



ALBA R23

cassette tape recorder

This is a 2-track $1\frac{1}{2}$ i.p.s. cassette tape recorder employing six transistors as follows:

2SB303 1st preamplifier, 2SB186 2nd preamplifier, 2SB186 audio driver, 2SB22/2SB22 audio output pair, 2SB22 bias oscillator.

Audio output is 300mW maximum, 200mW at 10 per cent distortion. Frequency range is 150Hz to 5kHz, wow and flutter is 0.6 per cent r.m.s. and signal-to-noise ratio 30dB. Power is provided from four 1.5V cells (LPU11 or equivalent) with a battery consumption of 120mA (playback), 160mA (record).

DISMANTLING

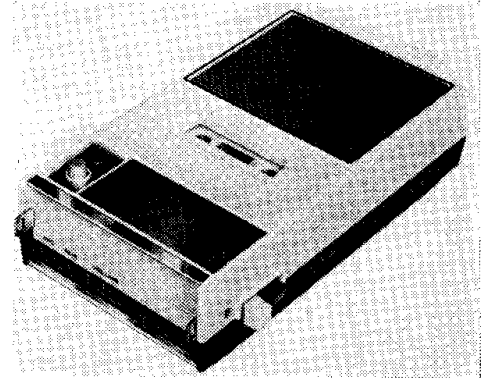
Take off battery compartment cover and remove batteries. Remove the two Phillips screws in case bottom, which may then be lifted off. This exposes the tin dip side of the printed circuit board and provides access to the motor and flywheel.

For further dismantling, remove the two Phillips screws in the cassette compartment and the two Phillips

screws securing the chassis assembly to the case (these are adjacent to the battery clips). The complete chassis assembly may then be taken out of the case, providing full access to the main mechanical assemblies.

To obtain access to the component side of the printed circuit board, remove the two Phillips screws (marked 1 and 2 on the panel). Then bend back the clip securing the lead assembly near the R/P heads and gently ease the leads through the chassis. This will enable the circuit board to be hinged over sideways to the extent of the other interconnecting leads.

When reassembling, first pull the R/P heads leads back through the chassis and secure by bending the clip back. Ensure that the red Record button (which is tensioned by a leaf spring) is placed in position on its spindle before the chassis assembly is reunited to the case. Also ensure that before fixing screws 1 and 2 back on the circuit board the plastics R/P switch forked lever engages with the pin in the slider bar.



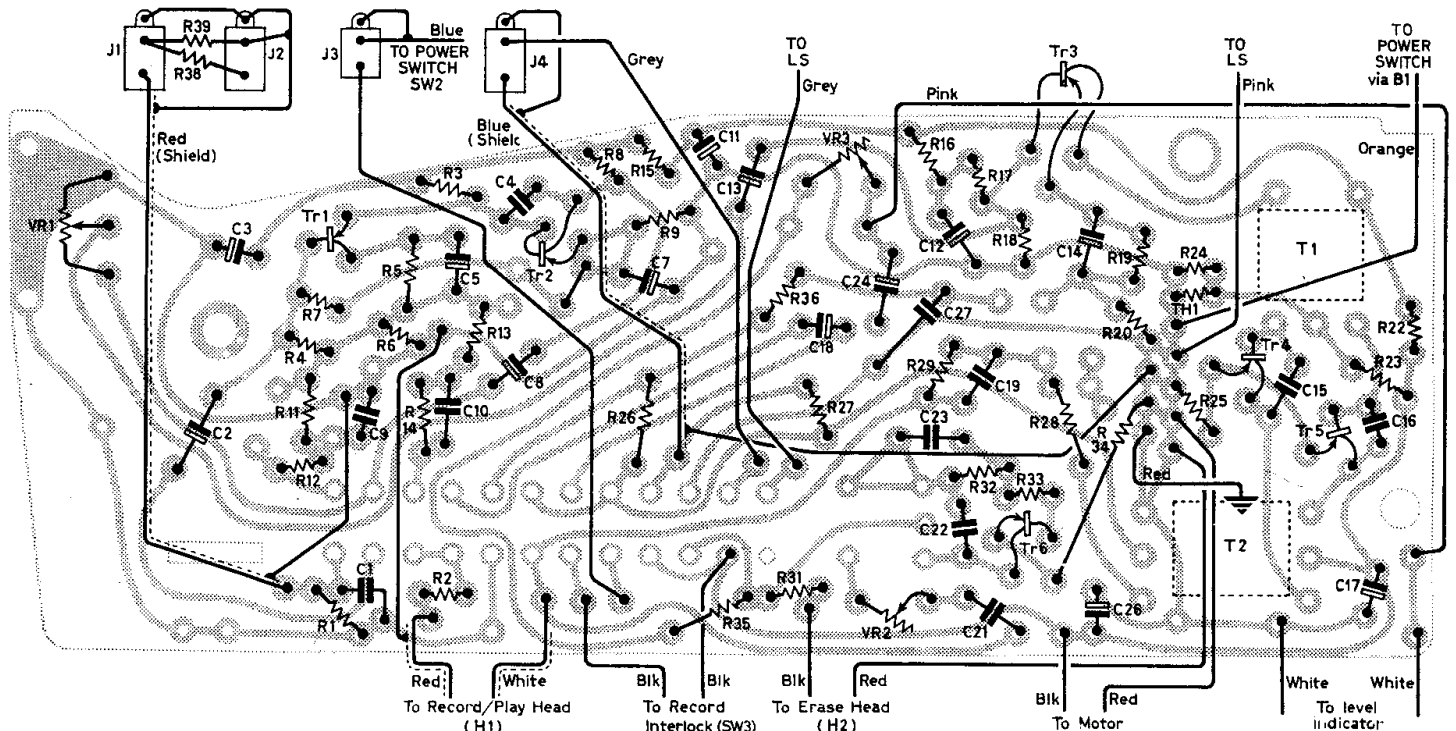
Note that the input socket assembly should be located by its slot in the edge of the case and by its side slots with the case bottom.

ELECTRICAL ADJUSTMENTS

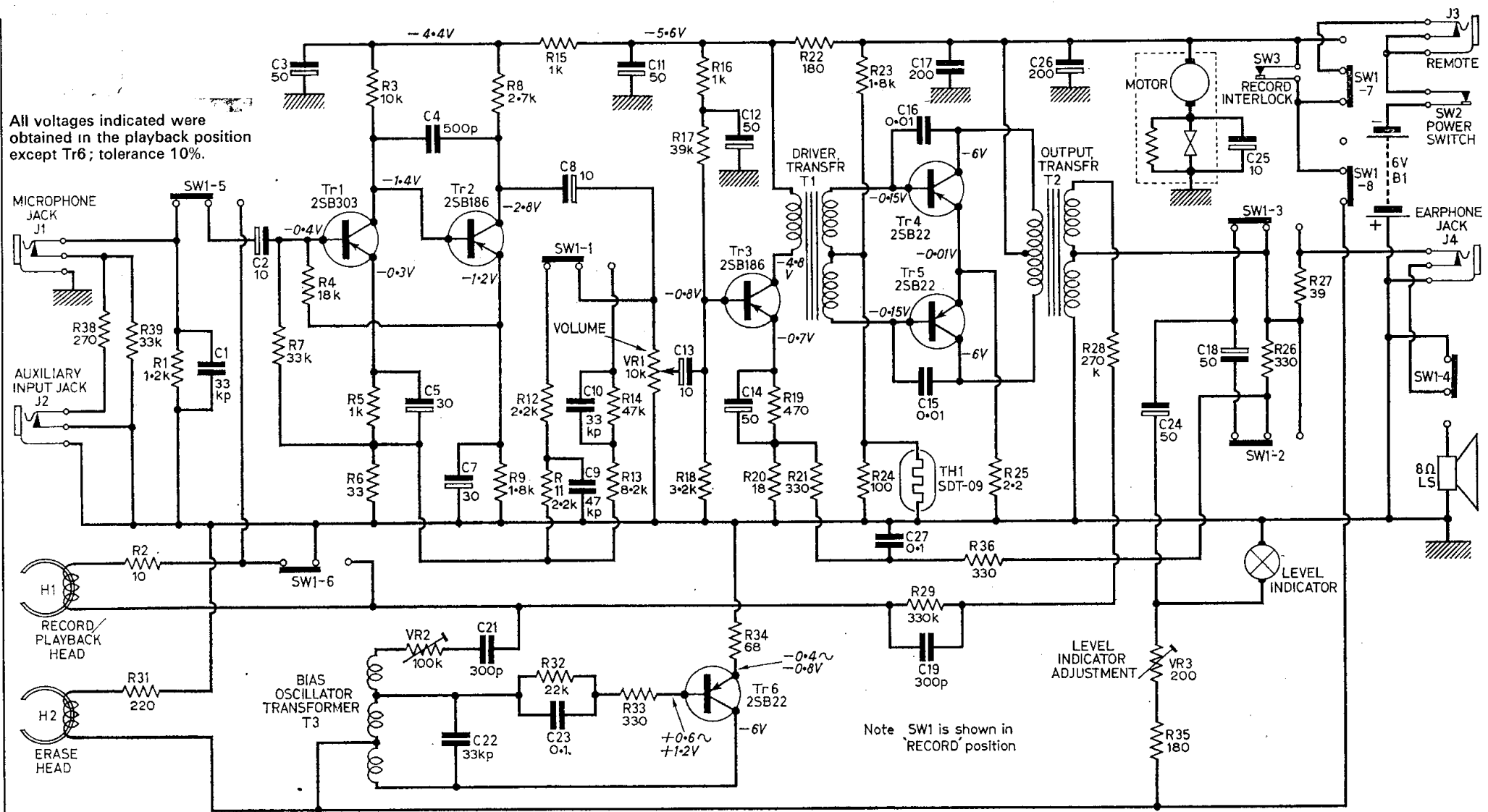
The following adjustments should be made whenever the record and erase heads, the bias adjustment control VR2, etc., are replaced in the amplifier. The adjustments should be checked periodically.

Recording Bias

With new batteries fitted, or with a stable external 6V d.c. power supply connected, connect a high impedance voltmeter across R2 and set the volume control to its mid-range (i.e.



Printed circuit board, viewed from foil side, with components as seen through the board.



All voltages indicated were obtained in the playback position except Tr6; tolerance 10%.

to white mark II).
 Insert a cassette and make a short recording with 0.18mV at 150Hz and 5kHz input signals to the MIC socket. Connect a dummy load to the earphone socket and play back the recorded signals, noting the output levels.
 If the output at 150Hz is higher than that at 5kHz, turn the bias adjustment control VR2 clockwise. If the 150Hz recording is lower than the 5kHz recording, turn VR2 anticlockwise.

Repeat the procedure until the outputs at 150Hz and 5kHz are as near to each other as possible.

Level Indicator

Whenever the indicator lamp or the level indicator control VR3 is replaced, VR3 must be re-adjusted as follows:
 With new batteries inserted, set the tape recorder to Record and adjust VR3 so that the indicator lamp just starts to glow.

Note SW1 is shown in 'RECORD' position

