

RESISTANCES		Values (ohms)
R1	LW frame damping	15,000
R2	V1 CG decoupling	1,000,000
R3	V1, V2 anodes HT feed	1,000
R4	V2 CG resistance	1,000,000
R5	V2 SG HT feed	15,000
R6	AVC line decoupling	500,000
R7	IF stopper	23,000
R8	Westector signal load	230,000
R9	Pick-up shunt	23,000
R10	Manual volume control	250,000
R11	V4 CG resistance	2,300,000
R12	V4 grid stopper	100,000
R13	V4 anode load	50,000
R14	V1-V4 HT feed	7,500
R15	V5, V6 CG's decoupling	230,000

CONDENSERS		Values (μF)
C1	Ext. aerial series	0.00005
C2	V1 CG decoupling	0.01
C3	V1, V2 anodes decoupling	0.4
C4	V2 CG condenser	0.0001
C5	V2 SG decoupling	0.2
C6	1st IF trans. pri. tuning	0.0001
C7	Osc. circuit LW trimmer	0.00015
C8	HT isolating condenser	0.0017
C9	V3 CG decoupling	0.1
C10	V1, V3 SG's decoupling	0.2
C11	Westector AVC coupling	0.0002
C12	Westector signal coupling	0.0002
C13	IF by-pass	0.0001
C14	HT line decoupling	2.0
C15	AF coupling to V4	0.01
C16	IF by-pass	0.002
C17	AF coupling to T1	0.1
C18	Fixed tone corrector	0.001
C19	Frame aerial tuning	0.0001
C20	Frame manual trimmer	0.00007
C21	V1 anode LW trimmer	—
C22	V1 anode circuit tuning	—
C23	V1 anode MW trimmer	—
C24	Oscillator circuit tuning	—
C25	Osc. circ. MW trimmer	—
C26	1st IF trans. pri. tuning	0.0001
C27	1st IF trans. sec. tuning	0.0001
C28	2nd IF trans. pri. tuning	0.0001
C29	2nd IF trans. sec. tuning	0.0001

† Variable. ‡ Pre-set.

VALVE ANALYSIS

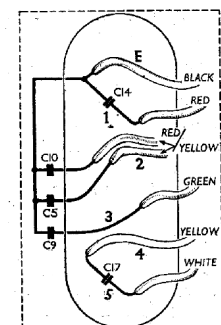
Valve currents given in the table below are those quoted in the makers' manual. Voltages have been computed on the

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 S21	122	1.9	60	1.5
V2 S21	122	1.0	40	0.6
V3 VS2	127	0.9	60	0.7
V4 HL2	66	0.6	—	—
V5 PT2	166	1.0	*	0.4
V6 PT2	166	1.0	*	0.4

* V5, V6 screen voltage depends upon the code letters on the valves (see "General Notes").
assumption that the meter resistance is 200,000 ohms (such as the 400 V scale of the Model 7 Universal Avometer), and that the negative lead is connected to chassis.

Switch Table

Switch	Off	MW	LW	Gram
S1	—	—	—	—
S2	—	—	—	—
S3	—	—	—	—
S4	—	—	—	—
S5	—	—	—	—
S6	—	—	—	—
S7	—	—	—	—



Sketch showing the connections of the condenser block, as seen when viewed from the rear of the underside of the chassis.

OTHER COMPONENTS

		Approx. Values (ohms)
L1	Frame aerial windings	2.0
L2	V1 anode MW tuning	15.0
L3	V1 anode LW tuning	4.0
L4	V1 anode LW tuning	13.0
L5	V1 filament reaction coils	1.4
L6	V1 filament reaction coils	1.4
L7	Osc. circ. MW tuning	3.5
L8	Osc. circ. LW tuning	6.4
L9	1st IF trans. { Pri. ...	63.0
L10	1st IF trans. { Sec. ...	90.0
L11	2nd IF trans. { Pri. ...	73.0
L12	2nd IF trans. { Sec. ...	82.0
L13	Speaker speech coil	4.0
T1	Intervalve { Pri. ...	465.0
T2	trans. { Sec. ... total	7,800.0
T2	Speaker input { Pri. ... total	465.0
T2	trans. { Sec. ...	1.0
S1-S6	Waveband switches	—
S7	HT circuit switch	—
S8	LT circuit switch	—
MR1	Westector rectifier	—

CIRCUIT ALIGNMENT

IF Stages.—Switch set to MW, turn the gang to minimum and the volume control to maximum. Short-circuit the frame aerial connections or remove V1 anode (top cap) connector. Sufficient coupling between the signal generator and receiver should be obtained by connecting a coil of wire across the generator output and placing the coil near V2 holder; otherwise, the signal generator leads may be connected via a 0.01 μF condenser to V2 control grid and chassis.
Feed in a 125 KC/S (2,400 m) signal, and adjust C27 for maximum output, then adjust C26, C28 and C29, in that order, for maximum output. Replace V1 top cap, or remove short-circuit.

It is important that these adjustments are made with a trimming tool whose handle and blade are insulated. Serious damage may result from contact between the blade and chassis while the adjustment of C26 or C28 is being carried out. A piece of adhesive tape round the blade provides sufficient protection.

MR and Oscillator stages.—With the gang at maximum, and the scale pointers at about the centres of their slots, the letters "MW" and "LW" should register with the pointers. If they do not, the scale drum can be adjusted after the two grub screws in the coupling between the drum and the gang spindle have been slackened.

Remove the frame aerial connecting panel (three set screws) from the end of the rear of the chassis, and transfer the signal generator leads to the two outer terminals from which the connecting panel has been removed.

MW.—Switch set to MW, slacken off C23 and reset to a position just short of maximum, and fully unscrew C25. Tune to 220 m on scale, feed in 220 m (1,360 KC/S) signal, and adjust C25 for maximum output. Then adjust C23 for maximum output. Repeat these adjustments.

LW.—Switch set to LW, tune to 1,000 m on scale, feed in a 1,000 m (300 KC/S) signal, and adjust C21 for maximum output.

Replace the frame connecting panel, and check the calibration at various scale settings, using broadcast signals or coupling the signal generator via a turn or two of wire round the case. Finally, adjust the scale points in their slots for the best compromise on each waveband.

Diagram showing the connections to the switch unit, drawn as seen in the position indicated in our under-chassis view.

The values given are approximately correct when the receiver is operating with a new HT battery reading 175 V overall, the receiver is switched to LW and an earth wire is connected to the chassis. It is important that there should be no signal input.