YAMAHA
CDR200t
SERIES

User Guide
Guide de l'utilisateur
Bedienungsanleitung
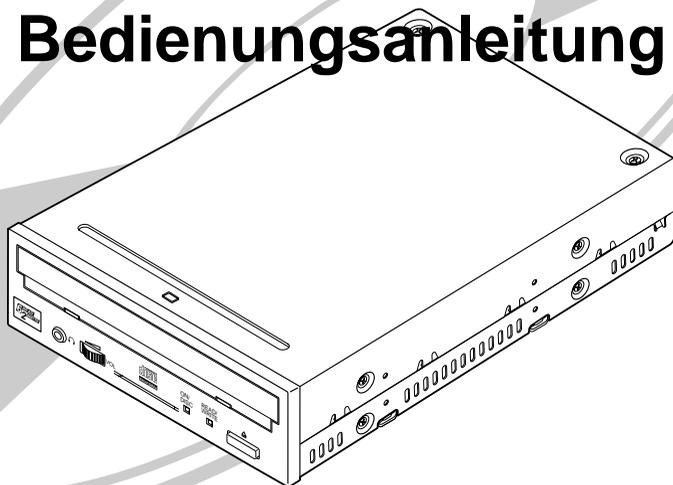
YAMAHA

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:	CDR200t
	CDR200t-NB

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.

• This manual applies to the CDR200t and CDR200t-NB.
  The CDR200t front panel displays the YAMAHA brand name.
  The CDR200t-NB front panel does not display a brand name.
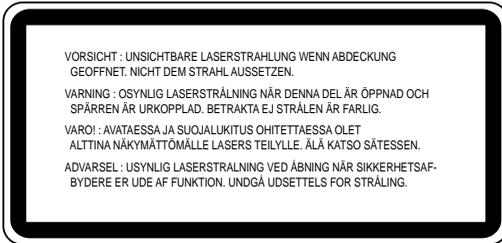
❢ WARNING ❢

- The temperature where CDR200t is located should be between 5ºC and 40ºC (41ºF – 104ºF), when used in a fan-cooled system.

- Do not disassemble the CDR200t cover to reduce the risk of electric shock.

- Always remove the disc before transporting CDR200t.

Important Precautions

Please read the following precautions before attempting to operate CDR200t.

- Before recording a disc, be sure to clean the disc and CDR tray using an air aerosol-type dust remover.
  A dust particle on the disc may cause recording to fail, producing an unuseable disc.

- Always record in a dust-free environment. If the disc must be removed from CDR200t before recording is finished, store the disc in a clean, dust-free environment.

- CDR200t contains no user serviceable parts. Refer all servicing to qualified personnel.

- If any of the following should occur, CDR200t should be serviced by qualified personnel:

  Metal objects or liquids get inside CDR200t.

  CDR200t does not operate normally or a marked change in performance is noticed.

- Do not place heavy objects on the CD-R discs.

- Do not subject CDR200t and computer to impact or shock when in use, as this may impair recording or playback.

- Yamaha is not responsible for any data or information losses resulting from the operation of CDR200t.

Table of Contents

Introduction

Thank you for purchasing a Yamaha CDR200t drive. Please read this manual before using the drive in order to make the best use of the superior CDR200t functions. After reading, please retain this manual for future reference.

CDR200t Features

■ **2xS Recording - 6xS Reading**
The CDR200t 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 CDR200t 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 CDR200t is also equipped with an analog audio output terminal (headphones) for CD-DA.

■ **SCSI 2 for High-Volume, High-Speed Data Transfer**
The CDR200t 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 CDR200t 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 CDR200t, 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

- A vacant half-height bay

- 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
This is required in order to connect a SCSI device (the Yamaha CDR200t) to your computer.

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

Yamaha CDR200t is a "SCSI" device. You will need to install a SCSI card and some mastering (writing) software in your host computer to connect the CDR200t.

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 CDR200t, 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 ⑂ logo which conform to the Compact Disc Read Only Memory standard (CD-ROM standard, Yellow Book). If you wish to use the audio functions, use discs with the ⑂ logo, which conform to the Compact Disc Digital Audio standard (Red Book).

Chapter 2 - Installing the Yamaha CDR200t Drive

## CDR200t drive settings

Before installing the CDR drive into your computer, you will need to set the following jumpers. You set these jumpers by inserting jumper connectors into the jumper switch located on the rear panel of the CDR drive switch.
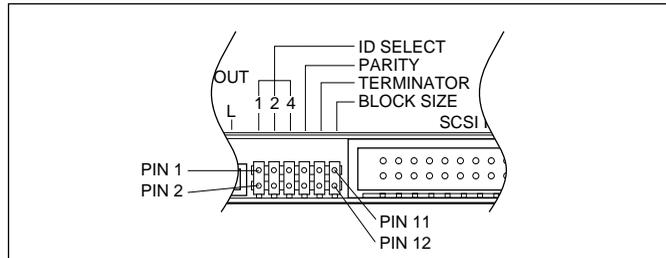
♦ SCSI ID settings
♦ Parity setting
♦ Terminator setting
♦ Block size setting

Important: *Use long-nose pliers to remove or insert jumper connectors.*
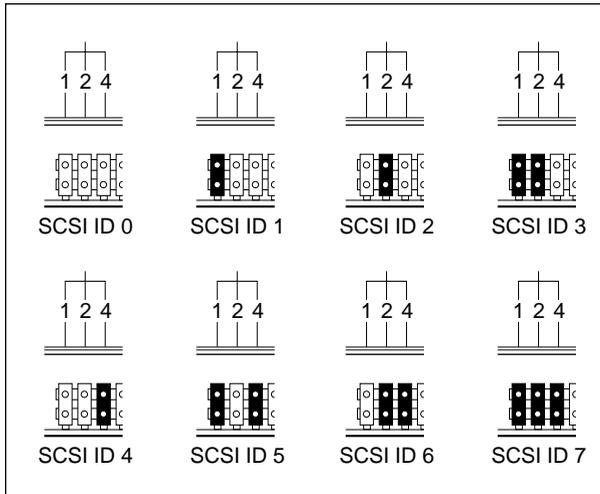
Rear Panel
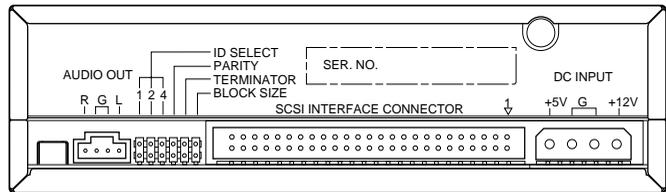
Jumper Switch

♦ **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 CDR200t. Refer to the diagram below for more information on setting the SCSI ID number. The factory set ID number is "3".

Important: *If you are using other SCSI devices, be sure to use a unique ID number for each device.*

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 CDR200t (SCAM protocol level 1).*

SCSI ID Setting

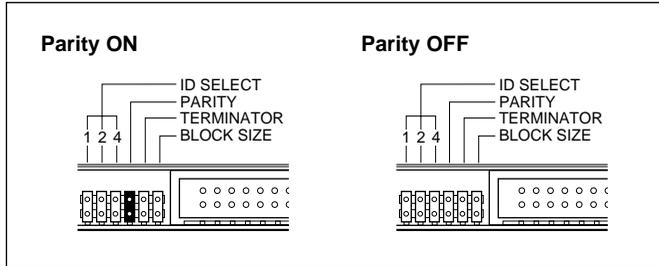| SCSI ID	ID 1	ID 2	ID 4
0	O (OPEN)	O (OPEN)	O (OPEN)
1	1 (SHORT)	O (OPEN)	O (OPEN)
2	O (OPEN)	1 (SHORT)	O (OPEN)
3	1 (SHORT)	1 (SHORT)	O (OPEN)
4	O (OPEN)	O (OPEN)	1 (SHORT)
5	1 (SHORT)	O (OPEN)	1 (SHORT)
6	O (OPEN)	1 (SHORT)	1 (SHORT)
7	1 (SHORT)	1 (SHORT)	1 (SHORT)

♦ **Parity setting**

Parity ON (with a jumper)
— Parity Check will be performed. **Normally, use this setting.**

Parity OFF (without a jumper)
— Parity Check will not be performed.

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

Terminator ON (with a jumper)
— Use this setting if the CDR200t is the last device in the internal SCSI daisy-chain.

Terminator OFF (without a jumper)
— Use this setting if devices other than the CDR200t are in the internal SCSI daisy-chain and the CDR200t is not the last device.
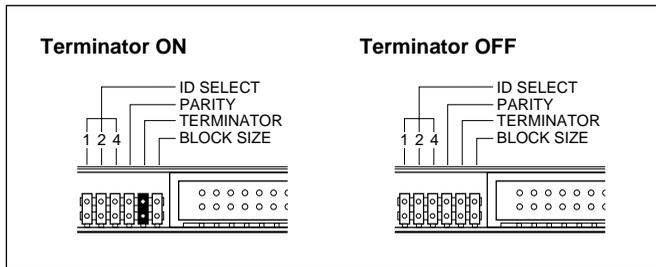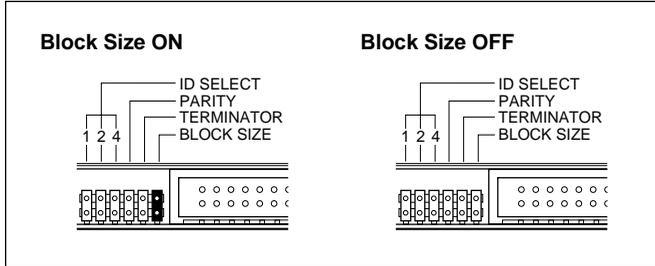
♦ **Block size setting**

Block size ON (with a jumper)
— Block Size is set to 512Byte/sector. This function is valid only for workstations, such as those that run UNIX.

Block size OFF (without a jumper)
— **Normally, use this setting.**

Block Size ON

ID SELECT
PARITY
TERMINATOR
BLOCK SIZE
1 2 4

Block Size OFF

ID SELECT
PARITY
TERMINATOR
BLOCK SIZE
1 2 4

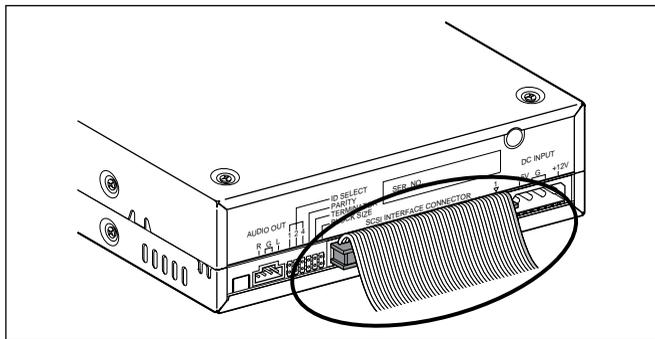## Cable Connection

SCSI cable
Connect a SCSI cable to the SCSI INTERFACE CONNECTOR on the rear panel of the CDR200t.
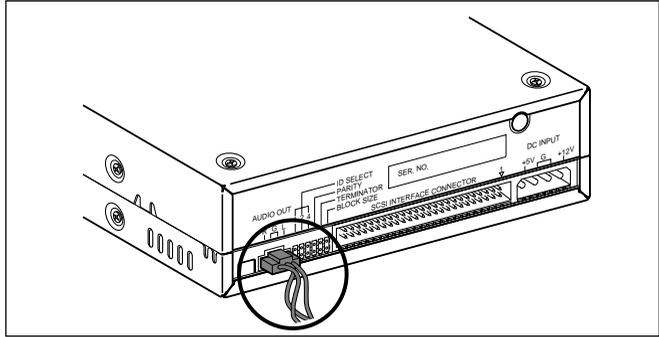**At this time, make sure that figure "1" on upper right corner of the connector will match the red line on the SCSI cable.**

Audio output cable

Connect an audio output cable to the AUDIO OUT connector in the lower left corner of the rear panel.
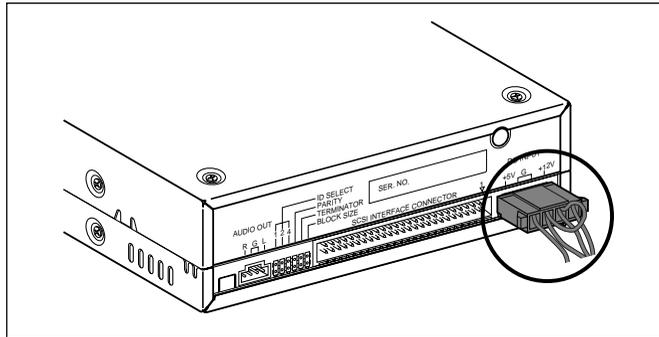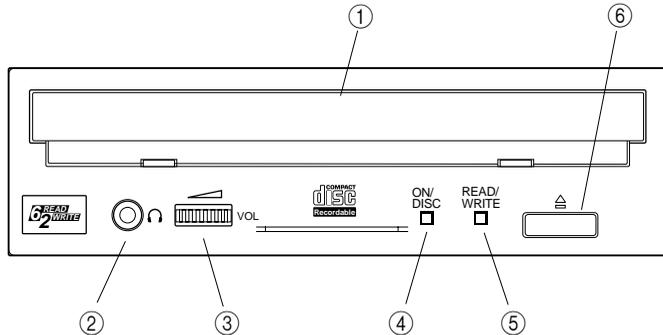**Make sure that the projection of the connector is facing upward.**

DC power cable

Connect a DC power cable to the DC INPUT connector on the lower right corner of the rear panel.
**Make sure that the notch on the connector is facing upward.**

Chapter 3 - Operation

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 CDR200t is powered on, and lights up in green when the CDR200t 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.

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.**
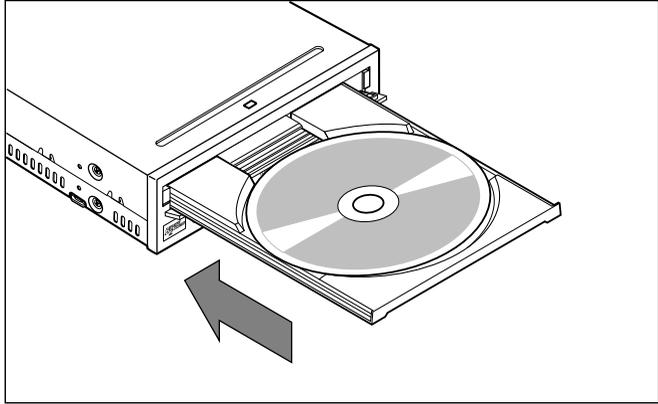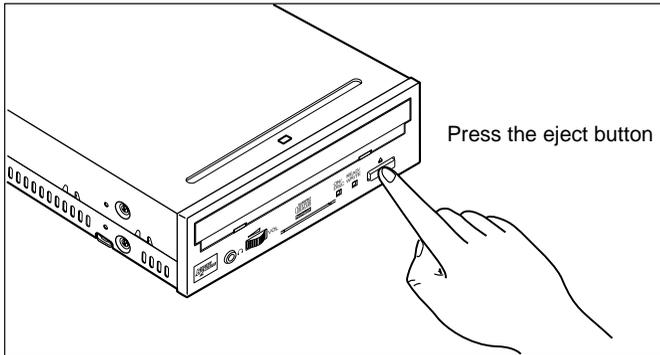
Ejecting the Disc

If the CDR200t 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 CDR200t 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 CDR200t is not powered on:
Pressing the eject button will not eject the disc.

Troubleshooting

If CDR200t 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 CDR200t is off	• Check the DC power cable connection.
The power to the computer is off	• Check to see if the SCSI card is correctly installed.
The CDR200t 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 CDR200t 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$<\pm15$ degrees
Disc Loading	Disc tray
Audio Out	Frequency Response 20 - 20,000Hz (Line Out)
(normal speed)	Output Level 1 Vrms (Line Out)
Power Consumption	11W max (read/write)
Power Supply	5V ±5%, 12V ±10%
Environment	Temperature: +5°C - +40°C (read/write, when used in a fan-cooled system)
	Humidity: 25 - 80%
Dimensions (WxHxD)	146 x 41.3 x 203 mm
Weight	1.3kg

Rear Panel	Connector
SCSI2/Power Supply	Non-shielded two-in-one, 50p + 4p
ID Selector	Short-pin 12p
Audio Out	MOLEX 53532-04

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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