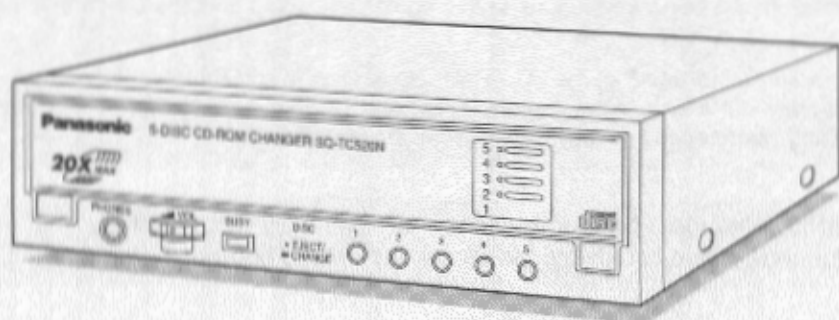


Panasonic®

5-Disc CD-ROM Changer

SQ-TC520N

Operating Instructions



Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

Interface: Enhanced IDE interface with ATAPI Support
For IBM PC-AT compatible DOS/Windows

COMPACT disc COMPACT disc
DIGITAL AUDIO

IMPORTANT SAFETY NOTICE

To prevent fire or electric shock, do not expose this appliance to rain or moisture.

FEDERAL COMMUNICATIONS COMMISSION (FCC) RADIO FREQUENCY INTERFERENCE STATEMENT

Class B Computing Device

CAUTION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two 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.

FCC WARNING: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTICE

- (1) Reproduction of any part of this publication without authorization is prohibited.
- (2) The manufacturer reserves the right to revise this document without notice at any time.
- (3) For most up to date information, please refer to README.TXT of the Setup disks.
- (4) If any questions arise concerning this document, please contact your sales representative or Panasonic Technical Support at 1-800-Panasys (1-800-726-2797).

LASER SAFETY INFORMATION

Class 1 LASER Product

This equipment is certified to comply with DHHS Rule 21 CFR Chapter 1, Subchapter J in effect as of date of manufacture.

This equipment is classified as a Class 1 level LASER product and there is no hazardous LASER radiation.

Caution:

- (1) The use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- (2) The CD-ROM Changer is designed to be incorporated into a computer-based system or unit which has an enclosed cover. The CD-ROM Changer may not be used as a stand-alone unit.

LASER Specification:

Type: Semiconductor laser GaAlAs
Wave length: 780 nm

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Chapter 5

INTRODUCTION

Congratulations on your purchase of the 5-Disc CD-ROM Changer. The Panasonic SQ-TC520N CD-ROM Changer features Panasonic's maximum 20× speed technology, which allows data to be accessed at high speed.

CD-ROM is read-only memory using an audio compact disc system as a media package which handles digital data.

This CD-ROM Changer uses CD-ROM data discs which bear the following mark.



This CD-ROM Changer uses digital audio compact discs which bear the following mark.



Supports Major CD-ROM Formats

CD-DA(Audio), CD-ROM, CD-ROM XA, Photo CD Multisession*
Video for Windows**, QuickTime for Windows**, CD-I***, Video-CD***

- * Requires a Photo CD viewer (not included)
- ** Requires Microsoft Video for Windows, Apple QuickTime for Windows (not included)
- ***Requires MPEG decoder board or MPEG decoder software and CD-I and/or Video-CD playback software (not included)

System Requirements

- 80386, 80486 or Pentium based ISA Computer
- 8 MB of RAM
- 3 MB of free space on Hard Disk
- EIDE hard disk (HDD) controller

- Windows NT 4.0 Ready
- Windows 95 Ready
- Supports MS DOS 6.22 & Higher, Windows 3.1 & 3.11

Feature Summary

- Half-height mounting 5-disc CD-ROM Changer
- Tray system permits easy exchange of any single disc.
- Maximum 20×-speed data transfer rate (3000 KB/s)
- Enhanced IDE Interface ATAPI support
- Easy view "DISC WINDOW" to check which disc is loaded

NOTE:

A BIOS update may be required from your System Motherboard manufacturer.

Software Preface

“Panasonic Disc Director” is an application utility software designed to load, play and/or display five CDs such as compact discs (CD) for music or CD-ROM on your personal computer in the MS Windows operating environment. Disc Director is designed to be used with Windows 3.1, Windows 95. We recommend using Disc Director with 5 Drive Letter configuration.

Notice Concerning Software

To playback video CDs, you will need special hardware and software (sold separately).

Some applications restrict the usage of the device driver. Please check the drive letter and select the correct disc tray for playing applications. If you don't know the correct slot number/drive letter number, please try from disc tray 1 to disc tray 5 in sequence.

As more applications and operating systems become “changer aware”, we will continue to update our device drivers and Utility software. You may get the most up to date driver and utility software by downloading from our BBS or internet web site.

BBS #201-863-7845
Web address <http://www.Panasonic.com>

Conventions used in this guide to describe key operations

This manual describes key operation by using keytop letters enclosed in angle brackets (<and>). For example, “press<Y>” means to press the letter **Y** on the keyboard. Some of the keys, however, have symbols as keytop names and have specific functions. They are named according to their functions.

Example: **ENTER** or **RETURN** key is described as <Enter>.

Key Combination appears in the following format:

“Holding down the Ctrl and Alt keys, press the Del key” is described as “Press <Ctrl><Alt>”.

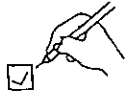
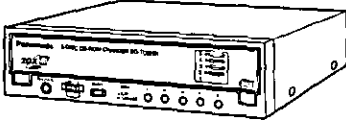

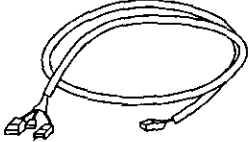
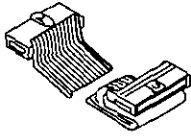
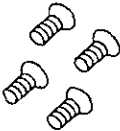

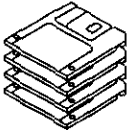
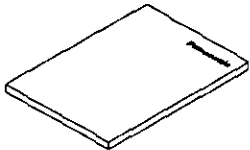
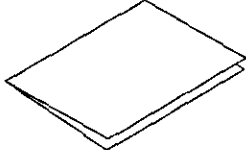
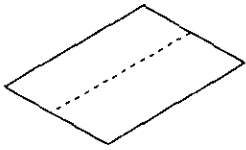
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Microsoft Windows, MS-DOS, MSCDEX and Video for Windows are trademarks of Microsoft Corporation.
QuickTime for Windows is a trademark of Apple Computer, Inc.
© Copyright LHA Version 2.13 H. Yoshizaki, 1988-1991
© Copyright Matsushita Electric Industrial Co., Ltd. 1997

IDENTIFYING THE KIT CONTENTS

The following is a checklist of items which are included with your Panasonic CD-ROM Changer. Be sure to save the original box and packing materials for future shipments or transportation of your Panasonic CD-ROM Changer.

<input checked="" type="checkbox"/>  Please check and identify the supplied accessories.	<input type="checkbox"/>  5-Disc CD-ROM Changer	<input type="checkbox"/>  Jumper Pin 1 (RJS1C0902)	
<input type="checkbox"/>  Audio Cable 1 (REX0821)	<input type="checkbox"/>  Interface Cable 1 (REX0820-1)	<input type="checkbox"/>  Mounting Screws 4 (XST3+4)	<input type="checkbox"/>  Eject Pin 1 (RFE0030)
<input type="checkbox"/>  Setup Disks 4	<input type="checkbox"/>  Operating Instructions (This book)	<input type="checkbox"/>  Quick Reference Guide	<input type="checkbox"/>  Warranty & Registration Card

NOTE:

The setup disks provided with this system are 3.5" high density floppy disks. If your system requires a 5.25" floppy disk instead, please contact Panasonic at 1-800-726-2797.

OPERATION GUIDE

Before you begin installing your Panasonic CD-ROM Changer, please take a few minutes to read the following Operation Guidelines.

1) WHEN TRANSPORTING

To avoid damage:

- Keep the original packing materials.
- Before transporting the CD-ROM Changer, remove the discs from the Changer and repack it in its original packing.

II) WHEN INSTALLING

Do not install the CD-ROM Changer in environments where it would be subjected to:

- High-temperature, high-humidity, or extreme temperature changes
- Dust
- Excessive vibration/sudden shock
- Inclines or angled operation
- Direct sunlight
- **Do not install the CD-ROM Changer in a vertical position.**

III) WHEN USING

- Never push objects of any kind through the cabinet slots.
- Never spill liquid of any kind on the CD-ROM Changer.
- Do not place objects on the unit.
- This CD-ROM Changer is not user serviceable; do not open or remove cover.
- **Do not insert foreign objects in the disc insertion slot and attempt to operate.**

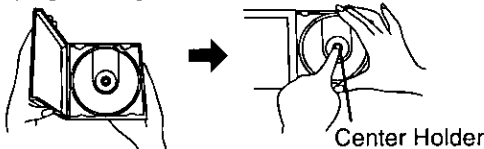
IV) WHEN OPERATING

To avoid data errors:

- Do not move the CD-ROM Changer while operating.
- Do not operate the CD-ROM Changer immediately after a sudden change in temperature.

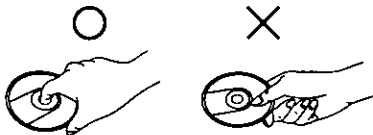
V) WHEN HANDLING DISCS**To remove a disc from its case**

Press the center holder and lift the disc by grasping the edges.

**To hold the disc**

Hold the disc by the edges so the surface is not soiled with fingerprints.

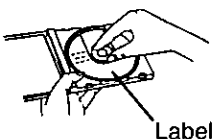
Fingerprints, dirt and scratches can cause skipping and distortion.

**If the surface is soiled**

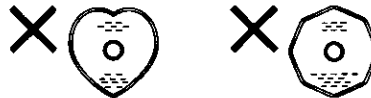
Wipe gently with a soft, damp (water only) cloth.

**To store a disc in its case**

Insert the disc with label facing upwards and press downwards at the center.

**Handling precautions:**

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lint-free cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use CDs with poorly attached labels or stickers. Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your changer to malfunction.
- Do not use irregular shaped CDs (heart-shape, octagonal, etc.).

**Storage precautions:**

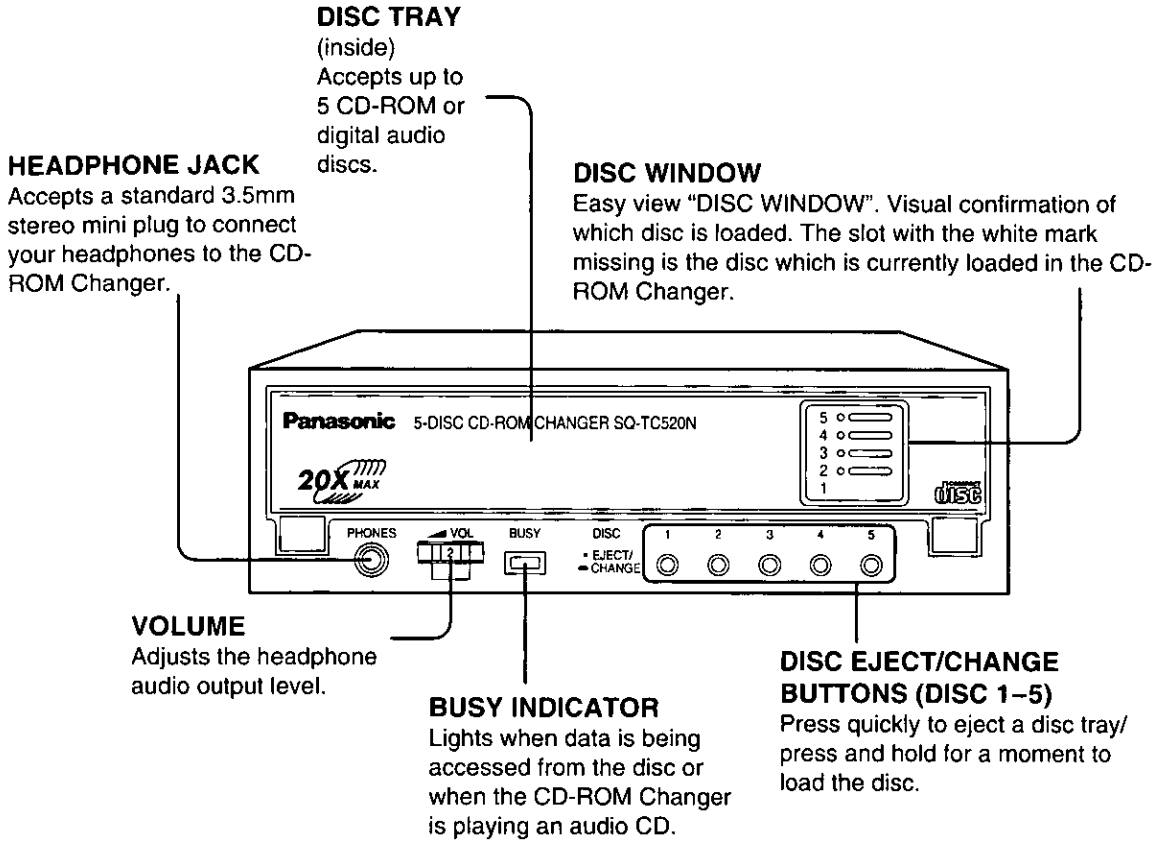
Be sure to store discs in their cases to protect them from dust, scratches and warping.

Do not place or store discs in the following places:

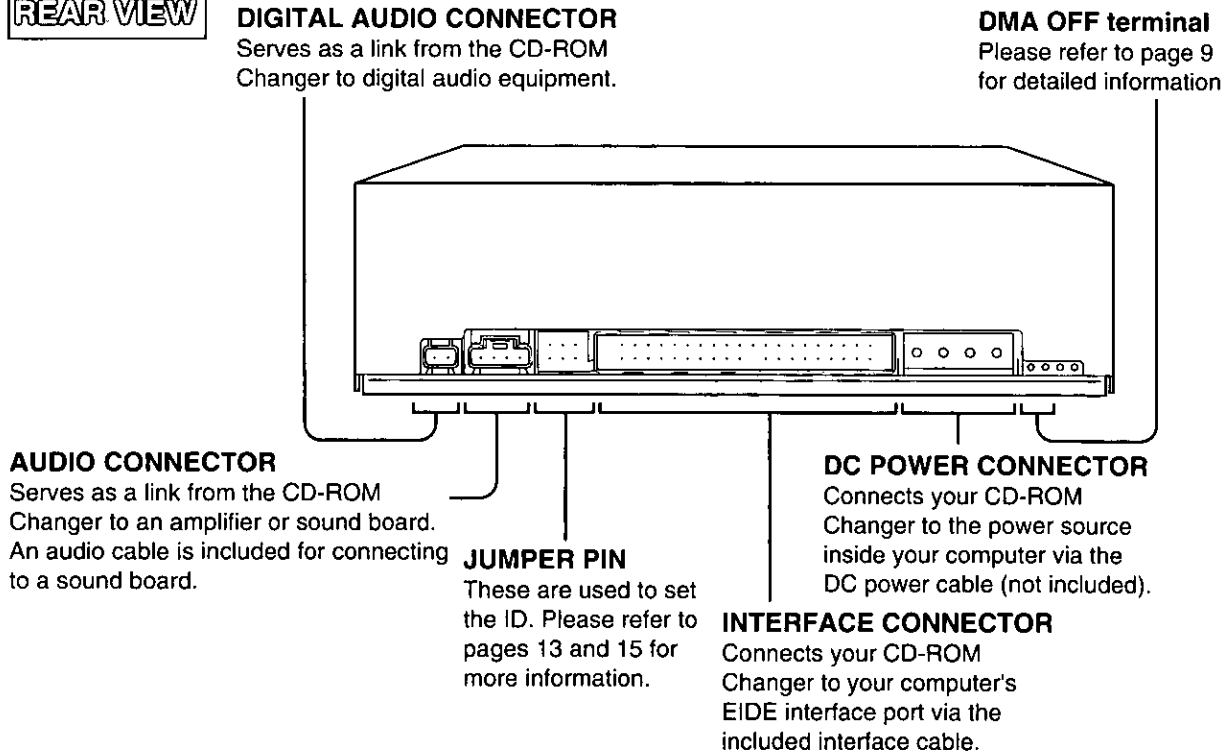
- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

PARTS AND FUNCTIONS

FRONT VIEW



REAR VIEW

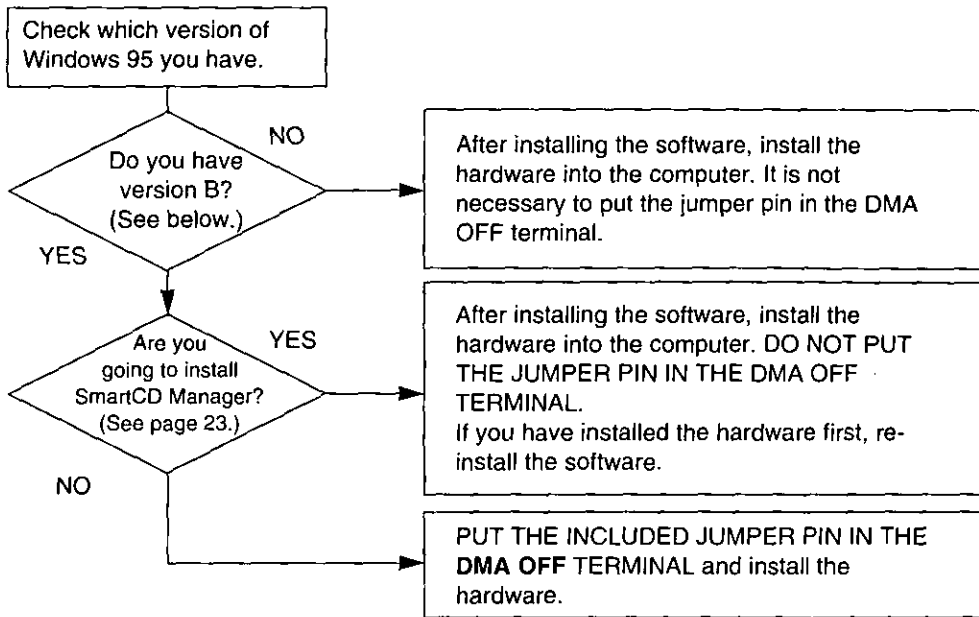


PREPARATION FOR SOFTWARE INSTALLATION

Ensure that you have installed the Panasonic CD-ROM Changer Utility and the Changer device driver to suit your computer's operating system before you install the Panasonic SQ-TC520N CD-ROM Changer into your computer. (See pages 10 to 12 for details.)

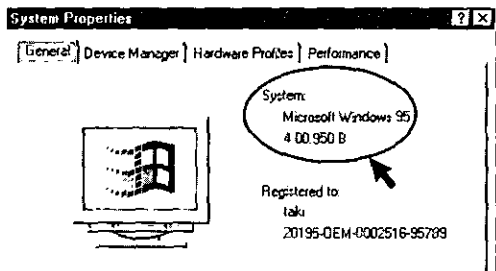
IMPORTANT:

If you are going to use Windows 95, then follow the flowchart to find out what preparations you must make before installing the software.



Checking which version of Windows 95 you have

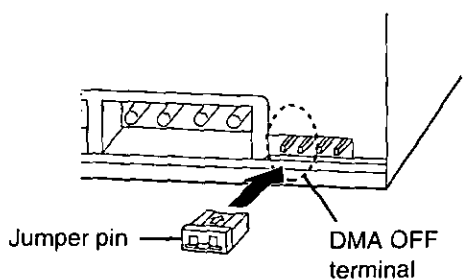
- 1 Choose "Settings" from the "Start" menu.
- 2 Open "System" with "Control panel".
- 3 Select the "General" tag.



If 4.00.950 B appears under "System:", then you are using version B.

Jumper pin setting for the DMA OFF terminal

If you are using version B of Windows 95 and you have installed SmartCD Manager ver. 3.6 or later, then DO NOT put the jumper pin in the DMA OFF terminal and install the changer. This means that Direct Memory Access (DMA) will be on. If, however, you do not install SmartCD Manager ver. 3.6 or later, then the CD-ROM Changer may not work correctly. If this is the case, put the jumper pin included into the DMA OFF terminal.



IMPORTANT:

Be sure to put the included jumper pin in the DMA OFF terminal if you are going to reinstall the Operating System for Windows 95 from this unit.

This completes preparations for installing the software.

INSTALLING UNDER WINDOWS 3.1, 3.11

This section explains how to install the Panasonic CD-ROM Changer Utility and the changer device driver for Windows 3.1 and 3.11, MS DOS 6.22 or later on your computer's hard disk.

To install the CD-ROM Changer Utility and the changer device driver, you need Setup Disk No. 1 For Windows 3.1/DOS (included) and your Panasonic 5-Disc CD-ROM Changer SQ-TC520N.

NOTE: If you have installed another CD-ROM device driver, we recommend that you deactivate the existing device driver before performing installation. For help please view the Readme. txt file on the installation disc.

- 1 Turn the computer on.**
If your system automatically loads Windows, you must exit Windows and reach the DOS prompt C:\. This explanation assumes that your floppy disk drive is designated "A" and your hard disk drive "C". If, however, you have used other letters to designate your drives, please substitute the appropriate letters.
- 2 Place the included Setup Disk No. 1 in the floppy disk drive.**
- 3 Type A:<Enter>.**
The current drive changes to "A".
- 4 Type CD WIN31<Enter>.**
- 5 Type SETUP31<Enter>.**
- 6 Follow the instructions on the screen until installation is complete.**

After you have installed the Changer Utility and the Driver Software for DOS/Windows 3.1 in your system, eject the Setup Disk from the floppy disk drive and reboot the system. When your computer is restarted, the CD-ROM Changer will be installed on your system. Please view and print the included Readme. txt file. (Refer to page 21.)

IMPORTANT:

If you intend to upgrade your computer from Windows 3.1 to Windows 95, be sure to use the **SOS Utility** and change the "Number of CD-Drive" setting from "5" to "1". (For details, see page 22.) Otherwise, your computer may fail to load Windows 95.

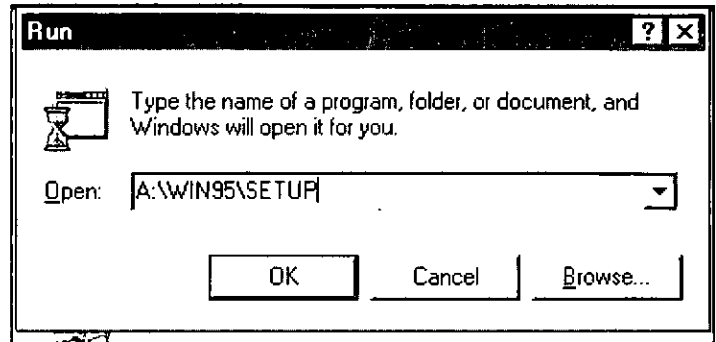
INSTALLING UNDER WINDOWS 95 AND WINDOWS NT 4.0

This section explains how to install the Panasonic CD-ROM Changer Utility and the changer device driver for Windows 95 and Windows NT 4.0 on your computer's hard disk.

To install the CD-ROM Changer Utility and the changer device driver, you need Setup Disks No. 1 and No. 2 For Windows 95 (included) or For Windows NT 4.0 (included) and your Panasonic 5-Disc CD-ROM Changer SQ-TC520N.

1 Place Setup Disk No. 1 For Windows 95 or Windows NT 4.0 in floppy disk drive A:.

2 Click **Start** on the Windows task bar and choose **Run...**. The Run dialog box appears.

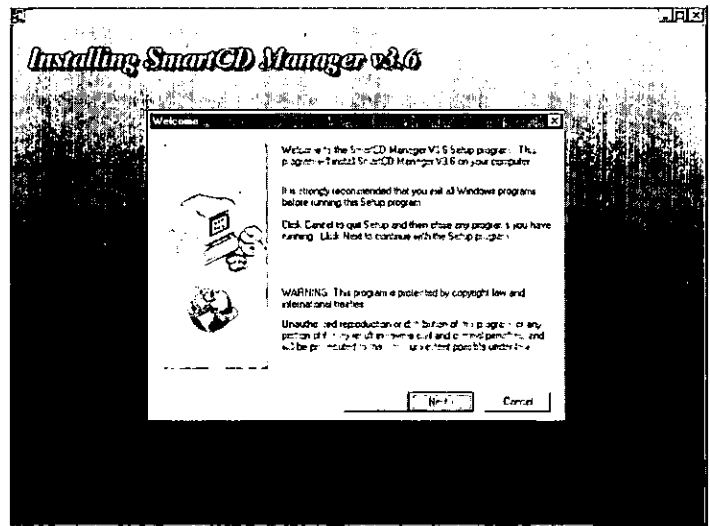


3 When you install them under Windows 95; Type "A:\WIN95\SETUP" in the text box and click **OK**.

When you install them under Windows NT 4.0;

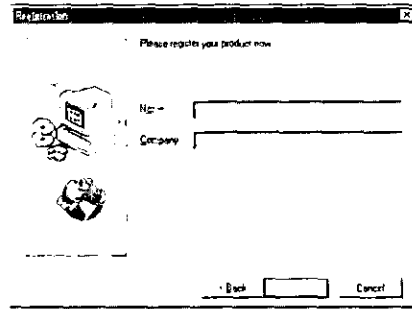
Type "A:\SETUP" in the text box and click **OK**.

4 The Welcome Display appears. Click **Next** to start installing the SmartCD Manager ver. 3.6 Setup program on your computer.



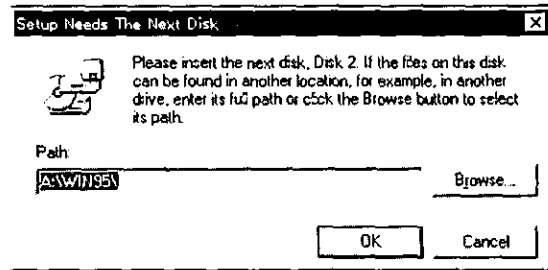
5 Check the Destination Directory and click **Next** by following the instructions on the Destination Location Display.

6 The Registration Display appears. Type your name and, if necessary, your company name, then click **Next** or press <Enter>.



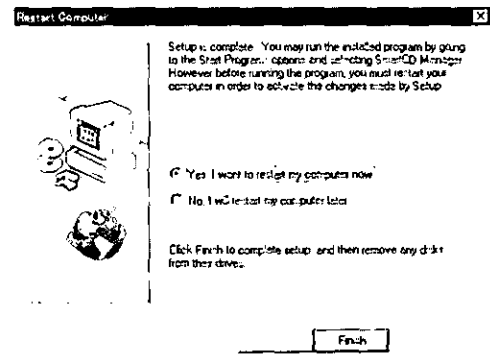
7 Only when you install them under Windows 95; The Setup Options Display appears. Select the operating mode (single drive letter mode or five drive letter mode) on the dialog box and click **Next**. (See page 20.)

8 The Next Disk Display appears. Eject Setup Disc No. 1 and place Setup Disk No. 2 For Windows 95 or Windows NT 4.0 in floppy disk drive A:. Check if the Path Setting is correct and click **OK**.



If you want to modify the path, follow the instructions on the screen.

9 The Restart Computer Display appears and shows Setup of the Disc Director and the device driver is complete. However before running the program, you must restart your computer in order to activate the changes made by Setup. Click **Finish** and then remove Setup Disk No. 2 from drive A:.



Your computer will be restarted and the display of Microsoft's Windows 95 or Windows NT 4.0 will appear.

NOTE:

Even if you have not installed the utility and device driver, My Computer may display the icon of a CD-ROM if one is put in the Changer. The CD-ROM Changer may not function correctly, however, if you attempt to use it before the utility and device driver are installed.

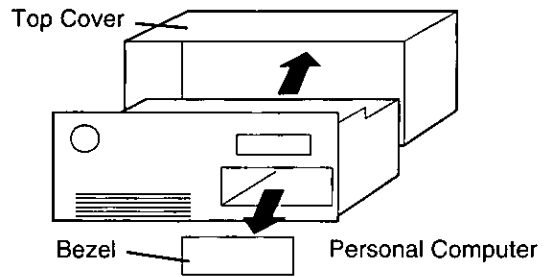
INSTALLING THE CD-ROM CHANGER

Before Installation

Read this section completely before proceeding.

Consult your system operation manual for CPU disassembly instructions.

- 1 Turn off your system and all connected devices.
- 2 Disconnect all AC power cables.
- 3 Remove the top cover from your system.
- 4 Remove the bezel covering a vacant disk drive bay.



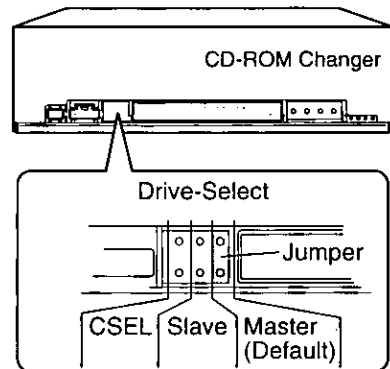
Installing the CD-ROM Changer

- 1 Remove the Changer from its packaging.

- 2 Check jumper pin setting for proper ID (Master)*.

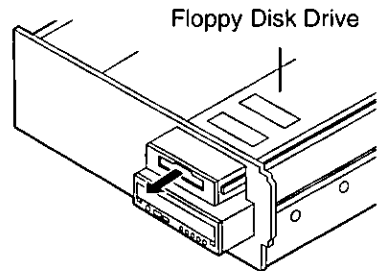
*Set to SLAVE if you connect to your systems Primary HDD IDE Controller.

Most installations do not require changing the jumper pins.

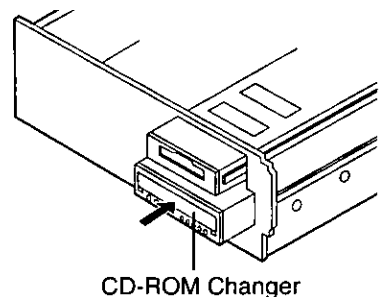


- 3 Look above your vacant disk drive bay. If it is occupied by a floppy disk drive: **It might be necessary to slide the floppy disk drive forward a couple of inches to ease insertion of the "Big 5".**

Do not disconnect its cables, even if this may allow for easier CD-ROM Changer installation.



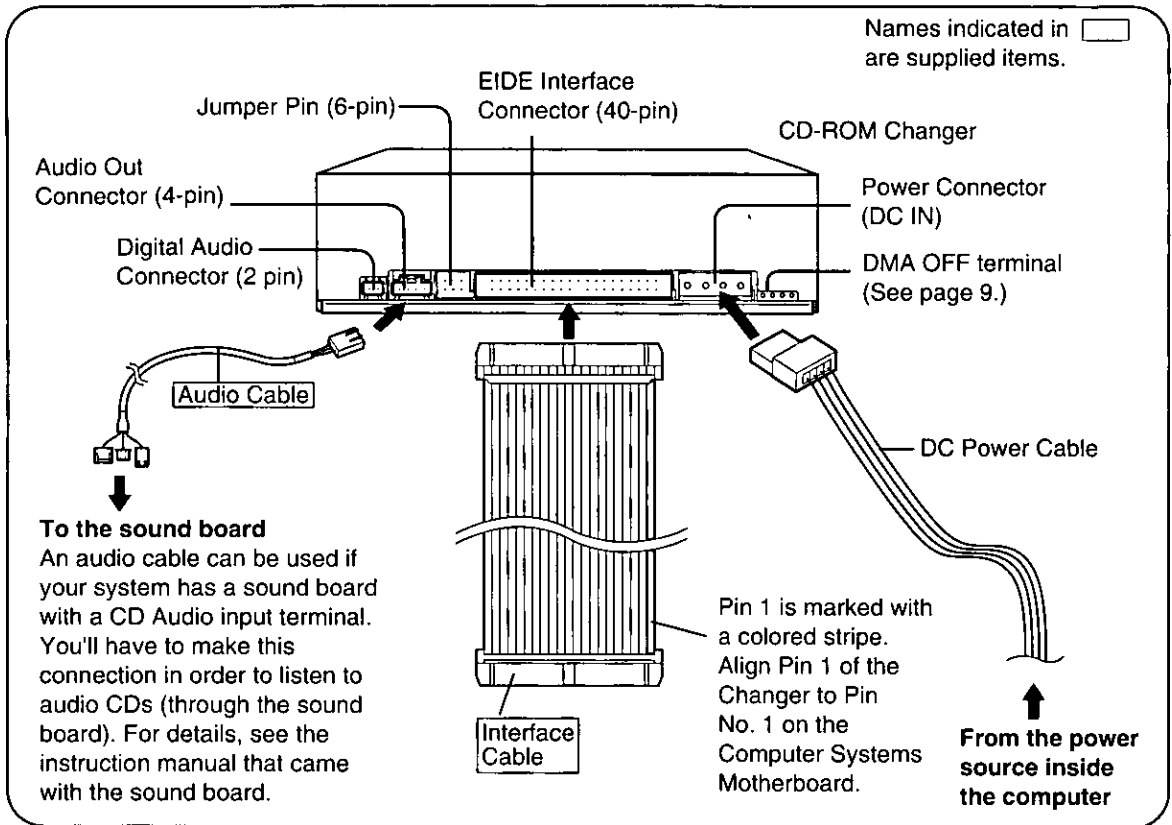
- 4 Slide the CD-ROM Changer into the vacant bay until it is parallel with the floppy disk drive. Some systems require mounting.



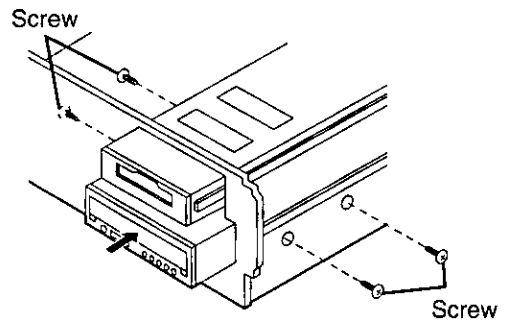
(Continued on next page)

INSTALLING THE CD-ROM CHANGER

- 5** Connect the DC power cable, interface cable and audio cable.

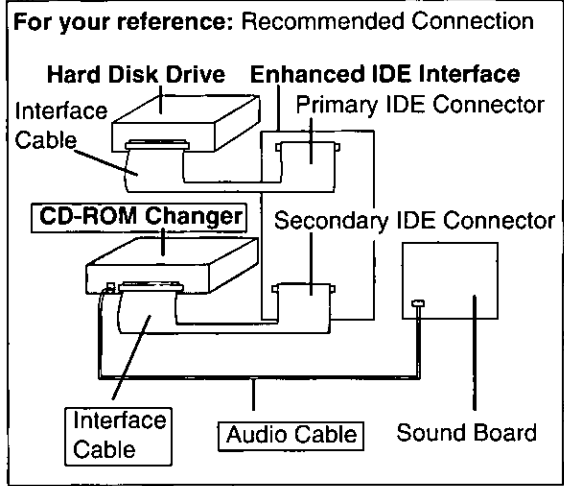
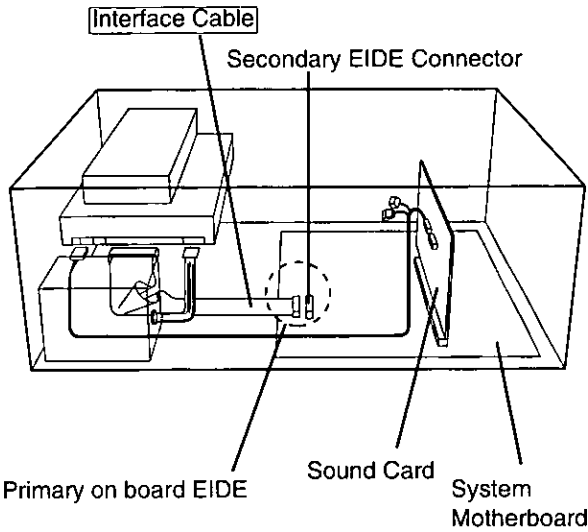


- 6** Firmly slide the Changer into the drive bay. Secure with included screws.



- 7** Reattach the top cover and reconnect your peripheral devices and AC power.

For most Enhanced IDE type computers



NOTE:

Some older system do not have the EIDE interface built into the Motherboard. Please consult your system manual or dealer.

Chapter 3

Other Settings (Jumper Pin)

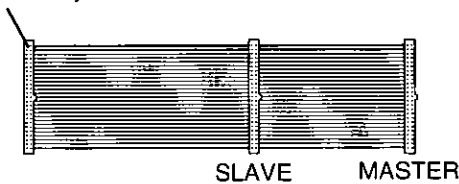
We recommend that you connect the CD-ROM Changer as described on pages 13–15. If, for some reason, your computer does not allow this configuration, note the following **Jumper pin setting options**.

Changing the jumper pin setting

You will have to change the master-slave jumper pin in the following instances:

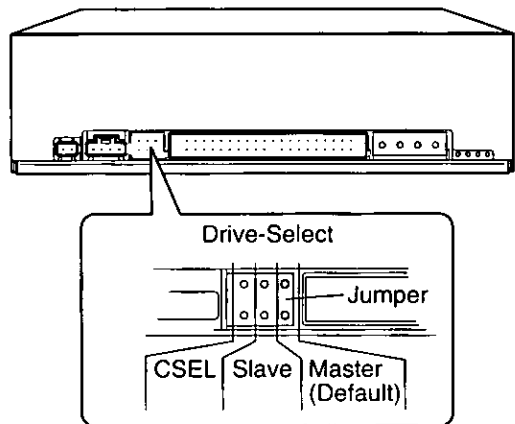
A single EIDE cable has connectors for multiple devices.

Connect to System Motherboard.



- With a single cable you may need to change the master/slave pin.
- With two devices connected, one must be set to slave, and the other set to master.
- To change the setting, pull the jumper off with tweezers and slide the jumper onto the correct pins.

CD-ROM Changer (Rear)



Restriction with Windows 95

Generally, only one **type** of device (ex. HDD or CD-ROM) should be connected to a single EIDE interface connector. For example, a hard disk drive and a CD-ROM Changer cannot both be connected to the Primary EIDE connector port when using Windows 95. This restriction is for Windows 95 but not Windows 3.1.

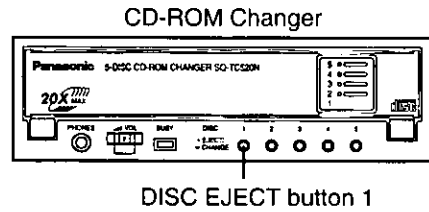
BEFORE USING/SHIPPING THE CD-ROM CHANGER

Removing the Shipping Spacer

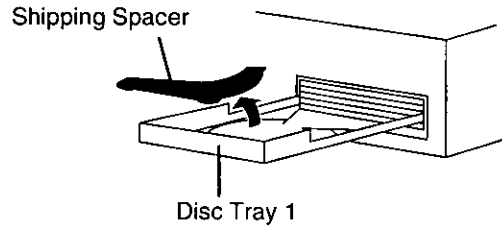
Before using the "Big 5", you must remove the shipping spacer from the disc tray. Failure to do this may damage discs in the changer.

1 Turn the computer ON.
The CD-ROM Changer will turn ON.

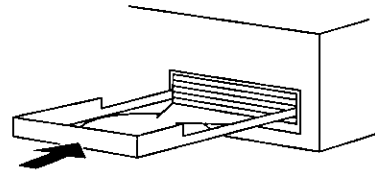
2 Press DISC EJECT button 1.
Disc tray 1 will eject.



3 Remove the shipping spacer.



4 Push the tray until it retracts automatically.



5 Turn OFF the computer.

NOTE:

Save the shipping spacer and box. You will need them when moving or shipping the equipment.

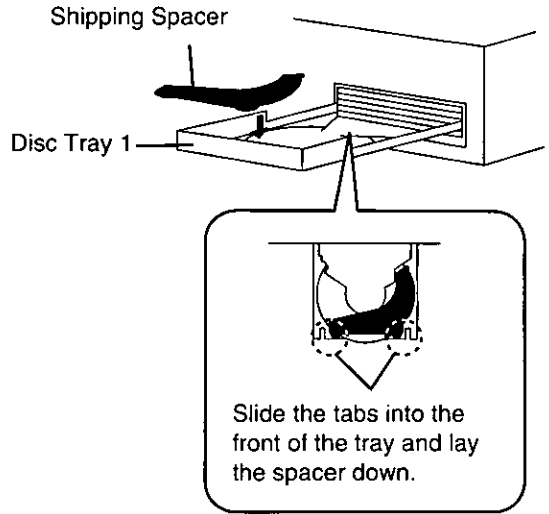
Caution for Shipping

Be sure to take the following precautions before moving your Changer a considerable distance, shipping the changer, or taking it in for service.

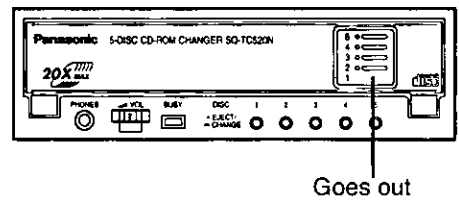
1 Insert the shipping spacer into disc tray 1.

(This is also necessary if moving your computer with the CD-ROM Changer still installed.)

- 1 Turn your computer ON.
The CD-ROM Changer will turn ON.
- 2 Remove all discs.
- 3 Press DISC EJECT button 1.
Disc tray 1 will eject.
- 4 Insert the shipping spacer into disc tray 1.
- 5 Push the tray until it retracts automatically.



2 Check for the white mark next to tray "1" on the disc window. If the white mark is still visible, press and hold DISC EJECT button 1 until the white mark disappears.



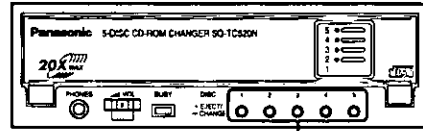
3 Turn OFF the computer.

4 Your Changer is ready for shipping. Pack the Changer in the original box.

INSERTING/REMOVING DISCS

- 1 Turn the computer ON.**
The CD-ROM Changer will turn ON.

- 2 Press one of the DISC EJECT buttons.**
The disc tray will eject.

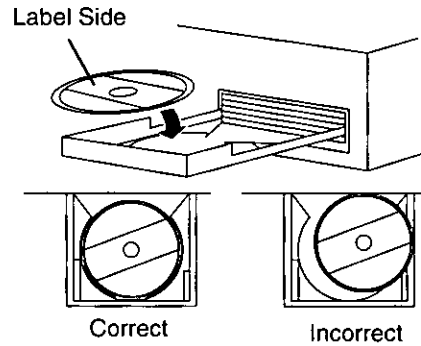


DISC EJECT buttons

- 3 Set the disc in the tray. The label must be facing upwards.**

NOTE:

Be sure to set the disc correctly in the tray.



- 4 Push the tray until it retracts automatically.**

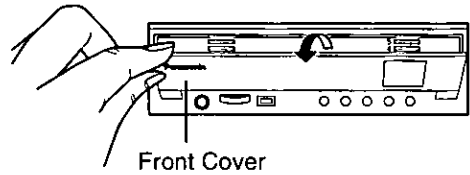
- 5 Repeat steps 2 to 4 until you have loaded all the discs.**

NOTE:

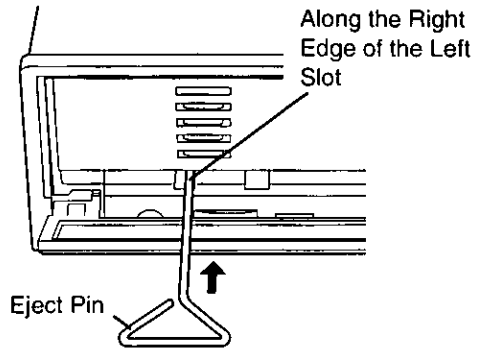
- Do not insert any objects other than an Audio CD or a CD-ROM disc into the disc tray. This could result in a malfunction and jam the Changer.
- Do not manually force the tray open or press down hard on the tray when loading a disc, since this may result in damage or malfunction of the tray.
- When the CD-ROM Changer is not in use, keep the tray closed to protect it from dust and dirt.
- **You cannot open/close the disc tray while using the headphones jack.**

If the tray does not eject automatically

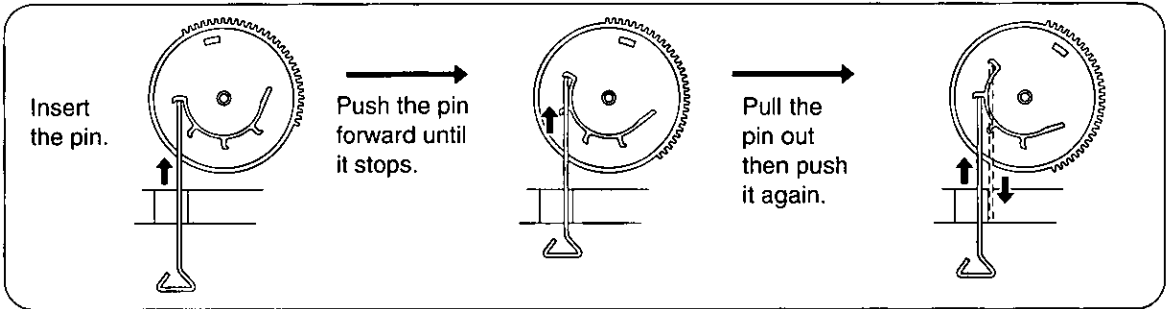
- 1** Turn OFF your computer.
- 2** Carefully open the front cover of the CD-ROM Changer.



- 3** Insert the eject pin.
 - 1** Gently push the pin along the right edge of the left slot until the pin stops. The tray will eject a little.
 - 2** Pull the pin out and then push it again about four times until the tray is extended enough that you can pull it out by hand.

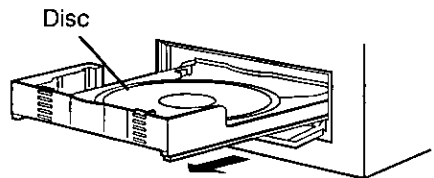


Mechanism inside works as follows:



- 4** Pull the tray the rest of the way by hand. The tray currently in the play position and the tray immediately below it can both be pulled out by hand.

- 5** Remove the disc from the tray and turn ON your computer. This is to check if the Changer returns to normal position.



If the CD-ROM Changer becomes jammed, please contact our hotline for assistance. (1-800-726-2797)

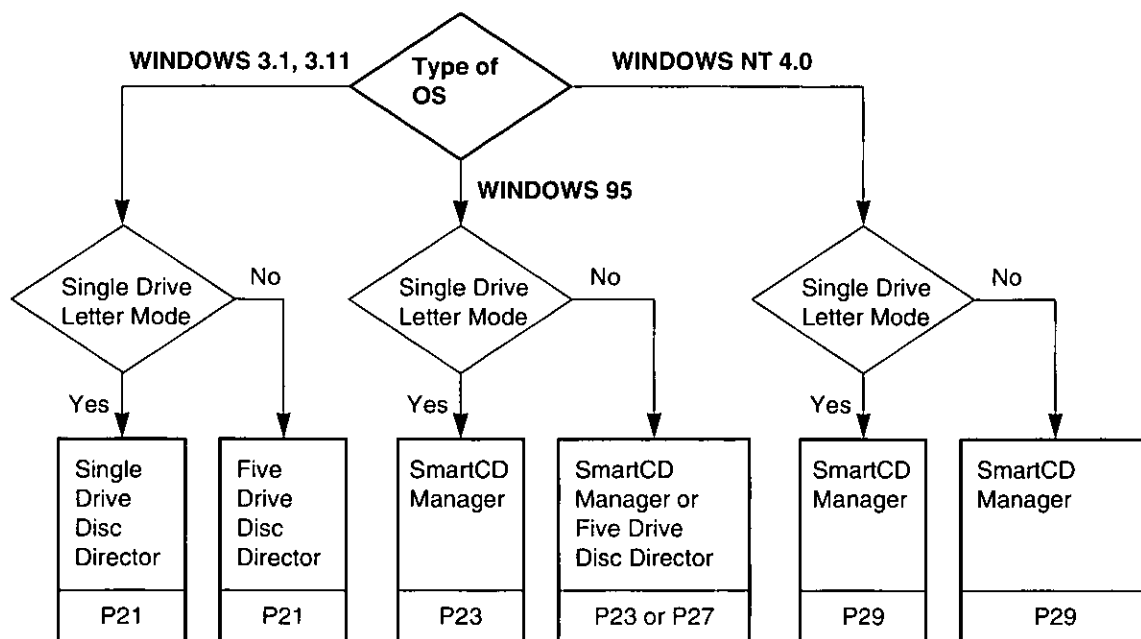
OPERATING THE SOFTWARE

The Panasonic SQ-TC520N CD-ROM Changer comes with a variety of application utility software designed to control, play and/or display five CDs on your computer. The application utility which you can use differs according to the OS (Operating System) installed on your computer as shown in the following diagram.

OS	SmartCD Manager		Panasonic Disc Director		
	Five Drive Letter Mode	Single Drive Letter Mode	Five Drive Letter Mode	Single Drive Letter Mode	SOS Utility
WINDOWS 3.1, 3.11	Unusable	Unusable	Five Drive Disc Director	Single Drive Disc Director	Available
WINDOWS 95	Available	Available	Five Drive Disc Director	Unusable	Unusable
WINDOWS NT 4.0	Available	Available	Unusable	Unusable	Unusable

We recommend that you use the application utility in Single Drive Letter Mode. Follow the flowchart below as a reference to use it in the optimum condition.

NOTE: DMA transfer cannot be carried out in Five Drive Letter Mode.



Please view or print the included Readme.txt file and refer to the online help provided within each application utility for more detailed information.

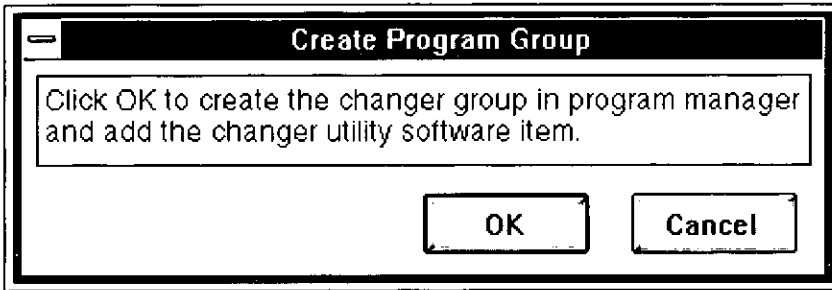
OPERATING UNDER WINDOWS 3.1, 3.11

Using the Panasonic Disc Director in DOS/Windows 3.1

Panasonic Disc Director provides great new tools so that you can easily access your discs. It will setup the software for you and **play audio**. You do not need to remember which slot you used to install the software. **Disc Director will adjust or auto-run the software you select.**

Windows 3.1 display

When you restart Windows (for the first time) after installation, the following display will appear:

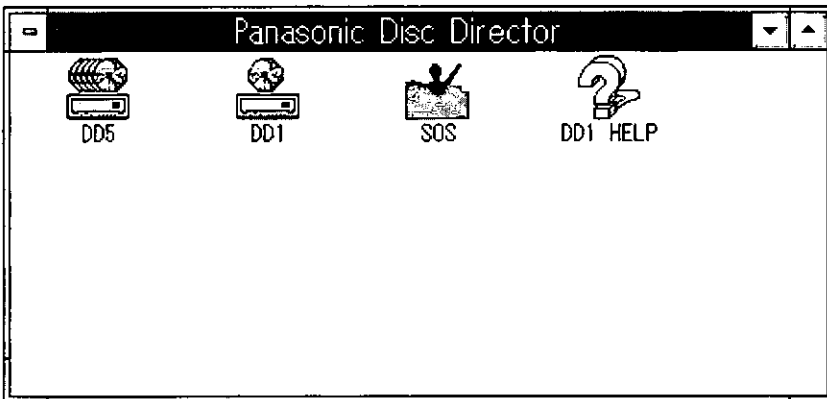



Read this dialog box carefully. Important information will be in this dialog box.





Click **OK** if you agree.


The installation program will now create a program manager group called "PDD" (Panasonic Disc Director).



 Double click this icon to use the Five Drive Disc Director. (See page 27.)

 Double click this icon to use DD1 Single Drive Letter slot selector.

 Double click this icon to use the SOS Utility. (See page 22.)

 Double click this icon to refer to the online help about DD1.

Panasonic Disc Director utilities have many very useful features. Please view or print the **Readme.txt** file which is located in the C:\DD5 directory.

SOS Utility (For DOS/Windows 3.1 only)

Use the SOS Utility for the following purposes:

1. When you change the CD-ROM hardware connection and/or jumper setting

We recommend that the SQ-TC520N be connected as described on pages 13 to 15 (CD-ROM Changer is connected to Secondary connector & Master pin). However, if for some reason your computer does not allow for this configuration, you can change:

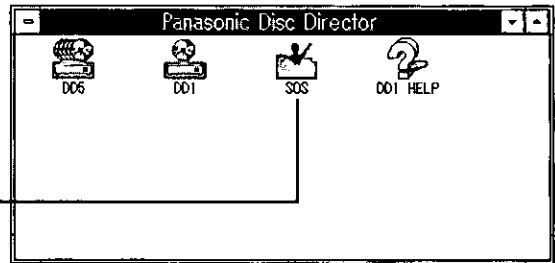
- the **IDE connector**
- **Jumper pin setting** and
- **IRQ setting**

by using the **SOS Utility**. Of course, you need to change the hardware setting beforehand.

2. When you upgrade your computer from Windows 3.1 to Windows 95

Be sure to change the “**Number of CD-Drive**” setting from “**5**” to “**1**”. Otherwise, your computer may fail to load Windows 95.

1 Double click **SOS Utility**.



2 *If changing the hardware connection and setting...*

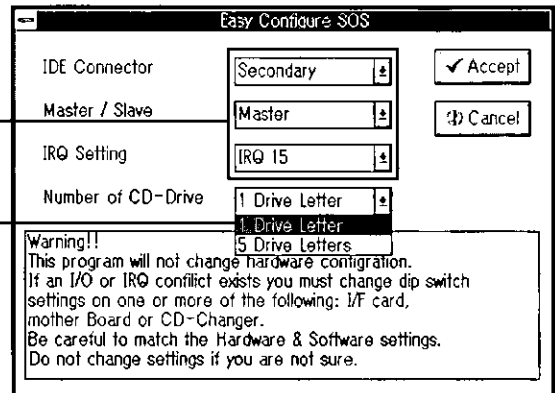
Select the device driver setting.

If upgrading to Windows 95...

Select “1”.

If you select 5 drives for Windows 3.1... we recommend using the Disc Director Software Utility.

If you select 1 drive for Windows 3.1... we recommend using the DD1 (Single Drive Letter) Utility.



NOTE: Follow the instructions on the display carefully.

Using the SmartCD Manager in Single Drive Letter Mode

SmartCD Manager is an innovative solution for managing collections of CDs. It uses a unique single drive letter system. It takes advantage of Microsoft's Windows 95 operating system and allows you to use the CD Changer just like a CD-ROM drive.

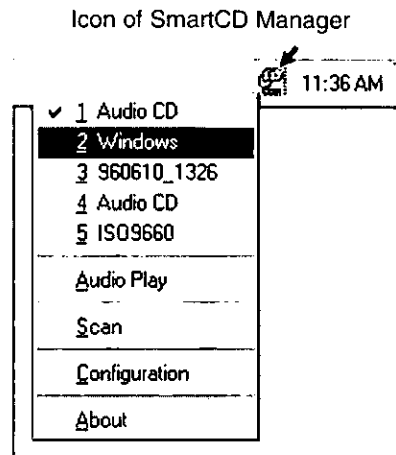
If you are using version B of Windows 95 (see page 9) and you have installed SmartCD Manager ver. 3.6 or later, then DMA transfer can be carried out in Single Drive Letter Mode.

SmartCD Manager is comprised of two parts: The SmartCD Manager and the SmartCD [Audio Player](#).

To start the SmartCD Manager on the Windows task bar

- 1 Right-click on the SmartCD Manager icon on the Windows task bar.
- 2 Single-click the volume name of any CD-ROM currently on the pop-up menu to select a CD-ROM.
When a CD-ROM preprogrammed for Auto Run is selected, the program of the selected disc will be started.

You can also start the SmartCD Manager from the "Program" group when selecting the "Start" icon on the Windows task bar.



Scan

The Scan utility can be accessed by clicking "Scan" on the pop-up menu.

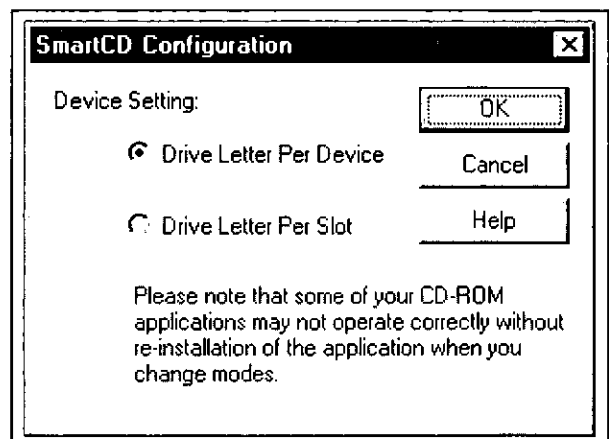
Select the Scan utility if you have changed one or more CDs in the device. This utility will scan all slots in the Changer and update the icon display in My Computer and Explorer.

NOTE: The Scan utility is not necessary when operating in single drive letter (drive letter per device) mode.

Configuration

The Configuration dialog box is accessed by clicking "Configuration" on the pop-up menu.

The Configuration option allows you to select how the device you are using will display its contents within Explorer. Choose the Drive Letter Per Device radio button if you would like any mini-changer you are using to appear under one drive letter. Choose the Drive Letter Per Slot radio button if you would like each individual CD in the Changer to be displayed under its own drive-letter.

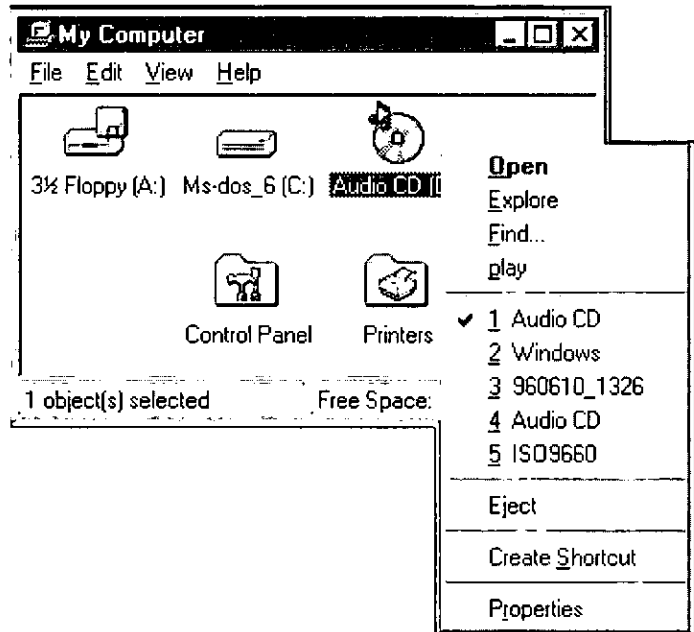


- 1 Select the Device Setting on the dialog box and click **OK**.
- 2 Follow the message displayed on the screen and click **OK**.
Your computer will be rebooted to install your configuration settings.

Please refer to the "On-Line Help" for more information about the SmartCD Manager.

To start the SmartCD Manager in My Computer

By right-clicking on the icon display of any mounted CD, any other CDs can be accessed by choosing the volume name of a CD from the pop-up menu.

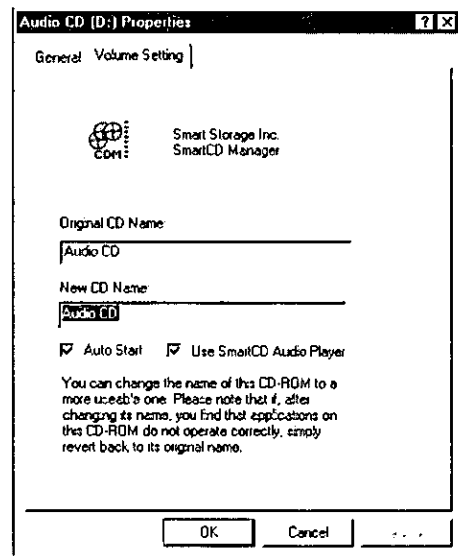


Volume Settings

The Volume Settings dialog box is accessed by choosing the Volume Settings tab within the Properties dialog box. To access the Properties dialog box from Explorer, right-click on any mounted CD and choose "Properties" from the pop-up menu.

The Volume Settings dialog box allows you to:

- change the volume name of a CD by entering a new name in the New CD Name field, and
- set whether or not an Auto-Start CD-ROM will automatically launch when mounted by checking the Auto-Start check box.



If the CD you have selected to Auto-Start is an Audio CD, you can also check the Use SmartCD Audio Player check box to automatically load this application when this particular Audio CD is mounted.

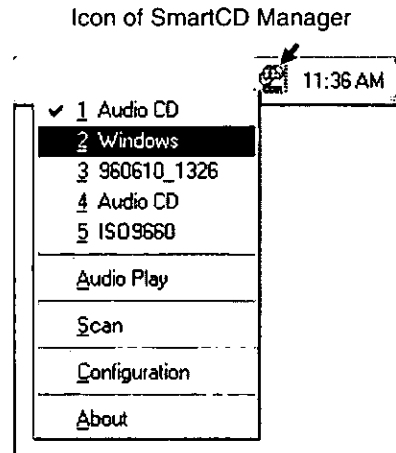
NOTE: If you do not choose this option, Microsoft's Windows 95 CD Audio Player will launch instead.

Using the SmartCD Manager in Five Drive Letter Mode

To start the SmartCD Manager on the Windows task bar

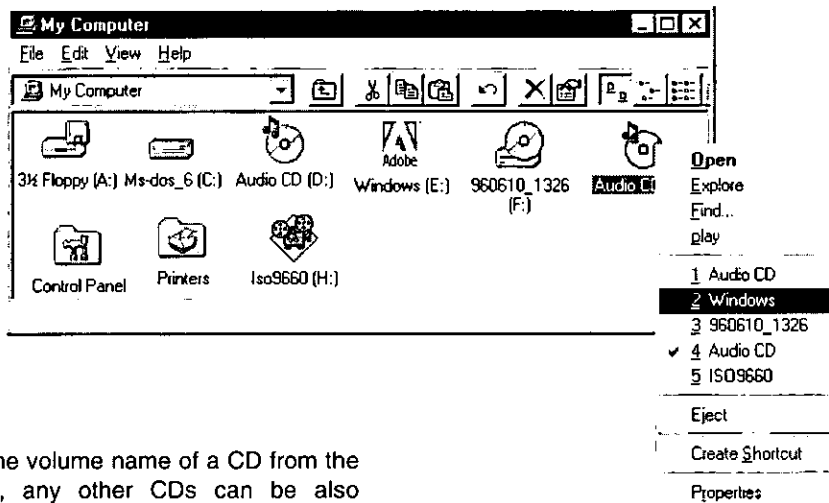
- 1 Right-click on the SmartCD Manager icon on the Windows task bar.
- 2 Single-click the volume name of any CD-ROM currently on the pop-up menu to select a CD-ROM.
When a CD-ROM preprogrammed for Auto Run is selected, the program of the selected disc will be started.

You can also start the SmartCD Manager from the "Program" group when selecting the "Start" icon on the Windows task bar.



To start the SmartCD Manager in My Computer

You can access any CD directly by double clicking on the icon display of any mounted CD in My Computer.



By choosing the volume name of a CD from the pop-up menu, any other CDs can be also accessed.

Refer to page 23 and 24 for more details about the "Scan", "Configuration" and "Volume Setting" utilities.

SmartCD Manager includes an Audio Player that plays Audio CDs in your CD Changer.

Using the SmartCD Audio Player

The SmartCD Audio Player provides an attractive, straight forward medium for listening to your audio CDs. You can use the SmartCD Audio Player in both single drive letter mode and five drive letter mode.

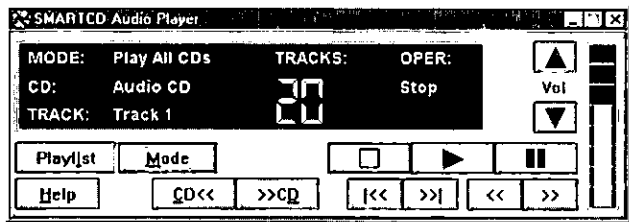
To start the SmartCD Audio Player

1 Right-click on the SmartCD Manager icon on the Windows task bar.

2 Single-click "Audio Play" on the pop-up menu.

NOTE: "Audio Play" will function only when an Audio CD is selected.

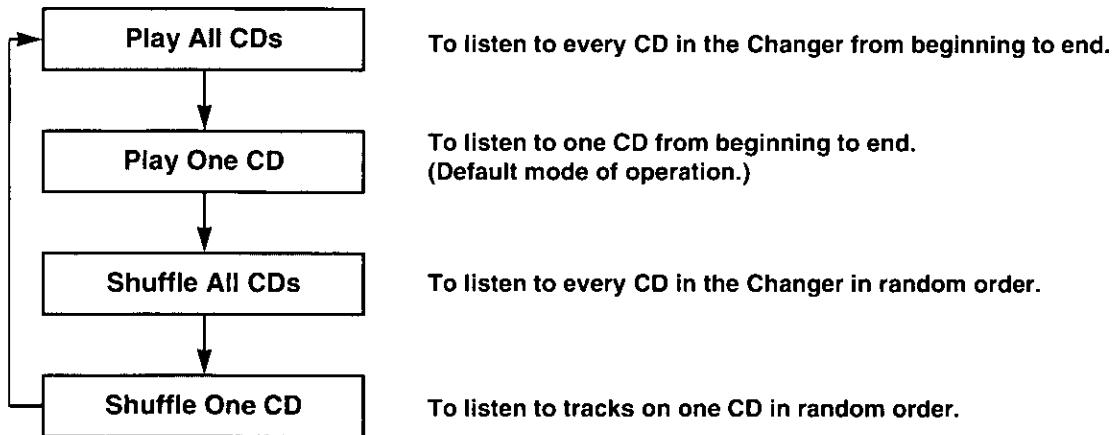
The Audio Player Display appears and playback starts.



The Display informs you of the current status of the audio player, including mode of operation, the currently mounted CD, current track number, total number of tracks on the CD, elapsed play time and current operation.

Playback Modes

This utility provides the following operation modes for playing Audio CDs and each time you click **Mode** on the display in Stop mode, operation modes will change in the following sequence:



NOTE: Before selecting the CD you want to listen to, run the SmartCD Manager and scan all CDs in the Changer (unnecessary if you have previously scanned them).

Programming the Audio Player

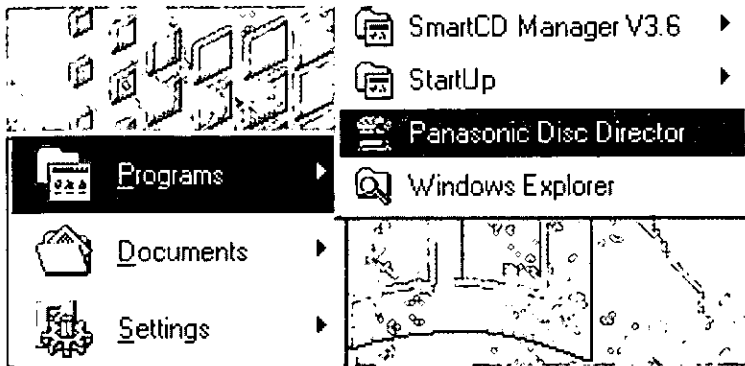
SmartCD Audio Player's programming features allow you to input track names and create customized playlists of your favorite songs on one or more CDs.

Click **Playlist**.

The programming panel drops down.

Using the Panasonic Disc Director in Windows 95

Select "Start" → "Programs" → "Panasonic Disc Director".



We recommend using Disc Director with five drive letter configuration.

The Disc Director dialog box appears.



AutoRun (Under Windows 95 only)

To run the program of the selected disc

When a CD-ROM preprogrammed for Auto Run is selected, pressing this button will start Auto Run.

Play

To display the Audio CD Player dialog box (See page 28.)

You can select a specific audio track or start at the beginning of the tracks.

Setup

To setup/install the software and store the library information of the disc for future use

Open

To eject the selected disc and then close the disc tray

After exchanging discs, the disc icon will show the information of the newly inserted disc.

NOTE: You cannot open/close the disc tray while using the headphones jack.

Scan

To scan all CD-ROM Changer slots and other CD-ROM drives attached to your computer (See page 28.)

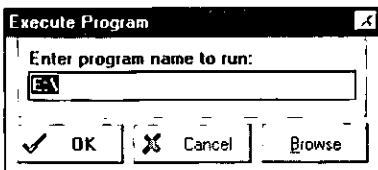
Shows the disc type

You can scroll the disc icons to see all drives attached to your computer.

By **single clicking** the icon, the drive will be selected.

If you **double click** the icon...

the following dialog box will appear.



- Enter the program name you want to start and select OK to run the program.
- Just select OK without entering any program name, then the directory of the disc will appear in the dialog box.

Shows the associated information about the disc you selected (highlighted icon)

For your reference:

Helpful hints are provided. Just move the mouse cursor onto the buttons, and the Hint that explains the button is displayed.

Scanning Disc Titles

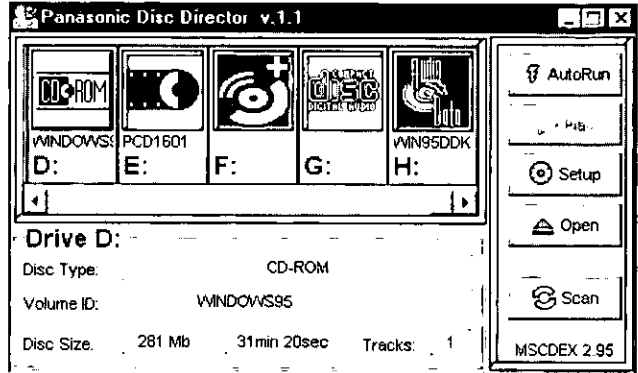
The scan function is a convenient way to "inventory" the contents of the Changer.

Click .

Each disc will be loaded (one at a time) into the CD-ROM Changer. Its volume label or disc type will then be registered into the title window.

After scanning all 5 discs, all titles appear.

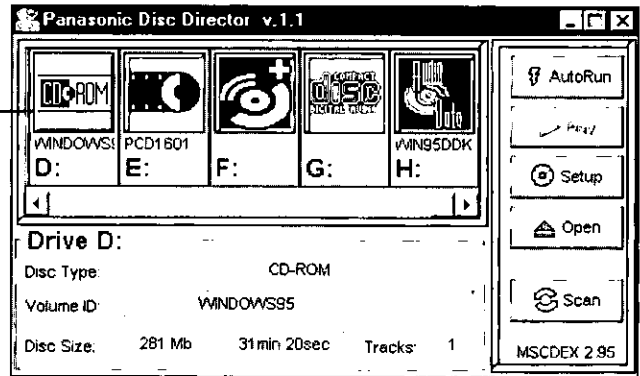
NOTE: Scanning the contents of the CD-ROM Changer takes approx. 1 minute.



Playing Audio CDs

1 Single click the disc icons to select an audio CD.

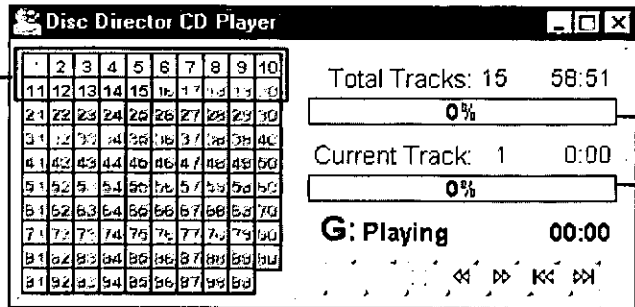
2 Click .



The Audio CD Player dialog box appears.

3 Click the numeric icon of the desired track.

Playback starts from the selected track.



Percentage of track played

Percentage of disc played

OPERATING UNDER WINDOWS NT 4.0

Using the SmartCD Manager & SmartCD Audio Player

SmartCD Manager is an innovative solution for managing collections of CDs. It uses a unique single drive letter system. It takes advantage of Microsoft's Windows NT 4.0 operating system and allows you to use the CD Changer just like a CD-ROM drive.

SmartCD Manager is comprised of two parts: The SmartCD Manager and the SmartCD Audio Player. The SmartCD Audio Player provides an attractive, straight forward medium for listening to your audio CDs.

How to use them is explained in the Windows 95 section. Refer to pages 23 to 26 for more details about the SmartCD Manager & SmartCD Audio Player.

Using Microsoft's Windows NT CD Player

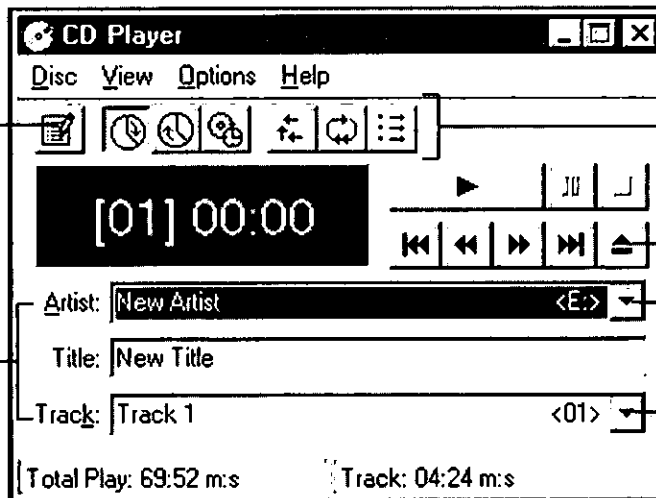
You can use another medium called "CD Player", originally provided within Windows NT 4.0, to play your audio CDs. We recommend using "CD Player" with Five Drive Letter (Drive Letter Per Slot) configuration, because more than one CD-ROM drive must be installed to change to another CD.

To start Microsoft's Windows NT CD Player

Select "Start" → "Programs" → "Accessories" → "Multimedia" → "CD Player".
The CD Player Display appears.

**Icon to edit
"Play List"**
By clicking the icon, the Disc Settings dialog box will appear to create a play list.

Disc/Track Info



Toolbar

To eject the selected disc from the drive

To switch to a different CD

To specify the track to be played

Your CD continues to play even if you minimize the CD Player Display.

Please refer to the online help, for the additional information about MS Windows NT CD Player, provided within the CD Player application.

TROUBLESHOOTING

Problem	Check these possibilities:	Page
Tray doesn't eject.	Is the power cord plugged in correctly? Is the CD or CD-ROM inserted properly? Disconnect the headphones.	14 18 8
Computer doesn't boot.	Is there a disk in the floppy disk drive? Is the IDE cable plugged into the expansion card correctly? Does Pin 1 of the EIDE cable have the proper orientation?	— — 14
CD player doesn't respond to computer commands.	Is the device driver installed correctly? Is the IDE interface cable connected properly, completely inserted, is Pin 1 connected to pin 1 etc.?	10–12 14
CD or CD-ROM won't play.	Are you trying to use a CD or CD-ROM that is not compatible with this machine? Are you using the appropriate CD or CD-ROM software? Is the CD or CD-ROM inserted properly? Is the CD or CD-ROM inserted with the label side up? Is the CD or CD-ROM scratched, broken, warped or dirty? Is there condensation on the machine? (If so, leave the machine on for an hour and try again.)	7, 18
No sound comes out of headphones.	Is the volume adjusted properly? Are the headphones properly connected?	8
The CD-ROM Changer doesn't work correctly in Windows 95.	Have you checked which version of Windows 95 you have? Have you installed SmartCD Manager ver. 3.6 or later? Have you installed the software first? Is the jumper pin setting for DMA OFF terminal correct?	9
Device driver won't load in Windows 95.	1) Existing real mode driver in config. sys 2) IDE controller is not set correctly—check control panel in Windows 95	—

NOTE:

When returning the product to the Service Center, please also print out the personal computer's AUTOEXEC.BAT and CONFIG.SYS files and send with the product.

SPECIFICATION SUMMARY

Interface		ATAPI Interface Specified in SFF-8020 Rev. 2.6 mode 4 (40 Pin Connector)
Playable Disc Format		12 cm/8cm: 4.75"/3.16" CD-ROM (mode 1 and mode 2) CD-ROM XA (mode 2 form 1 and form 2) Photo CD (Single and multi-session)* ¹ CD-DA, CD Extra (CD Plus) Video CD* ¹ , CD-I Movie* ¹ , Video for Windows* ¹
Disc Speed	Normal Velocity Max. 20X Velocity	200–530 rpm (CLV mode) 4000–4593 rpm (CAV & CLV combination mode)
Data Transfer Rate		1275–3000 KB/s 3000 KB/s (Max)* ² 16.7 MB/s (PIO mode 4 with IORDY) 13.3 MB/s (Multi Word DMA Mode 2)
From Buffer		
Access Time	1/3 Stroke	110 ms typ.
Buffer Memory Capacity		128 KB
Error Rate	Hard Read Error Soft Read Error	Less than 10 ⁻¹² Less than 10 ⁻⁹
Analog Audio		
Output Level	Line Out	0.8 +/- 0.1 Vrms (50 kΩ)
(Impedance)	Headphone	0.6 +/- 0.1 Vrms (32Ω)
Frequency Response	Line Out	20 Hz–20 kHz (+0.5, -3 dB)
Digital Audio		
Output Level	(Impedance)	TTL Level (more than 100 kΩ)
Format		Type 2 Form 1
Temperature	Operating Storage	5 to 45°C -20 to 60°C
Humidity	Operating Storage	20 to 90% Rh (Non-condensing) 20 to 90% Rh (Non-condensing)
MTBF		100,000 POH (10% duty cycle)* ³
Source Voltage		DC 5 V±5% DC 12 V±10%
Source Current		DC 5 V=1.2 A (Peak) DC 12 V=1.5 A (Peak)
Dimensions (W×H×D)		146×41.3×224 mm: 5¾"×1⅝"×8⅓⅛"
Weight		1.3 kg: 2.9 lb.
OS	Compatible with:	Windows NT 4.0, Windows 95, Windows 3.1/3.11 MS DOS 6.22 & higher
Accessory		Setup Disks, Jumper Pin, Eject Pin, Mounting Screws, Interface Cable, Audio Cable

*¹Requires Viewer or Playback Software

*²Average of 650 Mbytes Transfer time

*³Read and Access duty is 10% of power on time at normal temperature and humidity.

Note:

Specifications are subject to change without notice.

Weight and dimensions are approximate.

Panasonic Computer Peripheral Company
Division of Matsushita Electric Corporation of America

Two Panasonic Way, Secaucus, New Jersey 07094

RQT4245-P
F1297K0 (D)