

**MODELS E-740, E-742, E-810
E-812, E-814 and E-816**

NOTES

* ALL COMPONENTS MARKED WITH ASTERISK ARE CONTAINED IN UNIT, N1.

I1 IS USED ONLY IN MODELS E-814 AND E-816. IN OTHER MODELS THE 35W4 PLATE (PIN 5) CONNECTS TO FILAMENT, (PIN 4) AND THE LINE CONNECTS TO THE FILAMENT TAP, (PIN 6).

MODEL E-816 HAS TWO SPEAKERS WIRED IN PARALLEL.

MODEL E-740 USES A CLOCK, WIRED FROM THE POINTS MARKED X. IN THE CLOCK MODELS, THE OFF-ON SWITCH IS PART OF THE CLOCK ASSY.

IN THE MODEL E-742 THE ON-OFF SWITCH (PART OF THE CLOCK) IS IN THE FILAMENT RETURN ONLY AND IS CONNECTED AS SHOWN BY THE DOTTED LINES, ALSO, C7, THE LINE BY-PASS CONDENSER, RETURNS TO THE FILAMENT RETURN SIDE OF THE SWITCH INSTEAD OF B+.

⊕ INDICATES A RESISTANCE OF LESS THAN 1 OHM.

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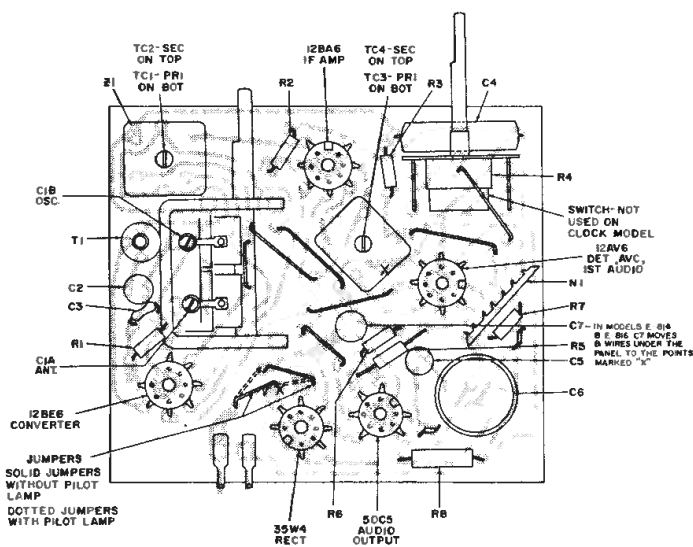
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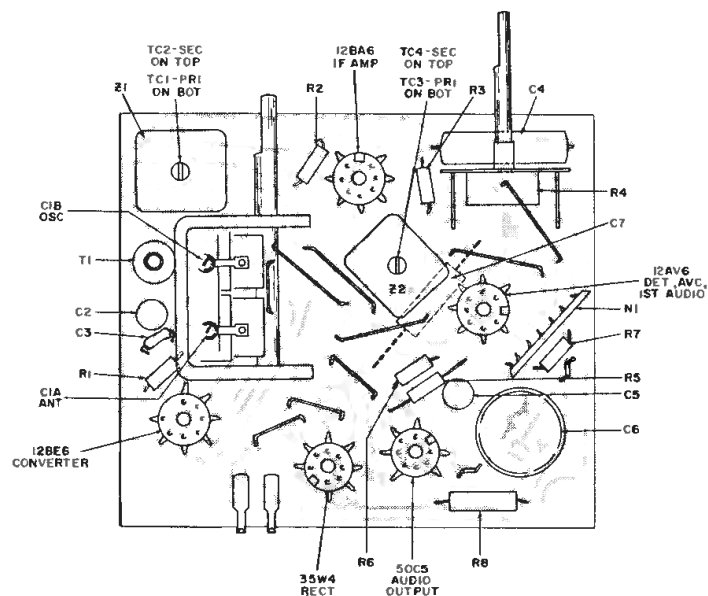
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Schematic Diagram — Models E-740, E-742, E-808, E-810, E-812, E-814 and E-816

PHILCO Models E-740, E-742, E-810, E-812, E-814, and E-816



Printed Panel Component Layout—Models E-740, E-808, E-810, E-812, E-814 and E-816



Printed Panel Component Layout—Model E-742

Frequency Range—540 KC to 1620 KC.

Intermediate Frequency—455 KC.

Audio Output—9 watt.

Power Consumption—30 watts.

Operating Voltage—E-740 and E-742, 105 to 120 volts, 60 cycles; E-808, E-810, E-812, E-814, and E-816, 105 to 120 volts, AC-DC.

Aerial—High Impedance loop mounted on inside of back.

ALIGNMENT PROCEDURE

Radio Controls—Set volume control to maximum. Set tuning control as indicated in chart.

Output Meter—Connect across voice coil terminals.

Signal Generator—Connect generator and set frequency as indicated in chart. Use modulated output, 30%.

Output Level—During alignment, adjust signal-generator output to hold output-meter reading below .5 volts.

SPEAKER PHASING (Model E-816 Only)

When replacing or reconnecting the two, paralleled speakers, it is possible that an out-of-phase condition may exist. This is readily apparent by weak output and serious distortion. To correct, interchange the leads to one of the speakers.

CHASSIS REMOVAL

- (1) Remove Back: In models E-808 and E-810 there are two screws holding the back to the cabinet. In models E-710, E-742, E-812, E-814 and E-816, spring the cabinet top to allow the back top to come back and out. Then lift (or slide upwards) the back to free back from bottom slots. Disengage interlock.
- (2) Remove the drive screw which holds the volume control frame to a boss on inside of cabinet front.
- (3) It may be desirable or necessary to unsolder the two speaker leads to obtain full chassis freedom.

ALIGNMENT CHART

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1.	Ground lead to B—; output lead through a .1 mf condenser to grid (pin 7) of 12BE6.	455 kc.	Tuning gang fully open.	Adjust tuning cores, in order given, for max. output. TC1 and TC3 are located on top of transformers.	TC4—2nd i-f sec. TC3—2nd i-f pri. TC2—1st i-f sec. TC1—1st i-f pri.
2.	Radiating loop (See note below).	1620 kc.	1620 kc.*	Adjust for maximum output.	C1-B—osc.
3.	Same as Step 2.	1500 kc.	1500 kc.	Adjust for maximum output.	C1-A—aerial.

Note: Make up a 6-8 turn, 6 inch diameter loop from insulated wire, connect to signal generator leads, and place near radio loop.

* For proper adjustment of the oscillator trimmer, fully open the tuning gang and insert a .006 inch non-metallic shim between the heel of the rotor and the top of the stator plates. Close the tuning gang sufficiently to hold the shim in place, and then remove the shim without disturbing the gang setting.