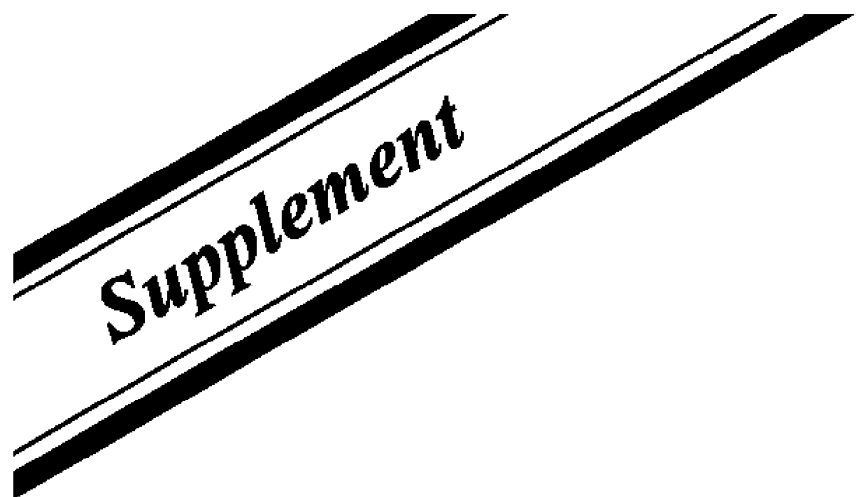


Order No. AD0002034S2

# Service Manual

Mini Disc Deck



**SJ-HD505**

Area

E.....Europe.

**Corrections in descriptions Laser Power Adjustment.**

**Please file and use this supplement manual together with the service manual for Model No. SJ-HD505(E), Order No. AD9905119C2.**

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**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Technics®

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# 1. Guide and Note

- All corrections of “Laser Power Adjustment” have been stated in this supplement manual (see next page onward).  
When making the laser power adjustment, please refer to this supplement manual.
- The meshes points are corrected. Please be careful about when you adjust.

## 9.4. Laser Power Adjustment

Adjust each laser power: read power for reading (play) and write power for writing (record).

### 9.4.1. Necessary Instruments

- Laser power meter (Advantest TQ8210 or compatible meter)
- Test disc (Pre-mastered disc RFKV0006 or RFKV0014)
- Recordable disc available on sales root (with music recorded)
- Insulated driver for adjustment such as a ceramic driver
- Jitter meter

### 9.4.2. Set the Unit to the Adjustment Mode

1. Perform the item of "MD servo board check" in "Operation Check and Component Replacement Procedures", step 1 and 2.

#### Caution

##### 1. About handling the MD unit

- The magnetic head is a precision unit and is very fragile. Do not deform it.
- Laser diode in the optical pickup may be destroyed by the static electricity generated in your clothes or body. Be especially careful with the static electricity.
- The optical pickup is structured extremely precisely. Do not subject to the strong impact or shock. Do not touch the lens.

##### 2. About handling the magnetic head

When replacing the magnetic head, do not tighten the mounting screw (RHD17C22) too firmly. If the screw is tightened too much to deform the resin, the position of the head is moved, and this affects its recording operation.

Recommended torque for mounting screw: 700 g·cm +/- 100 g·cm

Reference: This is the same force as using a screwdriver with a 15-mm diameter grip, you fasten the screw naturally with your thumb and index finger.

##### 3. About the driver for adjusting laser power

Use only insulated driver such as a ceramic driver. With the metal driver, it is not possible to adjust properly because of the induction noise. Also, if it short-circuits with the chassis, it may destroy or damage the laser diode.

Recommended driver: VESSEL 9000 1.8 -30 (Ceramic driver)

#### Caution on optical pickup:

- The optical pickup and the magnetic head are structured precisely; therefore, they are very fragile. Be careful not to touch them with the edge of the laser power meter.
- The sensor of the laser power meter is a very fine part. Be careful not to touch it to the optical pickup lens.
- The focus point of the laser reaches to 356°F. Therefore, avoid adjusting using laser power for a long

time because the sensor of the laser power meter may be burned.

- Do not allow the write power to even momentarily reach or exceed 5.5 mW. Doing so will result in damage to the optical pickup.
- Do not set the unit to the laser power adjustment mode with the MD loaded. Doing so may result in damage to the MD.

### 9.4.3. Adjustment Procedure

1. Remove the MD unit from the system unit.
2. Short-circuit the no.67 pin (TP77) of the IC10 and GND (TP74) with the lead wire.
3. Set the MD unit in the system unit and turn on the power. The REC and PLAY of the main unit will light up.
4. Slide the sensor cover of the laser power meter. (Refer to Fig.8.)

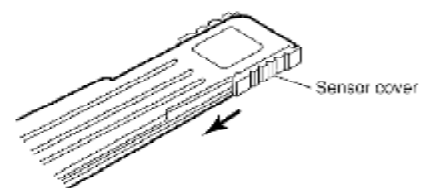


Fig.8

5. Position the sensor of the laser power meter directly above the optical pickup. (Refer to Fig.9.)

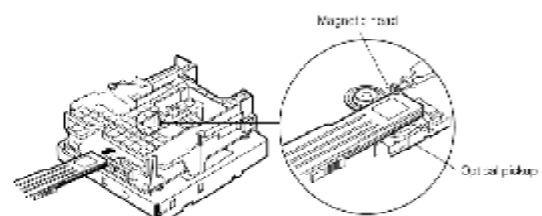


Fig.9

6. Press the CD EDIT button and confirm that the reading of the laser power meter is within the specified range. If it is higher than 800 uW, adjust by turning VR1 and set to lower than 880 uW. (Refer to Fig.10.)

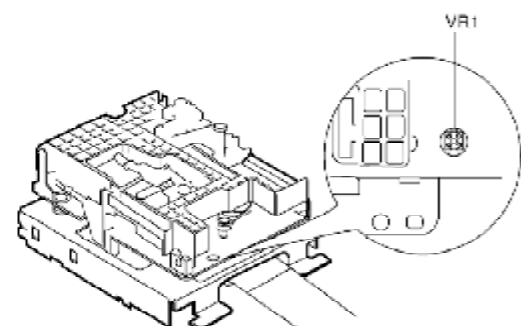


Fig.10

Specified range (read power): 800 uW or lower

**Caution:**

- Proceeding on to the subsequent adjustment procedure with the read power exceeding 680  $\mu\text{W}$  will result in damage to the optical pickup.

7. Press the CD EDIT button and read the write power.  
Specified range (write power): 4.8 mW  $\pm$ 0.1 mW
8. If it is not within 4.8 mW  $\pm$ 0.1 mW, adjust by turning VR1.  
(Refer to Fig.10.)

**Caution:**

- Do not allow the write power to even momentarily reach or exceed 5.5 mW. Doing so will result in damage to the optical pickup.

9. Press the CD EDIT button, the read power will be displayed again. Confirm that the read power is within 540  $\mu\text{W}$  and 660  $\mu\text{W}$ .
10. Then, again press the CD EDIT button. The laser power recorded in the laser ROM will be displayed.  
Confirm that it is within 540  $\mu\text{W}$  and 660  $\mu\text{W}$ .
11. Press the  $\blacksquare$  button and exit the adjustment mode.
12. Turn off the power and remove the lead wire between the No. 87 pin and GND. This ends the adjustment mode.

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