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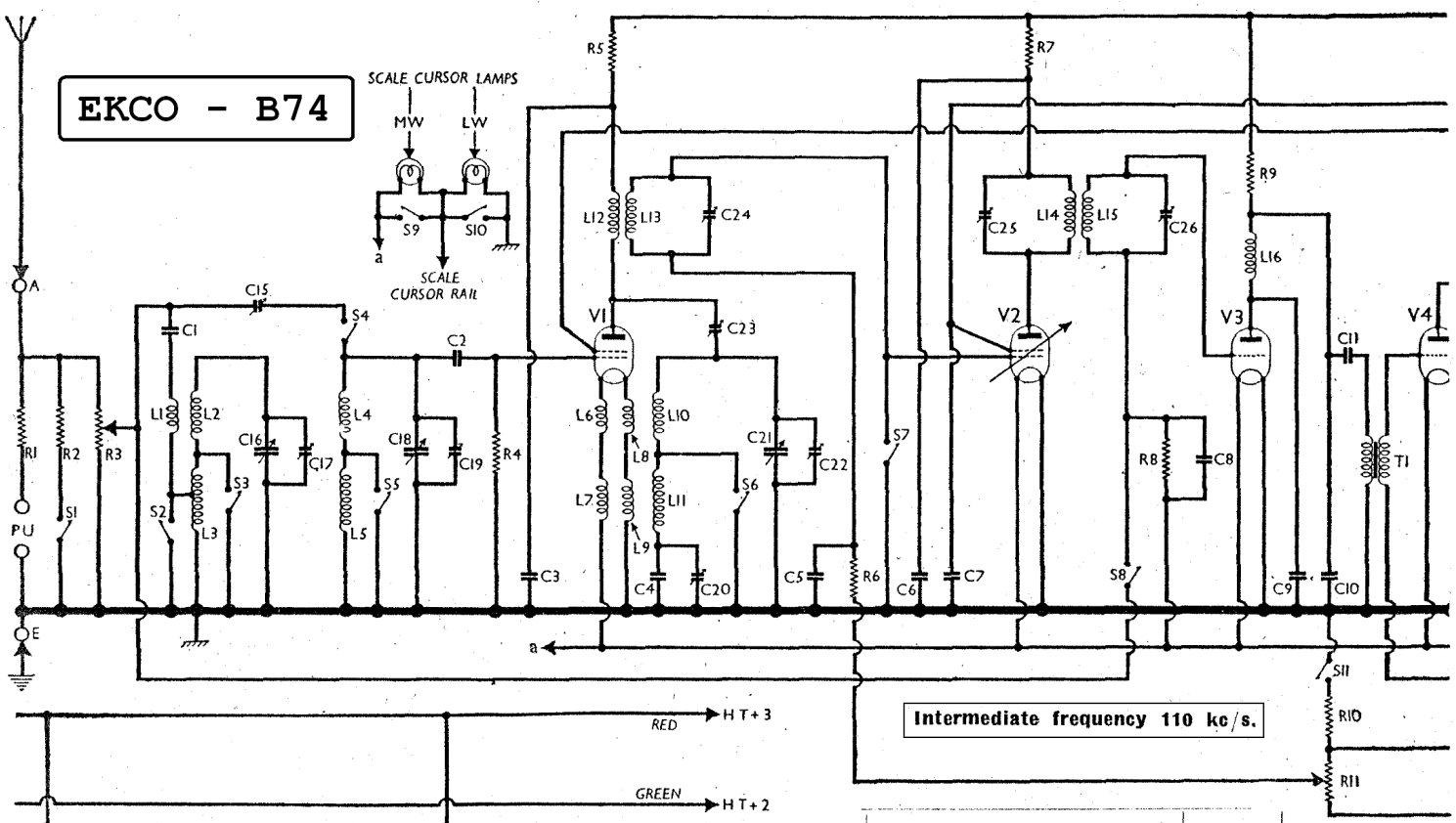

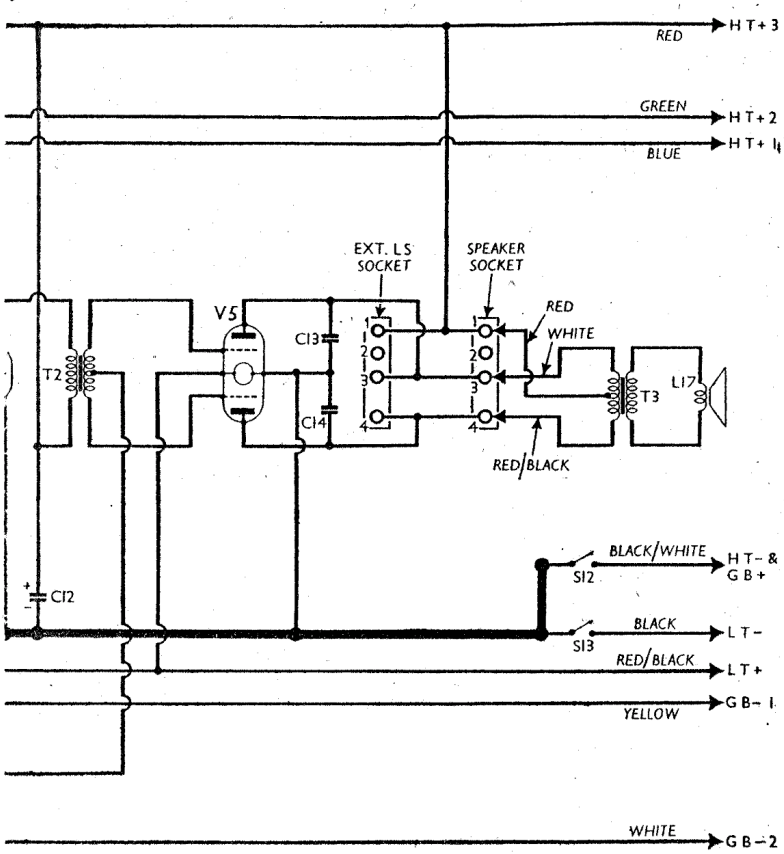

RESISTORS		Values (ohms)
R1	Pick-up series resistor ...	9,000
R2	Local/distant resistor ...	20
R3	Gain control	10,000
R4	V1 CG resistor	2,000,000
R5	V1 anode decoupling ...	4,000
R6	V2 CG decoupling ...	250,000
R7	V2 anode decoupling ...	2,000
R8	V3 grid leak	250,000
R9	V3 anode load	50,000
R10	V5 GB resistor	70
R11	V2 gain control	1,000

CAPACITORS		Values (μF)
C1	Aerial series coupling ...	0·001
C2	V1 CG capacitor ...	0·0001
C3	V1 anode decoupling ...	0·1
C4	Osc. LW fixed tracker ...	0·00075
C5	V2 CG decoupling ...	0·1
C6	V2 anode decoupling ...	0·1
C7	V2 SG decoupling ...	0·1
C8	V3 CG capacitor ...	0·004
C9, C10	IF by-pass capacitors ...	0·001, 0·001
C11	AF coupling to T1 ...	0·1
C12*	HT circuit reservoir ...	9·0
C13, C14	Fixed tone correctors	0·01, 0·01
C15‡	Image suppressor ...	—
C16†	Band-pass pri. tuning ...	0·0005
C17‡	B-P pri. MW trimmer ...	—
C18†	Band-pass sec. tuning ...	0·0005
C19‡	B-P sec. MW trimmer ...	—
C20‡	Osc. circ. LW tracker ...	—
C21†	Oscillator circuit tuning	0·0004
C22‡	Osc. circ. MW trimmer...	—
C23‡	1st IF trans. pri. tuning	—
C24‡	1st IF trans. sec. tuning	—
C25‡	2nd IF trans. pri. tuning	—
C26‡	2nd IF trans. sec. tuning	—

* Electrolytic. † Variable. ‡ Pre-set.

VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 215SG	120	1·5	63	1·0
V2 220VS	120	4·0	75	1·5
V3 210HF	45	1·5	—	—
V4 PM2DX	125	3·0	—	—
V5 220B	125†	1·0†	—	—

† Each anode, quiescent.

Switch Table

Switch	MW	LW	Gram
S2	C	—	—
S3	C	—	—
S4	C	—	—
S5	C	—	—
S6	C	—	—
S7	—	—	C
S8	—	—	C
S9	—	C	—
S10	C	—	—

	OTHER COMPONENTS	Approx. Values (ohms)
L1	Aerial coupling coil ...	2·5
L2	Band-pass primary coils...	4·0
L3		15.0
L4	Band-pass secondary coils	4·0
L5		15·0
L6	Filament (cathode) oscillator reaction coupling coils	Very low
L7		
L8		
L9		
L10	Osc. MW tuning coil ...	9·0
L11	Osc. LW tuning coil ...	10·0
L12	1st IF trans. Pri. ...	110·0
L13	Sec. ...	110·0
L14	2nd IF trans. Pri. ...	110·0
L15	Sec. ...	110·0
L16	IF filter choke	300·0
L17	Speaker speech coil ...	2·0
T1	Intervalve trans. Pri. ...	500·0
	Sec. ...	2,700·0
T2	Driver trans. Pri. ...	1,100·0
	Sec., total	520·0
T3	Speaker input trans. Pri., total	760·0
	Sec. ...	0·2
S1	Local/distant switch ...	—
S2–S6	Waveband switches ...	—
S7	Radio muting switch ...	—
S8	Gram PU switch ...	—
S9, S10	Scale lamp switches ...	—
S11	GB circuit switch ...	—
S12	HT circuit switch ...	—
S13	LT circuit switch ...	—

CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator leads to **A** and **E** sockets, switch set to LW, turn the gang to maximum capacitance and the volume control to maximum. Switch **S1** should be set to "distant."

Feed in a 110 kc/s (2,727 m) signal, and adjust **C26, C25, C24** and **C23** for maximum output, reducing input as circuits come into line. If no signal can be detected, connect the signal generator leads first to **V2** control grid and chassis, and adjust **C26** and **C25**; then transfer the leads to **V1** control grid and chassis, and adjust **C24** and **C23.** After preliminary adjustment, transfer leads to **A** and **E** sockets and recheck.

RF and Oscillator Stages.—With the gang at minimum and maximum the cursor line should be about an equal distance from the ends of the scale. It may be adjusted if the two fixing screws in the cord line drum boss are slackened.

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Leave **S1** and the signal generator connections as described for IF stages, but insert a dummy aerial or a 0.0002 μF capacitor in series with the aerial connection.

MW.—Switch set to MW, tune to 200 m on scale, feed in a 200 m (1,500 kc/s) signal, and adjust **C22** for maximum output. Tune to 250 m on scale, feed in a 250 m (1,200 kc/s) signal, and adjust **C19** and **C17** for maximum output. **C19** will usually be nearly at its minimum position.

Feed in a 500 m (600 kc/s) signal, and tune it in. If the calibration now reads too high, slacken off **C22** slightly, feed in a 250 m (1,200 kc/s) signal, tune it in, and adjust the cursor for correct calibration, readjusting **C19** and **C17.** If the calibration reads too low, screw up **C26** slightly, then proceed as before. Repeat until no improvement results.

LW.—Switch set to LW, tune to 1,800 m on scale, feed in an 1,800 m (166.5 kc/s) signal, and adjust **C20** for maximum output. Check calibration at 1,200 m (250 kc/s), and if incorrect, readjust **C20** to divide the error between the two settings.

Image Suppressor.—This was arranged to operate originally at 479 m, but the relative powers and frequencies of transmitters have since been modified considerably, and their sites may have been changed, so that the original adjustment may not be effective.

If image interference is experienced, therefore, it may be minimised by tuning the receiver to the frequency at which the interference is evident, and adjusting **C15** for minimum interference, using the speaker as an indicator.