Pinnacle InstantCopy QUICK START GUIDE



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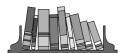


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IV



About the User's Guide

This User's Guide explains how to install and use the Pinnacle InstantCopy software. Instead of using the complete product name, the abbreviation Instant Copy is used for a better readability.

Subheadings

In the margins are subheadings to help you quickly find your way through this manual.



Important text passages are marked with the "notepad" and this format.

Numbers mark step by step instructions:

1. Start InstantCopy.

Bullets mark instructions for optional steps the order of which is not important:

• Select device driver.

All keyboard commands appear in this font:

setup

Menus, commands, options or buttons which the user can select are written in italics.



Installing Instant Copy

To install the software for Windows 2000 / Windows XP, proceed as follows:

1. Switch on computer.

Switch on your computer. Windows is started automatically.

If your computer is configured in such a way, that Windows is not started automatically, start Windows now.



Important for Windows 2000 and Windows XP: Log in with administrator rights.

2. Insert CD ROM.

Insert the installation CD in your CD-ROM drive. The setup program will be startet automatically.

Note: If the Setup program is not started automatically, please proceed as follows: Double click on My Computer icon on the Windows desktop and change to the CD-ROM drive. Double-click the "Setup" file.

THE SETUP PROGRAM

The setup program is started in the language determined by the Regional Settings (Start menu, Settings, Control Panel, Regional Settings) of the installed Windows version: German, English, or French,

3. Selecting the installation.

Choose what you want to install: InstantCopy, Acrobat Reader, Manual in *.pdf format and click on the appropriate button.

4. Click Next.

In the following window click *Next* again.

5. Enter User Name, Company Name, Serial Number. Click Next.

Enter the *User Name*, the *Company Name* and the *Serial Number*. You will find these on the sleeve of the installation CD.

6. Select language, follow the instructions.

If you chose "Manual" select the language and follow the instructions of the setup program.



Using InstantCopy

InstantCopy is a powerful yet easy to use tool for the creation of 1:1 or modified copies. The ease of use guarantees optimal results after a short learning period.

Please read this manual carefully before using InstantCopy. This will help you to avoid typical problems and enable you to easily create your own CDs.

QUICK INSTALLATION

Starting InstantCopy

InstantCopy can be started in two different ways

- Through the Windows *Start* menu with the command *InstantCopy*.
- Via the local menu of a recorder. To do this, click on the device with the right mouse button and choose *Copy CD/DVD* from the local menu.

The InstantCopy windows appears:



All connected drives are automatically shown in the Source or Target window. If your device is not found, you can assign a driver manually. For more information, please read the section "Assigning a driver" in the Appendix on Page III.

Using InstantCopy

Using InstantCopy is very easy. For normal copies you simply have to select source and destination(s) and press the *Start* button.

You have three possibilities to work with Instant Copy

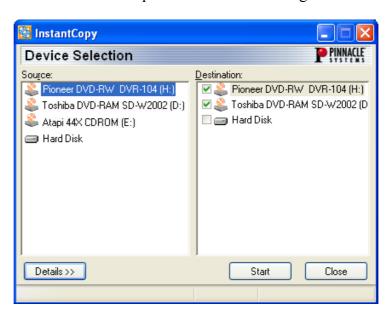
- You copy from CD-ROM to CD-ROM.
- When copying from DVD to CD-ROM, this is always subject to certain restrictions
- You copy from DVD to DVD.

Making a copy

To start a copy you have to do the following:

- 1. Select source drive.
- 2. Select destination drive(s).

To select only one drive, click on the drive name in the destination area. If you want to copy to more than one drive, please read "Using Multiple Drives Simultaneously" as of page II. If your target drive is not listed in the destination area please read "Driver Assignment" as of page III.



3. Press the *Start* button to start the recording.

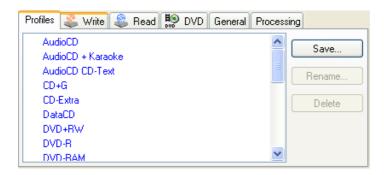
ADDITIONAL SETTINGS

The above-described procedure will work for most copies. In spite of this, it can sometimes be appropriate to use the detailed set-up options of InstantCopy in order to carry out the copying process either more accurately or faster.

To get access to the advanced features of InstantCopy, you have to press the *Details* button. The detailed settings are described in the following sections.

Profiles

All InstantCopy settings can be stored in "profiles". Profiles help you to generate predefined settings for most copy processes for your individual needs.



To store your settings, make the settings you want and click on the save button. After specifying the name, your settings are stored. You can restore these settings simply by selecting the stored settings in the list of profiles.

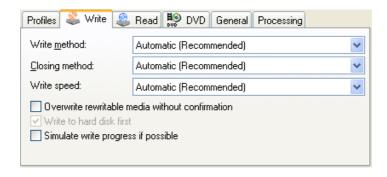
If you want to rename or delete profiles use the *Rename* and *Delete* buttons.



ATTENTION: Changes will not be stored automatically in the selected profile. If you wish to save settings you have to click Save.

Write Settings

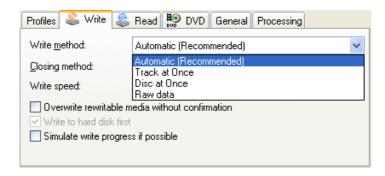
An important part of any copy process is the definition how the disc should be written.



Below, you will find a brief overview of the individual functions.

The Write Method

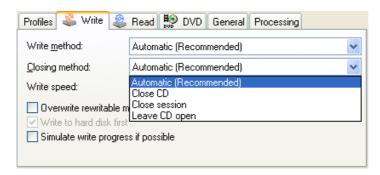
The selectable write methods depend on the writer and the driver system. More information about the methods can be found in the section "The Write Methods" as of page I in the appendix.



If you choose the *Automatic* option, the write method "Disc at Once" will be used

The Closing Method

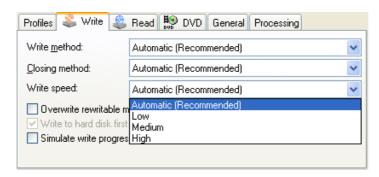
This setting defines how the writing process is finished. More information about the methods can be found in the chapter "The Closing Methods" as of page II in the appendix.



The Automatic option uses "Close session" as the closing method. If you have selected Automatic or Disc at Once as the write method, then "Close CD" will be the only closing method available.

Write Speed

This box displays all the available speeds for your drive. Normally InstantCopy selects the highest speed. However, sometimes it can be useful to work with a lower speed to decrease the performance demands on your system or to enhance the quality of the written disc. This possibility is particularly useful when reading from a CD-ROM, as here even small errors can lead to a significant deterioration in the reading speed.



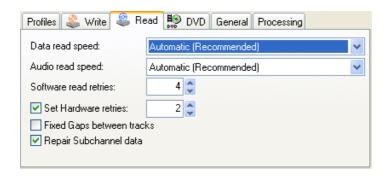
If you choose *Automatic*, then the write speed will be set to "High". If you have already inserted a disc into the drive, the possible write speeds for this medium will appear in the selection window.

Write to hard disk first

Usually optical drives are not as fast as hard disks. Additionally CD-ROMs will decrease the reading speed if errors occur. This can cause write errors if the data is not delivered at the necessary speed. To buffer your data on the hard disk you can select this option:

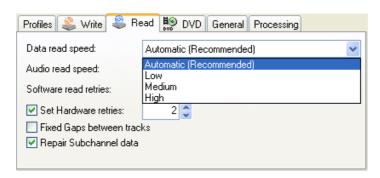
Read

An important part of any copy process is the definition how the disc should be written.



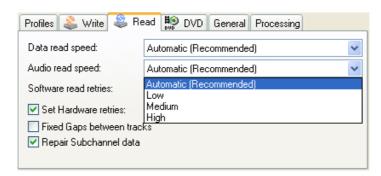
Data Read Speed

Use this setting to set the speed at which data tracks are read. We suggest using the highest available speed, because the drives will automatically choose a lower speed in the case of read errors and the quality does not deteriorate at lower speed.



If you choose *Automatic*, then the data read speed will be set to "High". If you have already inserted a disc into the drive, the possible data read speeds for this medium will appear in the selection window.

Audio Read Speed



Use this setting to set the speed at which audio tracks are read. The optimum speed depends on your drive. For some drives the audio quality gets worse at higher speeds. For direct copying, the speed should be at least double your writing speed.

If you choose the *Automatic* option, the write speed will be set to "High".

Software read retries

This value specifies how often the software will read a sector that was reported as defective from the drive until a read error is reported. A normal value is 10 times. For special uses like copying discs with known read errors you can decrease the value to speed up the process. Values below 3 normally make no sense.

Hardware read retries

This value specifies the number of times the hardware will read a sector until an error is reported to the hardware. A normal value is 10 times. For special uses like copying discs with read errors you can decrease the value to speed up the process. Values below 3 normally make no sense, but this setting depends on the drive.

Fixed gaps between tracks

If you activate this check box, the pause between tracks on DVDs will be set to two seconds (instead of the original pause length).

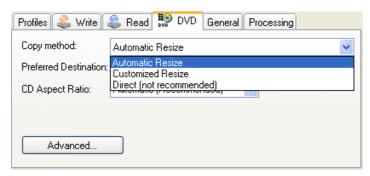
Repair Subchannel data

Subchannel data are pieces of information in addition to the data on the disk. In the case of copy-protected disks these may intentionally be a disk ID, for example. In this case, you should deactivate this check box.

DVD

Here, you make all the additional settings that you can use for creating a DVD, a Video CD or an S-Video CD.

Copy method



If you are copying a video DVD, the amount of data is reduced to the storage capacity of a recordable blank DVD (4.7 GByte) by means of the Automatic Resize option.

If you choose the *Customized Resize* Option, you can define the size of the video and the quantity of audio data. You can see the quality in each case by means of the Preview tab.

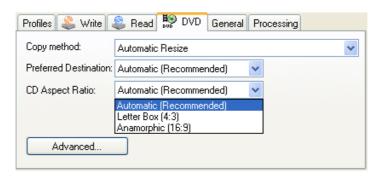
Direct creates a 1:1 copy. The prerequisite for this is that the source DVD is smaller than the target DVD.

Preferred Destination



The Automatic option creates a DVD. This has important repercussions on the "Customized Resize" dialogue, as the DVD copying process is fundamentally different from the DVD to (S)VCD copying process.

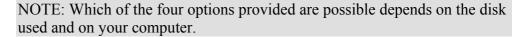
CD Aspect Ratio



This setting only applies for copies from DVD to (S)VCD. With the Automatic option, you can create a letterbox copy with a side ratio of 4:3. A video CD is unable to display a video in widescreen format (16:9); a DVD player basically reproduces video with a side ratio of 4:3, which means that videos that have been recorded in 16:9 format are distorted when played back. The 16:9 option is suitable for playing back on televisions that can be set manually to this format.

Advanced

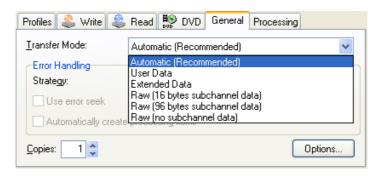
Using the "Advanced" button, you can gain access to four additional tabs, which you can use to set up your DVD individually.



General

Transfer Mode

The transfer mode defines which data from the CD is read and written. Read more about the contents of a CD in the chapter "The CD Structure". The available modes are "User Data" and "RAW mode". While "User Data" should work with every drive combination "RAW" is not supported by many drives. For exact copies Pinnacle suggests that you use "RAW", but for normal copies "User data" is sufficient.



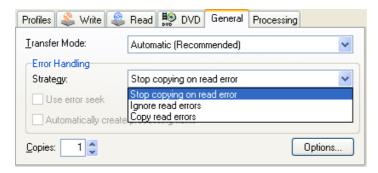


If you choose the Automatic option, "User Data" will be used as the transfer mode. This is also the recommended setting. With copy-protected disks, you must try out the options.

Error Handling

InstantCopy can handle errors in different ways:

- Errors abort the process.
- When errors are reported, they can be ignored,
- When errors are reported, they can be copied.



If you specify to ignore errors, you can select the following options:

Use Error Seek / Error Seek Range

When an attempt is made to read data from defective or protected areas of a disc, it takes a very long time to read a sector. To speed up this process, InstantCopy can test for defective sectors in steps specified by Error Seek range. If a good sector is reported, InstantCopy seeks back to find the first available readable sector and continues to copy. The higher the step width, the faster the process becomes, but the chance of missing smaller readable areas is also greater. Values for the step width generally lie between 100 and 1000.

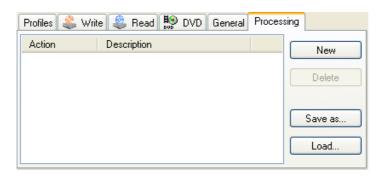
Automatically create processing items InstantCopy builds a list of defective sectors on the source media and if this box is checked it will automatically create processing items. This enables you to copy the same disc the next time at a very high speed regardless of the read errors. Read more about this in the "data processing" chapter.

Options

Use this option to set general options for the writing process. You can find more information in the section "Advanced Options" as of page 15.

Processing

Data processing can be used to process data of the source disc while copying. The following options are available by clicking the *New* button:



The "Processing" functions process the data to be copied during copying. The individual options can be entered in the list by means of the *Add* button. The whole list is only ever applicable to one disk and should be saved if the same process has to be carried out again.

Exclude

Exclude specifies areas on the disc that will not be copied. You have to specify the position and length in sectors. These entries will be automatically created for read errors if you select "Automatically create processing items".

Mark Error

This option enables you to create defective areas on the target disc if your drive supports this.

Patch

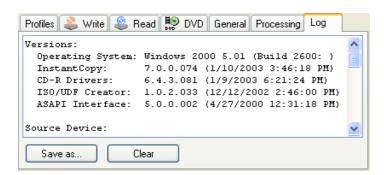
This option enables you to patch data from the source disc to the target disc. Please note that the position depends on the selected "Transfer Mode".

Skip Track

If you want to skip specific tracks from a source disc you can use this setting.

After specifying the settings for a disc, you can save the processing entries in a CCI (CD COPY INFORMATION) file. Other users may use this file to copy the same disc without problems. If you are looking for information about how to copy a particular disc, we suggest you search the Internet where you will probably find some existing CCI files.

Log



When you have made a copy, you will find the report of the copying process here.

STARTING THE COPYING PROCESS

Before the copying process can be started, the source and target must be selected. When doing so, either an optical drive or the hard disk can be selected. If you want to copy DVD video, please note that the DVD must not be copy-protected and make sure that you are not infringing any copyright specifications.

If a hard disk drive is chosen as the source, then the data can be available in an image file with the extension PDI, a CUE file or, in the case of video DVD data, as a normal copy of the files.

When a hard disk drive is the target, only a PDI file can be created. This PDI file can be used as a source for future copies.

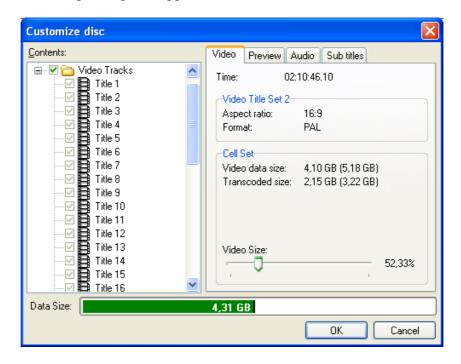
NOTE: If you want to make several copies, it is expedient to first create a copy on the hard disk, which is stored there as an image with the ending "*.PDI". Having done this, create copies of the image.

Copying a CD or a data DVD

After you have made all the settings and selected the source and target, simply click on *Start* and follow the instructions in the program.

Copying DVD video to DVD

Select the source and target and click on *Start* in order to start the copying process. If you have selected *Customized Resize*, after a brief analysis the following dialog will appear.



Note: If you have selected *Automatic Resize*, this dialog will also appear in a few cases where, without manual adjustment, the program would presumably produce a lower quality copy.

In this dialog, you can edit and delete DVD ROM content, set up the video quality of the individual titles and remove audio and subtitle tracks. When doing so, the quality of the video data will be better the more audio and subtitle tracks are removed and thus the more space becomes available for the video data.

You can achieve optimum utilisation of the DVD and thus optimum picture quality by setting the indicator for the video quality as high as possible and in the green area.





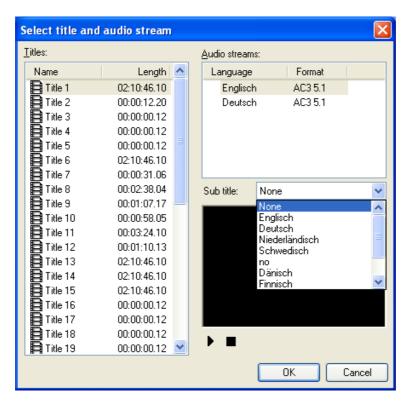
In order to create DVDs that can be played on DVD players, "PCM" or "AC3" must be available as audio tracks. Other audio tracks can be deactivated. The greater the quantity of "deactivated" audio data, the higher the quality of the video picture will be.

After you have carried out all the settings, you can start the copying process by clicking on OK. If, after more extensive analysis of the video data, the program determines that an adequate video quality can still not be achieved, then the dialog box will be automatically displayed again.

Copying DVD video to VCD or SVCD

If there is a blank CD in the target drive or if copying is to take place to the hard disk and S(VCD) is specified as the target format, the copying process can be started by clicking on Start.

If you are copying a DVD to the SVCD or VCD format - unlike the process of copying to DVD - it is not possible to transfer several subtitles or audio tracks. Therefore, a different dialog box appears before the final copying.



Here, you can select a language (if several languages are available on the source disk) and one subtitle - if several subtitles are available.

Audio track

Only "AC3" is displayed as the audio format.

Subtitle

When creating VCDs and SVCDs, subtitles are inserted directly into the video picture and can therefore not be turned off.

The video data are now converted and distributed between several target CDs.



Advanced options

CD-RW SUPPORT

InstantCopy also allows you to erase CD-RW discs. To erase a CD-RW, right click on the CD recorder and select *Erase Disc* from the local menu. You can specify *Quick* or *Complete*. The erase method you should use depends on your CD-RWs and the CD recorder.

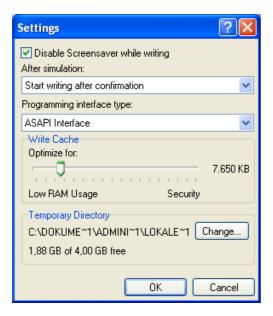
OVERSIZE SUPPORT

InstantCopy supports the full capacity of CD-R(W)s and also oversize writing. Oversize means to write on a CD-R longer than the guaranteed size. This option works only with disk-at-once recording and only with some CD recorders. Refer to the Pinnacle Internet pages to get more information.

To use oversize burning you have to turn on *Direct Write* in *Device* Properties. If you are not sure whether the CD-R(W) size is sufficient, you can determine the capacity by right clicking the drive and selecting Determine capacity. Most CD-R(W)s are stored in the database of InstantCopy so that this feature is not needed for most CD-Rs.

ADVANCED SETTINGS

The advanced settings refer to write processes and the current system configuration. The following settings are available.



Disable Screensaver while writing

Some screen savers require a lot of system resources and can thus have a negative effect on the write process. You can choose this option to prevent compatible screen savers from being run during the write process.

After simulation

Different actions can be carried out after the simulation. With this setting, you determine how the write process will run after successful simulation:

- "Start writing after confirming" expects a confirmation by the user before the write process is started. This is useful with caddy devices, for example, or when you do not yet know whether you really want to write the CD.
- "Start writing without confirming" writes directly without any intervention by the user.

Write Cache

Click here to select how much RAM should be allocated to buffer the write data. If you use more RAM, the write process will be more secure. Lower RAM allocation may lead to buffer underruns on slow systems

Interface

This setting specifies the type of interface used. For more information, read the section "ASAPI and ASPI Interface" in the Appendix on Page III.

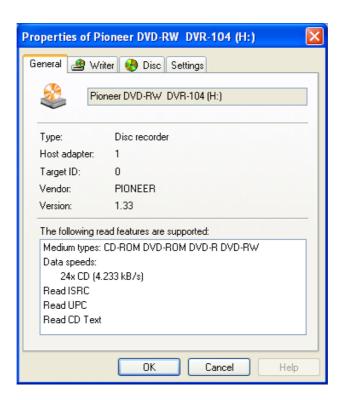
Temporary Directory

The temporary directory specifies the directory for buffered data. For optimum results, this directory should be at least as large as a CD (ca. 800 MB) and be on the fastest disk.

DEVICE PROPERTIES

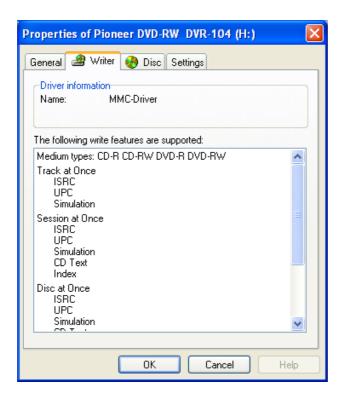
You can access the device property settings by selecting the drive with the right mouse button and selecting "Properties" from the local menu. The properties are split into the following pages:

"General" Tab



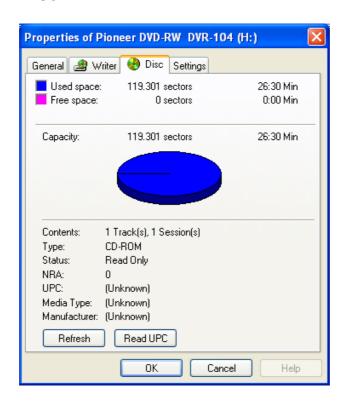
The general tab displays general information about the selected drive. If you want to find out which firmware version you are using, you can use this tab.

"Writer" Tab



This page shows you information concerning supported features of your drive/recorder combination. The listing is not complete. Be sure to have this information available if you are making support requests.

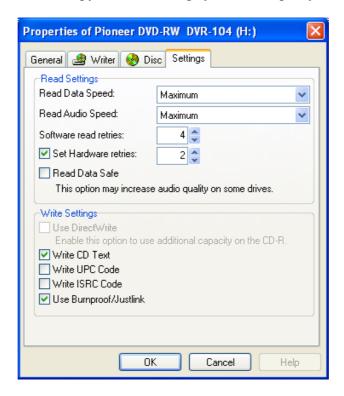
Disc



This tab shows you general information about the disc in the selected drive. Reading the UPC code can take longer, so you have to click the *Read UPC* button to read the UPC code. Please note that not all drives support reading the UPC code. Click on *Refresh* if you have inserted a new disc.

Settings

Some of the settings on this page are the same as the "Read" Settings from InstantCopy. Which settings you use is up to you. The function is identical.



Read Data Speed

Use this setting to set the speed at which data tracks are read. We suggest using the highest available speed. In the case of read problems, the drive will automatically select a lower speed.

Read Audio Speed

Use this setting to set the speed at which data tracks are read. The optimum speed depends on your drive. On some drives, the audio quality degrades at higher speeds. For direct copying you should set the least the double speed of your writing speed.

Software Read Retries

This value specifies how many times the software will read a sector that was reported as defective from the drive until a read error is reported. A normal value is 10 times. For special uses, such as copying discs with known read errors, you can decrease the value to speed up the process. Values below 3 normally make no sense.

Set Hardware Retries

This value specifies how many times the hardware will read a sector until an error is reported to the hardware. A normal value is 10 times. For special uses, such as copying discs with known read errors, you can decrease the value to speed up the process. Values below 3 normally make no sense, but this setting depends on the drive.

Read Data Safe

If this option is selected, then a special read process is used for error correction. This may increase audio quality on some drives. If you have no problems with audio extraction, leave this field blank.

Use DirectWrite

Pinnacle CD recording programs support the full length of CD-R(W)s and also oversize writing. Oversize means to write on a CD-R longer than the guaranteed size. This option only works with disk-at-once recording and only with some CD recorders. Refer to the Pinnacle Internet pages to get more information. To use oversize burning you have to turn on this option. If you are not sure whether the CD-R(W) size is sufficient, you can determine the capacity by right clicking the drive and selecting "Determine capacity".

Write CD Text

Check this box if your drive is able to write CD-Text and you want to use this feature.

Write UPC Code

Check this box if your drive is able to write UPC codes and you want to use this feature. Be sure to use valid UPC numbers: invalid UPC numbers can cause the write process to fail.

Write ISRC Code

Check this box if your drive is able to write ISRC code and you want to use this feature. Be sure to use valid ISRC codes; invalid ISRC codes can cause the write process to fail.

Appendix



THE WRITE METHODS

Writing to CD/DVD is a process that cannot be interrupted. When the writing is stopped (e.g. because no data is available, power is lost, etc.) the track is corrupt and cannot be continued. To avoid such problems, the writing can be done simulated or real. When simulating, all write operations are executed, but the write laser is switched off. If the writing procedure is discontinued, the CD/DVD is not affected and can be used after correcting the error. If you are not sure about the performance of your system you should always perform a simulation before you really write.

Track-at-once

This method is available for nearly all CD recorders. The tracks are written step by step and the table of contents is written after the last track.

If you do not close the CD you can add additional sessions if there is enough space left. Another advantage is that the CD can still be used, even if a write error occurs.

Please note that an Audio CD player can only detect the first session. If you want to write additional audio tracks to a CD, you are not allowed to close the session after the fist write.

A disadvantage of this method is that it is not possible to write tracks without pauses between. Depending on the CD recorder the forced pause can be between 2 1/75 seconds and 2 seconds.

Session-at-once

Using this write method, the data is written to the CD in one pass. This makes it possible to insert pauses between tracks. Please note that an Audio CD player can only detect the first session. If you want to write additional audio tracks to a CD you cannot use this method.

Disk-at-once

Using this write method, the data is written to the CD/DVD in one pass. This makes it possible to insert pauses between tracks. You cannot add any additional data to a CD/DVD written in this method. The greatest advantage of this method is the optimum utilisation of space and the option of using "DirectWrite as long as this is supported by the recorder. Tracks can be appended to one another without pauses.

RAW

Using this write method, the data is written to the CD in one pass. Unlike Disk-at-once where some data written to the CD is created by the CD recorder itself, in RAW mode all data is written by the program. This makes it possible to write data to the disc which otherwise couldn't be written. Since InstantDisc always creates the correct data, this feature is not needed in InstantDisc but in InstantCopy to create real 1:1 bit copies.

THE CLOSING METHODS

The closing methods define how the write process is finished. Depending on this method you can write more data to the disc or not.

Leave session open

This method only finishes the writing of the track. The session and the CD/DVD stay open and you can write additional tracks to the existing session. Please note that normal CD-ROMs or Audio CD Players are not able to use these CDs until they are finished.

Close session

If the session is closed, every normal drive is able to read the disc. Of course the medium itself must be readable. Not all CD-ROM drives can read CD-RW CDs. Please note that a normal CD player is not capable of multi session and will only detect the first session on your CD. Make sure that if you write Audio CDs, they are always in one session. Please note that any tracks that you add will be in following sessions.

Close Disk

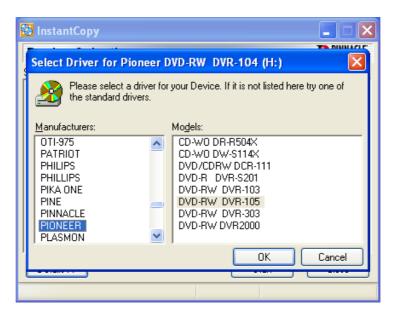
This option is a kind of write protection to the disc. If you select this option, no one can change the content of the disc, however a CD-RW can still be erased.

USE MULTIPLE DRIVES SIMULTANEOUSLY

InstantCopy enables you to write to several drives simultaneously. To do so, you have to mark all the drives you wish to write to. Please note that all drives must be compatible and must be able to write at the same speed. The best results are obtained when the same recorder models are used. Small variations in the speed can be compensated for by the internal buffer, which should be set as high as possible. You will find the buffer settings under "Advanced settings".

ASSIGN A DRIVER

If your drive is not automatically recognized as a writer by VOB programs, you can assign a driver manually. Simply right click on the drive icon and select Assign Driver from the local menu. A list of manufacturers and drives will appear where you can select a compatible model.



If you have made an error when assigning the recorder, you can also change the driver retrospectively using the *Change driver* option or delete it using Delete driver.

ASAPI AND ASPI INTERFACE

AT/IDE or ATAPI is the most commonly used controller. Two devices can be attached to each controller. Since most computers have two controllers, up to 4 devices including hard drives, can be connected. If the CD/DVD device is to be connected as a separate device, the jumper must be set to master. If two devices are connected to the same controller, one device must be set to master and the other one to slave.

Pinnacle recommends the use of the ASAPI interface, but, in special cases, you can also change over to ASPI. You will find the settings needed for this under "Advanced settings".



NOTE: When using ASPI, make sure that the Windows "Automatic changeover detection"" is switched off, as otherwise this can lead to problems.



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