

**HAMMER**  
S T O R A G E

Internal  
16x DVD Writer

hardware and software

**Installation Guide**





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# Warranty information

## One-Year Limited Product Warranty

### Hammer Storage

9700 W 76th Street  
Eden Prairie MN.55344  
www.hammer-storage.com

**(800) 237-0840 (Monday - Friday, 5am – 5pm PST)**

hammersupport@anacomp.com

Hammer Storage warrants that this product and all components thereof will be free of defects in workmanship and materials for a period of one year from the date code from the manufacturer (the "Warranty Period"). This warranty will not apply to repair or replacement necessitated by:

- Any damage caused during shipment except the shipment to the original consumer/purchaser
- Any damage caused by natural acts such as fire, flood, wind, earthquake, lightning or similar disaster
- Damage from use outside the product usage parameters
- Damage from upgrade outside the product upgrade parameters, and unauthorized modifications or incorporation into another product
- Damage caused by improper use, environment, installation or electrical supply, improper maintenance or any misuse, abuse or mishandling
- Damage to or loss of any programs, data or removable storage media

Non-Conforming Products. Upon discovery of any failure of a Hammer Storage product or component thereof, to conform to the above warranty during the Warranty Period, the consumer/purchaser will promptly contact Hammer Storage, at the phone number or email address listed at [www.hammer-storage.com/storage](http://www.hammer-storage.com/storage), and seek a return material authorization ("RMA") number. Each requested RMA number will be issued within three (3) days after the consumer/purchaser requests therefore. The allegedly defective Hammer Storage product or component thereof, will be returned to Hammer Storage securely and properly packaged, freight and insurance prepaid with the RMA number prominently displayed. Hammer Storage will have no obligation to accept any Hammer Storage product that is returned without an RMA number and will not accept any returns from anyone other than the original consumer/purchaser.

Hammer Storage will use diligent efforts to either replace or repair, at its option, within thirty(30) days, any Hammer Storage product or component found to be non-complying and to return such Hammer Storage product or component to the original consumer/purchaser freight and insurance prepaid. In the event that Hammer Storage, in its sole discretion, determines that it is unable to replace or repair the Hammer Storage product or component, it will refund to the original consumer/purchaser the F.O.B. price paid by the consumer/purchaser for such defective Hammer Storage product. The foregoing constitutes the original consumer/purchaser's sole remedy for Hammer Storage's breach of the warranty provided herein.

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Information contained in this document is subject to change without notice.  
Hammer Warranty.

# Safety instructions

Please read through these instructions before operating this unit.

## Notice

- You may not reproduce or transcribe any part of this publication without permission.
- We reserve the right to revise this document at any time without notice.
- If you have any questions about this document, contact your sales representative.

## Safety notice

- To prevent fire or electric shock, do not expose this appliance to rain or moisture.
- To avoid electric shock or damage to the eyes due to laser beam, do not attempt to disassemble the cabinet.

## Laser safety information

### Class 1 laser product

This equipment is certified to comply with DHHS Rule 21 CFR Chapter 1, Subchapter J in effect as of date of manufacture.

Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC)60825-1 and CENELEC EN60825-1 for Class 1 laser products.

Class 1 laser products are not considered to be hazardous. To ensure continued product safety, the following precautions should be heeded. This equipment has the Optical Pickup which has the Dual Lasers (DVD & CD).

### Caution:

- 1 The use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- 2 The drive is designed to be incorporated into a computer-based system or unit which has an enclosing cover. The drive may not be used as a stand-alone unit.
- 3 Do not open the drive unit; no user adjustments or serviceable parts are inside.

CLASS 1 LASER PRODUCT KLASS 1 LASER APPARAT	LASER KLASSE 1 EN60825-1	LUOKAN 1 LASERLAIT E APPAREIL A LASER DE CLASSE 1
<b>CAUTION</b> – CLASS 2M LASER RADIATION WHEN OPEN. DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. <b>VORSICHT</b> – LASERSTRAHLUNG KLASSE 2M, WENN ABDECKUNG GEOFFNET. NICHT IN DEN STRAHL BLICKEN ODER DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN. <b>ADVARSEL</b> – KLASSE 2M LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN – HELLER IKKE MED OPTISKA INSTRUMENTER. <b>ADVARSEL</b> – KLASSE 2M LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER. <b>VARNING</b> – LASERSTRÅLING KLASSE 2M VID ÖPPEN LUCKA. STIRRA INTE IN I STRÅLEN VARKEN DIREKT ELLER GENOM OPTIK. <b>VARO</b> – AVATTAESSA OLET ALTTIINA LUOKAN 2M LASERSÄTEILYLLE. ÄLÄ TUJOTA SÄTEESEEN TAI KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.		
<b>CAUTION</b> – CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. <b>VORSICHT</b> – UNSICHTBARE LASERSTRAHLUNG KLASSE 3B. WENN ABDECKUNG GEOFFNET, NICHT DEN STRAHL AUSSETZEN. <b>ADVARSEL</b> – KLASSE 3B USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING. <b>ADVARSEL</b> – KLASSE 3B USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN. <b>VARNING</b> – OSYNLIG LASERSTRÅLING KLASSE 3B VID ÖPPEN LUCKA. UNDVIK EXPONERING FÖR LASERSTRÅLINGEN. <b>VARO</b> – AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.		
<b>CAUTION</b> – Laser radiation when open. DO NOT STARE INTO BEAM.		
<b>DANGER</b> – Invisibile Laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.		

This label is attached to the upper shield at the top of the drive unit.

# Safety instructions

## Electrostatic discharge notice

Do not insert any foreign objects into the drive unit, since this may result in damage to the drive.

## Specification summary

General performance				
1	Power rating	+5 V $\overline{\text{---}}$ 1.4 A +12 V $\overline{\text{---}}$ 1.1 A		
2	Dimensions: (exclude Front Panel)	Width 146.0 mm	Height 41.3 mm	Depth 190.0 mm
3	Weight	945 g [typical]		
Environmental conditions				
		Operating	Non-operating	
4	Temperature	5 °C ~ 45 °C	-30 °C ~ 60 °C	
5	Humidity	10 %RH ~ 80 %RH Max. wet bulb temp. is 29 °C, Non-condensation	5 %RH ~ 90 %RH Non-condensation	

## Laser Specifications

### Laser specification for DVD media

Type:	Semiconductor laser GaAs / In(GaAl)P
Wave Length:	652 nm ~ 662 nm (Typical 658 nm)
Divergence:	$\theta = 14.5^\circ \sim 19^\circ$ (Typical $17^\circ$ )
Output Power:	Read = 1.0 mW Write = 72 mW

### Laser specification for CD media

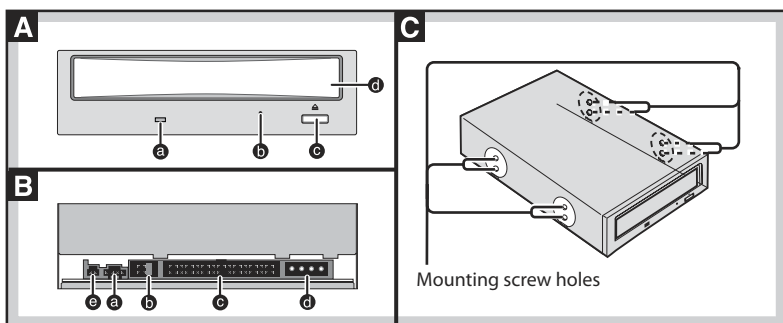
Type:	Semiconductor laser GaAlAs
Wave Length:	780 nm ~ 787 nm (Typical 784 nm)
Divergence:	$\theta = 14.5^\circ \sim 17.5^\circ$ (Typical $16^\circ$ )
Output Power:	Read = 1.5 mW Write = 104 mW

# Package contents

## **In this box:**

- Internal, half-height DVD-RAM Super Multi Drive
- Installation guide and materials
- Ribbon cable, audio cable, screws
- One Panasonic 3X DVD-RAM media
- One Verbatim 16X DVD+R media
- Ulead Digital Media Center software CD:
  - Ulead VideoStudio 8 SE DVD - easily capture and edit video with Hollywood-like special effects
  - Photo Explorer 8.5 SE - transfer, manage, enhance, and share digital photos
  - My Scrapbook 2 - create scrapbook pages, clip art, and titles
  - MovieFactory 3.5 SE Suite Deluxe - make DVD movies, slideshows, and music discs
  - PhotoImpact 10 SE - edit digital images, create graphics, and design Web pages
  - CD & DVD PictureShow 3 SE - turn photos into slideshows with transitions, titles, music, and a DVD menu
  - Ulead DVD Player Software - play DVD movies or slideshows on your computer
  - Ulead Burn.Now - create data and audio discs; also copy discs
  - NovaBACKUP 7.1- conveniently back up your data
  - DVD WorkShop 2 SE trial version - DVD authoring software for creating professional DVDs with multiple audio and subtitle tracks and advanced navigation
  - MediaStudio Pro 7 trial version - a complete professional video editing suite with realtime capture, preview, and output

# Parts and functions



## A Front panel

- a Operation indicator lamp**  
Off: No disc inside  
Steady Green: Disc inserted in the drive, recording, playback or tray opening/closing  
Flashing Green: Error
- b Manual eject hole**  
Used to manually eject the tray in the event it doesn't eject normally using the open/close button or software commands. **Use this procedure as a last resort as it can cause malfunction**
- c Open/close button**  
For opening and closing the tray.
- d Disc tray**

## B Rear panel

- a Audio output connector**  
For connecting the internal audio cable (included).
- b Jumper connector**  
For setting the drive's Master and Slave with Jumper pin.
- c IDE connector**  
For connecting the internal IDE cable (included).
- d Power supply connector**  
For connecting the power cable from computer.
- e Digital audio connector**

## C Side panels

When securing this drive to a computer or other device, secure the drive with the mounting screws (included) into the areas as indicated (either upper or lower holes depending on your system). You can also use the four holes on the bottom to secure the drive.

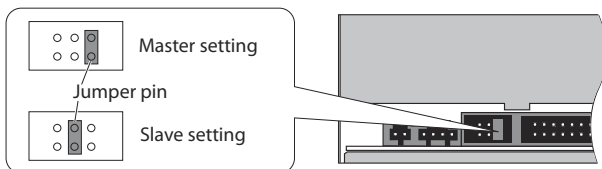
# Installing in a PC

## Before connecting this drive

- Gather all included materials: audio cable, ribbon cable, and 4 screws.
- Be sure to read the operating instructions and operating precautions for the computer into which the drive will be installed.
- Turn off the computer and unplug the power cord from the power socket. (Never connect the drive while the power is on.)
- Do not place the drive where it will be susceptible to vibration or impact or where the surface is tilted.
- Be sure to observe all operating environment restrictions.


## 1 Setting the jumper pin

**This drive is set as a master at the time of shipment.** There is a jumper pin switch on the rear panel of the drive. Set the unit to either master or slave, according to connection environment.



### Caution:

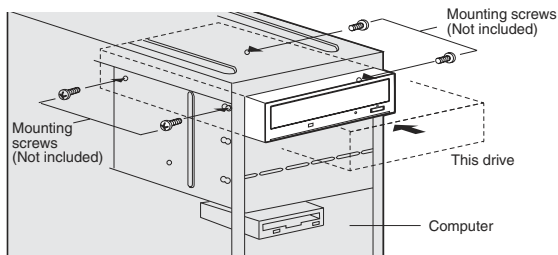
Do not set the jumper pin sideways or in any position other than specified. This can cause the drive to malfunction.

Not allowed (example) 

The diagram shows an incorrect jumper pin setting where the jumper pin is positioned between the two pins, which is not allowed.

## 2 Connecting to a computer

Mounting screw holes are located in eight places on the right and left panels of the drive, and in four places on the bottom panel. When securing the drive in to a computer or other device, secure the drive firmly in place with four mounting screws in four places on the right and left panels, or in four places on the bottom panel.



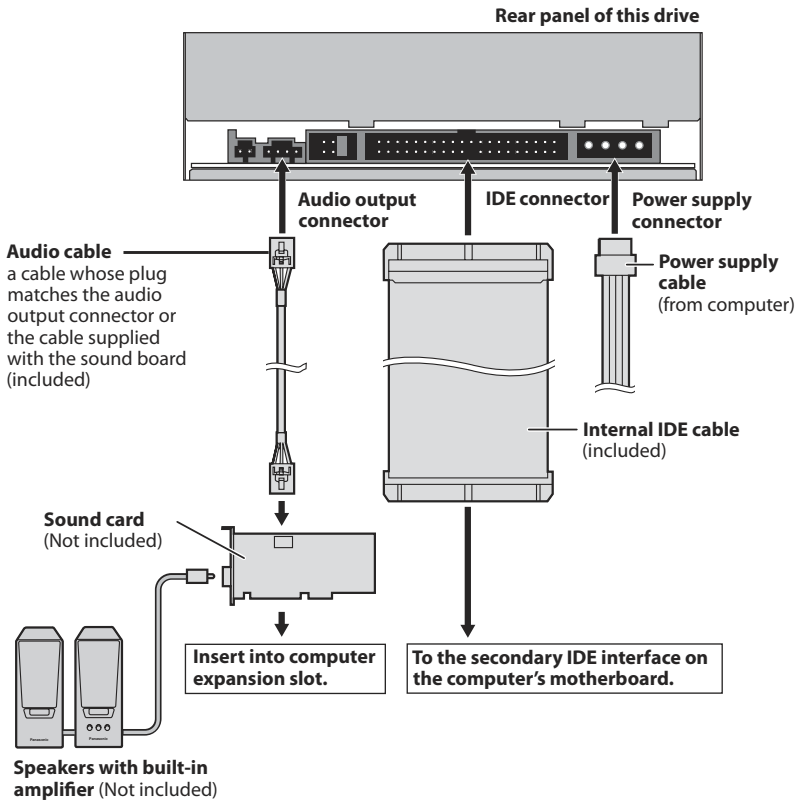
### Note:

Only use the proper screws for this drive. Using screws with a different length or diameter may damage the drive.

# Installing in a PC

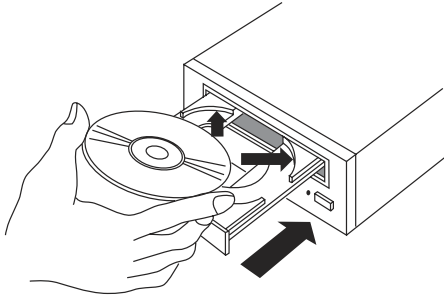
## 3 Connecting the cables

Insert the connection cables firmly.



# Inserting a disc

- 1 Turn on the power supply.
- 2 Press the eject button. The tray opens.
- 3 Place the disc in the tray with the disc's label facing up.
- 4 Press the eject button or press the tray lightly as in the following figure. The tray is retracted automatically.



**Caution:**

- Do not insert any foreign objects into the disc tray. This could result in a malfunction.
- Do not manually force the tray to open.
- When the drive is not in use, keep the tray closed to protect against dust and dirt.
- Do not press down hard on the tray when loading a disc. This may result in damage to or malfunction of the tray.

# DVD-RAM driver software installation

## 1 Driver installation

### Note:

- If packet writing software and UDF file systems other than the software included with this product are installed on the computer in use, please delete them first.
- When installing in Windows 2000/XP, login under a user name assigned to the administrator group.

- 1 **Insert the Ulead disc in the drive**  
The installation program starts automatically.
- 2 **Click [Driver and Formatter Setup] button on the screen**  
The installation program starts automatically.  
– The procedure steps of the rest depends on each OS –

### For Windows XP / Windows Me / Windows 98

- 3 **Click [Next] on the screen “InstallShield Wizard”**  
Follow the on-screen instructions.
- 4 **When the installation complete screen appears, select “Yes, I want to restart my computer now” and then click [Finish]**  
The computer now reboots. You can read from and write to a DVD-RAM disc.

### For Windows 2000

- 3 **Click [Next] on the screen “Install Shield Wizard”**  
Follow the on-screen instructions appears.
- 4 **When the installation complete screen appears, click [Finish]**  
The computer detects the DVD-RAM device.
- 5 **When the “DVD-RAM Devices” or “new devices” installation complete screen appears, click [Yes]**  
The computer now reboots. You can read from and write to a DVD-RAM disc.

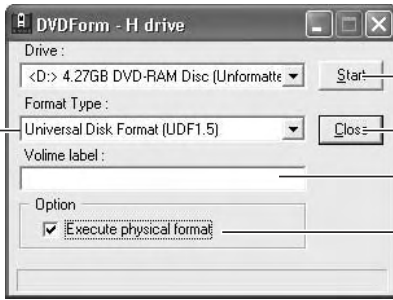
# DVD-RAM disc formatting

## 1 Formatting

You must logically format a DVD-RAM disc before writing files on the disc. Once you have logically formatted a DVD-RAM disc, you can use it to write files just as you would with a floppy disk or hard disk.

Please format a DVD-RAM disc with the formatting software “DVDForm”

- 1 **Insert the DVD-RAM disc you want to format.**
- 2 **Open [My Computer], right click on the icon for the DVD-RAM disc and select [Format].**
- 3 **The following window appears.**



Click to start formatting.

Click to close DVD Form.

Enter a volume name.  
You must input a volume name when you select UDF format. When you do not input one, the volume name is set as “UDF” automatically.

Select this when you want to perform physical formatting.  
(There is no need to do this every time.) This mode forces a check of all sectors for defects and allocates detected defective sectors to the spare area. (Normally formatting with this option takes between 40 and 90 minutes for 4.7 GB/9.4 GB DVD-RAM discs and about 20 minutes for 8 cm DVD-RAM discs.)

- ▼ Select the format type.
  - “Universal Disk Format (UDF 1.5)” when writing PC data.
  - “Universal Disk Format (UDF 2.0)” when writing audio-visual data.

### Notes:

In the case of Windows XP, the DVD-RAM icon may change to a CD-ROM icon after you format a DVD-RAM disc with DVDForm. Use [Refresh] in the [View] menu in Explorer to correct this.

## Compatible discs

Discs and logo mark for reading			Discs and logo mark for writing		
DVD-ROM		DVD-Video *1		DVD-RAM	- Non-cartridge type - Cartridge type (TYPE2 or TYPE4)
CD-ROM		Video-CD *2		DVD-R	
CD-DA (Music CD)		CD-EXTRA		+R	
CD TEXT *2		Photo CD *2		CD-R	
				CD-RW	

- \*1) To play, the region number of the DVD-Video must match that of this drive.
- 2) To play, the special software is necessary.

# Ulead software installation

## System requirements for Ulead software

- Intel® Pentium® III 800MHz, AMD Athlon™ 800MHz, or higher recommended
- Microsoft® Windows® 98SE, 2000, Me or XP
- 256 MB RAM (512 MB or above recommended)
- 2 GB of available hard drive space for program installation
- DirectX® 9.0 driver or above
- Windows® compatible sound card
- Windows® compatible display with at least 800 x 600 resolution (1024 x 768 recommend)
- Windows® compatible mouse or pointing device

## System requirements for video capture

- Intel® Pentium® 4 1.8GHz, AMD Athlon™ 1.7GHz, or higher is required for direct capture and burn from DV to DVD discs
- 5 GB of available hard drive space for video capturing
- 5 GB of available hard drive space for DVD disc burning
- At least one of the following:
  - USB 1.0 and USB 2.0 capture devices and PC cameras
  - IEEE-1394/ FireWire cards for use with DV/D8 camcorders
  - Analog capture card (WDM support)

## System requirements for TV recording

- TV tuner device (TV tuner card or TV tuner USB external device)

## To install Ulead Digital Media Center:

- 1 Insert the Ulead Digital Media Center Installation DVD in your newly installed drive.
- 2 If the Setup program does not start automatically, launch Windows Explorer or open the "My Computer" window. If it does, jump to Step 5 below.
- 3 Double-click on the drive symbol for your new DVD burner.
- 4 Double-click on the icon of the Setup program (setup.exe).
- 5 Follow the instructions on the screen.

## Technical support for Ulead software

[www.ulead.com/tech/techsupport.htm](http://www.ulead.com/tech/techsupport.htm)

## Hammer Storage Product Line



1.8", 2.5" and 3.5" External Hard Drives



External DVD drives



Internal DVD Drives

**HAMMER**  
S T O R A G E

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