



SpinWise CD Duplicator

User Guide

Declaration of Conformity.

Telex Communications, Inc
12000 Portland Avenue South
Burnsville, MN 55337

Equipment Information
Description: CD Duplicator

Model Number	Number of Drives
2-52 NH	2
3-52 H	3
3-52 NH	3
3-52 R	3
4-52 NH	4
6-52 R	6
7-52 H	7

SpinWise Duplicator products have been tested and found to comply with the Class A digital device, pursuant to Part 15 of 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 contained in this manual, may cause harmful interference to radio and television communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try correcting the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to 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.

You may find helpful the following booklet: How to Identify and Resolve Radio-TV Interference Problems. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, stock number 004-000-00345-4.

Warning: Changes or modifications to this unit not expressly approved by Telex Communications, Inc., could void the user's warranty.

Safety Precautions

SpinWise Duplicator products are high-precision electronic devices. Do not use them in any manner other than as specified in this manual. Please read this manual in its entirety before using the SpinWise system.

To prevent fire or shock, do not expose the unit to moisture or rain

To prevent electrical shock, do not attempt to disassemble the duplicator or any of its internal components. Refer servicing to authorized personnel.

The internal drives utilize a laser beam that can be harmful to the eyes. Do not disassemble the unit. Do not attempt to look through the front panel or into the unit while the power is turned on.

A user who changes or modifies the unit or operation procedures specified herein without express written approval by the manufacturer will void the user authority to operate the equipment.

Specifications and features subject to change without notice or obligation.

CE Certification

This product has been tested and complies with the requirements of:

The EMC Directive 89/336/EEC

EN55022: Radiated and Conducted Emissions A

EN55024: Generic Immunity ESD, RF, and Transient Susceptibility and Low Voltage Directive Product Safety EN60950.

Copyright

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The SpinWise CD Duplicator is used only for copying personal data and audio tracks. Violation of the International Copyright Laws is a criminal charge. The SpinWise CD Duplicator is intended to be used only in legal copying situations. Telex Communications, Inc. is not responsible for the illegal use or any damage in connection with the use or performance of this system.*

Trademarks

SpinWise is a registered trademark of Telex Communications, Inc.

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Chapter 1 Introduction

Introducing the SpinWise CD Duplicator Systems

SpinWise CD Duplicator systems enable you to copy CDs up to 52X speed. They are available in the configurations listed in Table 1 shown below, which shows how many CD copies can be made at once (number of target drives) and whether or not a 40-Gigabyte hard drive is included in the system configuration.

If your system includes the hard drive, you can load the original CD onto the hard drive and use all of the available CD drives to duplicate multiple CDs all at once. The hard drive has 36 partitions of one gigabyte each. You can load up to 36 CDs in the hard drive and duplicate from one partition at a time. You can also use each partition in the hard drive to load selected tracks from any number of CDs and then duplicate the loaded tracks to multiple CDs.

If your system does not include a hard drive, you can use the first CD drive as the reader, and the remaining drives for duplication.

Model Number	Number of Target Drives	Includes 40-Gigabyte Hard Drive		Dimensions H x W x D	Weight
		Yes	No		
2-52 NH	2		x	6½" x 7" x 11"	12 lbs
3-52 H	3	x		10 3/8" x 7" x 15¼"	16 lbs
3-52 NH	3		x	10 3/8" x 7" x 15¼"	16 lbs
3-52 R	3		x	5 ¼" x 19" x 15 ½"	22 lbs
4-52 NH	4		x	13 ¾" x 7" x 18"	29 lbs
5-52 R	5		x	5 ¼" x 19" x 15 ½"	29 lbs
7-52 H	7	x		17' x 17" x 18"	40 lbs
7-52 NH	7		x	17' x 17" x 18"	40 lbs

Table 1: SpinWise System Configurations

Features

- Up to 52X recording speed
- Disk At Once support for audio
- Support for multiple CD formats, including:
 - CD+G (compact disc and graphics)
 - Karaoke
- Cooling fans
- Audio track extraction for music disc compilation

System Specifications

Power:	115/230 VAC 0.5 Amp 50/60 Hz
Duplication Speeds:	Up to 52X recording speed
CD Formats	Support for multiple CD formats (including CD+G, Karaoke)
Other:	Disc At Once support for Audio Copy, Copy and Compare, Verification, Emulation, and Load to Hard Drive are supported All sizes of business card CD format are supported

Installation Instructions

Unpack the SpinWise system in a clean working area with moderate temperature control. Confirm that the following items have been shipped with the system: power cable, user manual, and warranty card.

Confirm that the voltage setting (AC 115/230V) is correct.

Confirm that the power input is stable and consistent. Install an uninterruptible power supply (UPS) if necessary.

Make sure that the environment for the SpinWise system is properly ventilated and free of dust, excessive heat and humidity, and electronic interference.

Make sure the system is properly grounded. Do not attempt to defeat the third ground prong on the power cable.

The system is shipped in professionally designed, foam-based external packaging.

Please keep and store this packaging for future transport or storage of the system.

Warranty Information

The SpinWise system is guaranteed to be free from defect in materials and workmanship for one year. This warranty is applicable when the warranty registration card is completed and returned to Telex Communications, Inc. within 90 days from the date of purchase. The warranty is not applicable to defects or malfunctions caused by misuse, accidents, or system changes by the end user. Telex is not responsible for damages to data or related content by the SpinWise system. You can register your SpinWise product online at www.telex.com/duplication. Click on the online warranty registration link.

Note: Telex assumes no responsibility for the illegal copying and distribution of audio, video, and text/graphics data.

Technical Support

For detailed technical support or questions regarding the SpinWise CD Duplicator, contact Telex Technical Support at 1-800-828-6107, ext 5549 (952-887-5549).

Chapter 2 Getting Started

Turning on the System

Plug the AC cord into the SpinWise system and then into a wall outlet. Press the ON/OFF button located in the bottom right corner of the tower unit. The LCD Panel display will light up, indicator lights on each of the CD disc drives will flash momentarily, the ON indicator light next to the ON/OFF button will be lit, and the LCD Panel Display will indicate that it is initializing and detecting drives. It is ready for operation when the LCD Panel displays **1.Copy**.

About the LCD Panel Display

When you first turn the system on, the information displayed in the LCD Panel will indicate that **Copy** function is selected. :



Press the down arrow button:



to scroll through the functions that are available in the system. They appear in the following order:

1. Copy
2. Test
3. Test & Copy
4. Verify
5. Compare
6. Prescan
7. Disc Info
8. Select Source
9. Image (when a hard drive is in the duplicator)
10. Edit Track
11. Setup

Press the up arrow button:



to scroll through the functions in the opposite order.

Pressing the **OK** button starts the function that you have selected.

Pressing the **ESC** button stops/cancels any function that you have started or selected.

For Best Performance

For best performance, quality CDs are a considerable factor. Telex recommends Telex Branded Bulk Media CDs (recommended for best performance), which are available in 300-disc cartons (six 50-disc spindle packs).

Chapter 3 The Basics

Overview

This chapter provides procedures for the most frequently used functions of the SpinWise CD Duplicator, which are as follows:

- Duplicating (Copying) a CD
- Copying a CD to the Hard Drive
- Duplicating from the Hard Drive
- Copying Selected Tracks to the Hard Drive
- Burning Composite CDs from a Hard Drive Partition
- Selecting or Changing the Source (Master CD or Hard Drive)
- Selecting a Specific Hard Drive Partition as the Source

Copying a Master CD

Overview

Duplicating (Copying) from CD to CD is the most frequently used function of the SpinWise system. This procedure provides step-by-step instructions for making duplicates from a Master CD.

The Copy Function is the Default Function

1. Turn on the system. Note that the **1.Copy** command is displayed. Your LCD display should look like this:



The Master (Source) Drive

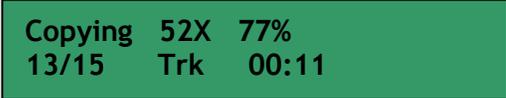
2. Place the Master CD in the *top* drive. This is the drive that functions as the Master or “source” drive.

The Slave (Destination) Drive(s)

3. Place one or more blank CDs in the remaining drives. It doesn’t matter which drive(s) you use; the system will automatically detect which Slave or “destination” drives have blank discs in them ready to be copied to.

Copying a Master CD (continued)

- Start the Copy Process**
4. Press the **OK** button. The system will begin by copying information from the master CD to the CDs in the slave drives. Red lights on the slave drives indicate when information is being written to the discs in those drives. The Master drive flashes a green light, indicating that it is reading and copying the information. In the LCD Panel display, the status of the copy operation is indicated. For example:



```
Copying 52X 77%  
13/15 Trk 00:11
```

- Duplicates Produced**
5. When the copies are produced, the slave disc drawers will automatically open and the LCD Panel will display the status of the successful duplication process:



```
1. Copy  
OK: 06
```

- Remove the Duplicated CD(s)**
6. Remove the duplicated CD(s) from the drive(s) and close the drive(s) (using the open/close button on the CD drive).

Congratulations! You have just copied a master CD.

- Remove the Master CD**
7. Unless you intend to make more copies of the same master CD, remove the master CD from the Master (source) drive.

- End the Copy Session**
8. Press the **ESC** button to return to the **Copy** function.

Loading a CD onto the Hard Drive

Overview

This procedure applies to SpinWise systems that have a hard drive. It explains how to copy the contents of a CD into a partition on the hard drive. Once a CD is copied to the hard drive, it is easy to make duplicates using all of the available CD drives.

The Initial Default Function

1. Turn on the system. Note that the copy command is displayed. Your LCD display should look like this:

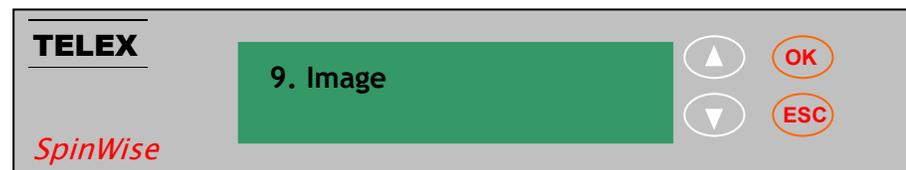


Insert the Master CD

2. Place the CD to be Loaded onto the Hard Drive into the Master (Source) Drive (the top drive of your SpinWise system).

Select the Image Load Function

3. Use the down arrow button to display the **Image** function:



Then press the **OK** button to select the **Image** function. Note that the LCD Panel display shows which partition of the hard drive the CDs contents (image) will be loaded into. In the following example, the Image will be loaded into hard drive partition A:



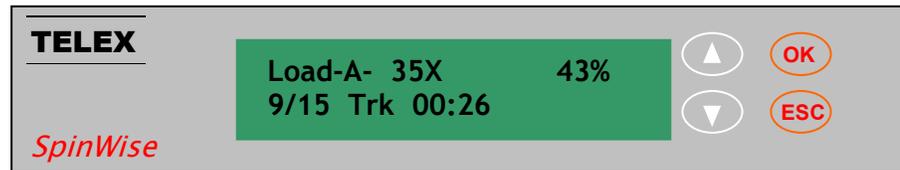
(To learn more about how to select a particular partition on the hard drive, see page 20.)

Loading a CD onto the Hard Drive (continued)

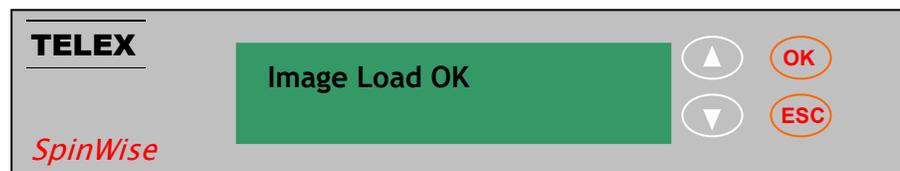
Load the Contents of the Master CD onto the Hard Drive

- Press the **OK** button. The LCD Panel display will indicate the status of the load process by displaying the percent of the CD's contents that have been loaded, the number of tracks that have been loaded, etc.

In the following example, we can see that the contents of the Master CD are being loaded into partition A of the hard drive. This particular "snapshot" shows that 43 percent of the CD has been copied, 9 of the 15 tracks have been copied, the present copying speed is 35X, and that 26 seconds of track 9 have yet to be copied from the Master CD to the hard drive:



When the load process is complete, the system will beep and display the following message:



Congratulations! You have just loaded a master CD onto the hard drive.

Remove the Master CD

- Remove the master CD from the Master (source) drive.

Exit the Image Load Function

- Press the **ESC** button two times to return to the numbered functions list. Use the up or down arrow buttons to set the display to **1.Copy**.

1.Copy

Copying from a Partition on the Hard Drive

Overview

This procedure applies to SpinWise systems that have a hard drive. It explains how to copy a CD that has been loaded into a partition on the hard drive to blank CDs in all of the available CD drives in the system.

Initial Operation Mode

1. Turn on the system. Note that the copy command is displayed. Your LCD display should look like this:



1. Copy

2. Use the down arrow button to display the **8.Select Source** function. Your LCD display should look like this:



8. Select Source

Select the Hard Drive (HDD) as the Source

3. Press the **OK** button, and then press the down arrow key to select the HDD Source. For example, your LCD display should look like this:



Src: HDD
00 IDE0 Master

4. Press the **OK** button again to confirm that the hard drive is selected:



HDD Selected!

5. Then press the **ESC** button to return to the list of functions, and use the up or down arrow keys to redisplay the **1.Copy** function. Note that the **Copy** function now indicates the hard disc source of data. In the following example, the hard disk partition that is the “Source” is partition A:



1. Copy P: A

The **Copy** function is indicating that it will be copying from **Partition A** of the hard drive. To learn how to select a different partition, refer to page 20.

Copying from a Partition on the Hard Drive (continued)

Insert Blank CDs in the Disc Drives and Start the Copy Process

- With the **Copy** function displayed in the LCD Panel, place blank CDs in the available disc drives and press the **OK** button. The system will scan for blank CDs and then write to those CDs, copying the data from the displayed partition letter of the hard drive. Note that the CD drives that are being written to from the hard drive have a red light, indicating that the copy session is in progress. The status of the copy operation is indicated in the LCD Panel Display.

In the following example, the “snapshot” shows that 44% of the data in hard drive partition A, which includes 7 out of 15 total tracks, and 37 seconds of track 7 remain to be copied from the partition of the hard drive:

Copy -A - 52X	44%
7/15 Trk	00:37

Remove the Duplicates from the Disc Drawers

- When the copy process completes, the disc drawers will automatically open and the LCD Panel display will indicate the status. In the following example, 7 CDs were successfully written to from partition A of the hard drive:

1. Copy	P: A
OK: 07	

Congratulations! You have learned how to use the hard drive to make CD duplicates.

Exit the Copy Function

- Press the **ESC** button and note that the system is still set to copy from partition A unless you select a different source (using the **8. Select Source** function).

1. Copy	P: A
---------	------

Copying Selected Tracks to a Partition on the Hard Drive

Overview

This procedure applies to SpinWise systems that contain a hard drive. It explains how to identify and copy selected tracks from multiple CDs into a partition on the hard drive.

Note the Initial Operation Mode

1. Turn on the system. Note that the copy command is displayed. Your LCD display should look like this if your last operation involved duplicating from a Master CD:



1. Copy

If your last operation involved duplicating CDs from a hard disk partition, then the last used partition will be displayed. For example:



1. Copy P: A

Define the Source

2. Press the down-arrow button to scroll to the **8.Select Source** function:



8. Select Source

3. Press the **OK** button to select the **8. Select Source** option.
4. Use the down arrow button to display the top drive (IDE 1) as the Master or “source” and press the **OK** button to select the source. Press the **OK** button again to confirm the selected source. This step may be skipped if the CD-ROM drive was previously defined as the “source.”
5. Place the CD from which you will copy the first track into the top (source) drive.

Go to the Edit Track Function

6. Use the down arrow button to scroll to the **10.Edit Track** function, and then press the **OK** button to select it.



10. Edit Track

Copying Selected Tracks to a Partition on the Hard Drive (continued)

Select the CD to HDD Option

7. The **Edit Track, CD to CD Edit** option appears as the first option within the **Edit Track** function:



10-01. Edit Track
CD to CD Edit

8. Press the down arrow button to select the **Edit Track, CD to HDD Edit** option:



10-02. Edit Track
CD to HDD Edit

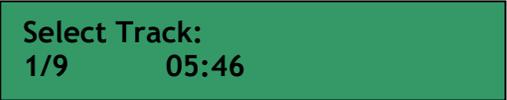
9. Press the **OK** button to select the **Edit Track, CD to HDD Edit** option:



10-02. Edit Track
CD to HDD Edit

Insert Master CD

10. If you have not done so already, place the Master CD in the CD-ROM drive (top disc drawer). The system will read the Master CD and the LCD Panel will display the number of tracks, and show the minutes and seconds of the first track. For example:



Select Track:
1/9 05:46

Select Tracks

11. Use the down arrow button to display the first track that you want to load onto the hard disk. In the following example, we want to copy track 6 to the hard disk partition:



Select Track:
6/9 09:21

12. Press the **OK** button to select the track. Note that a plus sign appears in front of the track number. For example:

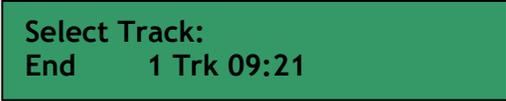


Select Track:
+6/9 09:21

Copying Selected Tracks to a Partition on the Hard Drive (continued)

Load a Track from the Master CD

13. Press the down arrow key to scroll through the rest of the track numbers until you see the **End** option:



```
Select Track:
End 1 Trk 09:21
```

14. Press the **OK** button. The following appears in the LCD Panel display:



```
End edit disc
and burn? Yes
```

15. Press the **OK** button again. The track you selected will be loaded to the hard disk partition.
16. Note that the LCD Panel displays the status of the load:



```
Load - P0 -19X Edit
1/1
```

17. When the track has been loaded the LCD panel displays the following:



```
Image load OK
```

18. Press the **OK** button again. You are given the option of copying a track from the next disc:



```
Continue edit
next disc? No
```

To add additional tracks to the partition in the hard drive, use the down-arrow button to select **Yes** and press the **OK** button. The disc drawer of the Master will automatically open. Remove the Master CD and insert the next Master CD from which you will select tracks to copy. Repeat steps 10 to 15 to add more tracks.

If you do not have any more tracks to add from a Master CD, then use the down-arrow to select **No** and press the **OK** button.

Copying Selected Tracks to a Partition on the Hard Drive (continued)

19. You can immediately burn the tracks you've loaded onto the hard disk, or you can move them to a partition in the hard disk for burning (copying) later:



Burn or Move to
Partition? Burn

If you elect to “burn” duplicates of the selected tracks that you've loaded onto the hard drive, place blank CDs in the available drives and then press the **OK** button.

If you elect move the selected tracks that you've loaded onto the hard drive to a partition, use the down-arrow button to select **Move** and then press the **OK** button. Refer step 20 to continue.

Moving the Selected Tracks to a Partition

20. When you elect to move the selected tracks to a partition, the LCD Panel will display the last-selected hard drive partition as the default. To select a different partition than the one displayed, press the down-arrow button to select the partition letter of your choice, and then press the **OK** button.

In the following example, we selected partition letter “J” to move our selected tracks to. The status of the move operation appears in the LCD display. For example:



Moving to P: J 33%

When the Move operation is complete the LCD Panel displays a confirmation. For example:



Moving to P: J
OK!

Exit the Edit Track, CD to HDD Edit Function

21. Press the **OK** button, which causes the LCD panel to redisplay the **Edit Track, CD to HDD Edit** option. Press the **ESC** button to return to the functions list and then use the down-arrow to scroll to the **Copy** function.

Burning CDs

To “Burn” CDs from the hard drive partition that has loaded selected tracks, refer to page 15.

Burning Composite CDs from a Partition on the Hard Drive

Overview

This procedure explains how to make CDs from selected tracks that you've *loaded* and *moved* to a specific partition on the hard drive. Refer to page 11 for instructions on how to create a composite CD from selected tracks by loading tracks onto the hard drive.

Start with the Initial Copy Function Displayed

1. Turn on the system. Note that the copy command is displayed. Your LCD Panel display should look like this if your last operation involved duplicating from a Master CD:



1. Copy

If your last operation involved duplicating CDs from a hard disk partition, then the last used partition will be displayed in the LCD Panel. In the following example, Partition A is the working partition:



1. Copy P: A

2. Use the down-arrow button to display the **9. Image** function:



9. Image

3. Press the **OK** button to select the **9. Image** function. Use the down-arrow button to display the **Select Image** option. Note that the last-used hard drive partition letter is displayed:



9-05. Image P: A
Select Image

4. Press the **OK** button to select the **Select Image** option and then use the down-arrow button to select the letter of the partition where you “moved” your selected tracks to. For example:



Select Working
Partition - J

Burning Composite CDs from a Partition on the Hard Drive (continued)

5. Press the **OK** button to select the partition. The LCD Panel will indicate your choice. For example:



Set Partition to
J

6. Press the **OK** button to confirm your choice and then press the **ESC** button to return to the function list.



9. Image

7. Use the up-arrow button to display the **8. Select Source** function:



8. Select Source

8. Press the **OK** button to select the **8. Select Source** function, and use the down-arrow button to display the hard drive source option:



Src: HDD
00 IDE0 Master

9. Press the **OK** button to select the hard drive. The LCD Panel will display the following:



HDD Selected!

10. Press the **OK** button to confirm that the source is the hard drive. The LCD Panel will redisplay the functions list. Use the down-arrow button to scroll to the **Copy** function:



1.Copy P: J

Note that the **Copy** function now shows the hard drive partition that you selected as the source for the copy operation.

Burning Composite CDs from a Partition on the Hard Drive (continued)

11. Place blank CDs in the available disc drives and press the **OK** button to start the duplication process. The LCD Panel displays the status of the “burn” process



1.Copy - J 52X 43%
4/10 Trk 01:33

12. The SpinWise system will automatically eject all successful copies of the burn process, and the LCD Panel will display the finished status. In the following example, six duplicates were successfully burned from partition J of the hard drive:



1.Copy OK: 06 P: J

Notes to help you set up the system for the next duplicating project

Depending on your next task using the SpinWise CD duplicator, you may need to use the **Select Source** function to identify a different partition of the hard drive or to identify the top IDE1 Master drive as the source for your next duplicating project.

To identify a different partition of the hard drive, use the **Image** function and then use the **Select Image** option to select a different working hard drive partition.

Selecting the Source to Copy *From* (CD-ROM or Hard Drive)

Overview

This procedure explains how to change the source drive. The top drive is the default drive when shipped.

Start with the Initial Copy Function Displayed

1. Turn on the system. Note that the **Copy** function is displayed. If your last operation involved duplicating from a Master CD in the CD-ROM drive, then the **Copy** function appears as follows:



1. Copy

If your last operation involved duplicating CDs from a hard disk partition, then the last used hard drive partition will be displayed. For example:



1. Copy P: A

Select the Source to Copy From

2. Use the down-arrow button to scroll to the **8. Select Source** function.
3. Press the **OK** button to select the function.

Use the down-arrow button to select the source you wish to copy from. For example, to select the hard drive as the source, select HDD:



Src: HDD
00 IDE0 Master

To select one of the CD-ROM drives as the source, press the down arrow button to cycle through the available source drives:



Src: CD-ROM
01 IDE0 Master

Selecting the Source to Copy *From* (continued)

Source Selection Confirmed

4. Press the **OK** button to make your selection. The LCD Panel displays a confirmation of your selection.

For example, if you selected the hard drive as the source, the following message is displayed:



HDD Selected!

If you selected the CD-ROM as the source, the following message is displayed:



CD-ROM Selected!

Selecting the Partition within the Hard Drive if the Hard Drive is the Source

5. Press the **OK** button or the **ESC** button to return to redisplay the **Select Source** function. The copy function will reflect the source as explained in step 1.
6. If you have selected the hard drive as your source, you must make sure to specify which partition in the hard drive you intend to use as your source, using the **Image** function. This procedure is explained on page 20, *Selecting a Specific Hard Drive Partition as the Source*.

Selecting a Specific Hard Drive Partition as the Source

Overview

This procedure explains how to select a specific partition on the hard drive as the source from which you will be copying from.

Start with the Initial Copy Function Displayed

1. Turn on the system. Note that the **Copy** function is displayed. If your last operation involved duplicating from a Master CD in the CD-ROM drive, then the **Copy** function appears as follows:

1. Copy

If your last operation involved duplicating CDs from a hard disk partition, then the last used hard drive partition will be displayed. For example:

1. Copy P: A

Select the Source to Copy From

2. Use the down-arrow button to scroll to the **8. Select Source** function.
3. Press the **OK** button to select the function.

Use the down-arrow button to select the source you wish to copy from. For example, to select the hard drive as the source, select HDD:

Src: HDD
00 IDE0 Master

To select the CD-ROM drive as the source, select CD-ROM:

Src: CD-ROM
01 IDE0 Master

Selecting a Specific Hard Drive Partition as the Source (continued)

Source Selection Confirmed

4. Press the **OK** button to make your selection. The LCD Panel displays a confirmation of your selection.

For example, if you selected the hard drive as the source, the following message is displayed:

HDD Selected!

If you selected the top Master drive (IDE 1) as the source, the following message is displayed:

CD-RW Selected!

5. Press the **OK** button or the **ESC** button to redisplay the **Select Source** function. The **Copy** function will reflect the source as explained in step 1. If you have selected the hard drive as your source, you must make sure to specify which partition in the hard drive you intend to use as your source, using the **Image** function.

Selecting the Partition within the Hard Drive if the Hard Drive is the Source

6. Use the down-arrow button to scroll to the **9.Image** function, and press the **OK** button to select the function.

Use the down-arrow button to scroll to the **Select Image** option. For example:

9-05. Image P: A
Select Image

Press the **OK** button to select this option, and use the down-arrow button to display the letter of the partition in the hard drive that you wish to use as the source. For example:

Select Working Partition - J

Press the **OK** button to select the displayed partition. The LCD Panel will confirm your selection. For example:

Set Partition to - J

Selecting a Specific Hard Drive Partition as the Source (continued)

Note the Source Partition listed with the Copy Function

Press the **ESC** button twice to return to the **Image** function. Then use the down-arrow button to scroll to the **Copy** function. Note that the partition you selected is displayed with the Copy function. For example:



```
1.Copy          P:  J
```

Chapter 4 Beyond the Basics

Testing (Simulating) the Copy Process

The **2.Test** function is used to simulate the copying process. When the simulation (test) finishes, no data will be written to the CD.

How to Use the **2.Test** function:

1. Use the down-arrow button to scroll down to the **2.Test** option.
2. The system will test the source and the target destination. If using the CD-ROM as the source, put a source CD into the CD-ROM (top disc drawer) blank CDs into the writers. If using a partition on the hard disk, ensure the correct hard disk partition is displayed. If you use rewritable discs that contain data, the old data will be quickly erased before simulation.
3. Press **OK** to start the simulation (test). The LCD Panel will display the testing information and when the test ends, the LCD will show the results.

Testing and Copying CDs

The **3.Test & Copy** function is used to test the copying process and then actually copy the source to the destination discs.

How to Use the **3.Test & Copy** function:

1. Use the down-arrow button to scroll down to the **3.Test & Copy** function.
2. The system will test the source and the target destination and then automatically start the copy process. If using the CD-ROM as the source, put a source CD into the CD-ROM (top disc drawer), and blank CDs into the writers. If using a partition on the hard disk, ensure the correct hard disk partition is displayed in the LCD Panel along with the **Test and Copy** function. If you use rewritable discs that contain data, the old data will be quickly erased before testing and copying.
3. Press **OK** to start the test and copy process. The LCD Panel will display the testing information, the copy information, and the results. It will automatically eject the duplicated CDs when the process is finished.

Verifying the Target (Duplicate) CDs

The **4.Verify** function is used to examine if the target CDs can be read correctly after copying.

How to Use the **4.Verify** function:

1. Begin by copying a Master CD or data from a partition in the hard drive to a target (slave, destination) CD. You can use the **1.Copy** function or the **3.Test and Copy** function to do this. When the copy process is done, the system will automatically eject the duplicated disc(s). Press the **ESC** button to redisplay the function and re-insert the disc(s).
2. Use the down-arrow button to display the **4.Verify** function and press the **OK** button to start the Verify process. The SpinWise system will start to verify the CDs in the target drives. The LCD Panel will display the verify process information and the results. It will automatically open all disc drives of the verified discs when the process is complete.

Comparing the Source and Target after Copying

The **5.Compare** function compares the source CD and the target CD *after* copying.

How to Use the **5.Compare** function:

1. Begin by copying a Master CD to a target (slave, destination) CD. You can use the **1.Copy** function or the **3.Test and Copy** function to do this. Press the **ESC** button to redisplay the function.
2. Ensure that the source and the copied target CDs are in their respective drives.
3. Use the down-arrow button to scroll down to the **5.Compare** function, and press the **OK** button to start the Compare process. The LCD Panel will display the compare information and the results. When the process completes, the target CDs will be automatically ejected.
4. Press the **OK** button to view the *detail* of the Compare information. If the compare result is identical, then the LCD Panel will display the message, “Identical.” If the result of the compare process is “Fail” then the message will show the number of discs that failed and succeeded. Press the **OK** button to view the *detail* of the Compare information. If the compare failed, the LCD panel will display the reason of the failure such as “TOC not match.”
5. Press the **ESC** button to redisplay the **5.Compare** function.

Prescanning the Master (Source) CD

The **6.Prescan** function is used to scan the master (source) CD to determine if it can be read correctly and to test the read speed.

How to Use the **6.Prescan** function:

1. Place the Master CD in the CD-ROM drive (source).
2. Use the down-arrow to display the **6.Prescan** function.
3. Press the **OK** button to start the Prescan process. The SpinWise system will scan the Master CD and the LCD panel will display the scanning information and the results. If the master CD can be read correctly, then the message, "**Prescan OK!**" appears in the LCD Panel. If the Master CD cannot be read correctly, then the message, "**Prescan Fail!**" will appear in the LCD Panel.
4. Press the **ESC** button to redisplay the function.

Viewing the Disc Info of the Master (Source) CD

The **7.Disc Info** function shows the following information about the Master CD:

- Number of sessions
- Number of tracks
- Total time (in minutes)
- Size of the data on the CD in Megabytes
- Number of minutes per track
- Type of data on each track (e.g., AUDIO)

How to Use the **7.Disc Info** function:

1. Place the Master CD in the CD-ROM drive (source).
2. Use the down-arrow to display the **7.Disc Info** function.
3. Press the **OK** button to view the number of sessions and total number of tracks on the Master CD
4. Press the **OK** button again to view the number of sessions and total number minutes and the number of Megabytes of data that are on the Master CD.
5. Press the **OK** button again to view the details of the first session. Press the down arrow to view the type of data (e.g., audio) and minutes for track 1, press the down arrow again to view the type of data and minutes for track 2, etc.
6. Press the **ESC** button to redisplay the **7.Disc Info** function.

Chapter 5 Using the Hard Drive Partitions as the Source

Overview

This chapter pertains to SpinWise systems that contain a hard drive.

For SpinWise systems that have a hard drive, the user can do the following:

- Load a CD into a specific partition of the hard drive (9-01. Image Load, page 28)
- Delete the contents of a partition on the hard drive (9-02. Delete Image, page 28)
- Review the contents of a partition on the hard drive, such as number of sessions, number of tracks, total number of minutes, and size of the data in megabytes (9-03. Image Info, page 28)
- Compare the contents of the working partition with the contents of the target CD (9-04. Compare Image, page 29)
- Select a Hard Drive Partition (Image) (9-05. Select Image, page 29)
- Select the Image Source Drive (9-06. Image Src Drive, page 30)

The hard drive in the SpinWise CD Duplicator system contains 36 partitions. Each partition can store one gigabyte of data. Therefore, you can load as many as 36 CDs into the hard drive. And you can duplicate the information that is in a particular partition onto all available CD drives at once. Each partition in the hard drive is labeled as shown at right:

Hard Drive Partition	Label
1	A
2	B
3	C
4	D
5	E
6	F
7	G
8	H
9	I
10	J
11	K
12	L
13	M
14	N
15	O
16	P
17	Q
18	R
19	S
20	T
21	U
22	V
23	W
24	X
25	Y
26	Z
27	AA
28	AB
29	AC
30	AD
31	AE
32	AF
33	AG
34	AH
35	AI
36	AJ

Loading a CD (Image) into a Partition of the Hard Drive

The **9-01 Image Load** option is used to load the data from a Master CD to a partition on the hard drive.

How to Use the **9-01 Image, Load** option:

1. Use the down-arrow button to scroll down to the **9.Image** function. Then press the **OK** button to select it. The option, **9-01 Image Load** is the first option presented within the **Image** function.
2. Place a Master CD in the CD-ROM drive (top disc drawer).
3. Press **OK** to start the load process. If the selected partition is already written to, then select another working partition and press the **OK** button to select it. Press the **OK** button again to confirm your selection. Press the **OK** button again to start the Load of the Master CDs contents to the partition displayed in the LCD Panel.
4. The LCD Panel displays the status of the load process and when the load is finished, the LCD will show the results.

Delete the Contents of a Hard Drive Partition

The **9-02 Image, Delete Image** option is used to delete the data (image) stored in the currently-displayed partition of the hard drive.

How to Use the **9-02 Image, Delete Image** option:

1. Use the down-arrow button to scroll to the **9.Image** function. Then press the **OK** button to select it. Use the down-arrow to display the option, **9-02 Image, Delete Image**. Press the **OK** button.
2. At the system prompt, “**Delete Image in Partition? Yes**” Use the down-arrow button to display **No** and then press the **OK** button to cancel the option, or, if **Yes**, then press the **OK** button and the data in the displayed partition is immediately deleted.

Review the Contents of a Partition

The **9-03 Image, Image Info** option is used to examine the contents of the currently displayed hard drive partition.

How to Use the **9-03 Image, Image Info** option:

1. Use the down-arrow button to scroll to the **9.Image** function. Then press the **OK** button to select it. Use the down-arrow to display the option, **9-03 Image, Image Info**. Press the **OK** button. The LCD Panel displays the Number of Sessions and the Number of Tracks.
2. Press the down-arrow button to view the total number of minutes and the size of the data in Megabytes.
3. Press the down-arrow button again to view the tracks in the first session.
4. Press the down-arrow button again to view the number of minutes in the first track.
5. Repeat step 4 for each track and press the **OK** or the **ESC** button to exit this option.

Compare the Partition to the CD

The **9-04 Image, Compare Image** option is used to compare the image (data) of the target and the current working partition on the hard drive.

How to Use the **9-04 Image, Compare Image** option:

1. Use the down-arrow button to scroll to the **9.Image** function. The press the **OK** button to select it. Use the down-arrow to display the option, **9-04 Image, Compare Image**. Press the **OK** button.

Selecting a Hard Drive Partition

The **9-05 Image, Select Image** option is used to select the current working partition of the hard drive.

How to Use the **9-05 Image, Select Image** option:

1. Use the down-arrow button to scroll to the **9.Image** function. The press the **OK** button to select it. Use the down-arrow to display the option, **9-05 Image, Select Image**. Press the **OK** button. The LCD Panel displays the prompt, “Select Working Partition – A”
2. Use the down-arrow button to display the desired working partition. Then press the **OK** button to select it.
3. Press the **OK** button again to confirm you choice of the current working partition.

Selecting the Image Source Drive

The **9-06 Image, Image Src Drive** option is used to select the particular drive to be the master source from which the data will be coming from.

How to Use the **-06 Image, Image Src Drive** option:

1. Use the down-arrow button to scroll to the **9.Image** function. Then press the **OK** button to select it. Use the down-arrow to display the option, **-06 Image, Image Src Drive**. Press the **OK** button. The LCD Panel displays the prompt, "Select Img Src:"
2. Use the down-arrow button to display the desired image source. Then press the **OK** button to select it.
3. Press the **OK** button again to confirm your choice of the current working partition.

Chapter 6 Editing Tracks

Overview

In Chapter 3 you learned how to copy selected tracks from master CDs to a particular partition on the hard drive. In this chapter you will learn how to use the following additional Edit Track options:

- Copy a track from a Master CD to a target CD (10-01. Edit Track, CD to CD Edit, page xx)
- Play an Audio Track (10-03. Edit Track, Play Audio Track, page xx)
- Close a session (10-04. Edit Track, Close Session, page xx)

Copying Tracks, Master CD to Target CD

The **10-01 Edit Track, CD to CD Edit** option is used to combine tracks on different CDs onto a single CD. For example, you can make a collection of favorite songs from different music CDs and store them onto one CD.

How to Use the **10-01 Edit Track, CD to CD Edit** option:

1. Place the Master CD in the CD-ROM drive and a blank CD in a target CD drive.
2. Use the down-arrow button to scroll to the **10. Edit Track** function. Then press the **OK** button to select it. The LCD Panel displays the first Edit Track option: **10-01 Edit Track, CD to CD Edit**. Press the **OK** button. The LCD Panel displays the contents of the Master CD and prompts you to select a track.
3. Use the down-arrow button to select the track number, and then press the **OK** button to select it. Do this for each track you wish to select.
4. Use the down-arrow to scroll to the end of the list of tracks. When **End** appears in the LCD Panel, press the **OK** button.
5. The system prompts you with the message, **“End edit disc and burn? Yes.”**
6. Press the **OK** button to start the “burn.” When the selected track has been copied from the Master CD to the target CD, the LCD Panel displays the message, **“Burn Complete! OK”**.
7. Press the **ESC** button and view the system prompt, **“Continue edit next Disc? No”** Use the down-arrow button to display **Yes** and then press the **OK** button, or, if **No**, then press the **OK** button to end the Edit Track option.

Playing an Audio Track

The **10-03 Edit Track, Play Audio Track** option is used to listen to any track on the Master CD. You will need headphones, which plug into the front of the disc drawer. The volume control is next to the headphone jack.

How to Use the **10-03 Edit Track, Play Audio Track** option:

1. Place the Master CD in the CD-ROM drive.
2. Use the down-arrow button to scroll to the **10. Edit Track** function. The press the **OK** button to select it. Use the down-arrow to display the option: **10-03 Edit Track, Play Audio Track**. Press the **OK** button. The LCD Panel displays the contents of the Master CD and prompts you to select a track.
3. Use the down-arrow button to select the track number, and then press the **OK** button to select it.
4. Attach headphones to the disc drive to listen to the track.
5. Press the **ESC** button three times to stop the Play Audio Track option.

Closing a Session

The **10-04 Edit Track, Close Session** option is used to finalize the target CD so that no more data can be written to it. This option makes the CD ready to be read on a normal player.

How to Use the **10-04 Edit Track, Close Session** option:

Use the down-arrow button to scroll to the **10. Edit Track** function. The press the **OK** button to select it. Use the down-arrow to display the option: **10-04 Edit Track, Close Session**. Press the **OK** button. The LCD Panel displays the prompt, **“Close all discs’ session? Yes”**. If you select **Yes**, then the target CDs in the system cannot be written to anymore. Selecting **No** cancels the option and ejects the disc(s).

Chapter 7 About the Setup Options

Overview

The **11.Setup** function contains options that allow the user to change the original default settings. As there are various settings that control the duplicator's operation, we suggest using the preset default settings for optimal operation. The options are described in this chapter for your reference.

Language

This option allows you to select the language that appears in the LCD Panel. The options are: English, Spanish.

Burn Speed

This option allows you to change the burn speed (depending on the CD-RW maximum speed support).

Read Speed

The option allows you to control the read speed of the CD-ROM (depending on the CD-ROM maximum speed support).

Auto Start Drive

This option controls whether or not the CD writers will auto start to copy or if the CD writers will test for the blank discs. The default setting is OFF.

Startup Menu

This option allows you to select which function will appear at system startup. The default is the **Copy** function.

Auto Verify

This option controls the auto verify of the target CDs, which verifies if they can be read correctly in the CD-ROM drive after copying. The default setting is OFF.

Auto Compare

This option controls the auto compare of the data between the Master CD and the target CDs after a copy operation. The default setting is OFF.

Auto Prescan

This option controls the auto prescan of the master disc to see if it can be read correctly and it tests the reading speed. The default setting is OFF.

Eject Disc

This option controls the ejection of the discs by the CD writer. Three settings are available: the default setting is the “Eject Good Only” setting, which will only eject the passed discs automatically and leave the failed ones in the CD writers; the “Eject All Disc” setting will eject all discs, whether or not they passed or failed; the “Do Not Eject” setting causes all the discs to remain in the CD writers when the job is done and the user will have to eject the discs manually.

Burn On The Fly

This option controls the writing methods to the CD. When this setting is ON, the data will direct copy from the source drive to the target drives. When the setting is OFF, the data will load into a particular temporary partition in the hard drive and then the copied data will come from the source partition.

Burn Mode

This option controls the writing methods to the CD including the “Disc At Once” (DAO) or “Track at Once” (TAO). The default setting is Disc At Once. Some CD writers may support different writing methods. If the method selected is not supported, the duplicator will automatically switch to the other one.

Button Sound

This option controls whether the button sound is ON or OFF. The default setting is ON.

Device Info

This option shows what drives are installed.

System Info

This option shows the system information of the LCD such as the internal firmware revisions.

Quick Erase

This option initiates a quick erase of the data on the CD-RW disc.

Full Erase

This option will do a complete erase of the data on the CD-RW disc. This will take a minute to complete.

Appendix A: Overview of the SpinWise Functions

Upon starting the SpinWise system, you can press the down-arrow button to scroll through the available options. The last three options, Image, Edit Track, and Setup have sub-options as listed in the outline below:

- 1. Copy**
- 2. Test**
- 3. Test and Copy**
- 4. Verify**
- 5. Compare**
- 6. Prescan**
- 7. Disc Info**
- 8. Select Source**
- 9. Image**
 - 9.1. Load
 - 9.2. Delete Image
 - 9.3. Image Info
 - 9.4. Compare Image
 - 9.5. Select Partition
 - 9.6. Select Src Drive
- 10. Edit Track**
 - 10.1. CD to CD Edit
 - 10.2. CD to HD
 - 10.3. Play Audio Track
 - 10.4. Close Session
- 11. Setup**
 - 11.1. Language (optional)
 - 11.2. Burn Speed
 - 11.3. Read Speed
 - 11.4. Auto Start Drive
 - 11.5. Startup Menu
 - 11.6. Auto Verify
 - 11.7. Auto Compare
 - 11.8. Auto Prescan
 - 11.9. Eject Disc
 - 11.10. Burn On The Fly
 - 11.11. Burn Mode
 - 11.12. Button Sound
 - 11.13. Device Info
 - 11.14. System Info
 - 11.15. Quick Erase
 - 11.1. Full Erase

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Glossary

CD	Short for compact disc, an optical disc storage format developed by Philips and Sony.
CD Duplication	The process of making one or more copies of a compact disc.
CD+G	CD+Graphics. Audio, text and graphics used in the same application. This type of disc is usually used for Karaoke machines.
CD-DA	Compact Disc-Digital Audio. A CD-DA disc contains tracks with audio sectors only. In 1982 Philips and Sony introduced the necessary technology for storing digital audio signals on a compact disc, and introduced the CD-Digital Audio.
CD-R [Disc]	An acronym for compact disc-recordable which is a type of media that allows you to record information using a CD Recorder.
CD-Recordable	CD-Recordable technology allows production of CD-ROMs on the desktop ('one-offs'). It requires a PC, a CD-R recorder or drive, appropriate software, and 'recordable' media. The reduction of prices for this hardware and software, and their ease of use, has helped the growth of CD-ROM production in-house. The 'one-off' is very different from the mass-reproduced or 'hot-pressed' CDs. It is sold pre-grooved, in 63 or 74 minute capacities, and it involves a layered structure--with a sensitive chemical recording layer, and almost always with a gold reflective layer. Once recorded, the CD-R disc (one-off) performs in the same way as the mass-reproduced CDs.
CD-ROM	Compact Disc-Read Only Memory. A standard for compact disc to be used as a digital memory medium for personal computers. The specifications for CD-ROM were first defined in the Yellow Book.
CD-ROM Disc	A CD-ROM disc contains only data sectors as defined in the Yellow Book.
CD-ROM Drive	A peripheral device attached to a computer which allows it to read/play a CD-ROM disc. All CD-ROM players can also play back audio CDs, but you need external headphones or speakers to hear them.

Compact Disc	CD stands for compact disc which is a general term for all formats of CD media. CD formats available on the market now include CD Audio, CD-ROM, CD-ROMXA, Video CD, CD-I and others.
Compact Disc Formats	During the last two decades several Compact Disc formats were developed to serve different purposes and uses. Starting with the CD-DA format in 1980, as a way to distribute high quality music in a compact and convenient format, the first compact disc standard was formulated. Then, the idea of storing computer data on the same media, more than 10 years ago, lead to a new format: the CD-ROM (along with CD). In the last few years, the desire to store a whole new generation of multimedia contents(audio, video, games, pictures etc.) demanded new formats: CD-I,CD-XA, Photo-CD, Video-CD, CD+ etc. were invented.
Digital Audio	Although digital audio can have a variety of sampling rates and quantization, the Red Book specifies CD-Digital Audio as being sampled at 44.1KHz, and quantized at 16 bits/sample, for high quality stereo sound (65,536 values).Therefore, sound of different quality, even if it is placed in a CD, is not Red Book Digital Audio.
Digital Audio Extraction (DAE)	The process of copying CD-DA audio tracks digitally from your CD-writer or another CD-ROM drive, to a hard disk or to a recordable CD. Not all CD-ROM drives support this.
Disc Read Head--Disc Write Head	Storage drives (magnetic and optical) have a head or heads that float over the recorded area to read and write. Obviously, CD-ROM drives have only a read head, which involves a low-intensity red laser diode (a.k.a. infrared laser diode), lenses that focus the laser on the track, and others that redirect the reflections to one of the photodiodes for appropriate decoding. Some Write-Once and Rewritable optical drives involve two heads (to write and read), while other drives, including CD-Recordable, use only one head to do both--using a high-intensity blue argon laser for the write function. For mass replication of CD-Audio, CD-ROM, and DVDs, the glass master is produced by encoders that have special recording heads.
Disc-At-Once (DAO)	A method of writing in which one or more tracks are written in a single operation. The laser will not stop until the whole disc recording is finished and the disc is closed - hence no clicks between audio tracks. Disc-at-Once has only been added/available with the recent generation of CD recorders and recent firmware upgrades.

Disk Sector	In magnetic disks, formatting provides a geography of the platters; which are divided into concentric circles, and these circles are further subdivided into sectors. Although sectors vary in size depending on their position in the disk, they have a specific capacity in bytes. This sectorized framework is found in constant angular velocity (CAV) drives, and is compatible with the FAT used in PCs. When discussing optical discs, 'sector' is used to refer to discrete amounts of data with a specific layout or structure along the single spiral track.
Emulate	To test the function of a disc on a computer after formatting a complete disc image.
Enhanced CD	A general term for various techniques that add computer software to a music CD, producing a disc which can be played in a music player or read by a computer. Also called CD Extra, CD Plus, hybrid CD, interactive music CD, mixed-mode CD, pre-gap CD, or track-zero CD.
Hard Drives	Originally known as Winchester drives, these magnetic storage devices have one or more non-removable solid platters--as opposed to the floppy-disk drives. Hard drives come in various types, different capacities and configurations--and are connected to the bus through a controller or interface card. There are removable hard drives, which allow removal of the component that contains the platters--a workable option for users with security concerns.
HDCD	High-definition Compatible Digital. A proprietary method of enhancing audio on CDs.
Hz	Hertz. A unit of frequency measurement. The number of cycles (repetitions) per second.
Jewel Box/Case Karaoke	The plastic clamshell case that holds a CD for shipping or for storage. Literally, empty orchestra. The social sensation from Japan where people sing along to a music track. Karaoke was largely responsible for the success of laserdisc in Japan, thus supporting it elsewhere.
Master	The metal disc used to stamp replicas of optical discs. The tape used to make additional recordings.
Mastering	Technically, refers to the process of creating a glass master from which compact discs will be reproduced in quantity. In desktop recordable CD systems, mastering is done together with premastering by the desktop CD recorder, and the term is generally used to mean "recording."

Mode	<p>Under the ISO 9660, a CD-ROM sector can be Mode 1 or Mode 2.</p> <p>Mode 1 allocates 2048 bytes for user data, plus a third layer of error detection and error correction codes. This is the Mode that provides the highest integrity for computer data.</p> <p>Mode 2 allocates 2336 bytes for user data, and no third layer of error detection and error correction. This mode is considered appropriate for segments of music, graphics and video, especially in CD-ROM-XA and CD-I implementations.</p>
Multimedia	<p>Information in more than one form, such as text, still images, sound, animation, and video. Usually implies that the information is presented by a computer.</p>
Protective Coating	<p>Optical discs are given a clear plastic or lacquer coat that protects the metallic layer. Even with this coating, small scratches, pressure, dirt and other markings can make the disc unreadable. The coating also prevents air from reaching and oxidizing the metallized layer--which would render the disc unreadable</p>
Track-At-Once	<p>With Track-at-Once writing mode, a CD-Recorder will record one track at a time. In between every two tracks (unless you are only recording a single track). The CD-Recorder laser will stop while the hard disc prepared for the contents of the next track. Each time the laser is stopped, it writes Run-Out blocks. When starting again, it writes Run-In blocks (a total of 7 blocks). These are ignored by CD-ROM readers and so do not disturb data transmission, but in some audio players you might hear a click between tracks. This is why disc-at-Once recording is preferable for audio discs.</p>
Wave	<p>A Wave file (.WAV) is a type of sound file which stores digitized analog signals.</p>
Yellow Book	<p>The book which sets out the standard developed by Philips and Sony for the physical format of compact discs to be used for information storage (CD-ROM).</p>

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<i>Emulate</i>	39	<i>Yellow Book</i>	40