

## RRD43 CD-ROM Disc Drive

---

### Operation Information for BA400-Based VAX 4000 Systems

Order Number: EK-RRDDD-IN. A01

---

**April, 1994**

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation.

Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

The software, if any, described in this document is furnished under a license and may be used or copied only in accordance with the terms of such license. No responsibility is assumed for the use or reliability of software or equipment that is not supplied by Digital Equipment Corporation or its affiliated companies.

Restricted Rights: Use, duplication or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

**FCC NOTICE:** The equipment described in this manual generates, uses, and may emit radio frequency. The equipment has been type tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such radio frequency interference.

Operation of the equipment in a residential area may cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Copyright © Digital Equipment Corporation 1994. All Rights Reserved.

The Reader's Comments form at the end of this document requests your critical evaluation to assist in preparing future documentation.

The following are trademarks of Digital Equipment Corporation: DEC, VAX, VAX DOCUMENT, and the DIGITAL logo.

All other trademarks and registered trademarks are the property of their respective holders.

S2556

This document was prepared using VAX DOCUMENT Version 2.1.

---

# Contents

|  |     |
|--|-----|
| <b>Preface</b> .....   | v   |
| <b>1 Introduction</b>  |     |
| 1.1 RRD43 General Description .....                          | 1-1 |
| 1.2 Drive Specifications .....                               | 1-1 |
| <b>2 Operation</b>   |     |
| 2.1 RRD43 Controls and Indicators .....                      | 2-1 |
| 2.2 Inserting a Compact Disc into the RRD43 Disc Drive ..... | 2-4 |
| 2.3 Removing the Disc from the RRD43 .....                   | 2-6 |
| 2.4 Removing a Disc Manually .....                           | 2-7 |
| <b>Index</b>   |     |
| <b>Figures</b>   |     |
| 2-1 RRD43 Compact Disc Drive Front Panel .....               | 2-2 |
| 2-2 Inserting a Disc in the RRD43 .....                      | 2-5 |
| 2-3 Removing a Disc from the RRD43 .....                     | 2-6 |
| 2-4 Removing a Disc Manually .....                           | 2-8 |

## Tables

|     |                                       |     |
|-----|---------------------------------------|-----|
| 1-1 | RRD43 Disc Drive Specifications ..... | 1-1 |
| 2-1 | RRD43 Controls and Indicators .....   | 2-3 |

---

## Preface

This manual provides supplementary procedures for operating the RRD43 CD-ROM in a BA400-based VAX 4000 system.

### Intended Audience

This manual is intended for BA400-based VAX 4000 system operators and users of the RRD43 CD-ROM.

### Structure

This manual is structured as follows:

- |           |   |
|-----------|---|
| Chapter 1 | Contains a general description and specifications for the RRD43 CD-ROM. |
| Chapter 2 | Contains operating information for the RRD43 CD-ROM disc drive.         |

### Related Documentation

The following documentation may be helpful in using the RRD43 CD-ROM disc drive.

|   |             |
|---|-------------|
| <i>BA400-Series Enclosures Storage Devices Installation Procedures</i>          | EK-BA44A-IN |
| <i>RRD43 CD-ROM Drive Installation Guide</i>                                    | EK-RRD43-IN |
| <i>VAX/VMS Guide to Using Command Procedures</i>                                | AA-H782B-TE |
| <i>VAX/VMS Command Language User's Guide</i>                                    | AA-DO23C-TE |
| <i>OpenVMS System Manager's Manual: Essentials</i>                              | AA-PV5MB-TK |
| <i>OpenVMS System Manager's Manual: Tuning, Monitoring, and Complex Systems</i> | AA-PV5NB-TK |
| <i>Guide to VAX/VMS Disk and Magnetic Tape Operations</i>                       | AA-M539A-TE |

## Conventions

The following conventions are used in this manual.

*italic type*

Indicates emphasis and complete manual titles.

**NOTE**

Provides general information about the current topic.

**CAUTION**

Provides information to prevent damage to equipment or software.

---

# Introduction

## 1.1 RRD43 General Description

The RRD43 compact disc drive is a read-only device that can read information from industry standard 600 MB compact discs. The compact disc is inserted directly into the drive.

## 1.2 Drive Specifications

Table 1-1 contains the specifications for the RRD43 compact disc drive and a list of add-on option numbers for the BA400-based VAX 4000 system.

**Table 1-1 RRD43 Disc Drive Specifications**

---

### Overview

---

|                     |   |
|---------------------|---|
| Description         | Half-height optical CD-ROM disc drive   |
| Features            | Photo CD capable/ can be used as an independent audio CD player                                     |
| Media               | Removable 5 1/4-inch compact disc   |
| Capacity            | 600 MB  |
| Form factor         | 5 1/4 in (1-inch high)  |
| Average access time | 320 ms  |
| Transfer rate       | 1X: 150 KB, 2X: 300 KB  |
| Rotational speed    | 1X: Inner track = 530 rpm/Outer track = 200 rpm<br>2X: Inner track = 1060 rpm/Outer track = 400 rpm |

(continued on next page)

**Table 1–1 (Cont.) RRD43 Disc Drive Specifications**

---

**Overview**

---

|                   |   |
|-------------------|---|
| Temperature       | 5°C (41°F) – 50°C (122°F) (operating)<br>-10°C (14°F)—65°C (149°F) (nonoperating) |
| Relative humidity | 8%–80%  |
| Voltage           | +5 VDC ±5%  |
| Current           | 1X—+5 V: 950 mA; 2X—+5 V: 1.0 A   |
| Power             | <7 W @ 5 V (maximum)  |

---

**Add-On Option Part Number**

---

|          |   |
|----------|---|
| RRD43–JF | Field embedded RRD43 disc drive with mounting assembly for the BA400-based VAX 4000 system. |
| RRD43–FB | Tabletop RRD43 disc drive with cable kit and U.S. power cord.                               |
| RRD43–DH | Tabletop RRD43 disc drive with cable kit. Requires country-specific power cord.             |

---

**Field Replacable Units and Options**

---

|             |             |
|-------------|-------------|
| RRD43 drive | RRD43–AB    |
| Test disc   | 30–23507–03 |

---



# 2

---

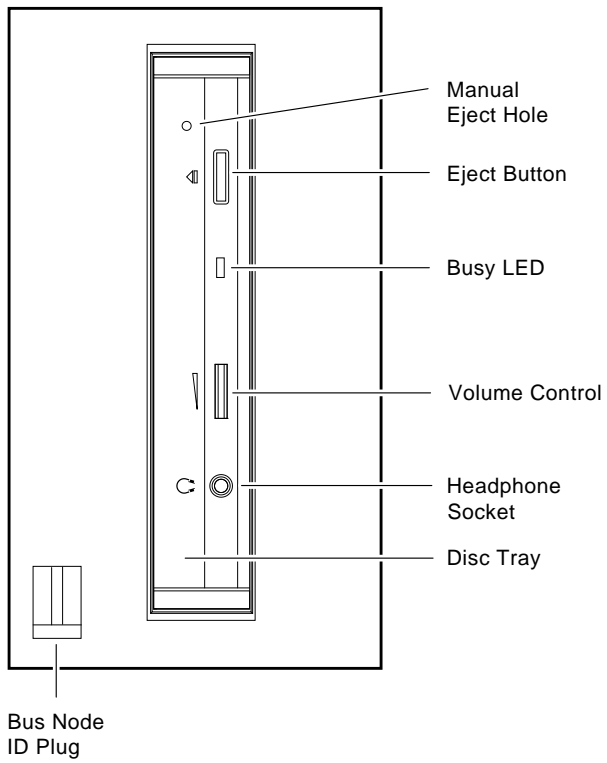
## Operation

The following sections describe the RRD43 controls and indicators, how to insert a compact disc into the drive, how to remove a compact disc from the drive, and how to manually eject a compact disc from the drive.

### 2.1 RRD43 Controls and Indicators

The front panel of the RRD43 compact disc drive contains the disc tray and has an eject button, a busy LED, and a manual eject hole. The front bezel also contains a bus node ID plug. Figure 2-1 shows the front panel of the RRD43 compact disc drive.

**Figure 2-1 RRD43 Compact Disc Drive Front Panel**



MLO-012795

Table 2-1 lists and describes the controls and indicators on the RRD43 front panel.

**Table 2-1 RRD43 Controls and Indicators**

| <b>Control/Indicator</b>            | <b>Description</b>   |
|-------------------------------------|--|
| Bus node ID plug                    | Identifies the bus node ID number (unit number) of the drive to the system.                            |
| Manual eject hole                   | Use the manual eject hole to manually eject the disc tray if a power failure occurs (see Section 2.4). |
| Eject button                        | Press this button to eject the disc tray from the RRD43.   |
| Busy LED                            | This LED turns on when data is read from the disc. It flashes during seek operations.                  |
| Disc tray                           | Holds the compact disc.  |
| Volume control and headphone socket | Not used.  |

## 2.2 Inserting a Compact Disc into the RRD43 Disc Drive

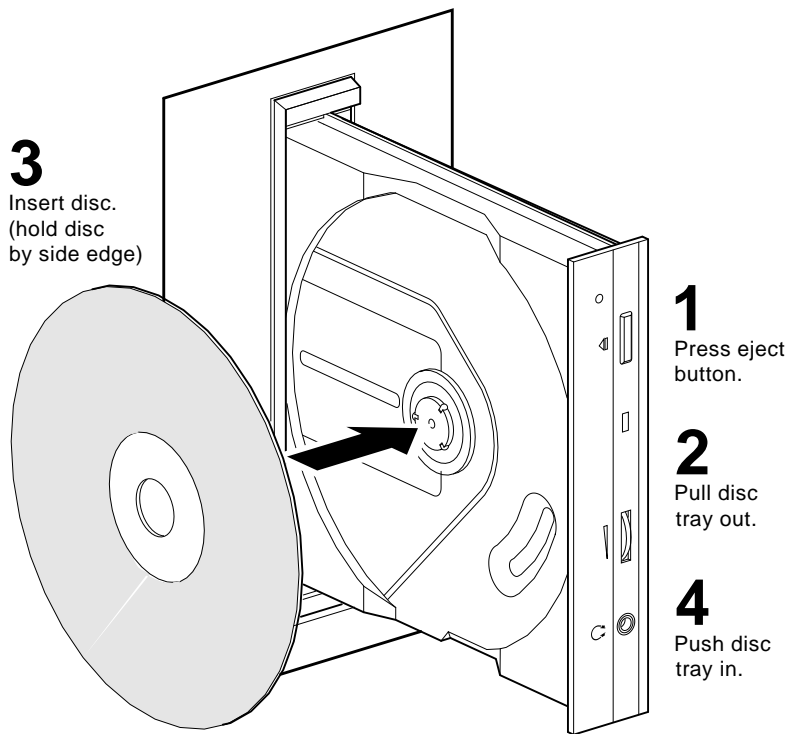
To insert a disc in the RRD43, see Figure 2-2 and follow these steps.

1. Press the eject button inward to release the disc tray.
2. The tray will eject part way out; pull the tray out manually to its full extension
3. Pick up the disc by the edges; taking care not to touch the bottom (unlabelled) side of the disc with any part of your hand or fingers (hold by the side edge and push into place in the disc tray). Insert the disc into the tray with the disc label facing to the left.
4. Push the disc tray back into the RRD43 until it is completely inserted and latched.

The busy LED stays on for a few seconds. When the busy LED goes off, the RRD43 can receive commands and you can read data from the compact disc.

If the disc is upside-down, not properly inserted in the tray, or if other conditions prevent the RRD43 from reading the disc, the busy LED will blink, then stay on steadily.

**Figure 2-2 Inserting a Disc in the RRD43**



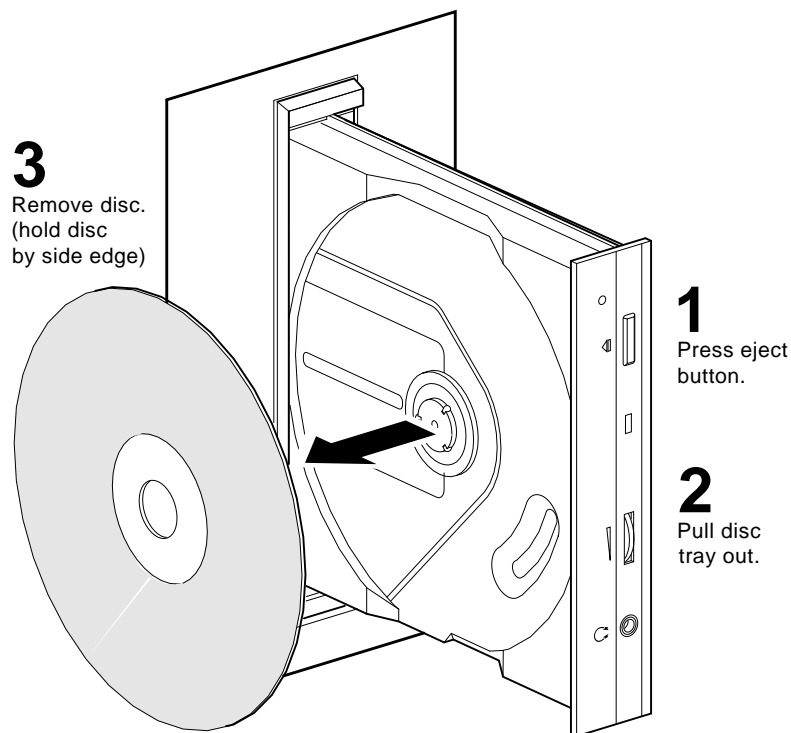
MLO-012730

## 2.3 Removing the Disc from the RRD43

To remove a disc from the RRD43, see Figure 2–3 and follow these steps.

1. Press the eject button inward to release the disc tray.
2. The tray will eject part way out; pull the tray out manually to its full extension.
3. Remove the disc from the tray; pick up the disc by the edges, taking care not to touch the bottom (unlabelled) side of the disc with any part of your hand or fingers (hold by the side edge and remove from the disc tray).
4. Push the disc tray back into the RRD43 until it is completely inserted and latched.

Figure 2–3 Removing a Disc from the RRD43



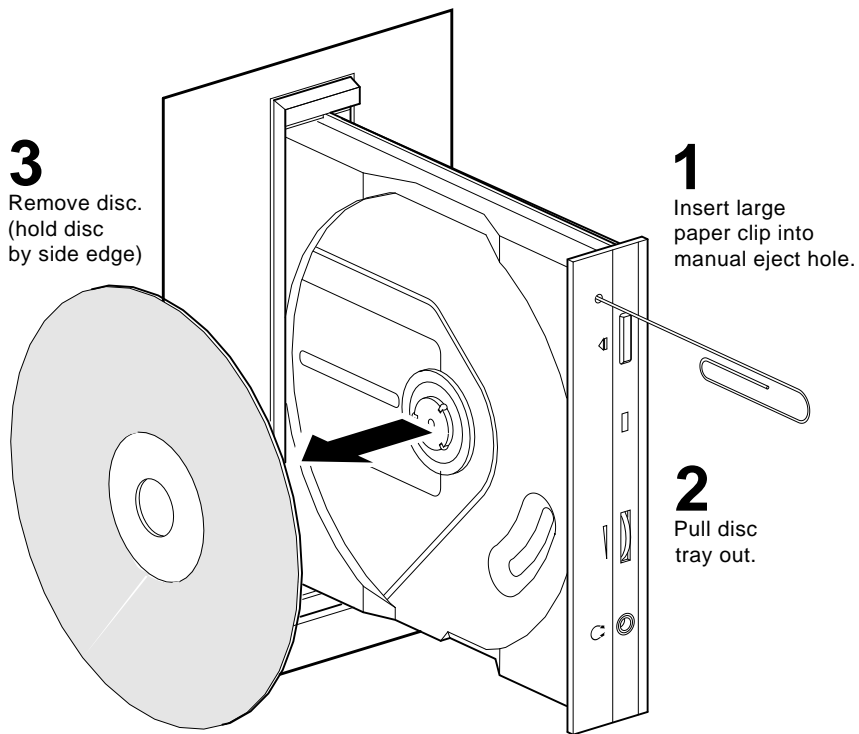
MLO-012791

## 2.4 Removing a Disc Manually

To remove a disc manually from the RRD43, in the event of a power failure for example, set the on/off switch on the system unit to the off (O) position then see Figure 2-4 and follow these steps:

1. Insert a straightened large paper clip or metal rod, 1.2 millimeters (mm) (0.047 inches) in diameter and not less than 35 mm (1.38 in.) long, into the emergency eject hole and push the clip or rod in until the disc tray disengages.
2. Pull the tray out manually to its full extension.
3. Remove the disc from the tray; pick up the disc by the edges, taking care not to touch the bottom (unlabelled) side of the disc with any part of your hand or fingers (hold by the side edge and remove from the disc tray).
4. Push the disc tray back into the RRD43 until it is completely inserted and latched.

**Figure 2-4 Removing a Disc Manually**



MLO-012792



---

# Index

## B

---

Bus node ID plug, 2-3  
Busy LED, 2-3

## C

---

Compact disc drive, 1-1  
Compact discs, 1-1  
    inserting into RRD43, 2-4  
    removing from RRD43, 2-6  
    removing manually, 2-7  
Controls, 2-1

## H

---

Headphone socket, 2-3

## I

---

Indicators, 2-1  
Inserting compact discs, 2-4

## M

---

Manual eject hole, 2-3  
Manually removing a compact disc, 2-7

## R

---

Removing compact disc, 2-6  
RRD43  
    compact disc drive, 1-1

## S

---

Specifications, 1-1

## V

---

Volume control, 2-3



## How to Order Additional Documentation

---

### Technical Support

If you need help deciding which documentation best meets your needs, call 800-DIGITAL (800-344-4825) and press 2 for technical assistance.

### Electronic Orders

If you wish to place an order through your account at the Electronic Store, dial 800-234-1998, using a modem set to 2400- or 9600-baud. You must be using a VT terminal or terminal emulator set at 8 bits, no parity. If you need assistance using the Electronic Store, call 800-DIGITAL (800-344-4825) and ask for an Electronic Store specialist.

### Telephone and Direct Mail Orders

| <b>From</b>   | <b>Call</b>  | <b>Write</b>  |
|---|--|---|
| U.S.A.  | DECdirect<br>Phone: 800-DIGITAL<br>(800-344-4825)<br>Fax: (603) 884-5597 | Digital Equipment Corporation<br>P.O. Box CS2008<br>Nashua, NH 03061  |
| Puerto Rico   | Phone: (809) 781-0505<br>Fax: (809) 749-8377                             | Digital Equipment Caribbean, Inc.<br>3 Digital Plaza, 1st Street<br>Suite 200<br>Metro Office Park<br>San Juan, Puerto Rico 00920 |
| Canada  | Phone: 800-267-6215<br>Fax: (613) 592-1946                               | Digital Equipment of Canada Ltd.<br>100 Herzberg Road<br>Kanata, Ontario, Canada K2K 2A6<br>Attn: DECdirect Sales                 |
| International   | -----  | Local Digital subsidiary or<br>approved distributor   |
| Internal Orders <sup>1</sup><br>(for software<br>documentation) | DTN: 264-3030<br>(603) 884-3030<br>Fax: (603) 884-3960                   | U.S. Software Supply Business<br>Digital Equipment Corporation<br>10 Cotton Road<br>Nashua, NH 03063-1260                         |
| Internal Orders<br>(for hardware<br>documentation)              | DTN: 264-3030<br>(603) 884-3030<br>Fax: (603) 884-3960                   | U.S. Software Supply Business<br>Digital Equipment Corporation<br>10 Cotton Road<br>Nashua, NH 03063-1260                         |

---

<sup>1</sup>Call to request an Internal Software Order Form (EN-01740-07).



## Reader's Comments

RRD43 CD-ROM Disc Drive  
Operation Information  
for BA400-Based  
VAX 4000 Systems  
EK-RRDDD-IN. A01

Your comments and suggestions help us improve the quality of our publications.

Thank you for your assistance.

| <b>I rate this manual's:</b>               | Excellent                | Good                     | Fair                     | Poor                     |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Accuracy (product works as manual says)    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Completeness (enough information)          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Clarity (easy to understand)               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Organization (structure of subject matter) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Figures (useful)                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Examples (useful)                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Index (ability to find topic)              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Page layout (easy to find information)     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

I would like to see more/less \_\_\_\_\_

What I like best about this manual is \_\_\_\_\_

What I like least about this manual is \_\_\_\_\_

I found the following errors in this manual:

| Page  | Description |
|-------|-------------|
| _____ | _____       |
| _____ | _____       |
| _____ | _____       |

Additional comments or suggestions to improve this manual:

For software manuals, please indicate which version of the software you are using: \_\_\_\_\_

Name/Title \_\_\_\_\_ Dept. \_\_\_\_\_

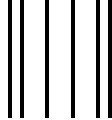
Company \_\_\_\_\_ Date \_\_\_\_\_

Mailing Address \_\_\_\_\_

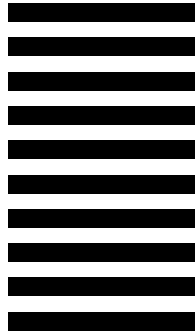
Phone \_\_\_\_\_

Do Not Tear - Fold Here and Tape

**digital**™



No Postage  
Necessary  
If Mailed  
in the  
United States



**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 33 MAYNARD MASS.

POSTAGE WILL BE PAID BY ADDRESSEE

DIGITAL EQUIPMENT CORPORATION  
Information Design and Consulting  
MRO2-2/D14  
2 RESULTS WAY  
MARLBORO, MA 01752-9840



Do Not Tear - Fold Here