

MARCONIPHONE

Model 4114

General Description: Nine-transistor, two-waveband portable receiver with tape socket for recording from radio (minimum load impedance 20k) and car aerial socket. 9-volt battery (PP9 or equivalent).

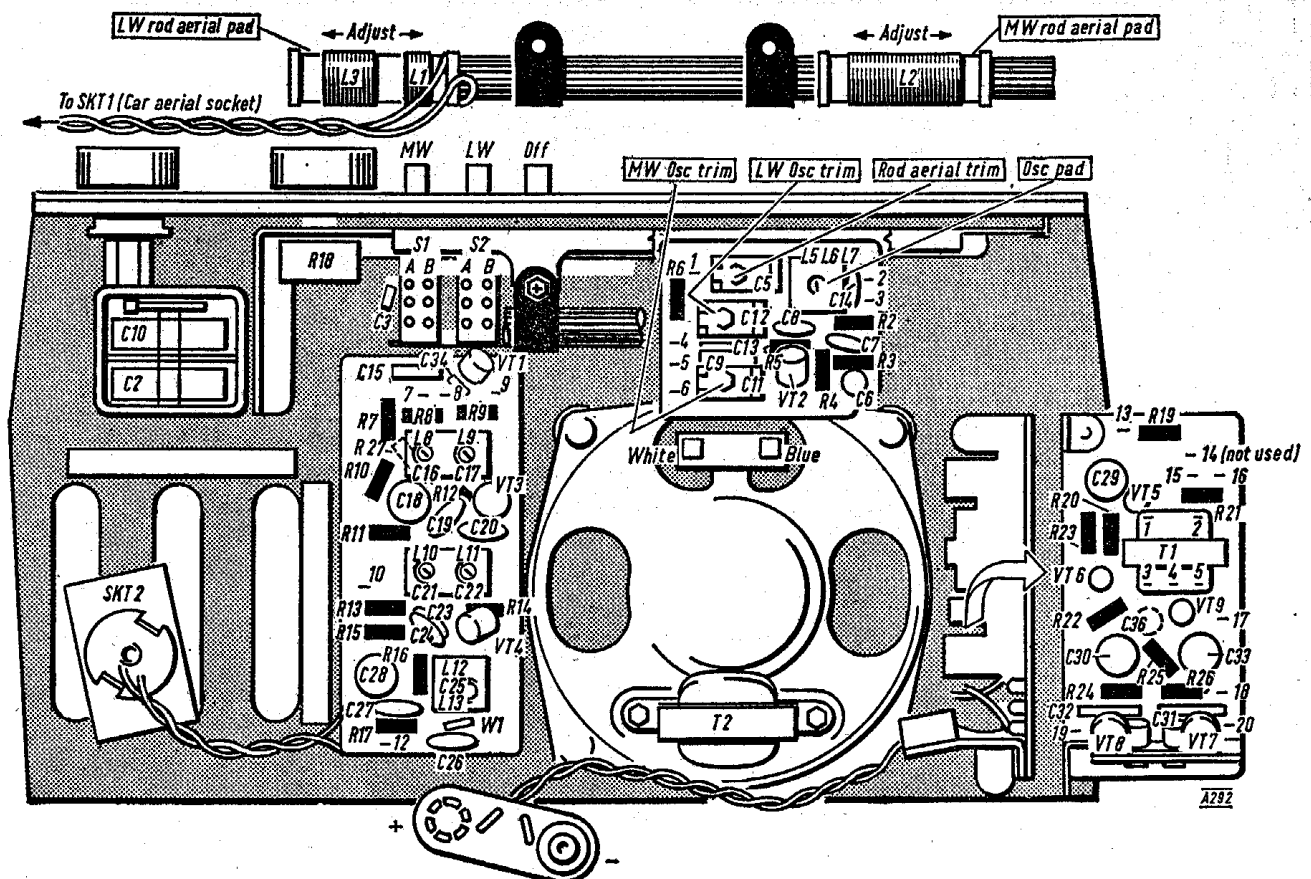
Wavebands: L.W. 1111-2027 m.; M.W. 185-566 m.

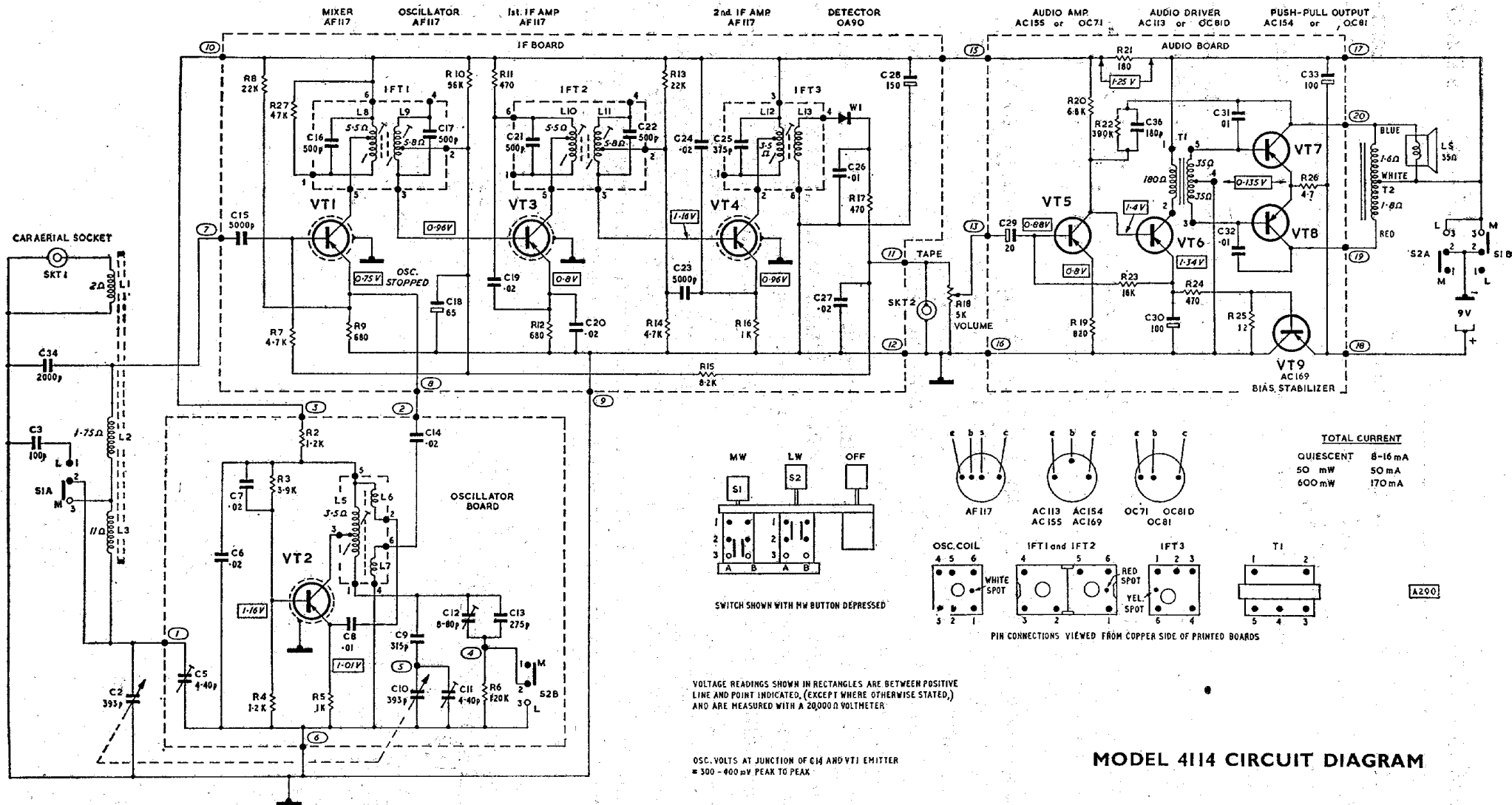
Semiconductors: (VT1-VT4) AF117; (VT5) AC155; (VT6) AC113; (VT7, VT8) matched AC154; (VT9) AC169 (bias stabiliser); (W1) OA90. VT1 is used as mixer only, with VT2 as separate local oscillator.

Dismantling: Remove battery cover, take out battery. Remove two screws from back and one from underside of receiver to release cover. Receiver baffle may now be withdrawn to extent of leads. For access to copper side of oscillator board, remove two screws accessible through two cut-outs in metal frame. To view underside of I.F. board, remove three screws from baffle taking care not to lose three brass spacers. Take out two screws from baffle to release audio board for easier access to components. When reassembling, lay cabinet on its back and guide baffle locating screws into holes. Replace fixing screws at back and underside of receiver.

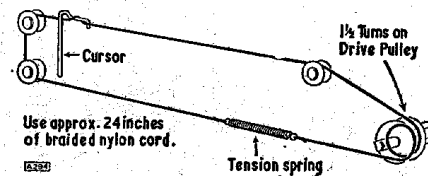
Alignment: I.F. 475 kc/s. (L12, L11, L10, L9, L8). M.W. 1500 kc/s. (C11, C5); 600 kc/s. (L5, L2). L.W. 220 kc/s. (C12, L3).

Bias Stabilisation: Bias voltage of VT7, VT8 is determined by collector-emitter voltage of VT9; this in turn is dependent upon base-emitter voltage of VT9, and is derived from voltage across R25. Any voltage change in emitter circuit of VT6 will produce corresponding change of voltage at base of VT9.





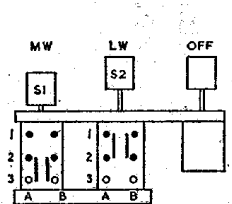
CIRCUIT AND CORD-DRIVE DIAGRAMS—
MARCONIPHONE MODEL 4114



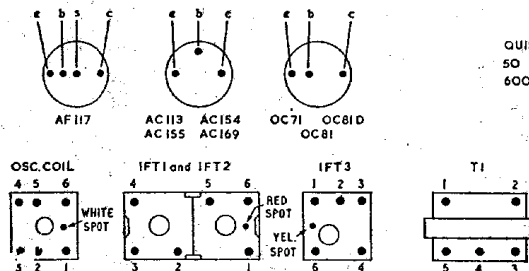
VOLTAGE READINGS SHOWN IN RECTANGLES ARE BETWEEN POSITIVE LINE AND POINT INDICATED, (EXCEPT WHERE OTHERWISE STATED,) AND ARE MEASURED WITH A 20,000 Ω VOLTMETER

OSC. VOLTS AT JUNCTION OF C14 AND VT1 EMITTER
= 300 - 400 mV PEAK TO PEAK

MODEL 4114 CIRCUIT DIAGRAM



SWITCH SHOWN WITH MW BUTTON DEPRESSED



PIN CONNECTIONS VIEWED FROM COPPER SIDE OF PRINTED BOARDS

TOTAL CURRENT

QUIESCENT	8-16 mA
50 mW	50 mA
600 mW	170 mA

A200

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