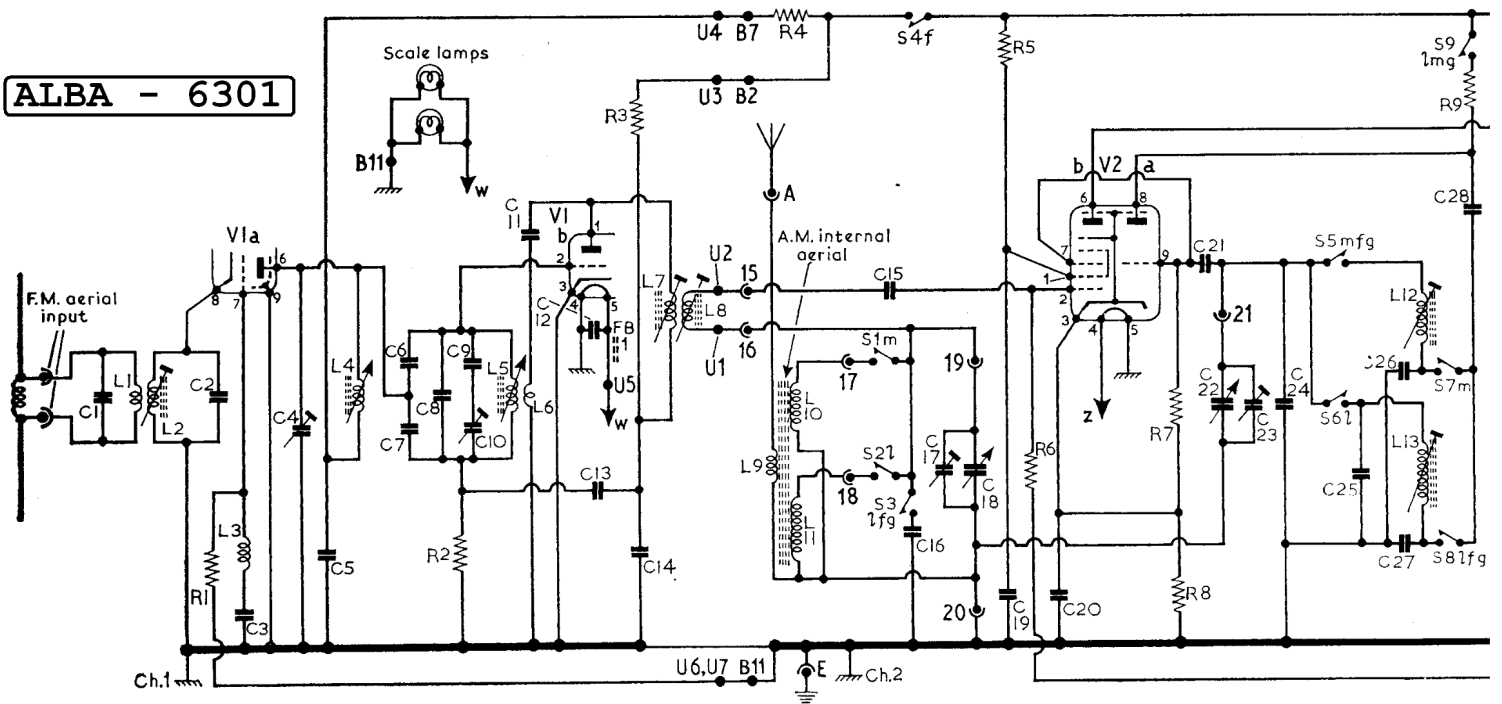


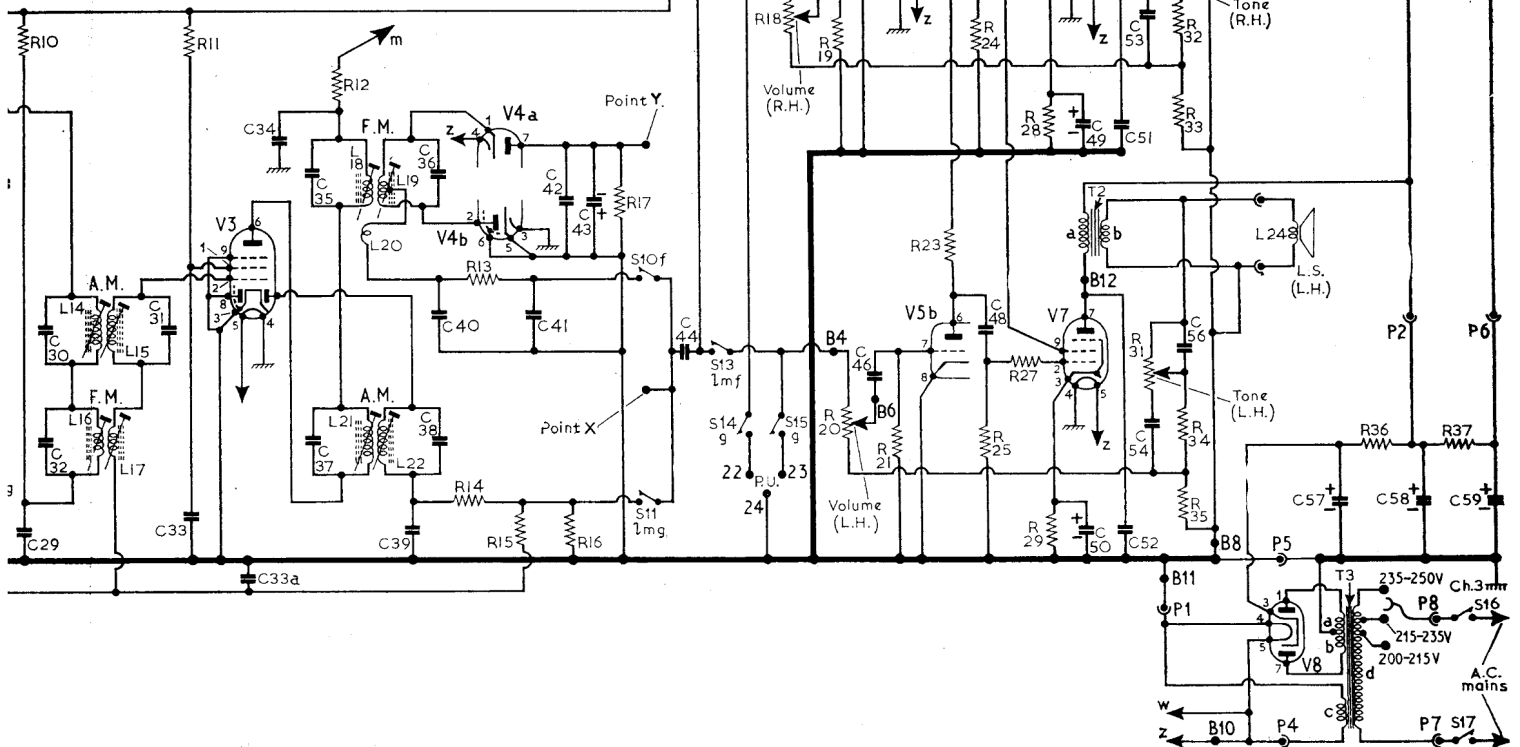
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Valve Table

Valve	Anode (V)	Screen (V)	Carbide (V)
V1 ECC85	140 $\frac{1}{2}$	230 $\frac{1}{2}$	144
V2a ECH81	240	115	105
V2b ECH81	240	80	63
V3 EBF99	240	115	105
V4 EBF99	240	80	63
V5 ECC83	252	250	6-9
V6 EL84	247	238	6-35
V7 EL84	252	250	6-9
V8 EZ81	247	238	6-35
			306
			302

*Receiver switched to A.M.
†Receiver switched to F.M.
‡Measured at point U4.
§Measured at point U3.
‡No readings given.



Resistors

R1	270kΩ
R2	1MΩ
R3	22kΩ
R4	10kΩ
R5	22kΩ
R6	1MΩ
R7	100kΩ
R8	150Ω
R9	33kΩ
R10	470Ω
R11	82kΩ
R12	470Ω
R13	27kΩ
R14	100kΩ
R15	1MΩ
R16	330kΩ
R17	10kΩ
R18	500kΩ
R19	10MΩ
R20	500kΩ
R21	10MΩ
R22	220kΩ
R23	220kΩ
R24	680kΩ
R25	680kΩ
R26	10kΩ
R27	10kΩ
R28	130Ω

Capacitors

C1	45pF
C2	15pF
C3	0.001μF
C4	—
C5	0.001μF
C6	10pF
C7	13.5pF
C8	12.5pF
C9	8.2pF
C10	—
C11	23pF
C12	0.001μF
C13	8pF
C14	75pF
C15	100pF
C16	138pF
C17	—
C18	—

C19	0.05μF
C20	0.05μF
C21	50pF
C22	—
C23	—
C24	15pF
C25	193pF
C26	481pF
C27	238pF
C28	0.001μF
C29	0.05μF
C30	200pF
C31	200pF
C32	12pF
C33	0.01μF
C33a	0.1μF
C34	0.01μF
C35	30pF
C36	47pF
C37	200pF
C38	200pF
C39	100pF
C40	500pF
C41	0.002μF
C42	0.005μF
C43	4μF
C44	0.1μF
C45	0.01μF
C46	0.01μF

C47	0.02μF
C48	0.02μF
C49	100μF
C50	100μF
C51	4,700pF
C52	4,700pF
C53	0.05μF
C54	0.05μF
C55	0.25μF
C56	0.25μF
C57	50μF
C58	50μF
C59	50μF

Transformers*

T1	a	375-0
	b	0.25
T2	a	375-0
	b	0.25
T3	a	75-0
	b	75-0
	c	—
	d	13.5

Coils*

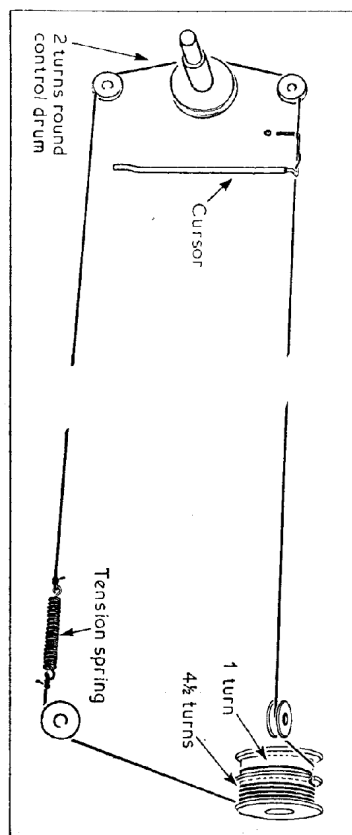
L1	—
L2	—
L3	—

L4	—
L5	—
L6	—
L7	—
L8	—
L9	—
L10	1-0
L11	4-0
L12	4-0
L13	9-0
L14	10-5
L15	10-5
L16	0-5
L17	0.75
L18	0-4
L19	0.25
L20	—
L21	10-5
L22	10-5
L23	3-0
L24	3-0

Miscellaneous

FB1	—
S1-S15	—
S16, S17	—

*Approximate D.C. resistance in ohms



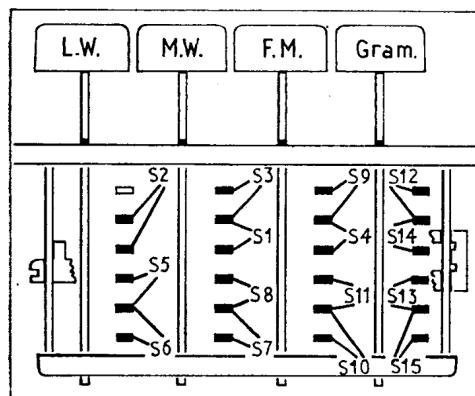
Drawing of the scale drive assembly as it appears when the tuning gang is at maximum

CIRCUIT ALIGNMENT

Equipment Required.—An A.M. signal generator 30 per cent modulated at 400c/s and capable of being switched to C.W.; an output meter with an impedance of 3 ohms; a 3 ohm dummy load resistor; a 0.50μA meter with a 100kΩ resistor in series; a 0.01μF capacitor; a non-metallic screwdriver trimming tool and a hexagonal trimming tool for the tuner I.F. coils.

A.M. Alignment

First check that both audio channels are operating correctly, then connect the output



The press-button switch contacts as seen from the same angle as the chassis illustration above.

meter in place of one speaker speech coil and the 3 ohms dummy load in place of the other. Set both volume controls to maximum and the tone controls fully clockwise.

Input from the signal generator should be maintained as low as possible to prevent A.G.C. action. Where two peaks occur, the one with the core nearer to its end of the former is correct.

1.—Switch to M.W. and fully mesh the tuning gang. Connect the signal generator between tag 2 on the tuner terminal strip U and chassis (location reference A1). Short-circuit the oscillator section C18 of the tuning gang.

2.—Feed in a 470kc/s modulated signal and adjust the cores of L14, L15 (B2) and L21, L22 (C2) for maximum output. Repeat these adjustments until no further improvement can be obtained.

3.—Check that with the tuning gang fully meshed the shorter leg of the cursor lines up with the extreme L.H. hole in the scale backing plate. The shorter leg of the cursor is used for calibration in conjunction with holes punched into the scale backing plate. Disconnect the signal generator from the tuner terminal strip and connect it across coupling coil L9 on the ferrite rod. Remove the short-circuit from C18.

4.—Set the cursor to the second hole from the left (500m), feed in a 600kc/s signal and adjust L12 (B1) and L10 (C2) for maximum output. Adjust L10 by sliding its former along the ferrite rod.

Note: On M.W. and L.W. R.F. alignment the tuning of oscillator coils L12 (M.W.) and L13 (L.W.) should be re-checked after each adjustment to their respective aerial coils.

5.—Set the cursor to the extreme R.H. calibration hole (200m). Feed in a 1,500kc/s signal and adjust C23 and C17 on the tuning gang unit (C2) for maximum output.

6.—Re-check calibration at 200m and 500m and repeat operations 4 and 5 if necessary.

7.—Switch to L.W. and set the cursor to the third calibration hole from the left (1,500m). Feed in a 200kc/s signal and

adjust L13 (B1) and L11 on the ferrite rod for maximum output.

8.—Disconnect the signal generator and check that the calibration is correct with the receiver tuned to the B.B.C. Light programme at 1,500m.

F.M. Alignment

1.—Connect the signal generator between tag 2 on the tuner terminal strip and chassis. Connect the 0.50μA meter in series with the 100kΩ resistor between point Y (C1) and chassis (meter nearest to chassis).

2.—Feed in a 10.7Mc/s unmodulated signal and adjust the cores of L16, L17 (B2) and L18 (C2) for maximum output on the μA meter. Note the reading obtained.

3.—Connect the μA meter and resistor between S10 (point X) and chassis and adjust which is half that obtained in operation 2.

4.—Repeat operations 2 and 3.

5.—Connect the signal generator via the 0.01μF capacitor to tag 4 on the tuner terminal strip U. Reconnect the meter and resistor to point Y. Feed in 10.7Mc/s unmodulated signal and adjust L7 and L8 (F5) for maximum output.

6.—Rotate the tuning gang to minimum capacitance and check that the grub screw on the tuner spindle rests against the front stop. Tune the receiver to a local station and check that the calibration is reasonably accurate. An error of plus or minus 1/4in is permissible. Adjust C4 and C10 (F4) if necessary.

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