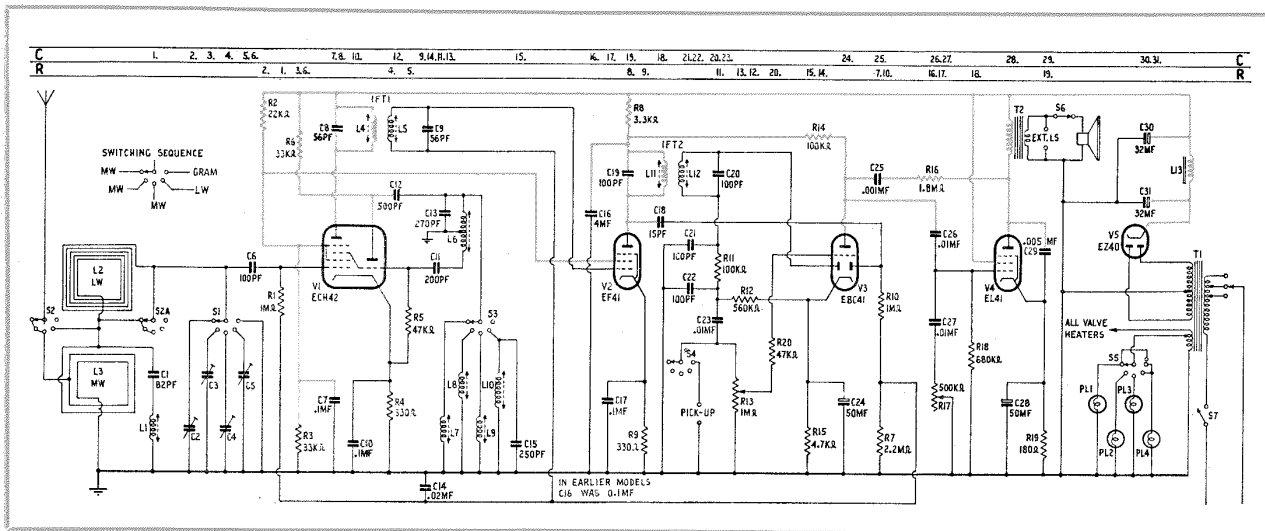


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# EKCO SERVICE DATA

## MODEL A110



Model A110 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 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.

**MAINS SUPPLY.** 200 to 250 volts, 50 to 100 c.p.s.

**CONSUMPTION.** 165 m.a. with 225 volts input.

**VALVES.** VI—ECH42 Frequency changer. V2—EF41 IF amplifier. V3—EBC41 Demodulator, AVC, LF amplifier. V4—EL41 LF amplifier. V5—EZ40 Full wave rectifier.

All valves are Mullard and have B8A bases.

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

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

**CONTROLS.** Right-hand side—SELECTOR. Left side, front—VOLUME ON/OFF. Left side, rear—TONE.

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

**INTERMEDIATE FREQUENCY.** 455 Kc/s Southern area. 460 Kc/s Northern area.

Individual receivers have an S or N stamped on the rear of the chassis.

**PRE-SET RANGES** 1. 250-167 Kc/s. 1200-1800 metres.

- |                |           |
|----------------|-----------|
| 2. 883-545 "   | 340-550 " |
| 3. 1225-768 "  | 245-390 " |
| 4. 1548-1035 " | 194-290 " |

**SELECTOR SWITCHING.** LW Position.

- Both frame aerials are in series and shunted by C5, to form the tuned LW input circuit.
- The master oscillator coil L6 is in effect shunted by L10.C15 to provide the required beat frequency.
- Position 1 pilot lamp circuit is completed.

**MW Position.**

- LW frame aerial is short-circuited leaving the MW frame shunted by the appropriate trimmer.
- The M.O. coil is shunted by either L9.L8 or L7.
- The required pilot lamp circuit is completed.

**Gram Position.**

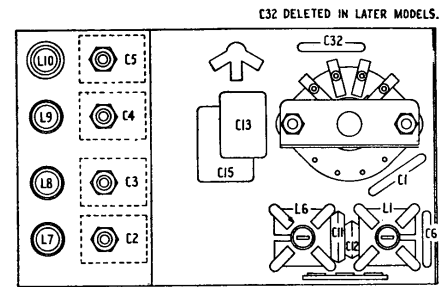
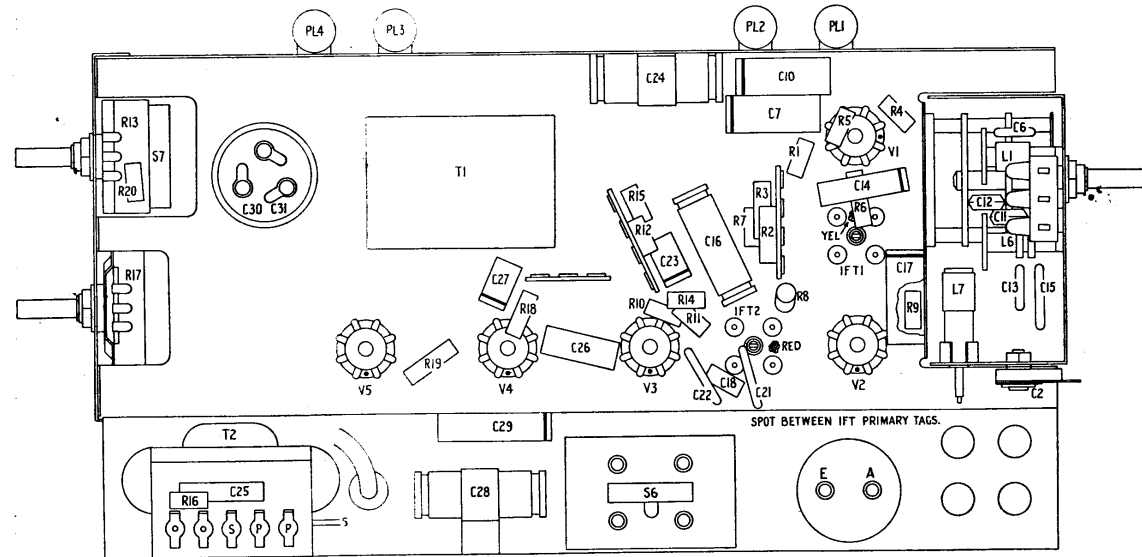
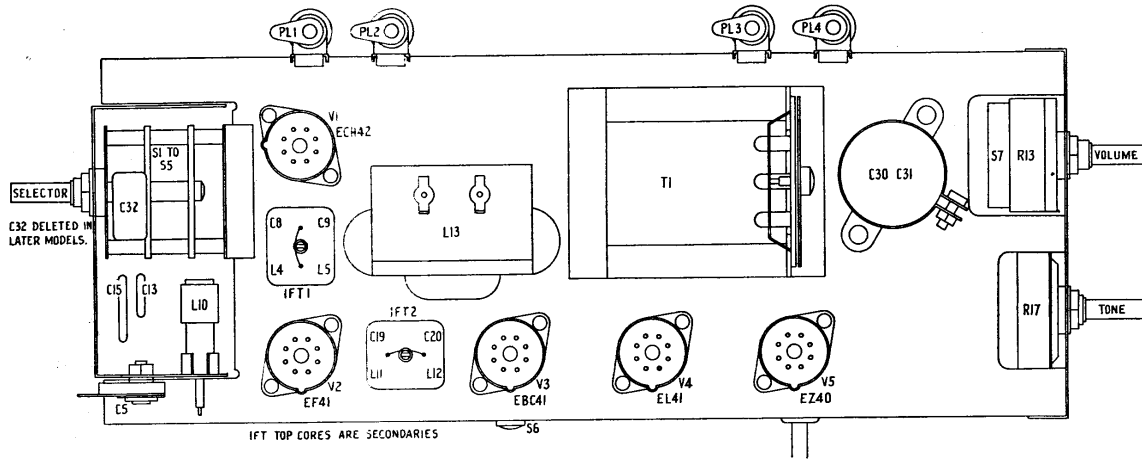
- The frequency changer signal grid is earthed.
- All M.O. shunt coils are disconnected.
- The pick-up is connected across the volume control.
- Pilot lamps 1 and 4 are illuminated together.

**ALIGNMENT.** Set selector to MW range 2. Connect output meter to EXT.LS sockets.

Inject required IF via a 0.1 mfd capacitor to the control grid of V1, then adjust upper and lower cores of 2nd IFT then upper and lower cores of 1st IFT for maximum output.

Inject IF 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 osc. core then resonate aerial circuit with the adjacent trimmer.



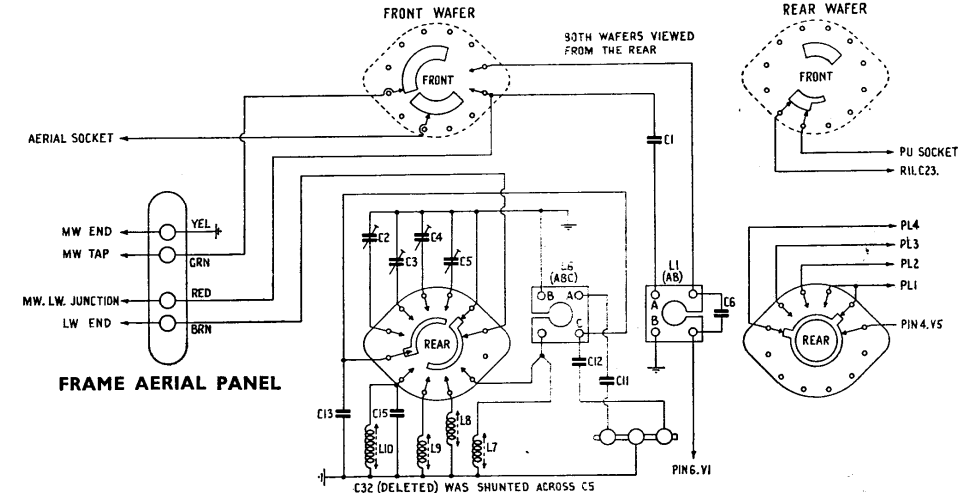
COIL & SWITCH UNIT

VOLTAGE & CURRENT DATA

Valve	Anode		Screen		Cathode	
	Volts	M.A.	Volts	M.A.	Volts	M.A.
V1 Mixer Osc.	245	1.84	95	2.55	2.6	7.73
	123	3.34				
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	6.8	38.05
V5	255	36.0	—	—	266	—

Conditions. Set at Range 3 (1,000 Kc/s.). No Signal Input. Volts relative to Chassis. D.C. Volts with 20,000 Ohms/Volt Meter. A.C. Volts with 1,000 Ohms/Volt Meter.

COIL & SWITCH UNIT WIRING



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

RESISTANCE OF WINDINGS

Winding	Ohms	Winding	Ohms	Winding	Ohms
L1	12.0	L7	3.0	L13	360
L2	6.0	L8	4.0	T1 PRI	50
L3	1.2	L9	2.5	HT SEC	675
L4	34	L10	5.5	T2 PRI	700
L5	34	L11	14.5	T2 SEC	0.34
L6	9.5+5	L12	14.5		

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