

CD-ROM Host Adapter Card

CDB-240 Series

Operating Instructions

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 or more of the following measures:

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC Rules.

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

Cet appareil est conforme aux normes Classe B pour bruits radioélectriques, spécifiées dans le Règlement sur le brouillage radioélectrique.

The export of this product is subject to the authorization of the government of the exporting country.

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Preface

This guide is intended for new users of the Series CDB-240 CD-ROM Host Adapter Card. It covers configuration, installation, and connections relevant to the card.

This guide is divided into the following chapters and appendixes:

Chapter 1	Introduction
Chapter 2	Setting the Switches
Chapter 3	Installing the Card
Chapter 4	Connecting the Card
Appendix A	Specifications
Appendix B	Sample Switch Settings

Please read this guide thoroughly before using the card.

References

The following document may be useful:

Sony MS-DOS CD-ROM Extensions Installation Manual (CD-ROM Extensions OPA-332-11).

Introduction

Overview

The Series CDB-240 CD-ROM Host Adapter Card is an interface card that can be used to connect the Sony CD-ROM drive to the IBM-PC/XT, PC/AT, IBM PS/2 Model 30, HP Vectra or equivalent.

Features

The Series CDB-240 Card offers the following features:

- Half-size printed circuitry board
- Easy-to-set base address switch
- Software read and DMA read operations
- Polling and interrupt processing for drive status read operations
- Support for one internal drive
- Support for as many as three additional stand-alone drives (Model CDB-242 and CDB-244)
- Support for audio output (Model CDB-241 and CDB-244)

The Series CDB-240 consists of three card models: Model CDB-241, Model CDB-242 and Model CDB-244. Features of each card are shown in Table 1-1.

Table 1-1. Series CDB-240 Cards

Features	CDB-241	CDB-242	CDB-244
External Host Bus Connector	No	Yes (half-pitch)	Yes (half-pitch)
Internal Host Bus Connector	Yes	Yes	Yes
Audio Connector and Cable	Yes	No	Yes

Supported Drives

The Series CDB-240 Card supports a number of Sony CD-ROM drives. The supported drives and the appropriate card(s) to be used with each are shown in Table 1-2.

Table 1-2. Sony CD-ROM Drives Supported

Sony CD-ROM Drive Model Name	CD-ROM Drive Type	Appropriate Series CDB-240 Card
CDU-510	Internal	CDB-241/242/244
CDU-520	Internal	CDB-241/242/244
CDU-531	Internal	CDB-241/242/244
CDU-6100	Stand-alone	CDB-242/244
CDU-6101	Stand-alone	CDB-242/244
CDU-6110	Stand-alone	CDB-242/244
CDU-6111	Stand-alone	CDB-242/244
CDU-6150	Stand-alone	CDB-242/244
CDU-6201	Stand-alone	CDB-242/244
CDU6250	Stand-alone	CDB-242/244

Card Components

The Series CDB-240 Card components are as follows (see Figure 1-1-1, 1-1-2 and 1-1-3):

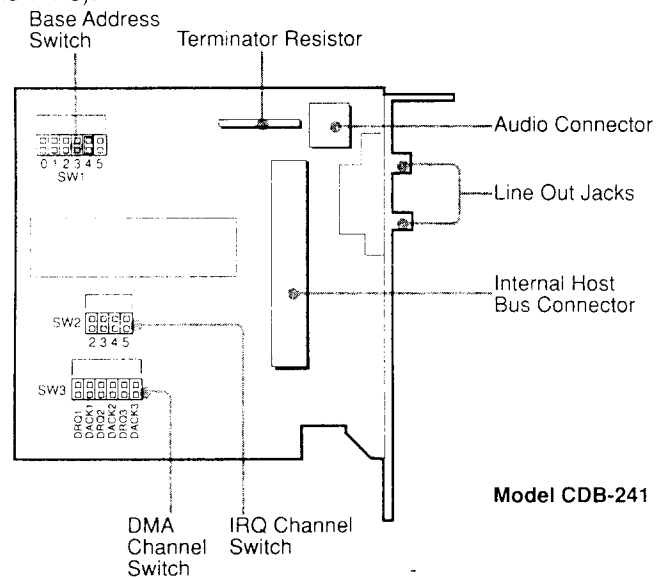


Figure 1-1-1. Series CDB-240 Card Components

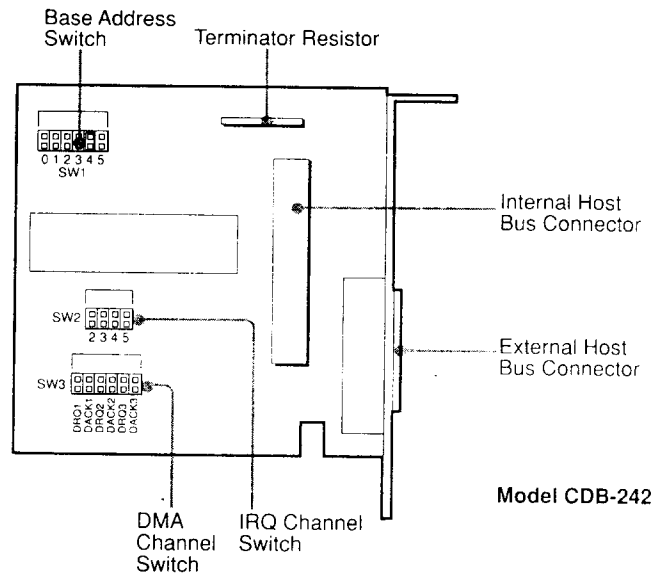


Figure 1-1-2. Series CDB-240 Card Components

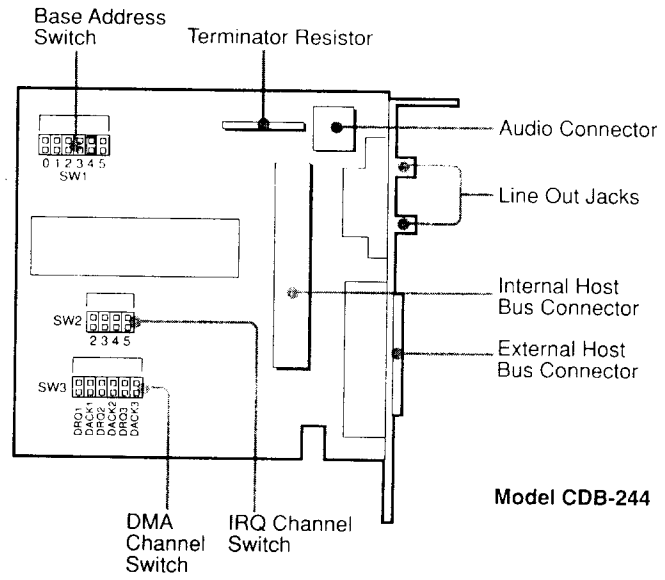
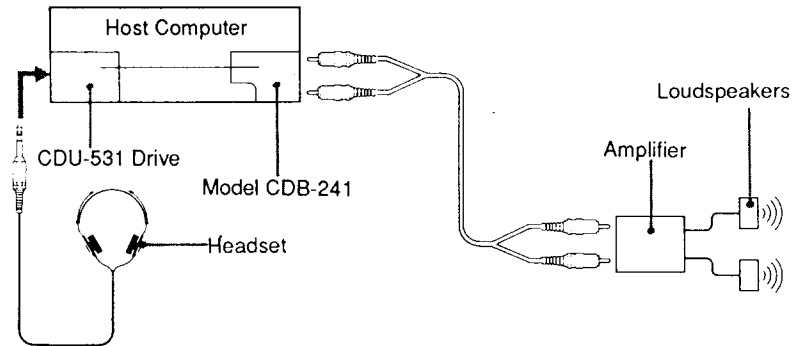


Figure 1-1-3. Series CDB-240 Card Components

Sample System Configurations

When configuring your system with the Series CDB-240 Card, you may want to consider one of the following sample setups (see Figures 1-2-1 and 1-2-2):

Sample 1: Connecting an amplifier



Sample 2: Connecting two stand-alone drives and an amplifier

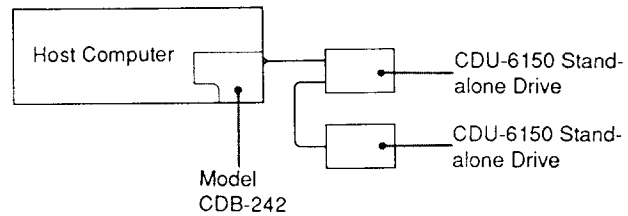


Figure 1-2-1. Sample System Configurations

Sample 3: Connecting three stand-alone drives and an amplifier

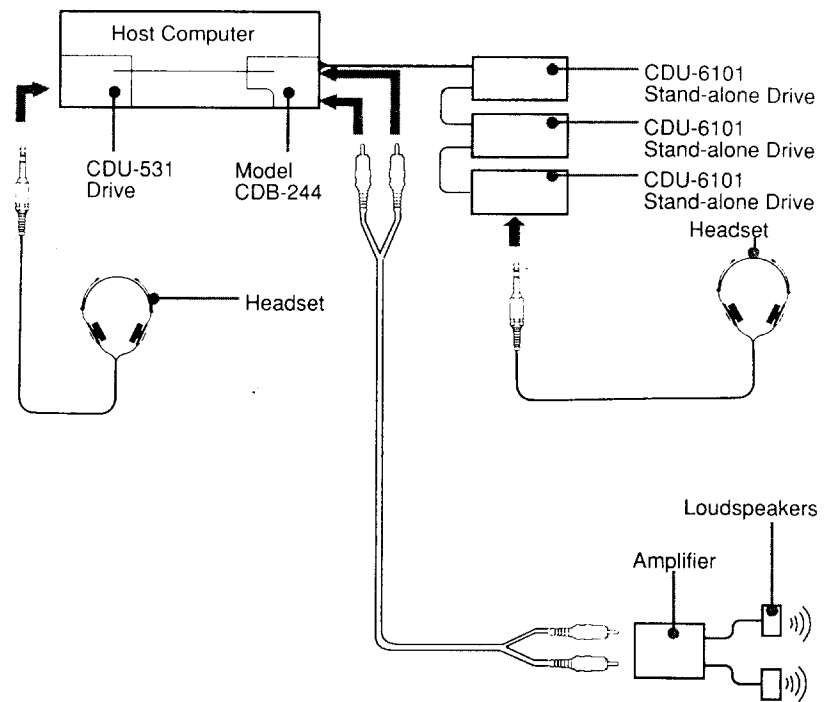


Figure 1-2-2. Sample System Configurations

Requirements

The CD-ROM drive DIP switch should be set as specified by the guide that came with the drive.

Be sure to set the drive's DRQ/WAIT DIP switch to DRQ unless your application software specifies a different setting. For switch setting instructions, see the guide that came with the drive.

Precautions

Observe the following precautions when using the card:

- **Protect the card from static electricity**
Components on the card can be destroyed by static electricity. Do not directly touch the components on the card.
- **Protect the card from mechanical shock**
The card consists of electronic components that have precise dimensions. Do not drop or bump the card.
- **Power off the computer before connecting the card to peripherals**
Connecting the card to peripherals while the power is on can damage the card and the computer.

Trademarks

IBM and PS/2 are registered trademarks, and PC/AT and PC/XT are trademarks of International Business Machines Corporation.

MS-DOS is a registered trademark of Microsoft Corporation.

3M is a registered trademark of Minnesota Mining and Manufacturing Company.

Molex is a registered trademark of Molex, Inc.

HP and Vectra are registered trademarks of Hewlett-Packard Company.

Setting the Switches

Overview

This chapter describes the factory switch settings for the Series CDB-240 Card. It also provides instructions in case you want to select new settings for the switches.

Factory Settings

The Series CDB-240 Card includes three jumper switches: SW1, SW2, and SW3. Switch SW1 allows you to select an I/O base address setting; the factory setting for this switch is 340 hexadecimal (H). Switch SW2 allows you to select the IRQ channel for status read settings. Switch SW3 allows you to select the DMA channel for data read settings. Switches SW2 and SW3 are not set.

The factory switch settings are as follows (see Figure 2-1):

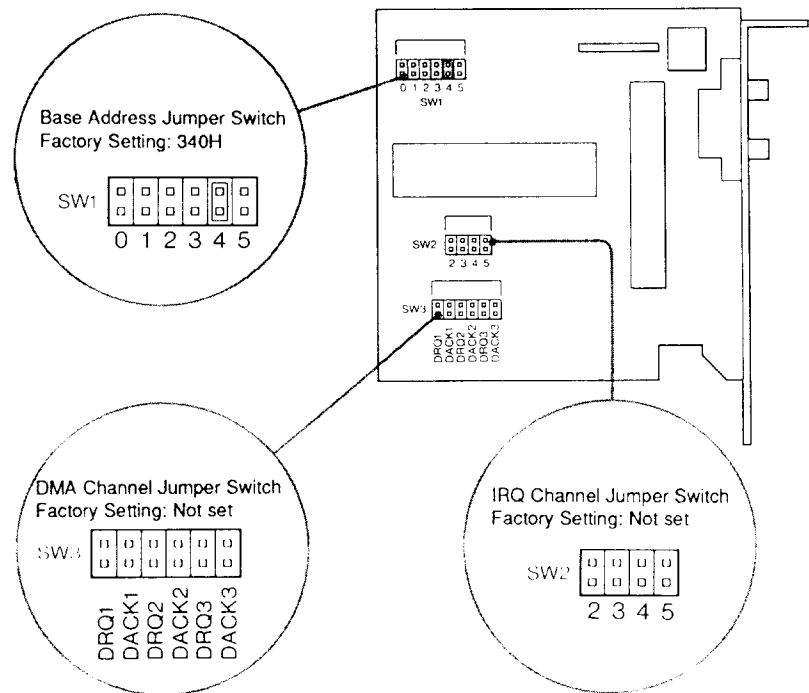


Figure 2-1. Series CDB-240 Card Factory Switch Settings (Model CDB-241 Shown)

Note

The presence of a plastic bit on the jumper switch indicates that the switch is closed (or "on"), and that its value is 1. The absence of a plastic bit indicates that the switch is open (or "off"), and that its value is 0.

Make sure that the switch settings on your card match Figure 2-1. If you want to change the switch settings, see the sections that follow.

Selecting a New Base Address Switch Setting

Other cards installed in your computer may also include base address switch settings. To avoid address duplication, be sure to read the documentation that came with the other cards regarding base address settings before selecting a new one for this card.

To change the base address setting for the Series CDB-240 Card, install the plastic bit(s) on the appropriate switch posts of jumper switch SW1. For base address sample switch settings, see Appendix B of this guide.

Setting the IRQ and DMA Channel Switches

The IRQ and DMA channel switches have not been set by the factory. If you want to set these switches for the Series CDB-240 Card, install the plastic bit(s) on the appropriate switch post(s) of jumper switches SW2 and SW3.

Note

To set the DMA channel switch correctly, install the plastic bits in pairs on the posts where the "DRQ" and "DACK" numbers match, for example (see Figure 2-2):

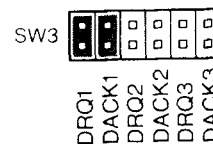


Figure 2-2. Bit Installation Example for the DMA Channel Switch

Installing the Card

Overview

This chapter describes how to install the Series CDB-240 Card. The card can be installed in an empty expansion slot in your computer.

Before You Begin

- 1 Power off the computer. Disconnect the power cable of the computer from the AC outlet and disconnect the cables attached to the back of the computer.
- 2 Remove the computer's cover. For instructions, see the guide that came with the computer.

Installing the Card

Caution:

To protect the card and the computer from potential damage, do not power on the computer before installation of the card is completed.

To install the card, follow this procedure:

- 1 Remove the screw from an empty expansion slot cover. Then remove the cover (see Figure 3-1).

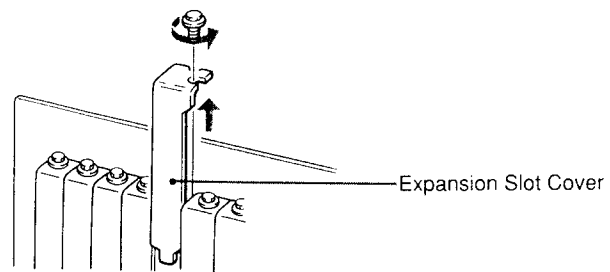


Figure 3-1. Removing the Expansion Slot Cover

- 2** Holding the card by the corners, slide it into the support bracket, and press it firmly into the expansion slot (see Figure 3-2).

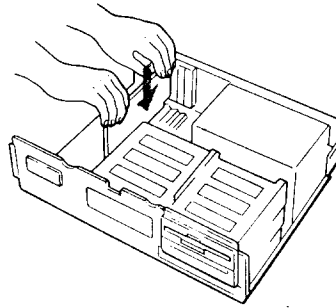


Figure 3-2. Inserting the Card

- 3** Secure the card with the screw you removed in Step 1 (see Figure 3-3).

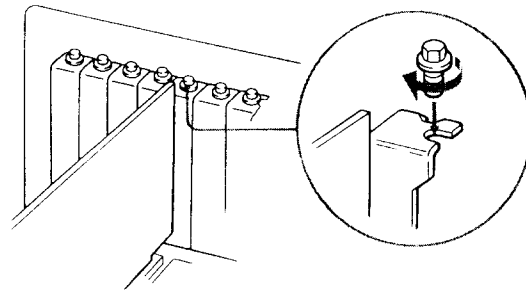


Figure 3-3. Securing the Card

Connecting the Card

Overview

This Chapter describes how to connect cables and equipment to the Series CDB-240 Card.

The card can be connected to an internal CD-ROM drive via the optional internal host bus connector cable. Then, depending upon the card model that you chose, an amplifier and/or as many as three stand-alone drives can be connected.

Before You Begin

- 1** Power off the computer. Disconnect the power cable of the computer from the AC outlet and disconnect the cables attached to the back of the computer.
- 2** Remove the computer's cover. For instructions, see the guide that came with the computer.
- 3** Be sure that you have installed the CD-ROM drive according to the guide that came with the drive.

Attaching the Internal Host Bus Connector Cable

The Series CDB-240 Card can be connected to an internal CD-ROM drive via the optional internal host bus connector cable. The recommended cables from Sony have the following part numbers: RK-B70F, RK-B20F.

To attach the internal host bus connector cable to the card, follow this procedure:

- 1** Make sure that one end of the cable is firmly attached to the internal CD-ROM drive. If necessary, see the guide that came with the drive.
- 2** Attach the other end of the cable to the card. For proper attachment, be sure to align the nose on the cable connector with the groove in the card connector (see Figure 4-1).

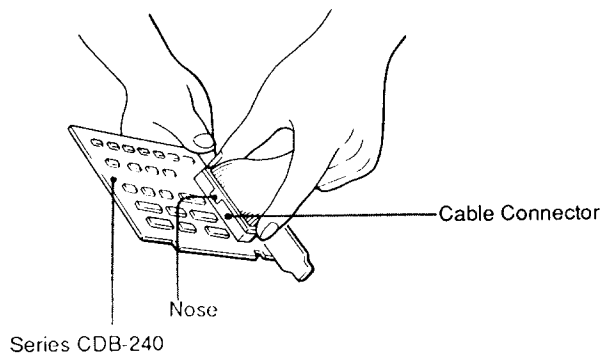


Figure 4-1. Attaching the Internal Host Bus Connector Cable to the Card

Connecting Audio Equipment (Model CDB-241/244)

When connected to the appropriate internal CD-ROM drive via the supplied audio cable, and to your amplifier via an audio connecting cord (not supplied), the Model CDB-241 and CDB-244 support audio output from the drive.

Attaching the Audio Cable

To attach the audio cable, follow this procedure:

- 1 Attach one end of the cable to the CD-ROM drive. For proper attachment, position the cable connector as illustrated in Figure 4-2.

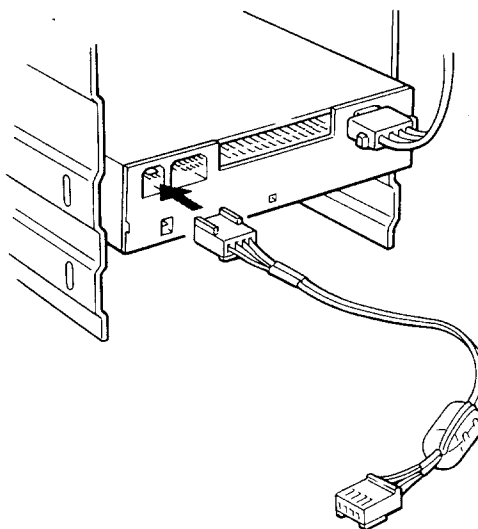


Figure 4-2. Attaching the Audio Connector Cable to the Drive (Model CDU-531 Drive Shown)

- 2 Attach the other end of the cable to the audio connector on the Model CDB-241 or CDB-244. For proper attachment, position the cable connector as illustrated in Figure 4-3.

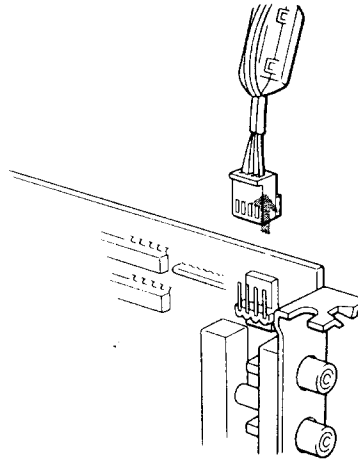


Figure 4-3. Attaching the Audio Connector Cable to the Card (Model CDB-241/CDB-244)

Connecting an Amplifier

To connect an amplifier, follow this procedure:

- 1 Attach the phono plugs on the audio connecting cord to the line out jacks on the Model CDB-241 or CDB-244. Attach the other end of the cord to your amplifier (see Figure 4-4).

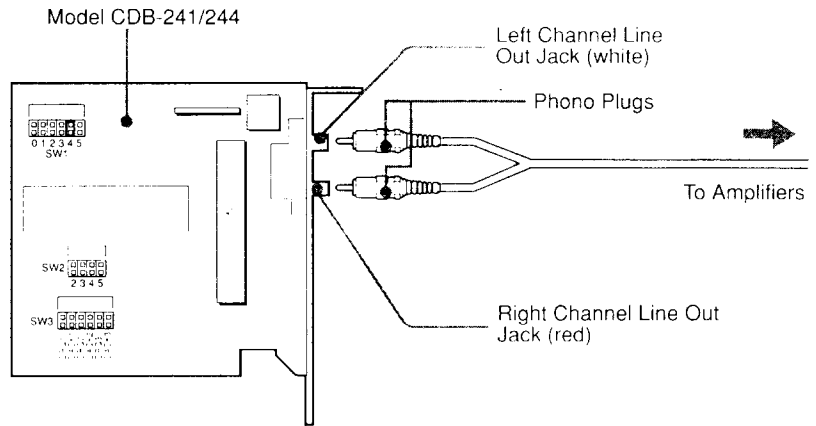


Figure 4-4. Attaching an Audio Connecting Cord

Connecting Stand-alone Drives (Model CDB-242/244)

In addition to one internal drive, the Model CDB-242 and CDB-244 provide support for as many as three stand-alone drives via the external host bus connector and optional cable.

The recommended external host bus connector cable from Sony has the following part number: RK-B101.

To connect the stand-alone drive(s), see the guide that came with the drive(s).

About Terminator Resistors

If you decide to connect internal and stand-alone CD-ROM drives to the Model CDB-242 or CDB-244, be sure to perform the following procedure regarding the terminator resistors:

- 1 Remove the terminator resistor from the Model CDB-242/CDB-244 (see Figure 4-5).

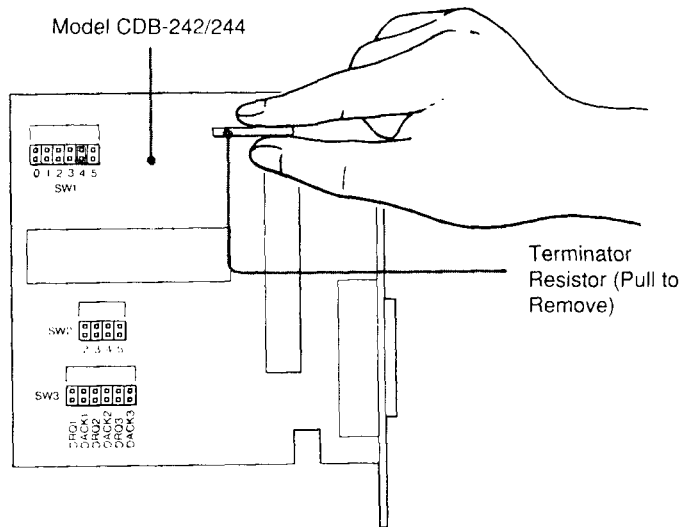


Figure 4-5. Removing the Terminator Resistor From the Card

- 2 Set to "on" the terminator resistor switches on the internal drive and on the last stand-alone drive connected to the card. For any other stand-alone drives connected to the card, set the terminator resistor switches to "off" (see Figure 4-6).

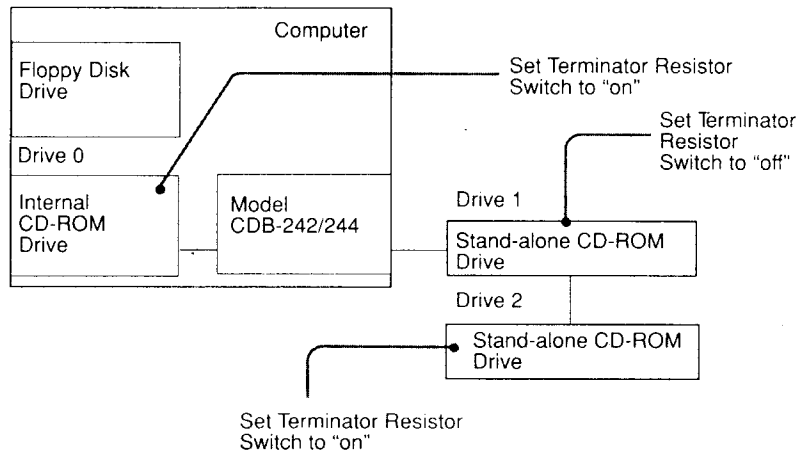


Figure 4-6. Sample Settings for the Terminator Resistor Switches

Specifications

The specifications for the Series CDB-240 Card are as follows:

Dimensions	130 x 25 x 120 mm (W/H/D) (5 1/8 x 1 x 6 in.)
Weight	90g (3 oz)
Operating temperature	5° to 45° C (41° to 113° F)
Storage temperature	-30° to 60° C (-22° to 140° F)
Supply voltage	+5V \pm 5%
DC current required	300mA
Connector types	
Internal host bus connector	3M #3595-500SE (or equivalent)
External host bus connector (Model CDB-242/244)	3M #10240-5202 JL
Audio connector (Model CDB-241/244)	Molex 5046-04A
Line out jack (Model CDB-241/244)	RCA pin jack

Design and specifications are subject to change without notice.

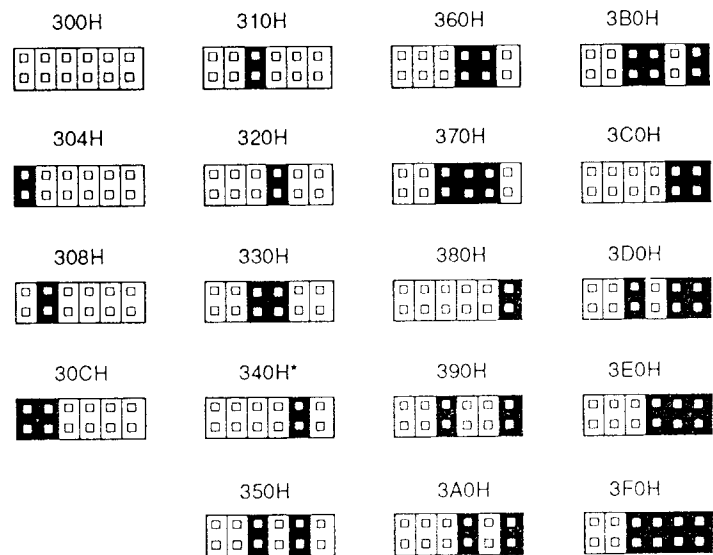
Sample Switch Settings

This appendix provides sample switch settings for the base address jumper switch SW1 on the Series CDB-240 Card. The base address switch is set to 340H by the factory. If you want to select a new base address setting, you can choose from one of the sample switch settings shown in Figure B-1.

For switch setting instructions, see Chapter 2 of this guide.

Base Address Sample Switch Settings

Sample settings for the base address jumper switch SW1 are as follows (see Figure B-1):



* This is the factory setting.

Figure B-1. Sample Settings for the Base Address Switch