



User Guide
Guide de l'utilisateur
Bedienungsanleitung



4x2x6

COMPACT
disc
Recordable
ReWritable

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: CRW4260tx

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.

Laser Diode Properties

Material : GaAlAs

Wavelength : 782-789 nm

Emission Duration : Continuous

Laser Output Power : Less than 44.6 μ W*

* 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.

**CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT**

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 SÄTESSEN.

ADVARSEL : USYNLIG LASERSTRALNING VED ÅBNING NÄR SIKKERHETS-
BYDERE ER UDE AF FUNKTION. UNDGÅ UDSETTELS FOR STRÅLING.

Varningsanvisning för
laserstrålning.

Important Precautions

Please read the following precautions before operating CRW4260tx.

- Do not remove the CRW4260tx's top cover. This device uses semiconductor laser. Refer all servicing to qualified personnel.
- Do not attempt to touch the inside of the CRW4260tx. Electricity may have been built up even after you turn off the power.
- CRW4260tx is a sophisticated electronic device. Handle it with care.
- If the fuse blows, CRW4260tx 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 CRW4260tx uses high-density circuits and LSIs. Even a small incident may cause malfunctions to occur.
- If CRW4260tx operates incorrectly, See "Troubleshooting" on page 13. If the problem persists, consult your CRW4260tx dealer.
- Yamaha is not responsible for any data or information losses resulting from the operation of CRW4260tx.

Installation Precautions

- Install CRW4260tx on a level surface.
- Do not install CRW4260tx 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 CRW4260tx to extremes of humidity.
- The ambient temperature where CRW4260tx is installed should be between 5°C and 40°C (41°F–104°F).
- Using CRW4260tx close to a television or radio may cause interference. Install CRW4260tx at least one meter away from television and radio equipment.
- Do not block the CRW4260tx ventilation slots. Install CRW4260tx with at least 10 cm of free space all-around.
- Make sure the CRW4260tx 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 CRW4260tx to impact or shock when in use. This may impair recording or playback.
- Do not place heavy objects on CRW4260tx.
- Avoid moving CRW4260tx from cold to warm places, and avoid sudden room temperature rises, as condensation that could cause CRW4260tx to malfunction may occur. If condensation does occur, wait at least one hour before operating CRW4260tx.
- Do not let liquid or other foreign objects enter CRW4260tx.
- To reduce the risk of electric shock, do not expose CRW4260tx to rain or moisture.
- Always remove the disc before transporting CRW4260tx.
- CRW4260tx 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 CRW4260tx is used near to radio and television equipment.
- CRW4260tx should be connected only to an AC receptacle of the type described in this User Guide or as marked on the rear panel of CRW4260tx.
- Use a soft dry cloth to clean CRW4260tx. Stubborn dirt can be removed using a cloth dampened with water and neutral detergent solution. Do not use benzine or solvent based cleaners on CRW4260tx.

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 CRW4260tx 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 CRW4260tx is vibrated while recording, the recording may fail. To avoid such failures observe the following practices:

- Place CRW4260tx on a solid, stable surface, away from high-traffic areas. The surface must allow CRW4260tx to operate in a level, horizontal position.
- Avoid touching or handling CRW4260tx 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.*

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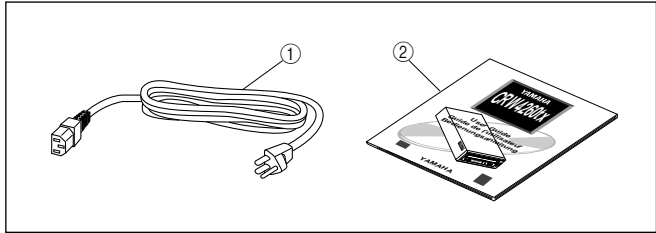
Introduction

Thank you for purchasing a Yamaha CRW4260tx drive. Please read this manual before using the drive in order to make the best use of the superior CRW4260tx 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)**



CRW4260tx Features

- **2xS Recording (Rewritable) - 4xS Recording (Recordable) - 6xS Reading**

The CRW4260tx is able to write (overwrite) CD-RW discs at double speed, and is able to write CD-R discs at quad speed, double speed, or normal speed.

For both types of media, this drive is able to read at 6X speed, quad speed, double speed, or normal speed, and any of these modes can be selected as desired.

- **Compatible with Seven Different Formats**

The CRW4260tx 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 CRW4260tx is also equipped with an analog audio output terminal (headphones) for CD-DA.

- **SCSI 2 Interface**

The CRW4260tx features SCSI 2, the second generation SCSI interface for connecting computers and peripheral devices.

- **Compatible with Windows 95 Plug and Play**

SCSI IDs are set automatically by the SCAM protocol (level 1).

- **Orange Book Part 2, Part 3 Compatible 5-Mode Recording**

The CRW4260tx conforms to the five recording modes outlined in the Orange Book Part 2 and Part 3: 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 a CD-RW or 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. The CRW4260tx supports both sequential and random packet writing.

Chapter 1 - System Configuration

In order to use the CRW4260tx, you will require the following.

Computer

The following operating environment is required:

- An IBM/AT compatible computer with a 100 MHz or faster Pentium CPU (in order to write at 4x speed), or a 100 MHz or faster 486 CPU (in order to write at 2x speed)
- A vacant slot in which to install a SCSI card or a pre-installed SCSI card
- Windows 3.1, Windows 95, Windows NT4.0 or Higher
- 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

This is required in order to connect a SCSI device (the Yamaha CRW4260tx) to your computer.

We recommend the following:

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

Software

Use writing software or packet writing software which supports the CRW4260tx.

Discs

On the CRW4260tx, you can use conventional CD-RW and CD-R discs that conform to the Recordable Compact Disc Systems Part 2 and Part 3 (Orange Book).

Yamaha recommends the following Yamaha CD-RW and CD-R discs:

CD-RW Discs

> CRWM74R (ϕ 120mm, 74 minutes)

CD-R Discs


> CDM12Y63 (ϕ 120mm, 63 minutes)

> CDM12Y74 (ϕ 120mm, 74 minutes)

> CDM12Y74M (ϕ 120mm, 74 minutes)

> CDM12Y74T (ϕ 120mm, 74 minutes)

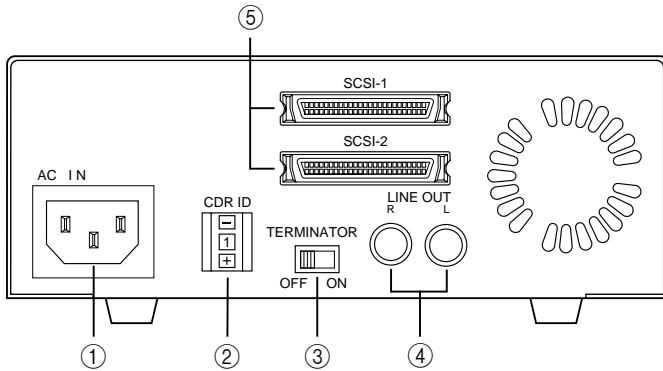
Read-only Discs

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).

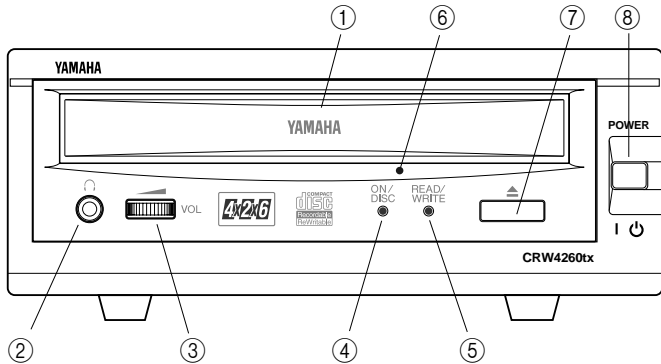
Chapter 2 - Touring Around CRW4260tx

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 CRW4260tx.
- 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 CRW4260tx in the SCSI daisy chain.

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 CRW4260tx is powered on, and lights up in green when the CRW4260tx 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 **Manual Eject hole**
This is used to manually eject a disc that cannot be ejected in the normal way. It is for emergency use only.
- ⑦ **Eject button**
This button is used to open or close the tray.
- ⑧ **POWER switch**
This is the main power switch. Use it to power CRW4260tx on and off. CRW4260tx and any other devices connected to the SCSI chain must be powered on before the host computer is powered on.

Chapter 3 - Installing the Yamaha CRW4260tx Drive

CRW4260tx drive settings

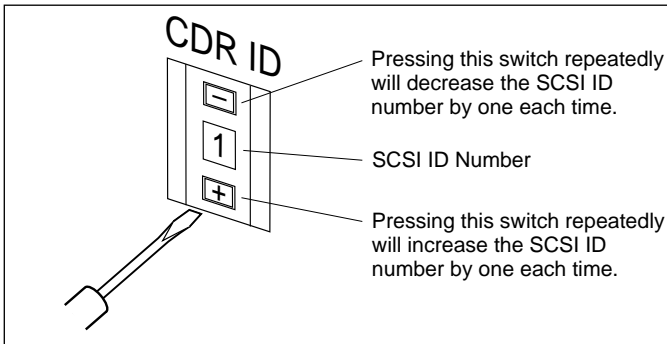
◆ SCSI ID settings

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 CRW4260tx.

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 CRW4260tx (SCAM protocol level 1).*



◆ 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 CRW4260tx is the last device in the SCSI daisy-chain.



Terminator OFF

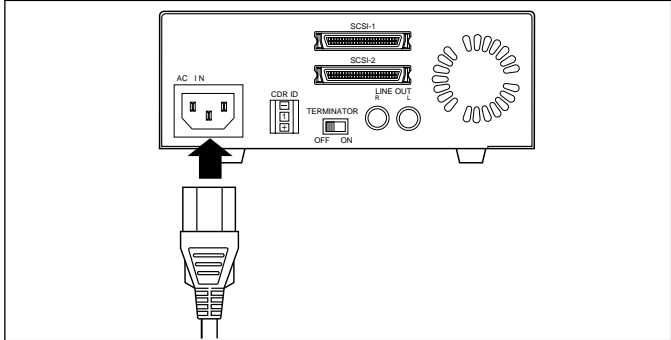
TERMINATOR — Use this setting if devices other than the CRW4260tx are in the SCSI daisy-chain and the CRW4260tx is not the last device.



Cable Connection

Power cable

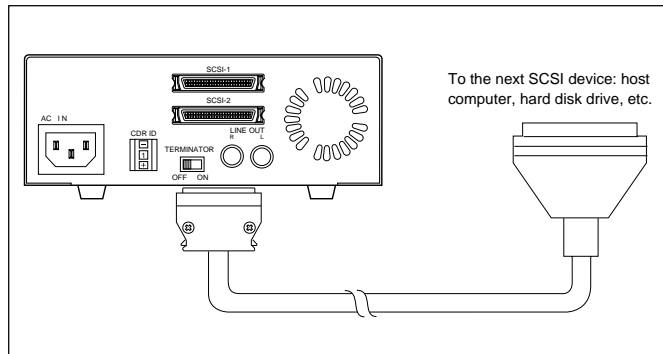
Insert the power cable securely to the “AC IN” connector on the rear panel.



SCSI cable

Connect the SCSI cable to either of the CRW4260tx rear panel SCSI connectors (1) or (2), and connect the other end of the SCSI cable to the host computer.

The CRW4260tx is not supplied with a SCSI cable. You will need to obtain one that will fit the drive and the host computer connectors.

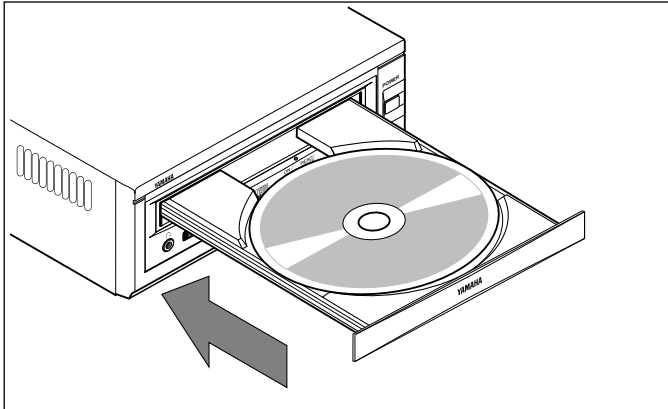


Chapter 4 - Operation

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.*



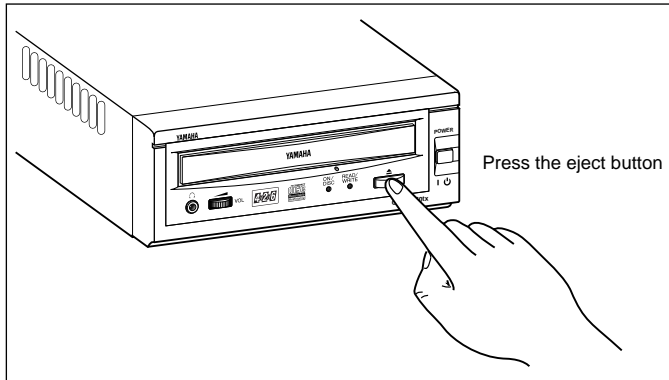
Ejecting the Disc

If the CRW4260tx 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 CRW4260tx 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.)*



If the CRW4260tx is not powered on:

Pressing the eject button will not eject the disc.

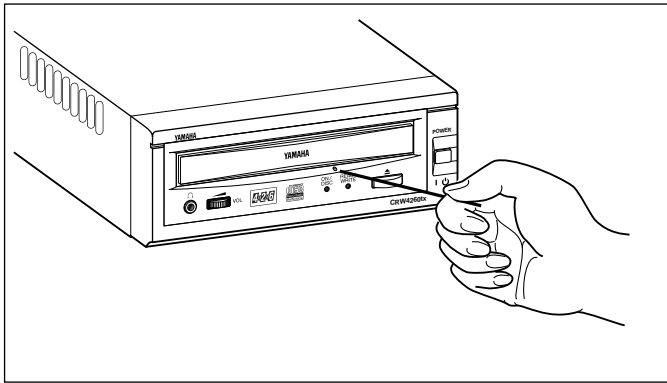
Manual Eject (emergency use)

Here we explain how to eject the disc when it cannot be ejected in the normal way; for example, the power is shut off inadvertently or the loading mechanism fails. This technique should be used only as a last resort. Frequent use may lead to malfunction.

You'll need a pin-like object of 2 mm or less in diameter to do this. A straightened paper clip makes an ideal tool.

- 1. Insert the pin-like tool into the manual eject hole and push gently.**

The spring-loaded mechanism ejects the disc.



- 2. After manually ejecting a disc, you must turn off the power supplied to the CRW4260tx, then turn it on before continuing.**

Troubleshooting

If CRW4260tx is not performing as expected, look up the symptoms in the following table, and take the appropriate corrective action.

Symptoms	Corrective action
The power to the CRW4260tx is off	<ul style="list-style-type: none">• Check the AC power cable connection.
The power to the computer is off	<ul style="list-style-type: none">• Check to see if the SCSI card is correctly installed.
The CRW4260tx is not recognized by the computer.	<ul style="list-style-type: none">• 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 CRW4260tx does not operate correctly	<ul style="list-style-type: none">• Install the SCSI driver software again.
The disc tray will not open	<ul style="list-style-type: none">• Make sure that the power to the drive is turned on.
The disc ejects	<ul style="list-style-type: none">• Make sure that the disc is seated in the tray correctly.
Incorrect operation	<ul style="list-style-type: none">• 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	Writing (CD-RW): 2X speed Writing (CD-R): Normal speed, 2X speed, 4X speed Reading: Normal speed, 2X speed, 4X speed, 6X speed
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	2MB (500 sectors)
Access Speed	250ms
Installation	Horizontal
Disc Loading	Tray
Audio Out (normal speed)	Frequency Response 20 - 20,000Hz (Line Out) Output Level 1 Vrms (Line Out)
Power Consumption	16W (read/write)
Power Supply	100 - 240V, 0.3A
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	2.6 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	●	●

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English: If you have any questions, please contact your dealer or one of the following companies.

French: Pour plus de détails sur les produits, veuillez vous adresser à Yamaha ou au distributeur le plus proche figurant dans la liste suivante:

German: Bei weiteren Fragen wenden Sie sich bitte an Ihren Händler oder eine der folgenden Firmen.

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