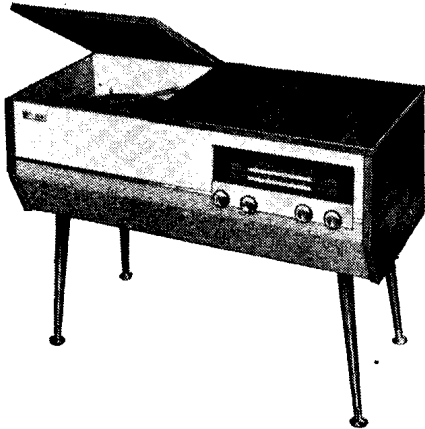


"TRADER" SERVICE SHEET
1730



Appearance of the Alba 8000

CHASSIS type PW32 is incorporated in Alba radiogram models 8000 and 8001.

It employs three valves plus rectifier and covers the medium and long wavebands with signal pick-up via an internal ferrite rod aerial. Waveband and gram selection is by means of a three-way rotary switch unit.

Both the radiograms are fitted with a four-speed automatic record changer and are designed to operate from 200-250V 50c/s a.c. mains only.

Release date: August, 1964.

CIRCUIT DESCRIPTION

The ferrite rod aerial is coupled via m.w. coil L1 or l.w. coil L2 to the mixer section V1b. The aerial coils are tuned by VC1/TC1, with C1 added across L2 on l.w.

The triode section of V1a is arranged as a parallel-fed oscillator, the oscillator coil L5 being tuned by VC2/TC2, with C9 added on l.w. operation.

The 470 kc/s i.f. signal is coupled via i.f. transformer L3, L4 to the i.f. amplifier V2. The secondary of the second i.f. transformer L7, L8 is coupled to one of the V2 diodes, which operates as the detector, the other diode being taken to chassis.

The d.c. component of the demodulated signal, appearing across the detector load R7, is applied via filter components to the grids of the mixer and i.f. amplifier valves as a.g.c. bias.

Audio signals from the detector are (Continued overleaf col. 1)

Valve Table

Valve	Anode (V)	Screen (V)	Cathode (V)
V1 UCH81	100	—	—
a	198	126	—
b	—	130	—
V2 UBF89	198	—	—
a	78	—	—
b	238	198	16
V4 UY85	—	—	255

ALBA 8000 & 8001
(Chassis Type PW32)

M.W. and L.W. Radiograms for A.C. Mains Supply

COMPONENT VALUES AND LOCATIONS

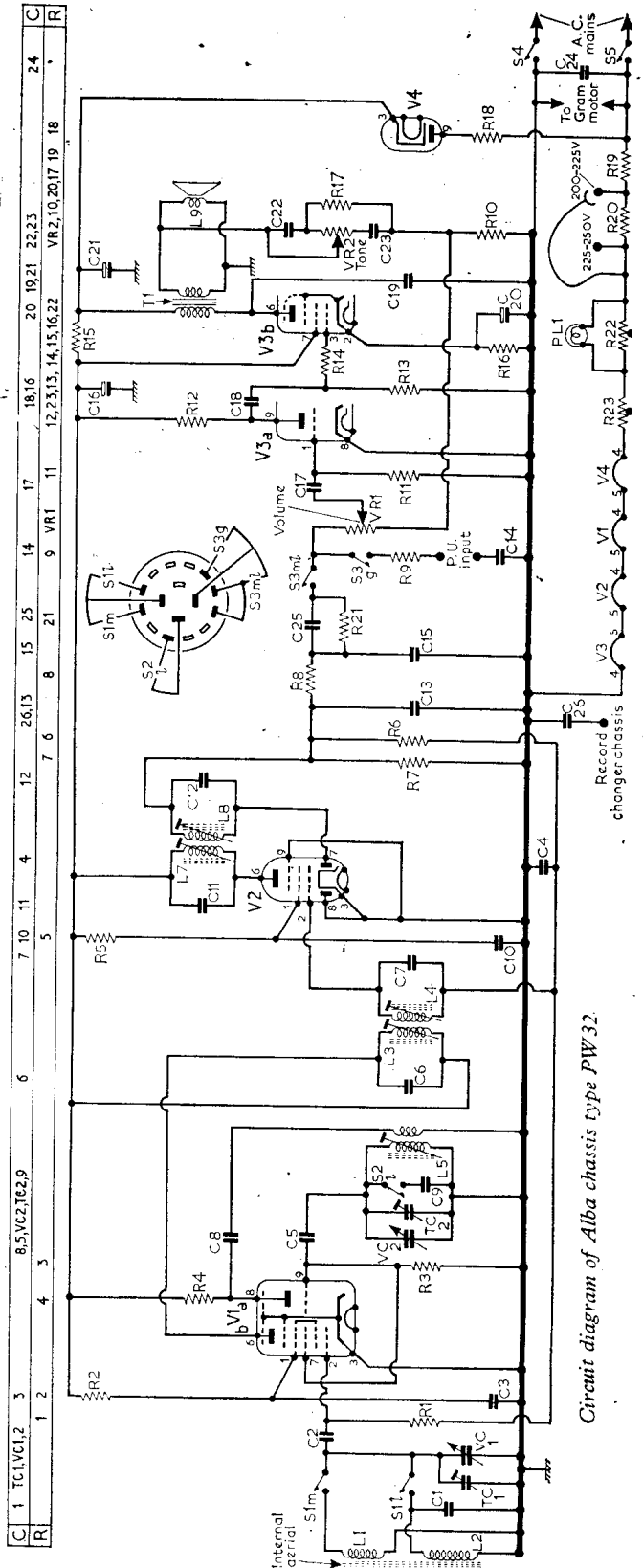
Resistors		
R1	1MΩ	B2
R2	18kΩ	A2
R3	47kΩ	B2
R4	27kΩ	A2
R5	47kΩ	B2
R6	1MΩ	B2
R7	1MΩ	B2
R8	100kΩ	B2
R9	220kΩ	A1
R10	680Ω	C1
R11	22MΩ	C2
R12	100kΩ	C2
R13	680kΩ	C2
R14	10kΩ	C2
R15	2.5kΩ	—
R16	390Ω	C2
R17	3.3kΩ	C1
R18	140Ω	—
R19	450Ω	—
R20	300Ω	—
R21	1MΩ	+
R22	V1G10	—
R23	V1005	—
VR1	500kΩ	C1
VR2	50kΩ	D1

Capacitors		
C1	120pF	B3
C2	100pF	A2
C3	0.01μF	A2
C4	0.1μF	B2
C5	47pF	A2
C6	—	B3
C7	—	B3
C8	1,000pF	A1
C9	290pF	B1
C10	0.01μF	B2
C11	—	B3
C12	—	B3
C13	100pF	B2
C14	0.01μF	B1
C15	100pF	B1
C16	50μF	—
C17	0.01μF	C2
C18	0.05μF	C2
C19	4,700pF	C2
C20	100μF	C2
C21	50μF	—
C22	0.05μF	C1
C23	0.02μF	C2
C24	0.01μF	D2
C25	500pF	+
C26	0.01μF	—
TC1	—	—
TC2	—	—
VC1	—	—
VC2	—	—

Coils and Transformers		
L1	—	D3
L2	—	B3
L3	—	B3
L4	—	B3
L5	—	A1
L6	—	A1
L7	—	B3
L8	—	B3
L9	—	—
T1	—	—

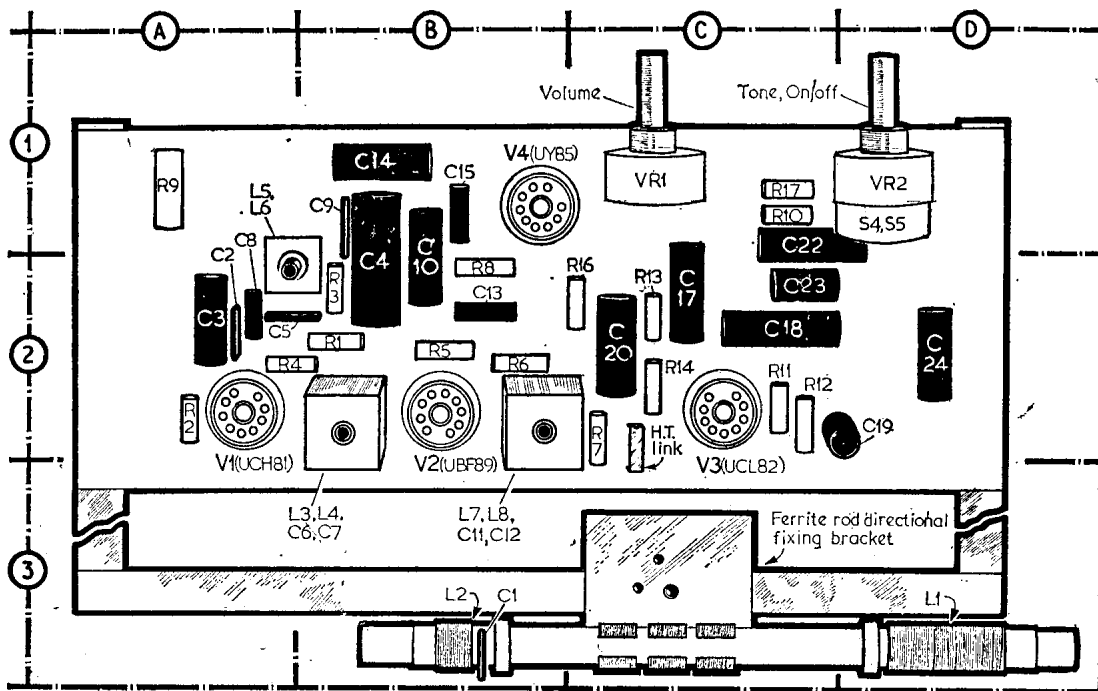
Miscellaneous		
PL1	20V 0.1A	—
S1-S3	—	—
S4, S5	—	D1

† Wired in lead from R8 to S3



Circuit diagram of Alba chassis type PW32.

Component-side view of the printed circuit panel. The ferrite rod aerial is drawn out of position, it is normally secured to the metal frame at the left-hand end of the panel



Circuit Description—continued

passed through i.f. filter C13, R8, C15 and R21/C25 to the volume control VR1 which, with R10, forms the grid resistance for the first audio amplifier stage V3a. Switch section S3 selects radio or gramophone inputs to the audio amplifier, the pickup being isolated from chassis by C14 and the gram motor plate by C26.

The output of V3 drives the pentode output stage V3b. Negative feedback is applied from the secondary of the output transformer and developed across R10 in the V3a grid circuit. A variable element (VR2) in the feedback network provides manual tone control facilities.

Valve heaters are fed from a series mains dropping chain which includes the scale lamp and surge limiting thermistor. A thermistor is also connected across the scale lamp so that the heater chain will not be broken in case of scale lamp failure. A half-wave rectifier V4 provides h.t. current, which is smoothed by C21, R15, C16.

CIRCUIT ALIGNMENT

A series of holes on the scale backing plate are provided as calibration markers (see illustration of drive cord assembly).

During alignment, the signal input should be reduced as the circuits come into line to prevent a.g.c. action.

Equipment Required.—An audio output meter; an a.m. signal generator; an r.f. coupling coil and suitable trimming tools.

- 1.—Connect the audio output meter in place of the loudspeaker and connect the signal generator across the tuning gang aerial section VC1.
- 2.—Switch receiver to m.w. Fully mesh the tuning gang and short-circuit the oscillator section VC2. Turn the volume control to maximum and the tone control fully clockwise.
- 3.—Feed in a 470kc/s 30 per cent modulated signal and adjust the cores of L8, L7, L4 and L3 in that order for maximum output. Repeat with a reduced signal input for optimum results,

then remove the short-circuit from VC2.

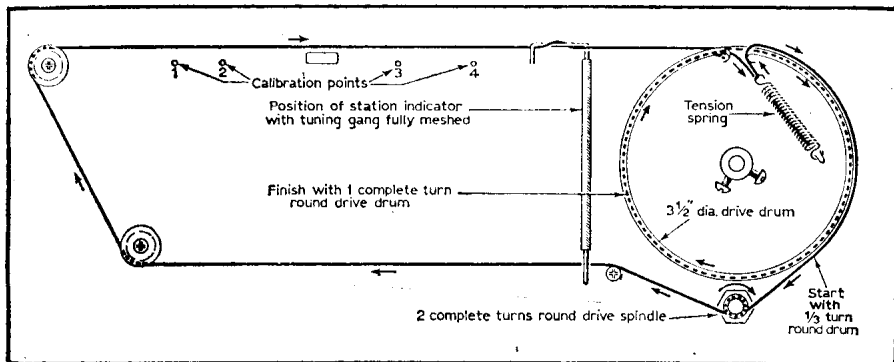
- 4.—Check that with the tuning gang at minimum the cursor lines up with the left-hand calibration mark (hole 1) on the scale backing plate. Connect the signal generator leads to the ends of the r.f. coupling coil and place the coil about twelve inches from the ferrite rod, in line with the aerial windings.
- 5.—Tune receiver to 500m (hole 4). Feed in a 600kc/s signal and adjust L5 for maximum output. Then adjust L1 by sliding the former along the ferrite rod, for maximum output.
- 6.—Tune receiver to 200m (hole 2). Feed in a 1,500kc/s signal and adjust TC2 and TC1 for maximum output.
- 7.—Switch receiver to l.w. and tune in the B.B.C. Light Programme at 1,500m (hole 3). Adjust L2 by sliding the former along the ferrite rod, for maximum output. Check the alignment at 500m (m.w.). It may be necessary to repeat operations 5 and 6 to obtain maximum calibration accuracy.

GENERAL NOTES

Switches.—S1-S3 are waveband and gram switches which are housed in a rotary assembly illustrated in detail with the circuit diagram. S4 and S5 double pole on/off switch unit is ganged with the tone control.

Drive Cord Replacement.—A replacement drive cord should be routed as shown in the illustration opposite, where the drive assembly is drawn with the tuning gang fully meshed.

The position of the cursor on the cord can be adjusted by rotating the tuning gang until the cursor is over the slot between calibration holes 2 and 3, then inserting a screwdriver through the slot and adjusting the cursor as required, by sideways pressure of the screwdriver.



Scale drive assembly illustrated with the tuning gang at maximum capacitance