FERRANTI Models 225, 425

General Description : Five-valve (including rectifier), three-waveband superheterodyne receiver with switched aerial circuits to give independent operation from built-in frame aerials or from an external aerial. *Model* 425 *Radiogram* is fitted with the Garrard single-speed record changer, RC70B. *Model* 425 *LP Radiogram* has a Garrard three-speed record changer, RC72A.

Power Supplies : A.C. mains, 200–250 volts. *Model* 225, 50–100 c/s.; *Models* 425 *and* 425 *LP*, 50 c/s.

Wavebands : S.W. 16–50 m.; M.W. 190–570 m.; L.W. 1000–2000 m.

Intermediate Frequency : 470 kc/s.

Alignment Procedure : This is identical with that described for Model 215 (see pages 338 and 336).

Valve Analysis : The voltage (measured to chassis) and current readings given below are average and were measured under no-signal conditions with a Model 7 Avometer.

Valve	*Anode Volts*	*Anode Current (mA.)*	*Screen Volts*	*Screen Current (mA.)*	*Osc. Anode Volts*	*Cathode Volts*
V1 ECH42	255	2·4	75	2·8	103	—
V2 EF41	255	5·0	75	1·5	—	—
V3 EBC41	75	0·65	—	—	—	—
V4 EL41	250	30	230	5·0	—	4·7
V5 EZ40	—	—	—	—	—	287

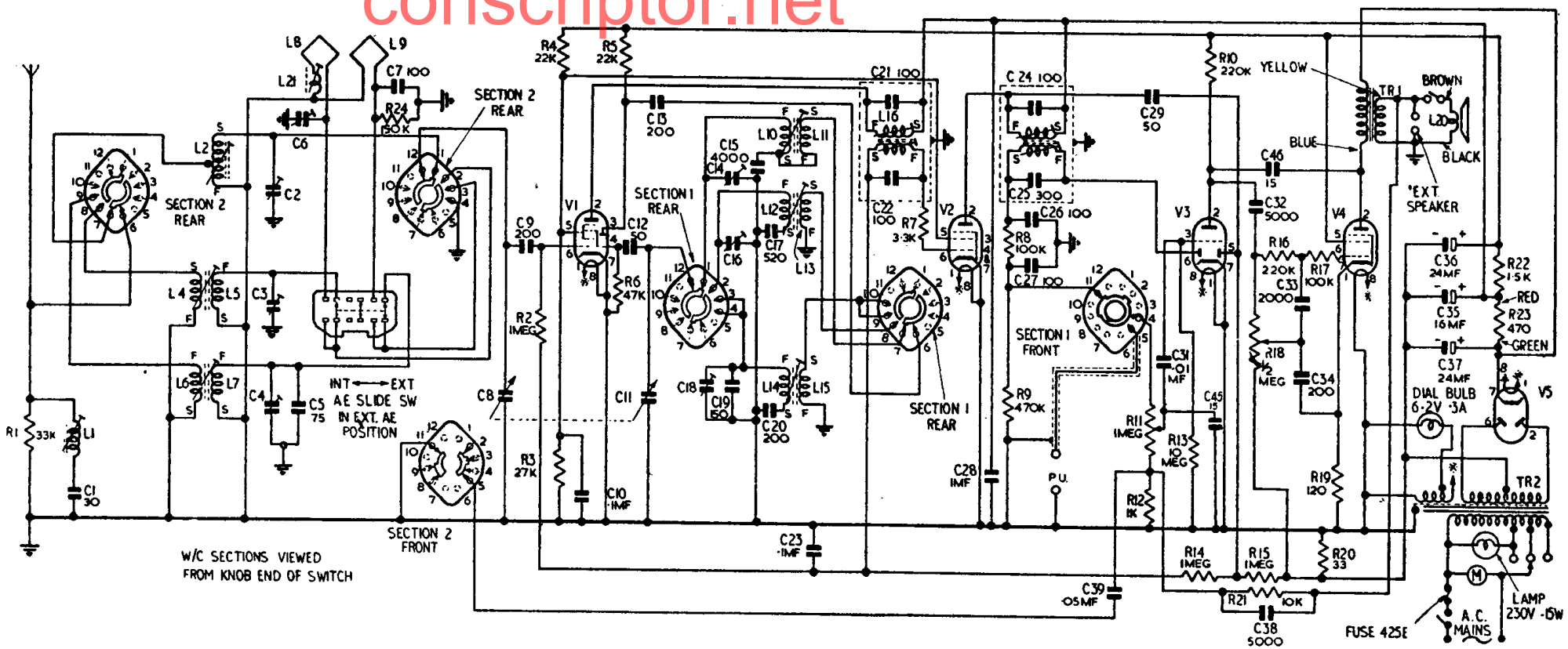
Unsmoothed H.T. at V5 cathode, 270 volts; part smoothed H.T. at low end of R23, 260 volts; smoothed H.T. at low end of R22, 230 volts; total H.T. current through R23, 57 mA.; bias across R20, 1·8 volts.

To check that the oscillator is functioning, earth its grid and note that the oscillator-anode volts fall by approximately 30.

Circuit Differences : C38, C39 and C40 are omitted in Model 225.

D.C. Resistances.

L1	18 ohms	L8	Under 1 ohm	L14	10 ohms	L20	2·6 ohms
L2	Under 1 ohm	L9	15 ohms	L15	1 ohm	L21	1 ohm
L4	30 ohms	L10	Under 1 ohm	L16	6·5 ohms	TR1 (Pri.)	450 ohms
L5	2·5 ohms	L11	Under 1 ohm	L17	6·5 ohms	TR2 (Pri.)	37 ohms (total)
L6	48 ohms	L12	4 ohms	L18	7 ohms	(Sec.)	180 ohms.
L7	15 ohms	L13	Under 1 ohm	L19	3·5 ohms		



CIRCUIT DIAGRAM—FERRANTI MODEL 425

(Model 225 is identical except for the omission of C38, C39, and C46.)