Panasonic

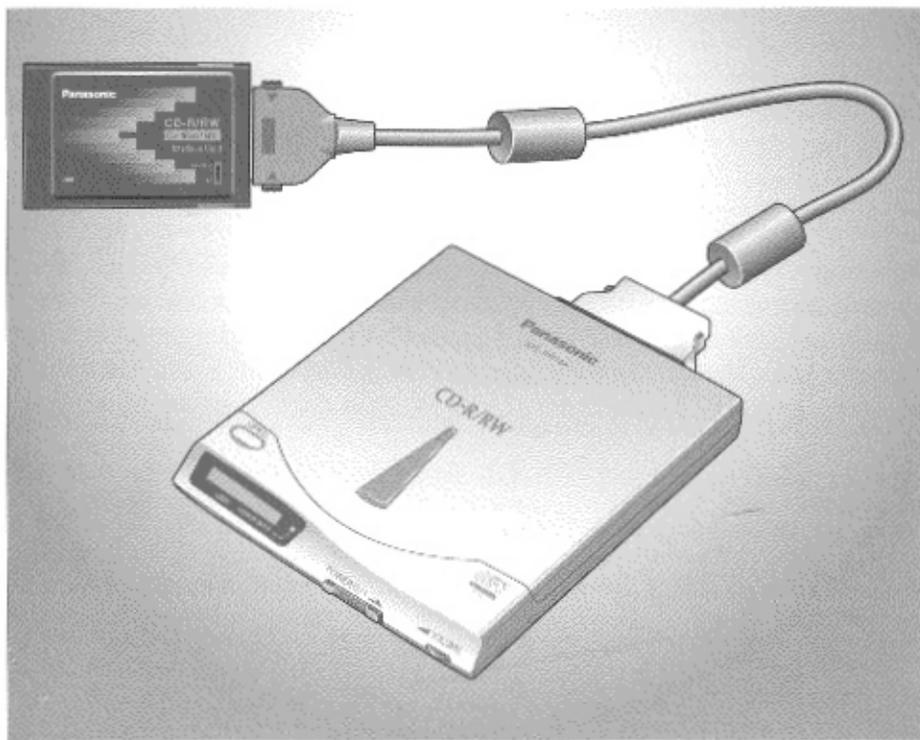## *Portable CD-R/RW Drive*

Operating Instructions

Model No. **KXL-RW10A**

This manual contains the information on handling the drive. Please read this manual first. For the information on setting up the drive for using with your computer, please read the Setup Manual enclosed with this manual.

Please carefully read this manual and the enclosed Setup Manual.
Keep these documentation in a safe place for future reference.

Thank you for purchasing the Panasonic Portable CD-R/RW Drive KXL-RW10A.

The serial number of this unit may be found on the label located at the bottom of the unit. Write down this number below and keep this book along with your proof of purchase to serve as a permanent record of your purchase or for future reference. For warranty service you may be required to show your purchase records.

MODEL NO. **KXL-RW10A**   NAME OF DEALER _____

SERIAL NO. _____   DATE OF PURCHASE _____

WARNING
- The power source voltage of the AC adaptor is listed on the nameplate. Plug the supplied AC adaptor only into an outlet with proper voltage.
- To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

CAUTION
- When you use this equipment with the supplied AC adaptor, the main socket-outlet should be near the equipment and should be easily accessible.
- To prevent the interface connector from static electricity damage, before you touch it, discharge any static electricity from your hands by touching a grounded metal surface, such as the screw on the plate cover of an electric outlet.

- Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Easy CD Creator and DirectCD are registered trademarks of Adaptec, Inc.
- Pentium is a registered trademark of Intel Corporation.
- Photo CD is a registered trademark of Eastman Kodak Company.

All other brands and product names are trademarks or registered trademarks of their respective companies.

Permission is granted from Microsoft Corporation to use Microsoft® Windows® Screen Shots.

Specifications given in these Operating Instructions are subject to change without notice.

© KYUSHU MATSUSHITA ELECTRIC CO., LTD. 1999

CAUTION FOR LASER

This product utilizes a laser.

Use of control, adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Do not open covers and do not repair yourself. Refer servicing to qualified personnel.

Laser diode properties	
Material	Semiconductor laser GaAlAs
Laser output	Less than HHS and IEC 825-1 Class 1 Limit
Wave length	778 - 787 nm

Location of the required label.
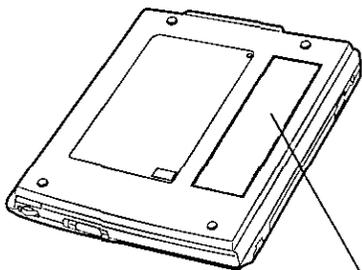
CAUTION	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ATTENTION	RAYONNEMENT LASER INVISIBLE EN CSA D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDS/ETTELSE FOR STRÅLING.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
VARO !	NÄKYMÄTÖN AVATTAESSA OLET ALTTIINA LASERSÄTEILYLLE, ÄLÄ KATSO SÄTEESEN.

3

4

If you wish to use the drive as a CD-ROM Drive or CD-R/RW Drive, you must follow
the steps below.

Refer to the Operating Instructions (this manual)	• Set the MODE switch of the drive. • Confirm the setting of your computer. • Set the mode of the interface card. • Connect the interface card and interface cable to the drive.

⬇

Refer to the Setup Manual	• Confirm the PC card device. • Connect the drive to your computer. • Setup your computer. • Confirm the setup.

⬇ (The drive can be used as a CD-ROM drive.)

Refer to the "Easy CD Creator" and "DirectCD" Quick Reference Guide	• Setup the supplied writing software. (For the operation of writing and rewriting to the CD-R/CD-RW media, refer to the Quick Reference Guide.)

(The drive can be used as a CD-R/RW drive.)

End-User License Agreement

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Within ninety (90) days of your receipt of the SOFTWARE, Panasonic warrants that the storage media on which the SOFTWARE are furnished is free from defect in materials and workmanship under normal use, and that it will repair or at its option replace any defective media at no charge to you, provided that such defective media is returned to Panasonic within such ninety (90) days period.

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Features

■ Ultra Compact Design
— Weight less than 12.7 ounces (approx. 360 g)
— Slim, thin design and lightweight - a truly portable drive

■ Supplied Interface Card which supports CardBus mode / 16 bit mode
— Set either to CardBus mode or to 16 bit mode

■ Maximum 20X Reading Transfer Rate *1 (CardBus mode only)
— CardBus mode 3000 KB/s (Max.)
— 16 bit mode 2700 KB/s (Max.)

■ 4X Writing Performance *2
— 600 KB/s (4X), 300 KB/s (2X), 150 KB/s (Normal speed)

■ Supports 5 Types of Writing mode
— The Easy CD Creator writing software supports "Track at once", "Multisession", "Disc at once" and "Session at once" modes and the DirectCD writing software supports "Packet writing" mode, these writing modes are based on the Orange book Part 2/Part 3.

*1 Performance will vary depending on computer specifications.
· Reading data from a CD-RW media, the maximum reading transfer rate is 10X.
*2 When writing to a CD-RW media with 4X, you need a 4X writing transfer rate's compatible media.

Important:

■ Please use CD-Rs with the marking below.

■ Please use CD-RWs with the marking below.

■ Please use CD-ROMs with the marking below.

■ Please use audio CDs with the marking below.

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Table of Contents

Before Use

Preparation

Operation

Appendix

Precautions

■ Do not disassemble the drive and do not repair yourself, or it may cause electrical shock hazard, or a laser may damage your eyes.
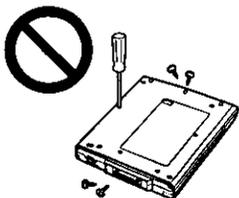
■ Do not store or use the drive in a dusty, humid, oily environment, or under damp or moist conditions.

■ Do not turn up the volume too high, when using the headphones.

■ Do not leave the drive in direct sunlight, near a heat source or especially in a hot automobile.

■ Do not drop or jar the drive.

■ Do not touch the pins/terminals of the interface card and interface cable.

■ When the drive has been moved from a cold place to warm place, it may damp or moist. Leave the drive for about 1 hour before using.

■ Keep magnetic objects away from the drive.

■ Do not insert any foreign metal object inside the drive.

■ Do not touch the lens.

■ If noise is heard from radio or TV, move the drive 2 m (about 6 ft.) away from the radio or TV.

■ Do not use any other interface card with the drive, except the supplied interface card.

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AC Adaptor

■ Do not plug-in or remove the AC adaptor using wet hands.
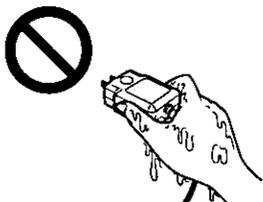
■ Make sure the AC outlet or cord for the AC adaptor does not exceed the limit of their electrical ratings.
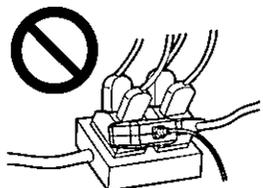
■ Make sure the prongs of AC adaptor are fully inserted into the AC outlet.

■ Periodically remove the dust from the prongs of AC adaptor.

■ Only use the AC adaptor indoors.

■ Do not damage the AC adaptor by scratching or modifying, or bending its prongs.
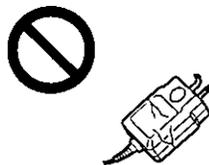
■ Do not use the AC adaptor under the following conditions.
—when it is damaged
—when there is smoke or strange smell
—when an abnormal sound is heard

■ Use only the supplied AC adaptor (☞ P. 18)

■ Do not disassemble the AC adaptor.

Disc

■ Do not scratch, smudge, write or label both surfaces of Disc.

■ Do not leave the Disc in direct sunlight, near a heat source or especially in a hot automobile.

■ Do not use chemicals or cleanser to clean Disc.

■ Do not wipe Disc with dried hard cloth.

■ Do not touch the data side (the side without the label) of Disc. Avoid finger prints and scratches while holding it.

■ Do not throw or bend Disc.

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Accessories

Make sure that the following accessories are included with the drive. If anything is missing, contact your dealer immediately.

❏ **AC Adaptor**
 KX-WZ701
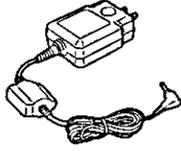
❏ **Media**
 • CD-R Media
 • CD-RW Media
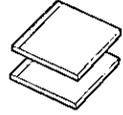
❏ **Interface Card**
 (PCMCIA Type II)

❏ **Operating Instructions**
 (this manual)
 Setup Manual
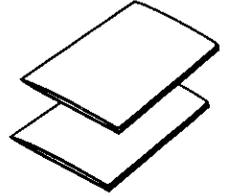
❏ **Interface Cable**
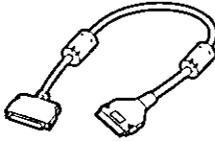
❏ **Setup Disks**
 [Before opening
 the packet,
 please read
 the End-User
 License
 Agreement.]

❏ **Warranty Card**
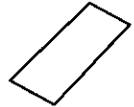
❏ **Writing Software**
 (Easy CD Creator/DirectCD)
 Quick Reference Guide
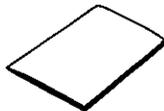
Part Names

■ Front / Left Side view

Disc cover (☞ P. 28)

VOLUME control
Adjusts the volume of the
headphones/external
speaker system (not
supplied) attached to the
PHONES jack (0-10)
(☞ P. 32).

POWER switch
[POWER ⏻/ |]
(☞ P. 27)

LOCK release hole
(☞ P. 29)

OPEN button [OPEN]
Opens the disc cover.
(☞ P. 28)

Display Panel
(☞ P. 15)

POWER / BUSY indicator (green or amber)
● lit (green) :   When the drive is on.
● blink (green) : When data is being read from
                          a media.
● lit (amber) :   When data is being written to a
                          media.
● lit alternately
   (green and amber)* : When the disc cover
                                         needs to be opened.
*When "OPEN" display blinks
   at the display panel.

Note:
● Before using the drive, remove
   the lens protection sheet.

Lens protection sheet
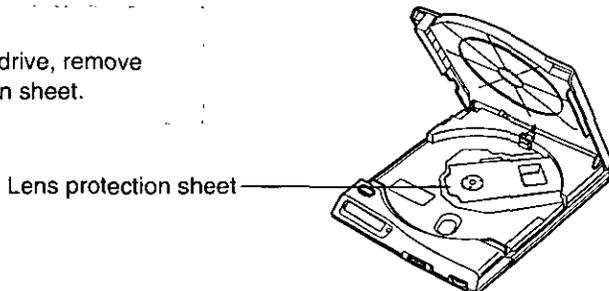
Part Names

■ Rear / Bottom view

MODE switch (☞ P. 16)
Set the following switches.
● SCSI ID NO.
● Terminator
● Vibration Detective

PHONES jack [⊚] (☞ P. 32)
Connect your headphones/external
speaker system (not supplied).

SCSI connector [⟡ SCSI]
(half pitch 50 pin : pin type)
Connect the interface cable
(☞ P. 22) or commercial
SCSI cable (☞ P. 24).

DC IN jack
[DC IN 6V ⟡–ⓒ–⟡] (☞ P. 18)
Connect the supplied AC adaptor.

■ Interface Card

Mode Selective Switch
Set the mode either to "CardBus mode"
or to "16 bit mode" (☞ P. 19).

■ *Display messages*

Message / Indication	Description
(`OP En`)	• Blink : When the disc cover needs to be opened*¹. • Lit : When the disc cover is open.
(`on`)	• Blink : While the drive is recognizing a disc. • Lit : When the drive has recognized a disc.
(`no d 15C`)	• When a disc is not inserted in the drive. • When the drive can not recognize a disc. (The disc may be up side down, scratched, dirty or damp.)
(▼)	• When the disc cover is locked. (Data is being written to a CD-R/CD-RW media, etc.)
*2 (`on 8 8 8 8`) Writing transfer rate. (normal, 2X and 4X)	• While data is being written to a CD-R media. • While data is being written or rewritten to a CD-RW media.

*¹ Open the disc cover, when "OPEN" display blinks at the display panel and the POWER/BUSY indicator lit alternately (green and amber), otherwise the drive will be hung up. After opening the disc cover, make sure that the "OPEN" display and the POWER/BUSY indicator (green) are lit.

*² *O* This mark circulates.

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MODE Switch Setting

Before setting the MODE switch, make sure that the drive is OFF.
MODE switch allows you to set "SCSI ID NO." (☞ below), "TERMINATOR" (☞ P. 17)
or "VIBRATION DETECTIVE" (☞ P. 17).
Set the switches (No.1 to No.5) to ON or OFF using a pointed object like a pen.

MODE switch

SCSI ID NO. switch
Terminator switch
Vibration Detective switch

1 2 3 4 5 6 7 8
ON
OFF
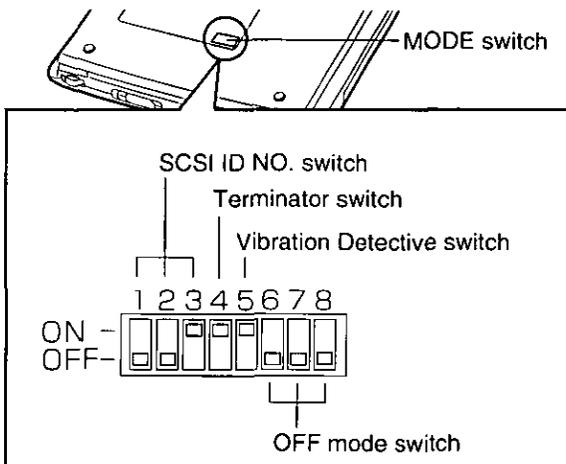
OFF mode switch

Note:
● Make sure that you use the drive with MODE switches No.6 to No.8 set to OFF.

Setting the SCSI ID NO.

Each SCSI device connected to your computer has an individual SCSI ID number. Be
sure that the drive's SCSI ID number does not interfere with other SCSI devices
connected to your computer.
The factory setting of the drive's SCSI ID number is set to **No. 4**.

MODE Switch	SCSI ID NO.							
	0	1	2	3	**4**	5	6	7*
1	OFF	ON	OFF	ON	**OFF**	ON	OFF	ON
2	OFF	OFF	ON	ON	**OFF**	OFF	ON	ON
3	OFF	OFF	OFF	OFF	**ON**	ON	ON	ON

* Do not use "No.7" as a drive's SCSI ID number, since it is used for the interface card
or SCSI board.

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Setting the Terminator

The factory setting is set to "**ON**".

MODE Switch	Setting	Description
4	**ON**	The drive is connected as a last SCSI device.
	OFF	The drive is connected between other SCSI devices.

Setting the Vibration Detective

The factory setting is set to "**ON**".

MODE Switch	Setting	Description
5	**ON***	Vibration detect function works while a disc is spinning. It automatically slows down the spin speed of the disc when the disc vibrates a lot.
	OFF	Vibration detect function does not work while a disc is spinning.

* While the Vibration detect function works, data transfer rate is 14X.

Preparation

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Connecting the AC Adaptor

DC IN jack

AC adaptor (KX-WZ701)
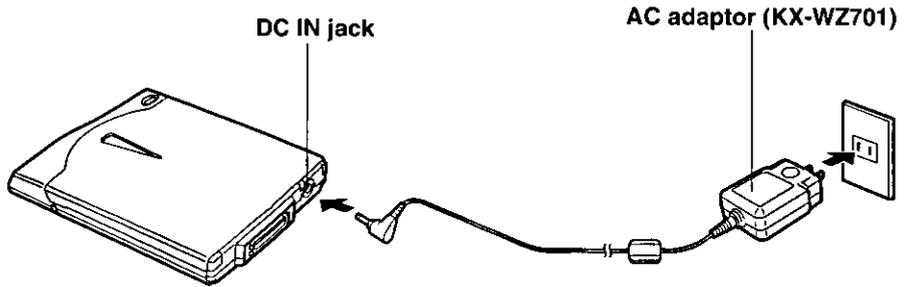
Notes:
- If the drive is not going to be used for an extended period, unplug the AC adaptor from the AC outlet to reduce power consumption. (Approximately 1 W of power is consumed when the drive is OFF and the AC adaptor is connected with 120 V outlet.)
- When you use the drive with the supplied AC adaptor, the mains socket-outlet should be near the drive and should be easily accessible.
- The AC adaptor is universal voltage. However, it is designed for use only in the country where it was purchased.

Using the Drive with Notebook Computer

About CardBus mode / 16 bit mode

The supplied interface card supports CardBus mode and 16 bit mode.
Make sure that you read specifications in your computer's manual before connecting the drive to your computer.

■ CardBus mode

Use this mode, if your computer supports CardBus mode. With this mode, data will be read by 3000 KB/s, and this reading transfer rate is maximum speed of the drive. Besides, your computer's CPU occupation for reading and writing would be much smaller.

■ 16 bit mode

Use this mode, if your computer does not support CardBus mode and the data transfer speed may become slower than when using CardBus mode.

System Requirements

	CardBus mode	16 bit mode
OS	Windows® 98[*1] Windows® 95[*2] (more than OSR2.0)	Windows 98 Windows 95 Windows NT® 4.0[*3]
Computer Specification	CardBus mode (32 bit)	CardBus mode (32 bit) or 16 bit mode
Referring Page	20-23	22-23

[*1] Microsoft® Windows® 98 operating system (hereafter Windows 98)

[*2] Microsoft® Windows® 95 operating system (hereafter Windows 95)

[*3] Microsoft® Windows NT® Workstation operating system and Microsoft® Windows NT® Server network operating system Version 4.0 (hereafter Windows NT 4.0)

Using the CardBus mode

Users for Windows 95, make sure that your computer's version is more than OSR2.0 and also PC card slot is compatible with CardBus mode.

Users for Windows 98, make sure that your computer's PC card slot is compatible with CardBus mode. To know your computer's version, follow the next steps below.

1   Click the "My Computer" icon, then click the "Property".
The Property screen is displayed.

2 (This step is only for Windows 95 users, skip this step for Windows 98 users)
Click the "General" tab.
  • If the display shows **4.00.950B** or **4.00.950C**, your version is more than OSR2.0. Go to step 3.
  • If the display shows **4.00.950** or **4.00.950a**, you have to use the drive with 16 bit mode.

```
System Properties                            [?][X]

 General  Device Manager  Hardware Profiles  Performance

                         System:
                           Microsoft Windows 95
                           4.00.950 B ─────────────── Version

                         Registered to:
```
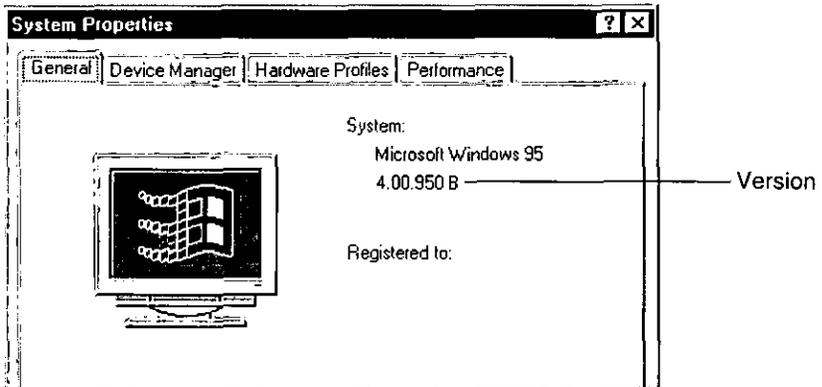
3   Click the "Device Driver manager" tab.

4   Click ⊞ displayed on the left of the PCMCIA socket.

• If any CardBus controllers are displayed in the PCMCIA socket, you can use the driver with CardBus mode.

• If no any CardBus controllers are displayed in the PCMCIA socket you have to use the driver with 16 bit mode.

```
System Properties                                    ? X
┌────────────────────────────────────────────────────┐
│ General │ Device Manager │ Hardware Profiles │ Performance │
│                                                        │
│  ⊙ View devices by type      ○ View devices by connection │
│                                                     ▲  │
│  🖳 Computer                                          │
│  ⊞ 💿 CDROM                                           │
│  ⊞ 💾 Disk drives                                    │
│  ⊞ 🖥 Display adapters                               │
│  ⊞ 🖧 Floppy disk controllers                        │
│  ⊞ 🖧 Hard disk controllers                          │
│  ⊞ 🎮 Keyboard                                       │
│  ⊞ 🖥 Monitors                                       │
│  ⊞ 🖱 Mouse                                          │
│  ⊞ 🖧 Network adapters                               │
│  ⊟ 🖧 PCMCIA socket                                  │
│       ◇ Texas Instruments PCI-1220 CardBus Controller │
│       ◇ Texas Instruments PCI-1220 CardBus Controller │
│  ⊞ 🖫 Ports (COM & LPT)                              │
└────────────────────────────────────────────────────┘
```

Controller(s)

The Company's name and the model name of CardBus controller are different depending on which company's computer you are using. Anyway, you just make sure that there is a name of the CardBus on your screen.

Note:

• Depending on your computer system, you might have to change the BIOS or PCMCIA socket setting to CardBus mode or 16 bit mode.
   Refer to your computer's manual and set to CardBus mode.

Preparation

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CardBus mode / 16 bit mode connection

1 *Set the mode selective switch of the Interface Card*

Set the mode of the interface card either to CardBus mode or to 16 bit mode (☞ P. 14) using a pointed object like a pen.

2 *Connect the Interface Card and Cable to the Drive*

To connect to your computer, refer to the enclosed Setup Manual.

Interface Card
("◄" mark facing up)   **SCSI Connector**

Interface Cable

"▶ ⬜ ◄ " mark facing up
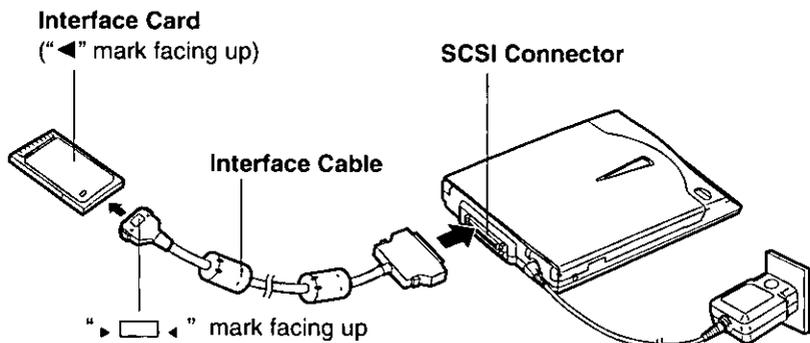
Notes:

• Use only the supplied interface card and interface cable with the drive. Other ones could damage the drive or your computer.

• Do not use the interface card with other drives.

---

3 *Setting up your computer*

To use the drive with your computer, you must install a device driver using the supplied Setup Disk. **Refer to the enclosed Setup Manual.**

Note:

• Depending on your computer system, you might have to change the BIOS or PCMCIA socket setting to CardBus mode or to 16 bit mode. Refer to your computer's manual.

■ *Disconnecting Interface Card from Interface Cable:*

Tabs

① ➡ ②

Interface Card ① Interface Cable
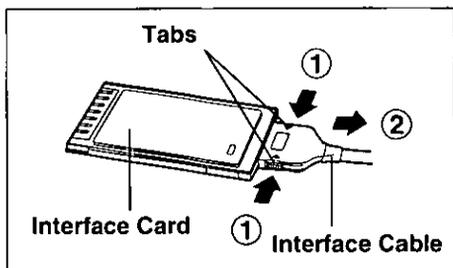
While pressing the side tabs of it (①), pull the interface cable straight (②).

Caution:
* Do not force the interface cable since this could damage the interface card or interface cable.

Preparation

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Using the Drive with Desktop Computer

Connection with the drive to your desktop computer, the drive is only compatible with DOS/V desktop computer.

Using a SCSI board

1 Connection

First connection make sure that both the drive and your desktop computer are off.

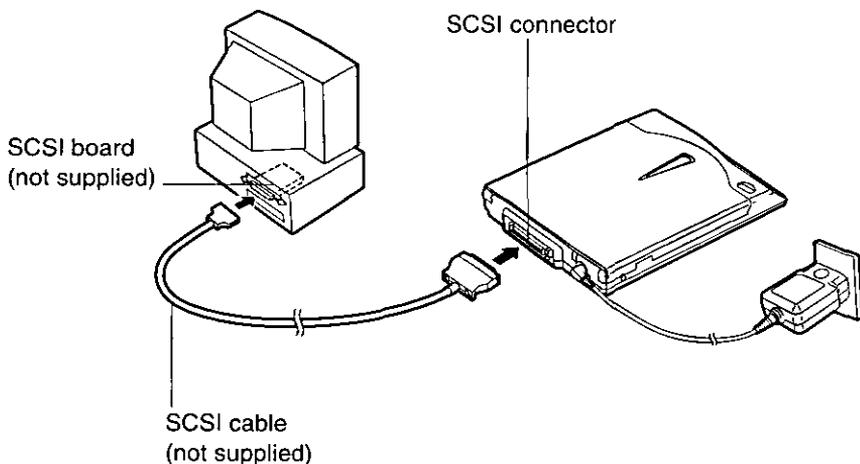SCSI connector

SCSI board
(not supplied)

SCSI cable
(not supplied)

Cautions for a SCSI cable:
- Use a shielded SCSI cable of 1.5m (4.9 ft.) or shorter.
- The connector connecting to the drive should be half pitch 50 pin (pin type). Refer to your SCSI board manual for the type of the connector connecting to your computer side.

Note:
- A commercial SCSI board and SCSI cable are required to connect the drive to a desktop computer without PCMCIA card slot. For a recommended SCSI board, refer to Recommended Products (☞ P. 36).
  For further information, refer to your SCSI board manual.
- The interface card is keyed. On some computers, you might have to insert the interface card with the " ◀ " mark facing down.

2 *Setting Up Your Desktop Computer*

Follow your SCSI board manual and install the Device driver in your computer.

Caution:

● Make sure that the SCSI board is compatible with your computer and the OS. Refer to your SCSI board manual.

Note:

● Users for Windows 98, Windows 95 and Windows NT 4.0 do not need to install the supplied device driver. CD-ROM device driver is included in each OS and which can operate your computer.

---

3 *Reconfirm the Setup*

1   Turn on the drive first and then turn on your computer.

2   Double-click the "My Computer" icon, then insert a disc in the drive.

When the "CD Drive" icon is displayed, you can use the drive.

Note:

● If the "CD Drive" icon is not displayed on your screen, reconnect the drive to your computer then setup again.

Using the supplied interface card

If there is a PC card slot at your desktop computer, you can use the supplied interface card to connect the drive to your computer. Even if there is not the PC card slot at your desktop computer, you can use a PC card adaptor to connect the supplied interface card to your computer.

Daisy chain connection

You can connect the drive to other SCSI devices (up to seven devices). Make sure that each SCSI device has different SCSI ID number.

For the setting of SCSI ID number and Terminator switches, refer to "Setting the SCSI ID NO." and "Setting the Terminator" (☞ P. 16-17).

Since the drive has only one SCSI connector, it must be the last device in the Daisy chain. In this case, set the Terminator switch to ON (☞ P. 17) and the other SCSI devices to OFF.

(Example)

Drive   Hard Disk   Host Computer
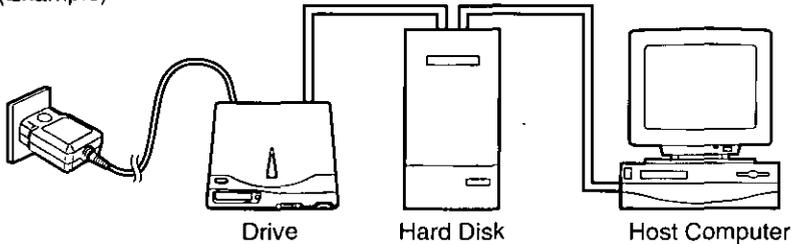
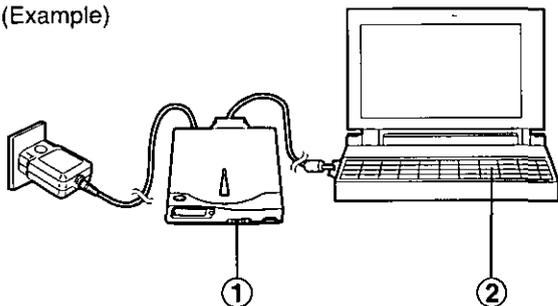|	Drive	Hard Disk	Host Computer
SCSI ID NO.	4	0	—
Terminator	ON	OFF	—

Cautions:

• If the drive is connected as the last device, set the Terminator to ON and other devices set to OFF.

• Do not duplicate SCSI ID numbers in the computer system.

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POWER On / Off

When you use the drive for the first time. Make sure that connection is done properly (☞ P. 16-26).

(Example)

① **Turn on the drive by sliding its POWER switch.**

② **Turn on your computer.**

Caution:

● When the POWER/BUSY indicator is blinking (green) or lit (amber), observe the following precautions since data is being read from a media, or data is being written to a media.

—Do not open the disc cover.

—Do not disconnect the interface card.

—Do not slide the POWER switch of the drive.

—Do not disconnect the AC adaptor.

Otherwise, your computer may hang up. If this happens, restart your computer.

Notes:

● The power of the drive is automatically turned on/off when your computer is turned on/off.

● Your computer will not be recognized the drive, if you turn off the drive while the supplied interface card and the drive are connected.

For Windows 98 and Windows 95 users, reset your computer or renew the device manager. For detailed information, refer to "Help" file in the enclosed Setup Manual. For Windows NT 4.0 users, reset your computer.

Inserting / Removing a Disc

Inserting a disc
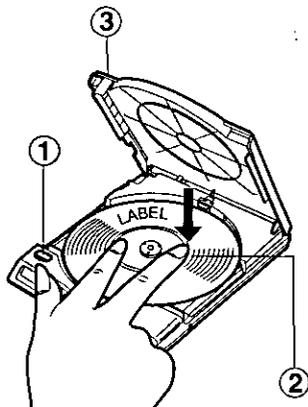
① **Press ⌒OPEN to open the disc cover and then raise it.**

② **Place a disc onto the disc spindle.**

Press on the center of a disc until it locks onto the disc spindle.

③ **Close the disc cover.**

Press [PUSH CLOSE] on the disc cover.

Caution:

• Insert a disc firmly until it locks onto the spindle and then close the disc cover, or the disc may fall off the spindle and get damaged.

Removing a disc
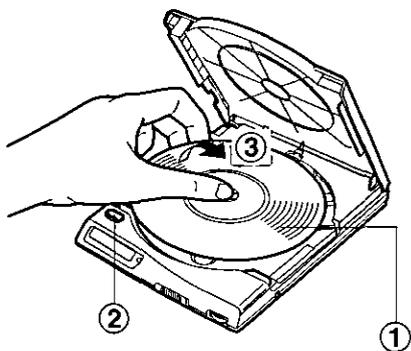
① **Make sure that the disc is not spinning.**

② **Press ⌒OPEN to open the disc cover and then raise it.**

③ **Carefully remove the disc by lifting it.**

Press on the disc spindle, then lift the disc by holding its edge.

Caution:

• Close the application, if you are using the drive with your computer and make sure that the POWER/BUSY indicator is not blinking (green) or lit (amber) before opening the disc cover.

Note:

• While data is being written to a media, 「▼」 the mark is displayed at the display panel. It indicates that the disc cover is locked.

When you cannot remove a disc

When the disc cover cannot be opened by pressing $\overset{OPEN}{\frown}$, unlock the disc cover by turning off the drive, then on again.

If you still cannot be opened the disc cover, perform the following steps.

Caution:

• Make sure that the POWER/BUSY indicator is not blinking (green) or lit (amber) before opening the disc cover and close the application, if you are using the drive with your computer.
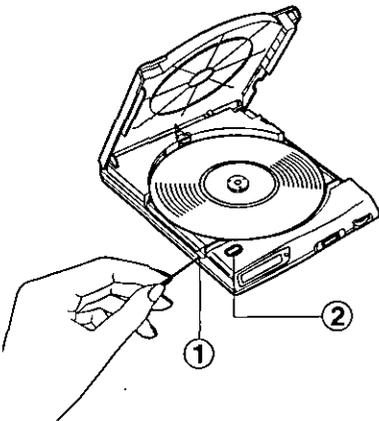
① **Insert a pin (smaller than 1 mm in diameter) into the LOCK release hole (about 10 mm).**

② **Press $\overset{OPEN}{\frown}$ and raise the disc cover.**

Operation

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Writing to a Media

How to write to a CD-R/CD-RW media

• **Easy CD Creator**

This writing software supports "Track at once", "Multisession", "Disc at once" and "Session at once" mode.

• **DirectCD**

This writing software supports "Packet writing" mode only.

You need to install the supplied writing software in your computer which is included "Easy CD Creator" and "DirectCD".
Refer to the enclosed Quick Reference Guide.

Caution:
● Make sure that you install the supplied writing software, after setting up your computer. (Refer to the enclosed Setup Manual.)

Before writing to CD-R/CD-RW media
● Please use your computer with AC power to prevent the battery of your computer from running down.
● Please do not use suspend mode, you might not be able to write data to a CD-R/CD-RW media.
● Do not close your Notebook computer's display, your computer's condition may change to the suspend mode.

Note:
● To write to the CD-R/CD-RW media properly, your computer meets the System Requirements.
(Refer to the System Requirements in the enclosed Setup Manual ☞ P. 5)

About CD-R/CD-RW media

• *CD-R Media* (Compact Disc-Recordable Media)

You can write data to the CD-R media only once by using the writing software.
Once the data is written, you can not erase the data, but if the data is written by the
Multisession mode and there is any space on the media, you can write data maximum
99 times.

• *CD-RW Media* (Compact Disc-ReWritiable Media)

Data can be rewritten approximately 1000 times on one CD-RW media by using the
writing software.

Caution:
● When you write to a CD-RW media at 4X, use the CD-RW media which
  supports 4X.

Note:
● For options of CD-R/CD-RW media, refer to page P. 36.

About the supplied writing software

We enclosed "Easy CD Creator" and "DirectCD" writing software.
When you use the CD-R/CD-RW media, refer to the Quick Reference Guide.

Operation

Reading from a CD

Playing a CD-ROM

To use a CD-ROM, refer to the manual or "README" file included on the CD-ROM.

- Some types of CD-ROMs [game CD-ROM with audio track, CD Extra, Portfolio CD (Photo CD), etc.] allow you to listen to the sound or music through the headphones/external speaker system (not supplied) with the PHONES jack of the drive. Connect the headphones/external speaker system (not supplied) with the PHONES jack of the drive. If the LINE IN jack is available on the sound system of your computer, make a connection between the LINE IN jack of your computer and PHONES jack of the drive using an audio cable with ø 3.5 mm mini stereo plug at both ends. The cable can be obtained at mass electronics stores.

Playing an audio CD

You can operate an audio CD on your computer using an audio CD control software. Sound can be heard through the PHONES jack.

- To listen to the sound or music of an audio CD, connect the headphones/ external speaker system (not supplied) with the PHONES jack of the drive. If the LINE IN jack is available on the sound system of your computer, make a connection between the LINE IN jack of your computer and PHONES jack of the drive using an audio cable with ø 3.5 mm mini stereo plug at both ends. The cable can be obtained at mass electronics stores.

You can follow either of the methods Ⓐ or Ⓑ.

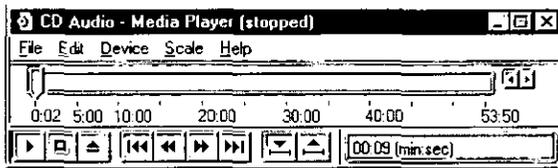Ⓐ Select **"Multimedia"** (for Windows 95 / Windows NT 4.0) or
"Entertainment" (for Windows 98) from the Accessories group of
Program Menu to start **"CD Player"**.

(Example)

```
CD Player                          _ ⊡ ×
Disc  View  Options  Help
                          ┌────┐ ▶  ┌──┐ ▌▌ ■
 [01] 01:56               └────┘     |◀◀|◀◀|▶▶|▶▶|▲
Artist  New Artist                    <0> ▾
Title:  New Title
Track:  Track 1                       <01> ▾
Total Play 53:37 m.s ____  ║Track: 02:26 m.s ____
```

Ⓑ **1.** Select **"Multimedia"** (for Windows 95 / Windows NT 4.0) or
   "Entertainment" (for Windows 98) from the Accessories group of
   Program Menu to start **"Media Player"**.

   2. Select **"CD Audio"** from the Device menu.

(Example)

```
 CD Audio - Media Player (stopped)       _ ⊡ ×
File  Edit  Device  Scale  Help
                                            ◀ ▶
  0:02  5:00  10:00    20:00    30:00    40:00       53:50
 ▶ ◼ ▲  |◀◀|◀◀|▶▶|▶▶|  ▼  ▲  00:09 (min:sec)
```

If an audio CD control software is not installed, install the software using "Add/Remove
Programs" in Control Panel. For detailed information, refer to the manual of
Windows 98, Windows 95 or Windows NT 4.0, or "Help" file for Windows 98 and
Windows 95 (☞P. 12, 18 in the enclosed Setup Manual)/"README.TXT" file for
Windows NT 4.0 (☞P. 23 in the enclosed Setup Manual).

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Insertion / Removal of the Interface Card

■ Users for Windows 98 and Windows 95

The supplied interface card supports the Plug & Play function. With your computer turned on, you can insert/remove the interface card without fear of hardware damage. Before removing the interface card, perform the following steps.

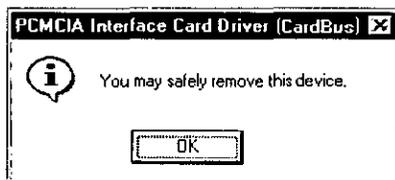**1 Click PC Card icon 🖱 in task bar.**

● 16 bit mode

> Stop PCMCIA Interface Card Driver

● CardBus mode

> Stop PCMCIA Interface Card Driver (CardBus)

2 Click the message bar above.

● 16 bit mode

> **PCMCIA Interface Card Driver** ☒
>
> (i) You may safely remove this device.
>
> [OK]

● CardBus mode

> **PCMCIA Interface Card Driver (CardBus)** ☒
>
> (i) You may safely remove this device.
>
> [OK]

3 Make sure that a message "You may safely remove this device" is displayed, then click [OK].

4 Remove the interface card.

■ Users for Windows NT 4.0

With your computer turned on, you can not insert/remove the interface card. Please turn off your computer to insert/remove the interface card.
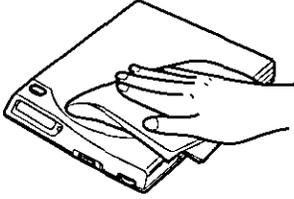
Maintenance

Caution:
- Do not use solvents such as benzine, thinner, alcohol, record cleaners or anti-static spray.

■ When the outside of the drive is dirty:

Clean the outside of the drive with a soft, dried cloth.
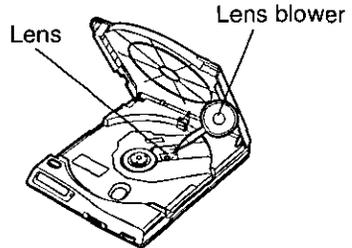
■ When a disc is dirty:

Wipe from the center to the edge with a soft, dried cloth.

■ When the lens is dirty:

Clean the lens with a commercial lens blower.

Lens blower

Lens

Appendix

Recommendation

The following recommendations are available through your local Panasonic authorized distributor.

Common Name	Model No. / Product Name (Maker)
SCSI board	AHA-2940AU (Adaptec, Inc.) [PCI Bus]
CD-R Media	TAIYOYUDEN Co., Ltd. MITSUI CHEMICALS, Inc. RICOH Co., Ltd. MITSUBISHI CHEMICAL Co., Ltd. TDK Co., Ltd.
CD-RW Media	RICOH Co., Ltd. MITSUBISHI CHEMICAL Co., Ltd. TDK Co., Ltd.

Troubleshooting

If trouble occurs, check the following points before returning the drive for service.

Trouble	Possible Cause	Solution
Your computer does not recognize the drive, or does not function properly.	■ Users for Notebook/Desktop computer with the supplied interface card:	
	The Auto Protect function of AC adaptor is working.	Disconnect the AC adaptor and connect it again after 2-3 minutes.
	The mode of interface card does not match the mode of your computer's PCMCIA socket.	If you wish to use CardBus mode, make sure that your computer's PCMCIA socket supports CardBus mode.
	Your computer has not been setup yet.	Set up your computer. (install the device drivers, if it is necessary.) Refer to the enclosed Setup Manual.
	The interface cable or interface card is not connected to the drive or to your computer properly.	Properly connect the interface cable or interface card (☞ P. 22).
	The interface cable pin is bent or broken.	Consult your dealer (or contact Panasonic Service Center at 1-800-PANA-SYS for users in continental United States).
	The drive is off.	Turn on the drive and reset your computer. (refer to "Help" file (☞ P. 12, 18) or "README.TXT" file (☞ P. 23) in the enclosed Setup Manual.
	■ Users for Desktop computer with SCSI board:	
	The Auto Protect function of AC adaptor is working.	Disconnect the AC adaptor and connect it again after 2-3 minutes.
	Your computer has not been setup yet.	Refer to "Setting Up Your Desktop Computer" (☞ P. 25).
	The drive was turned on after turning on your computer.	Turn on the drive first and then turn on your computer.

(continued)

Appendix

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Troubleshooting

Trouble	Possible Cause	Solution
Your computer does not recognize the drive, or does not function properly.	■ Users for Desktop computer with SCSI board: (continued)	
	The optional SCSI cable is not connected to the optional SCSI board properly.	Properly connect the optional SCSI cable (☞ P. 24).
	The same SCSI ID number(s) is/are used for the drive/SCSI device(s) with the daisy chain connection.	Use different SCSI ID number(s) for the drive and each SCSI device(s) (☞ P. 16, 26).
	The drive's Terminator switch is not set correctly.	Set the Terminator switch correctly (☞ P. 17, 26).
A disc cannot be removed. (The disc cover does not open.)	There is 「▼」 the mark displayed at the display panel.	Exit your writing software then 「▼」 the mark will be disappeared.
		Release the disc cover lock. (Even you exit your writing software, 「▼」 the mark might be still displayed or the disc cover might not open, even 「▼」 the mark is disappeared.) (☞ P. 15)
Transmission speed of data slows down.	A warped disc is used, then the Vibration Detective sensor is activated slowing down rotation of disc.	Set the MODE switch No. 5 (Vibration Detective switch) to OFF (☞ P. 17).
	Your notebook computer has entered the power management mode.	Set the CPU speed of your notebook computer faster in power management. Refer to your computer's manual.
The drive, AC adaptor or interface card is warm.		This is not abnormal. If they become hot, consult your dealer.
Data cannot be written to CD-R/CD-RW media properly.		Refer to the Quick Reference Guide.

(continued)

Trouble	Possible Cause	Solution
"no dISC" message appears on drive's display panel even after inserting a disc. Sound skips, or data cannot be read or written.	Disc is placed with the label side facing down.	Place the disc with the label side facing up (☞ P. 28).
	CD without ⓓⓘⓢⓒ or ⓓⓘⓢⓒ mark is used.	Use the CD marked with ⓓⓘⓢⓒ or ⓓⓘⓢⓒ.
	CD-R/CD-RW media without ⓓⓘⓢⓒ or ⓓⓘⓢⓒ mark is used.	Use the CD-R/CD-RW media marked with ⓓⓘⓢⓒ or ⓓⓘⓢⓒ.
	Vibration Detective switch is OFF.	Set the switch to ON (☞ P. 17).
	Disc or the lens of the drive may have become dirty.	Clean the disc or the lens of the drive (☞ P. 35).
	Disc is damaged.	Replace with another disc.
	Dust such as a hair lay on the disc spindle.	Clean the disc spindle (☞ P. 35).
	The drive or/and disc are damp or moist, because the drive or/and disc may have been moved from a cold place to a warm place.	Remove the disc from the drive and do not use the drive and disc for about 1 hour.
Sound of audio CD or CD-ROM cannot be listened.	Connection to the PHONES jack is not proper.	Connect the headphones/ external speaker system (or an audio cable) to the PHONES jack firmly (☞ P.14, 32).
	The drive's VOLUME control is set to "0".	Set the drive's VOLUME control to a higher level (☞ P. 13, 32).
	When your computer's sound system and your player's PHONES jack is connected: The volume is set to the lowest level in the "Volume Control" or "Mute" is selected on the software control of the sound device.	Set the volume higher level, or cancel the "Mute" selection. For further information refer to your sound device manual.

Specifications

Operating Environment (under no damp or moist conditions):	Temperature: 5°C {41°F} to 35°C {95°F} Humidity: 20% to 85% RH
Storage Environment (Non-condensing):	Temperature: −20°C {−4°F} to 55°C {131°F} Humidity: 15% to 85 % RH
Dimensions:	130 (W) × 163 (D) × 24.3 (H) mm {5.12"×6.41"×0.96"}
Mass {Weight}:	Approx. 360 g {12.7 oz.}
Power Sources:	Supplied AC Adaptor (KX-WZ701): 100-240 V, 50/60 Hz
Interface:	SCSI-2
Interface Connector:	50-pin
Buffer Size:	2 MB
Data Transfer Rate[*1]:	■ **Reading from a media[*2]** • With Desktop Computer: 1350 KB/s (inner: 9X) to 3000 KB/s (outer: 20X) • With Notebook Computer: **CardBus mode:** 1350 KB/s (inner: 9X) to 3000 KB/s (outer: 20X) **16 bit mode:** 1350 KB/s (inner: 9X) to 2700 KB/s (outer: 18X) ■ **Writing to a media** 150 KB/s (inner/outer: Normal Speed) 300 KB/s (inner/outer: 2X) 600 KB/s (inner/outer : 4X)
Access Time:	150 ms typical (The information is based on the test results measured 1/3 stroke by Panasonic test software)
Power Consumption:	When data is transferring: Approx. 11.0 W When the drive is off: Approx. 1.0 W
Compatible Format:	CD-DA (audio CD), VIDEO CD[*3], CD-i (movie), CD-ROM (Mode 1, Mode 2 Form 1), CD-ROM XA (Mode 2 Form 2), Photo CD[*4] (Multisession is compatible), CD Extra
Compatible Media:	CD-R (63 minutes/74 minutes) CD-RW (74 minutes)

[*1] Performance may vary based on computer specifications.

[*2] 10X is the maximum reading transfer rate to read from a media.

[*3] VIDEO CD or CD-i titles can only be viewed if the computer has software or hardware MPEG decoding capability.

[*4] Software required for viewing Photo CD titles is not included.

Writing Methods	Track at once, Disc at once, Session at once, Packet writing, Multisession	
Error Rates:	Soft read errors	Less than 10^{-9}
	Hard read errors	Less than 10^{-12}
Audio Performance Phones Out (stereo):	S/N	More than 80 dB (A Range)
	Maximum output level	14 mW (EIAJ) (impedance 32 Ω)
Interface Card and Interface Cable:	Power source	(16 bit mode) DC 5 V, approx. 150 mA (CardBus mode) DC 3.3 V, approx. 50 mA
	Card type	PCMCIA Type II
	Card dimensions	54 (W) × 85.6 (D) × 5 (H) mm {2.13″ × 3.37″ × 0.20″}
	SCSI connector	Half-pitch 50-pin (pin type)
	Cable length	Approx. 400 mm (without connector)
	Data transfer rate	10 MB/s (MAX.)
	Mass {Weight}	Approx. 180 g {6.35 oz.} (included the cable)

Appendix

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FOR USERS IN CONTINENTAL UNITED STATES ONLY
Technical Support Calls

If you have read this manual and Setup Manual and tried the troubleshooting procedures, and you are still having difficulty, please contact the store from which the unit was purchased. Panasonic Computer Peripheral Company will repair this product with new or refurbished parts free of charge for two (2) years from the date of purchase.

You may also call the technical support telephone number (24 hour, 7 day/week automated technical support. Live technical support M-F, 9 am-5 pm EST).

The technical support number is: 1-800-PANA-SYS
(1-800-726-2797)

Software drivers are sometimes updated. You can download the latest or new setup disk via your modem.
Internet: http://www.panasonic.com
BBS:@ 201-863-7845

This product is designed for use only in the country where it was purchased.

Panasonic Document Imaging Company
Division of Matsushita Electric Corporation of America
Two Panasonic Way, Secaucus, New Jersey 07094