TSSG

hp dvd-writer

Technical Support Solutions Guide

for

hp dvd-writer dvd100i

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Customer Satisfaction
CPSS DIVISION · HEWLETT PACKARD

Chapters

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This chapter describes the hp dvd-writer dvd100i internal drive and is organized as follows:

Product History

CD Technology

The first CD technology to be used with computers was CD-ROM, a read-only technology. In the early 1990's CD-R (CD-Recordable) drives became available to consumers for storing data permanently on a disc that could be read by any CD-ROM drive. Now Compact Disc ReWritable, or CD-RW, technology is available to consumers. CD-RW lets users rewrite CDs up to 1,000 times. CD-RW lets users easily store and erase data on CDs for playback on:

- MultiRead-compatible CD-ROM drives
- CD-R drives
- CD-RW drives

DVD Technology

A DVD disc is the same size as a CD, but holds much more data.

A DVD disc holds 4.7 GB per layer, which equals 135 minutes of compressed video. .

The DVD logo is trademarked and owned by the DVD Consortium.

What is MultiRead?

Hewlett-Packard Company played a principal role in the creation of MultiRead technology that makes CD-RW media read-compatible with the spectrum of current drives:

- CD-ROM (Compact Disc-Read Only Memory)
- CD-R (CD-Recordable)
- CD-RW (CD-ReWritable)
- DVD-ROM (Digital Versatile Disc-Read Only Memory)
- DVD+RW (Digital Versatile Disc-ReWritable)

The MultiRead logo on CD and DVD products indicates MultiRead compatibility.

DVD Media Read/Write Compatibility

The hp dvd-writer dvd100i drive can read DVD-ROM, DVD-R, and DVD+RW discs, usually read DVD-RW discs, and write DVD+RW discs.

Table 1   DVD-ROM/DVD-R/DVD-RW/DVD-RAM/DVD+RW Read/Write Compatibility

	DVD Players	DVD-R Drives	DVD-RW Drives	DVD-RAM Drives	DVD+RW Drives
DVD-ROM Media can be Read in:	X	X	X	X	X
DVD-R Media can be Read in:	Usually	X	X	X	X
DVD-R Media can be Recorded by:		X	Often		
DVD-RW Media can be Read in:	Usually	May	X	May	Usually
DVD-RW Media can be Recorded by:			X		
DVD-RAM Media can be Read in:	Rarely			X	
DVD-RAM Media can be Recorded by:				X	
DVD+RW Media can be Read in:	Usually	Usually	Usually	May	X
DVD+RW Media can be Recorded by:					X

CD-R/CD-RW Media Read/Write Compatibility

The hp dvd-writer dvd100i drive can read CD-ROM data discs, CD-R discs, and CD-RW discs, and write CD-R and CD-RW discs.

Table 2   CD-R/CD-RW Read/Write Compatibility

	CD Players	CD-ROM Drives	CD-R Drives	CD-RW Drives	MultiRead Compatible Drives	DVD-ROM Drives	DVD Players
CD-R Media can be Read in:	X	X	X	X	X	X	X**
CD-R Media can be Recorded by:			X	X			
CD-RW Media can be Read in:				X *	X		X
CD-RW Media can be Recorded by:				X *			

* Music CDs recorded on CD-RW media can only be played on audio equipment that is MultiRead compatible. Music CDs recorded on CD-R media can be played in most audio CD players.

** CD-R media can only be read in DVD players with dual optical pickups. Contact the player manufacturer to verify compatibility.

Disc Storage Capacity of HP Products

- 1 DVD-RW — Store up to 4.7 GB
- 1 CD-RW = 650 MB (530 MB formatted)
- 1 CD-R = 650 MB (up to 618 MB formatted)

Product Positioning

The hp dvd-writer dvd100i drive is an internal IDE DVD+RW/CD-RW drive with the following performances:

- DVD-Rewritable with 2.4x re-write, 8x read
- CD-Rewritable with 12x10x32x

The hp dvd-writer dvd100i drive is intended for:

- camcorder users who need to share, store, and view video
- business professionals who need to share, store, backup, and transport large multimedia and data files

The hp dvd-writer dvd100i drive has the following applications that will be supported by HP WW CCCs:

- HP Install
- HP MyDVD
- HP DLA
- HP RecordNow
- PowerDVD
- HP Simple Backup

Laser Safety

This unit employs a laser. Do not remove the cover or attempt to service this device when connected due to the possibility of eye damage.

CAUTION — Contains: Class 1 Laser Product

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser radiation exposure.

Parts Available for the hp dvd-writer Drive

Table 3 **Parts for C9619A (Internal) IDE hp dvd-writer dvd100i Drive**

Product Service Part Number	Description
C9619-69901	Exchange dvd 2.4x Re-Write, 8x Read; cd 12x10x32x Internal Drive Mechanism
C4353-61100	Internal IDE Cable
8120-8740	Audio Cable
C8008-60000	One DVD-RW High Speed Media

Current Products

Table 4 **Current HP CD-Writer Products**

Product	Type	Model Number	Part Number
9500 Series	CD-Writer CD-Writer	9500i (internal, commercial) 9510i (internal, retail)	C4502A C4503A
9600 Series	CD-Writer CD-Writer	9600si (internal, commercial) 9600se (external, commercial)	C4506A C4507A
9700 Series	CD-Writer	9700i (internal, commercial) 9710i (internal, retail)	C9627A C9628A
9900 Series	CD-Writer	9900i (internal)	C9629A
cd4_e Series	CD-Writer	cd4re (external, retail) cd4ce (external, commercial) cd4me (external, mass merchant)	C9634A C9635A C9643A
cd12_i Series	CD-Writer	cd12ri (internal, retail) cd12ci (internal, commercial) cd12mi (internal, mass merchant)	C4503B C4502B C9640A
cd16_i Series	CD-Writer	cd16ri (internal, retail) cd16ci (internal, commercial) cd16mi (internal, mass merchant)	C9628B C9627B C9641A
cd20_e Series	CD-Writer	cd20re (external, retail) cd20ce (external, commercial)	C9636A C9637A
cd24_i Series	CD-Writer	cd24ri (internal, retail) cd24ci (internal, commercial)	Q2096A Q2097A

Table 5 **Current hp dvd-writer Products**

Product	Type	Model Number	Part Number
dvd100i Series	DVD-Writer	dvd100i	C9619A

This chapter describes the specifications for the hp dvd-writer dvd100i drive and is organized as follows:

System Requirements

The hp dvd-writer dvd100i drive is an internal IDE DVD+RW/CD-RW drive with an EIDE-(ATAPI), MMC compliant interface.

The hp dvd-writer dvd100i drive functions on a desktop PC that meets the following minimum guidelines:

- Windows 98, Windows 2000 Professional, and Windows Me (Windows NT 4.0 Workstation with SP5 for data storage applications only) (Future — Windows XP Personal and Professional)
- Data applications:
  - Pentium II 450Mhz or equivalent processor
  - 64 MB RAM
- DVD video disc creation applications:
  - Pentium III 800Mhz or equivalent processor
  - 128 MB RAM
  - video capture capability
- hard disk space available
  - 150 MB for included software installation
  - 5 GB for DVD disc creation
- An IDE controller with available connector

NOTE: *Windows NT 4.0 Server, Windows 2000 Server/Advanced Server, and all versions of Windows CE are not supported.*

Physical Specifications

Mounting

- The hp dvd-writer dvd100i drive is mountable in either horizontal or vertical configurations.
- Mounting screws = M3x10mm
- The mounting screws should not extend into the drive more than 6mm.

See Figure 1 and Figure 2 page 16 for the positions of the mounting screws.

Dimensions are in millimeters

Rear side of Connector Housing

139.7

74.25

79.25

4-M3 Mounting Screws

47.5
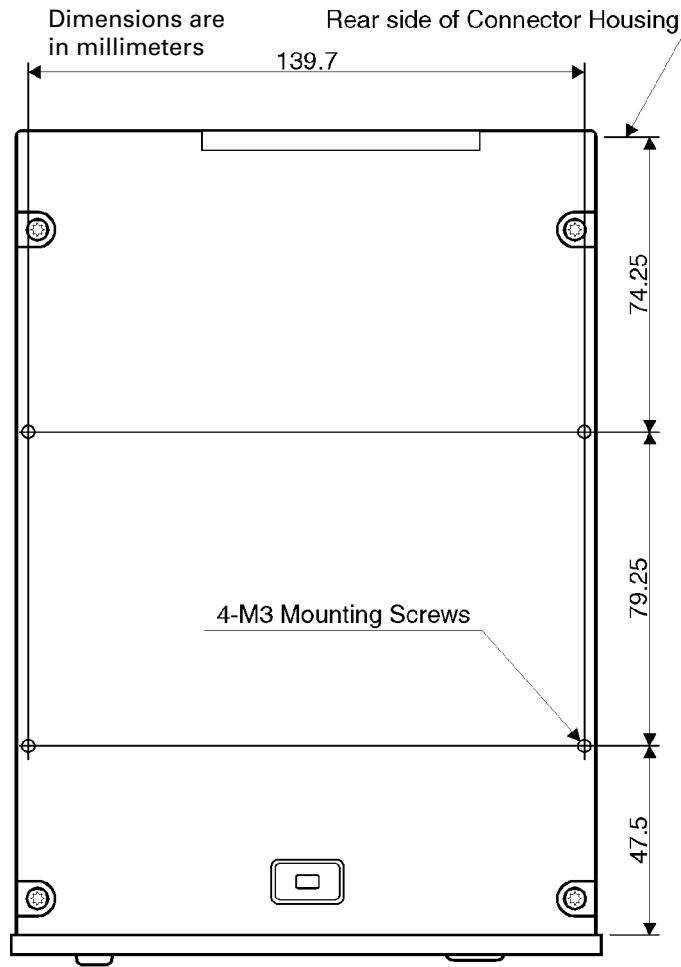
Figure 1 **Bottom View of the hp dvd-writer dvd100i Drive**

41.4

21.9

10.0

4-M3 Mounting Screws
(4 On each side)

Dimensions are
in millimeters

79.25

47.5

2.0 (Eject Button)
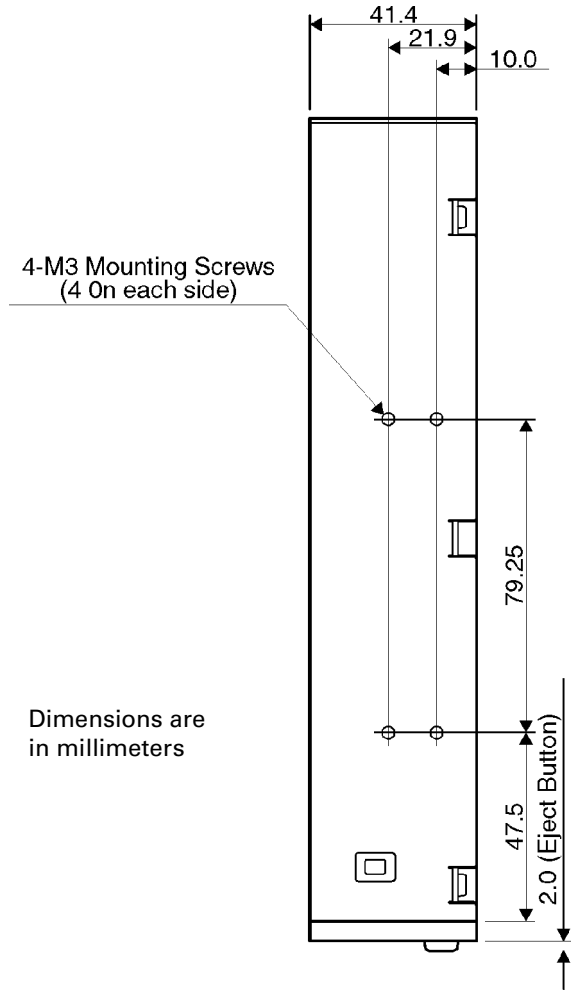
Figure 2 **Side View of the hp dvd-writer dvd100i Drive**

Size of the hp dvd-writer dvd100i Drive

The hp dvd-writer dvd100i drive is an internal IDE DVD+RW/CD-RW half height drive that is installed in an empty drive bay.

Table 6 **Dimensions and Weight of the hp dvd-writer dvd100i Drive**

Form Factor	5-1/4"
Depth	196.5 mm (7.74 in.) ± 0.5mm
Width	148 mm (5.83 in.) ± 0.5mm
Height	42.3 mm (1.66 in.) ± 0.5mm
Weight (net)	0.9 kg (2 lb)

Box Size and Weight for hp dvd-writer dvd100i Drive

Table 7 **Box Size and Weight of hp dvd-writer dvd100i Drive**

	US and Asia	Europe
Depth	291 mm (11.5 in.)	278 mm (11 in.)
Width	159 mm (6.3 in.)	150 mm (5.9 in.)
Height	228 mm (9 in.)	213 mm (8.4 in.)
Weight	2.2 kg (4.84 lb)	2.2 kg (4.84 lb)

Bezel Front Door
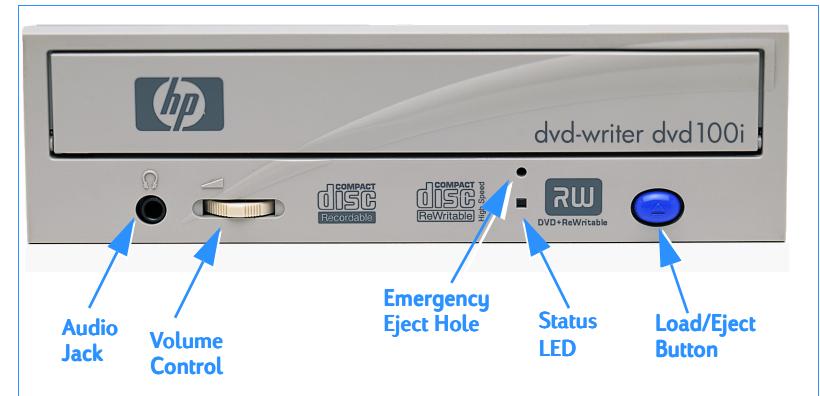
Figure 3 **Bezel Layout**

Disc Loading Mechanism

The hp dvd-writer dvd100i drive has a tray mechanism. The tray incorporates a dust seal so that dust does not enter from the front bezel.

Disc Ejection Mechanism

Table 8 **Disc Ejection States for the hp dvd-writer dvd100i Drive**

Tray Position	Action	Response
Tray is closed and drive is in READY state	Depress Load/Eject button	Tray will open if not in locked state.
Tray is closing or tray is closed and drive has not yet come READY	Depress Load/Eject button	Tray will open.
Tray is open or opening	Depress Load/Eject button	Tray will close

Manual Ejection

The drive has a manual ejection button on the front bezel. When pressed, it activates the electrical signal to open and close the tray. The manual ejection facility functions upon power-up, but it can be disabled by the host computer through the **Prevent/Allow Medium Removal** command.

Emergency Ejection

The tray is ejectable by pushing a pin or standard size paper clip into the emergency eject pinhole on the front bezel (see Figure 3). The emergency ejection mechanism functions even without power to the drive and with the prevent bit set.

Table 9   Emergency Ejection Specification

Maximum force	3.5 Kgf
Stroke of pin insertion	40 mm
Recommended diameter of pin	1.2 mm

Auto Insertion

The tray automatically closes when it is pushed.

Table 10   Auto Insertion Specification

Maximum force	5.5 Kgf
Stroke	3 mm

The drive is designed to respond within 1 second.

Ejecting Position

The tray is ejected approximately 64.5 mm from the front of the front bezel to the center of the disc.

Tray Locking Mechanism

There is a locking mechanism on the tray such that when power is off and the tray is closed, the tray will be locked in a closed position. This locking mechanism has a manual override.

LEDs

The drive has one LED visible on the front bezel. The use of the LED is described in Table 11 LED Protocol.

Table 11   LED Protocol

Drive State	LED
No disc inserted	OFF
Disc is loading or being ejected	
Disc in, drive in standby mode	Solid Orange
Disc not readable	Blinks Orange
Decoder Fail	Blinks Orange
EEPROM Fail	Blinks Orange
DRAM Fail	Blinks Orange

Connector and Jumpers on hp dvd-writer dvd100i Drive

Back of Drive

DIGITAL ANALOG
AUDIO AUDIO
OUT OUT   CABLE SELECT   IDE   DC INPUT
D G   R GND L   SLAVE   CONNECTOR   PIN #1   5V GND 12V
              MASTER
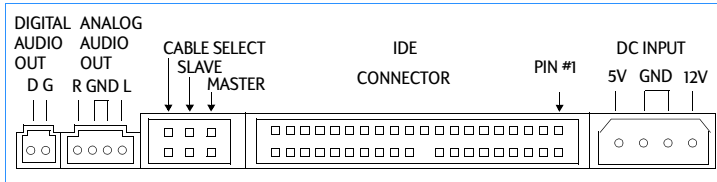
Figure 4   **Back of Internal IDE Drive**

Power Connector

The hp dvd-writer dvd100i drive is an internal drive. The drive shares power from the PC power supply. The drive has an industry standard 4-pin Amphenol or compatible male power connector, capable of housing 18 AWG wires for each connector pin.

Pin	DC Volts
1	+12 V
2	GND
3	GND
4	+5 V
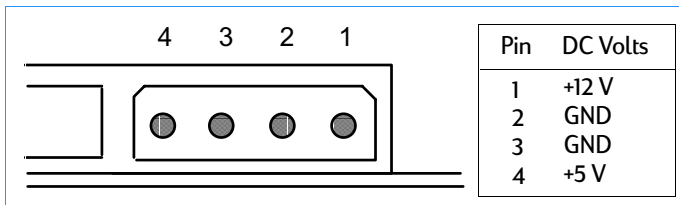
Figure 5   **DC Power Connector**

Signal Connector

The signal connection on the hp dvd-writer dvd100i drive is a 40-pin header connector with a key slotted shroud. Additionally pin 20 has been removed from the connector for keying as shown in Figure 6.

Missing Pin 20 (key pin)
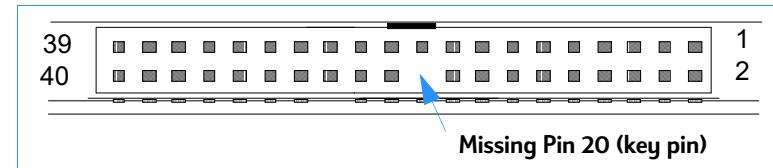
Figure 6   **Interface Connector**

The cable is a 40 conductor (stranded 28 AWG) flat ribbon cable with female header type connectors. The maximum cable length is 18 inches. The female header type connectors that connect to the drive has a plastic extrusion on the side of the connector by pins 19 and 21. This allows the cable to correctly mate with the key slotted shroud connector on the drive.

Table 12 on page 20 gives a list of the signals and connector pinout required for an ATA-2 interface. The signals listed in Table 12 are shown as single-ended contact assignments and not differential.

Table 12 ATA-2 Signals

Pin #	Signal	Signal	Pin #
1	-RESET	Ground	2
3	DD7	DD8	4
5	DD6	DD9	6
7	DD5	DD10	8
9	DD4	DD11	10
11	DD3	DD12	12
13	DD2	DD13	14
15	DD1	DD14	16
17	DD0	DD15	18
19	Ground	keypin	20
21	DMARQ	Ground	22
23	-DIOW	Ground	24
25	-DIOR	Ground	26
27	IORDY	SPSYNC/CSEL	28
29	-DMACK	Ground	30
31	INTRQ	-IOCS16	32
33	DA1	-PDIAG	34
35	DA0	DA2	36
37	-CS0	-CS1	38
39	-DASP	Ground	40

Master/Slave and Cable Select

Drive selection is made with jumpers on the Master, Slave, or Cable Select (CSEL) jumper block at the back end of the drive. The drive can be configured as Master, Slave, or Cable Select. The selection process in ANSI specification X3T10/0948D ATA-2 Revision 4c is used.
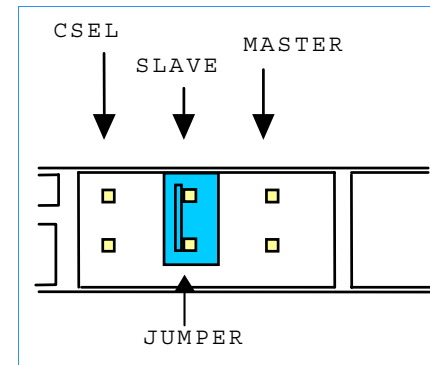
Figure 7 Drive Jumpers

Table 13 Drive Master/Slave/CSEL Jumpers

Jumper Setting	Meaning
M	Master - Drive is set to Master
S	Slave - Drive is set to Slave
CS	Cable Select - Cable and drive position determines setting
None	Not Allowed

Analog Audio Output Connectors

Rear Audio Output

The analog audio output connector is a 4-pin male latching housed keyed connector.

- AUDIO Connector (4 pin)
- Molex 70543, 70545, 70553, 70555 or equivalent
- Mating with Molex 70066G, 70400G, 70430G, or equivalent

Pin	Audio Signal
1	R Signal
2	GND
3	GND
4	L signal
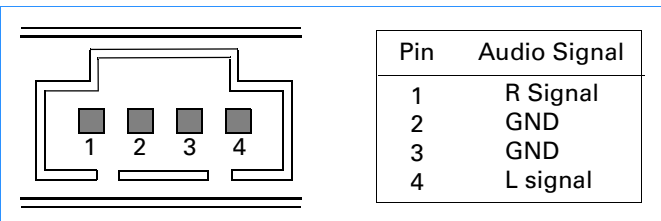
Figure 8 **Audio Connector Output Pins**

Front Audio Output

The front audio output is an industry standard stereo mini type.

Digital Audio Output Connectors

Rear Digital Audio Output

The digital audio output connector is a 2-pin male latching housed keyed connector.

Pin	Audio Signal
1	D Signal
2	GND
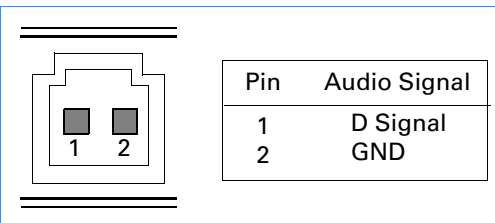
Figure 9 **Digital Audio Connector Output Pins**

Media

Read Media Compatibility

The drive can read the following discs:

- DVD+RW
- DVD-ROM
- DVD-Video
- CD-Digital Audio (Red Book) and CD Extra
- CD-ROM (Mode 1 – Yellow Book)
- CD-ROM XA & CD-I (Mode 2/Form 1 – Green Book)
- CD-ROM XA & CD-I (Mode 2/Form 2 – Green Book)
- CD-Bridge & Photo-CD (single and multi-session)
- CD – Video.

Write Media Compatibility

Recordable media compatible with the drive are:

- CD-R
- CD-RW
- DVD+RW

Write Methods

- Create:
  - Track at once
  - Disc at once
  - Incremental packet writing (variable and fixed packets per Orange Book part II)
- Copy:
  - Session at Once
  - Multisession

Logical Recording Format

Methods used to record data:

- UDF
- ISO 9660
- CD-DA

Audio

The following audio features are supported:

- CD:
  - WAV
  - MP3
- DVD:
  - WAV
  - MPEG-1
  - Layer 2

RIP Speed

The time it takes to transfer and store audio files from a music CD to MP3 files on your hard drive is:

- Extract a 4 minute audio track in less then 30 seconds, 8X minimum

Reliability Specifications

Overall, the HP CD-Writer and hp dvd-writer drives meet an estimated annualized drive failure rate of less than 1% per year as measured at product release.

Errors

Error Rate

The error rates are as follows:

- Audio, Data Mode 2, and Mode 2 Form 2: Less than 1 uncorrectable frame in 10^9 bits read. [ECC Off].

- Data Mode 1 and Mode 2 Form 1: Less than 1 uncorrectable frame in 10^{12} bits read. [ECC On].

Corrected Error Rate

The corrected error rates are as follows:

- Audio, Data Mode 2, and Mode 2 Form 2: Less than 1 uncorrectable frame in 10^9 bits read.

- Data Mode 1 and Mode 2 Form 1: Less than 1 uncorrected frame in 10^{12} bits read.

Influence on Media Life

Reading
Reading with HP CD-Writer and hp dvd-writer drives does not degrade the media life.

Writing
HP CD-Writer and hp dvd-writer drives are capable of at least 1,000 overwrites/track on qualified HP CD-RW media.

Mean Time Between Failures (MTBF)

The MTBF for the hp dvd-writer drive is 100,000 power-on hours minimum.

Preventive Maintenance

The end user of the product does not need to perform any maintenance on the HP CD-Writer or hp dvd-writer drives.

Acoustic Emissions

Acoustic Power Emissions
The level of sound power per ISO 9296, expressed in bels, is 7.0 B maximum.

Acoustic Pressure Emissions
The level of sound pressure per ISO 9614-1, expressed in decibels, is 70 dB(A) maximum.

Electrical Specifications

Power

Table 14 **Connectors and Jumper Block**

Connector	Description
DC Power Inlet	4 pin Amphenol

Audio Output	4 pin per MPC-2 spec. (rear of drive)
	   1V typical RMS output voltage
	3.5 mm Headphone Jack (front of drive)
	   0 to 3.5V RMS output voltage

Signal Connector	40 pin ATA-2 dual row header, shrouded & keyed
Rear Jumper Block	ATAPI ID selection (Master, Slave, CSEL)

Power Management

The drive is Energy Star compliant.

Power Input

The internal PC power supply for the drive is:

- 5 VDC with +/-5% tolerance, +12 VDC with +/-10% tolerance

Power Consumption

The amount of power used by this drive is 25 Watts, maximum.

Front Audio Output

The front audio output is an industry-standard stereo mini type.

Ground Tab

The ground tab is an AMP FASTON terminal 61761-2 or its equivalent.

Tray Locking Mechanism

There is a locking mechanism on the tray such that when power is off and the tray is closed, the tray will be locked in a closed position. This locking mechanism has a manual override.

Performance Specifications

The hp dvd-writer dvd100i drive:

- is able to write CD-R, CD-RW, and High Speed CD-RW discs
- can perform as a standard CD-ROM drive

Buffer

The amount of data buffered between source and storage medium, is 2MB minimum.

The hp dvd-writer dvd100i drive has buffer underrun prevention.

Performance of the Drive

The hp dvd-writer drive has write/read performances shown in Table 15.

Table 15 **Write and Read Speeds of the hp dvd-writer dvd100i Drive**

Write (CD-R)	12x
Write (CD-RW)	10x
Write (DVD+RW)	2.4x
Read (CD-RW)	20x
Read (CD-R/CD-ROM)	32x
Read (DVD+RW)	8x

The hp dvd-writer drive plays audio discs at up to 8x.

Seek Time

The time necessary to find data on medium is (expressed in milliseconds):

- Average full-stroke access time of 250 ms (CD-ROM)
- An average random access time of 125 ms (CD-ROM)

Initialization Time (2x)

The amount of time necessary for the disk to initialize is (expressed in seconds):

- Initialization at 2x (From power off, disc in drive, spin up time, read and calibrate disc): ‹20 seconds.

Disc Finalization Time (2x)

The expected maximum disc finalization time (closing a write session) is (expressed in minutes):

- CD: 2 minutes typical at 2X
- DVD: not applicable

Hours of Video Recording

Hours of video recording at Mbits per second:

- 1 hour @ 9.8 Mbits/sec
- 2 hours @ 5.8 Mbits/sec
- 3 hours @ 3.3 Mbits/sec

NOTE: *Bits rates include video and audio*

Video Formats

Formats supported by DVD authoring software:

- MPEG-1
- MPEG-2
- AVI
- QuickTime

Video Standards

Supported video playback & record standards:

- PAL
- NTSC

Video Capture Cards

Refer for the following web site:

www.hp.com/support/dvd-capture

Search Speed

Average time required to locate a specific file on a specific piece of media, expressed in milliseconds:

- Average full-stroke access time of 250 ms (CD-ROM, DVD-ROM)
- An average random access time of 125 ms (CD-ROM, DVD-ROM)

Backup Rate Native

Rate at which data can be backed up without data compression, expressed in units per hour.

- CD: 1.08GB/hr:
  - 2x, 2.16GB/hr
  - 4x, 4.32GB/hr
  - 8x, 5.40GB/hr
  - 10x, 6.48GB/hr - 12x
- DVD+RW:
  - 9.6GB/hr - 2.4x

Backup Rate Compressed

Rate at which data can be backed up with data compression, expressed in units per hour.

- CD:
  - Up to 2.16GB/hr - 2x
  - 4.32GB/hr - 4x
  - 8.64GB/hr - 8x
  - 10.80GB/hr - 10x,
  - 12.96GB/hr - 12x
- DVD+RW:
  - 19GB/hr - 2.4x

Burst Transfer Rate

Rate at which data can be transferred for short bursts of time, expressed in bytes per second.

- 33 MB/s

Transfer Rates

Rate at which data is normally transferred, expressed in units per second.

- Write:
  - CD-R = 2X,4X,8X,12X
  - CD-RW = 2X,4X,10X
  - DVD+RW = 2.4X
- Read:
  - CD-R = 2X,4X,8X,10X,14X~32X(CAV)
  - CD-RW = 2X,4X,8X~20X(CAV)
  - DVD+RW = 8X
- 1X CD = Audio: 175 KB/sec, Data Mode 2, Form 2: 171.1 KB/sec, Data (Mode 1 or Mode 2, Form 1): 150 KB/sec.
- 1X DVD = 1353KB/sec

Environmental Specifications

Temperature

The hp dvd-writer dvd100i drive is an internal drive. The drive shares power from the PC power supply. The drive has an industry standard 4-pin Amphenol or compatible male power connector, capable of housing 18 AWG wires for each connector pin.

The design minimizes dust and particle deposits on CD-RW discs, since these deposits can negatively impact write quality.

Non-Operating Temperature

Storage:	• -20 to +60°C
	• -4 to +140 °F
Transportation:	• -20 to +60 °C
	• -4 to +140 °F

Operating Temperature

Operating:	• +5 to +40 °C
	• +41 to +104 °F

Humidity

Non-Operating Humidity

Storage Non-Operating Range:	• 5 to 95% RH non-condensing

Operating Humidity

Operating: [a]	• 10 - 90% RH non-condensing

a. Humidity specification is limited by the data disc.

Vibration

Operating Vibration

- Operating:
  - 0.035mm p-p 10-45 Hz
  - 0.025mm p-p 45-65 Hz
  - 1.0G 10-150 Hz
- Non-operating: 1.0G, power off, without disc

Shock

The amount of shock that a product can withstand:

Operating:	operating: 2.0G, 3 ms half sine
Non-operating:	non-operating: 50G, 11 ms half sine, power off, without disc

Product Safety Specifications

Table 16 Certification Programs

Country	Type	Agency		Country Standard
USA	Safety	Underwriters Laboratories Inc	UL	UL 1950 Amd 4
	Laser	Center for Devices and Radiological Health	CDRH	Radiation Control Standards 21 CFR 1010 and 1020-l 0.50
	EMC	Federal Communications Commission	FCC	CFR 47 Part 15 Class B
Canada	Safety	Canadian Standards Association	CSA UL	CSA C22.2 No.950-M89 or CUL
				IECS-003 Class B
Europe	Safety	Low Voltage Directive	CE	73/23/EEC (amended by Directive 93/68/EC)
	Safety	TÜV Product Service	TUV	IEC 60950 plus amendments
	Laser			EN60825 plus amendment(s)
	EMC	EMC Directive	CE	EMCD 89/336/EEC plus amendment
	EMC	National Voluntary Accreditation Program OR American Association of Lab Accreditation	NVLAP A2LA	EN 55022 (CISPR 22) Class B (Radiated Emissions)

	EMC			EN 55024 EN 61000-3-2:1995 plus amendments EN 61000-3-3:1995 plus amendments
Australia & New Zealand	EMC			EN 61000-3-2 Class D (Harmonics)
	EMC		C-Tick	AS/NZS 3548 AS/NZS 4252.1

References

The following references contain the standards to which the hp dvd-writer dvd100i drive is designed.

ANSI X3T13/1153D	Information Technology - AT Attachment-4 with Packet Interface Extension (ATA/ATAPI-4), Revision 8 or higher
ANSI X3T13/2008D	Information Technology - AT Attachment-3 Interface (ATA-3), Revision 7b [ANSI X3.298 - 1996]
ANSI X3T10/995D	SCSI Primary Commands (SPC), Revision 11.0. [ANSI X3.301 - 199x]
ANSI X3T10/996D	SCSI Block Commands (SBC), Revision 8c.
ANSI X3T10/1048D	SCSI Multimedia Commands (MMC), Revision 10.a or higher.
CD-DA	Compact Disc Digital Audio, specified in the System Description Compact Disc Digital Audio ("Red Book"), N.V. Philips and Sony Corp. Also see Compact Disc Digital Audio System [IEC 908:1987].
CD-i	Compact Disc Interactive, specified in the CD-i Full Functional Specification ("Green Book"), N.V. Philips and Sony Corp.
CD-i Bridge	Compact Disc Interactive Bridge, specified in the CD-i Bridge Specification, N.V. Philips and Sony Corp.
CD-ROM	Compact Disc Read Only Memory, specified in the System Description Compact Disc Read Only Memory ("Yellow Book"), N.V. Philips and Sony Corp. Also see Information technology - Data Interchange on read-only 120mm optical data disks [ISO/IEC 10149:1993].
CD-ROM XA	Compact Disc Read Only Memory eXtended Architecture, specified in the System Description CD-ROM XA, N.V. Philips and Sony Corp.
CD-R	Compact Disc Recordable System Description, specified in Recordable Compact Disc Systems Part-II ("Orange Book Part II"), N.V. Philips and Sony Corp., Revision 3.1. Also reference Revision 2.0.
CD-RW	Compact Disc ReWritable System Description, specified in the Recordable Compact Disc Systems Part-III ("Orange Book Part III"), N.V. Philips and Sony Corp., Revision 2.0. Also reference Revision 1.0.
ECMA-167	Volume and File Structure for Write-Once and ReWritable Media using Non-Sequential Recording for Information Interchange, Revision 3. (see also ISO/IEC 13346:1997)
Enhanced Music CD	Enhanced Music Compact Disc, specified in the Enhanced Music CD Specification ("Blue Book"), N.V. Philips, Sony Corp., and Microsoft Corp.
HP Corporate Standard	Hewlett-Packard Corporate Environmental Test Manual. The *HP Corporate Environmental Test Manual* also includes information about Electrical (Shock) and mechanical (shock and vibration) testing.
ISO 9660:1988	Information Processing - Volume and File Structure of CD-ROM for Information Interchange.
Multisession CD	Multisession for CD-ROM and Finalized CD-R discs, Revision 1.0
OSTA MultiRead	OSTA MultiRead Specifications for CD-ROM, CD-R, CD-R/RW, and DVD-ROM Devices, Revision 1.0 or higher.

OSTA UDF OSTA	Universal Disk Format, including support for CD-ROM, CD-R, CD-R/RW and DVD-ROM devices, Revision 1.5 or higher. OSTA UDF is also called UDF.
PC 2000	PC 2000 System Design Guide, Intel Corp. and Microsoft Corp., Version 1.00 or higher
Photo CD	Photo Compact Disc, specified in the System Description Photo CD, N.V. Philips and Eastman Kodak Company.
SFF 8020i	ATA Packet Interface for CD-ROMs, Revision 2.6 or higher. [ATAPI CD-ROM 2.6]
SFF 8080	ATA Packet Interface for CD-R/RW Devices, Revision 1.2. [ATAPI CD-R/RW 1.2]
SFF-8090v3	Command Specification for DVD Computer Peripherals, Revision 1.0 or higher. Note: This document is also known as Mt. Fuji-3: 1999.
Video CD	Video Compact Disc, specified in the Video CD Specification ("White Book"), N.V. Philips, Sony Corp., JVC, and Matsushita.

Discussion of References

Several of the references listed in the preceding section are still in the process of being revised. This section provides help in understanding how the references should be followed.

The underlying specifications for CD-R/RW devices are presented in the specifications from N.V. Philips and Sony Corporation. These specifications are followed in order to obtain the right to use the "Compact Disc Recordable/ReWritable" logo. These specifications include CD-DA, CD-ROM, CD-ROM XA, CD-i, CD-i Bridge, Multisession CD, CD-R, CD-RW, Enhanced Music CD, and Photo CD.

The drive conforms to the OSTA MultiRead specification and is certified as a MultiRead device.

The drive will be used to support OSTA UDF file systems, and therefore implements functionality to allow efficient UDF operation using commercial software.

ATA-2 is used as the base reference for the drive's ATA interface. However, details from the ATA-3 and ATA/ATAPI-4 references are incorporated to allow operation with the higher level command set.

A brief description of how EIDE-(ATAPI) allows communication between a host computer and a hp dvd-writer dvd100i drive is provided in this chapter.

This chapter is organized as follows:

ATA/ATAPI

Prior to the introduction of CD-ROM drives, the standard interface used inside personal computers was the AT Attachment (ATA) interface (also referred to as the IDE interface), which was used to communicate with hard disk drives. The ATA standard allows two devices to exist on the same bus, with the primary device being named Device 0 or the Master, and the secondary device being named Device 1 or the Slave. The ATA standard defines both the low level hardware requirements such as required device registers, electrical signal specifications, cabling and connector specifications, and the higher level ATA command set which provides a mechanism for a computer to communicate with a device.

When CD-ROM drives were introduced, new requirements were set which could not be met with the existing ATA command set. Therefore an extension of the ATA protocol was created. This new protocol was named ATA Packet Interface (ATAPI). The ATAPI command set was based on the existing SCSI command set, and by design allows ATAPI and ATA devices to coexist on an ATA bus. Due to wide availability and low cost, the ATAPI interface has become the standard for CD-ROM drives used in PCs. However, since the newer MMC specification includes the majority of the packet commands which are in the ATAPI specification, the MMC specification is used as the primary reference for most commands, and the ATAPI specification is used as the primary reference for lower level communication protocol details. The hp dvd-writer and is designed using the ATA-2 version of the ATA specification, and the ATAPI 2.6 version of the ATAPI specification.

IDE Connectors

When you place Software Disc 1 in your CD-ROM and click **Install hp dvd-writer** the software analyzes your computer and makes a recommendation about connecting the hp dvd-writer hardware.

The Install Recommendation tells you whether the hp dvd-writer should be connected to the primary or secondary controller in your computer.

NOTE: *If the Install Recommendation states that your hp dvd-writer drive will share the data cable with another device (such as a CD-ROM drive), follow the cable already attached to the other device down to the circuit board in order to locate the IDE controller that you need. If you find an extra connector along that cable, simply attach that connector to the hp dvd-writer drive.*

Locate the recommended 40-pin IDE controller's connector (primary or secondary) on your computer's motherboard.

The IDE connectors are on the motherboard, which is the largest circuit board in your computer, taking up most of the bottom of a desktop computer or the side of a tower computer.

IDE connectors are usually found in pairs and may look like any of the following:
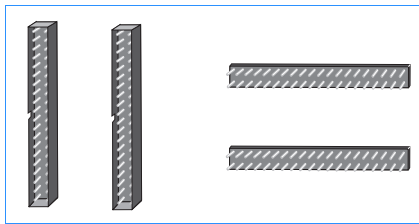
Figure 10   IDE Connectors

You will see a variety of connectors inside your computer that look similar to the 40-pin connector, but have more or fewer pins. Find the connectors that are the correct size to fit the cable that came in the box with your drive.
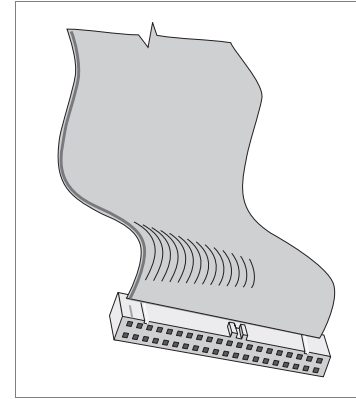
Figure 11   40-Pin IDE Connector

The IDE connectors may be hidden by some of the computer's cables or may be behind a drive.

Many computers have an IDE hard drive or CD-ROM that connects to the motherboard through an IDE controller. The data cables on these drives have the same width as the data cable included with your hp dvd-writer. If your computer has an IDE hard drive or CD-ROM drive, you can follow the data cable from the back of one of those drives to find the IDE controller.

Computer manufacturers use a wide variety of labels for IDE connectors. Look on your computer's circuit boards for printing identifying the primary and secondary connectors, such as:
- PRI and SEC
- IDE-0 and IDE-1
- IDE-1 and IDE-2
- HD and CD-ROM (most common devices to be attached)
- PCI-IDE and ISA-IDE

Look for a label identifying PIN-1 next to the IDE connector. The data cable's colored edge is aligned with PIN-1 of the IDE connector. This illustration shows a specific computer. Yours may look different. PIN-1 could be on either side of the IDE connector. (See Figure 12.)

colored stripe
on the data cable
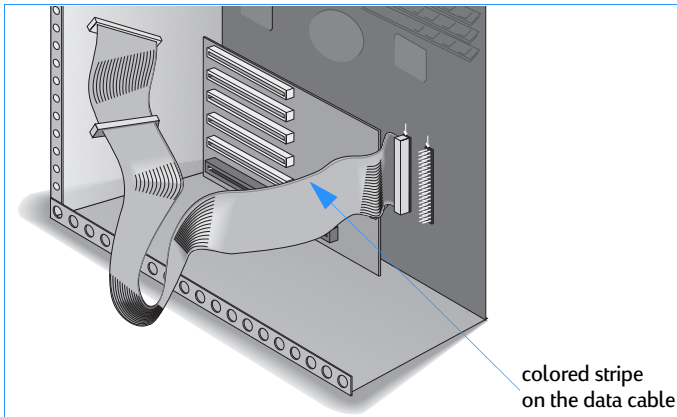
Figure 12   Align Pin 1 to the IDE Connector in the Computer

The cable's colored edge is aligned with PIN-1 on the hp dvd-writer drive. (Figure 13.)

colored stripe
on the data cable
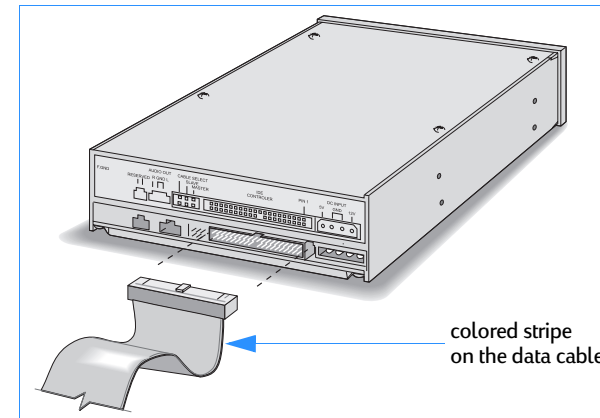
Figure 13   Align Pin 1 on the Drive

This chapter describes the installation of an hp dvd-writer dvd100i drive and is organized as follows:

PC Desktop Minimum System Requirements

The hp dvd-writer dvd100i drive is an internal IDE DVD+RW/CD-RW drive with an EIDE-(ATAPI), MMC compliant interface.

The hp dvd-writer dvd100i drive functions on a desktop PC that meets the following minimum guidelines:

- Windows 98, Windows 2000 Professional, and Windows Me (Windows NT 4.0 Workstation with SP5 for data storage applications only) (Future — Windows XP Personal and Professional)
- Data applications:
  - Pentium II 450Mhz or equivalent processor
  - 64 MB RAM
- DVD video disc creation applications:
  - Pentium III 800Mhz or equivalent processor
  - 128 MB RAM
  - video capture capability

NOTE: *HP MyDVD does not run on Windows NT.*

- hard disk space available
  - 150 MB for included software installation
  - 5 GB for DVD disc creation
- An IDE controller with available connector

NOTE: *Windows NT 4.0 Server, Windows 2000 Server/Advanced Server, and all versions of Windows CE are not supported.*

What's in the Box

Your hp dvd-writer dvd100i package contains:

- hp dvd-writer dvd100i drive
- 1 blank DVD+RW disc
- Documentation
  - Quick Start Placemat
  - Install Guide
  - Support Guide
  - Integrated Install
  - Electronic User's Guide
  - Minimum Legal Requirements
- audio cable
- IDE cable
- screws
- Software Disc #1 with:
  - HP Installation Software
  - HP MyDVD
  - HP DLA
  - HP RecordNow
  - HP Simple Backup
  - PowerDVD

Installing the hp dvd-writer dvd100i Drive

The following information is similar to the QuickStart sheet provided with the hp dvd-writer dvd100i drive.

Inserting Disc 1

1. Turn on your printer and the computer, and start Windows.

2. Insert the CD labeled *Software Disc 1* into your CD-ROM drive.

   The hp dvd-writer Installation **Splash screen appears briefly, then the Installation** menu appears (see Figure 14).

NOTE: *If Auto Insert Notification is turned on for your CD-ROM drive, the first screen will appear automatically. If Auto Insert Notification is not turned on, click the* Start *button on the task bar, click* Run, *type D:\SETUP (where D: is your CD-ROM's drive letter), then click* OK.
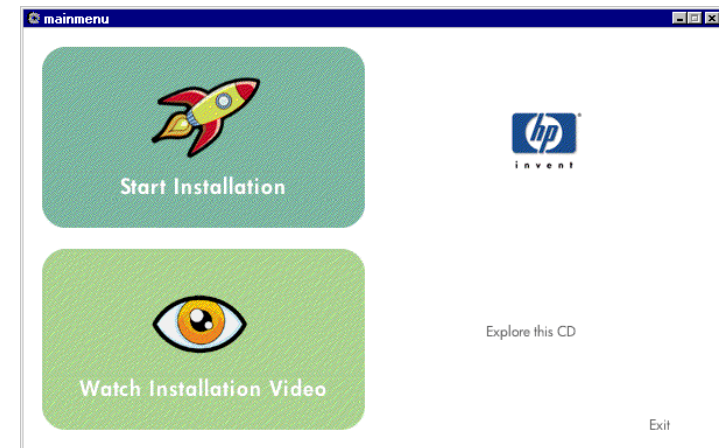
Figure 14   hp dvd-writer Installation Menu Screen

Viewing the Install Video

■ Click **Watch Installation Video** on the **Installation** menu to watch a short video of the installation process.

Starting Installation

1. Click **Start Installation** on the **Installation** menu.
2. Follow the instructions on the **Welcome** screen, then click **Next**.
3. Follow the instructions on the **Software License Agreement** screen, then click **Yes**.

Accepting the Attachment Recommendation

1. Follow the instructions on the hp dvd-writer **Connection Information** screen, then click **Next**.
2. Follow the instructions on the **Replace CD-ROM** screen, then click **Next**.

Printing the Install Recommendation

1. When the **Install Recommendation** screen appears, click **Print**.

Figure 15 **Printing the Install Recommendation**

The **HP Drive Install Recommendation** printout will include a recommendation for:

Jumper setting?

[   ] Master   [   ] Slave

Which IDE controller?

[   ] Primary   [   ] Secondary

Sharing controller & cable? If so, with: _____

Data cable instructions?

[   ] 1 device   [   ] 2 devices

2. If no printer is available, copy the recommendation from the **Install Recommendation** screen.

Installing the Hardware

1. When the **Shutdown for Hardware Installation** screen appears, click **Shutdown** to shut down Windows.

2. Turn OFF your computer, monitor, and other devices.

3. Unplug the power cords from the wall outlet or from the power strip, if you use one.
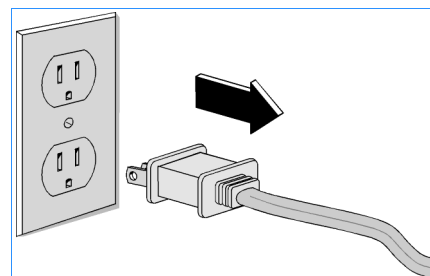
Figure 16 **Unplug the Computer**

4. Remove the cover from your computer.

⚠️ CAUTION: Touch something metallic (an unpainted part of the computer's case or a file cabinet) to discharge static electricity before touching anything inside your computer.

   ■ Static electricity can damage your computer's internal parts.

5. Locate a free, half-height drive bay in the computer and remove its cover plate.

   Half-height drive bays are about 6" wide and 1.75" tall (15 cm x 4.5 cm).

6. If you will be replacing an existing CD-ROM drive, remove that drive.

   Lay aside any cables that you unplug from the CD-ROM; you will later plug them into the hp dvd-writer drive.
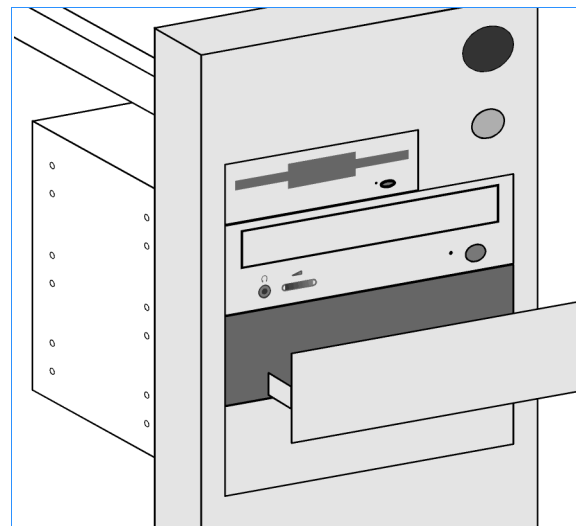
Figure 17 **A Free Drive Bay**

7. Keep any mounting hardware, as it may be needed later for securing the drive in the drive bay.

8. Look at the Install Recommendation printout to see whether the jumper should be set to the Master or Slave position, then set the jumper on the back of the hp dvd-writer drive to the recommended position.

NOTE: *Jumpers are small caps that fit over pairs of pins on the back of the hp dvd-writer drive. Jumpers can be pulled off or replaced with needle-nose pliers.*
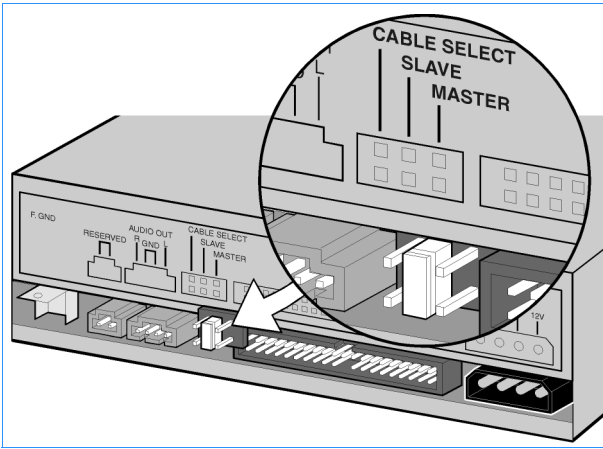
Figure 18 **Setting Jumpers on the Drive**

9. If your computer uses rails, attach the rails that came with the computer to the sides of the hp dvd-writer dvd100i drive (see Figure 19).

Some computers use rails instead of screws to hold the drive in place.

NOTE: *You can tell if your computer uses rails by looking at the other drives installed in your computer.*
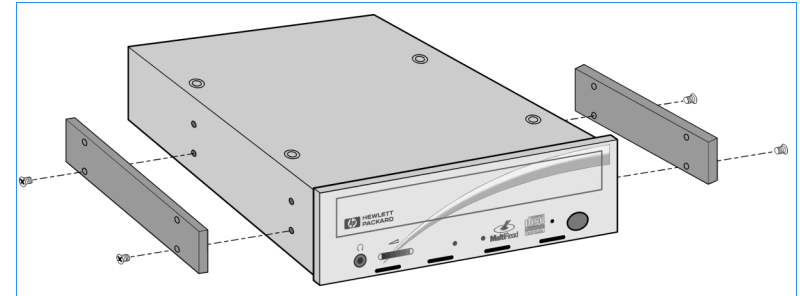
Figure 19 **Rails for Mounting the Drive**

10. Slide the hp dvd-writer drive partially into the bay.

11. To hear sound through your computer's sound system, connect one end of the audio cable to the back of the hp dvd-writer drive (see Figure 20) and the other end to an audio connector on your sound card or motherboard.

NOTE: *If you do not have a sound card, you can still hear sound through speakers or earphones plugged into the audio connector on the front of your hp dvd-writer drive.*
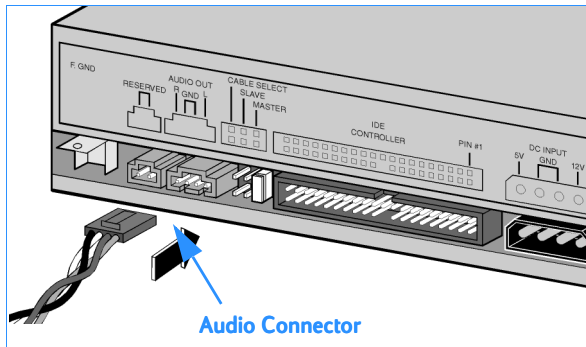
Figure 20   **Audio Cable Connector on Drive Back**

12. Look at the Install Recommendation printout to see whether or not the hp dvd-writer drive will be sharing the data cable with another device.

13. Connect the data cable to the hp dvd-writer (see Figure 21, Figure 22, and Figure 23).
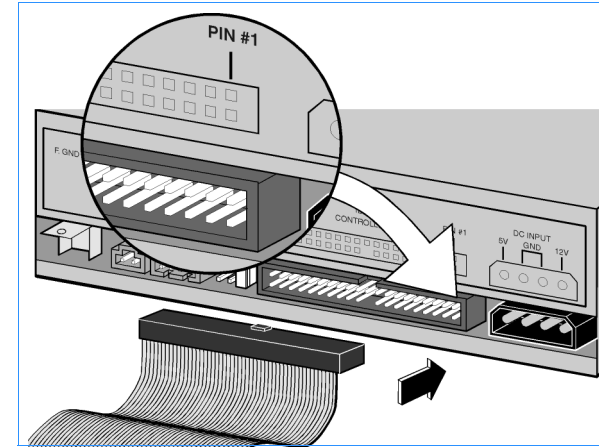
Figure 21   **Data Cable Connector on Drive Back**

NOTE: *Most IDE data cables are keyed to fit only one way. When connected correctly, the colored stripe on the cable lines up with Pin 1 on the back of the drive.*

a. For an hp dvd-writer drive sharing the data cable with another device, follow the cable already attached to the other device. If you find an extra connector along that cable, simply attach that connector to the hp dvd-writer drive (see Figure 22).

Figure 22   An hp dvd-writer Drive Sharing the Data Cable

b. For an hp dvd-writer drive that is the only device on the data cable, locate the IDE connector on the motherboard and use the data cable included in the box to connect the hp dvd-writer drive to the IDE connector (see Figure 23).
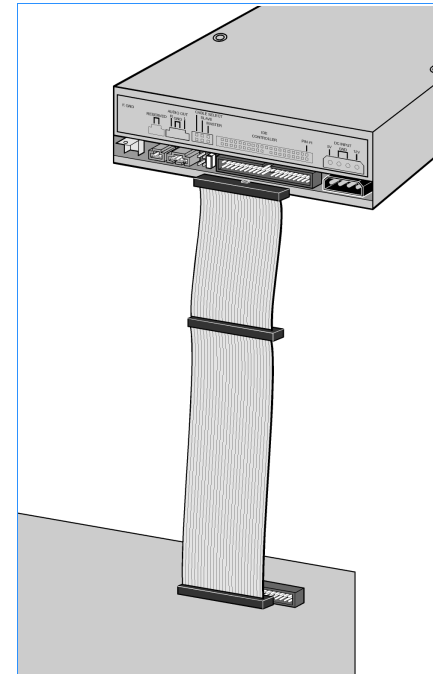
Figure 23   An hp dvd-writer Drive Not Sharing the Data Cable

14. Locate an available power cable connector in the computer.

Power cable connectors usually have yellow, red, and black wires. If you do not have an available connector, you need to purchase a Y power connector from your computer dealer.

15. Plug the power cable into the back of the HP drive. The connector only fits one way. (See Figure 24.)

NOTE: *Improper connection of the power cable will damage the drive.*
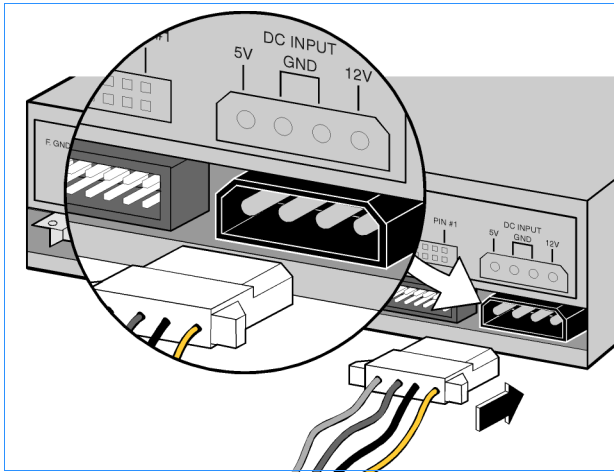
Figure 24 **Power Connector on Drive Back**

16. Slide the HP drive completely into the drive bay.

17. Secure the HP drive into the drive bay with the screws (or rails, if your computer uses rails). (See Figure 25.)
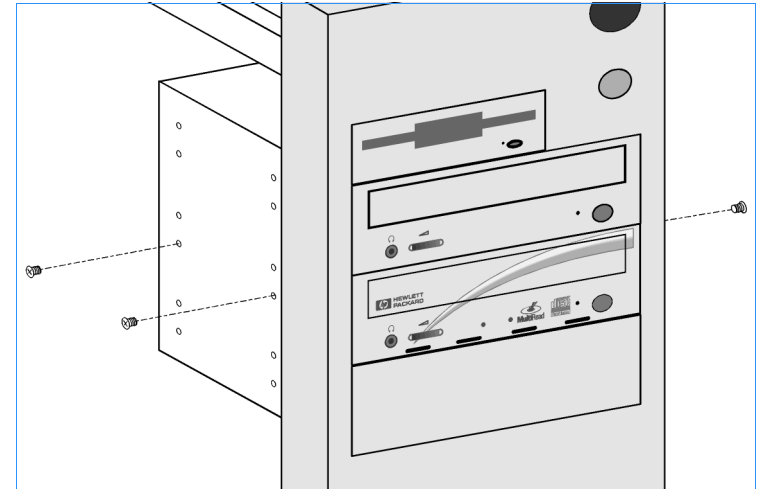
Figure 25 **Securing the Drive in the Bay**

Restarting the Computer

1. Replace the case on the computer.
2. Connect the computer and all attached devices to power.
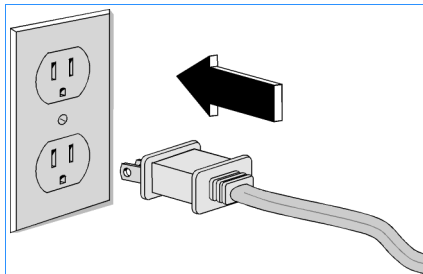
Figure 26   Connect the Computer to Power

3. Turn on the computer.

   The installation software will verify that the HP drive is correctly installed.

4. Press the **Load/Eject** button to make sure the drive is receiving power by opening and closing the tray.

Installing the Software

1. Follow the instructions on the screens to install the HP software applications.

The following applications are installed using an HP-developed custom installation program on *Software Disc 1*:

- HP MyDVD (described on page 72)
- PowerDVD (described on page 78)
- HP RecordNow 3.0 (described on page 53)
- HP DLA 2.5 (described on page 65)
- HP Simple Backup (described on page 75)

NOTE: *No hardware drivers need to be installed. The hp dvd-writer drive uses the operating system's IDE drivers.*

2. When the **Setup Complete** screen appears, select **Yes** to restart the computer, then click **Finish**.
3. After the computer has been restarted, the hp dvd-writer **Product Registration** screen appears .

Vendor Software Installation

After the user has finished installing the HP drive and restarted their computer, they must insert the additional software installation CDs to invoke the vendors' install programs.

Identifying the hp dvd-writer Drive

Users should see the hp dvd-writer drive in Explorer or My Computer, on on the Taskbar.

If users have problems seeing the drive, refer to the online User's Guide for troubleshooting information.

Desktop Icon
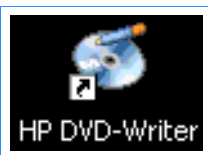
Figure 27   HP CD-Writer Desktop Icon

Start Menu Program Group Names

Table 17   Icon and Program Group Names

Application	Program Group Name
hp dvd-writer dvd100i	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer
HP MyDVD	**Programs**»**MyDVD**
PowerDVD	**Programs»CyberLink PowerDVD**»**PowerDVD**
HP DLA	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer
HP RecordNow	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer
HP Simple Backup	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer
User's Guide	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer»User's Guide Online
Uninstall	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer»Uninstall
Troubleshooting	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer»Troubleshooting
Electronic Registration	Hewlett-Packard»HP DVD-Writer»HP DVD-Writer»Electronic Registration

Additional Reference Information

Online User's Guide

The hp dvd-writer dvd100i Electronic User's Guide, application Help, and application ReadMe files should be referenced in addition to this manual if more software information is needed when using the hp dvd-writer dvd100i drive.

ReadMe Files

ReadMe files exist for the following:
- HP CD-WRITER, hp dvd-writer on page 96
- HP RecordNow, Version 3.0 on page 97
- HP DLA, Version 2.5 on page 98
- HP Simple Backup on page 100

You can read these files in Chapter 11 Release Notes, or they can be accessed from the program groups after installing the applications or the installation CD(s). Please refer to these CDs for additional information not included in the release notes.

Hardware/Software Compatibility

The software shipped with the hp dvd-writer dvd100i drive is compatible with Windows 98, Windows NT 4.0 Workstation with SP5, Windows 2000 Professional, and Windows ME operating systems.

Compatibility with previous releases of the HP CD-Writer (hardware, software, and firmware) has been maintained when possible. Discs made from a previous release are readable and usable on the hp dvd-writer dvd100i drive.

The software bundled with the hp dvd-writer dvd100i drive will not be sold as a separate product. See the hp dvd-writer Support websites for upgrade information:

http: //www. hp. com/support/dvd-compatibility

http: //www. hp. com/support/dvd-capture

http: //www. hp. com/support/dvd-mydvd

Uninstalling Software

Users can remove all hp dvd-writer dvd100i programs or individual programs at any time.

NOTE: *If users want to reinstall the hp dvd-writer dvd100i drive software, they must be sure to remove the original software first.*

Removing software:

1. Click
   Start>>Programs>>
   Hewlett-Packard>>HP DVD-Writer>>HP DVD-Writer>>Uninstall

2. Select the HP CD-Writer program(s) that you wish to remove.

3. Click the **Finish** button.

The software is removed, including all related entries in your system registry.

All files and directories should be removed if a complete uninstall is performed. To complete an uninstall, the user must reboot the system. After rebooting the system, verify the install directory has been removed (\Program Files\Hewlett-Packard\).

This chapter offers a description of the basic operating functions of the hp dvd-writer dvd100i drive and is organized as follows:

Bezel
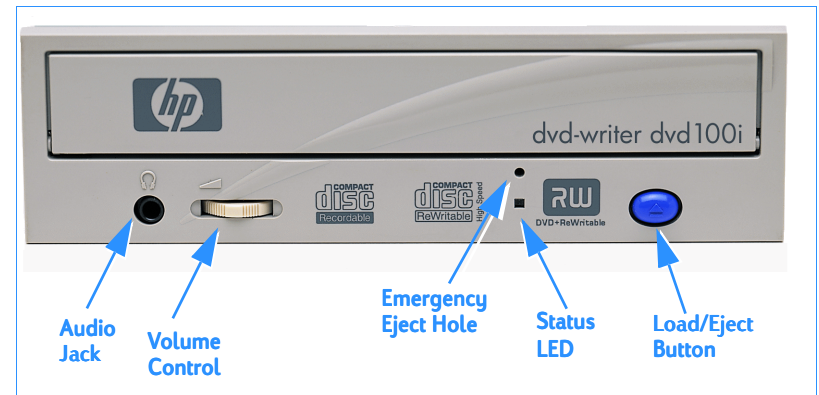
Figure 28   Bezel

For information on the LEDs, see .

Disc Loading Mechanism

The hp dvd-writer dvd100i drive has a tray mechanism. The tray incorporates a dust seal so that dust does not enter from the front bezel.

There is a locking mechanism on the tray such that when power is off and the tray is closed, the tray will be locked in a closed position. However, this locking mechanism has a manual override (see).

Disc Ejection Mechanism

Table 18 Disc Ejection States for the hp dvd-writer dvd100i Drive

Tray Position	Action	Response
Tray is closed and drive is in READY state	Depress Load/Eject button	Tray will open if not in locked state.
Tray is closing or tray is closed and drive has not yet come READY	Depress Load/Eject button	Tray will open.
Tray is open or opening	Depress Load/Eject button	Tray will close

Manual Ejection

The drive has a manual ejection button on the front bezel. When pressed, it activates the electrical signal to open and close the tray. The manual ejection facility functions upon power-up, but it can be disabled by the host computer through the **Prevent/ Allow Medium Removal** command, which is software controlled.

Emergency Ejection

The tray is ejectable by pushing a pin or standard size paper clip into the emergency eject pinhole on the front bezel. The emergency ejection mechanism functions even without power to the drive and with the prevent bit set.

Table 19 Emergency Ejection Specification

Maximum force	3.5 Kgf
Stroke of pin insertion	40 mm
Recommended diameter of pin	1.2 mm

Auto Insertion

The tray automatically closes when it is pushed.

Table 20 Auto Insertion Specification

Maximum force	5.5 Kgf
Stroke	3 mm

The drive is designed to respond within 1 second.

Ejecting Position

The tray is ejected approximately 64.5 mm from the front of the front bezel to the center of the disc.

Volume Control

The Volume Control on the front of the hp dvd-writer dvd100i drive (shown in Figure 28) controls the output volume to the headphone jack.

Starting Software

The **hp cd-dvd** screen can be opened three ways:

- Insert a blank disc into the drive.
- Select **Start›Programs›HP DVD-Writer›HP DVD-Writer**
- Double-click the hp dvd-writer desktop icon
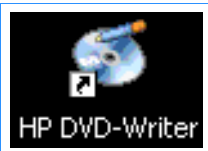
Figure 29   **hp dvd-writer Desktop Icon**

The **hp cd-dvd** screen appears (see **Figure 30**).
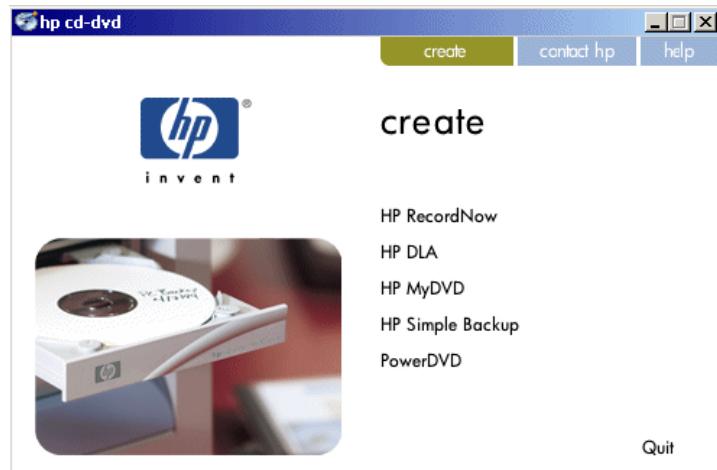
Figure 30   **hp cd-dvd Screen**

The choices in the **create** tab of the **hp cd-dvd** screen are:

- **HP RecordNow**
  Makes a music CD to play on your home or car stereo, a copy of an existing CD, or a data CD to use on any PC.

- **HP DLA**
  Makes a data CD to use on this PC.

- **HP MyDVD**
  Lets you record video directly to DVD or CD, or assemble a DVD project using video clips, pictures and photographs.

NOTE: *HP MyDVD does not run on Windows NT.*

- **HP Simple Backup**
  Backs up your PC to DVD or CD

- **PowerDVD**
  Play DVD movies on your PC

This chapter provides answers to questions frequently asked about using the hp dvd-writer dvd100i drive and is organized as follows:

Frequently Asked Questions

Q Why so many different programs?

A You can do dozens of things with your HP drive. Each program that came with the drive helps you do something different.

Use HP RecordNow to:
- copy non-content-protected DVDs and CDs
- create music CDs
- create DVD-ROM compatible data discs to share

Use HP MyDVD Video by Sonic to incorporate your video footage, photos and music on to DVDs that you can view on most DVD-ROM and DVD players.

Use HP DLA (Drive Letter Access) to write to your HP drive from any application you normally use such as a word processor, spreadsheet, or Windows Explorer.

Use HP Simple Backup by Veritas to protect your information from a hard drive or computer crash by backing up your files so you can quickly and easily restore them.

Q What's the difference between mastering and packet-writing software?

A Your HP drive comes with Two types of software: mastering software and packet-writing

Your HP drive comes with two types of software: mastering software and packet-writing software. Mastering software is useful for writing a complete disc, for recording music, or for ensuring that others can read your disc. HP RecordNow is the mastering application that came with your HP drive.

Packet-writing copies a few files at a time by dragging and dropping them onto the HP-drive icon or by saving directly from a word processor or other application. HP-DLA is the packet-writing software that came with your HP drive.

Mastering and packet-writing applies only to CD media.

Q How much information can I fit on one CD?

A The type of disc and software you use greatly affect the amount of data you can fit on a disc.

A DVD+RW disc can hold approximately 4.7 GB of data or up to 3 hours of video depending on the video-quality setting you choose when you record the disc.

When you use HP DLA, a DVD+RW disc can hold approximately 4.6 GB of information.

A single session CD written with HP RecordNow can hold 650 MB of data or 74 minutes of music (an 80 minute CD will hold 700 MB or 80 minutes of music).

Most of the time you will probably be writing multisession CDs. Multisession allows a CD to be recorded, removed, and read on a CD-ROM drive and then have more information added later. Each time you record a session, overhead is added to your data; about 23 MB of overhead for the first session and 14 MB of overhead for each session after that. Therefore, the total amount of data that you can fit on the CD varies depending on how many sessions are written and how much data is in each session. So when planning your work, try to write as much data in a session as you can.

When you use HP DLA with a CD-Recordable (CD-R) disc you can store up to approximately 618 MB of data on 74-minute media or 670 MB on 80-minute CD-R media.

When you use HP DLA with a CD-ReWritable (CD-RW) disc, the amount of data that can fit on the CD is about 530 MB because of the additional file structure overhead.

Q Can I do other things while my CD is recording?

A If your new drive is a cd12, cd16, cd24 or dvd100i, it has Buffer Underrun Protection Technology that eliminates buffer underrun errors. You can use your computer to do other tasks while you write discs. You never have to turn on your drive's buffer underrun protection technology because it works automatically in conjunction with your drive's mastering software.

HP MyDVD Video by Sonic does not capture video efficiently when your computer is performing other tasks. Your DVD disc will not be ruined, however video capture performance may be affected or there may be errors on the disc that require you to perform the recording operation again.

If your drive does NOT have buffer underrun protection technology you can do other things on your computer when using HP DLA; however, when using HP RecordNow, there won't be much computing power left to run other programs. Trying to run other programs at the same time can interrupt the recording process and corrupt the disc because HP RecordNow and other mastering applications need a constant stream of data to write to the disc.

So, before you start a recording session with these programs do the following:

● Sign off from email.

● Log off of the network.

● Turn off any other programs that might interrupt, such as a calendar with a reminder feature or a scheduled backup that might begin.

Q What kinds of discs can my HP drive write to?

A Your HP DVD-Writer can write to:

- DVD+RW (DVD-RW or DVD-RAM are not compatible with your drive)
- CD-R Media (74 and 80 minute)
- CD-RW media (1x-4x)
- CD-RW media (4x-10X)

Choose DVD+RW to store large amounts of data or your custom video that will play in most DVD players or DVD-ROM drives.

At times, you will want to use CD media rather than DVD, such as when you are sharing small amounts of data or creating music CDs. When choosing which kind of CD to use, consider the following:

- Use CD-R discs when you want assurance that a lot of other people can read the CD. Use CD-Rs when you want to share data with others, when you will be sending the CD to a large number of customers, or for music CDs that you can play in any home or car CD player.
- Choose CD-ReWritable discs as additional personal storage. For example, when you want to archive files to free up space on your hard drive or to transfer files between home and work where you have a drive in each location.
- We recommend you use HP brand media. HP is only able to provide technical assistance on issues related to the HP brand. If you experience difficulty with non-HP media, please refer to the media manufacturer for support.

Q What is the best way to make a disc I can share?

A To create a DVD+RW data disc that is compatible with most leading DVD-ROM players use HP RecordNow.

The DVD-video discs you create can be read in most leading DVD video players and DVD_ROM drives. If you wish to view a DVD-video disc you created on your PC, you must use PowerDVD software included with your drive.

If you want to be sure that anyone with a CD-ROM drive can read your CD, use a CD-Recordable disc and HP RecordNow: for example, if you want to send a business presentation to a large number of customers or make a music CD.

If you know that everyone reading your CD will be running Windows 95/98/Me or Windows NT/2000 you can use a CD-Recordable disc and HP DLA.

CD-RW discs can only be read in either CD-RW drives or newer CD-ROM drives that support the MultiRead specification. This is because CD-ReWritable discs are a newer technology. Since not everyone can read CD-RW discs, they are good for additional personal storage for your computer, for archiving and freeing up space on your hard drive or for transferring files between work and home when you have an HP drive in both places.

Q Can I erase a disc?

A DVD+RW discs can be re-written to repeatedly.

You can delete files from a CD-Recordable and CD-ReWritable disc the same way you can delete files from a floppy or hard disk. Each location on a CD-ReWritable disc can be erased and rewritten up to 1,000 times. However, deleting a file from a CD-Recordable disc works differently: the space that the deleted file took up is not made available again because each location on a CD-Recordable disc can only be written to once. For this reason, you may not want to delete files from a CD-Recordable disc even though it is possible to do so.

Q How should I take care of my discs?

A Recommendations:

- Do not use a CD jewel case with your DVD+RW discs. A CD case holds the DVD media too tightly, causing the disc to bend, which can lead to data loss.
- Do not expose your discs to extreme heat, moisture, or light for extended periods of time. Store in a cool, dry, dark place.
- Scratches, dirt, and fingerprints can make a disc unreadable. Handle a disc only by the edges and don't leave them scattered around or stacked on top of each other. Store discs in their cases.
- If it becomes necessary to clean a disc, use only water and a soft cloth. When wiping a disc, wipe in a straight line from the center to the outer edge, not in a circle. Make sure the disc is dry before you insert it into a drive.

Q What is the best way to label a disc?

A Recommendations

- Adhesive labels should NOT be applied to DVD+RW discs because they can make the DVD unreadable.
- If you use an adhesive label on CDs, use only labels made specifically for CDs. Once the label touches the CD, don't try to remove or reposition it because you can pull off the recording layer.
- Use only quick drying permanent markers to write on discs. Avoid any marker containing non-drying ink, because the ink may eventually eat through the disc surface and damage your data. Do not use ballpoint or other sharp-tipped pens because you can scratch through the protective coating and damage your data.

Q How do I buy more discs?

A You can purchase HP CDs and DVDs from your local computer store or online at http://www.hp.com

Q When do I need to format a disc?

A A CD only needs to be formatted if you will use HP DLA.

DVD+RW discs must always be formatted before use. Your software will take care of formatting automatically.

Q Can I copy a disc that is in my existing CD-ROM or DVD-ROM drive to a disc in my HP drive?

A You can use a DVD-ROM drive as a source drive; however, if the disc you want to copy is a DVD+RW, not all DVD-ROM drives will be able to read it.

The copyright law of the United States (Title 17, United States Code) and similar laws in other countries govern the reproduction of copyrighted works. The person using the HP drive may be liable for its use to make unauthorized copies of copyrighted works. Hewlett-Packard Company does not authorize or condone the use of the HP drive for the unauthorized reproduction of copyrighted works.

Neither your HP DVD-Writer nor the software that came with it is capable of copying content protected discs.

Q Can I copy a music disc that is in my CD-ROM drive to a blank disc in my HP drive?

A You can use your CD-ROM drive to copy music CDs if the CD-ROM is capable of "digital audio extraction". Although all CD-ROM drives can playback music from a music CD, not all are capable of reading the tracks in digital format or can do it at an acceptable speed. If a music CD that you've recorded contains clicks, pops, or hissing, this could be the cause. Your CD-ROM is capable of digital audio extraction if it is available in the "Device to read from" box in the HP RecordNow software. If your CD-ROM drive does not do digital audio extraction, you can still copy music CDs by swapping the music CD and the blank CD in and out of your HP drive.

Chapter 7   Software

This chapter describes software applications shipped with the hp dvd-writer dvd100i drive and is organized as follows:

Start Menu Choices for Core Software

The core HP software choices listed in Table 21 appear in the **hp cd-dvd** screen when the user selects
Start>>Programs>>Hewlett-Packard>>HP DVD-Writer>>HP DVD-Writer.

Table 21   Core Software Applications Accessed from the hp cd-dvd screen

Application
HP RecordNow
HP DLA
HP MyDVD
HP Simple Bacup
PowerDVD

HP RecordNow 3.0

HP RecordNow is disc mastering software that allows you to create your own music or data discs from files on your computer, or from other disc media such as CDs or DVDs. Music discs created with HP RecordNow will play on any CD player, whether it's at home, in your car, or through your computer's CD-ROM. HP RecordNow also makes it easy to create data discs that can be read on any appropriate CD or DVD disc reader.

NOTE: *Some DVD players cannot read CD-R media. Refer to the documentation that accompanied your drive for information on supported media.*

HP RecordNow guides you, step-by-step, through the recording process with simple Wizards and an intuitive user-interface. Using HP RecordNow you can create:

- Exact copies of existing discs
- Discs of archived data from your hard drive
- Music compilations from WAV or MP3 files, or from existing music discs

Manuals for HP RecordNow

Online Help is available for HP RecordNow from the **Help** menu in the **HP RecordNow** window.

A general discussion of CD formats and their limitations appears in the online HP CD-Writer User's Guide, in the section titled *Can others read the CDs that I've written?.*

A README file is accessible from the **Start** menu, the installation CD, and in Chapter 11 Release Notes, page 97.

Installing HP RecordNow

HP RecordNow is automatically installed by the HP CD-Writer installation program. Otherwise, to install HP RecordNow:

1. Insert the installation CD into your drive.
2. If the installation window does not appear automatically, go to Explorer and click on the drive containing the HP RecordNow installation CD. Double-click on **SETUP.EXE**.

3. When the installation window appears, click on HP RecordNow.
4. Follow the instructions on the screen.

Files Installed for HP RecordNow 3.0

Applicable to all supported OS platforms. (Win9x/ME, NT4 & Win2k).

Table 22   Location: C:\Program Files\HP MyCD ‹default ›

Name	Description	Version
Media	Directory	N/A
System	Directory	N/A
Btnenh4.ocx	Active Multimedia Button, ActiveX Control	4.4.05
Cehelper.dll	CEHelper Module used by MyCD.EXE	1.0.0.3
DelsL1.isu	Uninstall log	N/A
MainENU.dll	English language library	N/A
Mycd.cnt	Help Table of Contents file	N/A
MyCD.exe	Main Application Executable	3.0
Mycd.gid	Help file	N/A
Mycd.hlp	Help File	N/A
Pconfig.dcf	Encrypted Configuration File	N/A
Readme.txt	User information text file	N/A
~cevts.che	Cache file for Data CD Creation	N/A
~cevts.db	Data base file for Data CD Creation	N/A
~cevts_001_tmp.dir	Directory to hold temporary files	N/A
Music.dat	Cache file used by MyCD.EXE	N/A

Table 23 Location: C:\Program Files\HP MyCD\Media

Name	Description	Date
About.cea	UI Graphics File	05/15/01
Btn.ceb	UI Graphics File	05/15/01
BtnD.ceb	UI Graphics File	05/15/01
Main.ceb	UI Graphics File	05/15/01
Main256.ceb	UI Graphics File	05/15/01
Oem.ceb	UI Graphics File	05/15/01
Oemanim.cea	UI Graphics File	05/15/01
Read.cea	UI Graphics File	05/15/01
Write.cea	UI Graphics File	05/15/01

Table 24 Location: C:\Winnt\System32\ (NT & Win2k) — C:\Windows\System\ (Win9x)

Name	Description	Date
Px.dll	Main Prassi Engine	06/01/01
PxMas.dll	Mastering Component	06/01/01
PxWave.dll	Audio Component	06/01/01
PxSub.dll	Engine Services	06/01/01

Table 25 Location: C:\Winnt\System32\Drivers\(NT4 &Win2k) — C:\Windows\System\Iosubsys\ (Win9x)

Name	Description	Date
PxHelper.vxd	Device driver (Win9x)	06/01/01
PxHelper.sys	Device driver (NT4)	06/01/01
PxHelp20.sys	Device driver (Win2k)	06/01/01

Using HP RecordNow

Starting HP RecordNow

1. Use one of the following methods to start HP RecordNow:
   - Insert a blank disc into the drive.
   - Select **Start»Programs»Hewlett-Packard»HP DVD-Writer»HP DVD-Writer**.
   - Double-click the **HP DVD-Writer** desktop icon (see **Figure 31**).
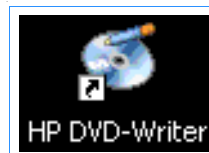
Figure 31 HP DVD-Writer Desktop Icon

The **hp cd-dvd** screen appears (see **Figure 32**).

Figure 32 hp cd-dvd Screen

2. Click **HP RecordNow**.

The **HP Record Now Welcome** screen appears (see **Figure 33**).

Figure 33   HP RecordNow Welcome Screen

Making an Exact Copy of a Disc

The *Make an Exact Copy* feature makes a duplicate of your master disc, transferring the disc layout of the original disc to your blank disc For example, a Disc-at-Once source disc will copy as a Disc-at-Once, retaining the track and gap layout of the original disc.

To make an exact copy of a disc:

1. Click **Make an Exact Copy** from HP RecordNow's main menu. HP RecordNow automatically opens your CD drive.

NOTE: *If you wish to use a different drive to read your disc, click the* **Change** *button (see* **Changing CD Recorder drives** *on page* **61** *for more information on this option).*

2. Insert the CD you wish to make a copy of into the tray.

3. Click **Next**.

4. Insert a blank disc into your CD-Recorder and click **Next**. HP RecordNow will now create a copy of your master disc and inform you when the process is complete.

5. If you wish to make another copy of the master disc at this time, remove the newly recorded disc from your CD-Recorder and replace it with a blank CD-R or CD-RW media, then click **Make Another**.

6. Click **Done** when you are finished recording.

7. Remove the discs from your drives and store them in a safe place.

Making a Data Disc

Use the *Data Disc* recording feature to copy data from your hard drive to a CD.

To create a data disc:

1. Click the **Make a Data Disc** button. HP RecordNow automatically opens your recorder drive.

2. Insert a blank or appendable disc into your recorder.

NOTE: *If you wish to use a different disc drive to read your disc, click the* **Change** *button (see* Changing CD Recorder drives *on page* 61 *for more information on this option).*

3. Select the files or folders you wish to copy to your disc by one of the following methods:
   - Click **Add Files or Folders**, highlight the files or folders you want to copy, then click the **Add** button.
   - Drag and drop files and folders directly from Windows Explorer to the *HP RecordNow* screen (see Dragging files from Windows Explorer to HP RecordNow on page 61 for more information on this option).

NOTE: *If you wish to remove any files from your list of files to record, highlight the file(s) you wish to remove then click the* **Remove** *button. Removing files from your copy job will not remove these files from your hard drive.*

4. Once you have selected the files to record, click **Next**. HP RecordNow begins recording data to your disc.

5. If you want another copy of your file list at this time, remove the newly recorded disc, insert another blank or appendable disc into your recorder, then click **Make Another**.

6. Click **Done** when you are finished recording.

7. Remove the discs from your drives and store them in a safe place.

Making a Music Disc from Audio Files

HP RecordNow easily creates custom music discs from your WAV and MP3 collection on the hard drive. Plus, the CDDB feature can automatically tag your files with such track information as artist, album, and genre to help you sort through your collection. See CDDB on page 58 for more information.

To make a music disc from audio files:

1. Click the **Make a Music Disc** button.

2. Click the **Make a Music CD from Audio Files** button. HP RecordNow automatically opens your CD-Recorder drive.

NOTE: *If you wish to use a different disc drive to read your disc, click* **Change**. *(See* Changing CD Recorder drives *on page* 61 *for more information.)*

3. Insert a blank disc, then click **Next**.

4. Click **Scan for Music** to have RecordNow automatically search your hard drive for valid music files.

NOTE: *You can control the size of audio file HP RecordNow searches for by selecting the* **Hide audio files shorter than...** *option from the* **Options** *button ›* **General** *tab (see* Options *on page* 58*). This feature speeds up the search process by eliminating the short audio files such as the ones you hear when Windows starts up or closes a program.*

5. When RecordNow has located all of the valid music files on your system, you can sort your music tracks by selecting a category from the **View** drop-down menu in the **Music on System** section.

6. Select the tracks you want to add to your music disc using one of the following methods:
   - Select the tracks you want from the **Music on System** window and click the **Add** button.
   - Click the **Browse...** button, navigate to the tracks you wish to record, select them, then click the **Add** button.
   - Drag-and-drop tracks from the **Music on System** window on the left to the playlist window on the right.

- Drag-and-drop tracks directly from Windows Explorer onto the RecordNow playlist window. See Dragging files from Windows Explorer to HP RecordNow on page 61 for more information on this.

NOTE: *Clicking* **Remove** *deletes the highlighted track from your list but does not affect any files on your hard drive.*

7. Arrange the order of the tracks in your playlist window by either:
   - Selecting a track then using the green up or down arrows

   or

   - Selecting a track and dragging it to the new position.

NOTE: *You can rename any track in the playlist window by selecting the track, single clicking twice on the track name (or pressing ‹F2›), then typing the new name. If your CD recorder supports CD text, your tracks will show the new names.*

8. Click **Next** to begin recording your tracks.

9. Once the disc has been created, if you would like to make another disc with the same track list, replace the newly recorded CD with a blank disc then click Make Another.

10. Click **Done** when you are finished recording.

11. Remove the discs from your drives and store them in a safe place.

Making a Music Disc from other CDs

RecordNow can record tracks from various CDs in your collection to a single disc. This is ideal for creating "Best Of" CDs.

To make a music disc from existing CDs:

1. Click the **Make a Music Disc** button.

2. Click the **Make a Music Disc from other CDs** button. HP RecordNow automatically opens your recorder drive.

3. Insert the CD you wish to copy songs from then click **Next**.

NOTE: *If you wish to use a different disc drive to read your disc, click* **Change**. *(See* Changing CD Recorder drives *on page 61 for more information.)*

4. Add the tracks you would like to copy to the disc by selecting them from the Music CD Tracks window on the left, then clicking **Add**.

   The selected tracks appear in the playlist window on the right.

5. Click **Next CD** to add tracks from other CDs. RecordNow prepares your tracks and then prompts you to insert another CD.

6. Insert the next CD you wish to copy tracks from.

7. Repeat steps 4-6 until all the tracks you wish to copy are displayed in the playlist window on the right.

NOTE: *See* Total time of your audio tracks *on page 61 for details on how to track the amount of time your CD has available for your audio tracks.*

8. Arrange the order of the tracks in your playlist window by either:
   - Selecting a track then using the green up or down arrows

   or

   - Selecting a track and dragging it to the new position.

NOTE: *You can rename any track in the playlist window by selecting the track, single clicking twice on the track name (or pressing ‹F2›), then typing the new name. If your CD recorder supports CD text, your tracks will show the new names.*

9. Click the **Finish** button. RecordNow prepares your track list and then prompts you to insert a blank disc.

10. Insert a blank disc and click **Next**. RecordNow records your tracks to your blank disc.

11. If you would like to make another CD with the same track list remove the newly recorded CD, replace it with a blank disc, then click **Make Another**.

12. Click **Done** when you are finished recording.

13. Remove the discs from your drives and store them in a safe place.

Making a Disc for an MP3 Player

RecordNow can create a disc of your MP3 files that you can play on your MP3 player.

To make a music disc for an MP3 player:

1. Click **Make a Music Disc** from the Main Menu.

2. Click **Make a Disc for an MP3** player. RecordNow automatically opens your recorder drive.

NOTE: *If you wish to use a different disc drive to read your disc, click* **Change**. *(See* **Changing CD Recorder drives** *on page* 61 *for more information.)*

3. Insert a blank disc, then click **Next**. **Selecting Audio Files** on page **62** for information about searching your hard drive for music files.

4. Click Scan for Music to have RecordNow automatically search your hard drive for valid music files.

NOTE: *You can control the size of audio files RecordNow searches for by selecting the* **Hide audio files shorter than** *option from the* **Options** *button ›* **General** *tab (see* **Options** *on page* 58*). This feature speeds up the search process by eliminating the short audio files such as the ones you hear when Windows starts up or closes a program.*

5. When RecordNow has located all of the valid music files on your system, you can sort your music tracks by selecting a category from the **View** drop-down menu, in the **Music on System** section.

6. Select the tracks you want to add to your music disc using one of the following methods:
   - Select the tracks you want from the **Music on System** window and click the **Add** button.
   - Click the **Browse...** button, navigate to the tracks you wish to record, select them, then click the **Add** button.
   - Drag-and-drop tracks from the **Music on System** window on the left to the playlist window on the right.
   - Drag-and-drop tracks directly from Windows Explorer onto the RecordNow playlist window. See **Dragging files from Windows Explorer to HP RecordNow** on page **61** for more information on this.

NOTE: *Clicking* **Remove** *deletes the highlighted track from your list but does not affect any files on your hard drive.*

7. Arrange the order of the tracks in your playlist window by either:
   - Highlighting a track then using the green up or down arrows

   or
   - Highlighting a track and dragging it to the new position.

NOTE: *You can rename any track in the playlist window by selecting the track, single clicking twice on the track name (or pressing ‹F2›), then typing the new name. If your CD recorder supports CD text, your tracks will show the new names.*

8. Click **Next** to begin recording your tracks.

9. Once the disc has been created, if you would like to make another disc with the same track list, replace the newly recorded CD with a blank disc then click **Make Another**.

10. Click **Done** when you are finished recording.

11. Remove the discs from your drives and store them in a safe place.

CDDB

HP RecordNow's CDDB feature gathers artist, album and genre information about your audio files. this can be helpful in sorting through your MP3 or WAV file collection for your favorite songs or artists.

If HP RecordNow is configured to use CDDB, whenever HP RecordNow finds a new or changed file, it will connect to CDDB via the Internet to download information relevant to your new music file(s). HP RecordNow then uses this information to sort your collection by artist, album, or genre.

Since this database is constantly growing, every time you access CDDB, your files are updated with the latest information for that track.

Options

The **Options** feature allows you to customize how HP RecordNow performs your recording operations. Click the **Options** button to open the *Options* dialog box, then choose one of the option tabs to customize your settings.

General Tab

The General tab contains options controlling how RecordNow handles your recording jobs. Use the General tab to customize the following settings.

Eject drives automatically:

A check mark in this box causes RecordNow to automatically open your recorder drive tray when RecordNow is ready to accept a disc for recording.

Remind me to shut down my programs before a disc is created:

A check mark in this box causes RecordNow to display a reminder to close all other applications before beginning a recording session.

If you check the "Do not show me this again" box in the reminder dialog, this reminder will no longer appear until you re-check the Remind me to shut down my programs before a disc is created box.

NOTE: *For maximum performance, close all other applications before recording a disc. This includes any screen savers or anti-virus software you may have running.*

Warn me if I can't create a full Music Disc:

A check mark in this box causes RecordNow to display a warning if there is not enough free space on your hard disk to stage the audio tracks when making a music disc from other CDs.

RecordNow uses this hard disk space to make a temporary copy of your tracks from your music CDs. If there is not enough space on your hard disk RecordNow will still allow you to record to your disc, but depending on the amount of available space on your hard disk, some of your tracks may not record.

Hide audio files shorter than (in seconds):

A check mark in this box causes RecordNow to only search for audio files longer than the number of seconds you specify. This number can be anywhere between 1 and 999 seconds.

This option speeds up the search process by eliminating the short audio files, most of which are the ones you hear when Windows starts up, or closes a program.

Warn me when appending to a data disc:

A check mark in this box causes RecordNow to display a warning when you add data to a disc that already has information written to it.

⚠ Caution: When appending data to a disc with data already written to it, any new files being copied will overwrite any files already on the disc with the same name. This process makes any information in the old file inaccessible.

Verify the data written to the disc after write:

A check mark in this box causes RecordNow to verify that no errors occurred during the recording of your data disc.

Advanced Tab

The **Advanced** tab contains options controlling the default settings for your optical drive, and determines how RecordNow handles re-writable media. Use the Advanced tab to customize the following settings.

Limit the maximum recorder speed to:

Specify a recording speed from the drop-down menu if you want RecordNow to control the recorder speed.

This option is useful if your recorder speed is faster than the drive you are using to read your source disc. If you experience errors during recording try reducing the maximum recorder speed to a speed equal to or slower than the read speed of the drive you are using to read your source disc.

Always do a full erase on rewritable media:

A check mark in this box causes RecordNow to automatically erase the contents of rewritable media before beginning a recording.

Test operation before recording discs:

A check mark in this box causes RecordNow to test its reading process before beginning to record. This feature can help catch potential problems before recording and prevent wasting media due to a failed recording process.

It is recommended that you leave this option checked until you have recorded to several CDs and are certain that no issues or problems exist with your hardware setup.

Use Burn-Proof:

A check mark in this box eliminates any buffer underrun errors you may encounter with your drive. This option is only available for drives equipped with Burn-Proof technology.

Use Just-Link:

A check mark in this box eliminates any buffer underrun errors you may encounter with your drive. This option is only available for drives equipped with Just-Link technology.

Use Lossless Linking:

A check mark in this box eliminates any buffer underrun errors you may encounter with your drive. This option is only available for drives equipped with Lossless Linking technology.

CDDB Tab

The **CDDB** tab contains options controlling how RecordNow downloads song information from the Internet (CDDB (Compact Disc Database) Tips on page 60 for more information on CDDB).

NOTE: *When using the Internet to download information from CDDB, no information from your system is uploaded to CDDB.*

Use the **CDDB** tab to customize the following settings.

Prompt before downloading information:

A check mark in this box causes RecordNow to prompt you before accessing CDDB to download song information.

Always download information:

A check mark in this box causes RecordNow to automatically access CDDB to download song information.

Never download information:

A check mark in this box prevents RecordNow from accessing CDDB to download song information.

Use proxy server:

Check this box if you use a proxy server to access the Internet.
- **Address**: The computer address of your proxy server.
- **Port**: The port connection of your proxy server.

My proxy server requires login:

Check this box if you want RecordNow to remember your login information (if any) of your proxy server.
- **Username**: The name you use to login to your proxy server.
- **Password**: The password you use to login to your proxy server.

Tips and Tricks

HP RecordNow uses an easy to understand design to make recording discs as simple as possible. This section describes some helpful tips that can make your recording even easier.

CDDB (Compact Disc Database) Tips

RecordNow's CDDB feature can gather artist, album and genre information about your audio files. This can be very helpful in sorting through your MP3 file collection for your favorite songs or artists (see CDDB for more information).

To sort your music files:

1. Click **Scan for Music** from the **Make a Music Disc from Audio Files** or **Make a Disc fro an MP3 Player** screens to display the music files in the **Music on System** window on the left.

NOTE: *If you use the CDDB feature to download song information for your files, depending on the amount of files on your system, the initial download process may take a few minutes.*

2. Click the **View** button to display a drop-down menu of the various sorting options.

3. Select a sorting option:
   - **All files**: Lists all files in alphabetical order.
   - **By Artist**: Organizes your files into folders according to the artist's name.
   - **By Album**: Organizes your files into folders according to the album name.
   - **By Genre**: Organizes your files into folders according to the genre type.

   Once you have selected a sorting option, you can then either open the directory to add individual files to the recording job, or you can drag the entire folder to the playlist window on the right. This adds all the files within the directory to your playlist.

Dragging files from Windows Explorer to HP RecordNow

You can drag files and folders directly from Windows Explorer to HP RecordNow.

1. Create a RecordNow recording job (See Making a Data Disc on page 56, Making a Music Disc from Audio Files on page 56, or Making a Disc for an MP3 Player on page 57).
2. Open Windows Explorer.
3. From Windows Explorer, select the file(s) and folder(s) you would like to copy to your disc.

NOTE: *You can select multiple files and folders by holding down the ‹Ctrl› or ‹Shift› key on your keyboard, then highlighting the files you would like to copy.*

4. Position your mouse over the file(s) in Windows Explorer. Hold your mouse button down and drag your files from Windows Explorer to RecordNow.
5. Release your mouse button and your selected files will show up in the RecordNow window.

Using the Back button

Clicking the **Back** button from any screen in *HP RecordNow* will take you back one screen menu. This is useful if you change your mind while setting up your recording job.

Total time of your audio tracks

HP RecordNow displays the cumulative time of your audio tracks. This number changes with each track that you add or remove.

HP RecordNow will not allow you to add a track if it exceeds the available space on your media (typically 74 minutes for a compact disc). Or, you can remove one or more tracks from your list.

Changing CD Recorder drives

HP RecordNow automatically chooses the first optical drive it finds. However, if you have more than one drive, you can choose which recording device you wish to use.

To change your recorder drive:

1. Set up your recording job as you normally would.
2. After HP RecordNow automatically opens your recorder drive, click the **Change** button.

HP RecordNow will automatically switch to the next drive. If you have more than two recorder drives, select the appropriate drive from the drop-down menu.

Adding Data to a Data CD

HP RecordNow allows you to append or add data to a disc that already contains data. When appending data to a disc that already contains data, a prompt will appear asking if you would like to continue with the operation.

Caution: If you add files or folders to a disc that already contains files or folders of the same name, the files or folders on your disc will be overwritten and any information in the old files will be lost.

If you are recording to a writable disc:

■ Click **Yes** to append, or overwrite data to your disc.

Or,

■ Click **No** if you do not wish to overwrite that data. You can then add another blank or appendable disc and try again.

If you are recording to a rewritable disc:

■ Click **Yes** to append data to your disc.

Or,

- Click **No** if you do not wish to overwrite that data. HP RecordNow then asks if you want to erase all data on your disc.
  - Click **No** to insert another blank or appendable disc.
  - Click **Yes** to erase all the data on your media.

Selecting Audio Files

When making a music disc from audio files or making a disc for an MP3 player, clicking the **Scan for Music** button causes RecordNow to automatically search your hard disk for correctly formatted MP3 and WAV files.

Once your audio files appear in the **Music on System** window on the left, sort them by selecting a category from the **View** drop-down menu. You can then add individual audio files or entire folders to the playlist window on the right.

Previewing Audio Files

Highlighting a track then clicking the **Preview** button allows you to listen to that track. This can be helpful when arranging a play list of songs.

Renaming Audio Tracks

To rename an audio track:

1. Select the track you wish to change.
2. Single click twice on the track name in the playlist window on the right (or press ‹F2› on your keyboard.
3. Type the new name for the track.

NOTE: *To have your disc display the new name, your CD recorder must support CD text. Check the device documentation to see if your device offers this feature.*

Troubleshooting

HP RecordNow makes recording CDs as simple as clicking a few buttons. However, you may still have some questions as you make your recordings. This section tries to answer those questions.

Recordings Fail

Disc recording is a resource-sensitive process. Having other applications running while recording to a disc can deprive your system of required resources and cause the recording to fail.

Most of these errors can be avoided by following these steps:

- Enable Direct Memory Access (DMA) on your system. See your operating system's documentation for information on enabling DMA.
- Close all other applications during the recording process. This includes any screen savers and anti-virus software that may be running on your computer.
- Reduce your maximum recorder speed. See Options for more details.
- Use your recorder to both read your source disc and to write to your blank disc. RecordNow will create a temporary image of the source disc on your hard drive, which may read faster than your computer's read-only drive.

Adding Data Files to a Music Disc

Data cannot be added to a music disc created by HP RecordNow. When HP RecordNow creates a music disc, it creates a closed session disc, which prevents the addition of data.

Unreadable Media

Your optical drive uses a laser beam to read the information on your disc. Fingerprints, scratches, or any kind of dirt on your disc can cause the drive to misread your disc.

To avoid this, be sure your disc is clean by taking a clean cloth and wiping off any dirt or fingerprints. Also be sure to take care when handling your disc to avoid touching the shiny surface.

Optical Drive Unavailable

There are two basic types of optical drives: a *read-only* drive and a *recorder* drive. Though a recorder drive can be used to read read-only media, a read-only drive cannot be used to record to media.

Check to make sure that your recording device is properly attached to your system and that it is functional, then try your recording again.

Registry Modifications for HP RecordNow
Location
Hkey_Local_Machine\Software\Veritas\MyCD\Current Version\All

Table 26   HP MyCD Registry Keys

Key Name	Default Value	Configurable	Description
AlwaysFullErase	0	Yes	0 to do quick erase on CD/RW media, 1 to always do a full erase
AudioWrite TestLen	60	No	Number of seconds to test writing an Audio CD from the hard drive to the CD recorder
Build	Build Number	No	Product build number that shows up in Help->About
DataDontVerify	0	Yes	0 to verify data after write, 1 to skip verify after write
DataWrite TestLen	30	No	Number of seconds to test writing a Data CD
DontEjectDrives	0	Yes	0 to eject drives before any operation, 1 to skip the eject
DontShow Append Warning	0	Yes	0 to warn the user they are appending to a Data CD, 1 to skip this warning (when they check "do not show again")
DontShowApp Warning	0	Yes	0 to warn the user that running other applications can cause the CD creation to fail, 1 to skip this warning (when they check "do not show again")

Key Name	Default Value	Configurable	Description
DontShow AudioWarning	0	Yes	0 to warn the user if they have less than 800MB free when creating compilation CD's, 1 to skip this warning (when they check "do not show again")
FullName	E.g. VERITAS Copy Exec	No	Full product name as it appears in the title bars and Help->About
ImageDir	~cevts_001_tmp.dir	No	Default name for the directory to create to store any temporary files
ImageFilePrefix	~cevts	No	Prefix to any temporary name created by the application
MaxRecord Speed	0	Yes	Set to 0 to disable, otherwise set to the maximum record speed for ALL writers
MinAudioFile Length	0	Yes	0 to disable, otherwise minimum length (in seconds) of audio files that appear when creating Audio CD's from files on your hard drive.
Name	E.g. Copy Exec	No	Short application name used in dialog messages.
OemUrl	http://...	No	URL to navigate to when the user clicks on the OEM Logo
PXCacheSize	256	No	Passed to the PX for all engine operations
SkipAudioErrors	1	No	Skip over any audio errors when creating Audio CD's, so the operation does not fail

Key Name	Default Value	Configurable	Description
UsePXVerify	1	No	1 to use the PX engine verify process, 0 if you want the UI to compare the disc file by file to the source files during Data CD creation
Version	E.g. 1.0	No	Product version that appears in the Help->About box

Uninstalling HP RecordNow

To uninstall HP RecordNow from Windows 9x:
1. Click the **Start** button from your Windows taskbar.
2. Go to **Settings**, then select **Control Panel**.
3. Select **Add/Remove Programs**, then click the **Install/Uninstall** tab.
4. Select **HP RecordNow** and click **Add/Remove...**

Windows will remove all files associated with HP RecordNow.

To uninstall HP RecordNow from Windows Millennium Edition:
1. Click the **Start** button from your Windows taskbar.
2. Go to **Settings**, then select **Control Panel**.
3. Select **Add/Remove Programs**, then click the **Install/Uninstall** tab.
4. Select **HP RecordNow** and click **Add/Remove...**

Windows will remove all files associated with HP RecordNow.

To uninstall HP RecordNow from Windows NT:
1. Click the **Start** button from your Windows taskbar.
2. Go to **Settings**, then select **Control Panel**.
3. Select **Add/Remove Programs**, then click the **Install/Uninstall** tab.
4. Select **HP RecordNow** and click **Add/Remove...**

Windows will remove all files associated with HP RecordNow.

To uninstall HP RecordNow from Windows 2000:
1. Click the **Start** button from your Windows taskbar.
2. Go to **Settings**, then select **Control Panel**.
3. Select **Add/Remove Programs**.
4. Select **HP RecordNow** and click **Change/Remove...**

Windows will remove all files associated with HP RecordNow.

Support Provider for HP RecordNow

First Tier Support is provided by Hewlett-Packard.
Second Tier Support is provided by Veritas.

HP DLA 2.5

Drive Letter Access (DLA) allows you to use your CD or DVD recorder just as you would any other drive. This means you can now write files to your optical discs, delete files from your discs, and even format them directly from Windows Explorer without having to use any special mastering software.

HP DLA offers such helpful features as:

- **Drag and Drop files:** You can drag and drop files directly from Windows Explorer to your optical drive.
- **Formatting discs:** HP DLA lets you customize how you format your CDs and DVDs. You can perform a Quick or Full format, set what type of file system is used, and create a label for your disc.
- **Making discs compatible with other operating systems:** With HP DLA's Make Compatible feature, you can make CD-R discs readable by virtually any CD-ROM drive.
- **Viewing disc properties:** HP DLA shows you information about your media with a click of a button.
- **Viewing disc contents:** HP DLA uses the standard Windows Explorer screen to show you the contents of your disc.

Manuals for HP DLA

Online Help is available for HP DLA from the **Help** menu in the **HP DLA** window.

A general discussion of CD formats and their limitations appears in the online HP CD-Writer User's Guide, in the section titled *Can others read the CDs that I've written?*.

A README file is accessible from the **Start** menu, the installation CD, and in Chapter 11 Release Notes, page 98.

Installing HP DLA

HP DLA is automatically installed by the HP CD-Writer installation program. Otherwise, to install HP DLA:

1. Insert the installation CD into your drive.

2. If the installation window does not appear automatically, go to Explorer and click on the drive containing the HP DLA installation CD. Double-click on **SETUP.EXE**.

3. When the installation window appears, click on HP DLA.

4. Follow the instructions on the screen.

Basic Installation Locations for HP DLA 2.5

Applicable to all supported OS platforms. (Win9x/ME, NT4, Win2k, and Windows XP)

There is really only one installation process though there are two products (the DLA read only file system and the DLA file system). The only difference between the file systems should be the PCONFIG and the registry settings. During installation, we install the basic file set and set up a few registry settings. Then we install the DLA drivers and again change a few registry settings. Each of these should be enumerated below. Note that a "???" in the file name indicates that this is a language specific file where "???" will be replaced with the installed language ("ENU" for English).

There is really only one installation process though there are two products (the DLA read only file system and the DLA file system). The only difference between the file systems should be the PCONFIG and the registry settings. During installation, we install the basic file set and set up a few registry settings. Then we install the DLA drivers and again change a few registry settings. Each of these should be enumerated below. Note that a "???" in the file name indicates that this is a language specific file where "???" will be replaced with the installed language ("ENU" for English).

Files installed to "[Target Directory]" ("C:\Program Files\VERITAS\DLA" for example):

- DLAR???.DLL – The DLA user interface resource file.
- DLATRAY.EXE – The DLA user interface executable.
- VXDLA.CNT – A DLA file that is used for help.
- VXDLA.HLP – A DLA file that is used for help.

Files installed to "[Target Directory]\INSTALL":

- DLA.EXE – A DLA executable that allows command line access to DLA.
- DLAINST.DLL – The DLA installation helper DLL that installs and uninstalls DLA shared driver files.

- SSCDBHK4.SYS – A DLA Windows NT 4.0 file that handles certain optical hooks into the OS.
- SSCDBHK5.SYS – A DLA Windows 2000 file that handles certain optical hooks into the OS.
- SSPROP.VXD – A DLA Windows 9X file that handles the property pages.
- SSRTLN.SYS – A DLA Windows NT (4.0 and 2000) file that handles the C run time library code.
- SSRTLW.VXD – A DLA Windows 9X file that handles the C run time library code.
- TFSNBOIO.SYS – A DLA Windows NT (4.0 and 2000) driver file that handles the block IO.
- TFSNCOFS.SYS – A DLA Windows NT (4.0 and 2000) driver file that does the compression filter.
- TFSNDOFS.SYS – A DLA Windows NT (4.0 and 2000) driver file that is a pass through file system.
- TFSNDRCT.SYS – A DLA Windows NT (4.0 and 2000) driver file that supports direct IO. Not documented for user. Accessable via DLA command line.
- TFSNDRES.SYS – A DLA Windows NT (4.0 and 2000) resource file for DLA pop up dialogs.
- TFSNDTFS.SYS – A DLA Windows NT (4.0 and 2000) driver file that does our tape file system.
- TFSNIFS.SYS – A DLA Windows NT (4.0 and 2000) driver file handles the OS file system interface.
- TFSNOPIO.SYS – A DLA Windows NT (4.0 and 2000) driver file that handles the optical IO requests.
- TFSNPOOL.SYS – A DLA Windows NT (4.0 and 2000) driver file that does memory pooling.
- TFSNUDF.SYS – A DLA Windows NT (4.0 and 2000) driver that does the UDF file system for CD-RW.
- TFSNUDFA.SYS – A DLA Windows NT (4.0 and 2000) driver that does the UDF file system for CD-R.

- TFSWAPI.DLL – A DLA file that allows outside applications to hook into DLA (an API).
- TFSWBOIO.VXD – The DLA Windows 9X block IO driver.
- TFSWCMD.EXE - A DLA executable that issues Format/Eject/Enable/Disable commands to dla. This EXE is spawed within DLA to initiate actions.
- TFSWCOFS.VXD – The DLA Windows 9X file system compression filter driver.
- TFSWCTRL.EXE – A DLA executable that runs a small DLA control window for each device.
- TFSWCRES.DLL – The DLA resource file for all command line operations.
- TFSWDOFS.VXD – The DLA Windows 9X file system pass through driver.
- TFSWDRCT.VXD – The DLA Windows 9X file that ?.
- TFSWDRES.VXD – The DLA Windows 9X resource file that handles DLA pop up dialogs.
- TFSWDTFS.VXD – The DLA Windows 9X tape file system driver.
- TFSWIFS.VXD – The DLA Windows 9X driver that handles the OS file system interface.
- TFSWOPIO.VXD – A DLA Windows 9X driver that handles the optical IO requests.
- TFSWPOOL.VXD – A DLA Windows 9X driver that does memory pooling.
- TFSWSHX.DLL – The DLA Windows shell extension driver.
- TFSWUDF.VXD – A DLA Windows 9X driver that does the UDF file system for CD-RW.
- TFSWUDFA.VXD – A DLA Windows 9X driver that does the UDF file system for CD-R.

Files installed to "[Target Directory]\SYSTEM":
- UNINST.DLL – A product file that helps handle the uninstallation of DLA.

Files installed to "[Windows Directory]\SYSTEM32" ("C:\WINDOWS\SYSTEM32" for example):
- MFC42.DLL – A shared file that contains the MFC foundation that the UI requires.
- MSVCIRT.DLL – A shared file required by MFC due to our UI.

- MSVCP60.DLL – A shared file required by MFC due to our UI.
- MSVCRT.DLL – A shared file required by MFC for the C run time library routines needed by the UI.
- OLEAUT32.DLL – A shared file that is required due to some of the UI functions we use in MFC.
- OLEPRO32.DLL – A shared file that is required due to some of the UI functions we use in MFC.
- PICTUREBTN.OCX – A shared file that contains some of the buttons used in the main user interface.
- PNPWPROP.DLL - This is a Windows 9x Plug-n-play resource file used by PAPI to generate the PNP dialog.
- PNPWR???.DLL - A shared Windows 9X file that contains translated resources for the PNP dialog
- VXBLOCK.DLL – This is a helper DLL shared between many products that allows us to stop running conflicting applications. It provides the support for running MyCD and DLA simultaneously.
- VXDMDBTN4.OCX – This is a shared file that contains some of the buttons used in the main user interface.

Files installed to "[Windows Directory]\SYSTEM32\DRIVERS":

- DRVMCDB.SYS – Our shared optical device driver for Windows 2000 only.
- DRVNCDB.SYS – Our shared optical device driver for Windows NT 4.0 only.
- DRVNDDM.SYS – Our shared DDM driver file for Windows NT (4.0 or 2000) only.

Files installed to "[Windows Directory]\INF":

- DRVMCDB.INF – A shared Windows 2000 installation file for DRVMCDB.SYS.
- DRVNCDB.INF – A shared Windows NT 4.0 installation file for DRVNCDB.SYS.
- DRVNDDM.INF – A shared Windows NT (4.0 and 2000) installation file for DRVNDDM.SYS.
- PNPWIDE.INF – A shared Windows 9X installation file for our IDE plug and play drivers.
- PNPWTAPE.INF – A shared Windows 9X installation file for our tape plug and play drivers.

Files installed to "[Windows Directory]\HELP":

- PNPWH???.HLP – A shared Windows 9X help file for our plug and play drivers.
- DRVMCDB.INF – A shared Windows 2000 installation file for DRVMCDB.SYS.

DLA Engine Installation

The DLA engine attempts to update all DLA engine drivers to be the same. These drivers are the file system engine drivers and have nothing to do with the actual device drivers from the shared components team. There are two complex issues with this. The first is to be certain that all of the engine drivers are the new versions. The second is to make certain that all of the PCONFIG data gets combined into one file.

Each installation has a PCONFIG file. This file indicates what devices are supported for DLA. However, as a new version of DLA is installed, new devices may be supported and this needs to be updated. As a version of DLA is uninstalled, some devices may disappear from the support list while others remain from another installation.

All of this is handled by DLAUNIN.EXE. The normal installer calls "DLAUNIN.EXE –Q –I –D:<INSTALL>" where –Q means quiet mode, -I means install, and –D indicates the directory to install from where <INSTALL> is the directory. Only 1 version of DLA can be installed on a machine. This is a new feature of the MSI installer

Shared Components Installation

The shared components (drivers used by all products including backup) are handled by the basic installer. Each component is updated to make certain that only the newest version is installed. A helper file (PNPWTAPE.EXE for Win9X or PNPNINST.EXE for NT) handles the plug and play driver installation. This installation is the same basic installation we use on all products.

Registry

DLA install settings are stored in the registry in MyComputer\HKEY_LOCAL_MACHINE\Software\VERITAS\Direct Access\CurrentVersion\All

DLA driver settings are stored in the registry in MyComputer\HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services*   (* = name of DLA driver e.g. tfsnifs)

NOTE: *These settings should not be altered by the user.*

Using HP DLA

Starting HP DLA

1. Use one of the following methods to start HP DLA:
   - Insert a blank disc into the drive.
   - Select
     Start»Programs»Hewlett-Packard»HP DVD-Writer»HP DVD-Writer.
   - Double-click the **HP DVD-Writer** desktop icon (see **Figure 34**).
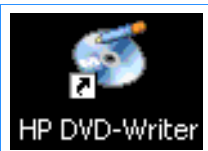
Figure 34   HP DVD-Writer Desktop Icon

The **hp cd-dvd** screen appears (see **Figure 35**).
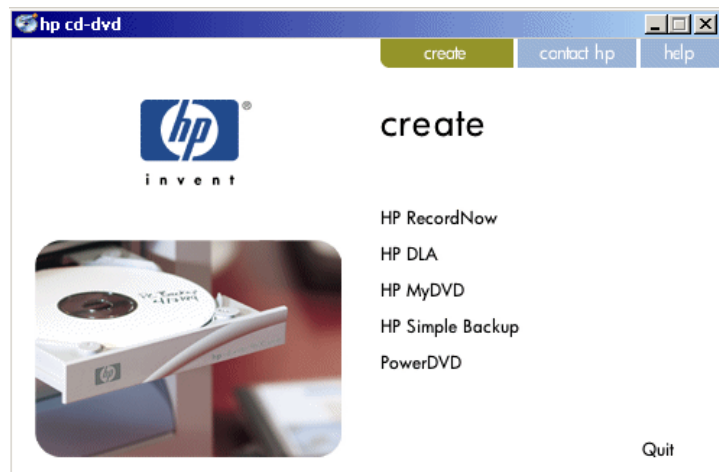
Figure 35   hp cd-dvd Screen

2. Click **HP DLA**.
   The **HP DLA Welcome** screen appears (see **Figure 36**).
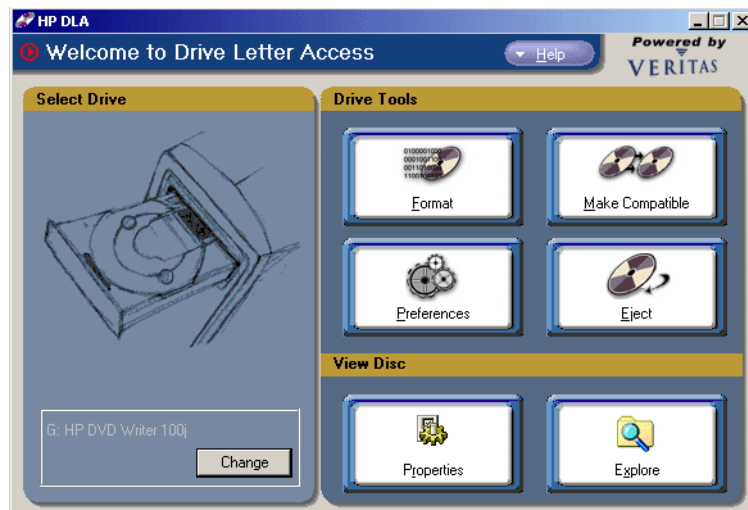
Figure 36   HP DLA Welcome Screen

Format

All discs must be initialized (or formatted) before they can store data. HP DLA's Format feature allows you to format your media directly from Windows Explorer just as you would any other drive.

HP DLA can perform either a Quick or Full format of your discs. The following table describes the fundamental differences between the two:

Table 27   Comparison of the different types of formatting

Quick Format	Full Format
Faster (generally taking less than 60 seconds)	Depending upon the speed of the drive, may take up to 90 minutes

Quick Format	Full Format
Can be performed on all CD and DVD recordable discs	Only available for CD-RW, DVD+RW, DVD-RW, and DVD-RAM media
Must be initially performed for all CD-R and DVD-R media	Must be initially performed for all CD-RW, DVD+RW, DVD-RW, and DVD-RAM media

To format a compact disc

⚠️ Caution   Formatting a disc makes all previously recorded data inaccessible.

1. Open HP DLA.
2. If your system has more than one recorder you can select the drive you wish to use by clicking the **Change** button on the left of the screen.
3. Click the **Format** button.
4. Place your media in your optical recorder and wait for the drive to spin up.

NOTE: *See* Eject Button *on page 70 for information on ejecting your recorder tray.*

5. Click the **Next** button.
6. Set the options:
   a. Type a label for the media (optional) by placing the cursor in the Volume label box and typing the name you wish.
   b. Select the Format option (either Quick or Full).
   c. If desired, select Enable Compression by clicking the option box until a check mark appears. (This compresses data with an approximate 2:1 compression ratio.)
7. Click Next.

NOTE:
   ● Once the Format operation is started, it cannot be cancelled.

● Media formatted with compression can only be read by a machine with HP DLA installed.
● Formatting a CD-R or DVD-R uses space on the media.
● If your CD-RW, DVD-RW or DVD-RAM disc has been used by another application, it may take HP DLA a little longer than normal to format the disc.
● If your drive is HP Fast Format capable (see your optical recorder's User Guide for more information) HP DLA will automatically use the HP Fast Format feature when performing a Full Format of your disc. This feature allows you to read and write to your disc during the formatting process.

Make Compatible

The Make Compatible feature makes the uncompressed data on your CD-R media readable by virtually any CD-ROM drive.

⚠️ Caution   The Make Compatible feature closes your appendable disc making it impossible to write further information to that disc. Do not use this feature until you have finished copying files to your disc.

To make your disc compatible
1. Open HP DLA.
2. Insert your CD-R disc into the drive tray.
3. Click the **Make Compatible** button.
4. Click the **Start** button.

NOTE:
   ● Depending on the amount of information on the disc, this process may take a few minutes to complete and cannot be cancelled.
   ● When using discs formatted by Make Compatible on computers that don't have HP DLA installed, long file names will be shortened and directories nested more than 30 folders deep will not be readable.
   ● Discs created with Make Compatible cannot be read by computers running in DOS mode.

Preferences

The Preferences feature allows you to customize settings that control how HP DLA works.

To customize your settings

1. Open HP DLA and click the **Preferences** button.

2. Set all appropriate option boxes:

Add Media Icon to the Taskbar

- Placing a check mark in the option box will place an icon in the Windows taskbar when you start up your computer.
- Removing the check mark will remove the icon from the taskbar.

Eject Button

Once a disc is inserted into the optical recorder, clicking the **Eject** button will open the tray so you can remove the disc.

NOTE:

- The **Eject** button does not open the tray when there is no disc in the drive. Manually open the recorder to insert the disc.
- HP DLA is enabled for one optical recorder at a time. Use the **Change** button to switch between drives, if you have more than one.

Properties Button

The **Properties** feature shows you the following information about your optical disc:

- Label: The name given to the disc.
- Type: The type of optical device being used to read the disc.
- Compression: The type of compression used to create the disc (i.e., None or Software).
- Used Space: The amount of information stored on your disc.
- Free Space: The amount of unused space still available on your disc.

NOTE: *Information about Used Space and Free Space is displayed both numerically (in KB or MB) and visually (blue shows used space, magenta shows free space).*

⚠ Caution   Use care when writing compressed files to write-once media such as CD-R and DVD-R. HP DLA is not able to determine in advance if a compressed file will fit on your disc. If the disc fills up before HP DLA finishes writing the file, you'll have to start over with a new disc.

Explore Button

Clicking the **Explore** button allows you to view the contents of your optical disc via the typical Windows Explorer screen. From there you can open, move, rename, and delete files just as you would from any other drive. HP DLA will automatically write the new information to your disc.

NOTE: *For users of Windows NT 4.0, 2000 Professional and XP: If you change the drive letter of your optical disc recorder after installing HP DLA, you will need to restart your computer before HP DLA will be able to recognize discs in your optical drive.*

Tips

The Taskbar Icon

If you right click on the media icon displayed in the taskbar, HP DLA will display a menu that lets you select a drive to access the following shortcuts:

Explore -- Open a Windows Explorer screen displaying the contents of the disc (see **Explore** Button)

Format -- Format the disc (see **Format** on page **68**)

Eject -- Eject the disc (see **Eject Button** on page **70**)

Make Compatible -- Open the Make Compatible feature (see **Make Compatible** on page **69**)

Properties -- View disc Properties (see **Properties Button** on page **70**)

Preferences -- Open the Preferences feature (see **Preferences** on page **70**)

Drag and Drop Files

You can drag files and folders directly from Windows Explorer to your disc.

1. Open Windows Explorer.

2. In Windows Explorer, highlight the file(s) and folder(s) you wish to copy.

NOTE: *You can select multiple files and folders by holding down the Ctrl or Shift key while highlighting your files. Press the Ctrl key and use your mouse to select non-adjacent files. Press the Shift key and use your mouse to select sequential files (i.e., highlight a file, hold down the Shift key and highlight another file -- all files between the two are selected).*

3. Position your mouse over the file(s) in Windows Explorer. Hold your mouse button down and drag your files to your optical drive.

4. Release your mouse button. HP DLA will copy your selected files to your disc.

Uninstalling HP DLA

Windows 9x

To remove HP DLA from a Windows 9x machine

1. Click the Windows **Start** button.
2. Select **Settings** then **Control Panel**.
3. Click **Add/Remove Programs** then click the **Install/Uninstall** tab.
4. Select **HP DLA** from the menu and click the **Add/Remove...** button.

Windows will remove all files associated with HP DLA from your computer.

Windows NT

To remove HP DLA from a Windows NT machine

1. Click the Windows **Start** button.
2. Select **Settings** then **Control Panel**.
3. Click **Add/Remove Programs** then click the **Install/Uninstall** tab.
4. Select **HP DLA** from the menu and click the **Add/Remove...** button.

Windows will remove all files associated with HP DLA from your computer.

Windows Millennium

To remove HP DLA from a Windows Millennium Edition machine

1. Click the Windows **Start** button.

2. Select **Settings** then **Control Panel**.
3. Click **Add/Remove Programs** then click the **Install/Uninstall** tab.
4. Select **HP DLA** from the menu and click the **Add/Remove...** button.

Windows will remove all files associated with HP DLA from your computer.

Windows 2000

To remove HP DLA from a Windows 2000 Professional machine

1. Click the Windows **Start** button.
2. Select **Settings** then **Control Panel**.
3. Click **Add/Remove Programs**.
4. Select **HP DLA** from the list of removable programs and click the **Change/Remove** button.

Windows will remove all files associated with HP DLA from your computer.

Windows XP

To remove HP DLA from a Windows XP machine

1. Click the Windows **Start** button.
2. Click **Control Panel**.
3. Click **Add or Remove Programs**.
4. Make sure the **Change or Remove Programs** button is selected, click **HP DLA** from the list of programs, and click **Change/Remove**.

Windows will remove all files associated with HP DLA from your computer.

HP MyDVD

HP MyDVD - Incorporate your video footage, photos and music into DVD titles that you can view and share on most DVD-ROM and DVD players. Easily transfer your video footage directly from your camcorder or VCR to DVD discs. Cut unwanted video footage, add transitions and rearrange scenes to create a more dynamic, enjoyable viewing experience for your audience. Jump to video scenes on DVD randomly and quickly without fast forwarding or rewinding.

NOTE: *HP MyDVD does not run on Windows NT.*

System Requirements

- Windows 95/98/ME/2000/XP
- 800 MHz Pentium-based PC or higher
- 128 MB RAM
- MyDVD disk space: 80MB
- Video disk space: 5GB
- 1024 x 768 with 16-bit (or better) color display
- DVD drive
- Mouse

Features

- Video import formats: MPEG-1, MPEG-2, AVI, QuickTime
- Audio import formats: WAV, MPEG-1 Audio
- Graphic import formats: BMP, JPG, PICT, PNG, TIF, TGA
- Video conversion: Software transcoder to convert AVI & QuickTime to MPEG
- Video standards: NTSC and PAL
- DVD output devices: CD-R, hard-drive
- DVD player: Included (can be automatically put on CD-R)

Manuals for HP MyDVD

A tutorial is available through a button on the first **MyDVD Wizard** screen (**Welcome to My DVD!**).

Available on the website mydvd.sonic.com/ are:

- MyDVD Knowledge Base — lets you perform queries for answers to commonly asked questions, and also submit new questions if you can't find what you need.
- MyDVD Online Forum — a place where you can ask questions, post answers, exchange information, and learn new ways to use MyDVD.
- FAQs — Answers to frequently asked questions

Installation

HP MyDVD is presented as an installtion option during the integrated install, except on Windows NT machines. The DirectX8a installer is used to install HP MyDVD on Windows 95/98.

Using HP MyDVD

NOTE: *HP MyDVD does not run on Windows NT.*

Starting HP MyDVD

1. Use one of the following methods to start HP MyDVD:

- Insert a blank disc into the drive.
- Select
  Start»Programs»Hewlett-Packard»HP DVD-Writer»HP DVD-Writer.
- Double-click the **HP DVD-Writer** desktop icon (see **Figure 37**) to open the
  hp cd-dvd screen (see **Figure 39**), then click **HP MyDVD** to open the **MyDVD Wizard** screen (see **Figure 40** on page **74**).
- Double-click the **MyDVD** desktop icon (**Figure 44**).
  The **MyDVD Wizard** screen appears (see **Figure 40** on page **74**).
- Select **Start»Programs»MyDVD»MyDVD**
  The **MyDVD Wizard** screen appears (see **Figure 40** on page **74**).
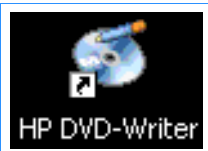
Figure 37   HP DVD-Writer Desktop Icon

Figure 38   MyDVD Desktop Icon

Figure 39   hp cd-dvd Screen

2. Click **HP MyDVD**.
The **MyDVD Wizard** screen appears (see **Figure 40** on page **74**).

3. Use the wizard to create the DVD.
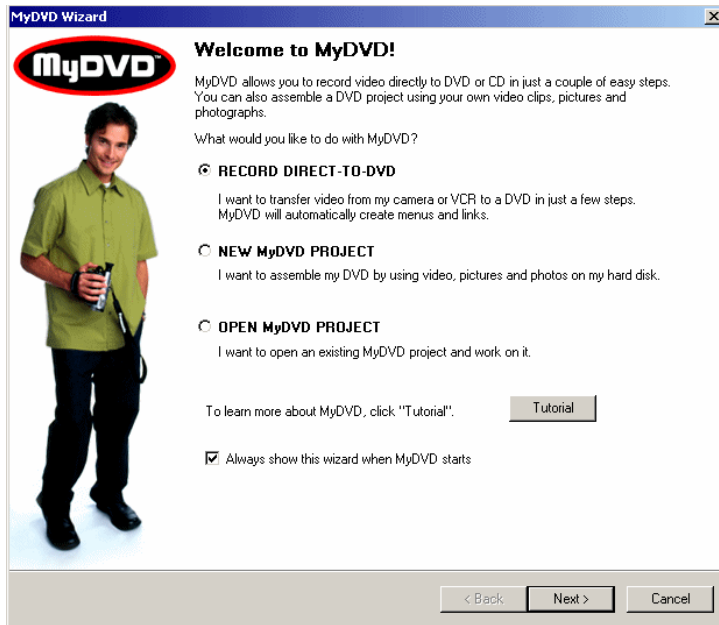
Figure 40   MyDVD Wizard Screen

Support Provider

First Tier Support is provided by Hewlett-Packard

Second Tier Support is provided by Sonic

Customer Support

For more information, contact:

Phone

Sonic pay-by-phone support provides access to dedicated support personnel on a per-incident basis. A fee will be charged to your credit card and covers the support needed to resolve an issue. Available worldwide.

USA and Canada

Pay $29.95 per incident. Call 1-877-DVD-1124

9am - 6pm Pacific Standard Time, USA (weekdays only)

Outside the USA and Canada

Pay $29.95 per incident. Call +1-415-893-7065

9am - 6pm Pacific Standard Time, USA (weekdays only)

Web

mydvd.sonic.com

HP Simple Backup

HP Simple Backup is a Windows based Backup software that allows you to use your HP CD-Writer to create backups of your computer's files and then restore those files to any computer equipped with a CD reader (yours or anyone else's).

HP Simple Backup offers four options to manage your backup needs:

- Full System Backup
- Custom Backup
- Complete System Restore
- Custom Restore.

HP Simple Backup also offers the following features to customize your backup or restore sessions to suit your individual needs:

- It can back up your entire drive, individual directories (with or without their subdirectories), or individual files.
- It can put multiple backup sessions onto one disc thus avoiding wasted media. It will estimate how many discs you will need to complete your backup so you won't run out of media half way through a job.
- Its Autorun feature allows you to restore files to any computer equipped with a CD reader (yours or anybody else's).
- You can even customize the way that you restore your files (i.e., overwrite all files, just the old ones, or never overwrite an existing file).

Using HP Simple Backup

Starting HP Simple Backup

1. Use one of the following methods to start HP Simple Backup:
   - Select **Start»Programs»Hewlett-Packard»HP DVD-Writer»HP DVD-Writer**.
   - Double-click the **HP DVD-Writer** desktop icon (see **Figure 41**).

Figure 41 HP DVD-Writer Desktop Icon

2. Click **HP Simple Backup**.
   The **hp cd-dvd** screen appears (see **Figure 42**).

3. Follow the instructions in the following sections.

Figure 42 hp cd-dvd Screen

Full System Backup

Making a copy of your computer's entire hard drive is easy with HP Simple Backup.

1. Start HP Simple Backup.
2. Click on **Full System Backup** from the main screen.

HP Simple Backup's Wizard walks you through the rest of the necessary steps.

Custom Backup

HP Simple Backup's Custom Backup feature allows you to pick and choose which files you want to backup. To create a Custom Backup, perform the following steps:

1. Start HP Simple Backup.
2. Click on **Custom Backup** from the main screen.

HP Simple Backup's Wizard walks you through the rest of the necessary steps.

Complete System Restore

HP Simple Backup's Complete System Restore option allows you to take the backup files you created using the Full System Backup option and put those files back onto any computer equipped with a CD reader (yours or anyone else's).

1. Insert the first CD of your backup set into your CD reader.
2. Click **Complete System Restore** from the automatically displayed screen.

HP Simple Backup's Wizard walks you through the rest of the necessary steps.

NOTE: *If HP Simple Backup does not start automatically, click on the Windows* **Start** *button and then select the* **Run...** *option. Browse to your CD reader's drive, double click the* **Setup.exe** *command and then click* **OK**.

Custom Restore

The Custom Restore option is much like the Complete System Restore option in that it allows you to restore files to any computer equipped with a CD reader (yours or anybody else's).

1. Insert the disc you created using HP Simple Backup's Custom Backup option into your computer's CD reader.
2. Click **Custom Restore** from the automatically displayed screen.

HP Simple Backup's Wizard walks you through the rest of the necessary steps.

NOTE: *If HP Simple Backup does not start automatically, click on the Windows* **Start** *button and then select the Run... option. Browse to your CD reader's drive, double click the Setup.exe command and then click OK.*

Automatically Excluded Files

Because of the constantly changing characteristics of some types of files, HP Simple Backup automatically excludes them. Following is a list of some of these types of files:

- Backup application files
- Index files for caches (internet files, history files, etc.)
- Windows swap files
- Drivespace or Doublespace files
- Temporary directories (i.e., .tmp files)

Errors and Warnings Report

The following is a list of errors and warnings that may appear in the **Report** file after a backup or restore operation. Look below for a description of the error that was reported.

Error/Warning	Description
File/directory busy or in use by another application, it will be skipped	An application was running at the time of backup, or a data file was in use. Close all applications, or those running from your system tray (i.e. Anti-virus, Scheduler,...), prior to backing up.
Error opening file/directory	• File or directory may be corrupted. Recommend running ScanDisk on that drive prior to backup. • You may not have proper read access to that file or directory (i.e. Windows NT security permission).

Error/Warning	Description
Error reading data from file system	• File or directory may be corrupted. Recommend running ScanDisk on that drive prior to backup. • You may not have proper read access to that file or directory (i.e. Windows NT security permission).
File/directory not found	File or directory was missing during backup. The files or directories selected for backup may have been moved or deleted by another application. If you would like these files backed up, locate them and perform a Custom Backup on these files.
Error creating file/directory	• File may be in use. Make sure the file you are restoring is not open or running. • You may not have proper write access to that file or directory (i.e. Windows NT security permission). • The hard disk you are restoring to may be corrupted. Recommend running ScanDisk on that drive prior to restore.
File/directory missing or corrupt during backup	These files or directories were not successfully backed up due to one or more of the errors above. Therefore, they are not available for restore on the backup media. This is simply a warning. To avoid receiving these errors in the future, follow the instructions above.

Error/Warning	Description
File/directory busy or access denied during backup	These files or directories were not successfully backed up due to one or more of the errors above. Therefore, they are not available for restore on the backup media. This is simply a warning. To avoid receiving these errors in the future, follow the instructions above.

Support Provider for HP Simple Backup

First Tier Support is provided by Hewlett-Packard.

Second Tier Support is provided by VERITAS.

PowerDVD

PowerDVD - Play DVD movies on your PC

System Requirements

- Windows ME, 2000, 98, 95 or Windows NT4.0 SP5+ operating systems
- Intel Pentium II 350MHz with MMX technology or above
- DVD-ROM installed
- Audio card supporting 44.1KHz or 48KHz sampling rate
- 32MB main memory
- Hard disk requirement of at least 20MB
- Display card supporting DirectDraw StandardFeatures

Manuals for PowerDVD

The user's guide is provided in Acrobat PDF format.

Using PowerDVD

Starting PowerDVD

1. Use one of the following methods to start PowerDVD:
   - Insert a blank disc into the drive.
   - Select
     Start>>Programs>>Hewlett-Packard>>HP DVD-Writer>>HP DVD-Writer.
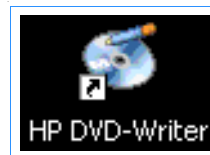   - Double-click the **HP DVD-Writer** desktop icon (see **Figure 43**) to open the **hp cd-dvd** screen (see **Figure 45**), then click **PowerDVD** to open the **PowerDVD** screen (see **Figure 46** on page **79**).
   - Double-click the **PowerDVD** desktop icon (**Figure 44**). The **PowerDVD** screen appears (see **Figure 46** on page **79**).
   - Select **Start>>Programs>>CyberLink PowerDVD>>PowerDVD** The **PowerDVD** screen appears (see **Figure 46** on page **79**).
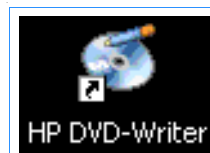
Figure 43   HP DVD-Writer Desktop Icon

Figure 44   PowerDVD Desktop Icon

Figure 45   hp cd-dvd Screen

2. Use the controls in the **PowerDVD** screen to play the DVD.

Figure 46   PowerDVD Screen

Support Provider

First Tier Support is provided by Hewlett-Packard.
Second Tier Support is provided CyberLink.

Customer Support

For more information, contact:

Email

powerdvd@gocyberlink.com

Phone

886-2-8667-1298

Fax

886-2-8667-1467

Web

www.gocyberlink.com

International Headquarters

CyberLink Corporation, 15F, No.100,

Min-Chiuan Road, Hsin-Tian City, Taipei Hsien, Taiwan

This chapter is organized as follows:

Product Care

- There are no user serviceable or maintainable parts in hp dvd-writer drives.
- When the drive is not in use, store the lid or tray in the closed position to keep out dust particles and other contaminants.
- Avoid vibration and shock to the drive. Excessive vibration and shock can misalign the laser and/or optics.
- Never mount or operate the drive in an upside down position.

Product Cleaning

Drive

The hp dvd-writer drives do not require cleaning.

- Never use a "CD-ROM cleaning kit" with this drive. The abrasive surface and brushes can damage the optics for the laser of the drive.
- If the external case becomes soiled, clean with a soft damp cloth and a mild detergent. Never clean with alcohol, gasoline, kerosene, benzene, lacquer thinner, or anti-static agents.
- Never use compressed air to clean the drive! The drive has parts that have very fine movement. Compressed air can impact these parts with dust and contaminants, causing them to fail.

Media

With reasonable care you can expect your DVDs or CDs to last for decades. However, to ensure performance and durability, follow these guidelines for handling your DVDs or CDs:

- Protect recording surfaces from scratches, fingerprints, and dirt.
- Hold DVDs or CDs by the outer edge or by the center hole.
- You can clean a CD with a soft, dry cloth. You can also use commercial CD cleaner or ethyl alcohol. Wipe the CD in straight lines from the center to the edges only.
- Write by hand only on the "white" premarked label side using an oil-based felt tip marker. **Do not use a ball-point pen.**
- Do not leave a CD in direct sunlight or in hot, humid location.

Chapter 9 Troubleshooting

This chapter provides descriptions and solutions for some hp dvd-writer drive hardware and software problems, and is organized as follows:

Up-To-Date Troubleshooting Information

Up-to-date troubleshooting information is available from the following web sites:

http: //www. hp. com/support/dvd-compatibility

http: //www. hp. com/support/dvd-capture

http: //www. hp. com/support/dvd-mydvd

http: //www. hp. com/support/dla

Frequently asked questions and answers are provided in Chapter 6 Tips and Techniques.

Release Notes for the hp dvd-writer dvd100i drives are on page 96.

HP Troubleshooting Assistant

More troubleshooting information is available in the browser-based HP Troubleshooting Assistant, which is installed with the drive.

NOTE: *Double-click on the hp dvd-writer icon on the desktop, then click on* **Help**, *then click on* **Troubleshooting**.
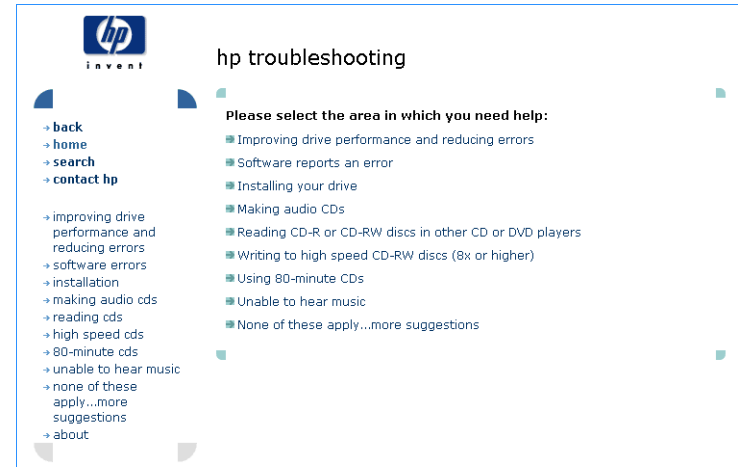
Figure 47 hp troubleshooting screen

Improving Drive Performance and Reducing Errors

Enabling Direct Memory Access to Enhance System Performance

Many computers and computer hardware devices come with a feature called Direct Memory Access (DMA). When you enable DMA, you accelerate data transfer between hardware devices because of a shortcut called the DMA channel. The DMA channel permits data to completely bypass the computer's CPU and travel directly from main system memory to the intended hardware device. By removing the CPU passageway,

you decrease the amount of time it takes to create your CD or DVD and increase system performance. Enabling DMA also reduces disc-writing failures.

HP recommends enabling DMA on all internal IDE CD/DVD Writers and all hard drives. DMA is not available on external HP drives; however, you can still improve performance when using an HP external drive by enabling DMA on your hard drive(s).

To enable DMA on HP CD/DVD drives and your computer's hard drives, follow the procedures for your version of Windows.

Enabling DMA on HP IDE CD/DVD Drives and Windows 98/Me

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Device Manager** tab.
4. Double-click the **CDROM** icon.
5. Double-click the HP CD/DVD drive listed.
6. Click the **Settings** tab.
7. Check the box next to DMA. If the box is already checked, then DMA is already enabled for the HP CD/DVD drive.

NOTE: *USB CD Writers do not have the DMA feature available*

Enabling DMA on hard drives and Windows 98/Me

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Device Manager** tab.
4. Double-click **Disk Drives**.
5. Double-click on the IDE hard drive listed.
6. Click the **Settings** tab.
7. Check the box next to DMA. If the box is already checked, then DMA is already enabled for the HP CD/DVD drive.

Enabling DMA on HP IDE CD/DVD Drives and Windows 2000 Professional

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.
5. In the list of devices, double-click **IDE ATA/ATAPI Controllers**.
6. Double-click the controller (normally the **Secondary IDE Channel**) that connects the HP CD/DVD drive to the motherboard.
7. Click the **Advanced Settings** tab.
8. Next to **Transfer Mode** select **DMA if available** for the correct IDE device. If you're unsure which device to enable DMA on, try setting DMA on both master (device 0) and slave (device 1).
9. Click **OK**.

Enabling DMA on hard drives and Windows 2000 Professional

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.
5. In the list of devices, double-click **IDE ATA/ATAPI Controllers**.
6. Double-click the controller (normally the **Primary IDE Channel** that connects the hard drive to the motherboard.
7. Next to **Transfer Mode** select **DMA if available** for each hard drive.
8. Click **OK**.

DMA will not stay enabled

Reasons why DMA will not stay enabled after restarting your computer

1. The device (hard drive, HP CD drive, HP DVD drive, CD-ROM drive) does not support DMA.
2. DMA is not available on your computer.
3. DMA has not been enabled in the computer's Basic Input/Output System (BIOS).

Refer to your computer's manufacturer for more information about using DMA on your system.

Other problems occurred after enabling DMA

If you enabled DMA and your system locks when accessing the HP drive or you start to have other system problems, disable DMA as a possible solution.

Other performance issues

40-conductor, 40-pin vs. 80-conductor, 40-pin IDE cables

The IDE cable that came with your new HP drive is a 40-conductor, 40-pin cable. Some computers now come with hard drives connected to faster 80-conductor, 40-pin cables, also known as ULTRA ATA66/100s.

The connectors on each of these two cables are the same, however you can note the difference between the two configurations on the cables themselves. The 80-conductor cables have more conductors on the cable, which can increase the performance of your hard drive.

When you installed your new HP drive, you might have replaced an 80-conductor cable with the 40-conductor cable that came in the box with your new drive. If you did replace an IDE cable, and your system now works slower, or you are having performance problems with one of your hard drives or a CD-ROM or DVD-ROM drive, examine the IDE cables. If you replaced an 80-conductor cable with a 40-conductor cable, your performance issues could be related to this and you should reinstall the 80-conductor cable. Although this isn't a recommended configuration, your HP drive will function with an 80-conductor cable.

Software Errors

HP RecordNow reported it was unable to read fast enough

When HP RecordNow creates a CD, it does so in a single, continuous operation. This operation requires that the computer's hardware and software transfer data from the source device to the HP drive fast enough to keep the HP drive's laser turned on at all times. If the HP drive becomes "starved" for data, the laser will turn off, and the recording session will fail. There can be many different causes of this error.

This error is more likely when making second-generation copies, when using a slow or unreliable CD-ROM as the source drive, or when using faster write speeds (10X or 12X) especially when the blank media is not rated for higher speeds.

If you are prompted to "retry" following a failed CD recording, first, try the following:

1. Clean your source CD.
2. Use your HP drive as your source drive.
3. Test the performance of your CD-ROM and HP drive prior to recording.
4. Retry the operation.

HP RecordNow reported that there was a problem reading the disc being copied

Clean the CD

1. Use a mild, nonabrasive soapy solution on a nonabrasive cloth to clean the shiny side of the disc.
2. Wipe from the center to the edge of the disc.
3. Dry the disc completely before reinserting it into your CD-ROM drive.

Try using a different source drive

To change the source drive, click the Change button in the device panel on the lower-right side of the RecordNow main window and select the desired drive from the pull-down list. Insert the CD into the selected drive.

Try using your HP drive as both the source and destination drive

If you use your HP drive as your source drive, the entire contents of the audio CD must be copied to your computer's hard disk. A 74-minute audio CD requires approximately 670MB of free hard disk space. Make sure your hard disk has at least this much free space available.

If you're trying to record to an 80-minute CD

The audio layout portion of the HP RecordNow application restricts audio creation to the 74-minute standard.

HP RecordNow reported a write error

See A high speed CD-RW disc was used in a drive that does not support high speed on page 88.

The CD-R or CD-RW disc may be scratched, damaged, or dirty

If the CD-R or CD-RW disc is scratched, damaged, or dirty, your HP drive may not be able to write data or audio to it.

■ Try using a new CD-R or CD-RW disc.
■ Try using a different manufacturer's CD-R or CD-RW disc.
■ Clean the CD-R or CD-RW disc:

1. Use a mild, nonabrasive soapy solution on a nonabrasive cloth to clean the shiny side of the disc.
2. Wipe from the center to the edge of the disc.
3. Dry the disc completely before reinserting it into your HP drive.

HP RecordNow reported that your HP drive is in use

Another application, such as DLA, is currently using your HP drive, preventing HP RecordNow from accessing it. Before you can continue, you must eject the current disc.

1. Press the eject button on the front of your HP drive and follow any on-screen instructions.
2. Insert a new, unformatted disc and return to HP RecordNow.

HP RecordNow reported that the source disc cannot be copied

Two types of source discs cannot be copied because they are in an incorrect format:
■ DVD movies that use copyright protection.
■ Discs that were written using the packet writing method (such as Veritas DLA).

Installation

Your HP drive is installed, but does not appear in Windows Explorer

■ Review your HP drive's configuration settings.
■ Turn off your computer, wait 20 seconds, then turn it on again.
■ Make sure your HP drive is receiving power. Press the eject button to open and close your HP drive's tray. If the tray opens and closes, the drive is receiving power.
■ If the drive is not receiving power, make sure that a power cable is plugged into the rear of the drive. If you have an external drive, make sure the external power supply is plugged into a working wall outlet or power strip.
■ Disconnect and then reconnect your external HP drive's power cable.
■ Disconnect and then reconnect data cable at both ends: at the back of the drive and at the computer's connector.
■ If you have an internal HP drive, check the data connectors at both ends for bent pins. If you find any bent pins, GENTLY and CAREFULLY straighten them with needle-nosed pliers.
■ Check the data cable for any signs of damage. If there is damage, you may need to replace the data cable.

Your HP drive is installed and appears in Windows Explorer, but now other devices such as CD-ROM or DVD-ROM drives do not appear in Windows Explorer

Check IDE/SCSI ribbon cables

You may have dislodged the IDE/SCSI ribbon cable for one of your IDE/SCSI controllers when you installed your HP drive. Inspect all cable connections inside

your computer, disconnecting and reconnecting the cables on the devices that no longer work.

Check data connectors for bent pins

Check the data connectors on the drive and controller for bent pins. If you find any bent pins, GENTLY and CAREFULLY straighten them with needle-nosed pliers.

Check external SCSI cables

You may have dislodged the SCSI cable for one of your SCSI devices when you installed your HP drive. Inspect all SCSI cable connections, disconnecting and reconnecting the cables on the devices that no longer work.

Change drive letter assignments

If you had assigned a fixed drive letter to your old device(s), Windows may now be assigning that letter to your HP drive, making it unavailable when the fixed letter assignment is attempted. Cancel all fixed drive letter assignments, or manually assign new fixed letters for all devices.

Windows assigned the wrong drive letters to your drives

Unless you specify otherwise, Windows assigns drive letters based on the hardware features of your computer and its components. This means that, in some cases, installing a new drive shuffles the drive letters not only of your new drive, but of those that were already installed.

If you want to assign drive letters to your CD or DVD drives manually, follow the procedure for your version of Windows.

Windows 95/98/Me

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Device Manager** tab.
4. Click the **View devices by type** radio button.
5. Double-click the **CDROM** icon.
6. Double-click a CD-ROM drive in the list.

7. Click the **Settings** tab.
8. Set the **Start drive letter** and **Finish drive letter** settings to the desired letter.
9. Click the **OK** button.
10. Repeat steps 6 through 9 for each remaining drive in the list.
11. Make sure no two drives are assigned to the same letter.

Windows NT

1. Log on with Administrator privileges.
2. Click the **Start** button, point to **Programs**, point to **Administrative Controls (Common)**, and click **Disk Administrator**.
3. Click a CD-ROM or DVD-ROM device.
4. Click the **Tools** menu, then click **Assign Drive Letter**.
5. Click the **Assign Drive Letter** radio button.
6. Select the desired drive letter from the pull-down list.
7. Click the **OK** button.
8. Repeat steps 3 through 7 for each remaining drive.
9. Make sure no two drives are assigned to the same letter.

Windows 2000

1. Log on with Administrator privileges.
2. Click the **Start** button, point to **Settings**, then click **Control Panel**.
3. Double-click **Administrative Tools**.
4. Double-click **Computer Management**.
5. Highlight the **Storage** icon in the left pane.
6. Double-click the **Disk Management** icon in the right pane.
7. Right-click the first drive whose drive letter you want to change.
8. Click the **Assign New Drive Letter and Path** option on the popup menu.
9. Select the desired drive letter from the pull-down list.

10. Click the **OK** button.

11. Repeat steps 5 through 8 for each remaining drive.

The HP drive's software installation fails

Uninstall the HP drive software:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.

2. Double-click the **Add/Remove Programs** icon.

3. Scroll through the list of installed programs.

4. When you see your HP drive's entry, click it.

5. Click the **OK** button.

6. Follow all on-screen instructions to uninstall the software.

Reinstall your HP drive's software.

Making Audio CDs

HP RecordNow reported an error while copying an audio CD or you hear clicks and pops when playing audio CDs

Try using a different source drive

Use another CD-ROM or DVD-ROM drive, if one is available.

You can also use your HP drive as both the source and destination drive. HP RecordNow copies the files or audio tracks from the CD to your hard disk, then back to the CD-R or CD-RW disc. Make sure your hard disk has enough free space to hold the entire contents of the CD you want to copy.

To change the source drive for an exact disc copy, click the **Change** button in the device panel on the lower-right side of the RecordNow main window and select the desired drive from the pull-down list.

When you change source drives or adjust the write speed, you should test your record operations before making the actual recording. To have HP RecordNow test your record operations before writing to a disc, follow these steps:

1. Click the Program Options button on the HP RecordNow main window.

2. Click the Advanced tab on the Program Options dialog box.

3. Check the Test operation before recording discs box.

HP RecordNow reported an incorrect file format

The specified file cannot be recorded to the CD because it is not in the correct format. MP3 and WAV files must be recorded as 16-bit stereo files using a rate ranging from 22KHz to 44.1KHz.

See also:

- HP RecordNow reported that there was a problem reading the disc being copied on page 83.
- HP RecordNow reported a write error on page 84.
- HP RecordNow reported that your HP drive is in use on page 84.

Reading CDs

A computer CD-ROM drive cannot read a recorded disc

The disc is scratched, damaged, or dirty

If the disc is scratched or damaged, it may be unreadable. If the disc is dirty, gently clean it to remove fingerprints, dust, and smudges:

1. Use a mild, nonabrasive soapy solution on a nonabrasive cloth to clean the shiny side of the disc.

2. Wipe from the center to the edge of the disc.

3. Dry the disc completely before reinserting it into the CD-ROM drive.

Try reading the disc in an HP drive, if available

Otherwise, try reading the disc in a different CD-ROM drive.

Some CD-ROM drives read discs very slowly if Read Ahead capabilities are enabled in Windows 95/98/Me.

Turn off Read Ahead capabilities for the drive.

Windows 95/98/Me only:

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Performance** tab on the **System Properties** dialog box.
4. Click the **File System** button in the **Advanced settings** box.
5. Click the **CD-ROM** tab.
6. Select **No read-ahead** from the **Optimize access pattern for:** pull-down box.
7. Click the **OK** button on the **File System Properties** dialog box.
8. Click the **OK** button on the **System Properties** dialog box.
9. Windows prompts you to restart your computer so that the change can take effect.

If these suggestions do not solve the problem, try these possible solutions:

You used CD-R media

Try closing the disc with the HP DLA wizard before reading it with a CD-ROM drive

If closing the disc fails to solve the problem, the CD-ROM drive is probably not Multi-Read compatible. To make a data disc that is compatible with non-Multi-Read CD-ROM drives, use HP RecordNow to write the CD.

(When you close a CD-R disc, you cannot reopen it to add more data with DLA.)

You formatted a disc and copied files to it using drive letter access (Windows Explorer, etc.)

If the CD-ROM drive you are using to read the recorded CD-R disc can successfully read commercially-produced CD-ROM discs, the drive is probably not capable of reading any form of recordable CD media.

If read errors occur when you use the CD-ROM drive to read both commercially-produced CD-ROM discs and CD-R media, the CD-ROM drive or its controller are faulty, the driver for the CD-ROM drive or controller is corrupted, or your Windows installation has become corrupted.

You used CD-RW media

If your CD-ROM drive can read formatted CD-RW discs but the drive lacks the necessary software, you can locate the software in the ENGLISH/UDFREADER directory on the software installation disc.

If the UDF Reader doesn't enable you to read the disc, the CD-ROM drive is probably not Multi-Read compatible. To make a data disc that is compatible with non-Multi-Read CD-ROM drives, use HP RecordNow and CD-R media.

The CD-ROM drive you are using is probably not Multi-Read compatible. Use CD-R media when you want to read discs using this drive.

If you're trying to read an 80-minute CD

See 80-Minute CDs on page 88.

A home, auto, or portable stereo CD player cannot play a recorded disc

Make sure this is an audio CD, not a data CD

Home, auto, and portable stereo CD players cannot read data discs.

Use the correct media

Make sure you use CD-R discs for recording, not a CD-RW discs. Most stereo CD players cannot read CD-RW discs. If you used a CD-RW disc, you can easily transfer its contents to a CD-R disc using the "Make an exact copy" feature of the HP RecordNow software. After you copy the CD-RW disc, you can erase and reuse it.

If an error occurs while recording

If HP RecordNow reported a serious error while recording an audio disc, the final state of the disc is uncertain. It may or may not play the audio tracks that had been recorded before the error occurred. Record the audio disc again.

You hear clicks, pops, and skips

If your audio disc plays but you hear clicks, pops, and skips, the CD was not recorded properly. See Making Audio CDs on page 86 for more information on this problem.

See Also:

- The disc is scratched, damaged, or dirty on page 86.
- 80-Minute CDs on page 88.

A computer DVD-ROM drive cannot read a recorded disc

Try reading the disc in an HP drive, if available

Otherwise, try reading the disc in a different CD-ROM drive.

Some DVD-ROM drives read discs very slowly if Read Ahead capabilities are enabled in Windows 95/98/Me

See Turn off Read Ahead capabilities for the drive. on page 87.

A DVD movie player cannot play a recorded disc

Make sure this is an audio CD, not a data CD.

DVD movie players cannot read data discs.

Use the correct media

Most DVD movie players can play audio CDs that are recorded on CD-RW media. Most DVD movie players cannot play audio CDs recorded on CD-R media. If you need to play recorded audio CDs in a DVD movie player, try recording on each media type, CD-R and CD-RW. If your DVD movie player can play CD-R discs, then always use CD-R media as these discs will also play in stereo CD players. If your DVD movie player only plays CD-RW discs, always use that media. Note that most stereo CD players cannot play CD-RW discs.

See Also:

- The disc is scratched, damaged, or dirty on page 86.
- 80-Minute CDs on page 88.

High Speed CDs

A high speed CD-RW disc was used in a drive that does not support high speed

New discs are available that support CD-RW writing speeds of 8X or higher. Older drives that support 1X to 4X CD-RW writing speeds do not support writing to high-speed discs. In this case, you cannot use high speed CD-RW media, and must purchase 2X or 4X certified CD-RW media.

To determine if this applies to your problem, examine the logo on the front of the CD-RW drive. If the drive does not have the "high speed" designation, do not attempt to use high speed CD-RW media rated at 8X or higher.

80-Minute CDs

A computer CD-ROM or HP drive cannot read an 80-minute CD

The CD is scratched, damaged, or dirty

- If the CD is scratched or damaged, it may be unreadable.
- If the CD is dirty, gently clean it to remove fingerprints, dust, and smudges. For more information, see Reading CDs on page 86.

Try reading the CD in a different drive

In some cases, you can try using a different drive to read the CD.

Use the drive that was used to write the CD

If you're using a drive different from the one used to write the data, try reading the CD in the original drive.

An error occurred while recording

If an error occurred while writing the CD, you may not be able to read some or all of the CD. You may not be able to accurately verify a recording error especially if you did not record the CD.

Use HP media

HP drives can read most 80-minute CDs. However, the manufacturing process for 80-minute CDs varies and reliability problems can occur. To reduce compatibility problems with 80-minute CDs, HP recommends that you use HP-brand 80-minute media or use a 74-minute disc. If experiencing difficulty with non-HP media, please contact the manufacturer for support.

A home, auto, or portable stereo CD player cannot read an 80-minute CD

Many home, auto, or portable CD players only read 74-minute CDs.

You cannot write to an 80-minute CD using your HP drive

HP supported drives

All HP DVD-Writers and most HP CD-Writers can write to 80-minute media. The following HP CD-Writer drives cannot write to 80-minute media: the 4020, 6020, 7100 and 7200 series drives. Ensure that you are using a supported HP CD-Writer drive when recording to 80-minute media.

You are using an HP CD-R 80-minute CD

If you are using an HP CD-R 80-minute CD and a supported HP CD-Writer drive and you cannot write to the disc, you may be experiencing a general write problem also associated with 74-minute CDs. For more information regarding write errors, see Software Errors on page 83 or Making Audio CDs on page 86.

You are using a non-HP CD-R 80-minute CD

HP drives can write to most non-HP 80-minute CDs. However, the manufacturing process for 80-minute media varies and reliability problems can occur. If you are using non-HP CD-R 80-minute CDs and you are experiencing write problems, HP recommends switching to 74-minute CDs or HP-brand CD-R 80-minute CDs. You could also contact the CD's manufacturer for support.

Supported HP CD-Writer Drives for 80-Minute CDs

Table 28   **Supported HP CD-Writer Drives for 80-minute CDs**

Drive Model	Hardware is Capable	Software is Capable
4020i	no	no
6020 series	no	no
7100 series	no	no
7200 series	no	no
7500 series	yes	yes
8100i series	Writes up to 78 minutes, 30 seconds on an 80-minute CD	yes
8200 series	yes	yes
8270e series	yes	no
M820e series	yes	yes
9100 series	yes	yes
9200 series	yes	yes
9300 series	yes	yes
9500 series	yes	yes
9600 series	yes	yes
9700 series	yes	yes
9900 series	yes	yes

Unable to Hear Music

You're unable to hear audio through the front headphone jack

If you can't hear audio through the headphone jack on the front of your HP drive, you can follow the steps for your version of Windows to enable the headphone jack and volume control. You will only be able to listen to an audio CD that will play in a standard CD audio player. CDs with MP3 or Wave files cannot be heard through the headphone jack but must be listened to through a sound card.

If you do follow these steps to enable the headphone jack, you will not be able to hear music through your speakers unless an audio cable is connected to your HP drive and a sound card. To enable the headphone jack on HP CD/DVD drives, follow the procedures for your version of Windows.

Windows 2000 Professional

Enabling the headphone jack in Windows 2000 Professional

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.
5. Double-click **DVD/CD-ROM drives** and double-click on the name of the drive(s) you want to enable.
6. Click **Properties**.
7. Under Digital CD Playback, uncheck the box next to **Enable digital CD audio for this CD-ROM device**. (To uncheck a box, simply click on it.)
8. Click **OK**.

Windows Me

Enabling the headphone jack in Windows Me

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Device Manager** tab.
4. Double-click **CD-ROM drives** and double-click on the name of the drive(s) you want to enable.

5. Click **Properties**.
6. Under Digital CD Playback, uncheck the box next to **Enable digital CD audio for this CD-ROM device**. (To uncheck a box, simply click on it.)
7. Click **OK**.

Windows 98

Enabling the headphone jack in Windows 98

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Double-click the **Multimedia** icon.
3. In the **Multimedia Properties Windows**, click the **CD Music** tab.
4. Under **Default CD-ROM drive for playing CD music**, select the name of the drive letter for your HP drive in the scroll window.
5. Uncheck the **Enable digital CD audio for this CD-ROM device**. (To uncheck a box, simply click on it.)
6. Click **OK**.

Windows XP

Enabling the headphone jack in Windows XP

1. Click the **Start** button, select **Settings**, and click **Control Panel**.
2. Click the **Performance and Maintenance** icon.
3. Click the **System** icon.
4. Click the **Hardware** tab.
5. Click the **Device Manager** button.
6. Double-click **DVD/CD-ROM drives** and double-click on the name of the drive(s) you want to enable.
7. Click **Properties**.
8. Under **Digital CD Playback**, uncheck the box next to **Enable digital CD audio for this CD-ROM device**. (To uncheck a box, simply click on it.)
9. Click **OK**.

DLA 2.5 Known Problems

DirectCD media read in DLA shows incorrect date/time

If a CD written to by DirectCD is read with DLA,

There may be a difference between the DLA date/time stamp and the date/time stamp recorded from DirectCD.

The original date/time stamp from DirectCD is correct, with DLA's is not.

We cannot determine if Direct CD is writing to the media correctly. DirectCD may be the only program that can view this correctly. (PTR#5043900)

Backpack Re-Writer 4A: Not Detected by DLA.

A warning message from DLA

"No compatible CD Recordable or CD Re-Writable devices could be found on your system." When using a Backpack Re-writer 4A.

Problem Description:

DLA appears to interfere with the driver installation for the Backpack Re-writer. If you install the Backpack software first, restart the machine and install DLA, and restart once more, you will not encounter any problems. However, if you install DLA first, restart the machine and install the Backpack driver software, and restart once more, you receive the above warning from DLA.

Despite this error message, the Backpack drive is mounted and has an assigned drive-letter. You can browse the drive from My Computer and it is displayed within the Device Manager. The drive will be recognized if you restart the computer another time. (PTR#5043061)

Installation allowed to Network Drives

The installation path will allow choices to a network drive. The user will not be warned of any problems. However, the user will receive an error "No compatible devices could not be found on your system" when they try to run DLA. This is due to the necessary driver files not available at the time of bootup.

The only solution is to have the user install all files to a local hard drive. (PTR#5043959)

Simple Backup and DLA can't be used simultaneously

This result is exclusive to computers with a CD-ROM and a CD-RW device or multiple CD-RW devices installed.

When Simple Backup is in use for one optical device, it blocks access to all other optical devices that are configured on that system.

This status is independent of device type, interface or bus configurations. Once the Simple Backup operation is completed, access to all optical drives is restored.

The DLA product will report that the drive is in use if access is attempted during any Simple Backup operation.

(PTR#5044123)

Very long volume label names get truncated in DLA tab and DLA properties

During the formatting of a CDR a name of 25 characters or more can be created. However the name will be truncated at the 25th letter. (PTR#5044132)

Disabling auto-insert results in DLA not recognizing discs.

If auto-insert notification is disabled, DLA will not recognize a disc in the drive. Other applications can see it and use the disc fine.

The user must enable auto-insert notification.
 (PTR#5039302)

Incorrect error message with Win 95 and Office 97

If a user removes the media from the drive and tries to save a file through Office 97, they will receive an error message "Floppy is not in use." The message should be "please insert media in drive."

This error is limited to Windows 95 and Office 97. This may not be intuitive to the customer. This means that the CD-RW drive does not have media inserted. (PTR#5037772)

Two Identical drives not recognized

If there are two identical drives installed on the same system, DLA will only recognize one drive.

This is a limitation of the CDB driver. (PTR#5039525)

Win 98SE DLA causing EZ CD Creator 4 to crash

EZ CD Creator will cause a "Creatr32 caused an invalid page fault in module Kernel32.dll" error. The error will occur with the following scenario:

1. Install DLA.
2. Install EZ CD Creator 4 and reboot.
3. Format a disk using DLA.
4. Move some files to the CD.
5. Eject the disk and close DLA.
6. Insert a new disk.
7. Start EZ CD and copy files into browser window.
8. Choose advanced and make sure it's track at once.
9. Do either create or test & create.

Error:

Creatr32 caused an invalid page fault in module Kernel32.dll

Workaround:
Installing EZCD first, then DLA fixes the problem

This error only occurs in Win 98SE.

(PTR#5038418)

Cannot change volume label in Windows ME

Cannot change the volume label on a CDRW with explorer in Win ME.

When trying to change the volume label on a CDRW in explorer, Win ME gives an error "can't label network drive". This is an issue with Win ME. The label command is making an assumption that non-hard drives are network drives. Label.exe should call into our file system via our IOCTL call with sub function 0x8 (to query if the drive is removable)...but never does.   (PTR# 5037611)

Zero length file is left at end of filled compressed media.

The last file being copied to a compressed media when the disk is filled creates the file but is zero bytes long. DLA can not predict disc capacity when figuring in compression.

There is no known work around. (PTR#5038660)

Network sharing is not supported with DLA

Sharing a DLA drive across a network is not supported. It can result in the host system locking up, receiving a BSOD or rebooting.

As sharing is not a requirement for this release. (PTR#5034607)

Drive not responding to close command

DLA cannot currently close an open drive.

 The user will have to manually close the drive.

(PTR#5044543)

CDR Media from Direct CD is not supported.

Media that was previously used by DirectCD cannot be used with DLA.

With an open session CDR the user will receive an error "Access is denied" when writing data with DLA.

(PTR#5044651)

When trying to format a CDR that was formatted with Direct CD the user will receive a "This disc is a read only disc and cannot be formatted" error (PTR#5044721)

Installer doesn't prompt to uninstall or disable built in Roxio software On Windows XP

Windows XP comes with CD mastering software built in (Roxio). During the installation of DLA the user will not be prompt to disable or uninstall the mastering application.

To disable the XP mastering applet the user needs to:

1. Right click on the CD-Writer.
2. Go to Properties.

3. Go to Recording.

4. Remove the check from "enable CD recording on this drive"

Reboot.

(PTR#5044348)

Not formatting when drag and drop from Explorer to unformatted media

When a user attempts to use windows explorer to drag and drop a folder to an unformatted CD-R, DLA prompts with   "The disk in drive x is not formatted. Do you want to format it now? Dialog appears: "This drive cannot be formatted". *‹after pressing yes?›* The media can be formatted by using the DLA toolkit or by right clicking on the drive letter from explorer and selecting "format".

(PTR#5044715)

This chapter is organized as follows:

hp dvd-writer dvd100i Warranty Information

DURATION OF LIMITED WARRANTY

Hardware - 1 Year

Software - 1 Year

The aforementioned warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, customer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation and maintenance.

In some regions, in addition to the normal local charges, fees may be charged for HP technical support. If during your phone call, it is determined that your HP drive requires repair, and you are within your drive's hardware-warranty period, phone charges will be reversed.

1. HP warrants to you, the end-user customer, that HP hardware, accessories and supplies will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

2. 2.HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software media which does not execute its programming instructions due to such defects.

3. .HP does not warrant that the operation of HP products will be uninterrupted or error-free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price on a pro-rated basis upon prompt return of the product. Refunds within the first 3 months of ownership will be refunded at 100% of purchase price. Refunds within 3-6 months of ownership will be refunded at 85% of purchase price. Refunds within 6-9 months of ownership will be refunded at 55% of purchase price. Refunds within 9-12 months will be refunded at 35% of purchase price.

4. HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

5. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

6. HP MAKES NO OTHER EXPRESS WARRANTY OR CONDITION WHETHER WRITTEN OR ORAL. TO THE EXTENT ALLOWED BY LOCAL LAW, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY SET FORTH ABOVE. Some countries, states or

provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country to country, state to state, or province to province.

7. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries, States or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

This information is subject to change without notice and is provided "as is" with no warranty. Hewlett-Packard shall not be liable for any direct, indirect, special, incidental, or consequential damages in connection with the use of this material.

Product Service and Support

Fee-based technical support. In some regions, in addition to the normal local charges, fees may be charged for HP technical support. If during your phone call, it is determined that your hp dvd-writer requires repair, and you are within your hp dvd-writer hardware-warranty period, phone charges will be reversed.

Service and support for the hp dvd-writer drive can be accessed from the following web sites:

http: //www. hp. com/support/dvd-compatibility

http: //www. hp. com/support/dvd-capture

http: //www. hp. com/support/dvd-mydvd

http: //www. hp. com/support/dla

At those sites you will find information on the following:

- Electronic Services
- E-Mail
- FTP Site
- Telephone

Support Parts List

The parts available for the hp dvd-writer dvd100i drive are listed in this manual in:

- Parts for C9619A (Internal) IDE hp dvd-writer dvd100i Drive on page 13.

This chapter contains the README text for applications shipped with hp dvd-writer dvd100i drives and is organized as follows:

HP CD-WRITER, hp dvd-writer

HP CD-Writer, HP DVD-Writer

This document contains information that may not be available in other areas of the software or the documentation.

Windows NT 4.0 ATAPI Driver Issues

Certain ATAPI drivers may cause the HP CD-Writer to perform incorrectly on some NT 4.0 machines. Changing the installed ATAPI driver to the standard mass storage controller driver (atapi.sys) that comes with Windows NT 4.0 should resolve the problem.

To change to the standard mass storage driver go the Control Panel, double-click on SCSI adapters, and select the appropriate IDE controller. Then click on the Drivers tab, select the currently loaded driver, and click Remove. Then click the Add button, and select the standard mass storage controller driver (atapi.sys).

The drivers for which problems have been seen include the Intel PIIX driver (piixide.sys) versions less than 2.04, and the Iomega ZIP IDE/ATAPI driver version 1.1.

HP RecordNow, Version 3.0

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This README.TXT file provides late-breaking information that supplements HP RecordNow on-line help. If information in help file conflicts with information presented here, the information in this README.TXT file should be considered correct and the most recent.

How to use this document

To view README.TXT on your screen in Notepad, maximize the Notepad window.

To print README.TXT, open it in Notepad, WordPad, or another word processor. Then select the entire document and format the text in 10-point Courier font before printing.

The following subjects are discussed:

1. Reading Audio Discs

    2. Delay After Cancel

    3. Copying CDs

    4. Mastering Limitations

    5. Conflicts with Easy CD Creator 4

    6. Enable DMA to Reduce Buffer Underruns

    7. Media Compatibility

1. Reading Audio Discs

If you create an Audio CD using a CD-RW disc, you will only be able to play this disc on Multi-Read capable CD players. For best results, it is recommended that Audio CDs be created using CD-R media.

For DVD players, please consult your DVD Owner's Manual in order to determine which type of media will provide the best results.

2. Delay After Cancel

A delay of a few seconds to several minutes may result after canceling an operation. The length of delay will depend upon the drive model, type of media used, and the point at which the operation was cancelled.

3. Copying CDs

Copying Audio CDs may take longer than copying Data CDs on some models of drives. This will vary between models, and can be affected by the quality of the source media.

4. Mastering Limitations

HP RecordNow can record files that contain file names up to 110 characters in length. This maximum length is a limitation of the recording file system, and cannot be exceeded.

5. Conflicts with Adaptec Easy CD Creator 4

If you are using HP RecordNow on a system containing Windows 2000 and Adaptec Easy CD Creator 4, you may experience a conflict. You will not encounter this problem if your version of Adaptec software is v4.02 or greater.

6. Enable DMA to Reduce Buffer Underruns

If you experience buffer underruns, try enabling DMA (Direct Memory Access) on your computer. See your computer's documentation for instructions on how to do this.

7. Media Compatibility

Some consumer disc players cannot read CD-R or CD-RW media.

If you are experiencing problems reading certain types of media, please check your player's documentation to ensure that your device is capable of reading the media.

HP DLA, Version 2.5

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This file contains important information which supplements the On-line Help. The following subjects are discussed:

1. Getting Started

2. System Requirements

3. Multiple Device Support

4. Upgrading HP DLA

5. Sharing a HP DLA Drive

6. Compressed Data

7. Incompatibility with Direct CD

8. Incompatibility with MS Backup

9. Problems with High Speed CD-RW Media

10. Problems formatting previously formatted DVD/CD-RW media.

11. Problems reading CD-R media

12. Multiple drive incompatibilities

13. Enabling/Disabling HP DLA

14. Two identical drives

15. Conflict with Nero software

16. Issue with USB and Firewire (1394) devices

1. Getting Started

This product enables access to your optical drive from Windows. You can now use your CDR(W) or DVD recorder for file storage and retrieval as if it were a hard drive or floppy disk.

Discs must be formatted for HP DLA use.

Refer to the on-line help for configuration and formatting instructions.

HP DLA may not function properly if Auto Insert Notification (AutoRun) is disabled. If you encounter difficulties with HP DLA, please ensure that the AutoRun feature of your operating system is enabled.

2. System Requirements

The system requirements for this product include:

- IBM or 100%-compatible Pentium 133 or higher, at least 32 Megabytes of RAM, and 10 Megabytes of free disk space

3. Multiple Device Support

If you have more than one supported optical device attached to your system, HP DLA will only be able to access one device at a time.

4. Upgrading HP DLA

While upgrading HP DLA to a Windows NT or Windows 2000 machine, a message might display stating that a driver has not been installed.

This does not affect the actual installation. Continue with the installation as normal and then reboot at the end of the installation process. The correct driver will be installed.

5. Sharing a HP DLA Drive

If you share a HP DLA drive, you may encounter data transfer issues. Sharing of HP DLA drives is not supported with this release, and not recommended for reliable data transfer.

6. Compressed Data

If you format a disc with compression, the disc will only be readable on a computer with HP DLA installed.

7. Incompatibility with Direct CD

HP DLA and Direct CD perform similar functions and are incompatible. Some computers equipped with the Windows XP operating system will have Direct CD preinstalled at the factory. Please uninstall Direct CD then continue installing HP DLA.

8. Incompatibility with MS Backup

If you experience conflict with MS Backup and HP DLA, please eject all HP DLA discs or manually disable HP DLA during the backup process.

9. Problems with High Speed CD-RW Media

If you experience problems using high speed media with a low speed drive, please check with the manufacturer of your drive to determine what type of media is supported.

10. Problems formatting previously formatted DVD/CD-RW media.

Media previously formatted using another application may not format properly using HP DLA. To correct this try one of the following procedures:

Option 1:

Full format or blank the media with the application used to originally format the disc.

Option 2:

From a command line prompt type the following command (where ‹drive letter› is the HP DLA device):

- DLA format /F /H ‹drive letter›: none

  For example, if your disc writing device is drive E, type:

  DLA format /F /H e: none

Then format again normally.

11. Problems reading CD-R media

For a non Multi-Read CD-ROM drive to read a CD-R disc, the media must be made "compatible." This media must not be compressed.

12. Multiple drive incompatibilities

If you have multiple IDE devices connected to the same IDE channel, you may experience problems using HP DLA simultaneously with other mastering software. To remedy this connect your IDE devices to different IDE channels (see your computer's User Guide for more information).

13. Enabling/Disabling HP DLA

To enable or disable HP DLA, right click on the drive in Windows Explorer then choose either Enable or Disable.

14. Two identical drives

If you have two identical optical drives installed on your computer, HP DLA will only recognize one.

15. Conflict with Nero software

If Nero disc mastering software is installed on your computer, HP DLA will not recognize blank discs. The work-around for this conflict is to temporarily uninstall Nero's software. Nero products do not affect HP DLA's ability to read discs containing data.

16. Issue with USB and Firewire (1394) devices

If you have a USB or other "hot-swappable" device and unplug it from your computer, HP DLA will not recognize the drive when it's plugged back in unless the computer is restarted.

HP Simple Backup

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This README.TXT file provides late-breaking information that supplements the HP Simple Backup user's manual and on-line help. If information in the user's manual or help file conflicts with information presented here, the information in this README.TXT file should be considered correct and the most recent.

The following subjects are discussed:

1. Multiple SCSI Device Setups

If you are receiving an error indicating that the controller is not responding and you have more than one device on your SCSI chain, make sure the Enable Disconnection option in your SCSI controller's BIOS setup is set to Yes (On).

If this option is off, the Windows miniport driver causes a SCSI bus reset when your hard drive or CD-ROM is idle for more than 10 seconds. The reset causes the backup device's current operation to abort.

To set the Enable Disconnect option:

1. Enter your SCSI controller's BIOS. For example, press and hold the CRTL-A keys (for Adaptec controllers) during the computer's boot sequence. 2. Switch ENABLE DISCONNECTION to YES (ON). Sometimes this option displays as Disconnect/Reconnect. Refer to your hardware manual for more information on this option.

2. SCSI Controller

If you experience sluggish performance with your SCSI controller, contact the hardware manufacturer for the latest mini-port driver. Please make sure you have the most recent versions of these drivers installed.

3. Delay After Media Format, Media Initialize, or Canceled Backup

A delay of a few seconds to several minutes may result after canceling a format or initialize operation. Delays may also occur after you cancel a backup job. Hard disk activity will occur while information is removed from the catalog. Longer delays occur if the medium contains a large number of files.

4. CD-R Overwrite

CD-R media (compact disc recordables) do not support the overwrite option.

5. Disaster Recovery on FAT32 or DBCS Systems

If you are running a Disaster Recovery on FAT32 (OSR2 and Win98) or DBCS systems, you can significantly reduce the recovery time, by adding the line "SMARTDRV 4096" to the autoexec.bat. Then reboot your system.

6. DOS ASPI Drivers

In order to recover your system in Windows 9x from a SCSI-connected device, HP Simple Backup requires that you provide a working DOS ASPI driver for your SCSI card. In most cases, the Disaster Recovery Wizard will identify the necessary driver and prompt you for a location. This driver is generally distributed on a floppy diskette with your SCSI controller card.

If the controller card is unrecognized by HP Simple Backup, it will be necessary to manually locate and configure the driver. See your hardware documentation for more details.

7. Erasing CD-RW Media

HP Simple Backup does not support quick-erased CD-RW media. If you are using CD-RW media that has been quick-erased, a full-erase should be performed on this media before using it with HP Simple Backup.

8. Booting from CD

Some system configurations do not support booting from CD. For more information on determining if your system is equipped for SCSI or IDE bootable functionality, contact your SCSI controller vendor or system manufacturer.

9. USB and Firewire (1394) Devices

USB and Firewire (1394) devices are not supported in Windows 95 or Windows NT Workstation. Disaster Recovery functionality will not be available when using a USB or Firewire device.

10. Disaster Recovery Configuration

When preparing to run the Disaster Recovery process after a system failure, please ensure that your drive configuration is the same as the configuration in use when the backup was created. If the configuration is different, HP Simple Backup may not be able to correctly restore all of your data.

11. Sparse Files

A significant difference between the estimated size and the actual byte count may occur if your operating system is set to use sparse files. The reported difference will have no effect on the integrity of your data.

12. HP Simple Backup and Active Desktop Applications

HP Simple Backup may report file miscompares of your Active Desktop applications if they are enabled during a backup. This is normal behavior as these applications are dynamically updated and therefore will not match archived copies.

13. File Permissions for Backups and Restores

In order to back up and restore all data files on your computer, you must have the proper permissions to these files. Having READ permission to a file allows you to back it up, but you must have WRITE permission in order to restore it. A System Administrator, or a USERID with the Backup Operator permission level is required to backup and restore your operating system, and all data files on your computer.

14. Restoring Data from CD-RW Media

Not all CD-ROM drives can read CD-RW media. When restoring data from CD-RW (CD re-writable) media, you may need to use your CD-RW drive to read the media.

15. Disaster Recovery for Windows 2000

Some PC system manufacturers may be shipping versions of the Windows 2000 Professional operating system that contain limitations affecting the Disaster Recovery feature of HP Simple Backup. Depending on which version of Windows 2000 this product is used for, the Disaster Recovery feature may not be available.

16. Performing Disaster Recovery for Windows NT 4.0 Without Disaster Recovery Diskettes

Some PC system manufacturers ship versions of the Windows NT 4.0 CD that contain limitations affecting the Disaster Recovery feature of HP Simple Backup. If, while creating Disaster Recovery diskettes, HP Simple Backup detects that your Windows CD cannot be used to create Disaster Recovery diskettes, you must follow the steps listed below to recover your data:

HP Simple Backup can protect the data on your NT Workstation in the event of a hard drive failure. The Disaster Recovery process allows you to recover lost data and return your system to full operation.

You may choose to back up the NT Workstation Registry by selecting it in the Options settings under the Advanced tab. By default, HP Simple Backup will back up the registry when the Windows Directory is selected for backup. The NT Workstation Registry must be backed up in order to properly restore your system in the event of a hard drive failure.

To use Disaster Recovery:

1. Replace all damaged hardware and properly format the destination drive (see your Windows NT manual for assistance).
2. Start your computer with the Windows NT system disk in your floppy drive (or in your CD-ROM drive if you have a bootable   CD-ROM drive).
3. Follow all instructions to perform a minimal re-install of Windows NT Workstation, including any Service Packs, and reboot   your machine when prompted. Configurations will be restored later.
4. Install HP Simple Backup.
5. When installation is complete, click the Start menu, select Programs, then select HP Simple Backup. The startup dialog screen appears. Click Close.
6. From the Restore tab, select a device in the Restore from device drop-down list box.
7. Insert the volume containing the last full backup of your system.
8. Select Device View, then select the last full backup on the volume.
9. From the Restore tab, click Options, General tab and select the Always replace the file on my computer checkbox.

10. Click the Advanced tab and select the Restore Windows Registry checkbox, then click Start.
11. Reboot your machine.

NOTE: *Files that were reported as "busy" should be restored at this time. If you wish to restore these files, follow the instructions below for restoring busy files.*

To restore busy files;

1. Click the Start menu, select Programs, then select HP Simple Backup. The Startup dialog screen appears. Click Close.
2. From the Restore tab, select a device in the Restore from device drop-down list box.
3. Insert the volume containing the last full backup of your system.
4. Select Device View, then select the last full backup on the volume.
5. From the Restore tab, check the files that were reported busy.
6. Click Options, General tab and select the Always replace the file on my computer checkbox.
7. Click the Advanced tab and de-select the Restore Windows Registry checkbox, then click Start.
8. Reboot your machine.

If you have any differential or incremental backups performed after the last full backup, restore those as required.

When you have restored all the files from your backup volumes, reboot the machine to complete your recovery.

17. Conflict With Microsoft System Restore

Microsoft System Restore periodically creates restore points to which you can return your system in the event of a system error or data loss. If you format your hard drive, then use HP Simple Backup to recover your system, these restore points cannot be restored.

18. PCHealth Updates on Windows ME

PCHealth performs automatic updates to your Windows ME (Millennium Edition) system via the Internet. HP Simple Backup may not be able to restore PCHealth directories if an update occurs during a backup or restore. Also, if a PCHealth update occurs after you perform a backup, you may receive errors when attempting to compare these files. To avoid this conflict, ensure that your PCHealth updates do not occur during a backup or restore operation. For information on how to re-schedule your PCHealth updates, consult your Windows ME documentation.

19. Device Issues With Windows Media Player 7.0

A conflict may exist between HP Simple Backup and early versions of Windows Media Player 7.0. If HP Simple Backup no longer detects the devices attached to your system after installing Media Player 7.0, you must reinstall HP Simple Backup.

20. Disaster Recovery on ATAPI Hard Disks Larger Than 8GB

ATAPI hard disks greater than 8 GB require Service Pack 4 (SP4) to be seen correctly in Microsoft Windows NT. Therefore, the Disaster Recovery disks may be SP1 by nature and not see these drives. There are 2 known workarounds for this issue.

1. Copy the ATAPI.SYS file from an installation of Windows NT that has SP4 or greater. Then, replace the version on the Disaster Recovery disk with the newer version. This should allow the hard drive to be seen from Disaster Recovery.

Or,

2. Reinstall the Operating System, apply the same Service Pack level that was present at the time of backup and do the restore from Windows NT. Reboot the machine after the restore, as prompted.

Drives No Longer Sold

Table 29 lists the HP CD-Writer and HP CD-Writer Plus drives no longer sold.

Table 29   HP CD-Writer Drives No Longer Sold

Drive Family	Model	Part Number(s)
CD-Writer	4020i	C4324B
CD-Writer	6020i	C4343A
CD-Writer	6020es/ep	C4325A/C4345A
CD-Writer Plus	7100i	C4353A
CD-Writer Plus	7100e	C4366A
CD-Writer Plus	7110i	C4365A
CD-Writer Plus	7110e	C4366A
CD-Writer Plus	7200i/e	C4380A/C4381A
CD-Writer Plus	8100i	C4392A
CD-Writer Plus	8110i	C4398A
CD-Writer Plus	8200e	C4454B
CD-Writer Plus	8210e	C4453B
CD-Writer Plus	8250i	C4464B
CD-Writer Plus	7500e	C4412A
CD-Writer Plus	7510e	C4413A
CD-Writer Plus	7550i	C4410A
CD-Writer Plus	7570i	C4411A
CD-Writer Plus	M820e	C4450A
CD-Writer Plus	8200i	C4414A
CD-Writer Plus	8210i	C4415A
CD-Writer Plus	8200e	C4454A
CD-Writer Plus	8210e	C4453A
CD-Writer	8220e	C4504A
CD-Writer	8230e	C4505A
CD-Writer Plus	8250i	C4464A

Drive Family	Model	Part Number(s)
CD-Writer Music	8270e	C4461A
CD-Writer Plus	9100i	C4460A C4460B
CD-Writer Plus	9110i	C4459A C4459B
CD-Writer	9140i	C4460C
CD-Writer	9150i	C4459C
CD-Writer Plus	9200i/e	C4457A/C4458A
CD-Writer Plus	9210i/e	C4455A/C4456A
CD-Writer Plus	9300i	C4492A
CD-Writer Plus	9310i	C4493A
CD-Writer	9340i	C4492B
CD-Writer	9350i	C4493B