



## **Welcome to AudioCD MP3 Studio!**

AudioCD MP3 Studio is a new kind of software for creating your own audio CDs. What makes this program special is the way it stores and manages your audio files. Normally, the large *.wav* files take up a great deal of space on your hard disk or other storage media. AudioCD MP3 Studio uses a special compressed format that cuts these space requirements radically. This format normally achieves a 1:4 compression ratio, reducing the space taken up by audio files to just one quarter of the normal size. For example, it enables you to store the data for a 60-minute audio CD in just 150 megabytes instead of the usual 600 megabytes!

But that's not all: AudioCD MP3 Studio also supports the revolutionary MPEG1 Layer 3 format (normally referred to as MP3), which achieves much higher compression ratios with quality that is virtually indistinguishable from ordinary CDs. Many musicians now publish public domain music on the Internet in MP3 files that can be downloaded quickly with maximum quality.

AudioCD MP3 Studio is the first program that enables you to write MP3 files directly to music CDs so that you can listen to them on ordinary audio CD players.

Last but definitely not least, PTS MusicCD doesn't make you wait around. It performs all its powerful audio processing functions in real time, at the same time as writing the data to the CD.

## Installation Information

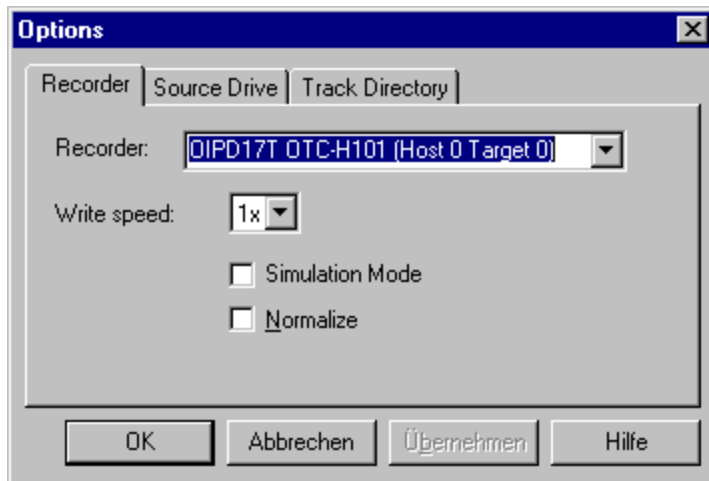
## **System Requirements**

System requirements for this version of AudioCD MP3 Studio:

- IBM-compatible PC with a P133 or faster processor
- At least 32MB of RAM
- Windows 95, Windows 98 or Windows NT 4.0 or higher
- A CD recorder

An ordinary CD-ROM drive for reading tracks (optional)

## Recorder Options



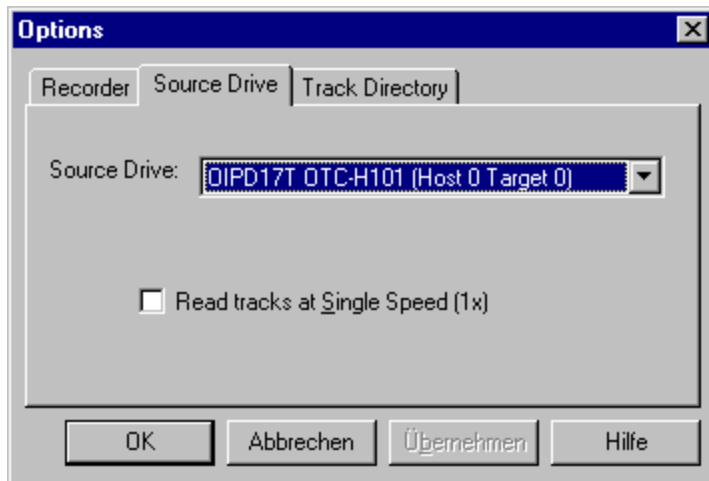
Options for selecting the CD recorder and setting the parameters for writing CDs.

Select the appropriate write speed for your recorder in the **Write Speed** field. You can choose values between 1x, 2x and 4x depending on the recorder model (see also: [Write Speed](#)).

If you activate the **Simulation Mode** check box the write process will only be simulated. This means that the entire write procedure will be executed without activating the laser beam, so that no data is actually written to the CD. You can select this mode the first time you use the program to make sure everything is working and to test modified settings if you experience a large number of write errors on your system (see also [Simulation Mode](#)).

Activating the **Normalize** check box switches on the normalization function, which automatically amplifies the loudest passage to the maximum peak value and adjusts all the other passages accordingly, so that all the tracks on the CD have the same overall volume level (see also: [Normalizing](#)).

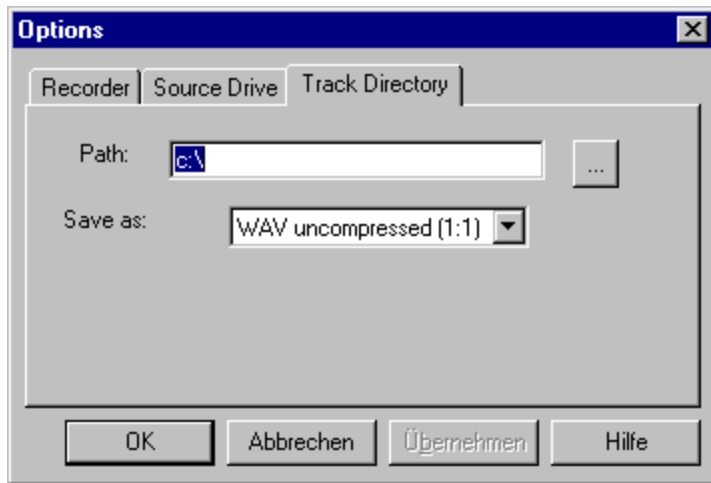
## Source Drive Options



Options for configuring the source drive with which you read music tracks. If the software identifies your drive or its manufacturer automatically the drive designation will be displayed in the selection list and you can assume that the program will achieve the maximum possible read quality. If the program cannot identify the drive UNKNOWN CD-ROM will be displayed in the list. The system then uses a generic driver which will usually work well; however, please note that you may occasionally experience minor quality impairment when reading some music tracks with this driver.

The **Read tracks at Single Speed** option forces your CD-ROM drive to read the music tracks at single speed. Some CD-ROM drives are only able to extract digital audio from music CDs at single speed, and others can produce better quality when extracting at this speed. You should try this option if you experience any read problems or feel that the audio quality of your extracted tracks could be better.

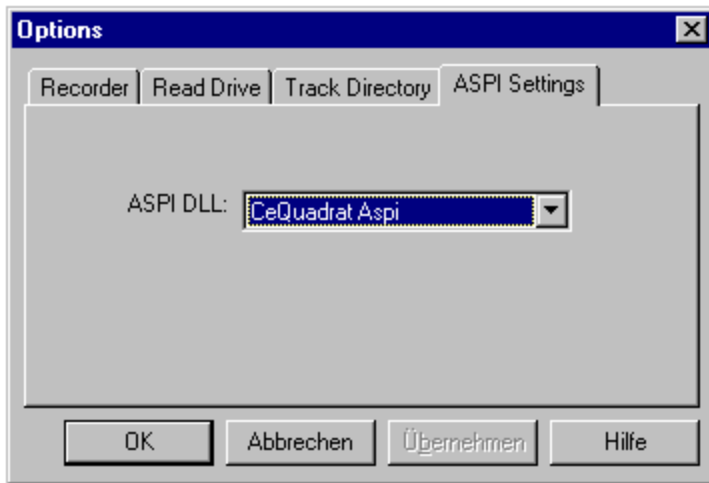
## Track Directory Options



This dialog allows you to define the directory in which AudioCD MP3 Studio stores your music files when you read them from CDs. Choose a suitable directory, such as D:\TRACKS.

AudioCD MP3 Studio supports a special compressed format that radically reduces the space required for storing music tracks. Selecting the **Save as: WAV compressed (1:4)** option reduces the file size by 75% without any audible reduction in audio quality. In addition to this the compressed .wav files still conform to the standard Windows format and can thus be read by most audio applications and utilities.

## Dialog: ASPI Options



AudioCD MP3 Studio is able to select the ASPI-Interface. In this dialog all available ASPI-Interface are displayed, so you can choose that what you want.

After changing the ASPI please restart AudioCD MP3 Studio.



## Track Properties: File



You can display this dialog box by double-clicking on a music track entry or by clicking on the entry with the right mouse key. In addition to checking the track properties you can also use this dialog to edit the title and artist information.

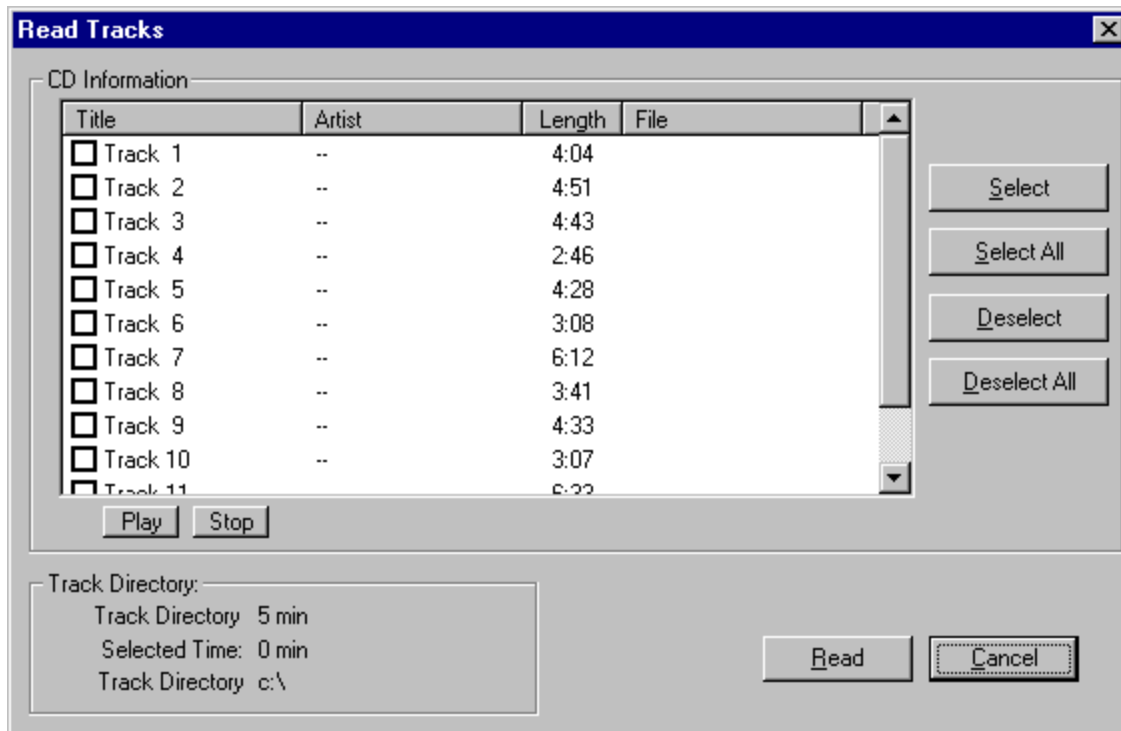
## Track Properties: Properties



This tab displays technical file information, including the exact duration of the music track, the sampling rate and the format.

The dialog also provides controls for playing the track,. Simply click **Play** to listen and **Stop** to stop. These functions will play all supported music track formats.

## Read Tracks



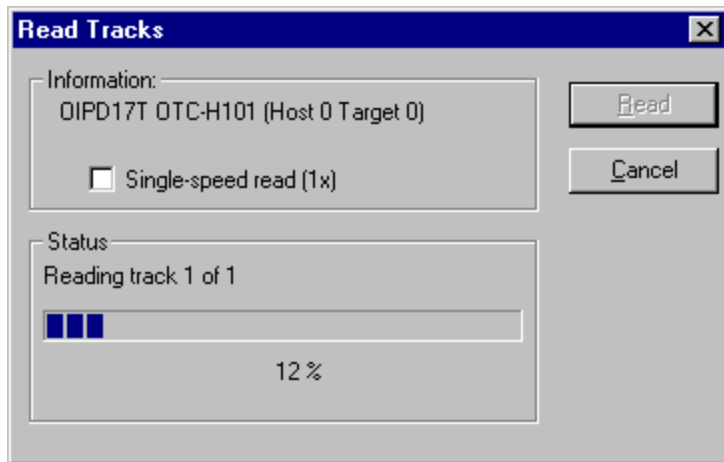
This function enables you to read tracks from music CDs. Choose an audio CD from which you wish to extract tracks, insert it in your CD drive and select the **Read Tracks** option in the **CD** menu to display the contents of the CD. You can then select tracks to extract by activating the check boxes to the left of the titles. Select all the tracks you want to read before continuing to the next step.

The first time you click each selection box the **Track Properties** dialog is displayed, allowing you to edit the data for the track. It's a good idea to enter the correct title and artist information at this point so that the information is always available when you work with the tracks later on. You can also redisplay the properties dialog at any time by double-clicking on the track entry in the list.

After selecting all the tracks you want, start the read operation by clicking on the **Read** button.

You can also use the **Play** and **Stop** buttons to listen to the tracks before reading them, which can be helpful if the CD contains tracks you are not familiar with. However, please note that you can only listen to tracks with this function if the source CD drive is connected to your sound card with an audio cable.

## Read Tracks (Progress)

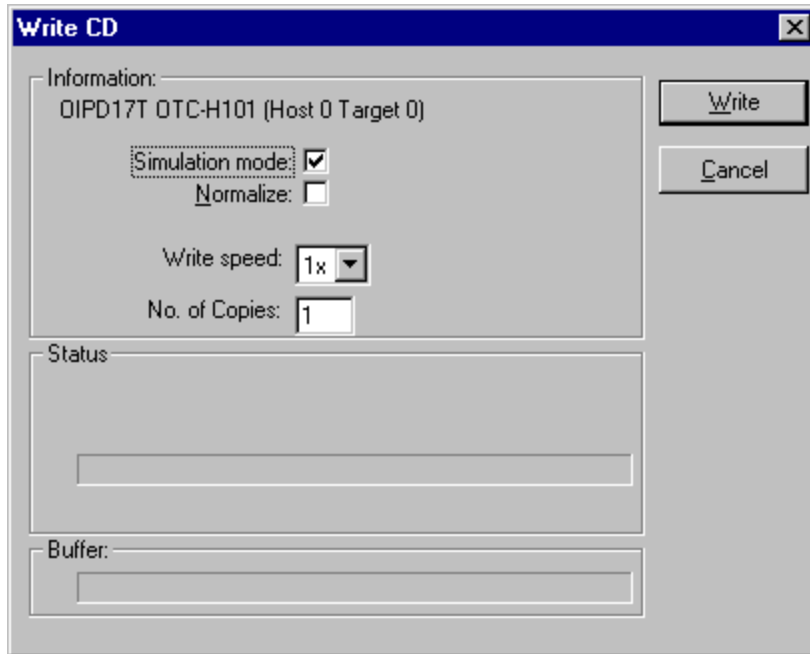


When you have selected all the tracks and clicked **Read** this dialog is displayed, allowing you to make a couple of final choices.

If you wish, you can specify **Single-speed read** at this point. This option produces radically improved audio quality with some drives. Some other drives ignore this command entirely and perform the read operation at maximum speed anyway.

When you are ready click **Read** to start or **Cancel** to quit.

## Write CD



Selecting the **Write CD** option in the **CD** menu displays this dialog with information about the CD recorder and the current write settings. You can change all the settings before starting the write operation, but any changes you make here only apply for the current session. If you want to use the same settings for all write sessions you must edit the parameters in the **Options** menu.

### **Write simulation mode:**

Select this option if you are not sure whether your system is powerful enough to perform the operation correctly. For example, MP3 files often cause problems on some systems because unpacking this format places a high load on the computer's processor. If the simulation completes without errors you can continue and burn the data to CD with confidence.

### **Normalize:**

Music tracks from different sources are often recorded at different overall volume levels, and if they are played directly after one another from the same disk the sudden volume variations do not sound so pleasant. This function automatically adjusts the volume of all the tracks with reference to the same maximum level, so that all tracks then play at the same overall level (see also: [Normalizing](#)).

### **Write Speed:**

It's important to understand that slower write speeds generally produce better audio quality. The difference is often not directly audible but real hi-fi fans should take the time and trouble to record their music at single speed (1x).

When you have entered all your settings, start the operation by clicking on the **Write** button.

The progress of the CD write operation is displayed on the bars in the lower section of the dialog box. Keep an eye on the **Buffer** bar – if it frequently drops down towards the minimum level it's advisable to reduce the write speed the next time you record a CD.



## Normalizing

Normalizing means adjusting the overall volume of a music track to a standard maximum level. Music tracks from different sources are often recorded at different levels and the fluctuations from one track to the next can be annoying when they are played on after another from a single CD. The Normalize function compensates for these differences so that all the tracks you write to a CD have the same overall volume level. AudioCD MP3 Studio can execute this function in real time, while it is recording the music to CD. Simply activate the **Normalize** check box in the **Write CD** dialog. You can also choose Normalize as the default setting in the recorder options.



## Write Speed

The write speed index (1x, 2x, 4x) is a number that expresses the speed at which the CD is written as a multiple of the play speed of a normal audio CD player. At "single speed" (1x) the recorder will take just as long to write the tracks as a CD player would take to play it – for example, 60 minutes for 60 minutes of music. At quadruple-speed (4x) the recorder will only takes 15 minutes to write the same data to a CD. However, at higher speeds the bit error rate also increases, resulting in a deterioration of audio quality. If you want the maximum possible audio quality it's always best to record at single speed.

## **Simulation Mode**

In simulation mode CD writing is only simulated, i.e. the entire write process is performed but the write laser is not activated, so that no data is written to the CD. This mode enables you to test your system configuration and localize errors without unnecessarily producing unusable CDs.

## Keyboard Shortcuts

### Shortcut

<INS>

<DEL>

<ALT>+

<ALT>+

### Function

Add track or tracks to project list

Remove selected track from project list

Move selected track up in project list

Move selected track down in project list

## **Format (music data)**

Digitized music can be stored in a wide variety of different formats. Among their other differences, the individual formats provide different audio quality, and different degrees of compression and flexibility. AudioCD MP3 Studio uses the WAV and MP3 (MPEG1 Layer 3) formats because they are commonly used on Windows systems and offer good quality combined with a high level of compression.

## **Sampling Rate**

Analog signals are converted to digital data by recording a consecutive series of "samples" of the analog signal at a fixed frequency or "rate". The number of samples taken per second is referred to as the "sampling rate". Music CD technology uses a standard sampling rate of 44.1kHz, which is 44,100 samples per second. This means that all data processed with AudioCD MP3 Studio must be recorded at this sampling rate to be compatible with the music CD format. The program will refuse to accept files recorded at other sampling rates.

## Length

In some places AudioCD MP3 Studio expresses the length of music tracks as mm:ss:ff – mm stands for minutes, ss for seconds and ff for "frames", which are the smallest addressable units on a music CD. Each frame is 2352 bytes long and thus has a duration of exactly  $1/75$ th of a second.

## **Buffer**

The buffer is a 1-megabyte block of RAM used by the program to compensate for fluctuations in the flow of data between the hard disk and the CD being written. For example, the buffer can compensate for short hard disk accesses, such as the start of another program, so that the flow of data to the CD is not interrupted. This is important because interruption of the data flow can cause write errors, making the blank CD medium unusable.

## The FILE Menu

**File** menu commands:

<u>New</u>	Create a new project file.
<u>Open</u>	Open an existing project file.
<u>Save</u>	Save an open project file under its existing name.
<u>Save As</u>	Save an open project file under a new name.
<u>Exit</u>	Exit PTS MusicCD Studio.



## The EDIT Menu

**Edit** menu commands:

<u>Add Tracks</u>	Add a new music track or tracks to the project.
<u>Remove Track</u>	Remove the selected track from the project.
<u>Track UP</u>	Move the selected track up one place in the project list.
<u>Track DOWN</u>	Move the selected track down one place in the project list.

## The HELP Menu


The **Help** menu commands give you access to help and reference information for this application:

<u>Help Contents</u>	Displays the available list of help topics.
<u>About PTS</u>	Shows the version number and other information about the program.
<u>Music CD</u>	
<u>Studio</u>	
<u>News &amp; Updates</u>	Starts the online registration module and allows you to order news and information on program updates by e-mail.

## The NEW Command (File Menu)

Use this command to create a new PTS MusicCD Studio project file. The project file is where you store your list of tracks and settings for writing a music CD.

### Shortcuts

Toolbar:   
Keyboard: CTRL+N

## The OPEN Command (File Menu)

Use this command to open an existing project file in a new window.

To create a new project file select the New command in the File menu.

### Shortcuts

Toolbar:



Keyboard: CTRL+O

## **The OPEN Dialog Box (File Menu)**

This Windows dialog box provides a variety of options for specifying the file to be opened. For example, you can specify the file type and the directory and drive where it is stored, and you can select the file to open from the directory list displayed. For more information on the many other powerful features of this dialog please refer to your Windows documentation.

### **Filename**

Enter a filename or select a file from the directory list. This list will only display files with the type extension specified in the File Type field.

### **File Type**

Select the file type from the drop-down list (.mcd for PTS MusicCD Studio files).

### **Drive**

Select the drive on which PTS MusicCD Studio stored the file you wish to open. This will normally be the drive containing your Tracks Directory ([see the Options menu](#)), which PTS MusicCD Studio opens by default.


### **Directory**

Select the directory in which PTS MusicCD Studio stored the file that you wish to open. Again, this will normally be the drive containing your Tracks Directory ([see the Options menu](#)) which PTS MusicCD Studio opens by default.

## The SAVE Command (File Menu)

Use this command to save changes to the current project file without changing its name or directory location. The first time you select this command to save a new project file PTS MusicCD Studio automatically opens the Save As dialog box so that you can give a name to the unnamed file. Use Save As to save an existing project file under a different name or in a different directory.

### Shortcuts

Toolbar:   
Keyboard: CTRL+S

## **The SAVE AS Command (File Menu)**

Use this command to save the current document under a different name or in a different location. PTS MusicCD Studio also displays the Save As dialog box automatically when you save a file that does not yet have a name.

To save changes to an existing file without changing its name use the Save command.

## **The SAVE AS Dialog Box (File Menu)**

The options in this Windows dialog enable you to give the file a name and specify the location where you wish to save it. You can use it to change the name of an existing project file and/or to save it in a different location. For more information on the many other powerful features of this dialog please refer to your Windows documentation.

### **Filename**

Enter a new name in this field if you want to save an existing file under a different name. PTS MusicCD Studio automatically adds the appropriate extension for the file type selected in the File Type field.

### **Drive**

Select the drive on which you wish to store the file. This will normally be the drive containing your Tracks Directory ([see the Options menu](#)), which PTS MusicCD Studio opens by default.

### **Directory**

Select the directory in which you wish to store the file. Again, this will normally be the drive containing your Tracks Directory ([see the Options menu](#)) which PTS MusicCD Studio opens by default.



### **The 1, 2, 3, 4 Commands (File Menu)**

The names of the last four files saved by PTS MusicCD Studio are listed in order at the bottom of the **File** menu. You can re-open them directly by clicking on the filename entry in the menu or by typing the number of the entry.

## The EXIT Command (File Menu)

This command exits the program, terminating your session with PTS MusicCD Studio. Alternatively, you can also exit the program by selecting the **Close** button at the right hand end of the title bar or by selecting the **Close** command in the control menu (opened by clicking the application icon at the top left corner of the application window). If you have not saved your file PTS MusicCD Studio will prompt you to do so before closing.

### Shortcuts

Mouse: Click on the **Close** button in the title bar (top right).  
Double-click on the application icon in the title bar (top left).




Keyboard: ALT+F4

## The REMOVE TRACK Command (Edit Menu)

This command removes the selected music track from the project list. If no track is selected the menu command displayed greyed out in the drop-down menu and cannot be selected.


### Shortcuts

Toolbar:   
Keyboard: DEL

## The **ADD TRACKS** Command (Edit Menu)

Use this command to add new tracks to your project.

### Shortcuts

Toolbar:   
Keyboard: INS

## The Toolbar



The toolbar is the horizontal bar displayed directly beneath the menu bar in the application window. The buttons in the toolbar enable you to immediately execute many PTS MusicCD Studio functions simply by clicking with the mouse.

### Button    Function

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Create a new project.



Open an existing project file. PTS MusicCD Studio displays the Windows **File Open** dialog box with which you can locate and open your project file.



Save the current project file under its present name. If the project has not yet been given a name PTS MusicCD Studio automatically opens the **Save As** dialog box.

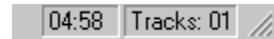


Remove the selected track from the project list.



Add a new track to the project list.

## The Status Bar



The status bar is the bar displayed at the bottom of the application window of PTS MusicCD Studio.

When you move through menu bars with the mouse or cursor keys brief texts explaining the highlighted functions are displayed at the left of the status bar. Similar texts are also displayed here for the buttons in the toolbar when you hold the mouse pointer over them. On some systems you must also press and hold down the mouse button to display the toolbar button texts. If you do not wish to perform the button function after reading the text simply move the mouse pointer off the toolbar before releasing the mouse button.

The two fields at the right hand end of the status bar show the total duration of the current CD project (i.e. the total length of all the tracks in the list) and the number of tracks in the project.

## **The HELP CONTENTS Command (Help Menu)**

Selecting this command activates the help system and displays the help contents screen, which provides direct access to a variety of reference information and detailed instructions on using PTS MusicCD Studio.

When you have opened a Help topic you can always return directly to the contents screen by clicking the **Contents** button.

## **The HOW TO USE HELP Command (Help Menu)**

Displays information explaining how to use the features of the Help system.



## **The ABOUT Command (Help Menu)**

This command displays a copyright message and information on the version number of your copy of PTS MusicCD Studio.

## The CONTEXT HELP Command



Use the **Context Help** command to obtain information on specific features of PTS MusicCD Studio. When you select the **Context Help** button in the toolbar the mouse pointer changes to an arrow with a question mark. Clicking anywhere in the PTS MusicCD Studio application window, for example on a button in the toolbar, will then display the help topic for that element or feature.

### Shortcut

Keyboard: SHIFT+F1

## **Scroll Bars**

If the contents of the project list extend beyond the borders of the application window "scroll bars" are displayed along the right and lower sides of the window. The scroll boxes in scroll bars indicate the relative vertical and horizontal position of the displayed window contents. You can move the window contents by clicking on the scroll bars and dragging the scroll boxes with the mouse. For further details on using scroll bars please refer to the Windows documentation.

## The SIZE Command (Control Menu)

In addition to resizing the application window by dragging its edges you can also use the **Size** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar. When you select this command the mouse turns into a four-headed arrow, and you can then adjust the size of the application window with the CURSOR KEYS.



When the mouse pointer is displayed as a four-headed arrow:

1. Press one of the CURSOR KEYS ( , , and ) to move the pointer to the window edge you wish to move.
2. Press the CURSOR KEY again repeatedly to move the window frame.
3. When you are satisfied with the new window size press ENTER complete the operation.

Note: This command is not available when the window is maximized.

### Shortcut

Mouse: Drag the window by its edges or the resize handle in the lower right corner.

## The MOVE Command (Control Menu)

In addition to moving the application window by dragging it with the title bar you can also use the **Move** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar. When you select this command the mouse turns into a four-headed arrow, and you can then adjust the position of the application window precisely with the CURSOR KEYS. When you are satisfied with the new position press ENTER to complete the operation.




Note: This command is not available when the window is maximized.

## The MINIMIZE Command (Control Menu)

In addition to the **Minimize** button at the right corner of the title bar you can also minimize the PTS MusicCD Studio window with the **Minimize** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar.


### Shortcut

Mouse: Click on the Minimize button in the title bar  .

## The MAXIMIZE Command (Control Menu)

In addition to the **Maximize** button at the right hand end of the title bar you can also maximize the PTS MusicCD Studio window with the **Maximize** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar.

### Shortcut

Mouse: Click on the Maximize button at the right hand end of the title bar  , or double-click in the title bar.

## The CLOSE Command (Control Menu)

In addition to the **Exit** command in the File menu and the **Close** button in the title bar you can also close PTS MusicCD Studio with the **Close** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar.

Double-clicking on the application icon has the same effect as clicking once and then selecting **Close**.





## **The RESTORE Command (Control Menu)**

In addition to the **Restore** button in the title bar you can also restore the application window to its previous size with the **Restore** command in the control menu, which is opened by clicking on the application icon at the left corner of the title bar. Both the **Restore** button and the **Restore** command restore the window to the dimensions it had before you used **Maximize** or **Minimize** commands.

## The CD Menu

**CD** menu commands:

Read Tracks

Reads tracks from a music CD.

Write CD

Writes the tracks in the current project to a blank CD.

## **The MOVE TRACK UP Command (Edit Menu)**

Moves the selected track up in the project list.

### **Shortcut**

Keyboard: ALT-UP

## **The MOVE TRACK DOWN Command (Edit Menu)**

Moves the selected track down in the project list.

### **Shortcut**

Keyboard: ALT-DOWN

