

TOSHIBA
Storage Device Division

**DVD-RAM
DRIVE**

SD-W2002
Installation Instructions
with VOB InstantWrite
and
CyberLink PowerDVD™ Software



VERSION 3.0
JANUARY 2002

Limited Warranty

Toshiba America Information Systems, Inc.

Storage Device Division

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1-949-457-0777

What does my limited warranty cover?

Toshiba America Information Systems, Inc. (“Toshiba”) warrants the Toshiba Storage Product (“Product”) you have purchased from Toshiba or from a Toshiba authorized dealer is free from defects in materials or workmanship under normal use during the warranty period.

This limited warranty extends only to the original purchaser and cannot be transferred to anyone. This limited warranty applies only to Products that are in cartons which are unopened on the date of purchase. During the warranty period, Toshiba will, at its option, repair or replace defective parts with new parts or with reconditioned parts. Reconditioned parts will be equivalent or superior in performance to new parts. Either your sales receipt or proof of purchase is required to receive warranty service.

How long is my limited warranty coverage?

Product	Free parts, labor
2.5" Hard Disk Drives	3 years
1.8" Hard Disk Drives	1 year
DVD-ROM Drives	1 year
DVD-ROM/CD-RW Combo Drives	1 year
DVD-RAM Drives	1 year

Where is this limited warranty valid?

This limited warranty is valid only within the United States and Puerto Rico.

What is not covered by this limited warranty?

- Damage caused by improper installation or improper connection to a peripheral (printer, etc.)
- Damage caused by an external electrical fault or an accident
- Damage caused by accident, misuse, abuse, neglect or improper maintenance
- Damage from use outside usage or storage parameters set forth in the product User’s Guide
- Damage from use of parts not manufactured or sold by Toshiba
- Damage to or loss of any programs, data or removable storage media, or costs of recovering such programs or data
- Software or data loss that may occur during repair or replacement
- Product purchased from anyone other than Toshiba or a Toshiba authorized dealer
- Product purchased outside the United States and Puerto Rico
- Modifications to product not approved in writing by Toshiba
- Service made necessary by use of incompatible third party products
- Routine cleaning, or normal cosmetic and mechanical wear
- Damage or loss during transit to Authorized Service Partner

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How do I obtain warranty service?

In order to obtain warranty service, please contact Toshiba’s authorized service center.

Details on contacting Toshiba’s authorized service center can be found at

www.sdd.toshiba.com.

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Protection of Stored Data

For your important data, please make periodic back-up copies of all the data stored on the hard disk or other storage devices as a precaution against possible failures, alteration, or loss of the data. IF YOUR DATA IS ALTERED OR LOST DUE TO ANY TROUBLE, FAILURE OR MALFUNCTION OF THE HARD DISK DRIVE OR OTHER STORAGE DEVICES AND THE DATA CANNOT BE RECOVERED, TOSHIBA SHALL NOT BE LIABLE FOR ANY DAMAGE OR LOSS OF DATA, OR ANY OTHER DAMAGE RESULTING THEREFROM. WHEN COPYING OR TRANSFERRING YOUR DATA, PLEASE BE SURE TO CONFIRM WHETHER THE DATA HAS BEEN SUCCESSFULLY COPIED OR TRANSFERRED. TOSHIBA DISCLAIMS ANY LIABILITY FOR THE FAILURE TO COPY OR TRANSFER THE DATA CORRECTLY.

Critical Applications

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LASER CAUTION

This appliance contains a laser system and is classified as a "CLASS 1 LASER PRODUCT". To use this model properly, read this Owner's Manual carefully and keep this manual for future reference. In case of any trouble with this model, please contact your nearest "Authorized Repair Center". *To prevent direct exposure to the laser beam, do not try to open the enclosure.*

CAUTION!

- REFLECTIVE OBJECTS SHOULD NOT BE PLACED IN THE DISK SLOT DUE TO POSSIBLE HAZARDOUS RADIATION EXPOSURE.
- USE OF CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN SPECIFIED IN THIS MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.



<i>Version</i>	<i>Date Published</i>	<i>Revised Contents</i>
01	November 2000	Initial release
02	December 2000	Add Warning/Notice Info
03	January 2002	TAEC to TAIS

Congratulations on your purchase of a Toshiba DVD-RAM drive and Kit. The following information will help you in the simple installation of your new DVD-RAM drive.

CHECKING YOUR KIT PACKAGING

Please unpack your DVD-RAM kit, and assure that you have the following items:

- Toshiba SD-W2002 DVD-RAM Drive
- Blank Media - Single Sided/Type 1 DVD-RAM
- CyberLink PowerDVD™ Software
- VOB InstantWrite Software CD
- DVD-RAM Installation Instructions (this manual)
- Quick Start Guide
- Mounting screws (4)
- IDE BUS cable
- DVD/CD sound cable

Additional items you may need that are not included in the kit are:

- Phillips Screwdriver
- Mounting hardware (i.e. some computer systems use mounting rails).

SYSTEM REQUIREMENTS

The DVD-RAM kit requires the following:

- ✓ At least 55MB of free hard disk space
- ✓ At least 32MB of RAM
- ✓ *Pentium II processor at 266MHz or higher or...
*Celeron 300A processor or higher or...
*K6-2 processor at 300MHz or higher
- ✓ Display card supporting DirectDraw
- ✓ 16-bit or better sound card
- ✓ Microsoft™ Windows 95 or higher
- ✓ Amplified stereo speakers

* These requirements are only required if you are using the CyberLink PowerDVD™ software. The SD-W2002 DVD-RAM will work as a CD-ROM and DVD-RAM when using a lower speed Pentium system.

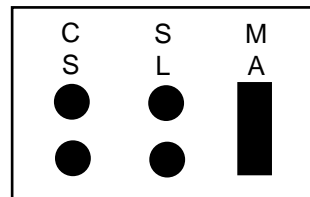
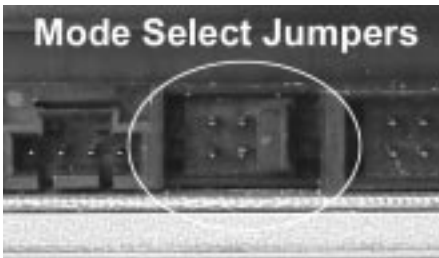
The following steps must be performed to properly install your DVD-RAM.

- Set drive's jumpers
- Connect audio cable
- Attach IDE BUS cable
- Connect power cable
- Mount DVD-RAM
- Install CyberLink PowerDVD™ software (used for viewing DVD movies)
- Install VOB InstantWritesoftware (used for recording CDs)

SETTING JUMPERS

The mode select jumpers are six (6) straight angle pins located on the rear of the DVD-RAM. By placing a jumper on the pins, you can select the following functions:

- CS: – Drive is configured using host interface signal CSEL
- SL: – Configures drive as Slave
- MA: – Configures drive as Master (default mode)



Mode Select Jumpers

In most installations, jumper should remain in MA (Master) position (factory default). It is recommended that you install your DVD-RAM only on the secondary IDE BUS. If you are installing on primary IDE BUS, your hard drive would then be the Master, and you should set your DVD-RAM to the Slave position (SL).

PLACING DVD-RAM INSIDE YOUR COMPUTER

Now that you have set your drive's jumpers, you are ready to install your DVD-RAM inside your computer.

👉 IMPORTANT: Disconnect power from your computer system before beginning installation.

1. Remove computer cover and faceplate if required (refer to your computer system's manual for removal information).
2. If the DVD-RAM is replacing a CD-ROM, disconnect all connectors and remove the CD-ROM presently installed in your system.
3. Your Toshiba DVD-RAM can be placed in any free half-height drive slot at the front of your computer. (It can be mounted horizontally or vertically.)
4. Carefully start sliding the DVD-RAM into the opening with the disc tray facing the front of the computer. Before you push the drive all the way in you will need to connect the IDE BUS cable, audio cable and the power cable to the back of the drive.

CONNECTING CABLES



Cable Locations on Rear of DVD-RAM

IDE BUS (Data) Cable - Most computer system have a primary and secondary IDE BUS cable already installed (an IDE BUS cable is include with your kit if your system does not have a secondary IDE BUS cable).

If you are replacing a CD-ROM: connect the DVD-RAM drive using the BUS cable that the CD-ROM was connected to. Insure that the jumper setting of the DVD-RAM is the same as the CD-ROM drive you are replacing.

If the DVD-RAM is not replacing a CD-ROM and/or is in addition to a CD-ROM: locate the secondary IDE BUS cable in your system. If your system does not have a secondary IDE BUS cable installed, you will need to install the IDE BUS cable that was included with your kit.

Installing secondary IDE BUS cable: locate the secondary IDE BUS connector on your system's motherboard (refer to your system's documentation for location). Connect one end of the IDE BUS cable to motherboard, assuring that it is keyed properly and that cable's colored edge is aligned with Pin 1. Connect secondary IDE BUS cable to DVD-RAM drive, assuring that pin 1 of the

cable (side with red stripe) is connected to pin 1 on the drive.

- *If the DVD-RAM is the only drive connected on the secondary IDE BUS cable:* connect drive to the last set of pins on IDE BUS cable.
- *If there is a device (i.e. CD-ROM) connected to the secondary IDE BUS cable:* connect DVD-RAM to the open middle connector. The DVD-RAM drive should then be jumpered to SL (slave) position.

If the DVD-RAM is to be the slave on the Primary BUS: connect the DVD-RAM to the open connector on the primary IDE BUS cable. *The DVD-RAM drive should be jumpered to the SL (slave) position. Note: the primary IDE BUS cable, in most cases, will be connected to your hard drive. The hard drive will be the Master on the primary BUS.*

Power Cable - Inside your computer system, locate an unused power supply cable. Connect the power cable to the power socket at the back of the DVD-RAM. One side of the plug has chamfered edges, so the power connector fits only one way so be sure to insert the DC power plug in the correct direction. Push plug completely into the socket making sure the plug fits correctly.

Audio Cable - Connecting your DVD-RAM to your sound card allows you to play audio CDs on your computer (speakers or headphones are also needed).

If the DVD-RAM is in addition to a CD-ROM: If you choose to have both a CD-ROM and DVD-RAM installed in your system, in most circumstances, only one audio cable can be used (there are some sound cards that will allow you to have two audio connections). You must decide which device you would like to hear audio from and connect the audio cable from the sound card to the CD-ROM or DVD-RAM (DVD audio is transmitted through the data cable, not the audio cable).

If the DVD-RAM is to be the only CD-ROM device in your system:

- *If replacing a CD-ROM that had an audio cable connection:* connect DVD-RAM drive to the audio cable that the CD-ROM was connected. Cable connects to the analog audio connector at the left rear of the DVD-RAM (see Cable Location photo on page 3 for location).
- *If you do not have an audio cable presently in your system:* connect the DVD-RAM using the audio cable that was included with this kit. Connect one end to your sound card and the other end to the analog audio connector at the left rear of the DVD-RAM (see Cable Location photo on page 3 for location). Refer to the instructions which came with your sound card for details on any sound-driver software required.

COMPLETING INSTALLATION

After you have connected all the necessary cables, push the DVD-RAM completely into the computer's drive slot. Mount the drive per your computer's instructions using the screws included in your kit. If you are using other screws, assure that the screw length does not exceed $3\pm 0.5\text{mm}$ (measured from outside surface of side or bottom of DVD-RAM to tip of screw). Replace the computer cover and all outer screws.

ATAPI CD/DVD Software Driver:

Toshiba's DVD-RAM drives do not require any unique device drivers for Windows '95/'98/2000/NT. After installing your drive and re-booting, your system should recognize your drive. Win '95/'98/2000/NT operating systems support all Toshiba ATAPI CD-RW, CD-ROM, DVD-ROM and DVD-RAM drives natively.

VOB InstantWrite Software:

VOB's InstantWrite software is used to record DVDs with your new DVD-RAM drive. Before installing VOB Software it is recommended that you visit VOB's website to check for any software updates (www.vobinc.com). To install software insert the installation CD into your newly installed DVD-RAM. If "Autorun" is enabled on your system, the Installation window will appear automatically. If it does not appear, go to Windows Start menu, select "Run" and type `d:\setup.exe` (substitute the appropriate letter of your DVD-RAM drive for `d`). From the Installation window select *Instant Write* and follow the installation instructions that appear on your screen. For additional information on this software, please refer to the documentation found on the VOB "Instant Write" CD.

VOB InstantBackup Software:

VOB's InstantBackup allows you to backup your valuable data to CD/DVD. Backup of selected files and folders or the complete hard drive is possible. Supports both incremental and random write-strategies.

CyberLink PowerDVD™:

CyberLink PowerDVD™ is a high-quality, pure-software DVD player that brings high-quality movies and karaoke into your multimedia PC. You can playback high resolution DVD titles or MPEG-2 files with superb MPEG-2 video and Dolby AC-3 audio quality.

Before installing CyberLink software it is recommended that you visit CyberLink's website to check for any software updates (www.gocyberlink.com). To install, insert CyberLink PowerDVD™ into your newly installed DVD-RAM. Go to Windows Start menu, select "Run" and type `d:\setup.exe` (substitute the appropriate letter of your DVD-RAM drive for `d`). Follow the installation instructions on screen. For additional information on using this software, please refer to the PowerDVD™ Help file (if you have opened PowerDVD™ software, click "?").

DVD-RAM FRONT PANEL

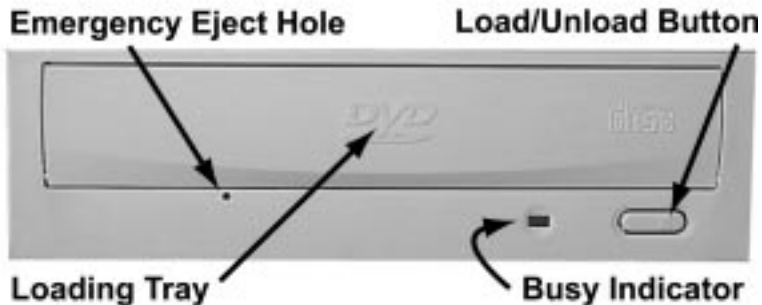
The photo below illustrates the following features of the SD-W2002 DVD-RAM's front panel:

Emergency Eject Hole: The emergency eject hole is to be used only when the DVD tray will not open when the Load/Unload button is pressed. Insert solid bar (i.e. paper clip) into hole, applying gentle pressure, until tray opens. Do not use Emergency Eject Procedure while the drive is in operation.

Loading Tray: Load disc using tray or recording cartridge

Load/Unload Button: Used to open the disc tray so you can install or remove a disc or recording cartridge.

Busy Indicator: Provides status of drive.



DVD-RAM BACK PANEL

The photo below illustrates the following features of the SD-W2002 DVD-RAM's back panel:

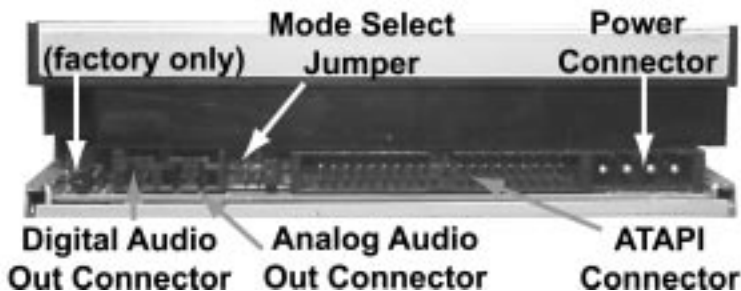
Digital Audio Out Connector: Outputs Digital Audio on the DVD-RAM.

Analog Audio Out Connector: Outputs Analog Audio on the DVD-RAM.

ATAPI Connector: Connects DVD-RAM to computer.

Power Connector: Connects DVD-RAM to power source.

Mode Select Jumper: Selects if drive is to be Master, Slave or Cable Select.



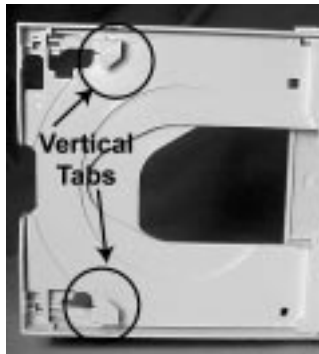
OPERATING THE DVD LOADING TRAY

To open the DVD loading tray, just press the Load/Unload button. After inserting or removing a disc or recording cartridge, press the Load/Unload button again. You must use a DVD-RAM recording cartridge when recording DVD-RAM media.



Vertical Disc Installations

When placing a disc into a DVD-RAM drive that has been mounted vertically, be assured that the disc is installed under the two front tabs.



DVD-RAM MEDIA

After installing the VOB and CyberLink software your system is ready to use. Some important things to remember when using your DVD-RAM Drive:

- Do not insert more than one disc into the drive at a time.
- Do not insert anything other than a CD or DVD disc into drive.
- Use media that is the correct size and shape.
- Use media that meets write/read requirements listed in the Specifications (see page 8)

SPECIFICATIONS

	DVD		CD
DATA CAPACITY	2,048bytes/block		mode 1: 2,048bytes/block mode 2: 2,336bytes/block
ROTATIONAL SPEED (RPM)	DVD-RAM (2.0): 1,380 - 3,300 2,100 - 3,300 DVD-RAM (1.0): 1,080 - 2,400 DVD-ROM (single): 2,400 DVD-ROM (double): 3,800 DVD-R,DVD-RW: 1,100 - 2,800		CD-ROM, CD-R: 5,100 CD-RW: 3,400 Video CD: 900 - 2,000 CD-DA: 1,800 - 4,200
SUSTAINED DATA TRANSFER RATE (kbytes/sec)	DVD-RAM(2.1) 2,704 DVD-RAM (1.0) 1,352 DVD-ROM: 2,812 - 6,760		mode 1: 1,557 - 3600 mode 2: 1775 - 4,140
ACCESS TIME (typ)	DVD-RAM	DVD-ROM	CD-ROM
Avg. Random Access	190ms	120ms	100ms
Avg Random Seek	145ms	100ms	85ms
Avg. Full Stroke	330ms	200ms	180ms
DATA BUFFER	8Mbytes		
POWER SUPPLY	+5v, +12v		
MTBF	100,000 hours		
DIMENSIONS	5.7" x 1.6" x 7.68" (146mm x 41.5mm x 195mm)(W x H x D)		
WEIGHT	2.5lbs (1.15kg)		
MOUNTING ORT.	±10° vertical / ±15° horizontal		
APPLICABLE WRITE/READ DISC	DVD Specifications for rewritable Disc Part 1, Ver 2.1: 4.7Gbyte x 1 & 1.46Gbyte x 1 (one side, there is cartridge/none) 4.7Gbyte x 2 & 1.46Gbyte x 2 (both side, there is cartridge/none) DVD Specifications for rewritable Disc Part 1, Ver 1.0 2.6Gbyte x 1 (one side, there is cartridge/none) 2.6Gbyte x 2 (both side, there is cartridge/none)		
APPLICABLE READ ONLY DISC	DVD-ROM, DVD-R(3.9GB), DVD-RW (4.7GB) CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM-XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW		

TECHNICAL SUPPORT

Technical support can be obtained by calling 949/455-0407 or by sending an email to: toshibadpd@teleplan-ventura.com or visiting our website at: <http://www.sdd.toshiba.com>

REPAIR CENTER

Should your DVD-RAM require maintenance, contact Toshiba SDD's Repair Center. In order to return your DVD-RAM, a Return Authorization Number (RA#) must be obtained from the Repair Center (do not send drive without an authorized RA number.

Phone: 510/651-6798

Fax: 510/623-9893

e-mail: sdd@pcs-sj.com

<http://www.toshiba.com/taisdd/support/repair.shtml>



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