

EKCO - U195

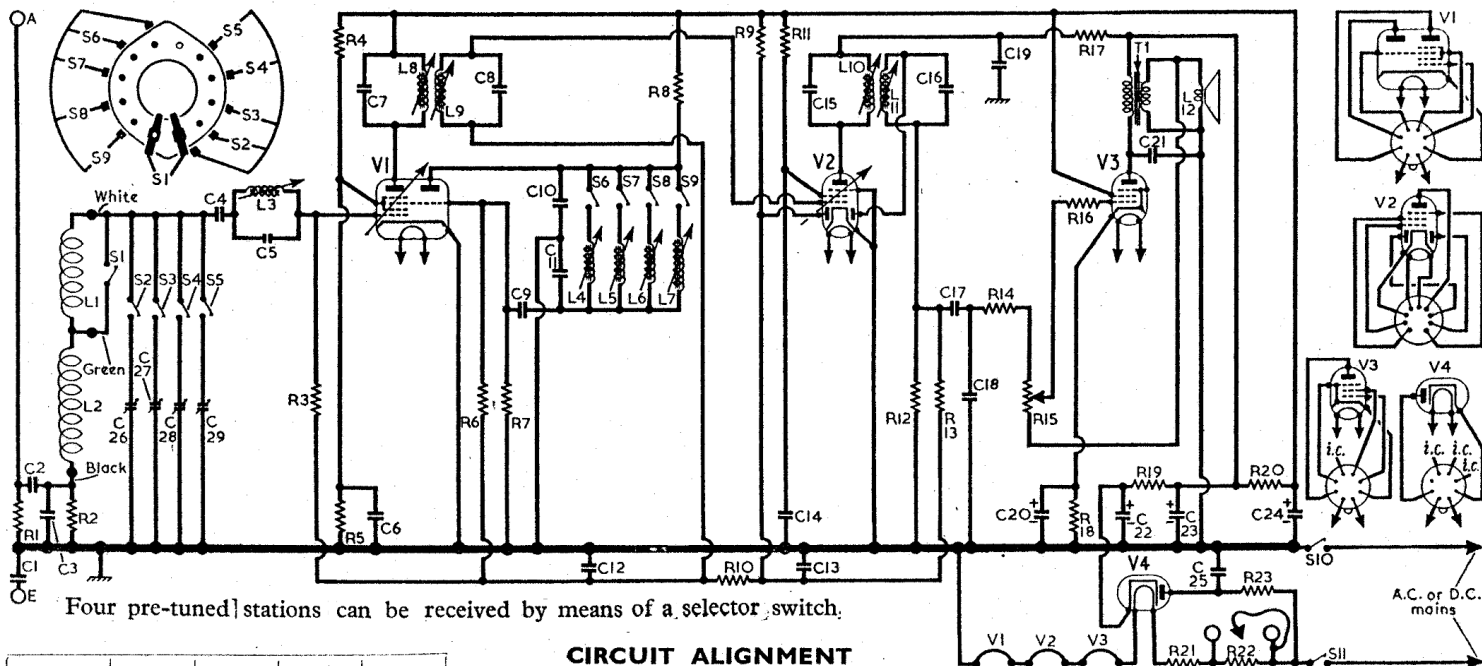
Intermediate Frequency 470 kc/s.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerials	1.0	—
L2		5.6	—
L3	I.F. filter	14.0	A2
L4		1.5	A2
L5	Oscillator pre-set tuning coils	1.5	A2
L6		1.5	A2
L7	1st I.F. trans.	2.0	A2
L8		14.0	A2
L9	2nd I.F. trans.	14.0	B2
L10		14.0	B2
L11	Speech coil	2.5	B1
L12		2.5	B1
T1	O.P. trans.	270.0	E3
S1-S9	Waveband switches	—	A1
S10	Mains sw., g'd R15	—	—
S11		—	A1

RESISTORS		Values	Locations
R1	Anti-static shunt...	1.5MΩ	G4
R2	Aerial input shunt	22kΩ	G3
R3	V1 C.G. ...	680kΩ	F3
R4	V1 S.G. H.T. pot. divider	10kΩ	F3
R5		15kΩ	F3
R6	V1 osc. C.G.	10MΩ	F3
R7	V1 osc. anode feed	47kΩ	F3
R8	A.G.C. delay	22kΩ	G3
R9	A.G.C. decoupling	10MΩ	F4
R10	V2 S.G. feed	1.5MΩ	F3
R11	Signal diode load	47kΩ	F4
R12	A.G.C. decoupling	470kΩ	E3
R13	I.F. stopper	2.2MΩ	F4
R14	Volume control	47kΩ	E4
R15	V3 C.G. stopper	1MΩ	A1
R16	H.T. decoupling	47kΩ	E4
R17	V3 G.B. ...	3.3kΩ	F4
R18	H.T. smoothing	100Ω	F4
R19	Heater ballast	680Ω	C2
R20		4.7kΩ	F4
R21	V4 surge limiter	1,030Ω	C2
R22		300Ω	C2
R23		150Ω	C2

CAPACITORS		Values	Locations
C1	Chassis isolators	0.01μF	G4
C2		0.002μF	G4
C3	Aerial input shunt	3,300pF	G4
C4	V1 C.G. ...	100pF	A1
C5	I.F. filter tune	82pF	A2
C6	V1 S.G. decoupling	0.01μF	F3
C7	1st I.F. trans. tun.	100pF	A2
C8		100pF	A2
C9	V1 osc. C.G.	100pF	F3
C10	Oscillator tune	560pF	G3
C11		0.001μF	G3
C12	A.G.C. decoupling	0.04μF	F4
C13	A.G.C. decoupling	270pF	F3
C14	V2 S.G. decoupling	0.01μF	F4
C15	2nd I.F. trans. tun.	100pF	B2
C16		100pF	B2
C17	A.F. coupling	0.01μF	E4
C18	I.F. by-pass	100pF	E4
C19	H.T. decoupling	0.01μF	F4
C20*	V3 cath. by-pass	50μF	D4
C21	Tone corrector	0.0025μF	E4
C22*		32μF	C1
C23*	H.T. smoothing	16μF	G4
C24*		32μF	C1
C25	Mains R.F. by-pass	0.01μF	D4
C26†		200pF	A2
C27†	Aerial Pre-sets	380pF	A2
C28†		750pF	A2
C29†		750pF	A2

* Electrolytic. † Pre-set.



CIRCUIT ALIGNMENT

I.F. Stages.—Switch pre-set station control to M.W.3 position (third position from fully anti-clockwise), turn volume control to maximum, and connect signal generator output, via an 0.1μF capacitor in each lead, to control grid (pin 6) of V1 and chassis.

Feed in a 470 kc/s (638.3m) signal and adjust the cores of L11 (location reference B2), L10 (F4), L9 (A2) and L8 (F4) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. effects. Repeat these adjustments.

I.F. Filter.—Transfer signal generator leads to A and E sockets, feed in a strong 470 kc/s signal and adjust L3 (G4) for minimum output.

Pre-set Stations.—All of 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 position of the control knob, the four positions are M.W.1, M.W.2, M.W.3 and L.W. The associated adjustments run from top to bottom in the same order, and their ranges are: M.W.1, 188-343m; M.W.2, 244-438m; M.W.3, 311-656m; L.W., 1,200-1,875m.

Switch	M.W.1.	M.W.2.	M.W.3.	L.W.
S1	—	—	—	○
S2	○	—	—	—
S3	—	○	—	—
S4	—	—	○	—
S5	—	—	—	○
S6	○	—	—	—
S7	—	○	—	—
S8	—	—	○	—
S9	—	—	—	○

The table (above) gives the switch positions for the four control settings, starting from the fully anti-clockwise (M.W.1) position of the control knob. A dash indicates open, and ○, closed.

Valve	Anode		Screen		Cath.
	V	mA	V	mA	V
V1 UCH42	120	1.5	55	2.1	—
V2 UBF80	65	2.2	—	—	—
V3 UL41	180	3.7	62	2.0	—
V4 UY41	180	38.0	120	6.0	5.0
	205*	—	—	—	235.0†

* A.C. reading. † Cathode current 59mA.