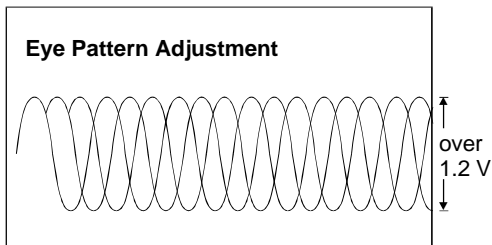


This CD is for testing and adjusting the laser unit on CD players. Typical skipping of individual tracks or the loss of function when reading the total play time in, is a clear character of a bad laser. The CD contains error sequences on 60 tracks expressed at different levels. This enables the technician to test the scanning ability of the laser unit and adjust it precisely if necessary.

Using the **BUROSCH LASER-CD**

1. Read the manufacturer's service guidance carefully before attempting repairs or adjusting the CD player. Be sure that the problem is in the laser unit and not the motor or drive mechanism.

2. Connect the oscilloscope to the "HF measuring point". The "Eye Pattern Diagram" should produce an output voltage over 1.0 V. If the value is clearly less than 1.0 V, the laser unit



has to be replaced. It is recommended to check and to replace both the CD disc drive motor and the laser unit. After replacement of the laser unit the output voltage has to be over 1.2 V.

3. After checking or replacing the laser unit the fine adjustment can be done. That applies also to laser units which do not have to be exchanged. Although they still produce the required output voltage, they wear themselves out in the course of the actual working time and must be readjusted to produce again the maximum output.

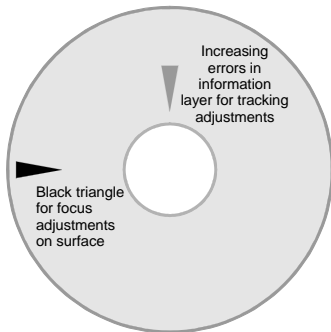
The **BUROSCH LASER-CD** keeps errors for the focus adjustment and errors for the tracking adjustment for mutual adjusting both.

The errors for the tracking offset adjustment are found on tracks 2 - 30 in increasing intensity. The errors for the focus offset adjustment are on tracks 32 - 60.

Track 1 and track 31 is to start the CD-Player and therefore have no errors.

The tracks are numbered from inside to outside.

Start the adjustment with the smallest error (track 2 or track 32 accordingly) and work upwards to the stronger errors gradually. The higher the track number, the stronger is the error designed for checking that the laser unit must skip. The first test error on track 2 corresponds to an error of 0.2 mm. The error level increases by 0.1 mm per track. The test error on track 8 corresponds thus 0.8 mm.

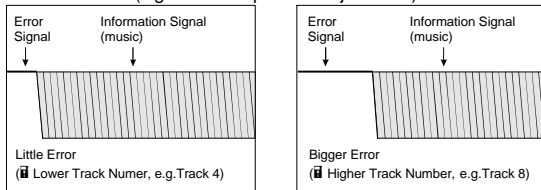


The minimum standard for the laser adjustment of good CD-Players is with track 8 (tracking offset) or track 40 (focus offset). The test CD is however designed in such a way that you can make also finest adjustments for most fastidious requirements (maximum error signal = 3.0 mm).

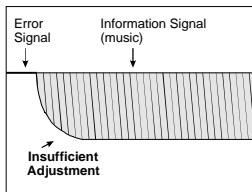
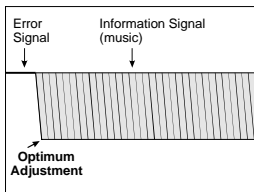
Do the adjustment mutually, i.e. you have to check for each error level the adjustment both for the tracking offset (increasing errors in information layer) and for the focus offset (black triangle on surface).

Tracking Offset Adjustment

Different error displays with the same oscilloscope setup
(signals with optimum adjustment)



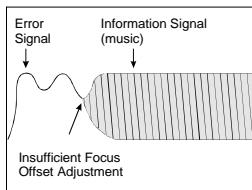
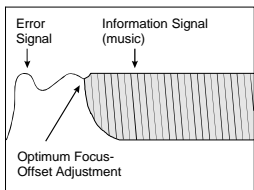
Trigger your oscilloscope manually on the error of track no. 2.
Make the adjustment according to the following figure.



Oscilloscope: Make sure that the output voltage is over 1.2 V and shows a linear amplitude wave for optimum adjustment.

Focus Offset Adjustment

Trigger your oscilloscope manually on the error of track no. 32. Make the adjustment according to the following figure.



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