EKCO

CAR RADIO

Model CR117

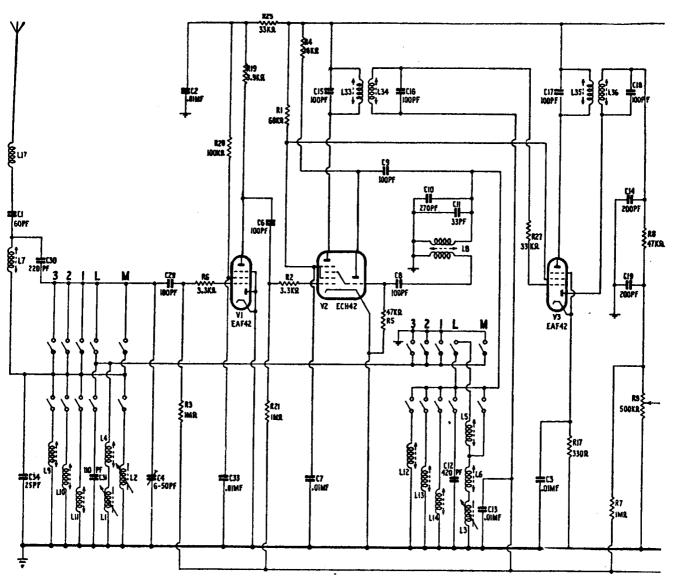
General Description: Six-valve (including rectifier), two wave-band superheterodyne receiver with non-synchronous vibrator power unit. Three pre-set M.W. positions are provided, and free tuning utilises permeability control.

Power Supply: Separate models are available for 12- and 6-volt supplies. Consumption, 12 volts, 2.7 amps., 6 volts, 4.5 amps.

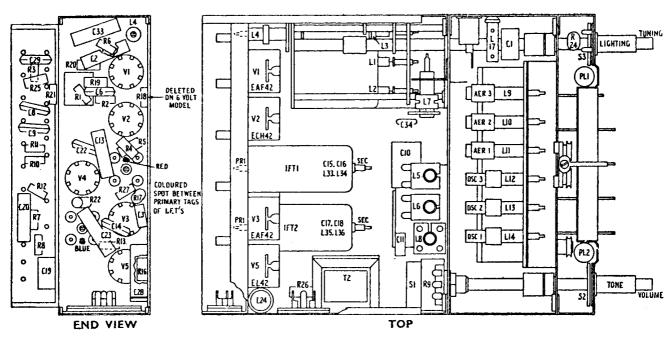
Wavebands: M.W. 190-550 m.; L.W. 1000-2000 m.; Preset 1, 325-485 m.; Preset 2, 245-485 m.; Preset 3, 200-300 m.

Intermediate Frequency: 465 kc/s.

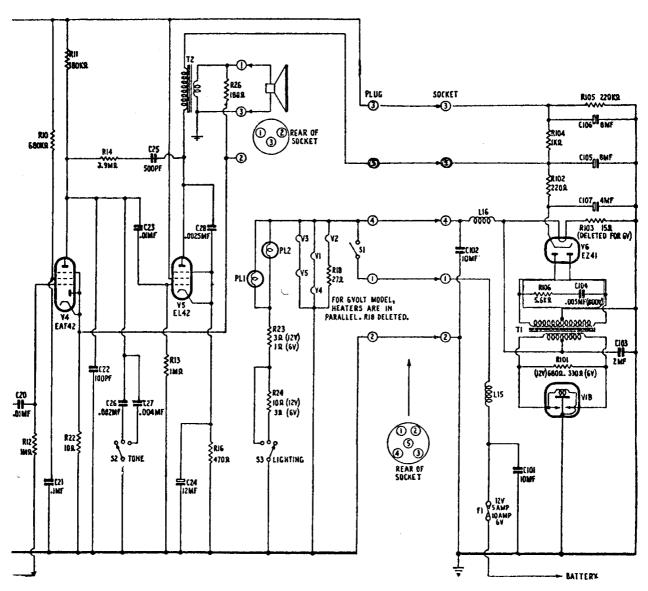
Valve Analysis: Measured with Avo Model 7. Set tuned to 550 m. under no-signal conditions.



CIRCUIT DIAGRAM-



CHASSIS LAYOUT VIEWS



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	Va	Ia	V_{g2}	Ig2	Vk	Ik
V ₁ EF.	11 125	2.2	64	0.8		3.3
V ₂ EC	H42 258 137 F42 258 F42 60		77	2.0	-	10.85
V2 (osc	.) 137	2·75 6·1				`
V2 (osc V3 EA	F42 258	2.0	77	0.3	0.7	2.2
V ₄ EA	F42 60	5.2	32	0.3		5.7
V5 EL2 V6 EZ2	270	26.0	32 258	3.1	13.7	29.1
V6 EZ	310 A.C.				280	45.0

Notes: The tuning variometer for free tuning on M.W. and L.W. comprises separate M.W. and L.W. aerial coils and a common oscillator coil which is loaded by L5 when used on L.W. The cores are mechanically coupled so that they move in tandem.

12-volt models: fuses, 5 amp.; pilot lamps, 12 volts, 2.2 W.; vibrator, Part No. C19878.

6-volt models: fuses, 10 amp.; pilot lamps, 6 volts, 0.3 amp.; vibrator, Part No. C19940.

Alignment Procedure: To assist alignment a flexible trimming tool should be made from a length of spring curtain-rod with a tip formed from \frac{1}{3}-in. tubing partly flattened. I.F. alignment follows conventional practice.

M.W.: Check that the variometer cores are $\frac{3}{8}$ in. from carrier plate. Set to 6 turns from fully clockwise of tuning knob, then inject 590-kc/s. signal to grid of V2 via 0·1- μ F. and adjust core of L8. Set to $\frac{1}{2}$ turn and adjust core of L6 at 1525 kc/s. Set to $2\frac{1}{2}$ turns and adjust core of L3 at 1015 kc/s. Repeat these operations until no further improvement occurs. Inject 590-kc/s. signal to aerial socket via 60-pF. capacitor. Set knob to 6 turns and adjust C4. Set to $2\frac{1}{2}$ turns and adjust core of L2 at 1015 kc/s. Set to $2\frac{1}{2}$ turns, inject 465-kc/s. signal and adjust core of I.F. filter (L7) for minimum output.

L.W.: Inject 260-kc/s. signal to grid of V2, set knob to 2 turns and adjust core of L5. Inject 260-kc/s. signal to aerial socket via 60-pF. capacitor and adjust core of L4. Tune to and inject 180-kc/s. signal, adjust core of L1.

Note: To ensure correct tracking when the receiver is assembled into its case, it is necessary to fit a screening plate on the underside of the chassis during alignment.

Circuit Variations: In later models C4 is 4-40 pF. (12-volt and 6-volt

receivers) and C102 is 2 µF. (12-volt receiver only).

D.C. Resistance of Components: L1, 22 ohms; L2, 10·5 ohms; L3, 1·4 ohms; L4, 17 ohms; L5, 4·5 ohms; L6, 0·6 ohms; L7, 24 ohms; L8, 7·7 + 6·8 ohms; L9, 7·5 ohms; L10, 9 ohms; L11, 21·5 ohms; L12, 1·0 ohm; L13, 1·4 ohms; L14, 1·6 ohms; L15, 0·04 ohms; L16, 0·03 ohms; L17, 2·7 ohms; L33, 14·65 ohms; L34, 14·65 ohms; L35, 14·65 ohms; L36, 14·65 ohms; T1, 12-volt models, primary, 0·56 + 0·56 ohms; secondary, 330 + 520 ohms; T1, 6-volt models, primary, 0·14 + 0·15 ohms; secondary, 330 + 520 ohms; T2, primary, 404 ohms; T2, secondary, 0·172 ohms.