




# Sun StorEdge™ DVD 10X Installation and User's Guide

---



**Sun Microsystems, Inc.**  
901 San Antonio Road  
Palo Alto, CA 94303-4900 USA  
650 960-1300 Fax 650 969-9131

Part No.: 806-5518-10  
Revision A, August 2000





Copyright 2000 Sun Microsystems, Inc. 901 San Antonio Road • Palo Alto, CA94303-4900 USA. All rights reserved.

This product or document is protected by copyright and distributed under licenses restricting its use, copying, distribution, and decompilation. No part of this product or document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any. Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of this product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd. For Netscape Communicator™, the following notice applies: Copyright 1995 Netscape Communications Corporation. All rights reserved.

Sun, Sun Microsystems, the Sun logo, StorEdge, AnswerBook2, docs.sun.com, SunVTS, SunDiag, and Solaris are trademarks, registered trademarks, or service marks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPENLOOK and Sun™ Graphical User Interfaces was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

RESTRICTED RIGHTS: Use, duplication, or disclosure by the U.S. Government is subject to restrictions of FAR 52.227-14(g)(2)(6/87) and FAR 52.227-19(6/87), or DFARS 252.227-7015(b)(6/95) and DFAR 227.7202-3(a).

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

---

Copyright 2000 Sun Microsystems, Inc., 901 San Antonio Road • Palo Alto, CA 94303-4900 Etats-Unis. Tous droits réservés.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a. Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX® est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd. La notice suivante est applicable à Netscape Communicator™ : Copyright 1995 Netscape Communications Corporation. All rights reserved.

Sun, Sun Microsystems, the Sun logo, StorEdge, AnswerBook2, docs.sun.com, SunVTS, SunDiag et Solaris sont des marques de fabrique ou des marques déposées, ou marques de service, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques Sparc sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK® et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

CETTE PUBLICATION EST FOURNIE "EN L'ETAT" ET AUCUNE GARANTIE, EXPRESSE OU IMPLICITE, N'EST ACCORDEE, Y COMPRIS DES GARANTIES CONCERNANT LA VALEUR MARCHANDE, L'APTITUDE DE LA PUBLICATION A REPENDRE A UNE UTILISATION PARTICULIERE, OU LE FAIT QU'ELLE NE SOIT PAS CONTREFAISANTE DE PRODUIT DE TIERS. CE DENI DE GARANTIE NE S'APPLIQUERAIT PAS, DANS LA MESURE OU IL SERAIT TENU JURIDIQUEMENT NUL ET NON AVENU.



## Safety Agency Compliance Statements

Read this section before beginning any procedure. The following text provides safety precautions to follow when installing a Sun Microsystems product.

## Safety Precautions

For your protection, observe the following safety precautions when setting up your equipment:

- Follow all cautions and instructions marked on the equipment.
- Ensure that the voltage and frequency of your power source match the voltage and frequency inscribed on the equipment's electrical rating label.
- Never push objects of any kind through openings in the equipment. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electric shock, or damage to your equipment.

## Symbols

The following symbols may appear in this book:



**Caution** - There is risk of personal injury and equipment damage. Follow the instructions.



**Caution** - Hot surface. Avoid contact. Surfaces are hot and may cause personal injury if touched.



**Caution** - Hazardous voltages are present. To reduce the risk of electric shock and danger to personal health, follow the instructions.



**On** - Applies AC power to the system.

Depending on the type of power switch your device has, one of the following symbols may be used:



**Off** - Removes AC power from the system.



**Standby** - The On/Standby switch is in the *standby* position.

## Modifications to Equipment

Do not make mechanical or electrical modifications to the equipment. Sun Microsystems is not responsible for regulatory compliance of a modified Sun product.

## Placement of a Sun Product



**Caution** - Do not block or cover the openings of your Sun product. Never place a Sun product near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of your Sun product.

## SELV Compliance

Safety status of I/O connections comply to SELV requirements.

## Power Cord Connection



**Caution** - Sun products are designed to work with single-phase power systems having a grounded neutral conductor. To reduce the risk of electric shock, do not plug Sun products into any other type of power system. Contact your facilities manager or a qualified electrician if you are not sure what type of power is supplied to your building.



**Caution** - Not all power cords have the same current ratings. Household extension cords do not have overload protection and are not meant for use with computer systems. Do not use household extension cords with your Sun product.




**Caution** - Your Sun product is shipped with a grounding type (three-wire) power cord. To reduce the risk of electric shock, always plug the cord into a grounded power outlet.

The following caution applies only to devices with a **Standby** power switch:



**Caution** - The power switch of this product functions as a standby type device only. The power cord serves as the primary disconnect device for the system. Be sure to plug the power cord into a grounded power outlet that is nearby the system and is readily accessible. Do not connect the power cord when the power supply has been removed from the system chassis.



## System Unit Cover

You must remove the cover of your Sun computer system unit in order to add cards, memory, or internal storage devices. Be sure to replace the top cover before powering up your computer system.



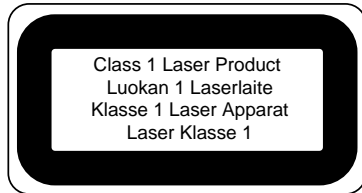
---

**Caution** – Do not operate Sun products without the top cover in place. Failure to take this precaution may result in personal injury and system damage.

---

## Laser Compliance Notice

Sun products that use laser technology comply with Class 1 laser requirements.



## DVD-ROM/CD-ROM



---

**Caution** – Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

---

# *Sun StorEdge DVD 10X*

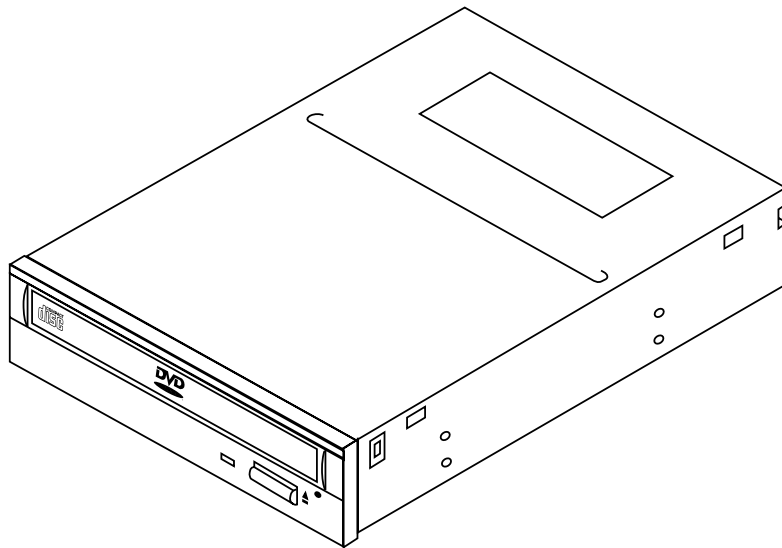
## *Drive Installation and User's Guide*

---

The Sun StorEdge™ DVD 10X DVD-ROM drive is a 10X (DVD maximum)/40X (CD maximum) read-only random access DVD-ROM device. It operates on the industry standard SCSI-2 interface. The DVD-ROM drive uses standard 4.76-inch (120-millimeter) DVD or CD media.

The StorEdge DVD 10X drive can run in five different modes:

1. CD-audio: 4-5.7X when audio is played
2. CD-RW: 8.6-20X for applications or data transfer
3. CD-ROM, CD-R: 17.2-40X for applications or data transfer
4. DVD-ROM/DVD-R: 4.1-10X for applications or data transfer



**FIGURE 1** Sun StorEdge™ DVD 10X Drive



DVD & CD data can be in any of the following formats:

- Red-Book (audio)
- Yellow-Book
- CD-ROM
- CD-DA
- CD-(E)G
- CD-MIDI
- CD-TEXT
- CD-XA
- CD-I Bridge (Photo-CD, Video CD)
- CD-I
- CD-R (read)
- CD-RW (read)
- Multisession (Photo-CD, CD-Extra, CD-R, CD-RW)
- DVD-R
- DVD-ROM

---

## Installing Your DVD-ROM Drive

Refer to the documentation that came with your enclosure or system. Locate the sections about installing, replacing, and using a DVD-ROM drive and follow the instructions.

Refer to the *Answerbook* that corresponds to your operating system for software tasks related to your drive installation. The handbook describes how to shut down the system before installation and how to configure the system after installing your DVD-ROM drive.

Read all necessary documentation before installing your new DVD-ROM drive.

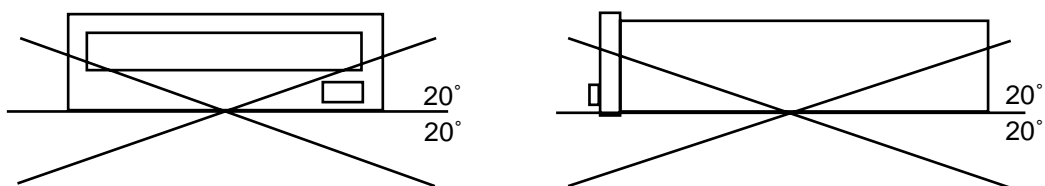
## Installation Conditions

When mounting the DVD-ROM drive, certain horizontal and vertical limits must be maintained or read errors may increase. Mount the drive within 20° of the horizontal positions and 10° of the vertical positions. See Figure 2 for details.

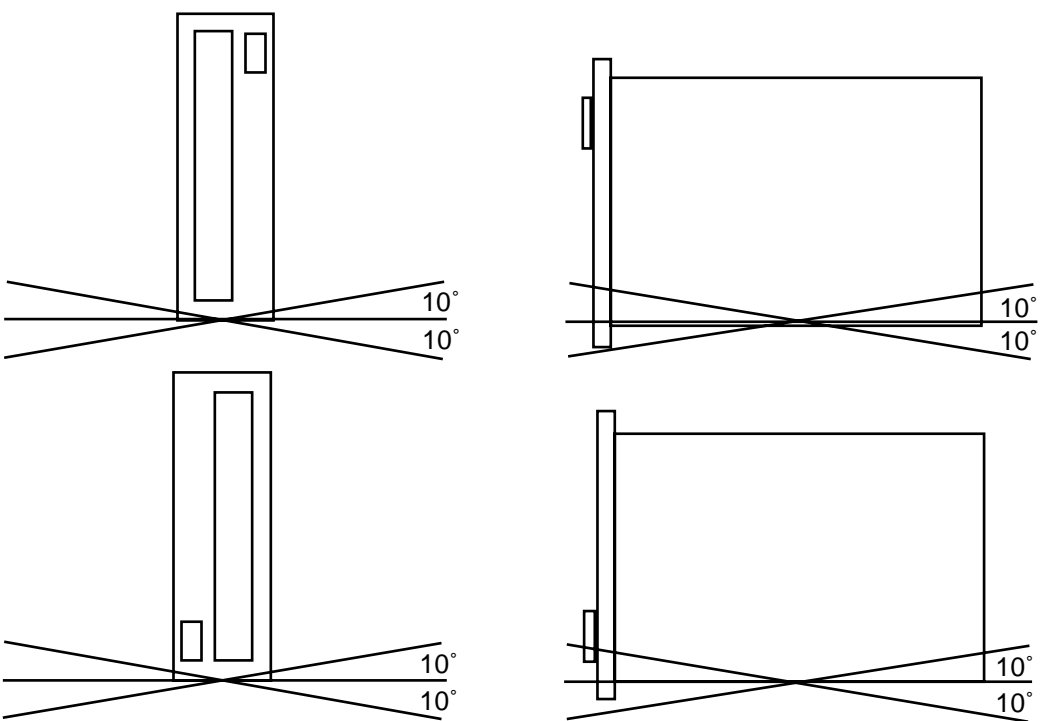
---

**Note** — When operating the unit vertically, and under the angle represented by the dotted lines in Figure 2, unbalanced media (greater than 1.0g-cm) may cause an audible hum to occur. This is considered normal operation.

---



Horizontal positioning



Vertical positioning

**FIGURE 2** Drive Mounting Limitations

## Setting the SCSI Target ID

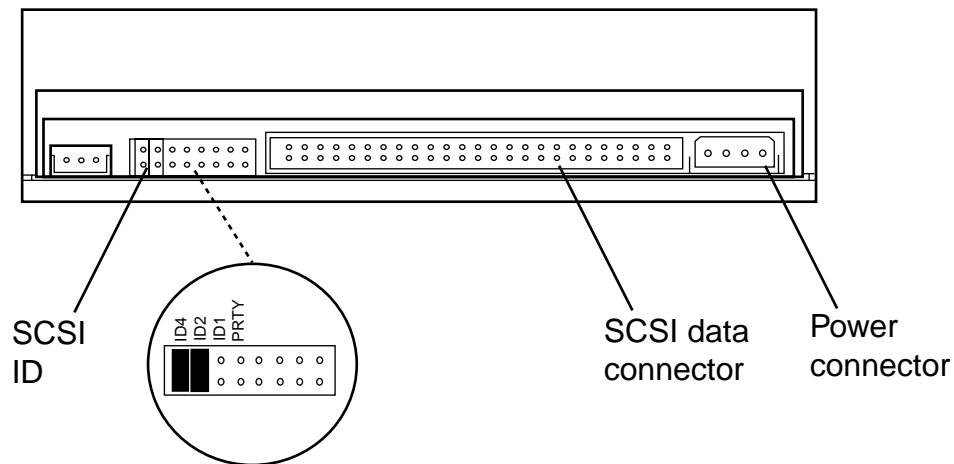
Your DVD-ROM device is factory set to SCSI target ID 6. You can also set the SCSI ID on a drive that is installed into a device using a target ID selector switch with a flex cable.

▼ To set the SCSI ID for use with a target ID selector switch and flex cable

1. **Remove the jumpers (if installed) from ID1, ID2, and ID4.**
2. **Connect the flex cable from the target ID switch on the rear panel of the enclosure to the ID jumpers on the DVD-ROM drive.**
3. **Set the target ID selector switch on the enclosure to 6.**

▼ To set the SCSI ID without a target ID selector switch

- Set the jumpers to SCSI target ID 6 by installing jumpers ID4 and ID2 as in Figure 3.



**FIGURE 3** StorEdge DVD 10X Drive — Rear View





---

## Cleaning

If your StorEdge DVD 10X drive cannot read a media, the cause can be a dirty disc. Follow these guidelines to clean a disc:

- Use a soft, clean, lint-free, *dry* cloth.
- Clean the *non-labeled* side of the disc.
- Wipe the disc *radially* from the center to the outside.
- Use professional cleaning kits.



---

**Caution** – Do not use solvents such as benzene, paint thinner, antistatic aerosol spray, or abrasive cleaners to clean compact discs.

---

---

## Handling and Storing Media

Follow these guidelines when handling and storing media:

- Handle discs only by their edges; avoid touching disc surfaces.
- Do not write on discs with permanent marking pens.
- Do not use discs in high-dust environments.
- Keep discs out of direct sunlight, extreme sources of heat or cold, and away from dust and moisture.
- Make sure discs are at room temperature before using them.
- Store discs in storage boxes so that they remain clean and free of dust.

---

## Inserting a Media into the Drive

▼ To insert a media into the drive.

1. **After the system is powered on, push the eject button to open the drive tray.**  
You may need to unmount the disc before manually ejecting it. You can also eject the disc by using software commands. Refer to the peripherals handbook that corresponds to your operating system.
2. **Place the disc (label side up) into the tray.**  
Ensure that the disc is properly set into the recessed area of the tray under tabs.
3. **Close the tray by pushing the front of it slightly or by pushing the eject button.**

---

## Drive Status

The front panel LED provides drive status that is dependent on the rate of indicator flashes. After the tray is closed, the LED blinks at 0.8-second intervals and then will indicate one of the statuses listed in Table 1.

---

**TABLE 1** LED Status Descriptions

---

LED Indicator	Description
Turned off	Drive is in data read/standby mode or no disc is mounted
Flashing at 1.6-second intervals	Audio CD is playing
Flashing at different intervals	Data access and transfer
Continuously on	Drive electronics or media has a problem that may require drive or media replacement

---

**Note** — If the drive remains inactive for approximately 32 minutes, the spindle motor stops, and the LED turns off. When the drive receives another command, the spindle motor starts and the LED automatically lights.

---



---

## Performance Specifications

The StorEdge DVD 10X operates at speeds of 4.1-10X for DVD and 17.2-40X for CD. Refer to Table 2 for more details.

---

**TABLE 2** Performance Specifications

---

	<b>DVD (4.1-10X)</b>	<b>CD (17.2-40X)</b>
<b>Rotational,</b>	5,800rpm	8,500rpm
<b>Data Transfer</b>	5,540-13,500KBytes/s	2,595-6,000KBytes/s (mode 1) 2,959-6,843KBytes/s (mode 2)
<b>Access Time (Random)</b>	95ms	80ms

---

**Note** — When the StorEdge DVD 10X drive runs at 40X speed (CD-ROM), the noise level will increase. This is a normal occurrence.

---

The StorEdge DVD 10X drive can run in four different modes:

- CD-audio: 4-5.7X when audio is played
- CD-RW: 8.6-20X for applications or data transfer
- CD-ROM: 17.2-40X for applications or data transfer
- DVD: 4.1-10X for applications or data transfer



## Environmental Specifications

**TABLE 3** Environmental Specifications

### Temperature

Operating	5 to 50°C, 10°C/hour (max) gradient
Nonoperating	-10 to +60°C

### Relative Humidity

Operating	8% - 80% (wet bulb temperature of 27°C max)
Nonoperating	5% - 95%

### Vibration

Operating	5 - 500 Hz 2.45m/s <sup>2</sup> (0.25g) (no resonance point) (0-P)
Nonoperating	5 - 10 Hz 5mm(P-P), 10 - 500 Hz 9.8m/s <sup>2</sup> (1g) (0-P)
Shipping	10 - 25 Hz 9.8m/s <sup>2</sup> (1g) (0-P)

### Altitude

Operating	0 - 3,000m
Shipping	0 - 12,000m

## Physical Characteristics

**TABLE 4** Physical Characteristics

Height	41.5 mm (1.63 inch)
Width	146 mm (5.75 inch)
Depth	193 mm (7.48 inches) excluding bezel
Weight	0.95 kg (net) (2.09 lbs)

## Power Requirements

**TABLE 5** Power Requirements

Operational	+5 VDC ±5%
	+12 VDC ±5%