

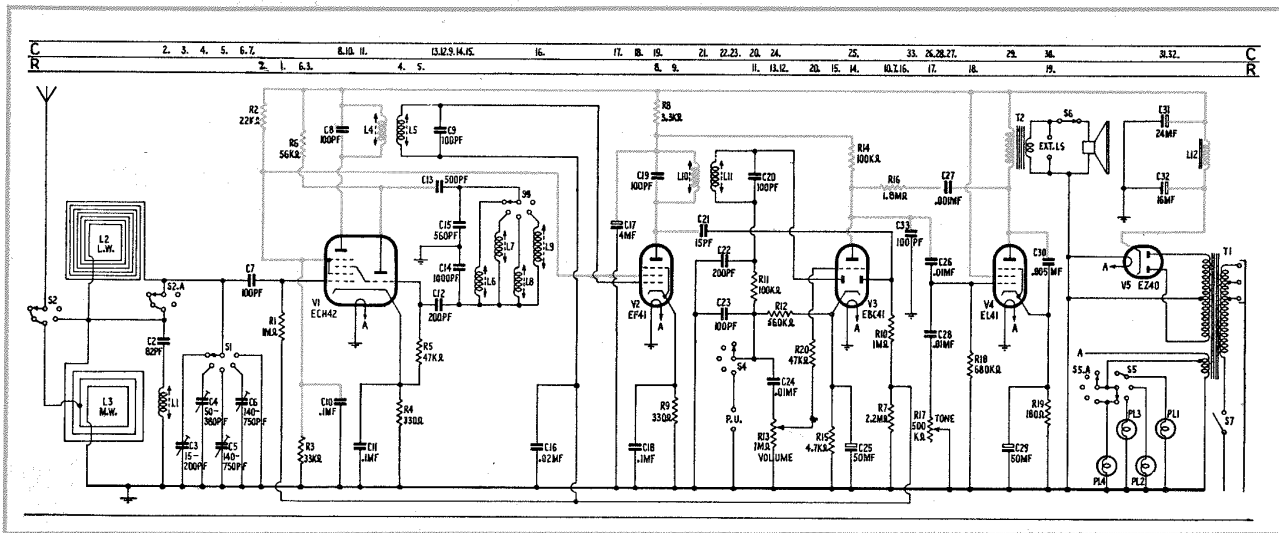
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EKCO SERVICE DATA

MODEL A147

See also Service News Sheets: Nos:



Model A147 is a high-quality five-valve superheterodyne receiver offering switch controlled selection of three Medium-wave and one Long-wave stations.

In addition, the selector switch effects the changeover from radio to gram.

Pick-up and extension loud-speaker sockets are provided at the rear of the chassis.

Built-in frame aerials are included for both Medium and Long-wave reception, and to cater for areas of low field strength, sockets are provided for the connection of an external aerial and earth.

CONTROLS: Top—Tone. Centre—Volume On/Off. Bottom—Selector.

MAINS SUPPLY: 200-250 volts. 50-100 c.p.s. A.C.

CONSUMPTION: With 225 volts input, T1 primary current is 165 m.a.

- VALVES:** V1—ECH42—Frequency changer.
 V2—EF41—I.F. amplifier.
 V3—EBC41—Demodulator, AVC, LF amplifier.
 V4—EL41—L.F. amplifier.
 V5—EZ40—Full-wave rectifier.

All valves are MULLARD with B8A bases.

Note. The heaters of *all* five valves are wired in parallel to a common supply, and it is essential that the rectifier is replaced with one of the same type, i.e. an indirectly heated type having a high heater/cathode insulation.

PILOT LAMPS: 6.2 volts, 300 m.a. M.E.S. type.

LOUD-SPEAKER IMPEDANCE: 3 ohms at 400 c.p.s.

INTERMEDIATE FREQUENCY: 470 Kc/s.

- PRE-SET COVERAGES:**
1. 250—166 Kc/s. 1,200—1,800 metres
 2. 965—545 Kc/s. 310—550 metres
 3. 1,225—690 Kc/s. 245—435 metres
 4. 1,600—875 Kc/s. 188—343 metres

SELECTOR SWITCHING: LW. POSITION.

- (a) Both frame aerials are in series and shunted by C6 to form the tuned LW input circuit.
- (b) The Colpitts oscillator circuit is completed by the connection of L9 to provide the required beat frequency.
- (c) Position 1 pilot lamp circuit is completed.

MW. POSITION:

- (a) The LW frame aerial is short-circuited, leaving the MW frame shunted by the appropriate trimmer.
- (b) The oscillator circuit is completed by the connection of either L6,7,8.
- (c) The required pilot lamp circuit is completed.

GRAM POSITION:

- (a) The frequency changer signal grid is earthed.
- (b) All oscillator coils are disconnected.
- (c) The pick-up is connected across the volume control.
- (d) Pilot lamps 1 and 4 are illuminated together.

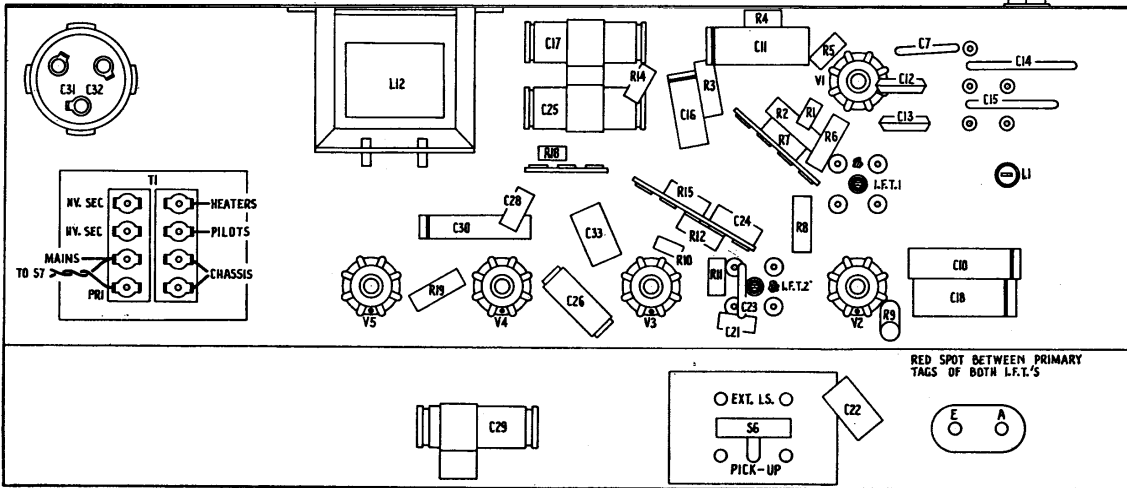
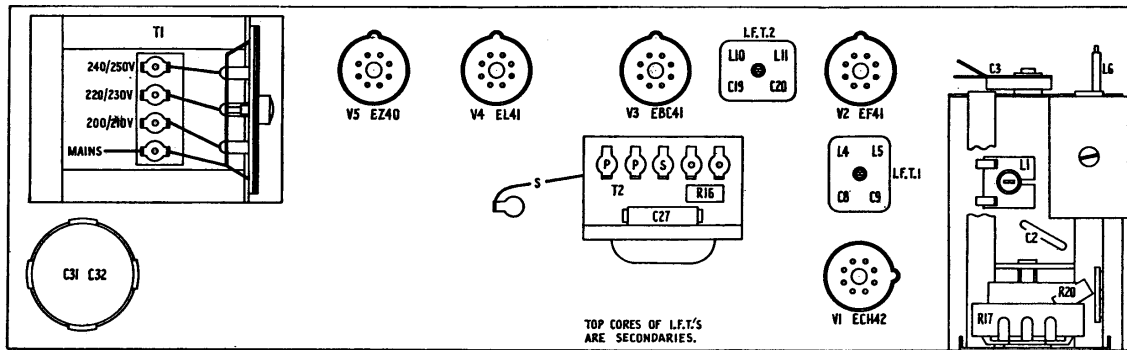
CIRCUIT ALIGNMENT: Turn selector to range 2 (310-550 metres). Connect output meter to the EXT. LS. sockets.

Inject a modulated 470 Kc/s. signal via a 0.1 mfd. condenser to pin 6 grid of V1.

Adjust the four I.F. cores for maximum output in the following order: 2nd IFT upper and lower, then 1st IFT upper and lower.

Inject I.F. to aerial socket, then adjust L1 core for minimum output.

PRE-SETS: Set selector to required position. Tune in the signal by adjusting the appropriate oscillator core, then resonate aerial circuit with the adjacent trimmer.



RESISTANCE OF WINDINGS

WINDING	OHMS
L1	16
L2	5.5
L3	1.0
L4	15
L5	15
L6	1.5
L7	1.8
L8	2.0

WINDING	OHMS
L9	2.3
L10	15
L11	15
L12	360
T1	PRI 42+5+5
	SEC 330+345
T2	PRI 700
	SEC 0.34

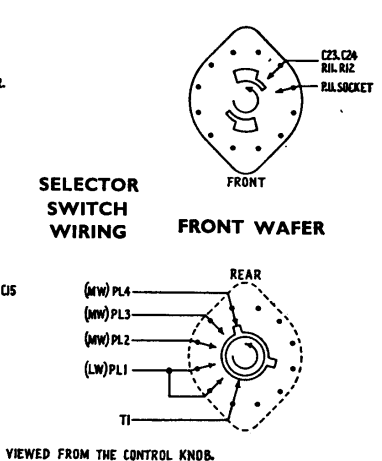
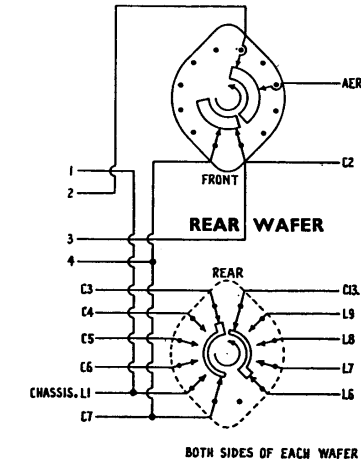
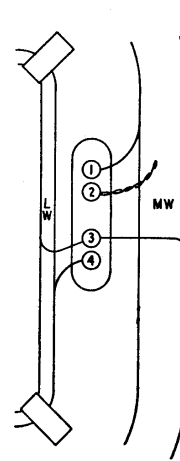
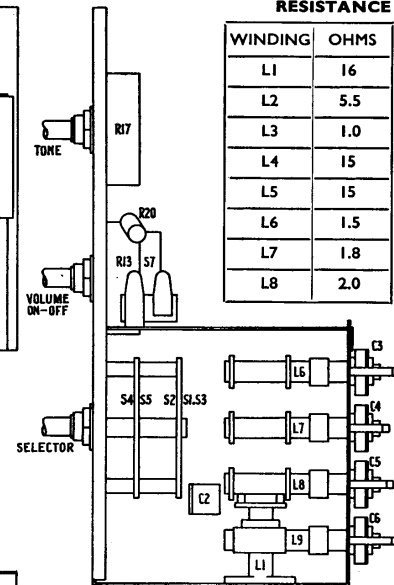
VOLTAGE AND CURRENT DATA

VALVE	ANODE		SCREEN		CATHODE	
	VOLTS	M.A.	VOLTS	M.A.	VOLTS	M.A.
MIXER	245	1.84	95	2.55	2.3	7.14
VI OSC	90	2.75				
V2	227	4.55	95	1.2	2.2	6.75
V3	178	0.5	—	—	2.4	0.5
V4	220	33.0	245	5.05	6.75	38.05
V5	255	36.0	—	—	266	—

Conditions. Set tuned to 300 metres. No signal input. Volts relative to chassis. D.C. volts 20,000 ohms/voltmeter. A.C. volts with 1000 ohms/voltmeter.

VALVE BASE DATA

VALVE	1	2	3	4	5	6	7	8
ECH42	H	A	0A	0G	G2	G1	K	H
EF41	H	A	K.G3	K.G3	G2	G1	K.G3	H
EBC41	H	A	G1	S	D1	D2	K	H
EL41	H	A	K.G3	—	G2	G1	K.G3	H
EZ40	H	A	—	—	—	A	K	H



BOTH SIDES OF EACH WAFER VIEWED FROM THE CONTROL KNOB.

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