

H.M.V.

Model 1420

General Description: Six-transistor (plus crystal diode), two-waveband portable receiver.

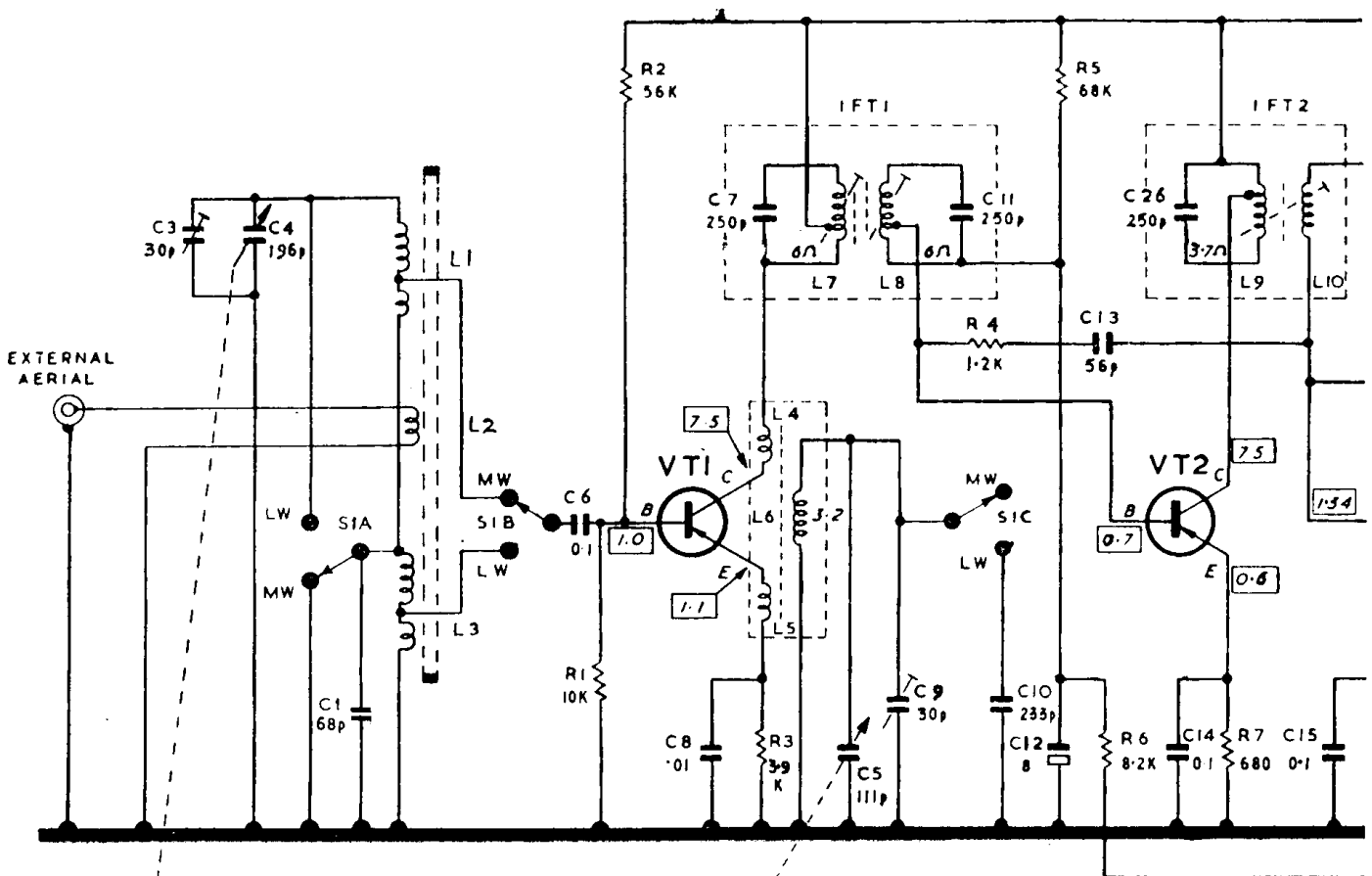
Power Supply: Two 6-volt batteries (PP₁, DT₁, BB₂, T₆₀₀). Consumption 20 mA. for average output. No-signal consumption about 12 mA.

Wavebands: M.W. 182–552 m.; L.W. 1090–1940 m.

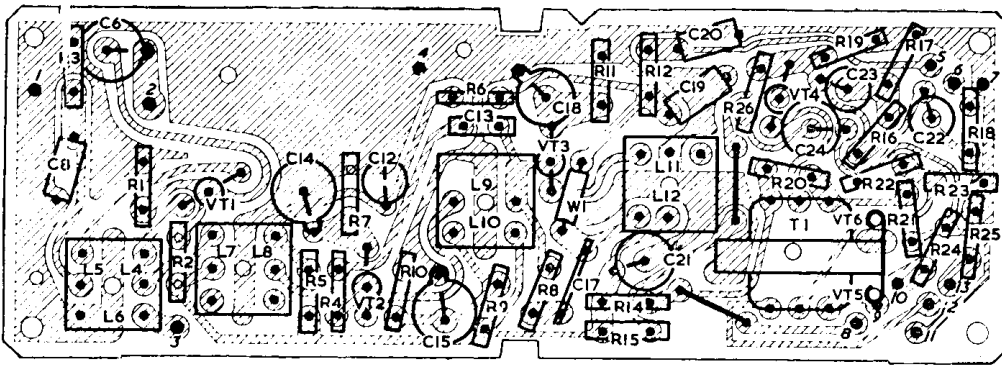
Transistors: (VT₁) OC44; (VT₂) OC45; (VT₃) OC45; (VT₄) OC81D; (VT₅, 6) OC81. Crystal diode (W₁) OA70. Typical voltages shown on circuit diagram measured with 20,000 ohms/volt meter.

Dismantling: Remove back cover held by single brass screw. Pull off wave-change knob. Withdraw two screws, one each side of chassis; chassis and printed board may then be removed. Because of shortness of inter-connecting wires, it is advisable to remove rod aerial also. This is held in place by two Phillips-headed screws.

Component Notes: C₁, C₁₃, C₁₇, R₂₀, R₂₁, R₂₂, R₂₃ are 5 per cent. C₁₀ 1 per cent. R₂₄, R₂₅ $\pm\frac{1}{2}$ ohm. C₁₂, C₂₂, C₂₃ 6-volt. C₂₁, C₂₄ 12-volt. Connections to printed board: 1 Rod aerial (earthy end) and gang. 2 Wiper S₁B. 3 Wiper S₁C and gang. 5 R₁₃. 6 R₁₃ slider. 7 R₁₃ and S₃. 8 S₂ and VT₅ collector. 9 VT₅ base. 10 VT₅ emitter. 11 VT₆ collector and speaker. 12 VT₆ base. 13 VT₆ emitter.



CIRCUIT DIAGRAM—



PRINTED-WIRING
PANEL LAY-OUT

Alignment Procedure: Output indicator should preferably have impedance of 30 ohms, connected across speaker terminals (with speaker disconnected). Signal levels should be kept below 5 mW. (0.4 volts A.C.) output. *I.F.:* Set to M.W. with gang fully open. Inject a 470-kc/s. signal through 0.1 μ F. across aerial section of tuning gang. Adjust L11/L12, L9/L10, L8 and L7 and repeat in same order. *R.F.:* Align M.W. circuits first. Inject signals via loop loosely coupled to rod aerial. Calibration points are marked on scale.

Circuits	Frequency, kc/s.	Cursor Position	Adjust
M.W.	1300	M.W. trim	C9, C3
	600	M.W. pad	L6, L1*
L.W.	215	L.W. trim	L3*

* Adjust by sliding coil former along aerial rod.

