

EKCO - A110

Valve	Anode		Screen		Cath.
	V	mA	V	mA	
V1 ECH42	245	2.5	100	2.8	3.0
V2 6F41	120	4.0	100	1.6	2.3
V3 6BC41	122	0.5	—	—	1.8
V4 6L41	222	33.0	245	5.1	6.5
V5 6Z40	270†	—	—	—	270.0

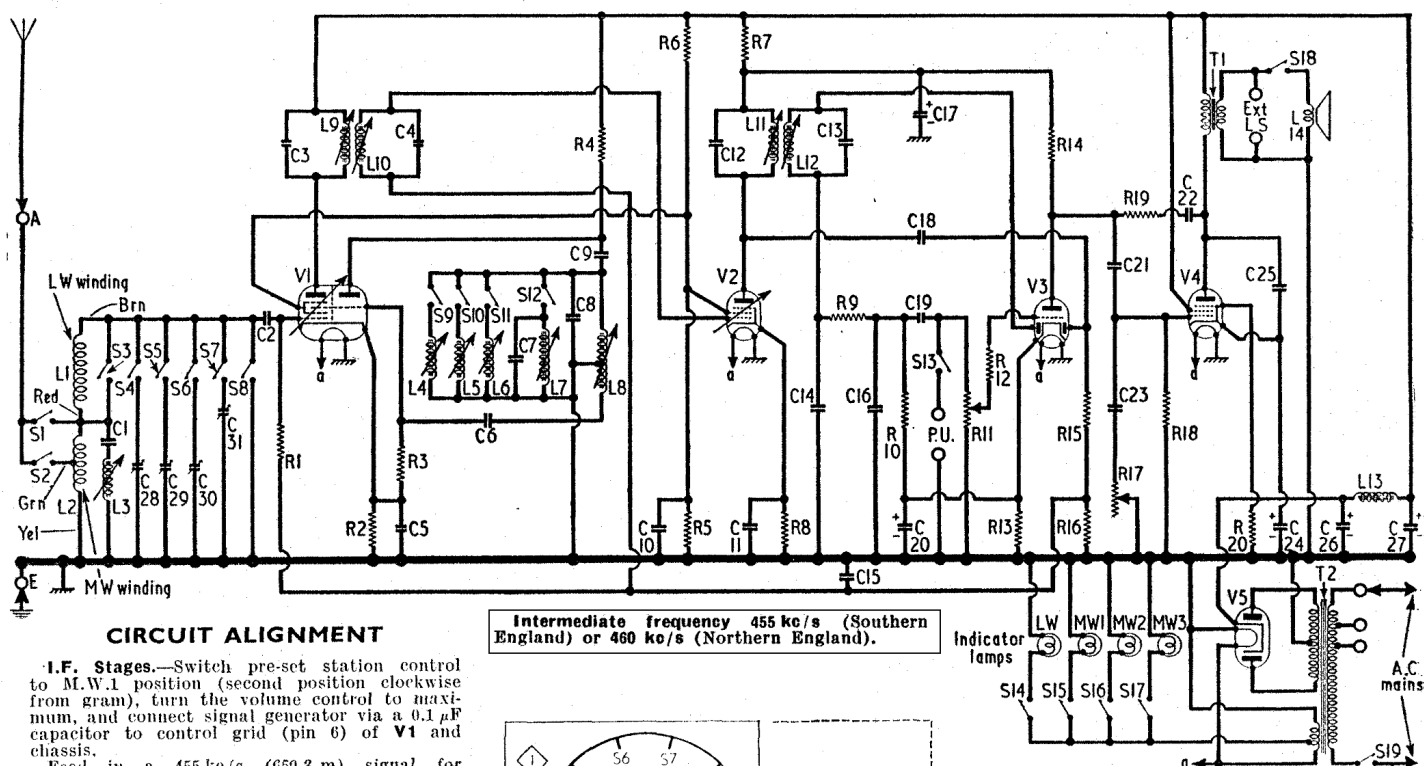
† Each anode A.C.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	L.W. frame aerial...	6.5	—
L2	M.W. frame aerial...	0.6	—
L3	I.F. filter coil ...	16.0	F3
L4	Oscillator pre-set tuning coils	3.0	F4
L5		4.0	F4
L6		2.0	A2
L7		3.0	A2
L8	M.O. coil (total) ...	14.5	F3
L9	1st I.F. trans. { Pri.	30.0	A2
L10		30.0	A2
L11	2nd I.F. trans. { Pri.	15.0	A2
L12		15.0	A2
L13	Smoothing choke ...	320.0	A1
L14	Speech coil ...	2.2	—
T1	Output trans. { Pri.	610.0	C4
	Mains { Pri. total ...	0.4	—
T2		50.0	—
		660.0	B1
S1-S17	Tuning switches ...	—	A1
S18	Spkr. muting sw. ...	—	B4
S19	Mains sw. g'd R11	—	B1

RESISTORS		Values	Locations
R1	V1 hex. C.G. ...	1MΩ	E3
R2	V1 fixed G.B. ...	330Ω	F3
R3	V1 osc. C.G. ...	47kΩ	E3
R4	Osc. anode load ...	33kΩ	E3
R5	V1, V2 S.G. H.T. feed	33kΩ	E3
R6		22kΩ	E3
R7	V2, V3 H.T. decoup.	3.3kΩ	E4
R8	V2 fixed G.B. ...	330Ω	F4
R9	I.F. stopper ...	100kΩ	E4
R10	Diode load ...	560kΩ	E3
R11	Volume control ...	1MΩ	B1
R12	Grid stopper ...	47kΩ	C3
R13	V3 G.B. ...	4.7kΩ	E3
R14	Triode anode load ...	100kΩ	E4
R15	A.G.C. diode load ...	1MΩ	E4
R16		2.2MΩ	E3
R17	Tone control ...	0.5MΩ	B2
R18	V4 C.G. resistor ...	680kΩ	D4
R19	F-B resistor ...	1.8MΩ	C3
R20	V4 G.B. ...	180Ω	D4

CAPACITORS		Values	Locations
C1	I.F. filter tune ...	82pF	F3
C2	V1 hex. C.G. ...	100pF	F3
C3	1st I.F. trans. tuning ...	56pF	A1
C4		56pF	A1
C5	V1 cath. by-pass ...	0.1μF	E3
C6	V1 osc. C.G. ...	200pF	F3
C7	L.W. osc. trim. ...	250pF	A2
C8	M.O. fixed tune ...	270pF	A2
C9	Osc. anode coup. ...	500pF	F3
C10	V1, V2 S.G. decoup. ...	0.1μF	E3
C11	V2 cath. by-pass ...	0.1μF	F4
C12	2nd I.F. trans. tuning ...	100pF	A2
C13		100pF	A2
C14	I.F. by-pass ...	100pF	E4
C15	A.G.C. decoupling ...	0.02μF	E3
C16	I.F. by-pass ...	100pF	E4
C17*	V2, V3 H.T. decoup.	4μF	E4
C18	A.G.C. coupling ...	15pF	E4
C19	A.F. coupling ...	0.01μF	E3
C20*	V3 cath. by-pass ...	50μF	E3
C21	A.F. coupling ...	0.01μF	D4
C22	F-B coupling ...	0.001μF	C4
C23	Part tone control ...	0.01μF	D1
C24*	V4 cath. by-pass ...	50μF	D4
C25	Tone corrector ...	0.005μF	D4
C26*	H.T. smoothing ...	32μF	B1
C27*		32μF	B1
C28†	Aerial M.W. 3 trim.	180pF	A2
C29†	Aerial M.W. 2 trim.	350pF	A2
C30†	Aerial M.W. 1 trim.	750pF	A2
C31†	Aerial L.W. trim. ...	750pF	A2

* Electrolytic. † Pre-set.



CIRCUIT ALIGNMENT

I.F. Stages.—Switch pre-set station control to M.W.1 position (second position clockwise from gram), turn the volume control to maximum, and connect signal generator via a 0.1μF capacitor to control grid (pin 6) of V1 and chassis.

Feed in a 455 kc/s (659.3 m) signal for Southern areas of the country, or a 460 kc/s (652.1 m) signal for Northern areas, and adjust L11 and L12, then L9 and L10 (location reference A2 and E4) for maximum output. The area for which they were originally adjusted is indicated by a large "S" or "N" stamped in indelible ink near the rear edge of the chassis deck.

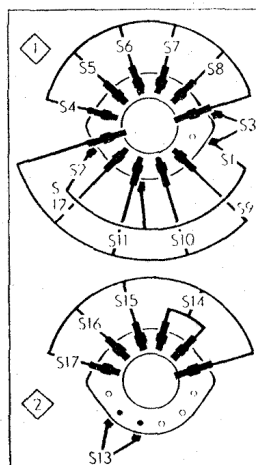
I.F. Filter.—Transfer signal generator leads to A and E sockets, feed in a strong 455 kc/s (or 460 kc/s) signal, and adjust the core of L3 (F3) for maximum output.

Pre-set Stations.—All the adjustments are grouped together at the rear of the chassis (location reference A2). They are best adjusted on the transmission of the required station, using the special double-ended trimmer tool supplied with the receiver, and adjusting the oscillator coil first.

Starting from the fully anti-clockwise (gram) position of the control knob, the four successive positions are L.W., M.W.1, M.W.2 and M.W.3. The associated adjustments run from top to bottom in the same order, and their ranges are: L.W., 1,200-1,800 m; M.W.1, 340-550 m; M.W.2, 245-390 m; M.W.3, 194-290 m. After adjustment to a particular station, the appropriate name panel should be inserted in the respective indicator window. The old one can be removed most easily by a prod from the rear.

The master oscillator coil L8 is adjusted on an inductance bridge to 251μH at works and sealed, and it should not require readjustment. If it has been disturbed, however, it may be reset by feeding in a 135 kc/s signal directly to V1 control grid (pin 6), switching the selector control to gram, and adjusting L8 core for maximum output.

Intermediate frequency 455 kc/s (Southern England) or 460 kc/s (Northern England).



Diagrams of the waveband switch units, as seen when viewed in the direction of the arrows in our plan view above.

Switch	Gram.	L.W.	M.W.1	M.W.2	M.W.3
S1	—	C	—	—	—
S2	—	—	C	—	—
S3	—	—	—	C	—
S4	—	—	—	—	C
S5	—	—	—	—	—
S6	—	—	—	—	—
S7	—	C	—	—	—
S8	—	—	C	—	—
S9	C	—	—	—	C
S10	—	—	—	C	—
S11	—	—	—	—	—
S12	—	—	—	—	—
S13	C	—	—	—	—
S14	—	C	—	—	—
S15	—	—	C	—	—
S16	—	—	—	C	—
S17	C	—	—	—	C