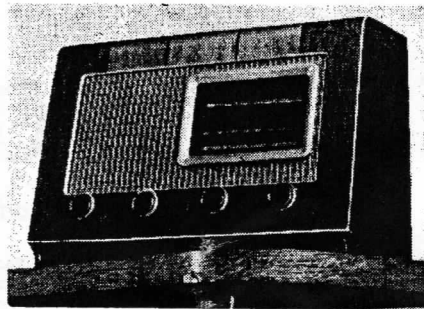


Resistance-capacitance coupling by R17, C27 and R18, via resistor R19, between V3 triode and pentode output valve (V4, Mullard UL41). Tone control is a mixture of fixed and variable negative feedback coupling and fixed and variable shunt resistance-capacitance networks in V3 triode anode circuit and V4 control grid and anode circuits. While C34 shunts V4, the series C32, R22, C31, R21, C27 feeds back selectively a fixed proportion of the output of V4 to its control grid. A measure of negative feedback is derived from the omission of a by-pass capacitor across R24.

C33, R23, R20 shunts V4 anode circuit to a degree depending on the position of the slider of R20, while C29, which is small, feeds back higher frequency components of the output to the control grid when the position of R20 slider permits it; when it doesn't, C29 is shunted directly across the input circuit to V4. C30, R20 shunt V3 anode circuit, attenuating the upper frequency end of the audio spectrum to a degree depending again on the position of R20 slider.

In the A.C. model, H.T. current is supplied by half-wave rectifying valve (V5, Mullard UY41) from the H.T. secondary 4, 5, 6 of the double-wound mains transformer T2. Smoothing is effected by the iron-cored choke L19 and electrolytic capacitors C36, C37. Valve heaters, in-



The appearance of all three receivers.

cluding that of the rectifier, are connected in series across the lower section of the H.T. secondary, between tapings 4 and 5. The scale lamps are energized from a separate secondary winding 1, 3.

In the A.C./D.C. model, the same valve types are used, but their heaters are connected in a different order and they are connected via the ballast resistor R27 directly across the mains input circuit. The rectifier anode is connected via the surge limiter R26 to one side of the mains, but the output from its cathode goes via the same path as it does in the A.C. model. The scale lamps are inserted in series with the mains lead to the chassis pressing, and are shunted by a thermistor (Brimistor, CZ1). This circuit carries

the combined H.T. and heater current. Because the chassis is "live" to the mains, isolating capacitors are inserted in the aerial, earth and pick-up leads, and the speech coil circuit is returned to the E socket, instead of to chassis as in the A.C. model.

COMPONENTS AND VALVES

CAPACITORS		Values	Locations
C1	I.F. filter tune ...	100pF	A2
C2	M.W. aerial shunt	220pF	A2
C3	L.W. aerial shunt...	880pF	A2
C4	L.W. aerial fixed trim. ...	56pF	B2
C5	V1 hex. C.G. ...	300pF	G4
C6	V1 S.G. decoupl. ...	0.1μF	G4
C7	1st I.F. trans. tune	56pF	A2
C8	1st I.F. trans. tune	56pF	A2
C9	S.W. neutralising...	1pF	G3
C10	V1 osc. C.G. ...	47pF	G4
C11	V1 osc. by-pass ...	0.1μF	F4
C12	Osc. M.W. tracker	680pF	H4
C13	Osc. L.W. tracker	420pF	H4
C14	Osc. S.W. tracker...	4,700pF	H3
C15	Osc. L.W. fixed trim. ...	240pF	H4
C16	A.G.C. decoupl. ...	0.1μF	H5
C17	Osc. anode coupling	0.001μF	G3
C18	V2 S.G. decoupling	0.1μF	G5
C19	V2 anode decoupl.	0.1μF	G5
C20	2nd I.F. trans.tune	100pF	B2
C21	2nd I.F. trans.tune	100pF	B2
C22	V2 cath. by-pass ...	0.1μF	G5
C23	I.F. by-pass ...	50pF	G5
C24	A.G.C. coupling ...	15pF	F5
C25*	V3 cath. by-pass ...	25μF	E5
C26	A.F. coupling ...	0.005μF	F5
C27	A.F. coupling ...	0.01μF	E5
C28	A.F. coupling ...	0.0016μF	E5
C29	A.F. coupling ...	82pF	E4
C30	Tone control and negative feedback capacitors ...	0.005μF	E5
C31	Tone control and negative feedback capacitors ...	82pF	E5
C32	Tone control and negative feedback capacitors ...	820pF	E5
C33	Tone control and negative feedback capacitors ...	0.0025μF	E4
C34	Tone control and negative feedback capacitors ...	0.005μF	E5
C35*	V4 S.G. de-coupl. ...	2μF	E5
C36*	H.T. smoothing ...	32μF	C1
C37*	H.T. smoothing ...	32μF	C1
C38	R.F. by-pass ...	0.0025μF	F4
C39†	Aerial S.W. trim. ...	40pF	A2
C40†	Aerial M.W. trim. ...	40pF	A2
C41†	Aerial L.W. trim. ...	40pF	A2
C42†	Aerial tuning ...	580pF	A1
C43†	Oscillator tuning ...	580pF	A1
C44†	Osc. S.W. trim. ...	40pF	G3
C45†	Osc. M.W. trim. ...	40pF	H4
C46†	Osc. L.W. trim. ...	40pF	H4
C47	Aerial isolator ...	0.0025μF	H5
C48	Earth isolator ...	0.1μF	H5
C49	P.U. isolators ...	0.01μF	G5
C50	P.U. isolators ...	0.05μF	G5
C51	Mains B.F. by-pass	0.1μF	B3

* Electrolytic. † Variable. ‡ Pre-set.

RESISTORS		Values	Locations
R1	V1 hex. C.G. ...	470kΩ	F4
R2	V1 S.G. H.T. pot. divider	27kΩ	G4
R3	V1 S.G. H.T. pot. divider	33kΩ	G4
R4	V1 fixed G.B. ...	330Ω	G4
R5	V1 osc. C.G. ...	47kΩ	G4
R6	S.W. osc. damping	47Ω	H3
R7	Osc. anode load ...	33kΩ	G4
R8	V2 S.G. H.T. feed...	68kΩ	G5
R9	V2 anode de-coupl.	2.2kΩ	G5
R10	V2 fixed G.B. ...	330Ω	G5
R11	Signal diode load	680kΩ	F5
R12	I.F. stopper ...	100kΩ	G5
R13	Volume control ...	1MΩ	E3
R14	V3 triode G.B. ...	4.7kΩ	F5
R15	A.G.C. de-coupling	1MΩ	F5
R16	A.G.C. diode load	1MΩ	F5
R17	V3 anode load ...	100kΩ	F5
R18	V4 C.G. resistor ...	680kΩ	F4
R19	V4 G.B. ...	47kΩ	F5
R20	Tone control and negative feedback resistors ...	500kΩ	D3
R21	Tone control and negative feedback resistors ...	470kΩ	E5
R22	Tone control and negative feedback resistors ...	470kΩ	E5
R23	Tone control and negative feedback resistors ...	15kΩ	E5
R24	V4 G.B. ...	120Ω	F5
R25	V4 S.G. H.T. feed	12kΩ	F5
R26	Surge limiter ...	130Ω	E5
R27	Heater ballast ...	1,230Ω†	C2

† Tapped at 980Ω + 150Ω + 150Ω from V5 heater

