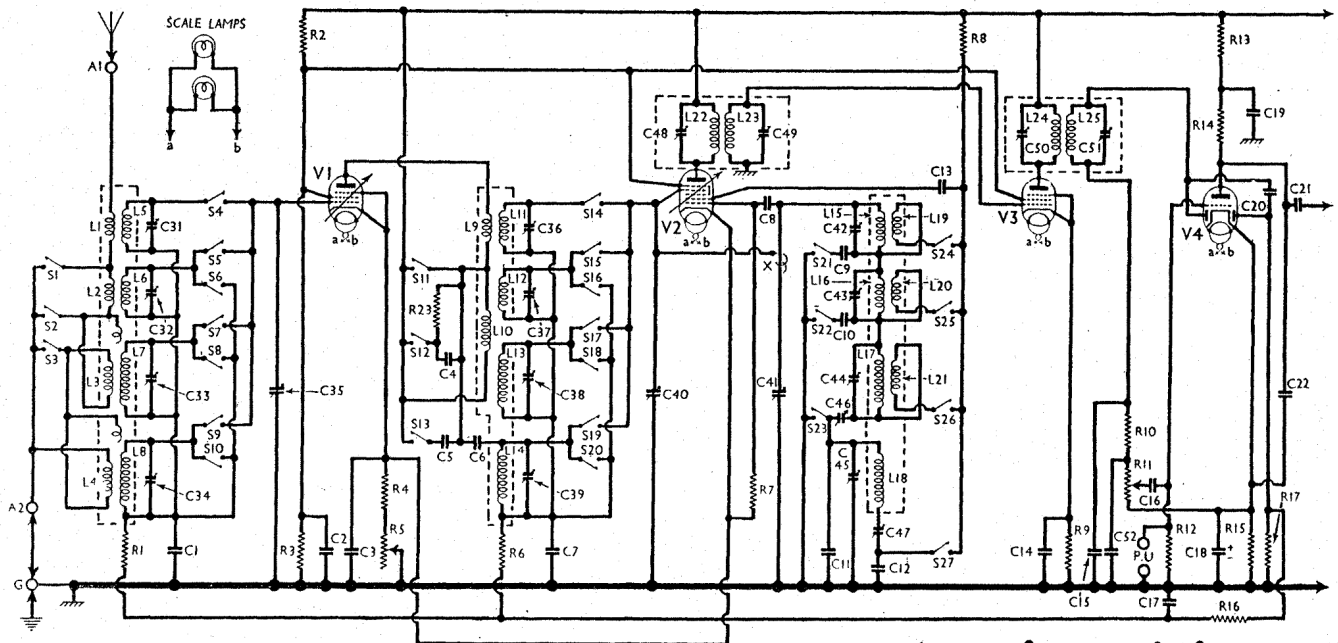


# FERGUSON - 350



## COMPONENTS AND VALUES

Resistances		Values (ohms)
R1	V1 cont. grid decoupling	100,000
R2	V1, V2 and V3, S.G.'s H.T. potential divider	20,000
R3	V1 and V2 sensitivity control	50,000
R4	V1 and V2 fixed G.B. resistance	200
R5	V1 and V2 sensitivity control	3,000
R6	V2 tet. cont. grid decoupling	100,000
R7	V2 osc. grid resistance	50,000
R8	V2 osc. anode resistance	25,000
R9	V3 G.B. resistance	500*
R10	I.F. stopper	25,000
R11	V4 signal diode load; vol. control	500,000
R12	V4 grid resistance	1,000,000
R13	V4 anode decoupling	100,000
R14	V4 anode resistance	250,000
R15	V4 G.B. resistance	2,000
R16	A.V.C. line decoupling	1,000,000
R17	V4 A.V.C. diode load	1,000,000
R18	V5 grid resistance	1,000,000†
R19	V5 G.B. resistance	1,000
R20	V5 anode decoupling	25,000
R21	Tone control	100,000
R22	V6 and V7 G.B. resistance	670
R23†	C4 shunt	3,000

\* May be 2,000 O. † May be 500,000 O.  
‡ May not appear in some chassis.

## VALVE ANALYSIS

Readings of valve voltages and currents given in the table below were taken with the receiver operating on mains of 220 V, using the 220 V tapping on the mains transformer. Both the volume and sensitivity controls were at maximum, the receiver was tuned to the lowest wavelength on the medium band and there was no signal input.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 6D6	280	6.7	100	1.8
V2 6A7*	280	3.1	100	3.2
V3 6D6	280	6.0	100	1.7
V4 85	20	0.8	—	—
V5 76	130	5.4	—	—
V6 45	270	36.0	—	—
V7 45	270	36.0	—	—
V8 80	385†	—	—	—

\* Osc. anode (G2) 155 V, 4.0 mA  
† Each anode, A.C.

## GENERAL NOTES

**Switches.**—There are no fewer than twenty-seven single-pole wavechange switches, in four ganged rotary units. Each unit is in two sections, with three or four switches in each section. Each section has one common tag, and a rotary contact brings in each switch in the section in turn. There is an exception to this, for in the case of S21, S22 and

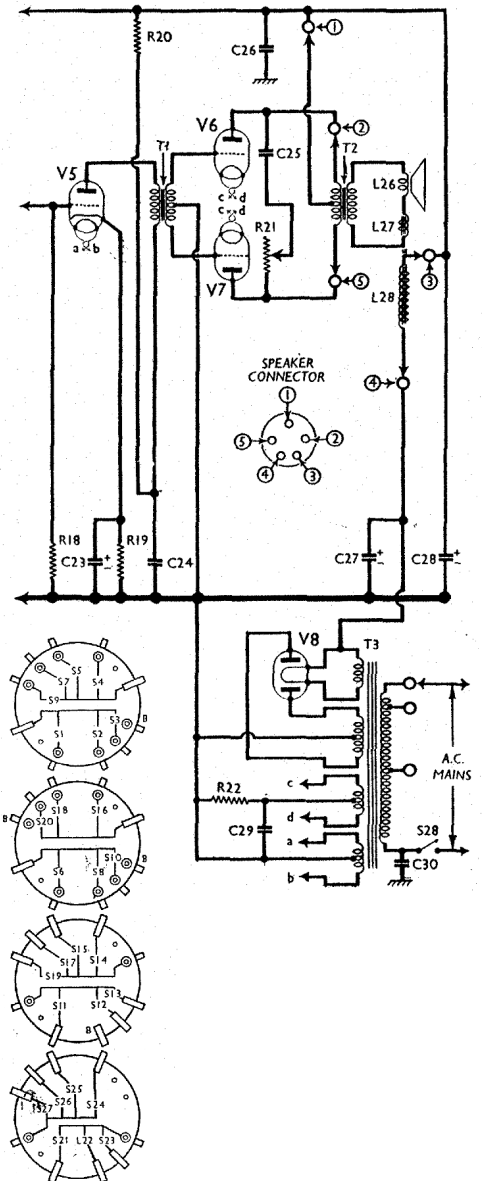
Circuit diagram of the Ferguson Model 350 all-wave A.C. superhet. The numbers in circles refer to the connections of the speaker plug and socket, a numbered diagram of which, viewed from the free ends of the pins, is inset in the extension of the diagram.

Condensers (contd.)		Values (μF)
C47†	Oscillator L.W. tracker	0.0005
C48†	1st I.F. trans. pri. tuning	—
C49†	1st I.F. trans. sec. tuning	—
C50†	2nd I.F. trans. pri. tuning	—
C51†	2nd I.F. trans. sec. tuning	—
C52	I.F. by-pass	0.0001

\* Electrolytic. † Variable. ‡ Pre-set.  
§ Two fixed and one pre-set in parallel.

Other Components		Approx. Values (ohms)
L1	S.W. aerial coupling coils	0.5
L2	M.W. aerial coupling coil	1.3
L3	L.W. aerial coupling coil	27.5
L4	L.W. aerial coupling coil	120.0
L5	S.W. aerial tuning coils	Very Low
L6	M.W. aerial tuning coil	0.2
L7	L.W. aerial tuning coil	3.8
L8	L.W. aerial tuning coil	17.0
L9	H.F. transformer primary	0.7
L10	H.F. transformer S.W. secondaries	28.0
L11	H.F. transformer M.W. sec.	Very Low
L12	H.F. transformer L.W. sec.	0.2
L13	H.F. transformer L.W. sec.	3.8
L14	H.F. transformer L.W. sec.	15.0
L15	Oscillator S.W. tuning coils	Very Low
L16	Oscillator M.W. tuning coil	0.2
L17	Oscillator L.W. tuning coil	4.5
L18	Oscillator L.W. tuning coil	4.6
L19	Oscillator anode coils	0.6
L20	Oscillator anode coils	1.2
L21	Oscillator anode coils	0.8
L22	1st I.F. trans. Pri.	9.0
L23	1st I.F. trans. Sec.	13.0
L24	2nd I.F. trans. Pri.	9.0
L25	2nd I.F. trans. Sec.	13.0
L26	Speaker speech coil	2.8
L27	Hum neutralising coil	0.3
L28	Speaker field coil	1,000.0
T1	Push-pull input trans.	1,000.0
T2	Speaker input trans.	4,000.0
T3	Mains trans.	500.0
S1-S27	Waveband switches	0.5
S28	Mains switch, ganged R11	17.5
X	Small coupling	0.15

S23 the rotary contact closes two switches in each of the S.W. positions. We give a diagram of the switch units, in the order and position in which they are seen looking from the rear of the underside of the chassis. The table below gives the switch positions for the four settings of the control knob, O indicating open, and C closed.



Switch diagrams, looking from the rear of the underside of the chassis.