



indiDVD RECORDABLE DVD/CD DRIVE



HARDWARE GUIDE

CAPTURE  CREATE  PREMIERE 

GREETINGS

Thank you for purchasing Indi DVD. Enjoy your new drive.

Before installing your drive, write down its serial number. Go the following URL and register the drive: www.tdk.com/registration.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications should be approved by the party responsible for compliance with FCC Rules. Otherwise, the user loses authority to operate the equipment.

The laser beam emitted from the optical pickup is invisible. Accordingly:

- Do not open the optical pickup housing.
- Obtain service only from TDK-authorized personnel.

LASER INFORMATION

These products have been designed and manufactured according to IEC 825-1 on the Safety of Laser products. This product comes under "Class 1 Laser Products." A Laser Caution Marking is attached on the top of the internal drive model: "Caution: Invisible laser radiation when open. Avoid direct exposure to beam."



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



CAUTION: To disconnect the drive from an electrical current, pull out the AC power cord.

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WHAT INDI DVD DOES...
Indi DVD is a DVD/CD burner that provides professional quality writing, rewriting and reading.



SAVE YOUR BOX! If you need to ship your drive back to TDK, send it packaged in the original box (if possible). TDK cannot assume liability for any damage your drive sustains during shipment. Please ship your drive in the safest manner possible.

DRIVE INSTALLATION

SECTION 1

This chapter explains how to physically install Indi DVD.

RECORD THE SERIAL NUMBER

On the cover of this manual, record the serial number and TLA code of your drive. This will come in handy should you need to contact TDK Technical Support.

OVERVIEW OF INSTALLATION STEPS:

- 1. Shut down the computer and disconnect its power cable.
- 2. Remove your computer's cover.
- 3. Set the jumpers.
- 4. Insert your new drive into an unused bay.
- 5. Connect the cables.
- 6. Finish setup.

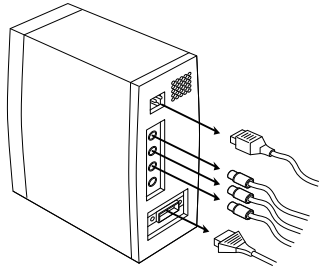
NOTE:

Prior to beginning the installation process, you may want to view the install video located on the included Disc Blender Software Suite disc. It's also available at www.tdk.com/support/flash.



SHUT DOWN THE COMPUTER AND DISCONNECT ITS POWER CABLE

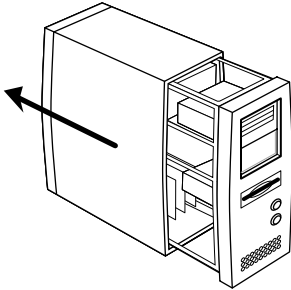
1. Click Start, then select Shut Down. Wait while Windows shuts down.
2. Unplug the computer's power cord and all other connected cables.



NOTE: Computer designs vary. If unsure of how to remove the cover, consult your PC's User Manual.

REMOVE THE COMPUTER'S COVER

1. Remove the screws or fasteners that attach the case cover to the computer. You may need a screwdriver.
2. Carefully remove the case cover.



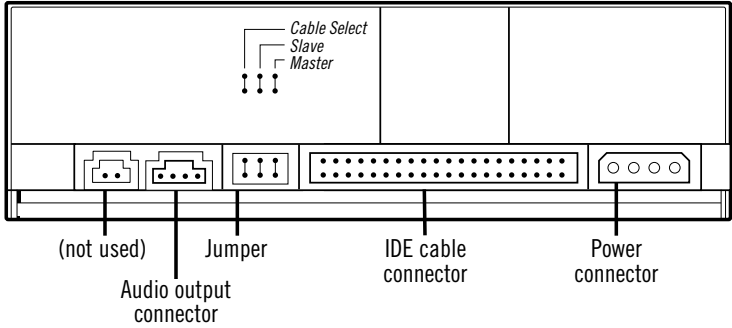
NOTE: Some computer cases may not require removal of the front cover. Consult your PC's User Manual to determine if this is necessary.

3. Remove the front cover.
4. Remove the cover plate from the unused drive bay into which you want to install your new drive.
5. Now touch unpainted metal, such as the inside edge of your computer's case. This important step discharges the static electricity that can damage electronic components.

SET THE JUMPERS

For your new drive to function properly, its jumper must be set correctly. Before setting the jumper, determine if your PC is a Cable Select (CSEL) or a Master/Slave system.

- If ANY device is set to CSEL (hard drive, CD-ROM, etc.), then your PC is a CSEL system.
If ANY device is set to Master or Slave (hard drive, CD-ROM, etc.), then your PC is a Master/Slave system.



For Cable Select (CSEL) Systems Only

Some computers feature Cable Select (CSEL) functionality. In a CSEL system, the jumpers for all drives must be set to CSEL (rather than MASTER or SLAVE). If your computer doesn't have CSEL functionality, drive jumpers MUST NOT be set to CSEL.

To use CSEL, you must have:

- A computer that supports CSEL.
- A special CSEL type IDE cable.

If your computer is CSEL compatible, simply change your new drive's factory jumper setting to the CSEL position. It is not necessary to make any adjustments to your other devices.

For Master & Slave Systems Only

If any device in your PC is set to Master or Slave, then you have a Master/Slave system as opposed to a CSEL system. Most computers have two IDE channels/cables: PRIMARY and SECONDARY. Your hard drive(s) is probably already connected to the Primary IDE cable. Typically, your new drive should be connected to the Secondary IDE cable as the MASTER device, and your old CD or DVD drive should be connected to the secondary IDE cable as a SLAVE.

Jumper Setting Examples

Here are examples of correct jumper settings for some common system configurations. (There are many possible configurations, not all of which can be covered here.) Find an example that resembles your system configuration and use the same jumper settings.

- A. IF: Any installed device is set to Cable Select (CSEL)
THEN: Set your new drive's jumper to CSEL and connect it to the Secondary IDE cable. If absolutely necessary, connect to the Primary IDE cable instead.
- B. IF: The Secondary IDE cable has a DVD/CD-ROM or CD-RW drive connected as Master
THEN: Change the DVD/CD-ROM drive's jumper setting to Slave. Leave the TDK drive set as Master and connect it to the secondary IDE cable.
- C. IF: There is nothing connected to the Secondary IDE cable.
THEN: If your system is the Master/Slave type, set your new drive's jumper to Master and connect it to the secondary IDE cable. If your system is the Cable Select (CSEL) type, set your new drive's jumper to CSEL and connect it to the secondary IDE cable.



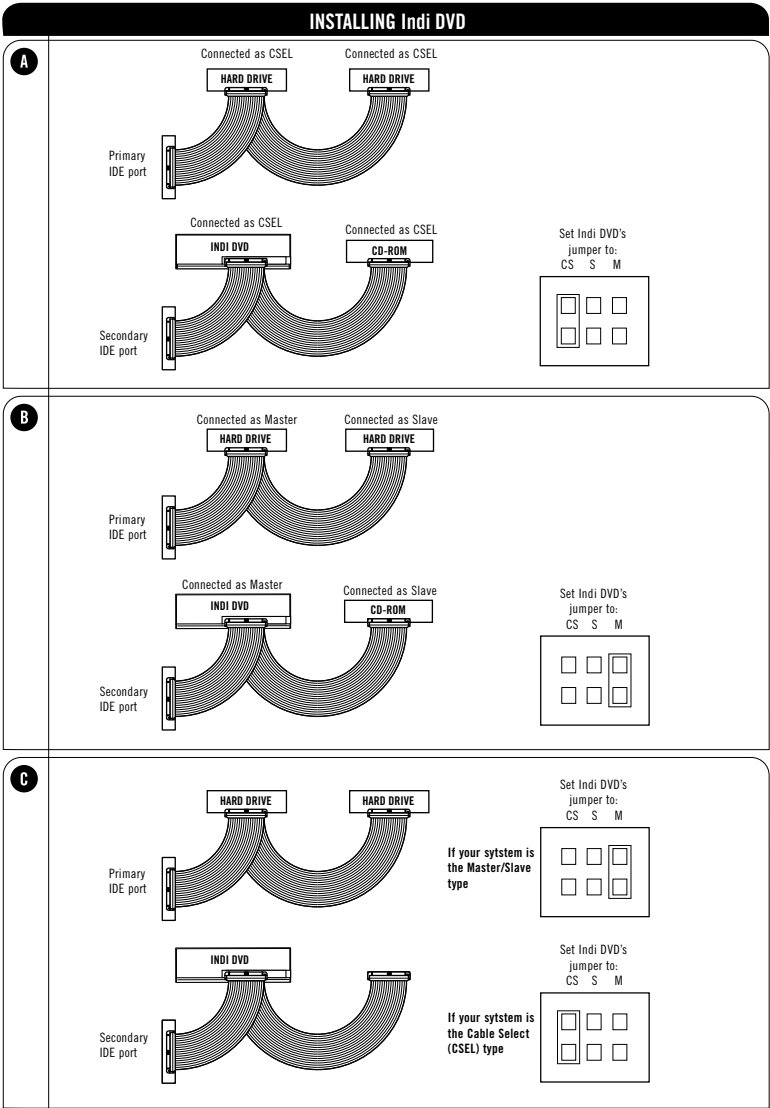
NOTE: The IDE cable included with your drive CANNOT be used for cable select (CSEL) configurations.



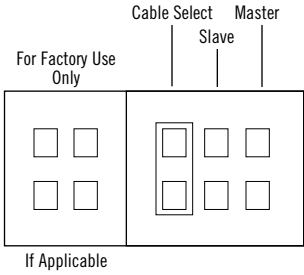
NOTE: If your old drive's IDE cable doesn't have an unused connector, replace the old cable with the IDE cable supplied with your new drive. The new cable can connect two devices.



NOTE: For best results, set Indi DVD's jumper to Master. If applicable, enable your system's DMA setting to achieve maximum writing speed.



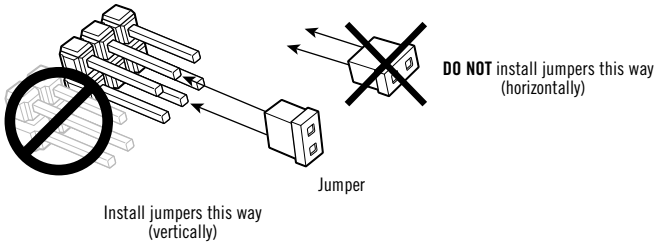
The jumper's position determines whether Indi DVD is set to Master, Slave or Cable Select (CSEL). In the example below, Indi DVD's jumper is set to CSEL.



Indi DVD's rear-panel jumpers

To change Indi DVD's jumper setting:

1. Remove the jumper with your fingers or needle nose pliers.
2. Place the jumper in the new setting. For example, to make Indi DVD a Slave, move the jumper to the center set of pins, leaving the other pins uncovered. To change the drive to Cable Select, move the jumper to the left set of pins. Make sure to insert the jumper vertically rather than horizontally. See below.



To change your old drive's jumper setting (if required):

1. Disconnect the power supply from the drive.
2. Disconnect the IDE cable from the drive.
3. Disconnect the audio cable from the drive.
4. Remove the drive from your PC.
5. Using your fingernails or needle-nose pliers, change the jumper to the new setting.
6. Place the drive back into the computer.
7. Reconnect the audio cable.
8. Reconnect the IDE cable.
9. Reconnect the power supply.



NOTE: If your PC doesn't have an unused drive bay, remove your old CD-ROM, DVD-ROM or CD-RW drive, then install Indi DVD.



NOTE: Some computers may require that drive rails be attached to Indi DVD. If you must use mounting rails, fasten the rails to the lower pair of holes. (In some instances, you may need to fasten the rails to the upper set of holes.) After attaching the rails, check their positioning by sliding the drive into the bay before you mount the drive or connect any cables. Rails are not included. If you need rails, obtain them from your computer's manufacturer or from a computer store.



CAUTION: Install Indi DVD horizontally. TDK does not guarantee the drive's performance in a vertical position.



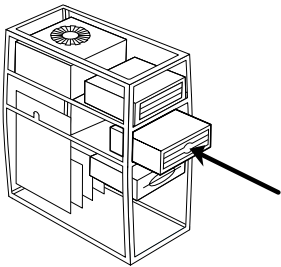
NOTE: You do not need to connect the audio cable if you plan to use TDK Digital Mixmaster as your CD playback software. If you plan to use another CD playback application, it may be necessary to connect the audio cable in order to hear music.

INSERT INDI DVD INTO AN UNUSED DRIVE BAY

Before installing Indi DVD in your personal computer, double check the jumper setting. Make sure the power to your computer and any external peripherals is OFF and verify that your computer is UNPLUGGED from its power source.

To insert Indi DVD into the drive bay:

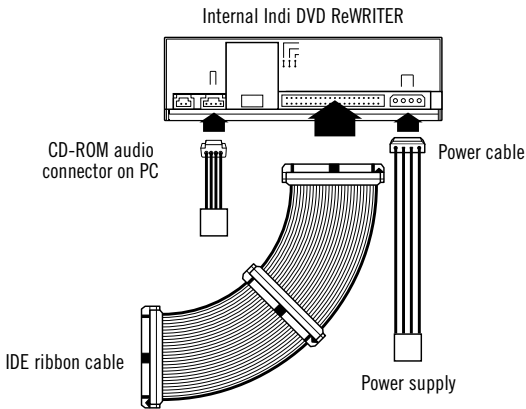
1. Locate an unused drive bay into which your new drive can be inserted.
2. Remove the cover plate from the unused drive bay.
3. Carefully insert the drive into the unused drive bay.
4. Using a Phillips head screwdriver, secure the drive into the drive bay with the included screws.



CONNECT THE CABLES

To connect the cables:

1. Look inside your computer's case, locate an unused IDE connector and attach that connector to Indi DVD's rear panel IDE port. (If there aren't any unused IDE connectors in the computer, replace the old IDE cable with the included IDE cable. The included cable can connect two devices. If installing the new IDE cable, be sure to connect one end to an unused IDE port on your computer's motherboard.)
2. Now find an unused power connector and attach it to the DC INPUT on the back of your new drive. If you do not find an unused connector, see the "Do you need a power cable?" section that follows.
3. Connect an audio cable between the back of your new drive and your soundcard (optional).
4. Double check your work. Make sure the side of the IDE cable with the red stripe is matched to Pin 1 on the computer's motherboard and on the drive.



Indi DVD's rear panel connections

The IDE Ribbon Cable

A standard IDE flat-ribbon cable has 40 pins and three connectors. One end connects to the IDE port on your computer's motherboard, and the other two connectors can be used to attach peripherals such as Indi DVD or a CD-ROM drive.

Do you need a power cable?

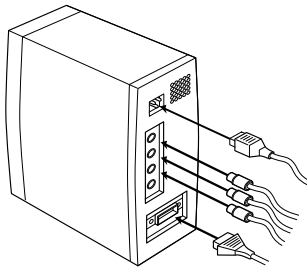
Most computers have a few unused power connectors. There should be a cable bundle sticking out of the power supply inside your computer. Follow the cable bundle to see if there are any unused connectors. If so, plug one of these connectors into the power jack on Indi DVD's rear panel. If there aren't any unused power connectors inside the computer, you'll need to buy a "splitter," available at most computer stores.

FINISH SETUP

Now it's time to reassemble your computer, verify that Indi DVD is recognized and optimize performance.

To reassemble your computer:

1. Using the screws or fasteners you removed, reattach the cover to your case.
2. Plug in the computer and reattach all the cables you removed.



After installation, make sure Indi DVD and your other IDE peripherals are recognized by the computer.

To verify that your new drive is recognized by the computer (Windows 98SE/ME/XP/2000):

1. Turn the computer ON. After the computer boots up, you should see the Windows display.
2. Open Windows Explorer and ensure there is an icon for Indi DVD, the hard drive, and other CD-ROM drives, if present. Indi DVD may be labeled D:, E: or another designator.
3. If Indi DVD doesn't appear in Windows Explorer, reboot and enter the computer's CMOS setup program. Enable the BIOS to recognize your new drive. Use the setup program to set up IDE Master and Slave designations as needed for your configuration. If a Master or Slave is set to "disable" or "none", change to "enable" or "auto" as appropriate.
4. Save and exit the computer's CMOS setup to restart your computer with the new settings.
5. **Windows 98SE and ME only:** Click the **START** button, then **SETTINGS**, then **CONTROL PANEL**, then **SYSTEM**, then **DEVICE MANAGER**. Click the + sign next to the CD-ROM icon. Your Indi DVD drive should be listed underneath the CD-ROM icon.
Windows 2000 and XP only: Click the **START** button on the Windows taskbar, then select **SETTINGS**, then **CONTROL PANEL**. Double Click the **SYSTEM** icon in the Windows Control Panel, then select the **HARDWARE** tab, then click on the **DEVICE MANAGER** button.
6. If you do not see the Indi DVD drive icon, or if it has a yellow diamond with an exclamation point (!), contact your PC or motherboard manufacturer to get the appropriate IDE controller driver.



NOTE: The IDE cable supplied with Indi DVD isn't Cable Select (CSEL) compatible. An IDE cable that supports CSEL (80-pin IDE) systems looks similar to a regular 40-pin IDE cable. All 80-pin IDE cables that meet ATA specifications support the CSEL feature. Such a cable can still be used with Master/Slave systems.



CAUTION: Some IDE cables are keyed to prevent them from being inserted upside down, but some cables aren't keyed. If your cable isn't keyed, match the red stripe along one side of the IDE cable to Pin 1 on the motherboard and to Pin 1 on the drive (the pin closest to the drive's power connector).



CAUTION: Stringing multiple IDE cables together isn't recommended. The total length of an IDE cable cannot exceed 18 inches.



NOTE: Refer to the computer's documentation for information on how to run the setup program.



NOTE: DMA is not an option on all computers.

ENABLE DMA (DIRECT MEMORY ACCESS)

DMA allows you to free up CPU resources by accessing memory directly.

To ensure that DMA is enabled:

Windows 98SE/ME

1. In Windows, click the **START** button, then **SETTINGS**, then **CONTROL PANEL**.
2. Double click **SYSTEM** in the Control Panel folder, then the **DEVICE MANAGER** tab. You will see a list of devices in your system.
3. Click the **CD-ROM** icon, and choose Indi DVD's **PROPERTIES** button. You will see the drive properties for Indi DVD.
4. Ensure that the DMA box is checked ON under the Settings tab.
5. Repeat steps 1 through 4 for other devices that you will be recording from and recording to such as your hard drive and/or second CD-ROM or CD-Rewriter.
6. Reboot your computer for the change to take effect.

Windows 2000

1. Click the **START** button on the Windows taskbar.
2. Select **SETTINGS**, then **CONTROL PANEL** from the menu.
3. Double Click the **SYSTEM** icon in the Windows Control Panel.
4. Select the **HARDWARE** tab then click on the **DEVICE MANAGER** button.
5. Click on the (+) sign beside IDE ATA/ATAPI CONTROLLERS.
6. Right click on the appropriate IDE channel (Primary or Secondary), right click **PROPERTIES**, then select the **ADVANCED SETTINGS** tab.
7. Set the "Transfer Mode" to "DMA if available". Device 0 is the MASTER device on the IDE channel and Device 1 is the SLAVE.
8. Click **OK** to accept the change and then reboot the computer for the change to take effect.

Windows XP

To enable DMA mode using the Device Manager:

1. Open Device Manager.
2. Double-click **IDE ATA/ATAPI CONTROLLERS** to display the list of controllers and channels.
3. Right-click the icon for the channel to which the device is connected, select **PROPERTIES**, and then click the **ADVANCED SETTINGS** tab.
4. In the Current Transfer Mode drop-down box, select "DMA if Available" if the current setting is "PIO Only."
5. If the drop-down box already shows "DMA if Available" but the current transfer mode is "PIO Only", then the user must toggle the settings.
6. Change the selection from "DMA if Available" to "PIO only", then click OK. Then repeat the steps above to change the selection to "DMA if Available."

Windows XP will turn off DMA mode for a device after encountering certain errors during data transfer operations. If more than six DMA transfer timeouts occur, Windows will turn off DMA and use only PIO mode on that device. In this case, the user cannot turn on DMA for this device. The only option for the user who wants to enable DMA mode is to uninstall and reinstall the device.

SOFTWARE INSTALLATION SECTION 2

INSTALL THE SOFTWARE

Before you use Indi DVD, install the software from the included Disc Blender Software Suite CD-ROM. The software automatically loads all necessary device drivers as well as TDK's Disc Blender Software Suite. If you have any problems, TDK's technical support staff will help you.

Also install the Pinnacle Studio 8 SE application from its disc.

INSTALL ADDITIONAL DEVICE DRIVERS (if required)

Indi DVD acts as a "CD-ROM Drive" for purposes of installation and setup. In some cases, you will need to install additional drivers to make use of all of the drive's features.



NOTE: For instructions on how to use the software, read the Software Quick Guide section of this manual.

TROUBLESHOOTING & MAINTENANCE

3 SECTION

READ THIS ENTIRE SECTION.
IF A PROBLEM ARISES, YOU MAY BE ABLE TO SOLVE IT YOURSELF,
RATHER THAN WAITING FOR ASSISTANCE FROM A TDK REPRESENTATIVE.

UPGRADING FIRMWARE

Occasionally, TDK may release drive firmware updates. Typically, you will not need to upgrade Indi DVD's firmware. But if Indi DVD doesn't respond to other troubleshooting efforts, try loading the latest firmware revision.

To obtain new firmware (if available) for Indi DVD:

1. Go to www.tdk.com/INDIsupport.
2. Look for firmware updates and check their intended uses.
3. Follow instructions for downloading the firmware to your computer.

To upgrade firmware:

1. Run the executable file that you downloaded.
2. Accept all defaults by clicking on the NEXT button until you see the message:
"Firmware update has completed."
3. Reboot your system.
4. Verify DMA is enabled before using Indi DVD.



NOTE: If the firmware upgrade does not complete successfully, disable DMA and try the procedure again.



NOTE: For optimal operation of Indi DVD, DMA should be enabled. Some computers do not offer the option of enabling or disabling DMA.

TROUBLESHOOTING: GENERAL		
SYMPTOMS	CAUSES	SOLUTIONS
Indi DVD drive not recognized by computer.	1. IDE cable is not connected properly.	1. Ensure IDE cable is connected. Verify that connectors on motherboard and drive do not have bent pins.
	2. Drive or IDE bus is not enabled in the computer's BIOS.	2. Ensure the IDE port is enabled and set properly in motherboard's BIOS.
	3. Jumper conflict.	3. Check jumpers for the Indi DVD drive and the other peripheral devices (hard drive or CD-ROM drive) on the same IDE cable. If you have a Master/Slave system, ensure that the jumper for one device is set to Master and the other to Slave. If you have a CSEL system, set all drives to CSEL. (If any already installed drive in your system is set to CSEL, you have a CSEL system.)
	4. Wrong cable with jumper set to Cable Select.	4. Make sure that a CSEL-compatible IDE cable is used if you want to use the Indi DVD with jumper set to Cable Select.
	5. Power connector is not attached to Indi DVD or does not work.	5. Ensure the computer's power cable is securely attached to Indi DVD's power connector. When the computer's power is ON, confirm that Indi DVD's indicator LED is illuminated briefly, then is extinguished. Connect a different power cable to Indi DVD.
Indi DVD does not respond (lights or eject button).	1. No power.	1. Ensure the power cable is connected securely to Indi DVD's power connector.
	2. IDE cable isn't connected properly.	2. Ensure that the IDE cable is securely inserted, and is not damaged. Check the connector pins to ensure they are not bent.
Cannot eject tray.	1. Power connector isn't connected to drive.	1. Ensure that a power connector is fully inserted into Indi DVD's rear panel power jack. (There are typically some unused power connectors emerging from the computer's power supply.)
	2. IDE cable isn't connected properly.	2. Ensure that the IDE cable is securely inserted, and is not damaged. Check the connector pins to ensure they are not bent.
	3. Disc was not properly set into tray and is stuck.	3. Insert a thin object such as a paper clip into the emergency eject hole on Indi DVD's front panel. Push in carefully to eject the tray.

TROUBLESHOOTING: READ		
SYMPTOMS	CAUSES	SOLUTIONS
Indi DVD drive has read errors, may not respond to a DIR command or cannot run a program.	1. Defective disc.	1. Try a different disc.
	2. Fingerprints, contaminants, or scratches on the disc's surface may prevent the drive from reading or writing data.	2. Carefully clean the disc or try a different disc.
	3. Bad connection between the Indi DVD drive and the motherboard.	3. Inspect the IDE cable and drive for recessed, broken, or bent pins. Inspect the IDE ribbon cable for any signs of distress, such as kinking.
	4. CD-Audio disc is in the drive. Audio CDs do not have computer data, so typing computer commands in DOS while an audio disc is in your drive gives an error message.	4. Use a data CD in the Indi DVD drive.
	5. Disc is inserted upside down.	5. Eject the disc and load it with the label or text side up.
	6. Blank disc is inside the drive.	6. Remove the disc from the drive and test it by using another disc.
Cannot use other drives to read discs written by Indi DVD.	1. Can't read the disc in a drive that doesn't support that format.	1. Confirm that the drive in which you're trying to read the disc supports that format. Check the User Manual of the drive in which you're trying to read the disc.
	2. UDF reader is not installed on the system to read rewritable or packet written discs from a CD-ROM drive.	2. Refer to your packet writing software manual for how to obtain a UDF reader and install it on the computer where you need to access these discs.
	3. Session was left open on the disc.	3. Place this disc back into Indi DVD and launch the same software originally used to write to it. Then use the software to close the session/disc.
Excessive noise. Excessive vibration. Slow read performance.	1. Disc is poorly balanced. Poorly manufactured discs or discs with poorly distributed ink on labeling cause significant vibration at high speeds because they are out of balance. Read errors may also occur. If the disc label (especially adhesive labels) adds more weight to one area of the disc than another, it can also cause the disc to be out of balance.	1. Carefully remove any adhesive label, then clean the disc. If there is no foreign substance on the disc, contact the disc manufacturer for a replacement.
	1. "Import previous session" or a similar feature was not enabled when the multisession disc was created.	1. Use mastering software to import session(s). Such features may vary in name depending on the software being used. Please refer to the appropriate manual regarding this feature.
Can read only the last session of a multisession disc.		

TROUBLESHOOTING: AUDIO		
SYMPTOMS	CAUSES	SOLUTIONS
When playing an audio disc, you do not hear sound even though everything appears to be functioning normally.	1. Soundcard volume too low. Mixer settings for soundcard set too low. Needs a soundcard. Needs an audio cable connection. Soundcard not properly configured.	1. Each soundcard has a different setting for each input source, including one for CD-Audio. Run your soundcard's mixer program and verify that the volume is turned up and not muted. You can do this by double-clicking on the speaker icon on your computer's task bar. Check your system configuration to see if the soundcard settings (such as IRQ, memory, etc.) are conflicting with other devices on the system. Check if all the necessary drivers and multimedia devices required by your soundcard are installed. Make sure the audio cable is properly connected between Indi DVD and your soundcard.
	1. Improper audio cable connection between Indi DVD drive and soundcard. 2. Low levels from audio mixer.	1. Check the cable connection from Indi DVD to soundcard. 2. Check the master, CD, and levels of all audio mixers.

TROUBLESHOOTING: WRITING DISCS		
SYMPTOMS	CAUSES	SOLUTIONS
Cannot record to discs.	1. You are using recording software other than that bundled with your Indi DVD.	1. Use the recording software provided with Indi DVD. To use other types of recording software, contact the supplier and ensure the software supports the Indi DVD drive.
	2. The media to which you're trying to record isn't supported by Indi DVD.	2. Use only media that's supported by Indi DVD. See the unit's Specifications sheet or visit tdk.com for more information.
	3. Disc inserted upside down.	3. Eject the disc from tray and load it with the label side up.
	4. Lack of hard drive capacity. This varies with different software packages. Contact the software vendor or check their documentation for recommendations.	4. Delete files from your hard drive to free up sufficient space, or use another hard drive.

TROUBLESHOOTING: WRITING DISCS (continued)		
SYMPTOMS	CAUSES	SOLUTIONS
Recording software cannot detect Indi DVD.	1. Power connector is not attached to Indi DVD.	1. Ensure the computer's power cable is securely attached to Indi DVD's power connector. When the computer's power is turned ON, confirm that Indi DVD's indicator LED is illuminated briefly, then is extinguished. Try connecting another power cable to Indi DVD.
	2. IDE cable isn't connected properly.	2. Ensure that the IDE cable is securely inserted, and is not damaged. Check the connector pins to ensure they are not bent.
	3. Drive or IDE bus is not enabled in the computer's BIOS.	3. Ensure the IDE port is enabled and set properly in motherboard's BIOS.
	4. Jumper conflict.	4. Check jumpers for the Indi DVD drive and the other peripheral devices (hard drive or CD-ROM drive) on the same IDE cable. Follow the Jumper Setting instructions featured in the Installation section of this manual.
	5. Jumper set to Cable Select (CSEL) using wrong cable or in non-CSEL system.	5. If your system is the CSEL type, be sure to use a CSEL compatible IDE cable, and set the drive's jumper to CSEL. If your system is the Master/Slave type, you CANNOT set the drive's jumper to CSEL.
Writing error occurs. Buffer underrun. Does not record at maximum speed.	1. DMA is not enabled on your computer.	1. In Windows 98SE/ME, click on Start button, then select Settings/ Control Panel, then double-click on System icon, then click on Device Manager tab, then doubleclick on CD-ROM icon. Select Indi DVD and click on Properties. Then click on the Settings tab and enable DMA. Reboot your system. Make sure DMA is enabled on your motherboard.
	2. Network is being used. Mouse was moved or Windows screensaver activated while writing. Other applications are running. Power save mode is active.	2. If problems occur when writing, reduce the load on CPU resources. Some ways to do this are: •Log off from the network. •Don't use the mouse. •Disable the screensaver or power save mode. •Exit all other applications.

TROUBLESHOOTING : WRITING DISCS (continued)		
SYMPTOMS	CAUSES	SOLUTIONS
Writing error occurs. Buffer underrun. Does not record at maximum speed.	3. Shortage of PC memory. If there is insufficient main memory in the PC, data may be swapped to the hard drive, and this can cause a buffer underrun.	3. Increase the PC's main memory (RAM) capacity.
	4. Indi DVD and another IDE CD-ROM drive are connected on the same cable.	4. When writing on the same bus from another IDE device to Indi DVD using on-the-fly writing, the IDE bus is very busy and it may cause writing errors. This depends on your system speed and configuration. Use the image writing method for best results (safe mode) or record at lower speed. Put the IDE CD-ROM drive on the primary bus and Indi DVD as the only device on the secondary bus (Master).
	5. Indi DVD and hard drive are connected on the same cable.	5. Remove Indi DVD from the cable and re-connect it to a secondary IDE port.
	6. Automatic thermal recalibration triggered. Some high-speed hard drives are equipped with an automatic thermal recalibration function.	6. Use another hard drive in this case.
	7. Defective recording media. Recording media may be dirty, scratched, or damaged.	7. Try another disc or another disc brand.
	8. Buffer underrun option is not enabled in your software.	8. Ensure that the buffer underrun option is enabled in the recording menu before you write to your media.
	1. The disc was originally written using other software. If the software is different, incompatibility errors may occur.	1. Always use the same recording software to add content to a disc.
	2. Not enough disc capacity.	2. Use compatible media with sufficient capacity or reduce the amount of data you're attempting to record on a single disc.
Cannot add information to recordable disc.	3. The disc was written by a drive from another manufacturer.	3. Use a different disc. Or use the other manufacturer's drive to add data to the original disc.

TROUBLESHOOTING: WRITING DISCS (continued)		
SYMPTOMS	CAUSES	SOLUTIONS
Cannot write at maximum speed.	1. Using poor quality media.	1. Use media recommended by TDK.
	2. Buffer underrun occurring.	2. Reduce the load on CPU resources. Some ways to do this are: <ul style="list-style-type: none">• Log off from the network.• Don't use the mouse.• Disable the screen saver or power save mode.• Quit all other applications except the authoring software.
	3. Using rewritable media. This drive may not support maximum recording speed with rewritable media. Check its specifications to verify.	3. Use write-once media.
	4. Defective media.	4. Media may be dirty, scratched, or damaged. Retry using a new disc.
	5. Using recording software other than that bundled with Indi DVD.	5. To use other types of recording software, contact the supplier and verify that the software supports the Indi DVD drive.
	6. Drive used cannot read data fast enough to record at max speed.	6. Record to hard drive first, then to Indi DVD.
Cannot write onto CD-RW at speeds greater than 4x.	1. Not using High-Speed CD-RW media.	1. You must use High-Speed CD-RW media to record at speeds faster than 4X.

FREQUENTLY ASKED QUESTIONS

SECTION 4

If you have problems during or right after installation of your Indi DVD drive, use these tips to help find the problem.

What media should I use for my Indi DVD?

See the included specifications sheet or visit www.tdk.com/INDIsupport for more information.

When should I record to DVD media?

Recordable DVD discs have much higher capacity than CD-R/RW discs. This makes recordable DVD discs ideal for recording video and large multimedia files and for backing up your hard drive.

Why can't I do disc-to-disc copying?

Some possible reasons are:

- Some CD-ROM and DVD-ROM drives will not allow direct copying to Indi DVD, or are not capable of digital audio extraction.
- You must use either a SCSI-2 drive or a supported ATAPI drive as the source.
- Some discs have copy protection or other features that prevent disc-to-disc copying.
- You cannot copy commercial DVD discs or copy protected CD discs.

Why am I getting buffer underrun errors?

If available, your recording software's buffer underrun write assurance option should be activated. Buffer underrun errors can occur if another application interrupts the writing process, or if the recording drive's write speed is set too high for the speed at which the source drive can supply data. Lack of computer memory can also cause underrun errors.

How can I optimize the recording process?

- Make sure your system meets the minimum system requirements.
- Do not run other applications while recording discs. Log off any networks, disable any FAX modems, email, screen savers, or other programs that may send messages to your computer while it is writing a disc.
- If your computer has a power management feature, disable it.
- Run ScanDisk and Disk Defragmenter periodically on your hard drive.
- Do not record using data from a compressed hard drive. Buffer underruns may be caused by hard drive compression software.

How do I install Indi DVD if another DVD drive is already installed?

- You may need to set the old DVD drive to its Master jumper position, and Indi DVD to its Slave position.

What is the best way to label a disc that I just burned?

- With a CD/DVD labeling marker. The marker must be soft-tipped and either alcohol or water based. Markers of other types will ruin the disc.
- Another way is to use a good quality label maker, such as TDK's CD/DVD Labeling System.

TECHNICAL SUPPORT

APPENDIX

Keep TDK's email, Web site, and phone numbers in a convenient location as indicated below. Keep your drive's serial number and a copy of your sales receipt handy as well. If you experience a problem while installing or operating your Indi DVD, please refer first to the relevant sections of this manual regarding setup and installation. If you do not uncover the solution there, please refer next to the Troubleshooting chapter. It contains solutions to the most common types of problems fielded by our technical support staff. You may also wish to refer to the Frequently Asked Questions (FAQ) section of our Web site to assist you in troubleshooting the problem on your own. If you have not been successful in your quest, our Technical Support Department will help you solve problems that relate specifically to your Indi DVD. In many cases, a problem that appears to be caused by your Indi DVD actually originates in another part of your computer. In such instances, our technical support staff will try to help you identify the part at fault and will refer you to the manufacturer of that part for further assistance.

HOW TO CONTACT US

There are several ways for you to contact TDK's Technical Support Department:

- Visit our web site (www.tdk.com/INDIsupport) for answers to Frequently Asked Questions.

BEFORE YOU CONTACT US

Please gather as much of the following information as possible before contacting us.

- The serial number and TLA number of your Indi DVD. Your serial number can be found both on the retail box and on a label on the drive itself. The TLA number appears both on the drive label and on a sticker at the rear of internal drives
- The version of TDK *Disc Blender Software* you are using, if applicable.
- The latest version of firmware you loaded onto the drive, if applicable.
- The version of the Windows or UNIX operating system you are using.

(continued on next page)



NOTE: Most new CD-ROM drives can read CD-RW discs. Many older drives may not be able to read CD-RW discs.



NOTE: Australian Users should call 1800.651.917 for TDK Technical Support or e-mail techsupport@tdk.com.au

- The brand name and model number of your computer (e.g. Dell Dimension 4500, Gateway 300 Series, etc.).
- The type of VGA, Super VGA, or other graphics card you use.
- Brand name and model number of any other peripherals you have installed or connected to your computer (e.g., CD-ROM, scanner, fax board, network board).

RETURNS

You must receive an RMA (Returned Materials Authorization) number from our Technical Support Department before any TDK drive can be returned for repair or replacement. Any drive sent to TDK without an RMA number will not be accepted. Drives must be sent postage prepaid. We recommend that you insure your shipment, as TDK cannot be held responsible for any damage that may occur during shipment.

TDK LIMITED WARRANTY

One Year Limited Warranty for Hardware

Ninety Day Limited Warranty for TDK Software

TDK Electronics Corporation ("TDK") warrants to the end-user customer that this data storage product, exclusive of software (referred to herein as "Hardware" or "Product") will be free from defects in material and workmanship for a period of one (1) year from date of purchase. If TDK receives notice of any such defects during the warranty period, TDK will, at its option, either repair or replace the Product which it finds to be defective at no charge (except for shipping and insurance). Repair of defective Product may be with either new or rebuilt replacement parts that will be warranted for the remainder of the original warranty period. Any exchanged parts under this warranty will become the property of TDK. Replacement Product may be either new or reconditioned. If the Product is discontinued and no longer available, then it may be replaced with Product determined by TDK to be of similar value and performance.

TDK warrants to the end-user customer that the TDK-branded software included with the Product (herein referred to as "TDK Software") when properly installed and used will not fail to execute its programming instructions due to defects in materials or workmanship for a period of ninety (90) days from date of purchase. If TDK receives notice of any such defects during the warranty period, TDK will replace the TDK Software which it finds to be defective at no charge (except for shipping and insurance).

Any software other than TDK Software included with the Product is supplied on an "AS IS" basis and without any representations or warranties of any kind, whether express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, title and non-infringement. Please refer to any documentation included with such software for your rights and obligations with respect to that software.

TDK does not warrant that the operation of the Product will be uninterrupted or error free. This Limited Warranty does not apply to defects resulting from (1) acts of God, accident, misuse, abuse, negligence, abnormal, or unusually heavy use; (2) improper installation, operation, testing, or maintenance; (3) power failure or connection to improper voltage supply; or (4) attempted repair by any party other than TDK.

This Limited Warranty does not apply when the malfunction results from the use of the Product in conjunction with other products, software, or accessories, or where it is determined by TDK that there is no fault with the Product itself.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product. This Limited Warranty extends only to the original end-user customer and is not transferable to any subsequent purchaser. This Limited Warranty is valid only within the United States. For areas outside the United States, contact the authorized dealer from whom you purchased the Product to determine what warranty, if any, applies.

In order to obtain warranty service, you must deliver the Product to TDK freight prepaid, in either its original package or packaging providing a degree of protection equivalent to that of the original packaging, along with proof of purchase. (Please contact TDK at the number listed below or in the manual for further information.)

TDK MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT ANY IMPLIED WARRANTIES APPLY, DESPITE THEIR EXCLUSION UNDER THIS LIMITED WARRANTY, SUCH WARRANTIES SHALL BE LIMITED TO THE DURATION OF THE EXPRESS WARRANTIES PROVIDED HEREUNDER.

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Some states do not allow limitations on how long an implied warranty lasts or any exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

U.S.A.: TDK Electronics Corporation 901 Franklin Avenue Garden City, NY 11530 800-835-8326

SERIAL NUMBER