



quickINSTALL

GUIDE & SOFTWARE MANUAL

DOUBLE LAYER

dual⁺/₋ FORMAT

DVD RECORDER

For DVD+ & DVD- Recording

EXTERNAL **USB 2.0 / IEEE-1394a**

| | | | | |
|------------------------------------|--|-----------------------------------|---|-------------------------------------|
| 16x DVD-R write speed | 2.4x DOUBLE-LAYER DVD+R9 write speed | 8x DVD-R write speed | 4x DVD+RW/-RW re-write speed | 16x DVD-ROM read speed |
| | | 48x CD-R write speed | 24x CD-RW re-write speed | 48x CD-ROM read speed |



nero 6
MEMOREX SUITE

Supports Windows® 98SE+/Me/2000/XP

+ USB drivers required for use with Windows 98SE.

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Memorex may void your authority, granted by the FCC, to use the product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class B digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the product OFF and ON, please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Memorex Products, Inc. 17777 Center Court Dr. #800, Cerritos, CA 90703.

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1. INTRODUCTION

1.1. Congratulations!

Thank you for purchasing a Memorex External DVD recorder.

Memorex's DVD recorder brings a new dimension to your PC's capabilities and performance by allowing you to record, re-write, and play both CD's and DVD's of several formats, all with a single drive.

Memorex makes award-winning optical drives to which many other drives are compared. Memorex quality, reliability, features, bundled software, and reputation are the reasons why you have made the right choice in choosing Memorex.

Before you can start enjoying all the features and benefits of your new Memorex drive, please read this manual thoroughly. It is also a good idea to keep this manual in a safe place for future reference.

1.1.1. System Requirements

Your new Memorex drive is a high-performance DVD recording device. For optimum performance, Memorex recommends installing our new drive in a high-performance PC. While complying with the minimum requirements highlighted below will ensure proper installation and operation of the drive, Memorex's recommended components are essential for high-speed recording.

Minimum Requirements:

IBM PC and compatibles PCs –

- Intel Pentium III 800MHz (Pentium 4 1.8GHz or higher is recommended for better results) or equivalent
- 128MB of memory (512MB of memory is recommended for better results)
- Fast hard disk drive with 15 ms or faster speed and DMA set (A/V Rated hard disk drives are recommended for better results and ensured high quality when capturing video)
- USB 2.0 port or IEEE-1394/Link/FireWire port
- Windows 98SE, Me, 2000, or XP operating system
- Internal CD-ROM or DVD-ROM drive (to install driver software) with DMA set (if it is a DVD-ROM drive and you are planning to use it as a source drive when backing up your DVD's). Please see Section 3.1 below for more information on DMA (page 12).

1.1.2. Package Contents

In addition to the items listed below, this package may contain additional software (see product box for details*) and optional items such as promotional offers.

- | | |
|------------------------------|--------------------------------------|
| 1. External DVD Recorder | 6. One USB 1.1/2.0 Cable |
| 2. Quick Setup Map | 7. One IEEE-1394/Link/FireWire Cable |
| 3. Quick Install Guide | 8. One Blank DVD+R Disc |
| 4. Software Installation CD | 9. Late Breaking News |
| 5. AC Power Cord and Adapter | (if applicable) |

* Specifications are subject to change without notice

1.2. About your new Memorex DVD Recorder

Your new Memorex DVD Recorder is a state-of-the-art device, capable of recording a wide variety of disc types and formats. Here is a list of some of the major features of this drive:

Dual Format Recording: Records both DVD+R/RW and DVD-R/RW discs.

Double-Layer Recording: Records on 8.5GB, DVD+R9 discs for extra capacity applications.

Fast Recording Speeds: This drive provides fast DVD recording speeds on both DVD and CD media. Please note that speeds displayed below are maximum recording speeds and average recording speeds might be lower.

| | | |
|--------------------|------------------|------------------|
| 16X DVD+R | 8X DVD-R | 48X CD-R |
| 2.4X DVD+R9 | 4X DVD-RW | 24X CD-RW |
| 4X DVD+RW | | |

Buffer Memory: This Memorex DVD Recorder is equipped with 2MB of buffer memory, virtually eliminating buffer underruns and preventing wasted time and media.

Smart-Burn Buffer Underrun Protection: This drive features a comprehensive Buffer Underrun Management system which monitors and adapts the recording technology for optimum burning, virtually eliminating the possibility of buffer underruns.

Superior Compatibility and Recording Performance: This drive offers reliable performance and superior functions. The discs produced in this drive have been tested to provide the highest compatibility available.

Precision Recording Technology: This drive provides exceptional overwrite performance significantly more advanced than technology used in previous models.

Defect Management: This drive features the new DRT-DM (Distributed Real Time Defect Management) system, offering the highest reliability for your recorded discs.

Vibration Absorber System (VAS): Imbalanced discs can cause vibrations that affect performance during high-speed recording and playback. VAS is designed to the resonance frequency of the drive rotating speed. The vibration will be inducted into the absorber to get the minimum vibration.

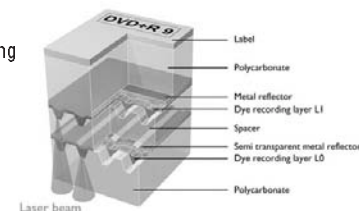
Smart-X Function: This drive technology adjusts CD-DA/VCD data extraction to the fastest allowable speed according to both data request rates from host and disk quality.

1.3. Double-Layer Recording

The new Double-Layer discs allow for 80 percent more recording capacity than current single layer discs delivering 8.5GB of data versus the standard 4.7GB DVD capacity.

Longer continuous recording makes Double-Layer DVDs ideal for recording movies, music and sporting events. High-capacity double layer DVDs are also an ideal backup and storage medium for data files.

Double-Layer DVD+R9 discs record at 2.4x speed and require a double layer burner (such as this drive) for recording. However, they are playback-compatible with most standard computer and home DVD players on the market because they conform to the DVD9 commercial standard.



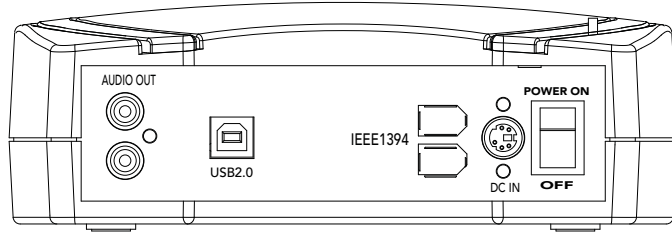
2. HARDWARE INSTALLATION

2.1. Setting up your recorder for use

Follow these steps to set your recorder up for use with your PC:

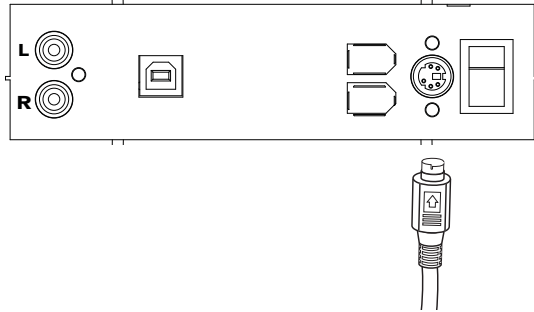
1. Face the rear of your new external drive to observe the power and interface cable connections (Figure 1).

Figure 1



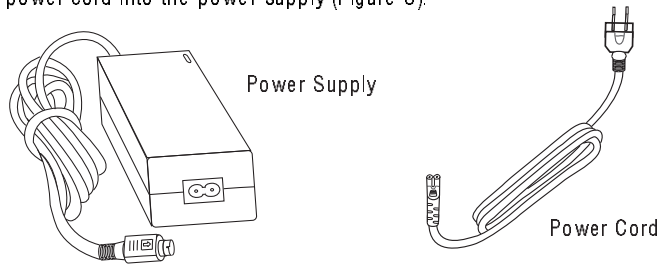
2. Plug the power supply connector to the rear panel of the enclosure (Figure 2).

Figure 2



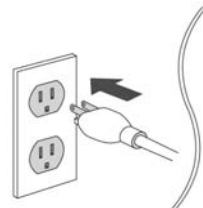
3. Plug the AC power cord into the power supply (Figure 3).

Figure 3



4. Plug the AC power cord into a 120VAC outlet (Figure 4).

Figure 4



5. Choose the USB 2.0 connection (Figure 5) or the IEEE-1394 connection (Figure 6) to plug into your PC and select the appropriate interface cable. Plug the appropriate cable into its respective port on the external drive.

NOTE: Do not plug the other end of the cable into your PC yet, this step will come later (see page 10).

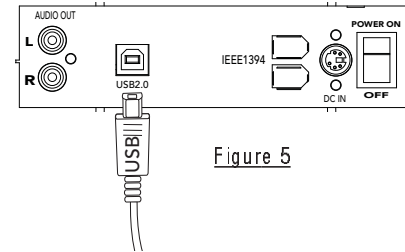


Figure 5

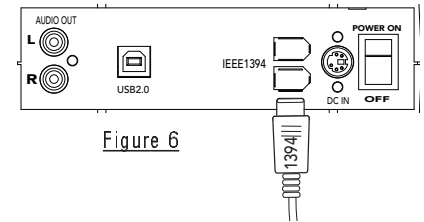


Figure 6

6. Locate the appropriate USB or IEEE-1394 connection on your PC. If you are using USB and Windows 98SE, do not connect the USB cable to your computer until you have installed the USB drivers we have supplied. Please see examples below

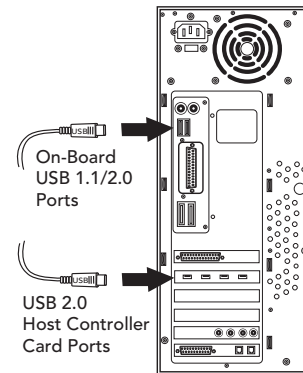


Figure 7

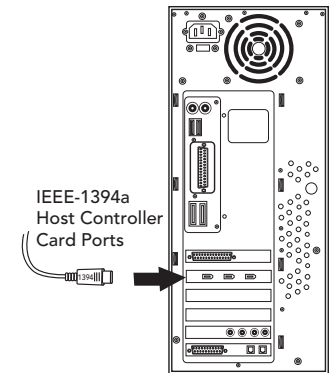
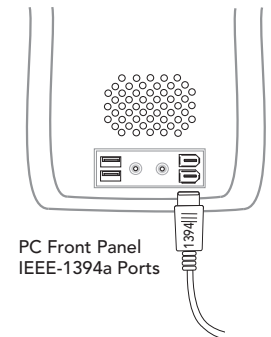
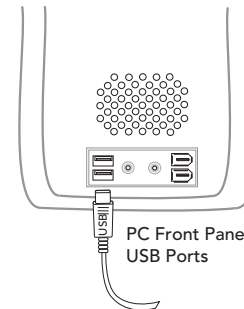


Figure 8



2.1.1 Installing the Windows 98SE USB 2.0 Drivers

Follow these steps to install the USB drivers for your External drive only if you are using the Windows 98SE operating system:

1. Turn your computer on.
2. Once your computer has finished loading the Operating System and any programs that launch when you start up, insert your Memorex Software and Driver CD from your new Memorex External DVD recorder kit.

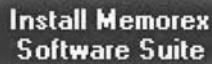
Note: If the program does not start automatically, select your existing internal CD/DVD drive containing the Memorex CD in Windows Explorer. Double click on the 'setup.exe' program in the main directory.

3. Once the program has launched, click on the Install Win98SE USB Drivers button (Shown below) in the main splash screen.



Install Win98SE
USB 2.0 Drivers

4. Follow the on-screen directions to install your drivers.
5. You will need to install the Software suite once your new drive has been installed and detected by your computer. It is recommended that you leave the software suite install window open and that you choose to click on the Install Memorex Software Suite button (Shown below) in the main splash screen. This will launch the installation of the most commonly used components of the Powerful Memorex Software Suite.



Install Memorex
Software Suite

6. Follow the on-screen directions to install the Memorex Software Suite. Further details about the Memorex Software Suite and installation specifics can be found below under the **5.1. Software Installation** section (page 16).

2.1.2 Connecting your External DVD Recorder

Follow these steps to connect your drive to your PC:

1. Turn the drive ON using the power switch on the back.
2. Plug the cable you have chosen into its respective port on your PC, USB 1.1/2.0 or IEEE-1394.
3. Once you plug the cable into the interface port, Windows will detect your new drive. You may be prompted to locate the drivers.

4. If you have been prompted to locate the drivers, use the Browse button to locate the drivers on the Memorex Software and Drivers CD. When the OK button becomes highlighted, you have found the drivers. The drivers are located in the main directory of the disc.
5. Follow the on-screen instructions to complete the process of installing your External DVD Recorder drive.

2.2 About USB 1.1/2.0 and IEEE-1394/iLink*/FireWire

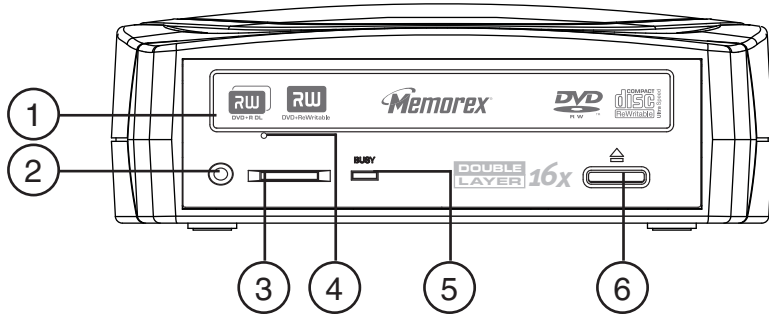
Your Memorex External 16X DVD Recorder will work with either USB connections or IEEE-1394a (also known as 'iLink*' or 'FireWire') connections. There are two basic versions of USB: the older USB 1.1 and the newer and faster USB 2.0 versions. The cables and ports for both versions are visually identical. Note that USB 1.1 ports will not transfer data as fast as USB 2.0 and will be inadequate for the recording or playback of DVD Discs or DVD video information. See the chart below.

| Port | Data Transfer Rate | Operating System | Note |
|-----------------------------------|--------------------|------------------------------------|--|
| USB 1.1 | Up to 12Mbps/Sec. | Windows 98SE/Me Windows 2000/XP | USB 1.1 will not transfer data fast enough for DVD recording or smooth video playback from the drive and will limit the drive's overall writing. |
| USB 2.0 | Up to 480Mbps/Sec. | Windows Me Windows 2000/XP | Microsoft does not support USB 2.0 natively in Win 98SE. You will need to install the Win98SE USB drivers that we have provided in the software CD. You may be able to install an add-in PC card with USB 2.0 ports on it and with proprietary drivers provided by the card maker. |
| IEEE-1394/ iLink*/ FireWire | Up to 400Mbps/Sec. | Windows 98SE/Me Windows 2000/XP | |

* iLink connections need to be iLink-400 at minimum. An iLink-200 connection will not allow high-speed writing and may have further issues depending on the age of your system.

3. OPERATING YOUR NEW DRIVE

3.1. Front Panel



- ① **Disc Loading Tray**
Holds the CD or DVD disc. Open the loading tray by pressing the eject button.
- ② **Headphone Jack**
- ③ **Volume Control**
- ④ **Forced Eject Hole**
Opens the loading tray when the tray cannot be opened using the eject button.
- ⑤ **LED Indicator**
This indicator displays the drive status.
- ⑥ **Eject Button**
Press this button to unload/load the tray.

Important Note:

For the most desired results, ensure that your Operating System has the DMA setting enabled for all of your system's internal drives. Consult your Microsoft Windows User's Guide to verify how to enable this setting and consult your Computer manufacturer's documentation to verify that your Computer and its various components like Hard Drives, Optical Drives and Motherboards are capable of enabling and utilizing the many benefits of DMA. For details about how to enable DMA in your Operating System, simply click on the Memorex FAQ's icon in your Nero StartSmart Toolkit list or under the Extras area. Once you are at the Memorex FAQ's page, look for topics about Enabling DMA. You will need Administrator rights to your computer if you are using Windows 2000 or XP in order to enable DMA.

3.2. Loading a Disc

1. Press the open/eject button to open the tray.
2. Carefully place the disc, label side up, on the disc tray. There is an indentation for Pocket CD-R's in the tray.

Important Note:

Not all cut disc or shaped media is appropriate for use with this drive. Please check with Memorex Technical Support for a current list of cut disc or shaped media that may be used in this drive.

3. Press the eject button again to close the disc tray.

3.3. Ejecting a Disc

If the drive is powered on, press the open/eject button to open the loading tray.

Be sure to remove the disc after it is completely ejected. (Trying to remove the disc before the tray is fully opened may cause the drive to malfunction or may damage the disc.)


If the drive is not powered on, pressing the eject button will not open the loading tray. However, you may use the manual eject hole to open the loading tray. If the tray will not open the normal way (for example, if the power is shut off inadvertently or the loading mechanism fails), use the manual eject hole.



Important Notes: This technique should only be used as a last resort. Frequent use may lead to malfunction of the drive.

3.4. Removing the External Drive from Your System


Simply unplugging the drive may make your computer unstable. Follow the instructions below to unplug the data cables from your computer without risking possible permanent loss of work.



USB Connection

Windows 98SE/Me – Click on the  in the system tray. Select 'Safely remove the Memorex DVD+R/+RW drive' and wait a few seconds until a window informs you it is safe to disconnect. Click OK, then remove the cable.

Windows 2000/XP – Click on the  or  icon in the system tray. Select 'Safely remove the USB Mass Storage Device' and wait a few seconds until a window informs you it is safe to disconnect. Click OK, then remove the cable.

IEEE-1394/iLink®/FireWire

Windows 98SE/Me – Click on the  icon in the system tray. Select 'Safely remove the IEEE-1394 CD-ROM' and wait a few seconds until a window informs you it is safe to disconnect. Click OK, then remove the cable.

Windows 2000/XP – Click on the  or  icon in the system tray. Select 'Safely remove the IEEE-1394 SBP2Device' and wait a few seconds until a window informs you it is safe to disconnect. Click OK, then remove the cable.

3.5. Troubleshooting

If your new drive is not performing as expected, look up the symptoms in the following table and take the appropriate corrective action.

| Symptom | Possible Cause | Self Diagnostic & Repair |
|--|---|--|
| Drive does not power up | Outlet into which the drive is plugged is not live. | Check the outlet to make sure it is live. |
| | Power cable is not attached properly. | Check to make sure the connections are correct. |
| The recording speed is lower than specified. | The input port on the computer is most likely USB 1.1 instead of USB 2.0. | USB 1.1 is much slower than 2.0, and will limit CD-R recording to 4X or slower and DVD recording to 1X or prevent it altogether. Upgrade to USB 2.0 if you want to use the drive to its fullest capabilities or add a IEEE-1394/FireWire Host Controller card to your computer. If you are using a iLink-200 port, you need to be using a iLink-400 port or better for a adequate performance. |
| | The speed rating of CD-Rs or CD-RWs is not as high as the speed selected. | Check the speed rating of discs to be sure the writing speed selected is the same or less than the disc's rating. |

Note: If you have attempted the above and have not resolved your issue, please contact Memorex Technical Support.

4. INCLUDED SOFTWARE

Your Memorex 16X DVD Recorder kit includes a CD-ROM disc that installs the powerful, comprehensive and customized Memorex Nero 6 software package, offering easy and simple access to nearly all of the most popular CD and DVD recording formats available today. This software allows you to create and copy digital audio, data, photo, and video programs on both CD's and DVD's. The package includes:

4.1. Nero StartSmart

Nero StartSmart is the command center of the Nero 6 product family and makes it easier to find, identify, and use the comprehensive software programs. Once you have launched Nero StartSmart, all you have to do is select the desired task and the corresponding software starts automatically.

4.2. Nero Express 6

Nero Express 6 provides a simple, uncluttered interface to powerful and efficient recording programs on both CD and DVD discs.

4.3. NeroVision Express 2

With NeroVision Express 2, you can record videos and edit or burn existing video files. Creating associated menus, that is, menus that allow users to select a section of a program or choose between individual films, is also quick and uncomplicated with NeroVision Express 2. You can also use NeroVision Express 2 to create convenient slide shows and even use your own music as a soundtrack for them.

4.4. InCD 4

InCD 4 is a packet-writing program that formats rewritable discs in such a way that they can be used as 'super diskettes.' You can copy files onto the disc by simply Dragging and then Dropping the files you have chosen on to your new DVD Recorder drive in Microsoft Windows Explorer or save them to a disc quickly and easily using Nero Express 6.

4.5. Nero BackItUp

Nero BackItUp is a convenient, easy-to-operate, and powerful program for backing up and restoring data. It allows you to archive your back-ups on either CD or DVD discs, an economical and secure method of data security.

4.6. Nero ShowTime

Nero ShowTime is a program that can play back nearly all digital recordings (e.g., movies, TV programs, home videos, DVD video) with excellent picture and sound quality.

4.7. Nero Cover Designer

Nero Cover Designer is a user-friendly program for creating and designing individual covers and labels. It allows you to use your own ideas to create personalized CD covers, booklets, and much more. You can give every disc an individual custom look.

4.8. Nero Recode 2

Nero Recode 2 is a new program for copying and archiving non-copy-protected DVD video titles onto a single 4.7 GB DVD+R/RW or DVD-R/RW disc. If the source DVD is a dual-layer disc with contents greater than 4.7 GB, Nero Recode 2 can compress the contents so that they fit onto a single empty DVD disc without any noticeable loss of quality. Nero Recode 2 can also combine multiple video titles from non CSS-encrypted single or dual-layer discs to create a single seamless title.

4.9. Nero Media Player


The Nero Media Player program enables you to play back audio tracks. The program supports most current formats, including MP3, WAV, AAC, to name but a few. Nero Media Player also enables you to play back Internet streams and to create and play back playlists of your favorite music.


4.10. Nero ToolKit

The **Nero ToolKit** contains the following programs: **Nero CD-DVD Speed**, **Nero DriveSpeed**, **Nero InfoTool** and **PhotoShow Deluxe** by Simple Star. **Nero CD-DVD Speed** is a program that tests the speed of the available CD/DVD drives. **Nero DriveSpeed** allows you to set the read speed of discs in order to noticeably reduce noise level or to optimize the spin up or spin down times of your drives. **Nero InfoTool** provides you with information about the most important features of installed drives, inserted discs, installed software, and much more. **PhotoShow**

Deluxe is included exclusively in this bundle, this award winning software allows you to store and edit all your digital photos and images with professional quality tools and ease.

Note: This area also has two New and special links to the Memorex website.

One is a link  to the Memorex Tech Support form page, where you can request assistance with an issue you may be experiencing.

The other link  takes you to the Memorex FAQ's page for you to gain immediate access to Frequently Asked Questions.

4.11. InCD EasyWrite Reader 4

InCD EasyWrite Reader 4 is a program that allows you to read discs written in MRW ('Mount Rainier ReWritable') format on systems that do not support MRW.

4.12. DVD-Video Plug-in

In conjunction with the NeroVision Express 2 program, the DVD-Video Plug-in allows the encoding of video files in DVD/SVCD format. You can then play back the videos on nearly any DVD player*.

4.13. HE-AAC Plug-in

The HE-AAC Plug-in allows you to encode audio files in MP4 format and also to decode them into another format. High Efficiency Advanced Audio Coding (HE-AAC) is the very latest audio compression technology; its main feature is its revolutionary high-speed compression and its incomparable sound quality. The HE-AAC Plug-in offers multiple real time encoding, variable bit rates, multi-channel functionality, and direct MPEG-4 ripping, burning, playback, and editing.

Note: Some DVD players are not able to play back certain disc formats. Please consult the manufacturer to find out which formats your DVD player supports.

For detailed info on how to use the above applications, please refer to the .pdf manuals on your Memorex installation disc.

5. CREATING CDs AND DVDs

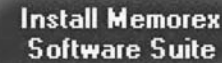
5.1. Software Installation

The Memorex recording software is quick and easy to install using the following steps:

Note: To install the software under Windows 2000 or Windows XP, you must have administrator rights.

1. Close all Windows programs and close any anti-virus software which may be running.
2. Insert the Memorex **Nero 6** software installation CD into the CD/DVD drive.
3. An installation menu appears from which you can choose to install using the one button install, **Install Memorex Software Suite** or to individually install the desired components. Click on the appropriate button to start the installation wizard for the option you chose.

It is recommended that you choose to click on the Install Memorex Software Suite button (Shown below) in the main splash screen. This will launch the installation of the most commonly used components of the Powerful Memorex Software Suite and speed up the software installation.



Install Memorex
Software Suite

Note: If the program does not start automatically, select the CD/DVD drive containing the Memorex CD in Windows Explorer. Double click on the 'setup.exe' program in the main directory.

4. In the welcome window you again see the choices of programs you may want to install. Click on NEXT to continue with the installation.
5. Carefully read through the license agreement. If you agree to the terms of the license agreement, click on 'I accept all terms of the preceding License Agreement.' If you do not accept the license terms, you cannot install the Nero 6 software. Click on NEXT to continue.
 - The installation wizard then automatically installs the selected program.
6. After the automatic installation of each selection, you can either restart your computer, select another program installation, or exit the installation wizard.
7. To close the installation menu, click on EXIT. If you decide to install more components at a later date, click on the appropriate button and carry out the installation with the aid of the wizard.
8. Restart your PC so that all the new settings take effect.

5.2. Uninstalling the Software

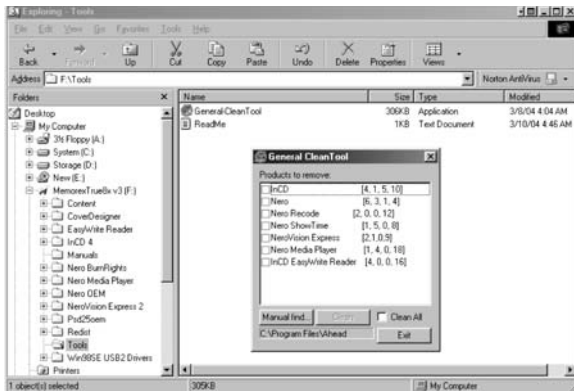
To uninstall **Nero 6** or individual components, proceed as follows:

Note: To uninstall the software under Windows 2000 or Windows XP, you must have administrator rights.

1. Insert the **Memorex Nero 6** CD into the CD/DVD drive.
2. If the Setup program launches automatically, an installation menu will appear, in which you can Click on the Exit button to close the Software Installation wizard.
3. Browse to the main directory of your Memorex Software CD.

Note: If the program does not start automatically, Browse to the main directory of your Memorex Software CD.

4. Open the *Tools* directory.
5. Double click on the *General-Clean Tool* application file.



6. Individually select the Software components that you wish to remove by clicking the box next to the application name.



7. You may also remove all of the Nero application components by just clicking on the box next to Clean All.



8. Follow the on-screen instructions, close all open applications and reboot your computer once the de-installation has successfully completed.

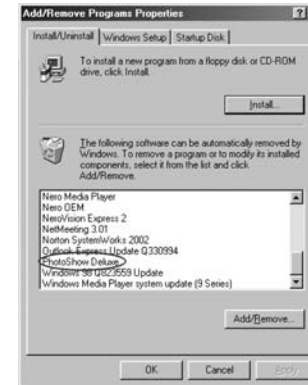
You may also individually select and remove the individual Nero Components in your Operating Systems Add/Remove Programs. Look for the following listings:

- **Ahead InCD EasyWrite Reader**
- **InCD**
- **Nero Media Player**
- **Nero OEM**
- **NeroVision Express 2**

If you have Windows 98SE and have installed the USB Driver, look for the following to uninstall the drivers.

- **Memorex External Drive USB 2.0 Drivers**

9. In order to uninstall **PhotoShow Deluxe**, you will be required to uninstall it by using the Add/Remove Programs interface in your Operating System. Once you select PhotoShow Deluxe, Click Add/Remove.



5.3. Using Nero StartSmart - The Command Center


The new program **Nero StartSmart** is the command center for the **Nero 6** product family and makes it easier to use the comprehensive software programs. Once you have started Nero StartSmart, all you have to do is select the desired category (e.g., Audio), then choose a task (e.g., Make Audio CD) and the relevant software starts automatically.

Note: The tasks shown in **Nero StartSmart** depend upon the version and the installed programs of **Nero 6** and therefore can deviate from the description within the documentation!

5.4. User Interface and Navigation

5.4.1 Standard view



Nero StartSmart consists of the following areas and elements. To launch **Nero StartSmart**, click on the **Nero StartSmart**  icon on your Desktop or Quick Launch Toolbar.



This button opens the **Nero ProductCenter**. If you are in the **Nero ProductCenter**, clicking on this button takes you back to standard view.



If recorders that can burn several formats are installed on the computer and/or the option to display all recorder formats is activated, the possible project types appear in the upper section of the **Nero StartSmart** window. The content of the categories and the possible tasks change according to the selected project type. For example, an audio CD can only be created if the CD tab has been selected as the project type.



Depending on the selected project type and the installed software, this section shows the available categories in **Nero StartSmart**. If you hover the mouse over the individual category icons, the possible tasks in that category are displayed. For each task, you also have the option of deciding for yourself which application is to be used to open it. If you hover the mouse over the desired task, the **OPEN WITH** option appears in the **Nero StartSmart** bar. You can then select the desired program in the pulldown menu.



Clicking on this button adds the **Nero StartSmart** bar to the program interface. The **Nero StartSmart** bar shows you the installed components of the **Nero 6** bundle in the 'Applications' area and, at the same time, allows you to select the desired program directly by clicking on it. You can open up the individual programs in the **Nero Toolkit** by clicking on them.



Clicking on this button allows you to change the colors of your **Nero StartSmart** interface for a customized look if you prefer.



This button displays the standard **Nero StartSmart** mode. If this mode is selected, only the most frequently used tasks are displayed. Clicking on this button switches **Nero StartSmart** to Expert mode described below.



This button displays the **Nero StartSmart** expert mode. If this mode is selected, all available tasks are displayed. Clicking on this button switches **Nero StartSmart** back to the standard mode described above.



Clicking on this button opens up the configuration window. Here you can set which program in the **Nero 6** family is started for which tasks.



Clicking on this button closes **Nero StartSmart**.

5.4.2 The Nero StartSmart Bar



In addition to the areas and elements that are available in standard view, the **Nero StartSmart** bar also gives you the option of accessing the desired program directly.



This area shows all installed applications in the **Nero 6** product family. Click once on the desired application to access it.



This area shows all installed applications in the **Nero Toolkit**. Click once on the desired application to access it.



This area shows all of the HTML based **Manuals** that are available for this software suite. Click once on the desired manual to access it. More manuals and documentation may be available in the main directory of the install disc and in the Ahead folder in your Program Files directory.

5.4.3. Navigation in Nero StartSmart

If you hover the mouse over the individual category icons, the possible tasks in that category are displayed. The tasks displayed depend on the selected mode. In standard mode, only the frequently used tasks are shown; in expert mode all tasks are displayed. If more than eight tasks are available in a category, you can show the remaining tasks by clicking on the small arrow in the bottom right of the screen.



This category contains your favorite or preferred tasks. When **Nero StartSmart** is installed, the Favorites area contains the most common tasks. To add entries, select a task by right clicking on it and choosing the command 'Add to Favorites' from the context menu. To remove a task from the Favorites, right click on the relevant task and then choose the command 'Remove from Favorites.'



Standard mode

This category contains the possible tasks for a data disc. The tasks displayed depend on whether standard or expert mode is selected.

Standard mode

- Make Data Disc
- Format/Prepare Rewritable Disc
- Make Audio and Data CD (CD only)



Expert mode

- Make Data Disc
- Format/Prepare Rewritable Disc
- Make Audio and Data CD (CD only)
- Make Bootable Disc



This category contains the possible tasks for an audio disc. The tasks displayed depend on the selected mode.

Standard mode

- Make Audio CD (CD only)
- Play Audio
- Make MP3 Disc
- Make WMA Disc
- Make Nero Digital Audio Disc
- Make Audio & Data CD (CD only)

Expert mode

- Make Audio CD (CD only)
- Play Audio
- Make MP3 Disc
- Make WMA Disc
- Make Nero Digital Audio Disc
- Make Audio & Data CD (CD only)



This category contains the possible tasks for Photo and Video discs. The tasks displayed depend on the selected mode.

Standard mode

- Make Video CD (VCD) (CD only)
- Make Super Video CD (SVCD) (CD only)
- Make Video CD Slideshow (VCD) (CD only)
- Make Super Video CD Slideshow (SVCD) (CD only)
- Capture Video
- Play Video
- Make your own DVD-Video (DVD only)
- Make or Modify DVD+VR (DVD+R/+RW only)
- Make DVD Slideshow (DVD only)
- Convert DVD-Video Movies to Nero Digital™
- PhotoShow Deluxe

Expert mode

- Make Video CD (VCD) (CD only)
- Make Super Video CD (SVCD) (CD only)
- Make Video CD Slideshow (VCD) (CD only)
- Make Super Video CD Slideshow (SVCD) (CD only)
- Capture Video
- Play Video
- Make your own DVD-Video (DVD only)
- Make or Modify DVD+VR (DVD+R/+RW only)
- Make DVD Slideshow (DVD only)
- Recode DVD-Video (DVD only)
- Convert DVD-Video Movies to Nero Digital™
- PhotoShow Deluxe
- Make MovieRecord Directly to Disc (DVD+R/+RW only)
- Burn DVD-Video Files



This contains the tasks involving copying and the tasks relating to backing up. What is displayed depends on the selected project type and the current mode.

Standard mode

- Copy DVD-Video Movie to CD (CD only)
- Copy Entire DVD-Video (DVD only)
- Copy Multiple DVD-Video Movies to One (DVD only)
- Copy Disc
- Back up Files
- Restore Backups
- Schedule Backups
- Burn Image to Disc

Expert mode

- Copy DVD-Video Movie to CD (CD only)
- Copy Entire DVD-Video (DVD only)
- Copy Multiple DVD-Video Movies to One (DVD only)
- Copy Disc
- Back up Files
- Restore Backups
- Schedule Backups
- Burn Image to Disc



This section contains the additional tasks [relating to discs](#). What is displayed depends on the selected disc type and the current mode.

Standard mode

Get System Info
Test Drive
Erase Disc
Make Label or Cover
Control Drive's Speed
Memorex Tech Support *
Memorex FAQ's *

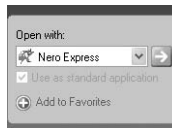
Expert mode

Get System Info
Test Drive
Erase Disc
Make Label or Cover
Control Drive's Speed
Disc Info
Memorex Tech Support *
Memorex FAQ's *

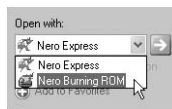
5.4.4. Assigning Programs

Clicking on a task in **Nero StartSmart** automatically opens a program that is well suited for executing that task. Many tasks, such as creating an audio CD, can be performed with more than one program, and you can change the program assignment if you like. For example, if you were to purchase the Retail upgrade of **Nero 6** and preferred to use **Nero Burning ROM 6** rather than the default application **Nero Express 6** to create an audio CD, you would proceed as follows:

1. Click on the button on the left-hand side of the program window to display the **Nero StartSmart** bar if it is not already displayed.
2. Hover the mouse pointer above the desired task and the application that will open when you click on the task appears on the left.



3. Click on the drop down button next to the program names and select the application you want to start.




4. Check the 'Use as standard application' check box if you always want this program to open in the future.
5. Click on the button with the green arrow to save the change and open the desired program.



If you are not happy with the changes you have made, you can always revert to the original default settings by clicking on the 'Configure' button and choosing 'Restore Defaults.'

5.4.5. Nero ProductCenter


Clicking on the  button opens the **Nero ProductCenter**. The first column contains the version number of the installed products from Ahead Software, while the other column shows the currently available version numbers. As a result you are always able to keep your programs up to date. To update, if you are currently connected to the Internet, you can connect directly to the homepage and start the download.



6. BURNING - THE BASICS

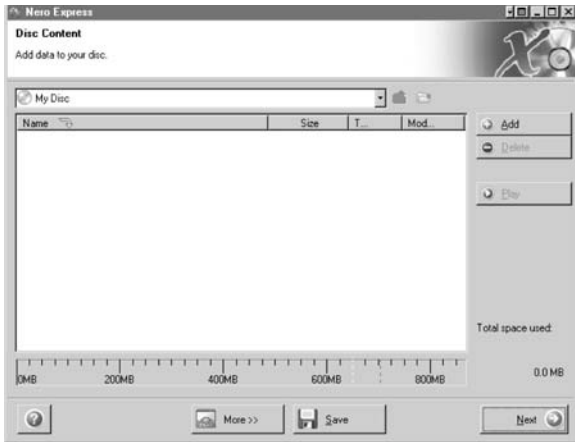
In this section, the QuickStart guide only deals with the default combinations. If you have already changed the program assignment, the programs opened differ from those in the QuickStart. For more details, please refer to the Html Help guides under the Nero StartSmart *Manuals* section or to the PDF manuals found in Manuals folder under the \Program Files\Ahead\ directory on your computer. These documents cover mostly all of the details you should need to become an expert.

6.1. Make a Data Disc

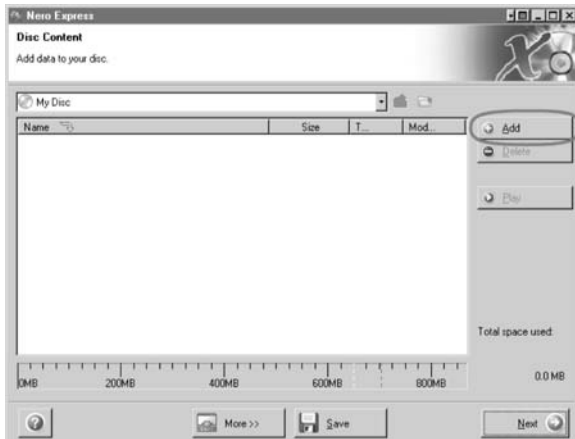
1. Click on the **Nero StartSmart**  icon; select the 'Data' category and click on 'Make Data Disc.'



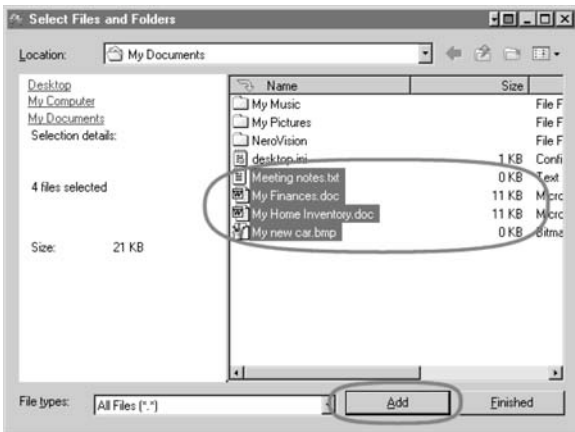
- **Nero Express 6** starts automatically and the compilation window for data opens.



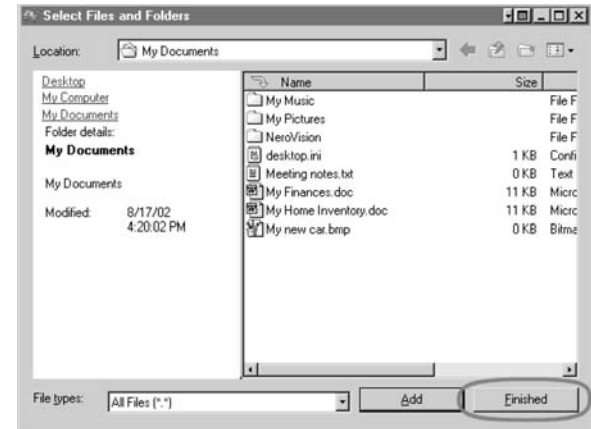
2. In the window, click on the 'Add' button to open the window for selecting files.



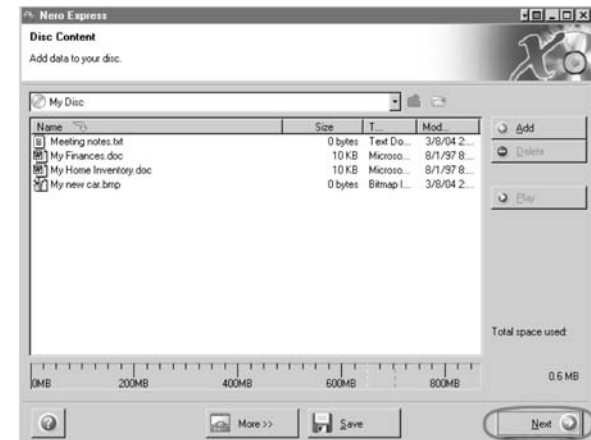
3. Select the desired files and click on the 'Add' button to transfer them to the compilation.



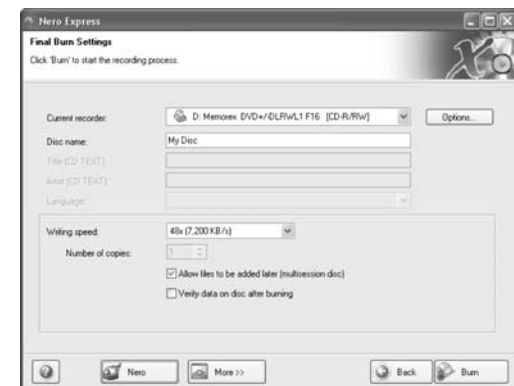
4. Once you have finished adding files, click on the 'Finished' button to close the window and return to the **Nero Express 6** screen.



5. All the files you have added appear in the compilation window. Click on the 'Next' button to advance to the burning window.



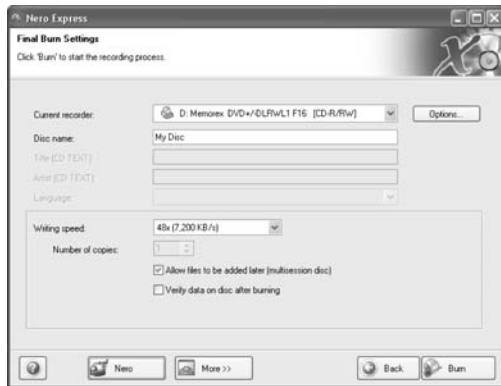
6. Before burning the disc, make the final settings.



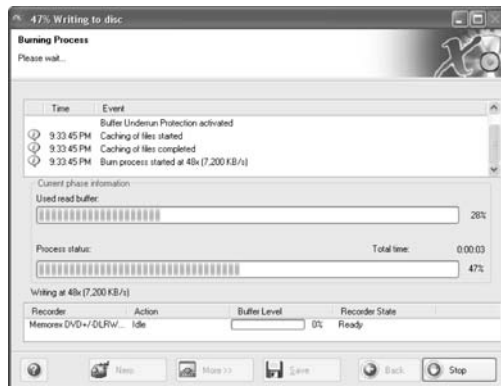
- Current Recorder** Select the Memorex 16X DVD recorder from the list of connected recorders.
- Disc name** Give the disc a title if you like.
- Writing Speed** Select the speed for the burning process.
- Number of copies** Select the number of copies to be burned.
- Multisession disc** If this checkbox is selected, a multi-session disc is created, allowing you to add further sessions later. If the checkbox is not selected, the disc is finalized and no more burning is possible.
- Verify data** If this checkbox is selected, the program verifies that the burned data on the disc is identical to the original data once the disc is recorded. This guarantees that the burned data will function as desired, but this step adds time to the full recording process.

Note: Clicking on the 'More' button expands the burning window and offers additional setting options such as selection of the burning method and simulation of the burning process.

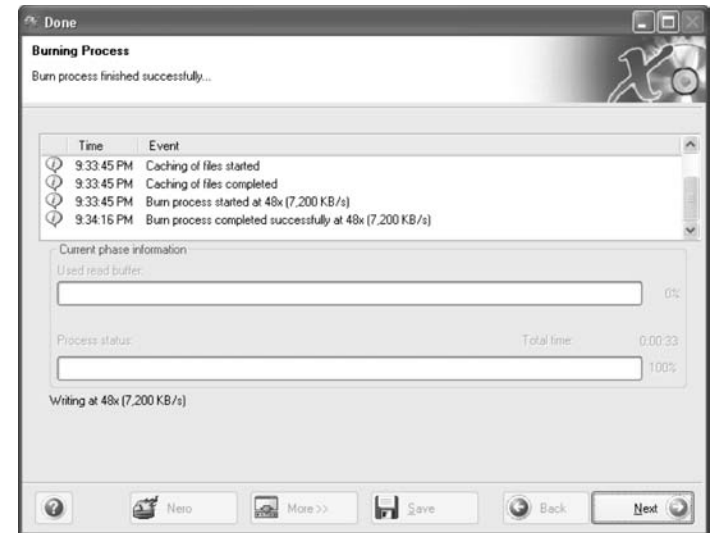
7. Click on the 'Burn' button to start burning the disc.



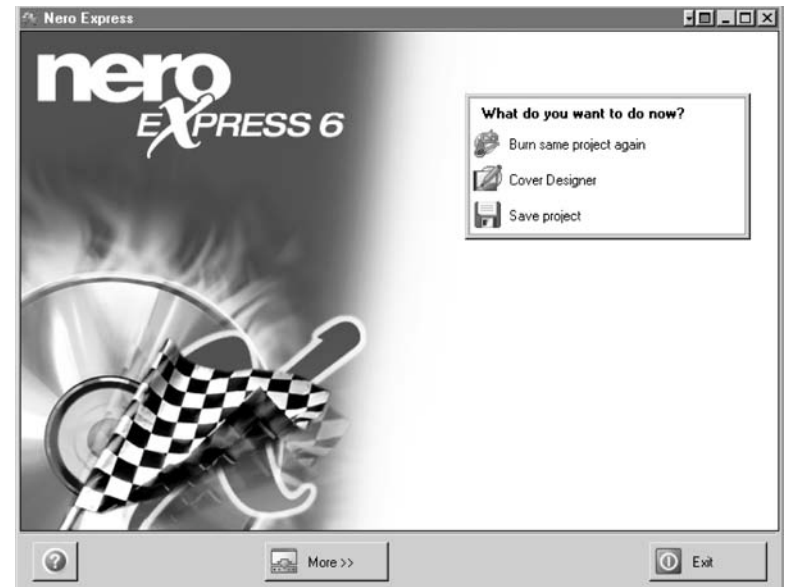
- The burning process starts and you will see information about the current status.



- Once the burning process is complete, you can print a label by opening Cover Designer or save a project file of the disc compilation. To do this, click on the appropriate button.
8. Click on the 'Next' button to advance to the selection window.




9. Select the desired option or close Nero Express 6.



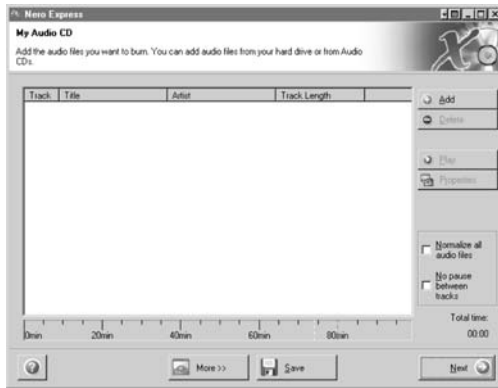
6.2. Make an Audio Disc

An audio disc(CD) contains music files that can be played back in any CD player and many DVD players.

1. Start **Nero StartSmart**  , select the 'Audio' category and click on 'Make Audio CD.'



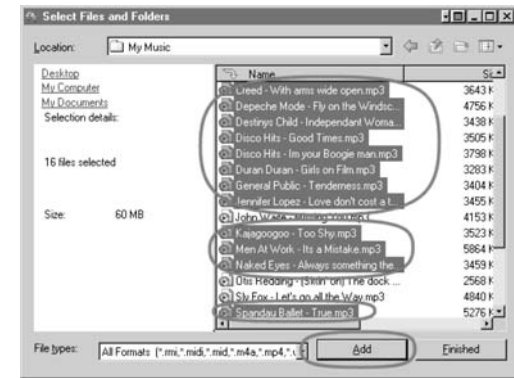
- **Nero Express 6** starts automatically and the compilation window for audio discs opens.



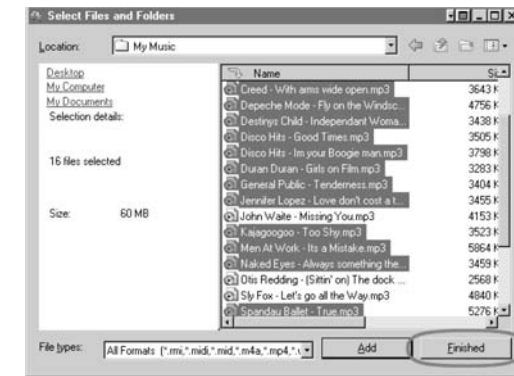
2. In the window, click on the 'Add' button to open the window for selecting files.



3. Select the desired files and click on the 'Add' button to transfer them to the compilation.



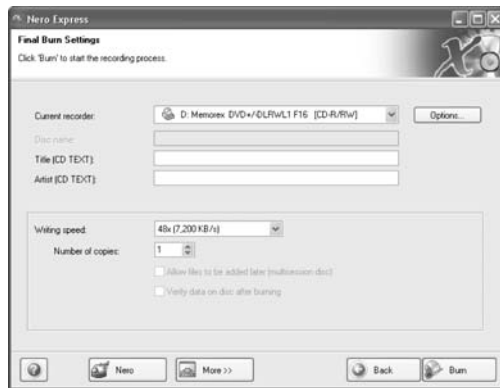
4. Once you have finished adding files, click on the 'Finished' button to close the window and return to the **Nero Express 6** screen.



5. All the files you have added appear in the compilation window. Click on the 'Next' button to advance to the burning window.



6. Before burning the disc, make the final settings.



Current Recorder Select the Memorex 16X DVD recorder from the list of connected recorders.

Title (CD TEXT) If the recorder supports the writing of CD TEXT, you can enter the title of the CD here. The title may not be longer than 64 characters.

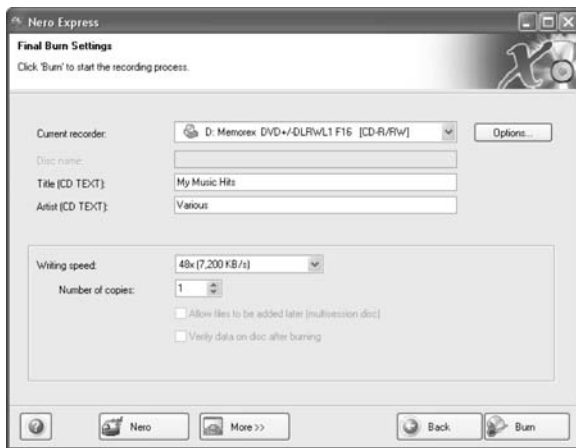
Artist (CD TEXT) If the recorder supports the writing of CD TEXT, you can enter the artist's name for the CD here. The name may not be longer than 64 characters.

Writing Speed Select the speed for the burning process.

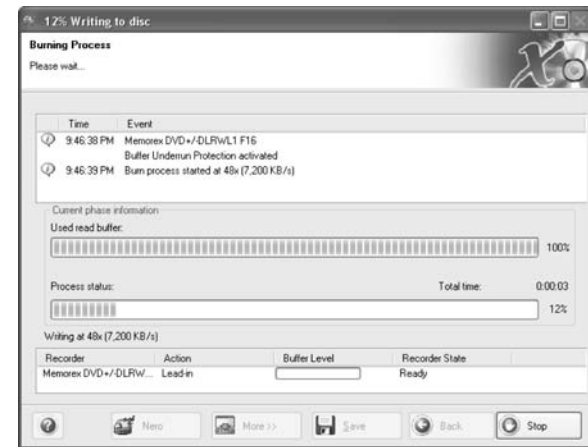
Number of copies Select the number of copies to be burned.

Note: Clicking on the 'More' button expands the burning window and offers additional setting options, such as selection of the burning method and simulation of the burning process.

7. Click on the 'Burn' button to start burning the disc.

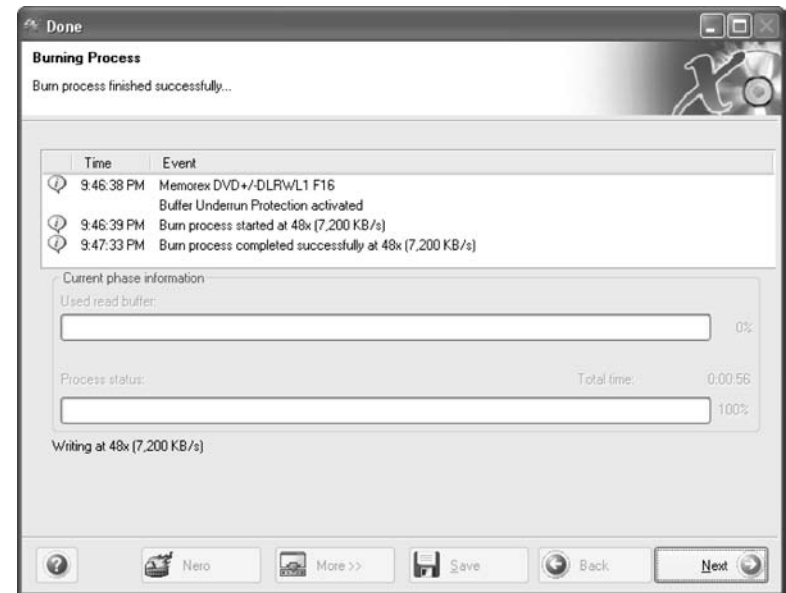


■ The burning process starts and you will see information about the current status.



■ Once the burning process is complete, you can print or save a log of the burning process. To do this, click on the appropriate button.


8. Click on the 'Next' button to advance to the selection window.



9. Select the desired option or close **Nero Express 6**.

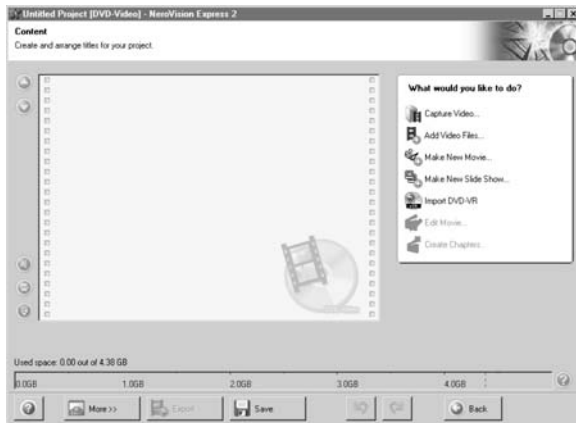
6.3. Make a CD or DVD Video Disc

A video disc contains video files that you can burn in a variety of formats (VCD / SVCD or DVD-Video) that you can record on your Memorex 16X DVD drive. This QuickStart Guide describes the creation of a DVD video disc. The procedure for a VCD or SVCD is essentially the same.

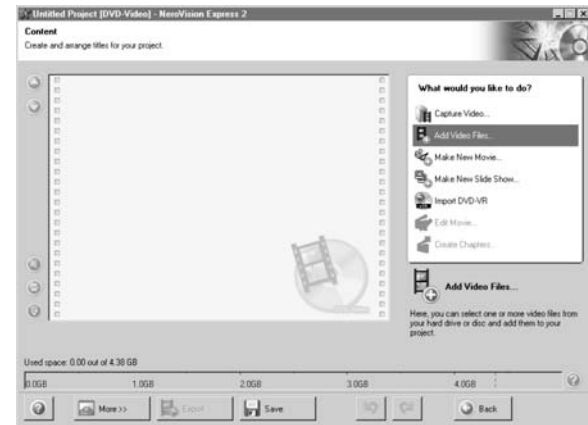
1. Start **Nero StartSmart** ; select the 'Photo and Video' category and click on 'Make your own DVD-Video.'



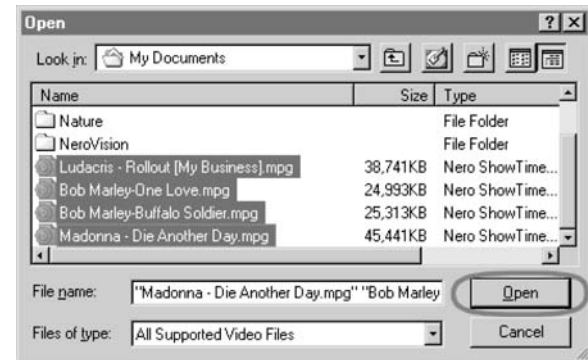
- **NeroVision Express 2** starts automatically and the selection window for video discs opens.



2. Click on 'Add Video Files' to open the window for selecting the files.

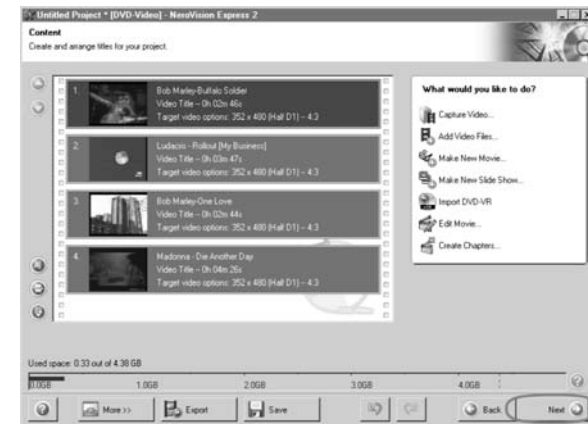


3. Select the desired files and click on the 'Open' button to transfer them to the compilation.



4. Repeat steps 2 and 3 to add more video files.

5. All selected files appear in the compilation window. Click on the 'Next' button to create the menu.



- Make the desired changes to the DVD menu by highlighting the individual menu items with the mouse and selecting the desired option. Click on the 'Next' button to proceed to the next window.

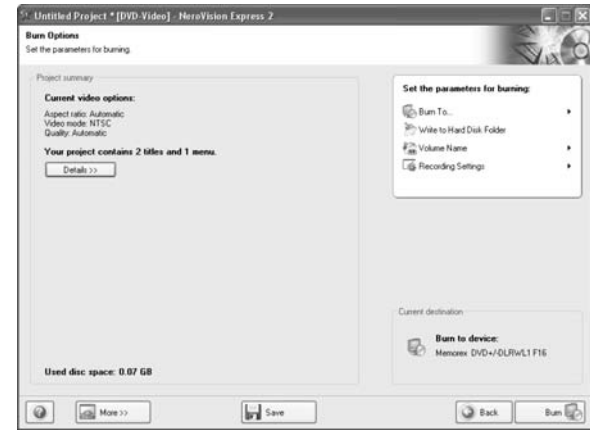


Note: With the Left Mouse button, click on the video thumbnail of your choice while holding the button down, you may drag the selected thumbnail around your project work area to avoid key or special areas (like peoples faces or various items) of your custom background picture if you have chosen one.

- You can use the remote control to move around the menu, e.g., to view the videos again. Click on the 'Next' button to proceed to the next window.



Before burning the disc, make the final settings then click Burn to continue.



Burn to Select the Memorex 16X DVD recorder from the list of connected recorders.

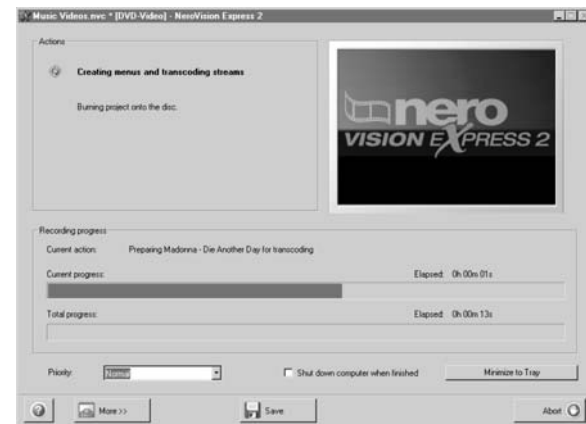
Write to Hard Disc Folder If you do not want to burn the project (yet) but you want to save it to the hard disc instead, click on this button to open up a window where you can select the location you to which you can save it.

Volume Name Change the name of the disc if you wish to do so.

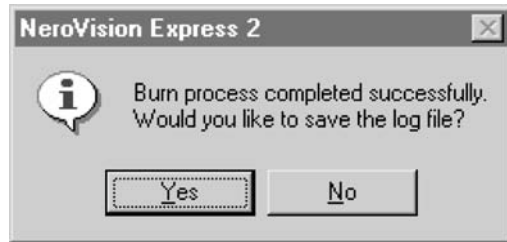
Recording Settings Depending on the selected destination recorder, you can adjust the recording settings, e.g., to select the burn speed.

Note: Clicking on the 'More' button expands the burning window and offers additional setting options, such as selection of the coding quality and the aspect ratio of the video.

- The burning process starts and you will see information about the current status.



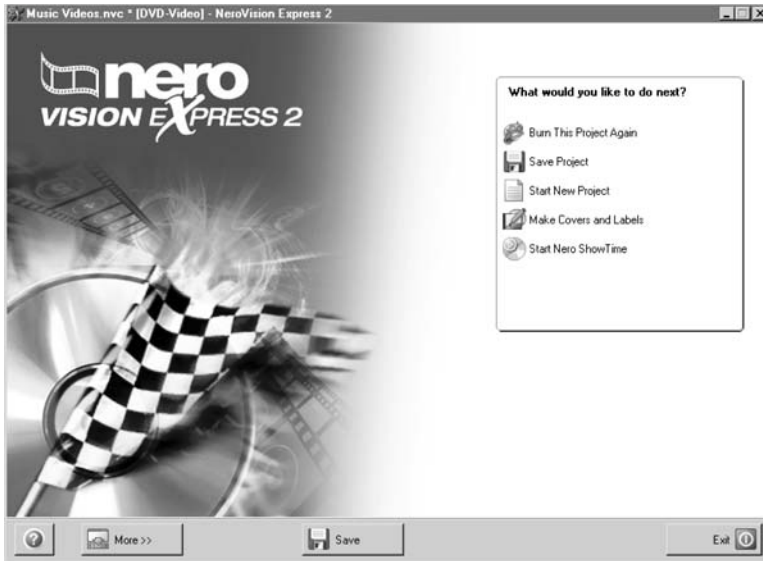
- Once the burning process is complete, a corresponding message appears. Click on the 'OK' button to close the window.



- Select the desired option or close **NeroVision Express 2**.




- NeroVision Express 2** starts automatically and the selection window for the drives and the final burning settings opens up.

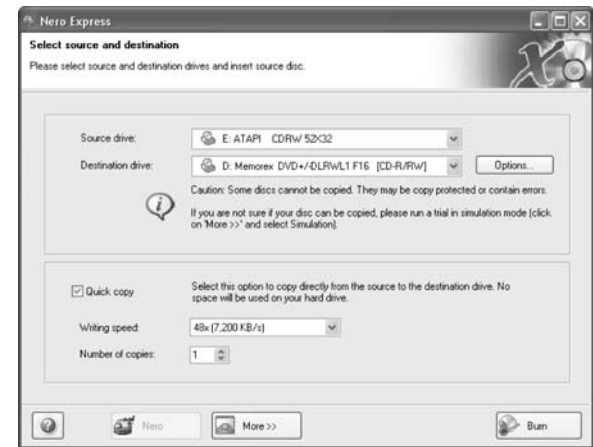


6.4. Copy a Disc



Unless you own the copyright or have the permission of the copyright holder, the unauthorized copying of discs represents a violation of national or international laws and may result in serious penalties.

- Start **Nero StartSmart**  icon, select the 'Copy and Backup' category and click on 'Copy Disc.'



- Select the drive containing the disc to be copied as the source drive.
- Select the Memorex DVD+/-RW 16X DVD recorder as your destination drive.
- In the 'Quick Copy' section, you can determine how the disc is to be copied.
 - If the Quick Copy option is selected, the copy is made directly, i.e., from drive to drive. This method is quick but is susceptible to errors.
 - If the Quick Copy option is not selected, a temporary image file for the original disc is first recorded on the hard drive, and the image file is then burned from the temporary image file. This method takes longer, and the size of the image file, and therefore the required hard disc space, corresponds to the quantity of data to be copied from the original disc.

In addition, you can also make the following settings:

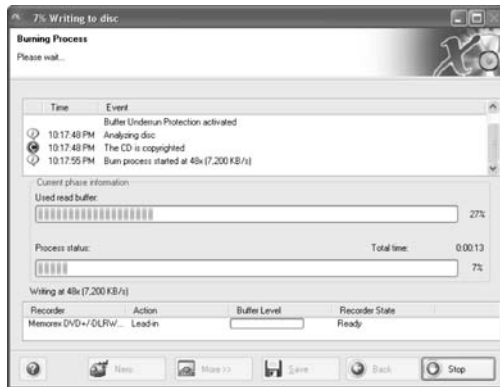
Writing Speed Select the speed for the burning process.

Number of copies Select the number of copies to be burned.

- Once you have made all your settings, click on the 'Burn' button to start burning the disc.

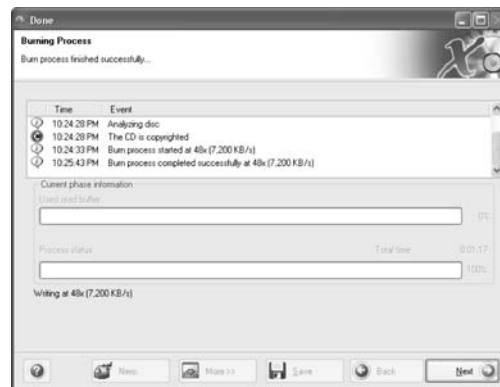


- The burning process starts and you will see information about the current status.



- Once the burning process is complete, you can print or save a log of the burning process.

- Click on the 'Next' button to advance to the selection window.



- Select the desired option or close Nero Express 6.



6.5. Upgrade Options

You have the option of upgrading to the full retail version of Nero Burning-ROM if you would like to add more features and options to your recording software. Visit Nero at <http://www.nero.com> to find out what extra features are available and to purchase the full version if you choose.

6.5.1. Updates (free downloads)

At <http://www.nero.com>, you will find regular updates for all programs, with new functions integrated and/or errors eliminated. You can either retrieve these updates via your **Nero ProductCenter** or just look at the **Nero** website from time to time. In order to optimize the functionality of your programs, we recommend that you keep them up to date. On occasion Memorex may post a special update on the Memorex website. Click on the Memorex FAQ's button in your StartSmart Toolkit or StartSmart Extras area to check on the Memorex FAQ's page or browse the Memorex website to http://www.memorex.com/service_support/software.php to check for any available downloads related to your kit.

6.6. FAQ

1) Where can I find step by step directions for using, Nero Express 6, NeroVision Express 2, and Nero BackItUp?

In addition to this Guide, the Nero StartSmart bar has a Manuals section with Html versions of the Nero manuals and the :AProgram Files\Ahead\Manuals directory on your hard drive has PDF* versions of the manuals containing detailed instructions for using the Nero software.

*Adobe Acrobat Reader is required in order to access any supplied PDF files. It can be downloaded for free at www.adobe.com

2) One of my encoders has expired! What should I do?

For licensing reasons, Memorex and Nero are only permitted to integrate demonstration versions into Nero 6 for some formats. This gives you the chance to test out the encoder functions for a limited time. To activate the demo version, you must purchase the corresponding encoder plug-in. You can do this at <http://www.nero.com> in the online shop. We decided to do take this step so that only those users who actually want to use these functions would have to pay the license fees due.

3) Why do I not have a Help file?

If for some reason you do not have access to any Help files, please download the latest update and the language package to enable you to access the help files again. You can download them from:

<http://www.nero.com/us/index.html#download>

4) Where can I download an update?

All updates and demo versions of other products from the Ahead Nero family can be found at <http://www.nero.com>. Any updates that may be available for the PhotoShow Deluxe application by SimpleStar can be found at <http://www.simplestar.com>.

5) Where can I get assistance with technical problems?

For all technical problems, we recommend visiting the Nero help system at <http://englishsupport.nero.com> or for PhotoShow Deluxe by visiting the PhotoShow Deluxe FAQ's page at http://simplestar.com/site_html/support_psd.php or finally by visiting the Memorex FAQ's page at http://www.memorex.com/service_support/faq.php.

If you cannot find an answer to your problem at either of the locations above, you can contact the Memorex Technical Support through e-mail at techsupport@memorex.com or the Nero support team through e-mail at techsupport@nero.com or the PhotoShow Deluxe support team through their support form which can be found on their FAQ's page.

If all of the above electronic assistance is not resolving your issue or answering your inquiries, please call Toll Free at (877) is it live [474-8548]. Technicians are available M-F 9-6 p.m. P.S.T. .



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MEMOREX SUITE

7. TROUBLESHOOTING

A summary of common questions and their answers are listed below to help you troubleshoot your new drive before calling for customer service. You may also refer to the Memorex web site at <http://www.memorex.com> for more information.

7.1. The drive is not recognized.

- Make certain the power cable and power supply is attached to the wall plug and drive correctly.
- Make certain that the USB 2.0 or IEEE-1394 interface cable is connected to your computer and your drive.

7.2. The drive is turned ON but the front panel LED does not light.

- Is the computer turned ON?
Turn the computer ON.
- Is the power cable connected properly to the drive?
Check that the connector of the power supply is connected to the wall plug in the correct direction and that the power cable is fully connected to the drive.
- If the drive's power supply is connected to another power source like a power strip that properly conducts power from another power source, is the power strip turned on?

7.3. The drive is not recognized by the operating system.

- Is the USB 2.0 or IEEE-1394 interface cable connected?
Check that the connectors are fully connected to your computer and your drive.

7.4. The disc tray does not open when you press the eject button.

- Is the drive turned on? (Does the LED light on the front panel light?)
Refer to 'The drive is turned on but the front panel LED does not light' (Troubleshooting Item 2)
- Is any CD/DVD writing software being used?
Some CD/DVD writing software prohibits ejecting while accessing. (If you are using such a software program, the disc tray does not open even if the eject button is pressed.) In such a case, follow the steps in the software window to eject the disc or quit the CD/DVD writing software prior to pressing the eject button.
- Is the disc tray opened when the computer is started?
Quit all running application software, restart your computer and press the eject button of the drive.
- Turn off the computer, and remove the disc following 'Manually Ejecting a Disc'.
If the disc tray is caught in the drive and does not come out, or if it cannot be opened or closed using the eject button after it is pulled out manually, contact the store of purchase.

7.5. The disc is ejected without order (or it comes out spontaneously)

- Is the disc set properly (horizontally) on the disc tray?
Set the disc properly and close the disc tray.
- Is the disc dusty or dirty?
Remove dust or dirt from the disc using an air spray or a dry soft cloth. To avoid damaging your discs, wipe the disc gently from the center perpendicular to the edge of the disc.
- Does the drive accept other discs (audio CD, CD-ROM, blank CD-R disc, etc.)?
If a specific disc is ejected, the disc itself may be damaged or deformed. If all discs are ejected, contact the store of purchase.

7.6. No data can be read from a disc.

- Is the disc ejected without order?
Refer to Troubleshooting Item 8.5.
- Is the disc useable with the drive?
Be sure that the disc is compatible with the drive.
- Is the disc dusty or dirty?
Remove dust or dirt from the disc using an air spray or a dry soft cloth. To avoid damage discs, wipe the disc gently from the center perpendicular to the edge of the disc. The Memorex Air Duster and OptiCloth products work great for this application.
- Can data be read from other discs (audio CD, CD-ROM, etc.)?
If no data can be read from a specific disc, data may be written in a format that the drive cannot recognize, or the disc itself may be damaged or deformed. Note that no data can be read from blank discs.

7.7. The playback of an audio CD (CD-DA) is inaudible.

- Check that the system volume is not set to the minimum level.
- Check that the drive volume is not set to the minimum level.
- If the playback audio from headphones or external speakers connected to the computer is inaudible, be sure that the sound card is configured properly. Consult your sound card manufacturers documentation or your computer manufacturers documentation for detailed instructions on how to do this.

7.8. Is more than one CD/DVD writing software installed on your computer?

Installing more than one writing software on a computer may cause overall instability of operation. (The writing software that comes with the drive can be used together without problems). Writing software must support the drive in order to recognize the drive. Contact the manufacturer of your CD/DVD writing software to see whether the software supports the drive.

7.9. The drive does not operate correctly.

- Is the disc compatible with the drive?

Important Note: Even if the disc is a type compatible with the drive, some varieties can still be unreadable on it.

- Is there dust on the disc tray or on the disc itself?
- Does your computer have several different CD/DVD writing applications installed?
If you use more than one CD/DVD writing application simultaneously, the behavior of the drive can become unpredictable.
- Do you have DMA enabled on all of your Internal Drives?
DMA being enabled is essential to obtain the high-speed performance of this drive. All Internal Hard Drives and CD/DVD types drives need to have DMA enabled.

7.10. The drive ejects or fails to read the disc, or the LED continues to blink after the disc has been loaded.

You may be trying to write to an unstable disc. Replace the disc with another blank disc. If the drive fails to write to a variety of different discs, it may be faulty and you should contact Memorex Tech Support.

NOTE: Before you contact Memorex Tech Support, verify that the blank media you have purchased is of a format that your drive supports. Example: This drive does Not support writing to DVD-RAM media. If you insert a blank DVD-RAM disc, you will have the results detailed in this issue.

7.11. When I copy data or music, why can't my CD-ROM drive or CD players see the information or play music?

It might be because you are using a CD-RW disc. Most older CD-ROM drives and CD players do not recognize the new rewritable media, so they won't be able to read the information.

In case of difficulties or to find answers to your questions, please:

1. Carefully read this Quick Start Guide.
2. Visit our Customer Support web site at <http://www.memorex.com>
3. E-mail our Tech Support at techsupport@memorex.com
4. Call Toll Free at (877) is it live [474-8548]. Technicians are available M-F 9-6 p.m. P.S.T..

8. APPENDIX

Technical Notes

Buffer Underrun Protection Function

DVD drives are equipped with a buffer memory that temporarily stores data that is being transferred. When the buffer memory becomes empty due to a delay of data transfer for any reason, a writing error happens. Such a condition is defined as a buffer underrun; such an error is defined as a buffer underrun error.

Buffer underrun protection is featured in this drive.

When a buffer underrun almost happens, buffer underrun protection temporarily suspends the writing process. Writing resumes when enough data has accumulated in the buffer memory. Buffer Underrun Protection in this drive is extremely accurate, resulting in seamless recording before and after suspension.

Test Writing

Test writing is a function to check for the possible occurrence of buffer underrun in your computer environment. The included CD/DVD writing software operates the test writing function that cannot operate when buffer underrun protection is activated (default). The buffer underrun protection should be first be deactivated to use test writing.

DMA

Direct Memory Access(DMA), is support that allows data transfer between the drives and memory without using the CPU. Both the drives and IDE controller in the machine on the motherboard must include support for DMA. Also, you must manually enable the operating system to support DMA, this is done in the System section in the Control Panel where the drive settings are .Please see Section 3.1 above for more information on DMA.

Writing Methods

Disc-at-Once (DAO)

This method is used to write all data onto a disc in one operation. It writes multiple pieces of data without placing a space between data, starting with the innermost track of the disc. Once data is written by this method, no data can be added to the same disc even if there is free space available on the disc. This method is useful for making a backup copy of an entire CD or DVD.

Track-at-Once (TAO)

This method is used to write all data on a track-by-track basis. A track can be defined as the smallest unit of area that contains an ordinary program, image file, text file, etc. This method enables you to add data to the same disc, one track of data at a time, as long as there is free space available on the disc. A disc that contains data written in several sessions is defined as a multi-session disc. An area that records data and management information (Lead-in/Lead-out) is defined as a session. Lead-in and Lead-out are signals written for stating the starting and ending points of one session.

Important Note: Ordinary audio CD players can only playback single-session discs or the first session on a multi-session disc. Do not record audio data on the second and subsequent sessions.

Session-at-Once (SAO)

This method is used to write all data on a session-by-session basis. Unlike Track-at-Once described above, Session-at-Once enables you to record multiple tracks onto a disc at a time. CD EXTRA, for example, uses this method to write multiple pieces of audio data (or multiple tracks) in the first session and information required for computers in the second session. This method enables you to add data into the same disc, one session at a time, as long as there is free space available on the disc. A disc that contains data written in several sessions by this method is defined as a multi-session disc, like a disc written by the Track-at-Once method.

Packet Writing

This method is used to record data onto a disc on a file-by-file basis. This method divides a track into small segments called "packets" so that data can be written on a packet-by-packet basis, which means that you can write data in much the same way as you can copy data to a floppy or hard drive. Since the data can be written easily, packet writing is proper to daily data backup. Packet writing also enables you to add packets to a disc as long as there is free space available on the disc.

ABOUT THE FIRMWARE

The "firmware" is a small piece of software built into the Memorex DVD recorder, and is used to control its basic operation. Since it resides in flash memory, it can be overwritten and updated.

To ensure the correct operation of your new drive, updates to the firmware will be made available as necessary. You can find information about the most recent firmware for the drive on the Memorex web site.

URL for the web site is <http://www.memorex.com>

The most recent user support information, including firmware updates, can be found in the support area of Memorex's web site. Please check this information regularly.

Important Note: The firmware is completely unrelated to the CD/DVD writing application software.

SAFETY PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

These precautions explain how to use the device correctly and safely, thereby preventing injury to yourself or to others. This section has been sub-divided into a WARNING section and a CAUTION section, according to the likelihood and nature of any potential injuries or damage inflicted. They relate to your personal safety, and also help you minimize the risk of damaging the device. Please read these sections carefully before proceeding.

WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Do not open the device or attempt to disassemble or modify it. Otherwise, there is an increased risk of electrical shock or fire. The device contains no user-serviceable parts. If it appears to be malfunctioning, have it inspected by qualified service personnel. Opening the drive enclosure will also void your warranty on this product.
- Do not look inside the device. If you expose your eyes to the laser inside the device, you risk damage or loss of your vision.
- Do not insert fingers or foreign objects into the device. Otherwise, there is an increased risk of personal injury, electrical shock, damage to the device or fire. Please take particular care if small children are present.
- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it that contain liquids which might spill into an opening. Otherwise, there is an increased risk of electrical shock, fire or personal injury.
- Follow the Owner's Manual carefully. Otherwise, there is an increased risk of personal injury, electrical shock, fire or damage to the unit. Follow the correct procedure when setting up the device.
- If unusual smells, sounds, or smoke emanate from the device or if liquids enter the device, switch the computer and drive off immediately and unplug it from the power outlet. Otherwise, there is an increased risk of electrical shock, fire or damage to the device. Please contact Memorex Tech Support (877) is it live [474-8548] to obtain an RMA.
- Make sure the computer is electrically grounded. Otherwise, there is an increased risk of electrical shock.
- When opening up the computer, always unplug the computer from the electrical outlet. Do not touch the plug with wet hands. Otherwise, there is an increased risk of electrical shock.

CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to yourself or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

- Always unplug all computer equipment from the electrical outlet if it will not be used for a prolonged period of time or if there is a risk of lightning. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Do not expose the device to excessive heat or vibrations such as in direct sunlight or near a heater. Also avoid placing it in extreme cold or in a dusty environment. Otherwise, the front panel may become disfigured or the internal components may be damaged.
- Do not use the device near other electrical products such as televisions, radios or speakers. Otherwise, this may cause interference which can affect the proper operation of those other products.
- Do not place the device in an unstable position. Otherwise, it may accidentally fall down and be damaged or cause personal injury.
- Mount the device horizontally. Otherwise, written data may be destroyed. Set the device up according to the instructions in this Quick Install Guide.
- Always remove the disc from the tray before transporting the device. Otherwise, written data may be destroyed.
- When cleaning the device, never use benzene, paint thinners, detergents or chemical impregnated wiping cloths. Also, do not place vinyl, plastic or rubber objects on the device. Otherwise, the device may be damaged or its front panel and case may become discolored. Use a soft, dry cloth to wipe the device.
- Do not rest your weight on or place heavy objects on the device and do not use excessive force on buttons, switches or connectors. Otherwise, there is an increased risk of damage to the device or personal injury.
- Do not place the device near sources of magnetic interference, such as a computer display. Magnetic interference can affect the operation and stability of the device.
- Have the device serviced regularly. Otherwise, dust can build up inside the device, increasing the risk of fire or damage. For information about servicing charges, contact the store at which the device was purchased. The device should be serviced about once a year.

■ About CD/DVD discs

Please read the following regarding the handling of CD/DVD discs.

1. Do not expose discs to excessive heat such as in direct sunlight or near a heater. Also avoid keeping them in a humid place.
2. Do not touch disc surfaces. When handling a disc, hold it by its edges.
3. Remove dust and dirt from disc surfaces. Use air-based dust removers. The surfaces may be scratched if wiped with a dry cloth.
4. Do not label your DVD discs.
5. Do not write on disc surfaces except where indicated. If you do, use Memorex CD Markers. Do not use pencil or ball point pens.
6. Do not clean discs with generic chemicals or detergents. Use the appropriate type of Memorex cleaning products.
7. Do not bend or drop discs.

* Check discs for defects before putting them in your drives. Defects include chips or cracks that can cause discs to come apart in high speed drives.

1. The information contained in this Quick Install Guide is subject to change without prior notice.
2. All trademarks contained in this Quick Install Guide belong to their respective owners.
3. Memorex does not bear any responsibility for any outcome as a result of using this device.
4. Reproduction of this manual, either in part or in full, is expressly forbidden.

■ Precautions for Transportation

Before transporting the device, always put it in its original box. If the device is transported without adequate packing, the internal components may be damaged and cause the device to malfunction.

■ Copyrights

When writing to CD or DVD, make sure that you are not infringing any copyrights. It is illegal to copy audio CDs for non-personal use. When backing up software, please make sure that you are not infringing any software copyrights for that product.

■ Warranty

Memorex Products, Inc. ('Memorex') warrants this product (excludes the bundled software, any connected device and data recorded in any form) against defects in materials and workmanship for one year from the date of original retail purchase. PURCHASER'S REMEDY IS LIMITED TO REPAIR OR REPLACEMENT (AT MEMOREX'S OPTION) OF ANY DEFECTIVE PRODUCT. THIS WARRANTY AND REMEDY IS EXCLUSIVE AND WE SPECIFICALLY DISCLAIM ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES. IN NO EVENT SHALL MEMOREX OR ANY SUPPLIER OR SELLER BE RESPONSIBLE FOR ANY DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR ANY OTHER DAMAGES OF ANY KIND. For further information regarding warranty service please go to www.memorex.com

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