

# Alpha AXP™ Systems

---

## Firmware Release Notes Overview

Order Number: AA-PW8YG-TE

**Digital Equipment Corporation  
Maynard, Massachusetts**

---

**First Printing, January 1994**

Digital Equipment Corporation makes no representations that the use of its products in the manner described in this publication will not infringe on existing or future patent rights, nor do the descriptions contained in this publication imply the granting of licenses to make, use, or sell equipment or software in accordance with the description.

Possession, use, or copying of the software described in this publication is authorized only pursuant to a valid written license from Digital or an authorized sublicensor.

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: Alpha AXP, AXP, Bookreader, DEC, DECchip, DECpc, DECwindows, DEC VET, Digital, InfoServer, OpenVMS, RRD42, RZ, TURBOchannel, ULTRIX, VAX, VAX DOCUMENT, the AXP logo, and the DIGITAL logo.

OSF/1 is a registered trademark of Open Software Foundation, Inc. PostScript is a registered trademark of Adobe Systems, Inc. Windows NT is a trademark of Microsoft, Inc.

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

**FCC NOTICE:** The equipment described in this manual generates, uses, and may emit radio frequency energy. 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 when operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user at his own expense may be required to take measures to correct the interference.

S2511

This document was prepared using VAX DOCUMENT Version 2.1.

---

# Contents

<b>Preface</b> .....	v
<b>1 Firmware Release Notes Overview</b>	
1.1 Purpose of Console Firmware .....	1-2
1.2 Importance of Following the Update Procedures .....	1-2
1.3 General Prerequisites .....	1-2
1.4 Prerequisites for Alpha AXP Systems .....	1-3
1.5 CD-ROM Contents .....	1-3
1.6 Printing a Document from a VMS Disk .....	1-5
1.7 Printing a Document from an ULTRIX or DEC OSF/1 AXP System Disk .....	1-5
1.8 Printing a Document from a Windows NT System Disk .....	1-6
1.9 Document File Names .....	1-6
1.10 DEC Verifier and Exerciser Tool (DEC VET) .....	1-7
1.11 Inserting and Removing the Update Utility Disc .....	1-8
1.11.1 Loading Caddy and Inserting Disc .....	1-8
1.11.2 Removing Disc Caddy .....	1-10
1.11.3 Removing Disc Caddy Manually .....	1-10
<b>Figures</b>	
1-1 Opening the Compact Disc Caddy .....	1-9
1-2 Pressing the RRD42 Eject Button .....	1-10

## Tables

1	DEC 2000 Model 300/500 AXP and DECpc AXP/150 .....	vii
2	DEC 3000 Model 300/300L AXP .....	vii
3	DEC 3000 Model 300X/300LX AXP .....	vii
4	DEC 3000 Model 400/400S AXP and Model 500/500S/500X AXP .....	viii
5	DEC 3000 Model 600/600S AXP and 800/800S AXP .....	viii
6	DEC 4000 Model 6x0 AXP .....	viii
7	DEC 4000 Model 7x0 AXP .....	viii
8	DEC 7000 Model 6x0 AXP and DEC 10000 Model 6x0 AXP .....	viii
9	Ordering Information .....	ix
1-1	DEC VET Documents .....	1-7

---

# Preface

## Purpose of This Guide

This guide is intended for managers of the following systems and/or TURBOchannel options:

- DEC 2000 Model 300/500 AXP
- DECpc AXP/150
- DEC 3000 Model 300/300L/300X/300LX AXP
- DEC 3000 Model 400/400S/600/600S AXP
- DEC 3000 Model 500/500S/500X/800/800S AXP
- DEC 4000 Model 6x0/7x0 AXP
- DEC 7000 Model 6x0 AXP
- DEC 10000 Model 6x0 AXP
- TURBOchannel options: PMAF-AA, PMAGB-BA, PMAZB-AA, PMAZC-AA

---

### Note

---

The x in the model number for the DEC 4000 AXP, DEC 7000 AXP, and DEC 10000 AXP indicates the number of CPUs in the system. x = 1-6 CPUs.

---

This guide describes how to update the system's or option's firmware using the loadable Firmware Update Utility.

See Section 1.10 for information on DEC VET.

## Conventions

The following conventions are used in this guide:

Convention	Description
<b>RZ2x</b>	RZ2x refers to any of the RZ-series fixed disk drives, including the RZ24L, RZ25, and RZ26.
<b>Return</b>	A key name in a box indicates that you press a named key on the keyboard.
<b>Ctrl/x</b>	A sequence such as <b>Ctrl/x</b> indicates that you must hold down the key labeled Ctrl while you press another key.
<code>show config</code>	This typeface denotes commands and command output. Commands are not case-sensitive except where specifically indicated.
<i>italics</i>	Italicized letters indicate a variable value that you must provide. For example,  >>> set variable <b>Return</b>
<b>Caution</b>	Cautions provide information to prevent damage to equipment or software.
<b>Warning</b>	Warnings contain information to prevent personal injury.

## Firmware and Operating System Revisions

---

### Note

---

Systems that have shipped recently may have firmware revisions at a higher level than is in this kit. The higher level firmware revisions support the revisions of the operating systems that are currently shipping. Some files on the CD-ROM are from previous firmware releases. Systems should not be loaded with older firmware than is presently installed.

---

---

### Note

---

The system firmware on this CD has a unique revision and is independent of the revision of this firmware kit.

---

The following tables show the compatibility between the firmware revisions and revisions of OpenVMS AXP and DEC OSF/1 AXP.

**Table 1 DEC 2000 Model 300/500 AXP and DECpc AXP/150**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP	Windows NT
1.1	1.5-1H1	Not supported	3.1
1.2	1.5-1H1	1.3B	3.1

**Table 2 DEC 3000 Model 300/300L AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
2.4	1.5	1.2A, 1.3
3.0	1.5-1H1, 1.5	1.3, 1.3A, 1.3B
3.2	1.5-1H1, 1.5	1.3, 1.3A, 1.3B, 2.0

**Table 3 DEC 3000 Model 300X/300LX AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
3.2	1.5-1H1	1.3B, 2.0

**Table 4 DEC 3000 Model 400/400S AXP and Model 500/500S/500X AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
2.4	1.5	1.2, 1.3
3.0	1.5-1H1, 1, 5	1.3, 1.3A, 1.3B
3.2	1.5-1H1, 1.5	1.3, 1.3A, 1.3B, 2.0

**Table 5 DEC 3000 Model 600/600S AXP and 800/800S AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
3.0	1.5-1H1	1.3A, 1.3B
3.2	1.5-1H1	1.3A, 1.3B, 2.0

**Table 6 DEC 4000 Model 6x0 AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
3.0	1.5	1.2
3.1	1.5	1.3
3.2	1.5	1, 1.3, 1.3A, 1.3B, 3B
3.3	1.5	1.3, 1.3A, 1.3B, 2.0

**Table 7 DEC 4000 Model 7x0 AXP**

Firmware Rev	OpenVMS AXP	DEC OSF/1 AXP
3.2	1.5	1.3A, 1.3B
3.3	1.5	1.3, 1.3A, 1.3B, 2.0

**Table 8 DEC 7000 Model 6x0 AXP and DEC 10000 Model 6x0 AXP**

Firmware Rev	LFU	OpenVMS AXP	DEC OSF/1 AXP
3.0	V08	1.5	1.3, 1.3A, 1.3B
3.1	V09	1.5	1.3, 1.3A, 1.3B, 2.0

1

<sup>1</sup>The x in the model number 6x0 indicates the number of CPUs in the system (x = 1-6 CPUs).

## Alpha AXP System Firmware Update Utility (CD Revision V2.7)

The Alpha AXP system firmware update kit comes on a CD-ROM. Table 9 lists the order numbers and kit contents of the update utility.

**Table 9 Ordering Information**

<b>Item</b>	<b>Order No.</b>	<b>Part No.</b>	<b>Media Rev.</b>
External Firmware Kit	QZ-003AA-E8.2.7		
Internal Firmware Kit	QZ-003AA-F8.2.7		
Release Notes		AA-PW8YG-TE	
CD-ROM		AG-PTMWJ-BE	2.7
License Letter		AV-PYW4B-TE	

## Associated Documentation

These firmware release notes do not describe how to use the console firmware commands nor do they list their error codes. You can find information about these subjects in the associated documentation listed in the following table.

Title	Part Number
<i>DEC 2000 Model 300 AXP Customer Hardware Information Kit</i>	QZ-00E8A-GZ
<i>DEC 2000 Model 300 AXP Maintenance Information Kit</i>	QZ-00EAB-GZ
<i>DEC 2000 Model 500 AXP Customer Hardware Information Kit</i>	QZ-00J8A-GZ
<i>DEC 2000 Model 500 AXP Maintenance Information Kit</i>	QZ-00JAA-GZ
<i>DEC 3000 Model 300/300L AXP Installation Card</i>	EK-PELHW-IC
<i>DEC 3000 Model 300/300L AXP Hardware Reference Guide</i>	EK-PELCN-OG
<i>DEC 3000 Model 300/300L AXP Service Guide</i>	EK-PELCN-SV
<i>DEC 3000 Model 400/400S AXP Owner's Guide</i>	EK-SNDPR-OG
<i>DEC 3000 Model 400/400S AXP Service Information</i>	EK-SNDPR-SV
<i>DEC 3000 Model 500/500S AXP Owner's Guide</i>	EK-FLAMI-OG
<i>DEC 3000 Model 500/500S AXP Pocket Service Information</i>	EK-FLAMI-SV
<i>DEC 3000 Model 500X AXP Owner's Guide</i>	EK-D5AXP-OG
<i>DEC 3000 Model 500X AXP Pocket Service Information</i>	EK-HOTPI-SV
<i>DEC 3000 Model 600/600S AXP and Model 800/800S AXP Service Information</i>	EK-FLSPC-SV
<i>DEC 3000 Model 600/600S AXP Owner's Guide</i>	EK-SNDPL-OG
<i>DEC 3000 Model 800/800S AXP Owner's Guide</i>	EK-FLMUL-OG
<i>DEC 4000 AXP Model 6x0/7x0 Owner's Guide</i>	EK-KN430-OP
<i>DEC 4000 AXP Model 6x0/7x0 Technical Manual</i>	EK-KN430-TM
<i>DEC 4000 AXP Model 6x0/7x0 Service Guide</i>	EK-KN430-SV
<i>DEC 7000 AXP, VAX 7000 Operations Manual</i>	EK-7000B-OP
<i>DEC 7000 AXP, VAX 7000 System Service Manual</i>	EK-7002B-SV
<i>DEC 7000 AXP, VAX 7000 Console Reference Manual</i>	EK-70C0B-TM
<i>DEC 10000 AXP, VAX 10000 Operations Manual</i>	EK-1000B-OP
<i>DEC 10000 AXP, VAX 10000 System Service Manual</i>	EK-1002A-SV
<i>DEC Verifier and Exerciser Tool Installation and Release Notes</i>	Refer to Table 1-1
<i>DEC Verifier and Exerciser User's Guide</i>	Refer to Table 1-1

---

## Firmware Release Notes Overview

This document covers the following topics:

- Purpose of console firmware
- Importance of following the update procedure
- General prerequisites
- Prerequisites for Alpha AXP systems
- CD-ROM contents
- VMS instructions for copying a document from the CD-ROM
- ULTRIX and DEC OSF/1 AXP instructions for copying a document from the CD-ROM
- DEC VET information
- Inserting and removing the compact disc

Digital Equipment Corporation produces a new Firmware Update Utility whenever the operating system is updated, or as required. This utility provides updated firmware for the flash memory for the following systems:

- DEC 2000 Model 300/500 AXP
- DECpc AXP/150
- DEC 3000 Model 300/300L/300X/300LX AXP, Model 400/400S/600/600S AXP, and Model 500/500S/500X/800/800S AXP
- DEC 4000 Model 6x0/7x0 AXP
- DEC 7000 Model 6x0 AXP
- DEC 10000 Model 6x0 AXP

These release notes describe how to configure and update firmware for the DEC 2000 AXP, DECpc AXP, DEC 3000 AXP, DEC 4000 AXP, DEC 7000 AXP, and DEC 10000 AXP systems.

Use the Firmware Update Utility to perform firmware upgrades to the DEC 2000 AXP and DECpc AXP, the DEC 3000 AXP workstation/server, the DEC 4000 AXP server, the DEC 7000 AXP server, and the DEC 10000 AXP server. The utility is a bootable image that can be booted from the CD-ROM. The utility maps in the required ROM address space to update the ROM(s).

The Update Utility updates the DEC 2000 AXP and DECpc, DEC 3000 AXP, DEC 4000 AXP, DEC 7000 AXP, and the DEC 10000 AXP system firmware. It does not update any other CPU ROMs on the system.

## 1.1 Purpose of Console Firmware

The console firmware provides a number of basic functions on your system, including the console program, diagnostic testing capabilities, and operating system bootstrap. The Firmware Update Utility lets you update your system with new firmware whenever it is available from Digital Equipment Corporation.

For information on using the console firmware, refer to the Associated Documentation listed in the preface.

## 1.2 Importance of Following the Update Procedures

---

### Caution

---

It is important that you follow the steps for updating the system firmware carefully. If you do not perform the update procedure correctly, you may render your system inoperable.

---

## 1.3 General Prerequisites

Before updating your firmware with the Firmware Update Utility, you should:

1. Already have your Firmware Update Utility compact disc.
2. Print out a copy of your system release notes. Then follow the instructions in Section 1.6 or Section 1.7.
3. Use the shutdown procedures outlined in your operating system documentation to shut down the operating system.
4. Halt the system to display the console prompt (>>>). (See your Owner's Guide for more information on halting the system.)
5. Have the Owner's Guide for your Alpha AXP system available.

## 1.4 Prerequisites for Alpha AXP Systems

To use the Firmware Update Utility on your Alpha AXP system, you must have one of the following:

- RRD42 compact disc drive installed in your Alpha AXP system.
- Access to a remote boot device.
- An RRD42 in an expansion box connected to your external SCSI port.

---

### Note

---

At present the Firmware Update Utility will not boot if the compact disc drive is connected to the DEC 3000 Model 300 AXP series via a PMAZC-AA option. You must use a PMAZB-AA option or connect your compact disc drive directly to the DEC 3000 Model 300 AXP series SCSI bus.

---

---

### Note

---

The InfoServer firmware is required to be at a minimum revision of 2.2 for booting the compact disc on the InfoServer.

---

## 1.5 CD-ROM Contents

In addition to the following files listed below for this release, there are also files on the CD-ROM from previous firmware releases. Systems should not be loaded with older firmware than is presently installed.

- [DOC]AXP\_V27\_FW\_UPD.PS (A PostScript file containing these release notes)
- [DOC]AXP\_V27\_FW\_UPD.TXT (An ASCII file containing these release notes)
- [DOC]DEC2000\_V12\_FW\_RELNOTE.PS
- [DOC]DEC2000\_V12\_FW\_RELNOTE.TXT
- [DOC]DEC3000\_V32\_FW\_RELNOTE.PS
- [DOC]DEC3000\_V32\_FW\_RELNOTE.TXT
- [DOC]DEC4000\_V33\_FW\_RELNOTE.PS

- [DOC]DEC4000\_V33\_FW\_RELNOTE.TXT
- [DOC]DEC7000\_V09\_FW\_RELNOTE.PS
- [DOC]DEC7000\_V09\_FW\_RELNOTE.TXT
- [DEC2000]M300\_V1\_2.EXE
- [DEC3000]M300\_V3\_2.EXE
- [DEC3000]M400\_V3\_2.EXE
- [DEC3000]M500\_V3\_2.EXE
- [DEC3000]M300\_V3\_2.SYS
- [DEC3000]M400\_V3\_2.SYS
- [DEC3000]M500\_V3\_2.SYS
- [DEC3000]M300\_V3\_2.BTP
- [DEC3000]M400\_V3\_2.BTP
- [DEC3000]M500\_V3\_2.BTP
- [TURBOCHANNEL]TC\_V1\_2.EXE
- [TURBOCHANNEL]TC\_V1\_2.SYS
- [TURBOCHANNEL]TC\_V1\_2.BTP
- [DEC4000]CFW\_V33\_EV4P3.EXE
- [DEC4000]CFW\_V33\_EV4P3.SYS
- [DEC7000]AXP7000\_V09.EXE
- [DEC7000]AXP7000\_V09.SYS
- [DEC10000]AXP7000\_V09.EXE
- [DEC10000]AXP7000\_V09.SYS
- [DECVET]VETAXP011.A
- [DECVET]DECVET\_RELNOTES.PS
- [DECVET]DECVET\_RELNOTES.DOC
- [DECVET]DECVET\_RELNOTES.DECW\$BOOK
- [DECVET]DECVET\_USERS\_GUIDE.PS
- [DECVET]DECVET\_USERS\_GUIDE.DECW\$BOOK

## 1.6 Printing a Document from a VMS Disk

If you have an VMS system and a connected CD-ROM drive, print the document you need from the CD-ROM as follows:

1. Log into the VMS system that has the CD-ROM drive connected.
2. Place the Firmware Update Utility CD-ROM into the drive.
3. Enter the following command, where DKA400: is the physical device name of the source drive that holds the firmware media:

```
$ MOUNT DKA400:[UPDATE]
```

4. To copy a document to your system disk, enter the following command, where *filename* is the document title. See Section 1.9 for specific titles.

```
$ COPY DKA400:[DOC]<filename> <filename>
```

5. Print the document you copied.
6. Dismount the firmware media by entering the following command:

```
$ DISMOUNT DKA400:
```

## 1.7 Printing a Document from an ULTRIX or DEC OSF/1 AXP System Disk

If you have an ULTRIX or DEC OSF/1 AXP system and a connected CD-ROM drive, print the document you need from the CD-ROM as follows:

1. Log in to the ULTRIX or DEC OSF/1 AXP system that has the CD-ROM drive connected.
2. Place the Firmware Update Utility CD-ROM into the drive.
3. Enter the following command, where rz4c is the physical device name of the source drive that holds the firmware media:

```
# mount -rt cdfs -o noversion /dev/rz4c /mnt
```

4. To copy a document to your system disk, enter the following command, where *filename* is the document title. See Section 1.9 for specific titles.

```
# cp "/mnt/CDROM/DOC/<filename>" <filename>
```

5. Print the document you copied.

6. Dismount the firmware media by entering the following command:

```
# umount /mnt
```

## 1.8 Printing a Document from a Windows NT System Disk

1. Place the Firmware Update Utility CD-ROM in to the drive.
2. From the file manager, select first the CDROM subdirectory and then the DOC subdirectory.
3. Print the release notes from the desired system.

## 1.9 Document File Names

This section contains the file names for the following documents in both PostScript and ASCII format. The files are located in the DOC subdirectory.

- AXP\_V27\_FW\_UPD.PS (A PostScript file containing these release notes)
- AXP\_V27\_FW\_UPD.TXT (An ASCII file containing these release notes)
- DEC2000\_V12\_FW\_RELNOTE.PS
- DEC2000\_V12\_FW\_RELNOTE.TXT
- DEC3000\_V32\_FW\_RELNOTE.PS
- DEC3000\_V32\_FW\_RELNOTE.TXT
- DEC4000\_V33\_FW\_RELNOTE.PS
- DEC4000\_V33\_FW\_RELNOTE.TXT
- DEC7000\_V09\_FW\_RELNOTE.PS
- DEC7000\_V09\_FW\_RELNOTE.TXT

---

**Note**

The DEC3000\_V32\_FW\_RELNOTE.PS and .TXT files are required for updating your TURBOchannel options.

---

## 1.10 DEC Verifier and Exerciser Tool (DEC VET)

The DEC Verifier and Exerciser Tool (DEC VET) is a state-of-the-art Installation Verification Procedure (IVP) and system exerciser. DEC VET provides a set of generic exercisers designed to ensure the proper installation of the hardware and base operating system software.

The DEC VET tool provides users with both a graphics and a command interface. The Graphics User Interface (GUI) is DECwindows Motif. DECwindows Motif must be installed on your system before you install DEC VET.

The DEC VET V1.1 kit contained on this media is for the OpenVMS AXP operating system V1.5. The DEC VET kit and the documentation for the DEC OSF/1 AXP operating system are included with the release of DEC OSF/1 AXP. For information on the DEC VET OpenVMS AXP kit and installation, refer to the DEC VET release notes. For information on using DEC VET, refer to the DEC VET User's Guide. Both documents are available on the CD-ROM. Refer to Table 1-1.

**Table 1-1 DEC VET Documents**

<b>File</b>	<b>Format</b>
Decvet_Relnotes.ps <sup>1</sup>	PostScript
Decvet_Relnotes.doc <sup>1</sup>	ASCII text
Decvet_Relnotes.Decw\$book <sup>1</sup>	DECwindows Bookreader
Decvet_Users_Guide.ps <sup>1</sup>	PostScript
Decvet_Users_Guide.Decw\$book <sup>1</sup>	DECwindows Bookreader

<sup>1</sup>File is in directory [DECVET]

---

### Note

---

You do not need to run DEC VET in order to upgrade the firmware.

---

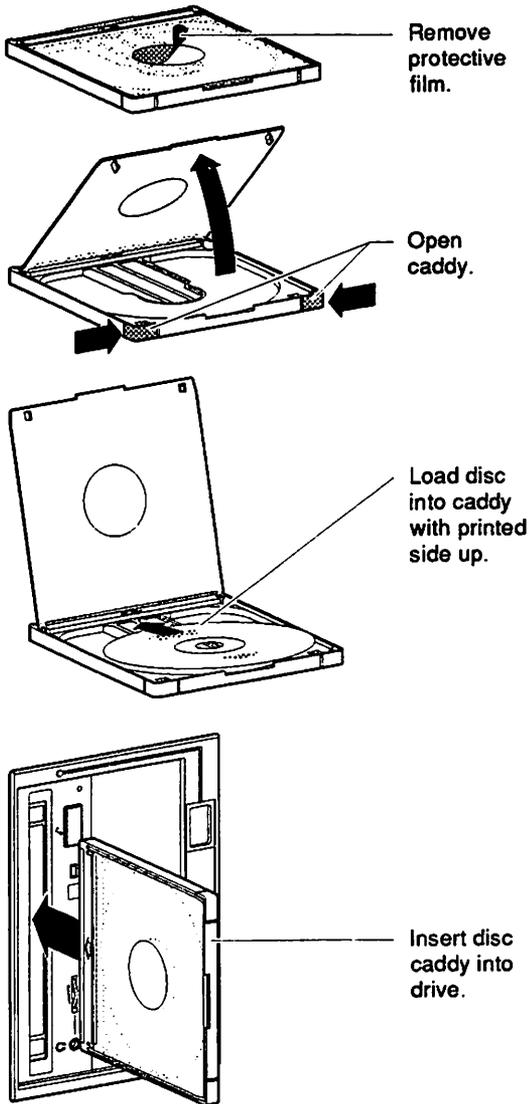
## **1.11 Inserting and Removing the Update Utility Disc**

This section explains how to insert and remove the Update Utility disc.

### **1.11.1 Loading Caddy and Inserting Disc**

Before using the compact disc to update your firmware, load the Firmware Update Utility disc into a caddy. Then insert the disc caddy into the RRD42 drive, as shown in Figure 1-1.

**Figure 1-1 Opening the Compact Disc Caddy**

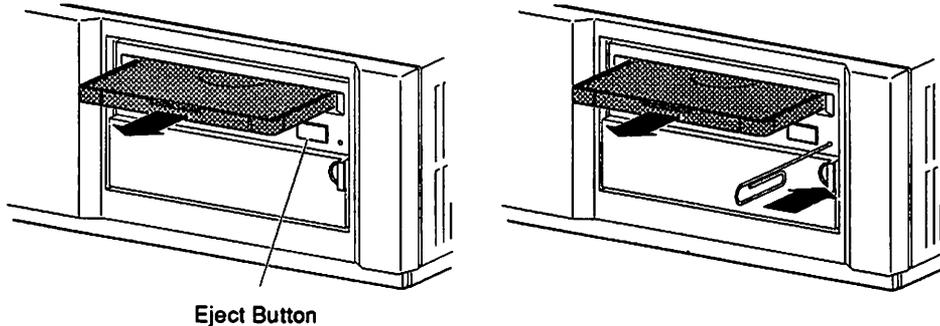


MLO-010127

## 1.11.2 Removing Disc Caddy

When you have updated the firmware, remove the Firmware Update Utility disc caddy by pressing the drive eject button, shown in Figure 1-2.

Figure 1-2 Pressing the RRD42 Eject Button



MLO-010126

## 1.11.3 Removing Disc Caddy Manually

If the eject button does not work, you must remove the caddy manually, as follows:

1. Turn the system off (O).
2. Insert the end of a large paper clip into the manual eject hole, as shown in Figure 1-2, and push until the disc emerges from the drive.

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

---

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