

**ALBA****“ DUCHESS ”****Model R59**

**General Description:** Single-speed ( $3\frac{3}{4}$  in./sec.), dual-track portable tape recorder with maximum spool diameter of  $5\frac{3}{4}$  in. B.S.R. tape deck. Weight about 20 lb. Independent adjustment of treble and bass on playback. Neon recording-level indicators.

**Power Supply:** A.C. mains, 200–240 volts, total consumption 65 watts.

**Valves:** (V<sub>1</sub>) ECC83; (V<sub>2</sub>) ECL82; (V<sub>3</sub>) EZ80. Neons Type CC29L.

**Notes:** V<sub>5</sub> (left-hand neon) is set to strike for an input of about 8 mV. at 1 kc/s. at the “MIC” socket, and V<sub>4</sub> for an input of about 20 mV. by adjustment of VR<sub>4</sub> and VR<sub>5</sub>. Bias/erase oscillator 50–60 kc/s. Erase voltage 26 volts, bias 12.5 volts measured on 100-volt A.C. range of Avo Model 8. Valve voltages shown on circuit diagram measured with 240-volt mains applied to 235-volt tap.

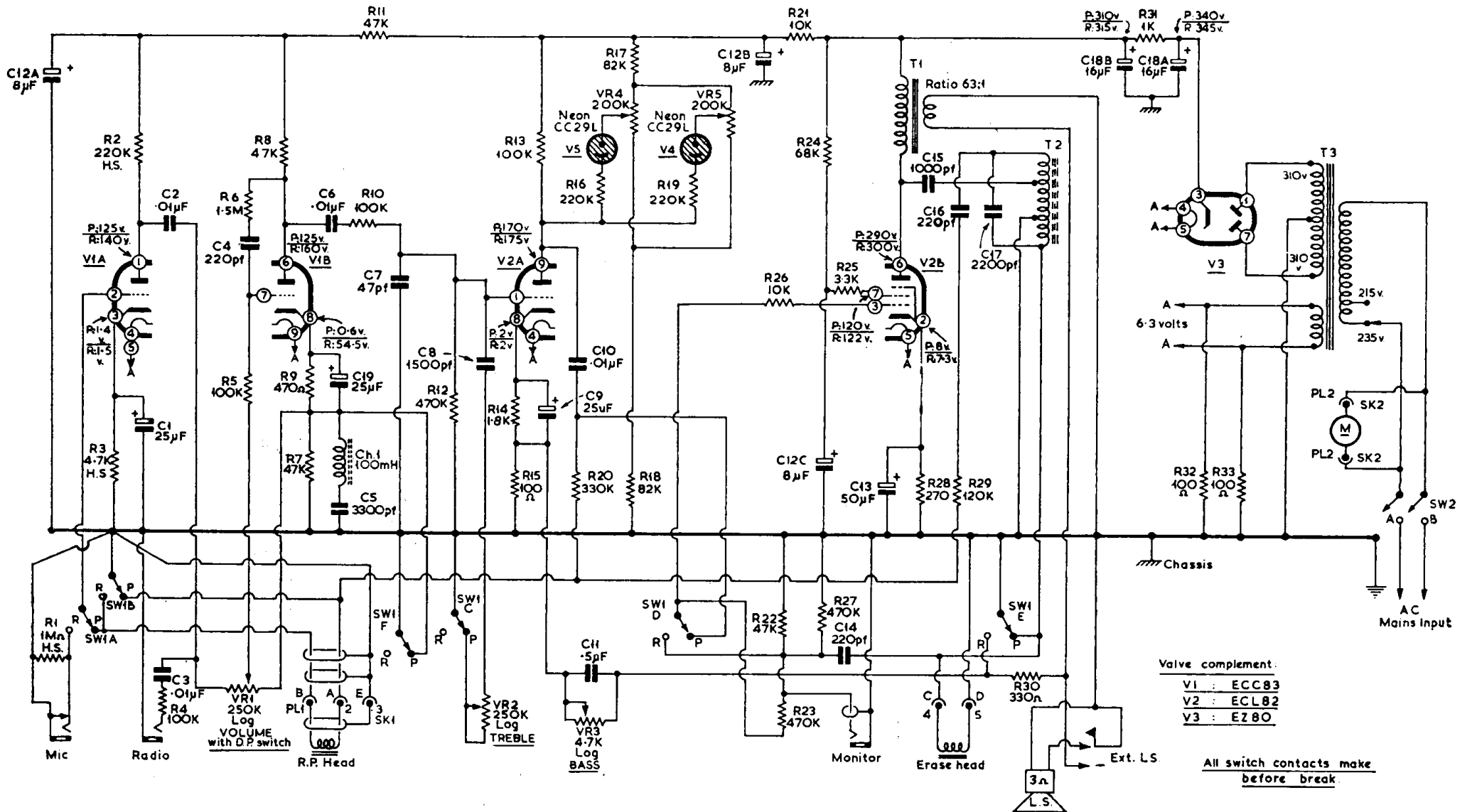
**Head Alignment:** Azimuth alignment of the record/playback head, if necessary, *must* only be carried out using a tape pre-recorded on a recorder whose head is in perfect alignment (use of commercial test tape is recommended). Using a high-frequency note, rock the head about central point by means of right-hand screw for maximum output. Secure in position by tightening left-hand screw.

**Circuit Modifications:** Recorders from Serial Number 724000 onwards have a modified amplifier: C<sub>4</sub>, C<sub>19</sub>, R<sub>6</sub>, CH<sub>1</sub> (replaced by link) deleted. 10k resistor (R<sub>34</sub>) connected between junction R<sub>7</sub>/R<sub>9</sub> and SW<sub>1</sub>/F. R<sub>4</sub> 47k, R<sub>8</sub> 100k, R<sub>9</sub> 1.8k, R<sub>10</sub> 47k, R<sub>22</sub> 100k, C<sub>5</sub> 5600 pF., C<sub>8</sub> 3300 pF. With modified circuit the overall sensitivity is higher, and inputs required for peak and overload neons to strike are about 2 mV. and 6 mV. with volume control at maximum.

**Chassis Removal:** Remove lid and turn cabinet on one side. Unscrew four PK headed screws at bottom of cabinet and remove feet together with screws. When cabinet is set upright, deck and amplifier chassis may be lifted out together. To separate deck and amplifier proceed as follows:

Turn recorder face down and unplug PL<sub>1</sub>, PL<sub>2</sub>. Loosen bolts on chassis U-brackets and open these brackets outwards. This will loosen four hooked catches, which can then be moved outwards to release fixing spigots on the deck, enabling the amplifier chassis to be lifted off.

When refastening chassis to deck, line up the hole in the rotor of SW<sub>1</sub> with spindle of record/playback control, or damage to switch may result. To keep hum pick-up to minimum, leads to PL<sub>1</sub> from recording and erase heads must be kept as far as possible from motor.



CIRCUIT DIAGRAM—ALBA "DUCHESS" TAPE RECORDER MODEL R59

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