

EKCO - AD38

RESISTORS		Values (ohms)
R1	Aerial-earth shunt ...	50,000
R2	Parts V1 variable gain control potentiometer ...	30,000
R3	V1 variable gain control ...	140
R4	V1 anode and SG HT feed ...	10,000
R5	V2 grid leak ...	10,000
R6	V2 SG HT feed ...	2,000,000
R7	V2 anode decoupling ...	250,000
R8	V2 anode load ...	25,000
R9	V2 anode load ...	100,000
R10	RF stopper ...	10,000
R11	V3 CG resistor ...	500,000
R12	V3 GB resistor ...	165
R13	Part of TC filter ...	10,000
R14	V4 surge limiter ...	100
R15	Scale lamp by-pass ...	50
R16	Heater circuit ballast ...	775*

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

VALVE ANALYSIS

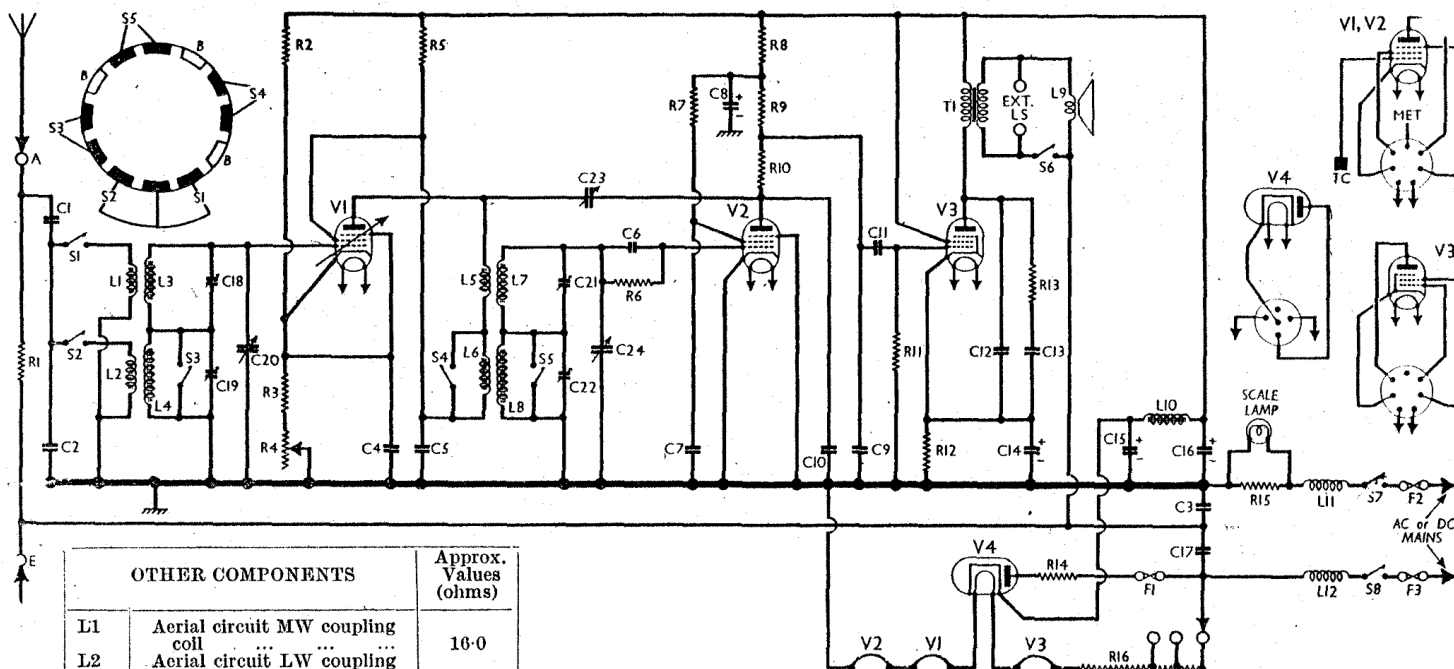
Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VPU1	125	4.5	125	1.9
V2 SP13C	40	0.9	65	0.3
V3 Pen36C	165	42.0	190	6.7
V4 UR1C†	—	—	—	—

CONDENSERS		Values (μF)
C1	Aerial input potential divider ...	0.0012
C2	Earth isolating condenser ...	0.00015
C3	V1 HT decoupling ...	0.1
C4	V1 cathode by-pass ...	0.25
C5	V2 SG decoupling ...	0.15
C6	V2 CG condenser ...	0.000015
C7	V2 SG decoupling ...	0.1
C8*	V2 anode decoupling ...	2.0
C9	V2 anode RF by-pass condensers ...	0.0003
C10	V2 to V3 AF coupling ...	0.0002
C11	Parts of TC filter ...	0.1
C12	V3 cathode by-pass ...	0.01
C13	Parts of TC filter ...	0.01
C14*	V3 cathode by-pass ...	50.0
C15*	HT smoothing condensers ...	8.0
C16*	Mains RF by-pass ...	24.0
C17	Aerial circuit MW trimmer ...	0.1
C18†	Aerial circuit LW trimmer ...	—
C19†	Aerial circuit tuning ...	—
C20†	RF trans. MW trimmer ...	—
C21†	RF trans. LW trimmer ...	—
C22†	Reaction control ...	—
C23†	RF trans. tuning ...	—
C24†	—	—

*Tapped at 575Ω + 100Ω + 100Ω from V3 heater end.

† Cathode to chassis, 215 V, DC.

* Electrolytic. † Variable. ‡ Pre-set.



OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial circuit MW coupling coil ...	16.0
L2	Aerial circuit LW coupling coil ...	74.0
L3	Aerial MW tuning coil ...	2.0
L4	Aerial LW tuning coil ...	13.0
L5	RF transformer primary coils ...	2.0
L6	RF transformer secondary coils ...	9.5
L7	Speaker speech coil ...	2.4
L8	HT smoothing choke ...	12.5
L9	Mains circuit filter chokes ...	2.8
L10	—	375.0
L11	—	2.5
L12	—	2.5
T1	Output trans. { Pri. ...	650.0
S1-S5	Waveband-switches ...	0.3
S6	Internal speaker switch ...	—
S7, S8	Mains switches, ganged R4 ...	—
F1	HT circuit fuse, 0.5A ...	—
F2	—	—
F3	Mains input fuses, 1.0A ...	—

CIRCUIT ALIGNMENT

With the gang at maximum, pointer should cover the 560 m. mark on the scale. If it does not, loosen the two small screws in the front of the pointer mounting plate, and turn the pointer through the desired angle, subsequently tightening up the screws again. Connect a signal generator to A and E sockets via a 0.0002 μF condenser.

MW.—Switch set to MW, and tune to 250 m on scale. Set volume (gain) control to maximum, and sensitivity (reaction) control to a point at which receiver is just short of oscillation. Feed in a 250 m (1,200 kc/s) signal, adjusting C21 and C18 for maximum output.

LW.—Switch to LW, tune to 1,090 m on scale, and readjust C23 (reaction) until receiver is just short of oscillation. Feed in a 1,090 m (2.7 kc/s) signal, and adjust C22 and C19 for maximum output.

If during these operations receiver breaks into oscillation, reduce the reaction setting slightly to avoid this.