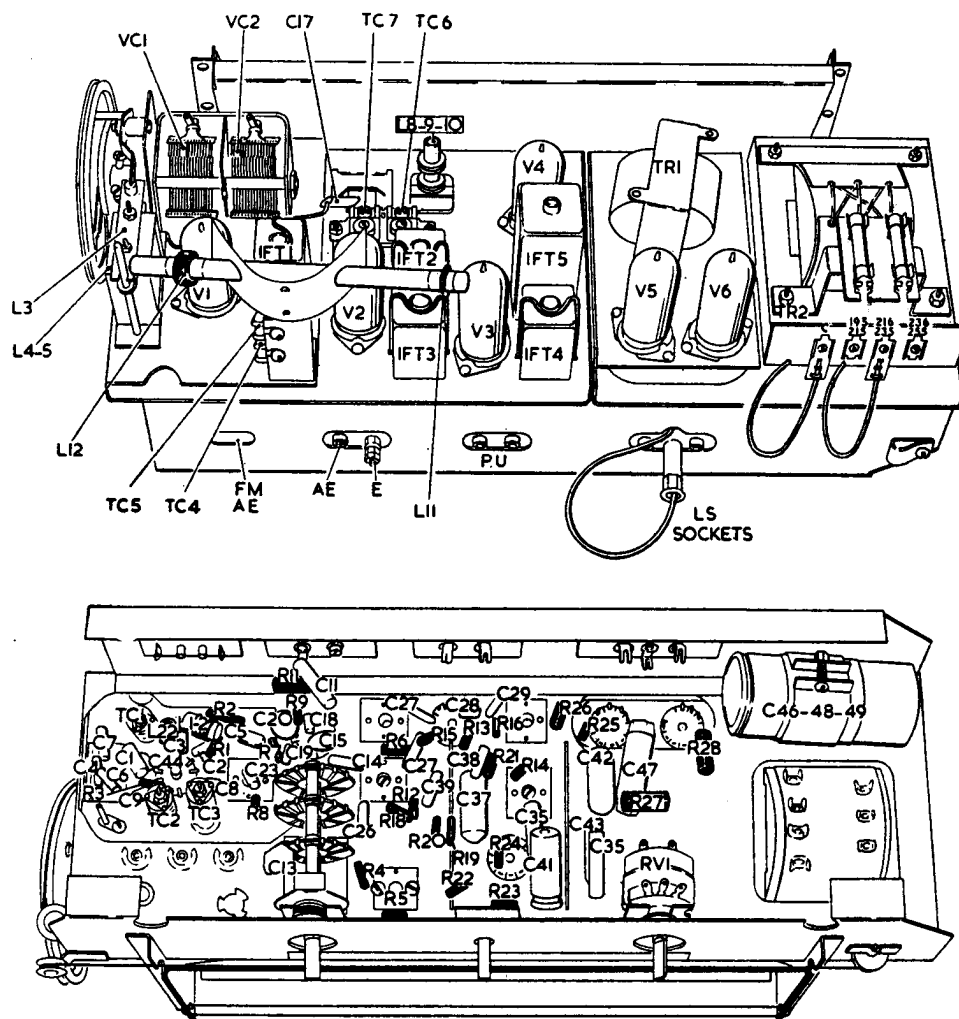
**Wavebands:** M.W. 187.5-575 m.; L.W. 901-2026 m.; V.H.F. 87.5-100 Mc/s.

**Valves:** (V1) B719/ECC85; (V2) X719/ECH81; (V3) W719/EF85; (V4) DH719/EABC80; (V5) N155 (EL85); (V6) EZ80.

**Pilot Lamps and Fuses:** Two pilot lamps, 6.8 volts, 0.3 amp. (tubular); two mains fuses, 1 amp. (cartridge type).

**Intermediate Frequencies:** A.M. 470 kc/s.; F.M. 10.7 Mc/s.



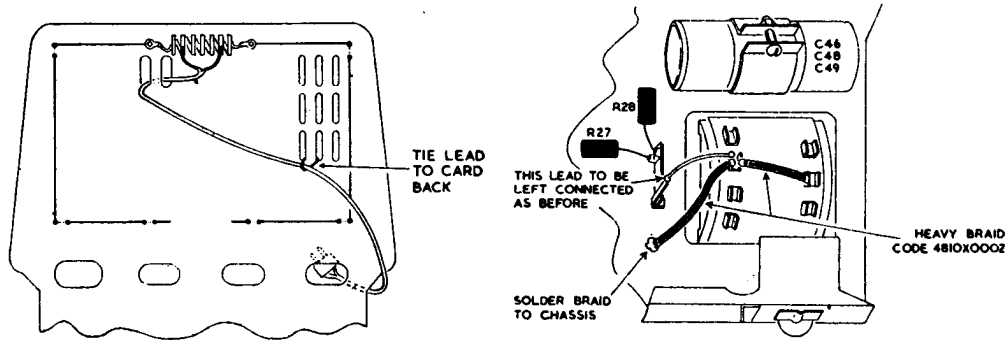


LAYOUT DIAGRAMS—H.M.V. MODEL 1128

**Alignment Procedure:** The manufacturers state that it is preferable whenever possible to use an F.M. sweep generator and oscilloscope display but the spot-frequency method outlined below may be used when the equipment necessary for sweep-generator alignment is not available.

**Equipment:** (1) Signal generator with output of not less than 50 mV.; (2) two accurately matched 100-k $\Omega$  resistors; (3) microammeter 0-100  $\mu$ A.

**F.M. Procedure:** (1) De-tune all F.M. I.F. transformers, bringing the cores half-way out of the formers. Connect two 100-k $\Omega$  resistors in series across C41. Connect meter between junction of resistors and chassis (chassis + VE). (2) Inject 10.7 Mc/s. into grid of V3, connect earthy side of input to bus-bar earthing tag and adjust L18 of I.F.T.5 (lower core) for maximum output. (3) Connect meter between junction of 100-k $\Omega$  resistors and junction C35, R18. Adjust L20 (upper core) for zero reading on meter. This will occur midway between a positive and negative-going peak. (4) Reconnect meter as (1) and repeat (2). (5) Inject signal to grid of V2, connect earthy side of input to bus-bar earthy tag, and adjust L15 of I.F.T.2 (lower core) for maximum output on meter. (6) Adjust L13 (upper core) for maximum output on meter and readjust L15 and L18 in that order, for maximum output. (7) Set input level such that reading on meter is 50  $\mu$ A. Check outputs at 10.6 Mc/s. and 10.8 Mc/s. respectively. If the outputs are not equal within 2-3  $\mu$ A. of each other adjust L18 until this is so. If the output at 10.6 Mc/s. is greater than that at 10.8 Mc/s. the core



MODIFICATIONS

of L18 will have to be unscrewed slightly, or vice versa. (8) Inject 10.7 Mc/s. into aerial socket and adjust L7 of I.F.T.1 (lower core) and L8 (upper core) alternately for maximum output until no further improvements result. (9) Repeat operation (7). The outputs at 10.6 Mc/s. and 10.8 Mc/s. should not be less than 26  $\mu$ A. when the output at 10.7 Mc/s. is 50  $\mu$ A. (10) Connect meter between junction of 100-k $\Omega$  resistors and junction C35, R18, as (3). Inject 10.7 Mc/s. into aerial socket and adjust L20 for zero output as operation (3).

*Note:* As the circuits are brought into line, the input should be adjusted such that the reading on the microammeter does not exceed 50-60  $\mu$ A.

*A.M. Procedure:* With gang fully open and set on M.W., inject a 470-kc/s. signal to control grid (pin 2) of V2. Adjust cores of L19, L17, L16 and L14 in that order for maximum output.

For R.F. circuits inject signals into A.M. aerial and earth sockets, and proceed as below. Figures in the second column of the table refer to the calibration strip affixed to the front of the chassis. They are read from right to left.

Operation	Set Gang	Set Generator, kc/s.	Adjust for Maximum Output
(1) M.W. . . . .	Max.	522	L8/L9
(2)	Min.	1602	TC6
(3)		Repeat (1) and (2)	
(4)	1 $\frac{15}{32}$	588	L11
(5)	9 $\frac{17}{18}$	1427	TC4
(6)		Repeat (4) and (5)	
(7) L.W. . . . .	Max.	146	L10
(8)	Min.	333	TC7
(9)		Repeat (7) and (8)	
(10)	1 $\frac{3}{32}$	162	L12
(11)	4 $\frac{5}{8}$	300	TC5
(12)		Repeat (10) and (11)	

Note that L11 and L12 are adjusted by sliding along the ferrite rod. They will normally be set about  $\frac{3}{4}$  in. from either end. Upon replacing the receiver in its cabinet check the calibration at about the centre of the wave scale on each waveband. If necessary, adjust the pointer to provide a compromise.

**Modifications:** In some later models C44 has been omitted to give improved I.F. stability. In some areas a modulation hum and distortion may be experienced when tuned to an F.M. station, and in some cases this modulation hum can only be heard when tuned "off" the station, i.e., on the side responses.

The following modification to the mains transformer TR2 earthing connection will generally eliminate this trouble. Remove the connecting lead which is at present connected from the centre tap of the H.T. winding and to the earth tag of the valve-heater winding of the mains transformer, and replace it with a piece of heavy braid, the end of which is to be soldered direct to the chassis adjacent to the earth tag that supports the smoothing resistors and the transformer earthing. The wire which is already connected from the earth tag of

the valve-heater winding to the earth tag on the smoothing resistor panel is to be left connected as before, therefore two separate earthing points now exist from the earth tag of the valve-heater winding.

In areas where the receiver is in close proximity to the transmitter the internal aerial lead should be routed and tied in position to the card back, as shown in diagram.

Some models will be found to incorporate a printed circuit panel mounting the output and H.T. rectifier valves together with a number of conveniently grouped components. In these models the circuitry remains unaltered.

*Voltage Readings:* The following measurements were taken under "no signal" conditions with a mains input of 220 volts, using a meter having an internal resistance of 20,000 ohms/volt. Variations of  $\pm 15$  per cent may be expected.

Band	Electrode	V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	V <sub>5</sub>	V <sub>6</sub>
AM	Anode	—	220	195	110	220	260
FM	Anode	180 *	185	175	100	200	260
AM	Osc. anode	—	105	—	—	—	—
FM	Osc. anode	—	90	—	—	—	—
AM	Screen	—	90	100	—	200	—
FM	Screen	—	94	80	—	215	—
AM	Cathode	—	2.4	1.6	—	10	280
FM	Cathode	1.4	2.7	1.5	—	9	265

\* At R<sub>2</sub>.

Total H.T. current, A.M. 52 mA., F.M. 62 mA.

## H.M.V.

## Model 1623

**General Description:** This six-valve table auto-radiogramophone uses a chassis basically similar to Model 1128. The only electrical change is the inclusion of an extra tag on Switch SW<sub>1</sub> which, in the "gram" position, disconnects C<sub>47</sub> to give additional negative feedback with slightly lower gain. These differences are shown in the insert to the circuit diagram of Model 1126.

**Record Unit:** Three-speed auto-mechanism Plessey "D" type 92010M.

**Pick-up:** High-impedance crystal reversible type employing replaceable styli.

**Styli:** H.M.V. type A<sub>4</sub> standard stylus for 78-r.p.m. records. H.M.V. type A<sub>4</sub> microgroove stylus for 33 $\frac{1}{3}$ - and 45-r.p.m. records.