YAMAHA
CDR200tx

User Guide
Guide de l'utilisateur
Bedienungsanleitung

YAMAHA

COMPLIANCE INFORMATION STATEMENT
(DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party:	Yamaha Systems Technology, Inc.
Address:	100 Century Center Court
	San Jose, California 95112
Telephone:	(408) 467-2330
FAX:	(408) 437-8791
Type of Equipment:	CD Recorder
Model Name:	CDR200tx

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following conditions:

1) this device may not cause harmful interference, and

2) this device must accept any interference received including interference that may cause undesired operation.

See user manual instructions if interference to radio reception is suspected.

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!
   This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the product "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

   Relocate either this product or the device that is being affected by the interference.

   Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

   In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

   If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Systems Technology, Inc. 100 Century Center Court, San Jose, CA95112, U.S.A.

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Laser Diode Properties
  Material : GaAlAs
  Wavelength : 780-790 nm
  Emission Duration : Continuous
  Laser Output Power : Less than 44.6 μW*
    * This output is value measured at a
      distance 200mm from the objective lens
      surface on the optical pick-up block.
      ANSI Class : Class 1
```

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSAETTELSE FOR STRÅLING.

VAROITUS
LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING
OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNABRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

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CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
PRODUIT LASER DE CLASSE 1
```

This compact disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label must be located on the exterior.

```
VORSICHT : UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG
  GEOFFNET. NICHT DEM STRAHL AUSSETZEN.
VARNING : OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH
  SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN ÄR FARLIG.
VARO! : AVATAESSA JA SUOJALUKITUS OHITETTAESSA OLET
  ALTTINA NÄKYMÄTTÖMÄLLE LASERS TEILYLLE. ÄLÄ KATSO SÄTEESSEN.
ADVARSEL : USYNLIG LASERSTRALNING VED ÅBNING NÄR SIKKERHETSAF-
  BYDERE ER UDE AF FUNKTION. UNDGÅ UDSETTELS FOR STRÅLING.
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Varningsanvisning för laserstrålning.

Important Precautions

Please read the following precautions before operating CDR200tx.

- Do not remove the CDR200tx's top cover. This device uses semiconductor laser. Refer all servicing to qualified personnel.

- Do not attempt to touch the inside of the CDR200tx. Electricity may have been built up even after you turn off the power.

- CDR200tx is a sophisticated electronic device. Handle it with care.

- If the fuse blows, CDR200tx should be checked by a qualified engineer. Do not just replace the fuse. Replacing the fuse by yourself may cause the protection circuit to be damaged.

- The CDR200tx uses high-density circuits and LSIs. Even a small incident may cause malfunctions to occur.

- If CDR200tx operates incorrectly, See "Trouble-shooting" on page 12. If the problem persists, consult your CDR200tx dealer.

- Yamaha is not responsible for any data or information losses resulting from the operation of CDR200tx.

Installation Precautions

- Install CDR200tx on a level surface.

- Do not install CDR200tx near water, in direct sunlight, close to heating units, or in areas subject to high or low temperature extremes, excessive dust, vibration, or severe shocks.

- Do not expose CDR200tx to extremes of humidity.

- The ambient temperature where CDR200tx is installed should be between 5°C and 40°C (41°F–104°F).

- Using CDR200tx close to a television or radio may cause interference. Install CDR200tx at least one meter away from television and radio equipment.

- Do not block the CDR200tx ventilation slots. Install CDR200tx with at least 10 cm of free space all-around.

- Make sure the CDR200tx power cord is not located in a position where it is likely to be walked on or pinched by other equipment.

Operating Precautions

- Do not subject CDR200tx to impact or shock when in use. This may impair recording or playback.

- Do not place heavy objects on CDR200tx.

- Avoid moving CDR200tx from cold to warm places, and avoid sudden room temperature rises, as condensation that could cause CDR200tx to malfunction may occur. If condensation does occur, wait at least one hour before operating CDR200tx.

- Do not let liquid or other foreign objects enter CDR200tx.

- To reduce the risk of electric shock, do not expose CDR200tx to rain or moisture.

- Always remove the disc before transporting CDR200tx.

- CDR200tx uses an optical pickup that is sensitive to dust and dirt. Make sure that the disc tray and disc are free of dust and dirt before loading.

- Use only the power cable supplied. Other cables may cause interference when CDR200tx is used near to radio and television equipment.

- CDR200tx should be connected only to an AC receptacle of the type described in this *User Guide* or as marked on the rear panel of CDR200tx.

- Use a soft dry cloth to clean CDR200tx. Stubborn dirt can be removed using a cloth dampened with water and neutral detergent solution. Do not use benzine or solvent based cleaners on CDR200tx.

Preventing Premature Disc Failure

The NUMBER ONE cause of premature disc failure with recordable CDs is contamination of the recording surface before recording is completed. To minimize disc failure, use the following disc-handling guidelines:

- Keep the disc tray and disc as clean and dust-free *as humanly possible* during the record process. DO NOT touch the recording surface, and do not expose the disc tray and disc to dust or dirt.

- DO NOT BLOW ON THE DISC to remove dust or dirt. To remove dust from the recording surface use a camera lens bulb. Be sure to follow the instructions when using the cloth.

- To remove stubborn dirt or grease from the recording surface use only nonabrasive foam-tipped swabs (such as Chemtronics Foamtips #120) with a *small amount* of pure, denatured alcohol. To avoid scratching the recording surface BE SURE TO USE ONLY LIGHT STROKES, beginning at the disc center, pulling directly towards the disc's outer edge.

- Always record in a dust-free environment. If the disc must be removed from CDR200tx before recording is finished, store the disc in a clean, dust-free environment.

- If a disc tray accumulates dust, DO NOT USE IT FOR DISC RECORDING. Always use a clean, dust-free tray for disc recording.

If CDR200tx is vibrated while recording, the recording may fail. To avoid such failures observe the following practices:

- Place CDR200tx on a solid, stable surface, away from high-traffic areas. The surface must allow CDR200tx to operate in a level, horizontal position.

- Avoid touching or handling CDR200tx when recording.

Note: *Once the disc has been finalized (and no more recording is possible), it can be handled with the same care that any CD should be handled.*
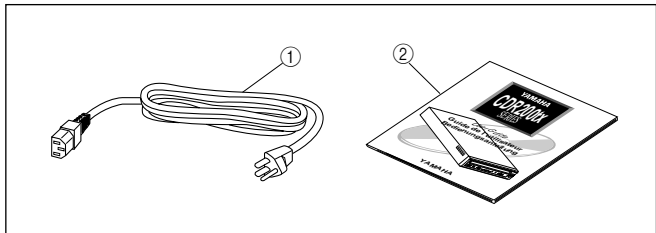
Table of Contents

Introduction

Thank you for purchasing a Yamaha CDR200tx drive. Please read this manual before using the drive in order to make the best use of the superior CDR200tx functions. After reading, please retain this manual for future reference.

Accessories

The package should contain the following items along with the drive. Check to see if you have all these items.

① **Power cable x 1**

② **User guide x 1 (this guide)**

CDR200tx Features

■ **2xS Recording - 6xS Reading**
The CDR200tx is a CD-ROM recorder capable of recording at double speed (2xS), or normal speed (1xS). It can read discs at up to 6xS.

■ **Compatible with Seven Different Formats**
The CDR200tx can both record and read seven different formats: CD-ROM, CD-ROM XA, CD-I, CD-DA, CD-Bridge (multisession), CD-Extra, and Video CD. The CDR200tx is also equipped with an analog audio output terminal (headphones) for CD-DA.

■ **SCSI 2 for High-Volume, High-Speed Data Transfer**
The CDR200tx features SCSI 2, the second generation SCSI interface for connecting computers and peripheral devices. SCSI 2 provides high-speed transmission of large quantities of data, which is especially important when working with image data.

■ **Compatible with Windows 95 Plug and Play**
SCSI IDs are set automatically by the SCAM protocol (level 1).

■ **Orange Book Part 2 Compatible 5-Mode Recording**
The CDR200tx conforms to the five recording modes outlined in the Orange Book Part 2: Track at Once, Multisession, Disc at Once, Session at Once, and Packet Writing.

Orange Book Compatible Recording

Track at Once

In this mode, data can be recorded to disc one track at a time. Discs recorded in this mode cannot be played in CD players or CD-ROM drives other than the CD-R drive until the session is closed.

Multisession

In this mode, data can be recorded to disc in stages (one session at a time). Additional data can be written later.

Disc at Once

In this mode, data can be recorded to an entire disc in one pass. It is not possible to write additional data later.

Session at Once

In this mode, data can be recorded to disc one session at a time. To use this mode, your software must support Session at Once recording. New sessions can be written later.

Packet Writing

This is useful for data back-up. Smaller units of data can be added to tracks. To use this mode, your software must support Packet Writing.

Chapter 1 - System Configuration

In order to use the CDR200tx, you will require the following.

For an IBM-PC computer with DOS or Windows

The following operating environment is required:

- An IBM/AT or compatible PC with a 486/33MHz or better CPU

- A vacant slot in which to install a SCSI card or a pre-installed SCSI card

- Windows 3.1 or later, or Windows 95

- Sufficient hard disk space

Note: *You will need about twice as much space on your hard disk as that required by the data you wish to write to CD-ROM.*

SCSI card and software

Yamaha CDR200tx is a "SCSI" device. You will need to install a SCSI card and some mastering (writing) software in your host computer to connect the CDR200tx.

We recommend the following:
Adaptec SCSI cards: AHA-2940 (PCI), AHA-284x (VL), AHA-2740 (EISA), AHA-154x (ISA), etc.

Use a mastering (writing) software application that supports the CDR200tx.

For a Macintosh computer

The following operating environment is required:

- A Macintosh computer that is equipped with a CPU of 68040 or higher

About Discs

CD-R Discs

On the CDR200tx, you can use conventional CD-R discs that conform to the Recordable Compact Disc Systems Part II (Orange Book). Yamaha recommends the following Yamaha CD-R discs:
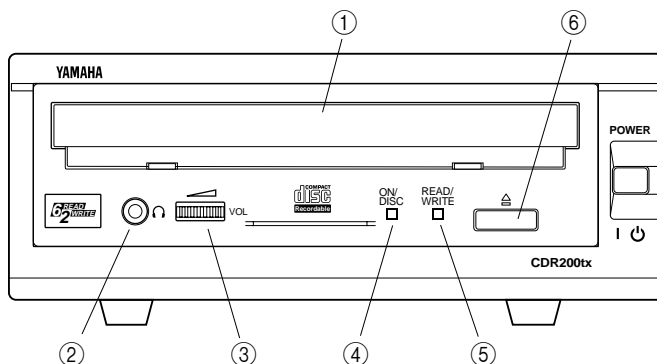
> CDM12Y63   (ϕ120mm, 63 minutes)
> CDM12Y74   (ϕ120mm, 74 minutes)
> CDM12Y74M (ϕ120mm, 74 minutes)
> CDM12Y74T   (ϕ120mm, 74 minutes)

Read-only Discs

You can use discs with the ⟨disc⟩ logo which conform to the Compact Disk Read Only Memory standard (CD-ROM standard, Yellow Book). If you wish to use the audio functions, use discs with the ⟨disc⟩ logo, which conform to the Compact Disc Digital Audio standard (Red Book).

Chapter 2 - Touring Around CDR200tx

Front Panel

① **Disc tray**

The disc is inserted and ejected here. Pressing the eject button will open the tray.

② **Headphone jack**

This stereo mini jack allows you to connect headphones and listen to audio.

③ **Headphone volume control**

This control adjusts the volume level of the headphone output. Rotating the control clockwise will increase the volume level.

④ **ON/DISC LED**

This indicator lights up in orange when the CDR200tx is powered on, and lights up in green when the CDR200tx contains a disc.
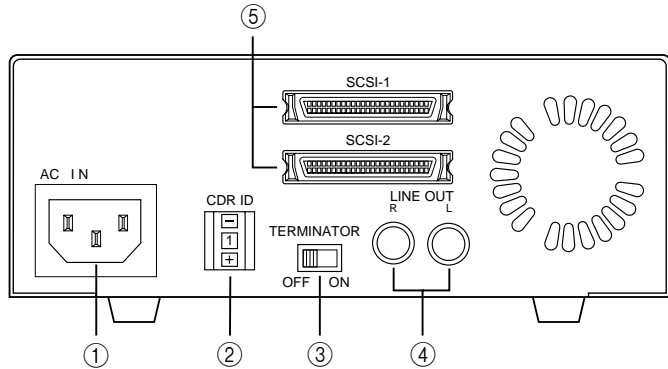
⑤ **READ/WRITE LED**

This indicator lights up in green when data is being read, and flashes when data is being accessed. It also lights up in orange when data is being recorded on a disc.

⑥ **Eject button**

This button is used to open or close the tray.

Rear Panel

① **AC IN**

Connect the included power cable here.

② **CDR ID**

Use this switch to set a unique SCSI ID number for the CDR200tx.

③ **TERMINATOR**

This switch is used to set termination. Refer to the terminator setting section for details.

④ **LINE OUT (L, R)**

These jacks are used to output audio to the amplifier.

⑤ **SCSI-1, SCSI-2**

These connectors are used to connect the CDR200tx in the SCSI daisy chain.

Chapter 3 - Installing the Yamaha CDR200tx Drive
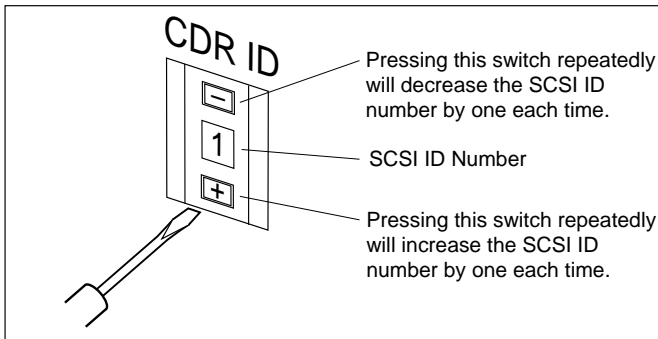
CDR200tx drive settings

♦ SCSI ID settings

The SCSI ID number is used so that the computer will recognize a connected SCSI device. You can assign 0 through 7 as the SCSI ID number. Usually, "7" is reserved for the SCSI card ID number, and "0" is reserved for the first SCSI device in the chain. Use a number between 1 and 6 for the CDR200tx.
Use the switch on the rear panel to set a SCSI ID number. The factory set ID number is "1".

Caution: *If you are using other SCSI devices, be sure to use a unique ID number for each device. Be sure to turn off the power to the drive before you set the SCSI ID number.*

Note: *When you are using Windows 95, and if the SCSI ID setting on the rear panel is the same as the number assigned to another SCSI device, the Plug and Play component of Windows 95 will automatically assign an unused number to the CDR200tx (SCAM protocol level 1).*

CDR ID

Pressing this switch repeatedly will decrease the SCSI ID number by one each time.

SCSI ID Number

Pressing this switch repeatedly will increase the SCSI ID number by one each time.

♦ Terminator setting

The terminator setting indicates whether or not this device is the last connected SCSI device.

Terminator ON

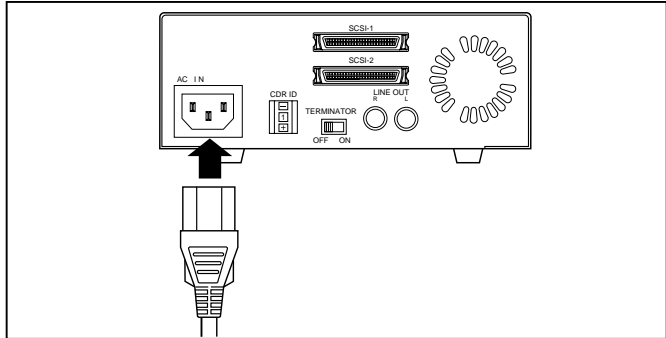TERMINATOR — Use this setting if the CDR200tx is the last device in the SCSI daisy-chain.

OFF   ON

Terminator OFF

TERMINATOR — Use this setting if devices other than the CDR200tx are in the SCSI daisy-chain and the CDR200tx is not the last device.

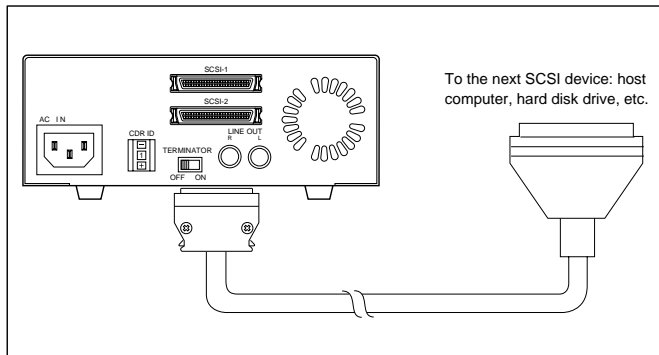OFF   ON

Cable Connection

Power cable

Insert the power cable securely to the "AC IN" connector on the rear panel.

SCSI cable

Connect the SCSI cable to either of the CDR200tx rear panel SCSI connectors (1) or (2), and connect the other end of the SCSI cable to the host computer.

The CDR200tx is not supplied with a SCSI cable. You will need to obtain one that will fit the drive and the host computer connectors.
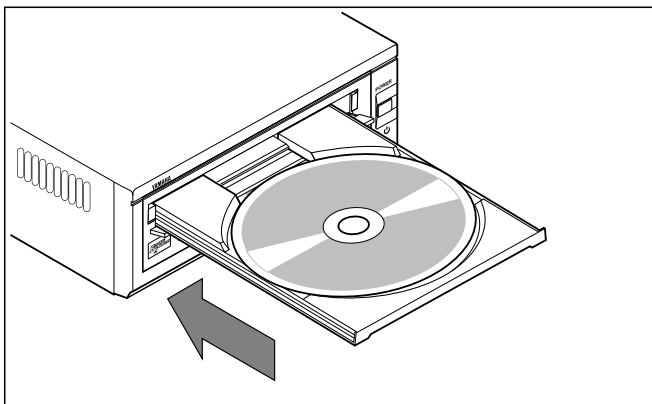
Chapter 4 - Operation

Loading a Disc

1. **Press the eject button to open the tray.**

2. **Carefully place the disc, label-side up, on the disc tray.**

3. **Press the disc tray softly or press the eject button again to close the disc tray.**

Important: *Take great care when handling CD-ROM discs. They are more sensitive to damage than audio CDs, and the slightest scratch can render a disc useless. Do not expose discs to dust, dirt, heat, or moisture.*
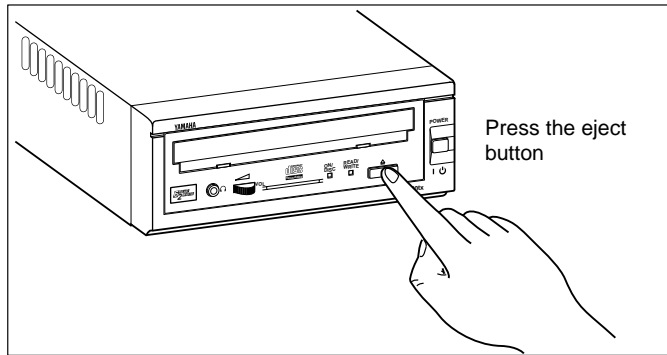
Ejecting the Disc

If the CDR200tx is powered on:
Press the eject button to eject the disc.

Note: *You cannot eject the disc if the SCSI command prohibits the eject operation while the CDR200tx is reading data.*

Caution: *Be sure to remove the disc after it is completely ejected. (Trying to remove the disc before it is completely ejected may cause the drive to malfunction.)*

Press the eject button

If the CDR200tx is not powered on:
Pressing the eject button will not eject the disc.

Troubleshooting

If CDR200tx is not performing as expected, look up the symptoms in the following table, then see what to do.

Symptoms	What to Do
The power to the CDR200tx is off	• Check the AC power cable connection.
The power to the computer is off	• Check to see if the SCSI card is correctly installed.
The CDR200tx is not recognized by the computer.	• Check the SCSI cable connection. • Make sure that SCSI ID numbers are assigned exclusively. • Make sure that the last device in the SCSI daisy chain is terminated correctly.
The CDR200tx does not operate correctly	• Install the SCSI driver software again.
The disc tray will not open	• Make sure that the power to the drive is turned on.
The disc ejects	• Make sure that the disc is seated in the tray correctly.
Incorrect operation	• Make sure that the disc is seated in the tray correctly. • Make sure that you are using the correct disc. • Make sure that there is no dust, dirt, or condensation on the disc or tray.

Specifications

Interface	SCSI 2
Data Capacity	1.2m/sec: 666MB
	1.4m/sec: 540MB
Record/Read Speed	1xS (real-time), 2xS, 4xS(read), 6xS (read)
Data Transfer Rate	6xS: 900KB/sec
	4xS: 600KB/sec
	2xS: 300KB/sec
	1xS: 150KB/sec
Burst Transfer Rate	4.2MB/sec (record asynchronous)
	3.4MB/sec (read asynchronous)
Buffer Size	1MB (250 sectors)
Access Speed	250ms
Installation	Horizontal<±15 degrees
Disc Loading	Disc tray
Audio Out	Frequency Response 20 - 20,000Hz (Line Out)
(normal speed)	Output Level 1 Vrms (Line Out)
Power Consumption	16W max (read/write)
Power Supply	100 – 240V, 0.3A
Environment	Temperature: +5°C - +40°C (read/write)
	Humidity: 25 - 80%
Dimensions (WxHxD)	170 x 68 x 327 mm
Weight	3 kg

Specifications are subject to change without prior notice.

Front Panel Indicator Key

● on: green   ✦ flashing: green   — off

❍ on: orange   ✧ flashing: orange

Status	ON/DISC	Read/Write
Reset	—	—
Ready (no disc)	❍	—
Inserting disc	✧	—
Ejecting disc	✦	—
Ready (disc inserted)	●	—
Seeking	●	✦
Preparing to write	●	✧
Writing	●	❍
Writing (test mode)	●	✧
Playback	●	●
Error occurred	✧	—

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