

RESISTANCES		Values (ohms)
R1	V1 SG HT feed	35,000
R2	V1 fixed GB resistance	100
R3	V1 osc. CG resistance	50,000
R4	V2 fixed GB resistance	100
R5	AVC line decoupling	2,000,000
R6	Manual volume control; V3 signal diode load	500,000
R7	V3 triode CG resistance	2,000,000
R8	V3 triode anode load	250,000
R9	V4 CG resistance	600,000
R10	V4 GB resistance	190
R11	V4 anode stopper	100
R12	HT feed resistance	1,200

CONDENSERS		Values (μF)
C1	V1 SG decoupling	0.1
C2	Osc. CG condenser	0.00015
C3	AVC line decoupling	0.2
C4	HT circuit RF by-pass	0.2
C5	IF by-pass	0.0001
C6	AF coupling to V3 triode	0.015
C7	IF by-pass	0.00075
C8	V3 triode to V4 AF coupling	0.0025
C9	Fixed tone corrector	0.01
C10*	HT smoothing condensers	16.0
C11*		32.0
C12	V5 anode RF by-pass	0.02
C13	Mains RF by-pass	0.1
C14†	Frame aerial tuning	—
C15†	Frame aerial MW trimmer	—
C16†	Oscillator circuit tuning	—
C17†	Osc. circuit MW trimmer	—
C18†	Osc. circuit LW trimmer	—
C19†	Osc. circuit MW tracker	—
C20†	Osc. circuit LW tracker	—
C21†	1st IF trans. pri. tuning	—
C22†	1st IF trans. sec. tuning	—
C23†	2nd IF trans. pri. tuning	—
C24†	2nd IF trans. sec. tuning	—

OTHER COMPONENTS		APPROX. VALUES (ohms)
L1	Frame aerial windings	1.5
L2		16.0
L3	Osc. circuit MW tuning coil	5.0
L4	Osc. circuit LW tuning coil	9.0
L5	Oscillator MW reaction	4.25
L6	Oscillator LW reaction	7.5
L7	1st. IF { Pri. ...	4.0
L8	trans. { Sec. ...	4.0
L9	2nd. IF { Pri. ...	10.5
L10	trans. { Sec. ...	10.5
L11	Speaker speech coil	2.5
T1	Output { Pri. ...	240.0
	trans. { Sec. ...	0.2
T1	{ Pri. total ...	90.0
T2	Mains Heater sec. ...	0.2
	Rect. heat. sec. ...	0.2
	HT sec. total ...	500.0
S1-S5	Waveband switches...	—
S6	Mains switch, ganged R6 ...	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating on mains of 223 V, using the 230 V tapping on the mains transformer.

The frame aerial leads were joined together, the receiver was tuned to the lowest wavelength on the medium band and the volume control was at maxi-

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 ECH3	{ 118 Oscilator 118	{ 0.3 4.2	58	1.7
V2 EF9	118	8.1	118	2.7
V3 EBC3	28	0.4	—	—
V4 EL3	112	16.0	118	1.9
V5 AZ1	164†	—	—	—

† Each anode, AC

mum, but there was no signal input.

Voltages were measured on the 400 V scale of a model 7 universal Avometer, chassis being negative.

SWITCH TABLE

Switch	MW	LW
S1	C	—
S2	—	C
S3	C	—
S4	C	—
S5	C	—

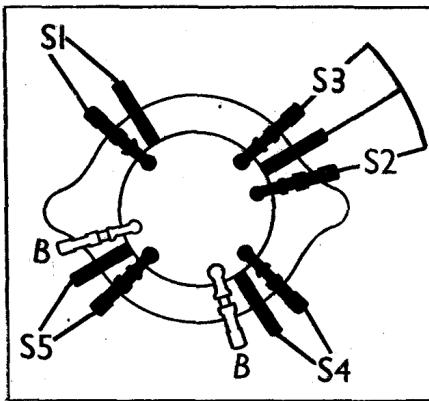
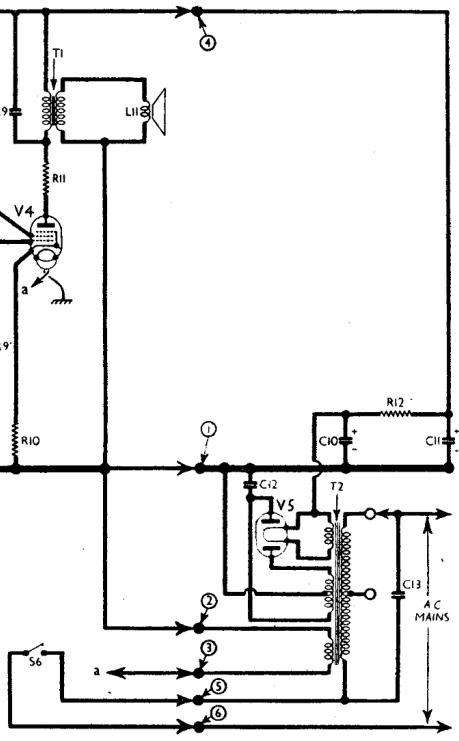


Diagram of the wavechange switch unit, as seen from the front of the chassis, after removal of the loudspeaker.



CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator, via a 0.1 μF condenser, to control grid (top cap) of **V1**, and to chassis. Switch set to MW, feed in a 450.5 KC/S signal, and adjust **C24**, **C23**, **C22** and **C21** in turn for maximum output.

RF and Oscillator Stages.—With gang at minimum, pointer should cover 200 m mark on scale. Couple signal generator to external **A** socket.

Switch set to MW and turn gang to minimum. Feed in a 200 m (1,500 KC/S) signal and adjust **C17** for maximum output. Switch set to LW, and with gang still at minimum, feed in an 895 m (335 KC/S) signal and adjust **C18** for maximum output.

Turn gang to maximum, and with set switched to LW, feed in a 2,040 m (147 KC/S) signal and adjust **C20** for maximum output. Re-adjust **C18** at 895 m if necessary. Switch set to MW, and with gang at maximum, feed in a 550 m (543 KC/S) signal and adjust **C19** for maximum output. Re-adjust **C17** at 200 m if necessary.

Remove signal generator, and tune in a weak station near 200 m. Adjust **C15** for maximum output. Next tune in a LW station at about 1,700 m and re-adjust **C20**, while rocking the gang, for maximum output. Finally tune in a MW station at about 450 m, and re-adjust **C19**, while rocking the gang, for maximum output.