AUDIOGRABBER

What is Audiograbber and what can it do?

Audiograbber is a program that copies digital music from CD's. It copies the music digitally, not using the sound card, enabling you to make perfect copies of the original sound tracks. It includes functions that check that the copies made are true to the original. Audiograbber can also automatically normalize the music, delete silence from the start and end of tracks and send them to an external program like Fraunhofers L3enc for automatic creation of mp3's. It can also use Fraunhofers internal acm CODEC or BladeEnc's freeware DLL to create MP3's.

System specifications:
- Windows 95 / 98 / NT
- CD-ROM connected to IDE or SCSI.
- A CD-ROM reader that can actually read digital music (Not all of them can) is useful but analog sampling is also possible. A soundcard is however needed for analog sampling.

Choose Contents in this help file for further information on Audiograbber.

What's new? See version information

The difference between audio CD's and normal data CD's.

The latest version of this program can be found at:
http://www.audiograbber.com-us.net (primary site)
http://www.dezines.com/audio/ (mirror site)

I can be reached on the following e-mail address.
Please read the hints section before sending me any e-mails asking for support.
jackie@audiograbber.com-us.net

The Problem with reading digital audio under Windows 95 OSR2 release and Windows 98

The latest version of Windows 95 (known as the OSR2 release or windows 4.00 build 1111) and Windows 98   normally can't read digital audio through MSCDEX calls (There is no problem with the ASPI calls however.) The problem has been located to the scsi1hlp.vxd file. Even though the name suggests that the file should only be used for SCSI devices, it actually handles IDE CD-ROM's as well.

Either way, in most cases it helps if the file Scsi1hlp.vxd is replaced with the old version.

To check which version of Windows 95 you are running, do one of the following:

- **Settings, control panel, system**. If it says Microsoft Windows 95 4.00.950 B it means you have the OSR2 release. Note the "B" after the version digits. There is also a version 4.00.950a that doesn't work either.

- **Audiograbber, help, System information**. If it says build number 1111 it means you have the OSR2 release.

To check which scsi1hlp.vxd version your computer is using, do one of the following:

- **Explorer**, right click on the file C:\windows\system\iosubsys\scsi1hlp.vxd. Click on properties and then version.

- **Audiograbber, help, system information**. The version number is written to the left of Scsi1hlp.vxd version.

It doesn't matter which Windows version you are running as long as the right scsi1hlp.vxd file is used. If the CD vendor has provided its own drivers for the CD, it may happen that it works with the wrong scsi1hlp.vxd version. If you are using another version than 4.00.950 and it is not working, I recommend that you replace it with the 4.00.950 version. The file is located in the C:\windows\system\iosubsys directory. I suppose that Microsoft doesn't want me to distribute one of their files so I can only give you a link to Sony's site with the file:

ftp://ftp.sony.com/ccpg/pc/scsi1hlp.exe

If it is not found on that site, try to find it on the Internet. Search for scsi1hlp.exe or scsi1hlp.vxd. A good search engine is

http://ftpsearch.ntnu.no/ftpsearch

Make a backup copy of your scsi1hlp.vxd before you replace it. Beware of renaming it to scsi1hlp.vxd1111 or something like that. When Windows uses this file, it seems to search for a file that loosely matches scsi1hlp.vxd. Rename it to osr2vxd.bak or something similar.

You have to restart Windows after you have replaced the file!

The difference between audio CD's and normal data CD's.

(Or why is it so hard to copy a track from a music CD?)

A CD-ROM is divided into sectors of 2352 bytes. Data CD's use 2048 of these bytes to store the data file. The other bytes are start / stop information and information of the sector's number. This makes it easy for a computer's CD-ROM device to find the right sector. An audio CD on the other hand uses all of the 2352 bytes to store audio information. This makes it hard for the CD-ROM reader to find exactly where the track starts. All bytes are coming in one long sequence. When the CD drive starts reading it usually has no problem delivering the right data but most CD drives have problems with starting on the correct byte (sample).

A sector (it is called a frame on audio CD's) on an audio CD, as stated earlier, is 2352 bytes. There are 75 frames per second which gives 2352 * 75 bytes per second of music. (This can also be calculated by 2 (stereo) * 2 (16 bits) * 44100 Hz per second). Philips "Red Book" standard specifies that a CD player should be able to position its head on the right frame but not where on the frame.

Since a computer program has to read a little piece of the track, write it to the hard disk, read another piece etc. there will be problems all the time. The program solves this problem by reading a little bit more data than is written and then compares the end of the previous reading with the beginning of the present reading and in that way can synchronize the readings. (This is called overlapping, synchronization or jitter correction).

You can select how many frames of audio should be read in every chunk and with how many frames overlapping. The program does not always get enough memory for all the frames it wants which means that it sometimes has to use a smaller audio buffer. (Under MSCDEX the program uses the low DOS memory to buffer data from the CD drive and depending on what other device drivers and programs want memory from that area, it can differ a bit from time to time or computer to computer)

The more sectors that are used for overlapping, the slower the CD driver will read. When windows 95's protected mode CD-ROM driver is used, the data from the CD drive is always cached and it seems to make the synchronization unnecessary. If a real mode driver is used for the CD drive and if the data is not cached the synchronization is necessary.

Whether the CD drive reads the audio perfectly can be tested by:
- Compare two files
- Calculate checksum

Windows 95 protected mode driver and real mode driver

Before Windows 95, all CD's read data through 16 bits real mode drivers and mscdex.exe. Those drivers were delivered with the CD player and were installed in config.sys and autoexec.bat. Windows 95 has built in support for CD-ROM and the real mode drivers are not normally needed.   Anyhow, there are some cases when digital audio can not be read, or is not read correctly with Windows 95's internal driver. If so, you can try to use a real mode driver instead. Under the OSR2 release of Windows 95 the file Scsi1hlp.vxd often causes digital audio to be not read at all. You should then replace it with an older version.

- **How to install a real mode driver**
- **How to replace the Scsi1hlp.vxd file**

Real mode driver installation

This is a bit complicated and if you don't know what you are doing pretty well, you'd better avoid doing this.

- Install the CD-ROM drivers in config.sys and autoexec.bat. Make sure that you can read an ordinary data CD when you are booting into DOS mode.
  (config.sys looks like this
  DEVICEHIGH /L:1,15488 =C:\MTM\MTMCDAI.SYS /D:MTMIDE01
  and autoexec.bat like this
  LH /L:1,46672 C:\WIN95\COMMAND\MSCDEX.EXE /D:MTMIDE01 /M:10)
- Connect the CD-ROM unit to secondary IDE and not together with any hard disk.
- Open Control Panel, choose System and the tab Device Manager.
- Click "View devices by connection"
- Locate Secondary IDE controller. (not the CD itself but the closest higher connection).
- Select the checkbox "Disable in this hardware configuration".
- Click OK. It sometimes happens that the computer crashes at this moment so make sure you are not running any other programs.
- Reboot the computer.

To restore Windows 95's protected mode driver just unselect the checkbox instead.

How to buy the full version of Audiograbber?

The price is $25. Go to http://www.audiograbber.com-us.net/buy.html for information on how to buy Audiograbber online.

If you like the program and can afford the $25 please buy it. I have spent a lot of time on this program and more money makes it easier to continue the development of Audiograbber!

If you are young and can't afford the $25, go on and use it anyhow. You are still allowed to use the free version as much as you want!

The difference between the full version and the freeware version.

There is only one difference between the free and the full version. The free version has been limited to only handle half of the tracks and those tracks are selected randomly at program startup (with a slight advantage for odd tracks). By restaring the program the checkboxes will be in front of other tracks. The full version can of course handle them all and has checkboxes in front of every track.

Here is how to buy the full version

Version information

Version history:

- **Version 1.50**   May 1999
    CDDB Submit function.
    Microsoft MS Audio (wma) support.
    Analog sampling from CD-ROM drives.
    Remembers the previous window size and position.
    Can run multiple instances.
    Can now rip multimedia discs under MSCDEX.

- **Version 1.41**   17 March 1999
    Direct rip and encode options.
    Better detection of drives that uses inversed byte order.
    Integration with MP3 players.
    An option to auto-query CDDB if a disc is not recognized.
    Speed selection for Plextor drives.

- **Version 1.40**   10 December 1998
    Support for BladeEnc's MP3 DLL.
    Enhanced normalizing and sound compression options.
    Better naming options.
    Better support for external programs.

- **Version 1.31**   25 August 1998
    Support for Philips, HP and new Toshiba SCSI drives.
    Improved speed selection for IDE drives.
    Added a spin up disc option.
    Improved the volume meter.

- **Version 1.30**   17 July 1998
    Added CDDB retrieve support.
    Better naming options which give more flexible control over the filenames.
    Added a progress bar for the played track on the main window. A volume meter is also added.

- **Version 1.21**   10 June 1998
    Added support for Panasonic (Matsushita) SCSI drives.
    Implemented a new rip method (Unbuffered Burst) and renamed the old Burst Copy method to Buffered Burst.
    Implemented an unlock method for the full version to prevent software piracy.
    Fixed a few minor bugs.

- **Version 1.20**   22 April 1998
    Added ASPI as read method. This enabled Audiograbber to work with SCSI cd's and Windows NT.
    Support for setting a rip offset has been added. This helps CD-ROM's that don't position their head exactly correct.
    Added a tip of the day function.
    An option to let Audiograbber shut down the computer when finished has been implemented.
    A way to easily see how fast a track was ripped.

- **Version 1.10**   15 February 1998
    Added support for Fraunhofers internal MP3 CODEC.
    Better ID3 tag options.

Some bugs fixed, (and undoubtedly some new created !)

- **Version 1.01**   6 January 1998
  Selects which tracks that can be copied randomly instead of only the odd ones.
  Supports Wav2mp3 for MP3 creation.
  Two new check boxes so that one can easily see if normalization / MP3 creation are selected.

- **Version 1.00**   24 December 1997
  The first version was released.
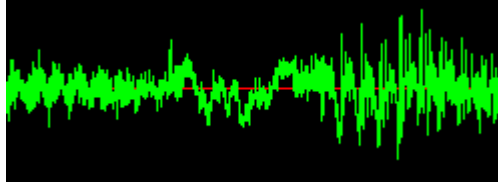
Normalizing

This function is found under the file menu.

Normalizing means how loud a track is recorded. Different CD's, just like LP's from the old days, are usually recorded at different volumes. All tracks on the same CD are individually, recorded at about the same level and as long as one listens to only one CD at a time there is usually no problem with the loudness of the CD.

The problem starts when you mix tracks from different CD's because they occasionally have an output level that differs from one CD to another. One CD can play quite loud and another noticeably quieter. The normalize function comes in handy in these cases and you can select the same level for all your CD's.

Most of the CD's are properly recorded and the normal level is usually between 95-99 %.   By choosing to normalize only the tracks normalized to less than about 91 %, your result will be that all the songs will have approximately the same volume and most tracks will be left in their original condition. These percentage values detect when the sound is loudest on the track. Normalize to 0% means absolute silence.

From version 1.40 of Audiograbber you can also use a much more Advanced Normalizing routine which also includes sound compression options to ensure that all your songs will sound equally loud.

It is possible to normalize the tracks right after they have been grabbed from the CD or normalize already stored .wav files from the hard disk.

If you want to normalize wav files you can then choose files from the file menu, directly from the normalize dialog box or by dragging and dropping them from Windows explorer.

Send to MP3 program.

This function is found under the file menu.

An audio file on a CD takes quite a bit of space to store (exactly 1411200 bps), and that's the reason that only a few tracks can be stored on a CD.   MP3 is a standard that compresses the music to make it take about 1/11 of the size and still sound as good as the original. The disadvantage with this file format is that it has to be decompressed when playing. This means that you must play it on your computer. It can not be played on an ordinary home stereo cd player.

MP3 stands for mpeg audio layer 3 and should not be written mpeg3 as some people do by mistake. Mpeg is lossy compression, and that means that the file has lost information and can no longer be restored to it's original content. Audiograbber can use a variety of external programs like Fraunhofers L3enc to create such MP3's.

Audiograbber also supports Fraunhofers CODEC to create MP3's. This means that it looks as if Audiograbber is doing the compression itself with a progress bar and time estimating. It is still Fraunhofer technology that compresses the wav though. This CODEC is a lot faster than the DOS program L3enc.

Audiograbber can automatically send the tracks to an external MP3 program right after they have been grabbed. First the track is copied to the hard disk; then it is sent to the external MP3 program and Audiograbber waits for it to finish. Audiograbber can then delete the wave file from the hard disk to release valuable disk space and continue with the next track. One of the main purposes with Audiograbber is to create MP3's when you are doing something different (like having a cup of coffee, a huge cup of coffee that is…).

Many people find L3enc and other command line based MP3 encoders a bit complicated to use since it is not a Windows GUI program. For that reason, some front-end programs have been created to use L3enc easily under Windows. Audiograbber can also be used as such a front-end program for external MP3 programs. This means that you can send .wav files directly from Audiograbber to your MP3 program without grabbing them from a CD first. They can be sent from the file menu, from the MP3 settings dialog box or by dragging and dropping them from Windows Explorer.

To play these MP3 files on your computer, I recommend the Sonique program. Your soundcard can not play compressed files and you need a program to continually decompress them while playing. The audio data is usually sent to the soundcard in 16-bit stereo, 44.1 kHz. (this is called PCM, pulse code modulation and is the same format that is stored on an audio disc.)

Compare two files

This function is found under the file menu.

The purpose of this function is to test if your CD player reads digital audio perfectly.

When digital audio is read from the CD there is a problem with the beginning of the frames. That is because there is no proper beginning and end of the frames, rather a long consecutive sentence of bytes. This means that if a track is read twice from the CD, the files should most likely be almost exactly the same. Usually, it is only some 1/1000 of a second difference, so it does not matter much.

The disadvantage is that the DOS command fc /b track1.wav track2.wav can not be used to test that the files really are equal. The Compare Two Files function does a comparison in the same way but takes into consideration that the tracks may start a little bit differently. This function also skips the first 44 bytes because they are not part of the track, they contain file size and file format information.

The offset tells how many bytes (not samples, a sample is 4 bytes) the beginnings of the tracks differ from each other. The comparison is halted as soon as a difference is detected. If the track differs, it tells at which position. You can open the file in a program like Cool Edit and see how they differ. Remember that the hexadecimal value Audiograbber gives you should be subtracted by 44 and then divided by 4 to get the exact sample.

Another test function is the checksum function of Audiograbber.

Calculate checksum

This function is found under the file menu.

Some CD players that actually can read digital audio do not necessarily read 100% correctly. The resultant files are then not exact copies of the originals. This can also happen if the CD is scratched, has fingerprints etc. It is hard to tell if a track is read perfectly only by listening to it. Checksums are therefor a good way to test if the CD player read 100% correctly. When a track is copied from a CD disc, Audiograbber automatically calculates a checksum. By reading the same track on two different CD players the checksums can be compared. If they are the same then the tracks are also the same and the reading is perfect.

But hey, readings do not usually start on exactly the same byte, so how can a checksum be calculated then? Yeah, a presumption for this is that the track begins and ends with silence. The checksum will then be calculated on only that part of the track that is over a value of 127.

(A sample from the CD can be between -32768 to +32767 (16 bits). -32768 means that the speaker's membrane is pulled back as much as possible, +32767 that it is pushed forward to maximum position and 0 that it is in its middle position. The more the membrane is moving back and forth the louder the speaker is playing. Samples in the interval -127 to +127 are interpreted as silence in Audiograbber. When a checksum is calculated, Audiograbber finds the first sample outside this interval. Then it finds where the file goes outside the interval for the last time and after that it starts to calculate the checksum. It does not matter if there is a bit of silence in the middle of the track, that part will also be included in the checksum.)

NOTE! If there is not enough silence (one frame = 2352 bytes) in either the beginning or the end of the track an X is added to the checksum. This indicates that other readings from the CD may give other checksums even if they are read in the same way. The checksum can not be used if it contains an X.

By comparing checksums from tracks you have grabbed with your own CD with already known and confirmed correct checksums you can test if the CD reads the way it should. There are some correct checksums on http://www.audiograbber.com-us.net/checksums.html that you can compare with if you are lucky to have some of the CD's listed. Understand that you must have a copy of the exact same CD, it is not enough to have the same song.

You can report your own checksums on http://www.audiograbber.com-us.net/checksums.html. Those tracks should then have been read at least twice on a CD player that you are sure reads digital audio correctly. Report checksums from track 1,3 and 5. When you only want the checksum and not the entire track the function test comes in handy and you don't have to save the track on the hard disk.

Compare two files is another function that controls the CD's audio reading. If two checksums are not the same the compare two files function can see where the files are different. Checksums can also be calculated on tracks that have been read by other programs.

Store in cdplayer.ini

This function is found under the file menu (Store in cdplayer.ini now).

Windows internal CD player uses a file called cdplayer.ini to store information about CD's. Audiograbber can also use this file for storing and recognizing CD's. Checking the box "Use cdplayer.ini" under "General settings" will enable the alternative "Store in cdplayer.ini now". Clicking "Store in cdplayer.ini now" will store the information and both Audiograbber and Windows internal CD player will recognize the disc the next time it is used.

Copy tracklist to clipboard

This function is found under the file menu.

This function copies the information about the tracks to Windows' clipboard. You can then paste it into another program like notepad. It can be good to use this function when testing [checksums](#).

Refresh Tracklist

This function is found under the CD menu.

The track list is automatically filled when Audiograbber starts. When you change CD you should use this function to fill the track list with information about the new CD. If the CD is recognized and you are using "Use cdplayer.ini" from "General settings" the track list will be filled with correct track names. If not, the track titles will be Track xx where xx indicates the track's ordinal number on the CD. Pressing F5 can also refresh the track list.

Grab

This function is found under the CD menu.

This is the program's main function and it copies the chosen tracks from the CD to the hard disk. You choose tracks to copy by checking the appropriate checkboxes.

NOTE! *Do not run other programs when Audiograbber is copying a track. It sometimes happens that the reading will not be correct if Audiograbber is not given full access to the processor.*

When a track has been copied it will optionally be normalized and processed by L3enc or Fraunhofers internal codec.

Test

This function is found under the CD menu.

The purpose of this function is to calculate checksums without saving the files to the hard disk. Test is basically the same as Grab but nothing gets saved to the hard disk; neither normalization nor MP3 creation through L3enc.

Shuffle

This function is found under the CD menu.

If you want to use Audiograbber as an ordinary CD player this function can be nice to use. By using shuffle, the tracks in the track list will be rearranged in a randomized order.

Select all

This function is reached by right clicking a track in the track list.

This function selects all tracks.

Select none

This function is reached by right clicking a track in the track list.

This function unchecks all tracks in the track list so that they are no longer selected.

Properties

This function is reached by double clicking or right clicking a track in the track list.

By double clicking a track you will get a dialog box in which you can adjust the track's properties like start and stop of the track etc.

Rename

You can rename a track by clicking an already selected track in the track list. Another way to rename a track is to right click it and choose Rename or by selecting the track and pressing F2.

Refresh

Press this button when a new CD is inserted or if you want to refresh the track list. The saved track names will be used if you have checked "use CD player.ini" under "General settings" and the CD is recognized.

Grab
Press this button to copy the selected tracks. You select tracks by checking the box in front of the track names.

Settings
Press this button to adjust the program's general settings.

Normalize

Different CD's are recorded at different volumes. Press this button in order to select that copied tracks automatically are adjusted to the same recording level.

MP3

MP3 is a standard for digital audio compression. Audiograbber can send the tracks to an external program for automatic creation of MP3's. Here is where you select your MP3 options.

CDDB retrieve

Press this button to automatically retrieve the track names from an internet database.

MP3 Player

Press this button to launch your prefered MP3 player. If you right click this button then the MP3 Player will be launched with a playlist (an .m3u list) based on the currently selected tracks.

Exit
Press here to exit the program. Your settings will be saved in audiograbber.ini.

Artist

The name of the artist who made the disc. If this is a compilation disc then leave the field empty and include the artist's name with the track name.

Album
The album name.

Track name
Double click to go to the properties menu for each track. Right click to get a pop-up menu. You can also change the order of the tracks by dragging them to new positions.

Play time
Describes the length of the track in minutes and seconds.

File size

The track will take up this much space on the hard disk. The file format is PCM wav, 16-bit stereo, 44.1 kHz, same as on the CD. Audiograbber can not handle any other file formats. The file size is in direct proportion to the track length.

Information

Here is information about how the copying has gone and which checksum has been calculated. Sync OK is no guarantee that the copying is completely perfect.

CD info
Pretty obvious eh…

Total time left

The copying of the tracks is estimated to take this long.   Any normalizing and mp3 processing are included. The more often the program is used, the better it gets at estimating the total time left.

Disk space needed

This tells how much hard disk space is needed and how much disk space is available on the hard disk being used to store the tracks. Click here to quickly switch to the play buttons.

Play time

Information telling which track is currently playing and for how long it has been playing - how much time remains. Click to switch between showing time elapsed and time remaining.

Play
Plays selected track. Use the other play button with a check mark to play more tracks than one.

Pause
Use this button to pause and resume the audio.

Stop
Stops playing the track(s).

Play list

Plays the tracks selected with a check mark in the track list. *Note: The playing starts from the track that is selected.*

Fast back
Jumps quickly backward in the track. It jumps more and more quickly the longer the button is held down.

Fast forward

Jumps quickly forward in the track. When the end of the track is reached it will continue with the next one if you are playing tracks from a list.

Track back

Skips to beginning of the track. If it already is in the beginning of the track it then jumps to the beginning of the previous track.

Track forward

Skips to the end of the track. If tracks from a list are already playing, the next selected track will start playing.

Empty space
Click here or on one of the disabled buttons to quickly hide all buttons.

Random play

Plays the tracks selected with a check mark in random order. Playing does not stop until the stop button is pressed.

Speaker
Switch between display of the volume meter and status bar.

Play progress
Indicator that displays how much of a track has been played. You can manually drag this meter to a new position.

Volume meter

Adjusts the volume of your CD-ROM drive.

Show play buttons

This function is found under the Settings menu.

This option toggles between showing CD play buttons or disk info in the statusbar. It can also be changed by clicking on an empty area of the right part of the statusbar.

Track bar
Shows the position of the track. One can manually drag it to set a new position.

Play button
Starts playing from the position of the above meter.

Stop button
Stops playing the track.

Set start

Sets the track start position to the value of the above meter.

Set end
Sets the track end position to the value of the above meter.

Position

Shows from where on the CD the track is playing right now. Position in the track is shown in minutes and seconds while position on the CD is measured in frames. One frame is 1/75 of a second.

Track name
Simply the name of the track. Can be changed from here or by clicking an already selected track in the track list.

Track size
This many bytes will be used to store the track on the hard disk. (Frames * 2352 bytes).

Minutes, seconds
The tracks start and stop in absolute position on the CD, reported in minutes and seconds.

Sectors

The tracks start and stop in absolute position on the CD, reported in sectors. Frames and sectors are the same and it is 75 sectors on every second of music.

Apply

Performs all the changes you might have made without leaving this dialog box.

Cancel
Leaves this dialog box without performing the changes you might have made.

OK
Leaves this dialog box and performs the changes you might have made.

Use normalizing
Select this box if you wish to automatically adjust the recording level, leave this checkbox unchecked if you wish to copy the track exactly as it is.

Normalize to
Select the recording level between 0 -100%. 0% is equal to silence and 100% is the highest volume. 98% is recommended.

Conditions
Use this option to adjust just those tracks that were imperfectly   recorded at the CD factory (too low output level). It is recommended that this function be used.

Lower than

Those tracks that have a peak level lower that this value will be normalized. Approximately 90 % is recommended.

Higher than
Tracks with a higher peak level than this are normalized. 99% or 100% is recommended.

Browse

Click here to choose one or more wav files from the hard disk to normalize. They will be normalized to the values selected in this dialog box.

Cancel
Leaves this dialog box without performing the changes you might have made.

OK
Leaves this dialog box and performs the changes you might have made.

Send wavefile

Use this option to send the wav file to your MP3 program or to Fraunhofers internal acm CODEC after it has been copied and automatically create an mp3 file.

Delete wavefile

Deletes the wav file after an mp3 file has been created. Use this option if you are only interested in the mp3 file, it will then save a lot of hard disk space.

Force to top

Puts your MP3 program in the left corner above all other programs, which gives the external program maximum processor time. If no other programs are running then the program will have maximum processor access anyway.

Direct rip and encode
Select this option to rip directly to an MP3 file without first creating a wav file. This does not work with MSCDEX as rip method and normalization can not be used in combination with this option.

External MP3 program information

BladeEnc is one of the freeware programs that creates mp3 files, compressed music. It can be downloaded from http://home8.swipnet.se/~w-82625/

You can also go to Audiograbbers homepage at http://www.audiograbber.com-us.net and find information about other programs that can be used as external encoder

MP3 program name

The name of the executable MP3 program. Use the browse button to locate your version of the program. The most common ones are L3enc.exe, BladeEnc.exe or Plugger.exe.

Browse
If you have an external MP3 program you can use this button to locate it.

HQ flag

Tells the MP3 program that it should take a longer time to analyze the wav file and create an MP3 file with extra high quality.

Cyclic Redundancy Check

Makes L3enc create a 2-byte checksum once in a while. It doesn't take more time but it is not used as a default by L3enc itself. Some other encoders may also use this CRC option.

Bitrate

Chooses how many bits per second the MP3 file will consist of. The higher the bitrate the better the quality and the larger the file. Most songs sound good with a bitrate of 128000 bps but a very few need 196000 bps to sound equal to the original. It's hard to say in advance which tracks these are.

Own arguments
Check this box if you want to specify your own arguments to send to the external encoder program.

Own arguments

Type your own arguments here. Audiograbber will send "program.exe filename.wav filename.mp3 " and the text in this box to the external MP3 program. This means that other programs besides L3enc can be used.

Use ID3 tag

ID3 tag contains extra information about the song that is added to the end of the MP3 file. An ID3 tag will be created if this option is selected. It is Audiograbber that creates this ID3 tag when the MP3 program has finished, not the MP3 program itself.

Browse

Click here to choose one or more wav files from the hard disk to send to your MP3 program with the options specified in this dialog box.

Cancel

Leaves this dialog box without performing the changes you might have made.

OK
Leaves this dialog box and performs the changes you might have made.

Edit ID3 tag
Press this button to edit the info that goes into the ID3 Tag.

External MP3 program name

Select this option if you use an external program to create your MP3's.

Internal MP3 CODEC or DLL

This option becomes available if you have one of the Fraunhofers acm codecs or BladeEnc.dll installed on your computer. It will look as if Audiograbber is doing the MP3 creation however this is not the case. Audiograbber is just a frontend to Fraunhofers codec or BladeEncs DLL.

CODEC Name

4 different encoders can show up here: Any of Fraunhofers acm codecs (If you only have 56 Kbit options with Fraunhofer then search the helpfile for l3codecp.acm for more info). Qdesigns MP2 acm codec, BladeEnc's freeware MP3 DLL or Microsoft MS Audio codecs are also internally supported if they are found on the computer.

Mode

Select what bitrate should be used for the MP3 file.

Own extension
Check this box if you want to give the encoded files a different extension than .mp3

Own extension
Type the extension here if you want your encoded files to have a differnt extension than .mp3.

Info button
Press this button to get information about the parameters you can specify on the own arguments line.

Directory
Select a directory to store your wav or mp3 files in. Audiograbber also uses this directory for temporary files.

Browse
Click here to select an appropriate destination directory for your files.

Time estimation
This is used to calculate how much time the program will need to process its tasks. How fast the external MP3 program or internal codec runs can not be changed from here because there are too many bitrates that are involved.   Those settings are stored in Audiograbber.ini and can be changed by editing that file manually.

Normalize speed

Detects how fast the adjustment of the recording level is done compared to how fast a track is played. The speed of the hard disk is also a vital part of this.

CD audio read speed
Detects how fast the CD-ROM drive can read digital audio compared to normal playing of the audio. Music is normally read much slower than ordinary data from the CD.

Silence Tab

Silence can be deleted automatically from the start and the end of the tracks. Normally, there is quite a bit of silence between the tracks on the CD, and Audiograbber checks the first and last four seconds for silence.

Leading silence
Select this option to delete leading silence.

Trailing silence
Select this option to delete trailing silence.

Keep

It is best to let the tracks start with at least a little silence; this value can be between 0 and 4 seconds.

Keep

This value can be between 0 and 4 seconds. A CD does not have a value for the end of the track; it only has values for the beginnings of the tracks. This means that there is usually quite a bit of silence at the end of the track. The recommended value is about 0.5 seconds.

Audio blocks
Determines how many audio frames should be grabbed each time. One second is 75 frames.

Synch size

Detects how many extra frames should be grabbed each time for synchronization. This is explained in more detail in the help file.

Continue

Tells Audiograbber what to do if synchronization fails. The track will not be a perfect copy if sync is lost. Check this box if you want Audiograbber to continue with the copying even if sync is lost.

CD player.ini
Check this box if you want to store the track names and the order of the tracks in cdplayer.ini. That file is also used by Windows 95's default CD player. If this option is used and the CD is recognized the track list will be filled with the track names when you press the refresh button.

Autosave

Check this box if you want to have the data retrieved from CDDB stored in your cdplayer.ini file automatically.

AutoQuery CDDB
Check this box if you want Audiograbber to automatically look up the disc in CDDB (internet) if it is not recognized. *Note: this checkbox is only enabled and working if you have selected to use cdplayer.ini under General Settings, Misc tab.*

CD ROM unit
Tells which CD-ROM Unit that should be used for ripping through MSCDEX calls.

Cancel
Leaves this dialog box without performing the changes you might have made.

OK

Leaves this dialog box and performs the changes you might have made.

Lock values
The time estimation values are recalculated every time a track has been processed by Audiograbber. If you don't want any recalculation of the time estimation variables then check this box.

First file

Enter the name of the first file. The complete path must be used.

Second file
Enter the name of the second file. The complete path must be used.

Browse

Browse to find a file to compare here. You can select two files at once with any of these browse buttons.

Offset

A 0 offset means that the files start at exactly the same positions. A positive offset means that file 1 starts after file 2 and a negative offset means that file 1 starts before file 2. The offset will most likely be a multiple of four because every sample takes 4 bytes. (16 bit * stereo).

Progress bar
Detects what percent of the files have been compared and found equal.

Value list

If the files differ from each other, the first values that do not match are found in here. All values are hexadecimal. It is not possible to continue to search for more differences after a mismatch has been detected.

The first 44 bytes of the files are the wav header and will not be compared.

Start / Stop
Starts and stops file comparing. This button is only enabled when two valid file names have been given.

Close
Closes this dialog box.

Windows version
Detects which version of Windows you are running.

Build number
Detects which minor version of windows you are running.
950 is the first windows 95 version.
1111 is the OSR2 release.
There is also a 953 version that is reported the same way as the 950 version.
More versions to come…

Scsi1hlp.vxd version

This file is important when reading digital audio through MSCDEX calls. Usually the only version that works is Windows 95's original version 950. Read more about Scsi1hlp.vxd in the help file.

Frames allocated

This value is only useful when MSCDEX is used as reading method.

Audiograbber will not always get as much memory for the MSCDEX ripping as it wants. This value is the number of allocated frames Audiograbber received this time.

MSCDEX version

Audiograbber can call either MSCDEX or ASPI to read digital audio. MSCDEX is only available under Windows 95/98 and with IDE drives. Version 2.25 or lower means that a real mode driver is used for the CD-ROM drive. Version 2.95 or higher means that Windows 95's protected mode driver is used.

CD number
This is the serial number of the actual CD. This serial number is used by Windows for storage in cdplayer.ini. The number is shown in hexadecimal form. Audiograbber can not detect this number when a real mode driver is used and the serial number will then be "UNKNOWN".

CDDB Disc ID

This is the CDDB serial number of the actual CD. This number is based on track information of the disc and is used when the disc is looked up in the CDDB database on internet.

Close
Close the dialog box.

Filename

Enter the name of the file. Use the complete path.

Browse

Browse for a file to calculate checksum by using this button.

Progress bar
Detects what percent of the file has been scanned and calculated.

Checksum

The checksum that was last calculated in this dialog box. Checksums are also calculated directly when tracks are copied form the CD. This value and the automatically calculated one are naturally the same.

CD number

This is the serial number of the actual CD. The number is given in hexadecimal form.

Start

Entering a valid file name will enable this button. It is then used to start the calculation of a checksum. When the calculation is in progress the button can be used to abort.

Close

Closes this dialog box and aborts eventual checksum calculation.

Cancel
Makes Audiograbber stop waiting for the external MP3 program. The external MP3 program must be aborted manually (usually by pressing Ctrl+C).

ID3 Tag title

The ID3 tag title is normally taken from the track name or from the name of the wave files. The title will be taken from this field only when a single file is sent to MP3 creation.

Artist

The name of the artist or the band that has made the song. This can also be set directly from Audiograbbers main window.

Album
The name of the CD. This will also be stored in cdplayer.ini if that file is used for storing info.

Year
The year the song was released.

Genre

The genre of the song. It is only possible to use one of the 147 predefined genres that are specified in the ID3 tag specs.

Comment
You can type any comment you like here, for example your nickname.

Append checksum

If this box is checked then Audiograbber will append the checksum of the track if it is ripped through Audiograbber. The comment field, that is 30 characters long, must have 14 characters left for the checksum. This means that you can only use 16 characters for your own comment.

Cancel
Leaves this dialog box without performing the changes you might have made.

OK
Leaves this dialog box and performs the changes you might have made.

Properties

Properties is a dialog box from which you can adjust a track's properties. You go to the Properties dialog box by double clicking a track in the track list. From here you can adjust exactly which sectors the track shall include. The track can also be played in here and you can set the beginning and end position "on the fly". By dragging the meter on top of the dialog box you can easily rewind / forward the track and that is handy if you want to copy just a refrain, for example. You should then click "Set start" and "Set end" at the right time.
By pressing the Apply button your changes will be performed. This button differs from the OK button in that sense that it will apply the changes but not leave the dialog box.

General Settings

The following functions are adjustable from here:

- The program's working directory, where files should be stored.

- **CD-ROM access method.** Access method of CD data given here. Audiograbber is able to use either ASPI, MSCDEX or Analog calls. MSCDEX   only works whilst running Windows 95/98 and an IDE CD-ROM's. ASPI works with both Windows 95/98/NT and IDE/SCSI readers. It is hard to predict which is best for a particular computer and CD-ROM, the best method (as always) is trial and error! There are more detailed descriptions of MSCDEX and ASPI in this help file. Analog is not as good as the digital rip methods ASPI and MSCDEX but if your drive does not support digital reading of audio then you will have to use analog.

- **Naming.** This is how your wav and mp3 files will be named. Simply check the boxes from where you want the filename taken. You can change the order by using the arrows at the left side. All fields are separated by a blank, a dash and another blank " - ".

- **Delete silence automatically.** There is usually quite a bit of silence between tracks on a CD. From here you can select how much silence in the beginning and end of a track should be kept. Values from -127 to 127 are treated as silence. Read more under checksums about what these 127's are.

- **Rip offset.** If your CD reader has problems finding the exact start and stop points of tracks, different offsets can be given here. You can also tell Audiograbber to simply discard a few of the first frames if your CD reader produces a click at the beginning of the track. Normally these values should be set to zero if you don't experience any problems though. Some crappy drives has problems to start reading from a non moving disc. By checking the "spin up disc" box Audiograbber will try to spin up the disc for 3 seconds before it starts reading. Some drives also tends to try to read outside the last frame of the last track due to bad positioning of the read head and gives an "ASPI error" just before they shall finish the last track. Check the "Shorten..." box to simply skip some frames and be on the safe side.

- **Time Estimation.** Normalize speed indicates how quickly your computer can normalize a track. Both processor speed and the speed of the hard disk are important for this value. Here is also the value for how quickly the CD reader reads digital audio. 100% means that it reads just as quickly as the track is normally played. These values are recalculated when the program is used but they can also be adjusted manually. The values will not be recalculated if the check box "Lock values" is checked. The speed of L3enc is not adjustable from here since there are too many factors to be taken into consideration (like hq-bit and bitrate). The speed of L3enc is also dependent on the actual type of music that is being compressed. Sometimes it's quicker; sometimes it's a bit slower. The L3enc values can be adjusted manually by editing the file Audiograbber.ini. The values there correspond to the different bitrates without hqbit and they too are recalculated. They should be compared with normal audio speed, for example 5.0000 means that the compression is 5 times slower than playing the track.

- **Miscellaneous,** with the following settings:

  Select all tracks by default
  If this option is selected then Audiograbber will put a checkmark in the boxes in front of the tracks as default. If not selected then all tracks will become unchecked by default.

  Continue even if synchronization fails
  The copy will not be perfect if the synchronization fails. By clicking "Continue even if synch is lost" will save the track regardless of how the synchronization is achieved, otherwise the track will be skipped if synch problems are detected. (This is called "jitter correction" in some programs).

Don't calculate checksum during the rip process
By choosing this alternative, the program won't automatically calculate a checksum when reading a track. This frees up more processor time which can be used for the actual reading and can be useful when using Burst copy and ASPI in conjunction with a fast CD-ROM.

Use cdplayer.ini
If this option is selected the track list will be filled with track names if the CD is recognized when you press Refresh. To enable the command Store in cdplayer.ini now this option must be selected.
(*Note*: An ini file in Windows can normally not exceed 64 KB. If your cdplayer.ini should be full then it can not hold any more disc data. In that case you can simply rename it and start all over with a new one. Not a good solution and I will fix a workaround later).

Autosave CDDB queries
If this option is selected then your successful disc queries from CDDB will be saved in cdplayer.ini automatically.

AutoQuery CDDB if a new disc is not recognized
If this option is selected and the disc is not found in cdplayer.ini then Audiograbber will look up the disc in the CDDB database on internet automatically. Audiograbber will only try once per disc, ie if the disc is not found in the CDDB database then Audiograbber will remember that it has already asked about that disc and not ask again.
(*Note: this checkbox has now been moved to the CDDB settings form instead*).

Shut down the computer when finished
This function only works with certain mother boards that support automatic "power off" to the computer. If the board doesn't support this operation, then only Windows will be shut down. You may find this function useful if you want to read in and create some MP3's but at the same time are in a rush to the office/school or bed! Audiograbber waits for two minutes after reading and then shuts down the computer. The result of the reading can then be read from the copyinfo.txt file, which will be found in Audiograbbers program catalogue.

Soundcard
Tells Audiograbber which soundcard to use for playing audio in the advanced normalizing function. This is also the soundcard that is hooked to the volume meter.

Other useful programs

Xing technology has made a very fast MP3 encoder that works good as external codec in Audiograbber. You must have their registered version and use x3enc.exe as external encoder (x3enc.exe does currently not come with their trial version). It cost however only $19.95 to register (22 May 1999).
http://www.xingtech.com/products/mp3encoder/

Another good encoder that works good with Audiograbber is BladeEnc. This encoder is totally freeware so it won't cost you a dime! It is far from as fast as Xing's encoder but many people thinks this encoder produces better sound quality. **The author Tord Jansson has also released a DLL that is very good to use with Audiograbber and highly recommended! Download his DLL, unzip it and simply place it in Audiograbbers program directory and you will have internal MP3 encoding options**.
http://home8.swipnet.se/~w-82625/

Another freeware MP3 encoder is called Plugger+ and works fine with Audiograbber. It's fast too!
http://members.tripod.com/~mp3nkoder/

There has also been a general Encoder plugin released by Alexander von Gostomski. With his plugin you can use both AAC, VQF and a Real Audio encoder! See this homepage for more information:
http://www.login-net.de/jugger/ag_vq/

Fraunhofers L3enc was previously used to create MP3's. It can no longer be downloaded from http://www.iis.fhg.de/audio but I keep the link here anyhow. They have also made a CODEC for MP3 creation that can be used by Audiograbber.

Cool Edit is one of the best programs for general editing of audio files and it can be found here:
http://www.syntrillium.com/

Hints

- CD-Ripping is a jungle! It usually works fine without the need for special adjustments, but not always ...   When the process doesn't work it's often hard to be able to suggest a definitive remedy other than trial and error. Try   both the   ASPI and MSCDEX methods to see which works best on your system. If you still experience problems, try with another computer.   When you find a working system, swap CD readers to see if the problem lies with your computer or reader. By a process of elimination, you can maybe determine what the problem is. *Some CD readers quite simply can't read digital audio which is <u>not</u> the same as being able to play a track!*

- If the CD-ROM drive reads audio very slowly (at 0.1x something) then it often helps if the CD-ROM is moved to the secondary IDE connector   and is the only device located there.

- If wave files are incorrectly read and are found to contain pops and clicks then it sometimes helps if you click the box "Synch data transfer" under Settings -> Control Panel -> System -> Device Manager -> CD-ROM. This may help for both IDE and SCSI drives.

- There are often problems with the reading of the first sectors of a CD if Windows 95's internal driver is used and with the read method MSCDEX. Audiograbber therefore reads the first 30 frames one by one and those that can't be read properly are skipped. (It is usually the first 16 or 17 frames that can't be read.) Because the first track usually starts with silence one will not usually notice any difference. This problem does not occur when a real mode driver is used… It does not occur with ASPI as rip method either.

- Do not disturb Audiograbber when it is reading from the CD. Whilst Audiograbber itself will not develop any problems, the device driver between Audiograbber and the CD player may.

- If you are about to buy a new CD player put Audiograbber and the ag12free.dll / ag12full.dll on a floppy disk, go to the retailer and test the CD player before you buy it. There is a list of tested CD's on http://www.audiograbber.com-us.net./cddrives.cgi

- You can drop wav files from Windows Explorer into Audiograbber's main window to easily normalize / create MP3's (assuming you already have the wav's.)

- If you want a track span over more than one song you must first double click the last one of them. Check the end frame for that track and double click the first one. Change the end frame of the first track to the value you got from the last one. *Note: This can only be done with the full version. The free version won't let you go outside the original start / end frames.*

- If you get ASPI error on the last track it usually helps if you doubleclick the track and lower the last sector a little. Try with 75 which equals one second.

- No, I don't know why some CD readers occasionally gives an ASPI error. You have to test yourself to see if you can find any settings that make your CD reader work reliable.

- You need a free MP3 encoder? Download Blade's DLL which works damn good with Audiograbber!

Credit goes to:

I would like to thank the following persons for direct or indirect help with this program:

- **Michiel Overtoom**, For releasing the source code to DIDO, another CD-ripper.

- **Simon Chang**, for providing a way to thunk down from 32-bit to 16-bit code.

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- **Hillary Cutler** and **Sean O'Neill**, for help with the english translation.

If anyone of you above would like to have the full version of Audiograbber, just mail me and I will send you one for free.

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Fraunhofers acm CODEC

An acm codec is a kind of program that works almost like a DLL. That means that it has functions that can be called from other programs but it can not be run separately.
Fraunhofer has made such a codec for MP3 creation and it is a lot faster then the L3enc program. The codec comes in two versions, the advanced and the professional. The advanced version was previously shipped with Microsofts Netshow which is free but unfortunately it supports only low bitrates for encoding. It does however support higher bitrates for decoding.

The professional version is better and supports bitrates up to 128 Kbit for encoding. This one has to be purchased and is quite expensive however... Contact Fraunhofer directly for price information.
(It seems as Fraunhofer now has stopped distribution of this acm codec for good. I believe the reason is all the software piracy that went on with this codec. Don't ask me for information where to find a pirated version of that codec, I won't tell you. Use BladeEnc's freeware DLL instead).

The filename of the codecs are l3codeca.acm and l3codecp.acm. They should be placed in the c:\ windows\system directory. The file c:\windows\system.ini must also be updated in the section [drivers32] with this:

[drivers32]
msacm.l3codec=l3codecp.acm   ;for the professional one.
msacm.l3acm=l3codeca.acm   ;for the advanced one.

I you want to install them in Windows NT they should be placed in the c:\windows\system32 directory. You also need to change in the registry. The easiest way to do that is to create a textfile with the following and name it to l3codec.reg. Then you just have to doubleclick it.
REGEDIT4
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\drivers.desc]
"L3codecp.acm"="Frauenhof L3 Codec Professional"
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Drivers32]
"msacm.l3codecp"="l3codecp.acm"

You can look in the Control Panel -> Multimedia and the advanced tab to see what sound compression codecs you have installed.

Audiograbber can use these Fraunhofer codecs to create MP3's in a way that it looks like Audiograbber is making the compression itself.

ASPI

This lets Audiograbber know which preferences are to be used when reading digital audio via ASPI calls.

MSCDEX

This lets Audiograbber know which preferences are to be used when reading digital audio via MSCDEX calls.

CD-ROM unit
Choose here which CD reader should be used for ASPI calls. If you change CD-ROM drives here, Audiograbber automatically alters other alternatives which it thinks best suite your needs. It may be necessary here to change these alternatives manually.

CD-ROM type

The command set used for accessing the CD reader. All IDE CD-ROMs use the same command set but SCSI use several different ones. Because the SONY command set is the most common, all unknown SCSI drives are set here by default.

Rip method

Burst copy should be the best and fastest, however, some CD readers may display problems with it. If you do experience problems, first try using dynamic synch width, there after with the others. Burst copy doesn't use any synchronizing ("jitter correction".) The other rip-methods do use this.

Digital Audio Extraction speed
Not all CD readers support choice of reading speed. Speeds here are intended for those readers that claim to support it. Whilst many claim to have this function, the reality is often not the case.

Soundcard

All soundcards available on the computer are listed here. Audiograbber uses the soundcard when it plays a wav file in the preview function. It can change the CD volume for the choosen soundcard from its main window.

Detect
Rescans the SCSI bus for drives and refills the CD-ROM unit box.

Start offset
Some CD readers exhibit problems in finding the exact start/stop reading points on a CD. If you find it necessary, you can manually adjust the program to read a few frames earlier or later. A maximum of 150 frames can be set (75 frames=1 second.)

End offset

Some CD readers exhibit problems in finding the exact start/stop reading points on a CD. If you find it necessary, you can manually adjust the program to read a few frames earlier or later. A maximum of 150 frames can be set (75 frames=1 second.)

Discard

If your CD reader occasionally begins reading with a click, you can set an amount of frames to be read but not used. Max. 100 frames can be given.

Don't calculate checksum during the rip process
Audiograbber can experience problems with the re-calculating of data if a very fast CD reader is being used. This is most common when using the ASPI rip method and burst copy. By not calculating the checksum of a wave file valuable processor time can be saved and the problem avoided.

Shut down the computer when finished

If so required, Audiograbber can shut down the computer when it has finished. On certain modern mother cards the power supply can also be turned off. If this function is activated, Audiograbber waits two minutes after finishing it's job and then tries to shut down the computer. The result of all copying can then be read in the copyinfo.txt file, residing in the Audiograbber program catalogue.

Select all tracks
Check this box to put a checkmark in front of every track when a disc is refreshed. Uncheck the box to have all tracks unselected as default.

Autoplay after grab

If this box is checked then Audiograbber will start playing the tracks after the ripping is finished. The tracks that are played are the ones that have been ripped and are played in random order (if you choose to play the grabbed files then the settings in your MP3 Player dictates how they are played).

Naming

Select what parts the filenames shall consist of. You can move the fields up and down with the arrows. Selected fields are separated by a space, a dash and another space.

Arrow
Press this arrow to move the selected item on position up.

Arrow
Press this arrow to move the selected item on position down.

File name items

Check the individual fields you want to be included in the filename. You can move the items up or down with the arrows to the left.

Directories

If you want to have your files stored in sub directories based on the artist and album names, select   here. Audiograbber will create the directory if necessary.

Advanced names

Check this box if you want more control over your filenames. Press the info button to get information on how to specify the names.

Advanced naming string

Type your file name options here if you want more flexability naming your files. Press the info button to get information on how this name format string should be defined.

Spin up disc
Some crappy drives has problems to start reading from a non moving disc. By checking this box Audiograbber will try to spin up the disc for 3 seconds before it starts reading.

Shorten last track
Check this box to automatically skip the last 10 frames of the last track. CD-ROM drives gives an ASPI error if they read outside the end of the last track. Some drives are not very good at positioning the laser exactly correct and it is a risk that they will go outside the last track. Check this box to be on the safe side.

Show detected speeds
This option works for IDE drives only. Audiograbber tries to ask the drive what DAE speeds it supports and displays the speeds it responds to.

Show all speeds
This option works for IDE drives only. When show all speeds are selected, all speeds are displayed. You will see yourself it the drive later responds to the speed you set.

Show direct in tracklist
State which value is to be displayed in the information column in the track list.

Copy result
Shows how the copying went. Cannot be removed.

Checksum
Shows the checksum calculated for the track.

Rip speed

Shows how fast the track was read compared to the speed it is normally played. At least 1x speed should be attained. Some readers however can go up to 20x speed!

Lost synchs

How many times it has not been able to synchronize between two blocks during reading. The value should be 0 in an error free file. Though this is no guarantee in the real world! Synchronization is not used at all with burst copy (only with ASPI.)

Possible speed problems
This value is only used with burst copy and ASPI as the rip method. When using burst copy, it's important that the CD reader delivers data in an even stream. When using a very fast reader, the computer can experience problems in keeping up. If possible, you should choose a lower reading speed, or choose the "don't calculate checksum" during the rip process. (under general settings, tab miscellaneous.)

Old peak value
Shows what the peak value was on the track on the disc.

New peak value
Shows the new peak value after an eventual normalization. This value is only calculated if the peak value has been changed.

Old average output level

Shows what the average output level was on the track on the disc. This is only displayed in case advanced normalizing has been used.

New average output level
Shows the new average output level for the track. This is only displayed in case advanced normalizing has been used.

Old compact ratio
Shows how compact the song was. This is only displayed in case advanced normalizing has been used. The higher value the more compact song and 100% is the maximum.

New compact ratio
Shows the new compact ratio for the song. This is only displayed in case advanced normalizing has been used. The higher value the more compact song and 100% is the maximum.

Rip offset

If your CD reader has problems finding the exact start and stop points of tracks, different offsets can be given here.

Miscellaneous

Here you'll find various settings that didn't fit into any other category.

ASPI manager

The name of the ASPI manager for the currently selected CD-ROM drive.

Next tip
Displays next tip.

Previous tip
Displays previous tip.

Show tips at startup
Uncheck this box when you're tired of all the tips. You can also reach this tip box from the help menu.

OK
Close this dialog box.

MSCDEX

MSCDEX is a tried and trusted method for reading digital audio from a CD reader. Originally it comes from the good ole DOS days but works fine with Windows 95. Unfortunately with the OSR2 release of Windows 95 and Windows 98 it is necessary to change the scsi1hlp.vxd. file to the original version.

MSCDEX calls are not accessible with Windows NT, rather one needs to use ASPI calls. MSCDEX calls don't work with SCSI units, so again ASPI calls need to be used.

When the program uses MSCDEX calls to read a certain number of sectors/frames of audio, everything freezes and the program must wait until the reading of these frames is complete. During the time when the program then writes these frames to the hard disk, the compact disk manages to rotate a bit, meaning that synchronization is necessary. This however is normally corrected for by Windows caching a little data in advance.

One example is that Audiograbber asks for sectors 1-26. The CD-ROM reads these sectors and passes them to Audiograbber. During the time it takes for Audiograbber to convert them and write them to the hard disk the cd has managed to rotate a little. Windows 95 however takes care of this and caches a little data from the CD. When Audiograbber then asks for, and receives, sectors 25-50 it thinks they have come directly from the CD. In reality though sectors 25-27 have come from the cache memory! Only when the program asks for sector 28 does it receive it from the CD (These numbers are only illustrative!)
In this case, Audiograbber thinks that synchronization should occur between sectors 25-26 and detects this to be true. A problem however may occur with the synchronization of sectors 27-28 and a small "click" can occur. Normally, the problem is solved, if however it doesn't sound good, install a real mode driver. The data here will not be cached, all data will be read directly from the CD. In addition you could try using ASPI as a read method, again caching is not used here.

The following preference under General settings dictates how many frames are read at one go with the MSCDEX call:

- Read audio in blocks of. This tells how many frames of audio should be read at each chunk and how many frames should be used for synchronization. Every frame is 1/75 second. You can read more about digital audio and how the reading is done.

ASPI

ASPI is a relatively new way of reading data from a music CD. Originally it was devised for use with SCSI units but often works well with IDE CD-ROMs. (via a command set known as ATAPI.)
Certain versions of ASPI however don't seem to be able to detect IDE CD-ROMs. It appears that the wnaspi32.dll file between versions 4.01 and 4.53 doesn't work with IDE. Earlier and later versions do work though. To see which version is installed on your computer, rightclick on it with the mouse.

Windows 95/98 originally came with a version of ASPI that worked with both SCSI and IDE. Unfortunately this is not the case with Windows NT and one is forced to install your own. If you don't have one read these instructions on how to obtain one.

The configurations needed by Audiograbber to read via ASPI are as follows:

- **CD-ROM unit.** The CD readers that Audiograbber has detected via the ASPI interface are displayed here.

- **CD ROM type.** The command set to be used for the CD reader . Unfortunately, different CD readers use ASPI calls in different ways. All IDE CD readers use ASPI calls in the same way. This is not the case with SCSI units. Those SCSI CD readers that are recognized are listed with the correct drive type. Unrecognized readers are listed as SONY by default (As SONY is the most common.) If however your SCSI drive doesn't work, you can try another call method. If no call method works, send an e-mail to your CD-ROM manufacturer and ask them to send a description of their command set for audio extraction to me.

- **Rip method.**
    Buffered Burst copy means that no overlapping or synchronization occurs. This is the fastest method of copying and should be attempted first. With this method it's important that the CD reader is requested for data continuously. As long as the reader doesn't need to reposition it's head and Audiograbber asks for 3 seconds of music and processes all the data in step with the process, this shouldn't be a problem. Directly after the reader has delivered some frames, Audiograbber requests some new ones, in this way a schedule of 3 seconds is maintained. If Audiograbber (or the computer) is unable to process the incoming data, the 3 second buffer will diminish. If the buffer is reduced to 0 a "possible speed problem" will occur, which generally means that the reader has been "idle" for a time. A possible speed problem doesn't necessarily mean that there is a problem, it is only a warning signal. If the CD reader reads at 8x speed Audiograbber's buffer will be filled in less than 0.4 seconds. It is therefore important that no other program interferes. The slower the reading speed is, the less danger the buffer underrun is exposed to.

    Unbuffered Burst copy is basically the same as buffered burst copy but the CD-ROM drive is never asked for more than one block at a time. Theoretically the buffered burst should be better but testings have proven that this copy method is better for some drives.

    Dynamic synch width means that sector synchronization is occurring. The buffer that's used to synchronize the previously read block is dynamic and grows or reduces in size as required. If synchronization fails, Audiograbber re attempts the process with a slightly larger overlap area.

    Fixed synch width means that a set amount of frames are used for sector synchronizing. Some CD readers seem to work best with this alternative, though theoretically dynamic synch width should yield the best results. "When in the real world .... "

- **DAE speed**, Digital Audio Extraction speed. This block is occasionally filled by the value requested from the reader as to which speed it supports. Different readers can manage different speeds, but often the speed they can actually read at isn't the speed reported to the program. In addition this only works

with IDE readers. I have sent an e-mail to Plextor and asked how to adjust the reading speed for their readers but have received no reply .....   If you experience problems whilst reading and are able to decrease the read speed, do so.

- **Show speeds**, This option works only with IDE drives. If "show detected speeds" are selected Audiograbber will ask the drive what DAE speeds it supports. Some drives does not respond to speed selection before the reading actually starts and in that case you can try with all possible speeds. It can also be a good idea to use "show all speeds" in case you already know what speeds works for your drive, Audiograbber will then start just a little faster.

ASPI for Windows NT

When being run with Windows NT, Audiograbber reads data via ASPI calls for both IDE and SCSI CD-ROMs. Unfortunately, no ASPI manager is distributed with NT, so a manual installation is sometimes required. If you have a SCSI reader you probably already have an ASPI manager installed. There is currently an ASPI manager delivered with Windows 95 and 98 which works with both IDE and SCSI drives but it may have been replaced by some other software. In case you need an ASPI manager you can find a good freeware one here that works with both Windows 95/98 and NT:
http://www.grc.com/freesetuff.htm
(Direct link: ftp://grc.com/aspi_me.exe)

Last minute UPDATE: The very good and reliable aspi_me ASPI manager seems to be no longer available from the above link. Mayeb you can find it somewhere else on the internet if you search for aspi_me.

Here is another old one that works for windows NT:
ftp://ftp.irnet.ru/pub/Windows/NT/ASPI/aspi_update.zip

It appears to work with NT4 even though it was written for NT 3.51. The installation instructions may however be inaccurate. You can clip out the text given below and save it as a file called aspi.reg. By Double clicking on the file the registry will be updated. Either way, be sure to read the installation instructions that came with the aspi_update.zip. Pay close attention to the ExcludeMiniports part as it is essential in making it work.

You can also try to get an ASPI manager directly from Adaptec at
http://www.adaptec.com

REGEDIT4
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ASPI32]
"ErrorControl"=dword:00000001
"Start"=dword:00000001
"Type"=dword:00000001

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ASPI32\Parameters]
"ExcludeMiniports"=""

NO CD-ROM drive access

This error occurs under the following conditions:

- You don't have a CD-ROM installed.

- You are running Windows NT but you have not installed any ASPI manager and MSCDEX calls can not be used under Windows NT.

- You are running Windows NT and have an ASPI manager installed but it hasn't been started.

- Audiograbber was unable to allocate enough memory in the low memory area (640 Kb.) As a result MSCDEX can't be used. In addition you have no ASPI manager installed. In this case, try re starting Windows and start Audiograbber before any other program.

- You are running Windows 95/98 but have no ASPI manager installed and Audiograbber can't find it's MSCDEX-DLL.

CD-ROM tab
Use these tabs to set the rip method for your CD-ROM drive. If the ASPI tab is grayed out it means that no ASPI manager is loaded (wnaspi32.dll). If the MSCDEX tab is grayed out it means that you are running Windows NT or that MSCDEX could not be loaded. If Analog is grayed out it means that there is no soundcard available.

Various settings tab
Use these tabs to set various options for Audiograbber.

Unlocking of the full version

This unlock method was only used in Audiograbber version 1.21 and is now obsolete.
It worked damn good however and the pirates had to release a program that changed your harddisks serial number. Unfortunately it was not so good for the real registered users so I simply skipped it.

I am sorry about the inconvenience with this unlocking procedure. Unfortunately there has been some software piracy going on and illegal copies of Audiograbber have been quite easy to find on the internet.
I don't like it, and I suppose that customers like you that have paid your $25 don't like that some people could get   for free what you have paid for. Hopefully this puts and end to it!

This method has not been done in order to prevent you from running Audiograbber on more than one computer. The purpose of this unlock method is to prevent illegal piracy of the full Audiograbber on the net.

On the page http://www.audiograbber.com-us.net/unlock.cgi you will be asked for your personal serial number of Audiograbber (which you got in the registration e-mail from ShareIt) and your computer's identity number. When you submit these numbers at the internet page your browser will immediately get the unlock code.   You will only have to do this once for every computer you install the full version on.

If you have any questions, or if there is a problem with the unlocking, please send an e-mail to jackie@audiograbber.com-us.net

CDDB server
The internet domain name of the database to ask for disc information.

CDDB server
This is where the server is physically located. Select one close to where you are.

Get list
Press this button to get a list of available CDDB servers.

Connect via
Select whether you want to connect to the disc database via TCP/IP or HTTP.

Direct TCP/IP

This should be the fastest way to retrieve disc information.

HTTP

Not all servers support connection through HTTP. Select another CDDB server if this option is disabled.

Proxy settings

Proxy can only be used under the HTTP protocol. As a rule, you shouldn't use this alternative but if you are accessing internet behind a firewall this can be used. If your proxy server needs username and password you can enter this in audiograbber.ini:

ProxyUsername=jackie

ProxyPassword=hacker

and replace jackie hacker with your own username and password.

Use Proxy
This box is only enabled if you select the HTTP protocol. Use it if you are accessing internet from behind a firewall.

Proxy port
The port number you use for proxy access.

Proxy Server
The IP address for your proxy server.

E-mail settings
The CDDB server wants to know your e-mail address so enter it here.

CDDB credits
These are the awesome guys that has made the CDDB server.

CDDB settings

CDDB is used for retrieving disc title and track names from an internet database. This means of course that you have to be connected to internet to use this function.

This database is hosted on various servers around the world, so select one that is close to you. By pressing the "Get list" button, your computer will try to fetch the current list directly from the internet. If this fails for some reason (30 seconds timeout) Audiograbber will let you choose from the latest known list.

There are two ways to connect to the CDDB server: Direct TCP/IP (also called CDDBP) and through the HTTP protocol. Both methods are about equally fast and generate the same result, so it really doesn't matter which you choose. If you are accessing internet from behind a firewall and must use proxy you will however need to use the HTTP protocol. It is not possible to use proxys under direct TCP/IP.
Not all servers accepts HTTP transfers though. You can check the list (from "Get list") and check the HTTP-path to see if HTTP is supported.

If your proxy server needs a username and a password you will have to enter that manually in the audiograbber.ini file. Simply type these two line in audiograbber.ini:
ProxyUsername=jackie
ProxyPassword=hacker
and replace jackie hacker with your own username and password.

Audiograbber needs to send an e-mail address to the CDDB server when asking for data so you will have to state your e-mail address (or at least something that looks as an e-mail address!)

AutoQuery CDDB if a new disc is not found in cdplayer.ini
If this option is selected and the disc is not found in cdplayer.ini then Audiograbber will look up the disc in the CDDB database on internet automatically. Audiograbber will only try once per disc, ie if the disc is not found in the CDDB database then Audiograbber will remember that it has already asked about that disc and not ask again. You need to check the box "Use cdplayer.ini" under General Settings, Misc tab, to enable this feature. It is recommended that you also check the box "Autosave CDDB queries", also under General Settings.

Audiograbber does not support uploading of discs (submitting). You need to use some other program if you want to submit discs (which you are encouraged to do if the disc is not found in the database). You can find a list of programs that can submit at http://www.cddb.com

CDDB™ is an acronym for Compact Disc DataBase and it is owned by the company Escient®. It is a huge database available on the internet where individuals has submitted their disc data. Programs like Audiograbber can connect to this database to see if the disc is found in the database and download various disc information. Read more about CDDB™ at http://www.cddb.com

Get from CDDB

This function is found under the CD menu.

The purpose of this function is to retrieve the track names from an internet database. You can read more about what this is under CDDB settings.

Undo CDDB Query

This function is found under the CD menu.

If you weren't satisfied with the answer from the CDDB server you can then go back to the track names prior to the query.

Copy status

This function is reached by right clicking a track in the track list. Here you can tell Audiograbber what information to show in the information field.

Create M3U list

This function is reached by right clicking a track in the track list.
It simply creates an M3U list which is a play list that can be used by Winamp. The M3U list is a plain textfile and is stored in your default directory. The tracks that are selected with a checkbox will be included in the M3U list. The name of the M3U list is taken from the album field.

Advanced Normalizing

Selects which options you want to use for normalization of your files. Normalization simply means how loud a song is played. Instead of adjusting the volume for each song you play, you can now ensure they will sound equally loud already when you rip them.

Use normalizing

Select this box if you wish to automatically adjust the recording level, leave this checkbox unchecked if you wish to copy the track exactly as it is. Also set the compression option to "Never" if you wish to get an exact digital copy of the tracks.

Peak level to

Select this if you want to use the peak level as criteria for how loud the song shall be. Peak level means the absolutely loudest part of the song.

Average output
Select this option if you want the output level adjusted, based on the average output level of the song.

Normalize to

Select the recording level between 0 -100%. 0% is equal to silence and 100% is the highest volume. 98% is recommended.

Average output to
Select how loud you want the song to be on average. 65% is recommended

Peak condition
Select if you want to exclude songs, within a certain range, from being modified. If this option or the average output condition is not realised the song will be neither normalized nor compressed. It will simply be left unchanged.

Average output condition
Select if you want to exclude songs within a certain range from being modified. If this option or the peak level condition is not realised the song will be neither normalized nor compressed. It will simply be left unchanged.

Compression

Compression essentially means making the sound more compact and giving the song a more equal output level. This is often used by radio stations to have the volume around the same level all the time.

Never
Choose this to not compress your songs.

Always
Choose this to compress all songs. This option is not recommended to be left in this state but can be useful if you are only modifying a few songs and you know what you are doing.

Only when needed

This option is only available if you have chosen to adjust the average output level. If the desired average level cannot be reach by ordinary normalizing it will use as much compression as needed to reach the desired average output level (but not more than the maximum compress value of course).

Maximum compress

This tells Audiograbber by how much it is allowed to compress the sound. A value of 60% means that every sample in the sound will get a new value that is within the range of 100% - 160% of the original value.

Don't compress songs

It is a good idea to not compress songs that have already been extensively compressed. Chose this option to leave already highly compressed songs in their original form. It is recommended that this option is used.

Max compact ratio
This is the limit for when a song is considered "already compact enough". Compact ratio basically means how close to the average output level the song is generally playing. For example classical music usually changes the volume a lot from low to high and does not stay on the average output level much. That gives a low compact ratio. Rock'n roll songs often play at the same output level throughout (often very loud!) which gives a higher compact ratio. 100% is max and would mean that there is no dynamic in the song. Recommended value here is 80%.

To new file

By choosing this option your original song will be left unmodified and a new modified song will be created. This option works only when you are in this dialog already. If you normalize/compress files from Audiograbber's main window, or drop them on the main window, it will modify the chosen file directly regardless of this setting. The same goes for ripped tracks.

Add file

Add files to the list from here. Newly added files will be placed on top of the list and not the bottom! The files must be .wav files, 44,1 KHz, 16 bit, stereo.

Remove file
Removes the selected file. They can also be removed from the list by pressing "Delete".

Modify
Press this button to start modifying the selected songs.

Test
This function will scan through the selected files so you can easily see what values they will get if they are modified with the chosen settings.

Preview
Press this button to view and listen to the last modified/tested song.

Abort

Aborts testing or modifying of the songs.

List

The order of the songs can easily be rearranged by drag and drop. Mark the songs you want to test/modify with a checkbox.

OK
Leaves this dialog box and performs the changes you might have made.
Note that you must leave the dialog in advanced state to have the advanced options used when ripping.

Toggle
Switch between the simple and the advanced normalizing/compression.

Advanced normalizing

This function is found under the settings menu.

Occasionally it simply isn't enough with ordinary normalizing. The peak level value does not say much about the average output level of a song; the average output is better to use as an indication for how loud the song is. That's why I made this function. I realized that I had to change the volume on my car stereo all the time when I played my own compilation discs. This function will put a clampdown to the movement of that volume button!

Audiograbber can now scan through a song and split the song into parts of 133 ms. The peak value in each 'frame' is then used to calculate an average output volume. This average is based on the 90% loudest 133 ms frames in the song, leaving the silent parts of the song out of the calculation.

This average value can then be changed up or down just like with ordinary normalizing. Usually with no problems.
Some songs do however have many silent parts and can not reach a certain average output level by only altering the peak level for the song. Here is where compression plays a role. Compression is something that radio stations and music studios use to even out the output level.
Basically, it is something like a continuous and rapid movement of the volume level, raising the silent parts of the song more than the loudest.

There are some concepts that I would like to explain:

- **Peak level:** Easy. This is simply the loudest sample of the song.

- **Average output level:** A value that tells how loud the song is on average.

- **Compact ratio:** Tells how compact the song is and how much each 133 ms frame differs from the average output level. The closer to 100% the more the song is playing at its average output level all the time. Can vary between 0% and 100%.

- **Maximum compress by:** Tells how much this function is allowed to compress the song. For a maximum value of 60% no single sample can be modified by more than 60%. This means that every sample will be between 100%-160% of its original value. I have limited this value to between 0% and 100% but there is theoretically nothing that says that this value can't be higher (or even less).

There is also a preview function where you can view and listen to a track, both in its original form and how it will sound after it has been changed. You can quickly switch between listening to the original or modified song which gives good testing options.
To change position in the song you simply click the position where you want it to play from and it will play from there. It's a good idea to use a pair of good quality headphones for more professional listening tests. The green drawing is the original song and the yellow is the modified.

If you have a special song, maybe one you have made yourself and want to make sure it is not over compressed you can do this:
Compress it by 100% and save it to a new file. Then compress the new file by another 100%. Now listen. You should try to listen for general changes in the volume in some parts of the song. You may have to compress by another 100% to make sure that you can hear the parts that do not sound correct. Now you know in which parts of the song an eventual error will be first noticeable.
Go back to the original song and compress by 60-70%,   listen carefully to the parts where you know the error will first occur.

If you choose to always compress then Audiograbber will first compress the sound and there after change the peak level to achieve the correct average output. If you instead use compression only when needed,

Audiograbber will first change the peak level and if a peak of 100% is not enough to achieve the desired average, it will use as much compression needed to reach the desired average output. It will of course never use more compression than specified by the maximum compress meter.

Play grabbed files
This option will send a playlist (an .m3u list) with the grabbed files to your MP3 Player. The settings in your MP3 Player dictates if they are played sequentially or in a random order.

Play selected tracks
This option will make Audiograbber play the selected tracks when the ripping is finished. They will be played in a random order.

Default MP3 player
Press the browse button and select your preferred MP3 player.

Audiograbber icon
Select this option to let Audiograbber display its own nice player icon in the main window.

Icon from MP3 player

Select this option to let Audiograbber display the icon from the MP3 player in the main window. You can click the icon here to select which icon you want to use (in case that the MP3 player has more than one icon). Left click for next icon and right click for previous.

Which icon

Left click for next icon and right click for previous icon. This works only if the MP3 player has more than one icon.

Artist

The name of the artist who made the disc. If this is a compilation disc with more than one artist then type "Various" here.

Album
The album name.

CDDB Category

The disc category. These are predefined values on the CDDB server and you can not make up your own categories. It has nothing to do with the categories in the ID3 tag for MP3 files.

Additional info

Additional info for this disc. You can for example include the year the disc was released and the musicians that performs on the disc. Not used by Audiograbber but other programs may use this info.

Same artist for all tracks

This is the normal value and should be used for discs with only one artist. If more than one artist performs on the disc then select "Different artists for the tracks" instead.

Different artists

If this is a compilation disc with many artists / bands then check this option. You will then get two fields on the next page, one for the artist and one for the track title.

Clear list

This button clears the list and makes it easier to fill in the track names for a new disc. When all information is entered you can then press the "Export to tracklist" button to send the info back to Audiograbber.

Track names

Fill in the names of the tracks here. The tracklist at the main form of Audiograbber does not accept characters that cannot be used in file names under Windows, but this tracklist accepts all characters. Invalid characters have been replaced on the main form with a dash "-" so check for dashes extra carefully here.

Additional track info

Type additional info for the track here if there is something special to mention. This info is not used by Audiograbber but may be used by other programs.

E-mail address

If the disc submission is not accepted then an e-mail with the reason will be sent to this e-mail address. Simply enter your e-mail address here.

Submit

Press this button to upload your disc to the database. Watch the penguins for a few seconds and then you shaould get a confirmation message back.

Export to tracklist
Click here to send your changes back to Audiograbber.

Back

Press this button to go back to the previous page.

Next
Press this button to move on to the next page.

Help
Press this button to open the helpfile with detailed help on how to submit a disc.

Cancel
Press this button to abort your disc submission and go back to the program.

OK
Press this button to go back to the program.

Analog

This lets Audiograbber know which preferences are to be used when reading digital audio via Analog sampling.

CD-ROM unit
Choose here which CD reader should be used for Analog sampling.

Input Soundcard

All soundcards available on the computer are listed here. Choose which soundcard to use for Analog sampling.

Don't change volume
Select this option if you don't want Audiograbber to change the input volume of your soundcard. Make sure that you have selected your CD-ROM drive as an input source for the soundcard if this option is used.

Set to

Select this option to make Audiograbber set the input volume of your soundcard. Audiograbber will also make sure that the CD-ROM drive is selected as the input source for the soundcard.

Input volume
Drag this meter to a desired input level for your soundcard. You will get best results if the peak level for a track is around 98% when the track is sampled.

Mute Speakers
Select this option to mute the speakers while analog samling is performed.

Encoder priority

You can lower the CPU priority of your encoder here. This only works when encoding is the only task that is going on, ripping is so sensive that normal priority is always used. Useful if you are doing other things on the computer during encoding.

Possible speed problems

A "possible speed problem" means that the disc has had to spin an idle revolution without reading any data. Then there is a risk that it doesn't find the correct position to resume reading from. It happens because the CD-ROM drive delivers data faster than the computer/harddisk can handle. For good drives "possible speed problems" doesn't matter but cheaper CD-ROM drives sometimes generate a pop or a click.

You can use the checksum function to find out if your CD-ROM drive has problems with this. Rip a track twice and see if you get the same checksum. If you do, then the files have been ripped exactly the same and "possible speed problems" are no problems at all.
If the checksums don't match then you must listen to the file and see how much the speed problem affected the song. Sometimes it is only a minor error and not even audiable. If you get annoying pops and clicks in your final file then change to a synchronized read method.

Note that for Analog sampling the term is changed from "possible speed problems" to "speed problems". If you get a speed problem when sampling analog then there is definately a piece of audio missing in the final file. Normally it should be no problem at all for the computer to handle the data when analog mode is used. It is only 1x speed and this should, even a 486 computer, be able to handle without problems. If you are sampling directly to an MP3 file then you may get speed problems however and you should then change to make a wav file first and then have it encoded.

Submit to CDDB

This function is found under the CD menu.

CDDB It is a huge database available on the internet where individuals have submitted their disc data. Audiograbber can also submit (upload) disc info to this database. Before you submit a new disc you shall first check if the disc is already present in the database. Press the penguin button to see if it is already in the database. If it is not found in the database or if you want to correct some spelling errors then go to the CD menu and press "Submit to CDDB".

The first page that welcomes you is where you enter artist and album name. If you are submitting a compilation disc with many artist then type Various in the artist field. The categories available here are the categories used in the database. You can not make up your own categories and they are not compatible with the MP3-ID3 tag categories. Use "Misc" in case you don't find an appropriate category.

Here is also a field with additional info for the disc. You can enter which artists that performs on the disc or any other interesting data. It is optional to use this field and it is not used by Audiograbber. Other programs may however use this information.

Audiograbber does not allow you to name tracks or artist/album name with characters that can not be used in file names (\ / : * ? " < > |). In this submit function you are of course allowed to use such special characters. When the disc info is retrieved from CDDB then special characters are replaced with a dash "-". A copy of the original name is however saved so it shall be correct spelled in this submit function.

You can also notice that after a disc retrieve from CDDB then all data on the submit form is exactly as it came down from the database. All additional fields with data that is not normally used by Audiograbber may have been filled in.

Check if it is a compilation disc or an ordinary disc with only one artist and move on to the next page by pressing the "Next" button.

Now go through each track and correct spelling mistakes and optionally fill in additional info about the tracks. The additional field for each track is normally left empty but if there is something special to note about the track then enter that info here.

If you are submitting a totally new disc then it is a good idea to press the erase pen in the upper right corner. The track name list will then become empty and it is faster to fill in the tracknames. When you are done then you can press the "Export to tracklist" button and send the info back to Audiograbber.

When you have filled in all the track names and checked the spellings carefully then press the "Next" button. On the next page you will only have to check that your e-mail address is correct. If your disc submission should fail for some reason then you will get an e-mail telling you why. If the disc submission is accepted then no e-mail will be sent. Press the Submit button and the disc info will be uploaded to the database. It should normally only take around 10 seconds to upload the disc info.

It is recommended that you use ASPI (under General settings) to fill the tracklist of the disc if it is a multimedia disc with a data track at the end. MSCDEX and Analog will not see the data track at the end and it is good to have that included in the database. For normal discs it doesn't matter if you use ASPI, MSCDEX or Analog.

There is a small risk that two different discs has so similar TOC (Table Of Contents, ie the discs has equally many tracks and the tracks are also equally long) that they generate the same CDDB disc ID. It is still possible to have both discs in the database but the only thing that separates them from each other will be the category. This means that if you want to submit a disc that is already in the database but is a completely different disc then you must specify another category for your disc.

Analog

If your CD-ROM drive can't read digital audio or if the disc is so scratched that digital reading fails then you will have to use Analog sampling instead of digital reading. Some people like to say analog ripping but I don't like that expression, analog sampling is a more appropriate expression.

When you sample analog you will loose quality in two steps: First when the CD-ROM drive converts the digital data to an analog signal. This signal is then sent to the soundcard which converts it back to digital. Some CD-ROM drives come with a digital out connector and if you are lucky then there is a digital in connector on your soundcard and then you will at least not loose much quality, if any. If not you may hear that some white noise has been added to the file. A decent soundcard shouldn't add much noise these days anyhow.

In either case if your CD-ROM drive comes with digital out or only analog out it has to be connected to the soundcard. It shall be a thin little wire that goes from the rear of the drive to the soundcard. Some soundcards have more than one place to connect this wire to. If your soundcard has more than one connector where this cable fits then check to see that it is really connected to the CD-ROM connector. (If this wire for example is connected to a TV input on the soundcard then normal playback from the CD will work but Audiograbber will not use the TV input and no sound will be sampled).

For best results with analog sampling then try to set input volume to a level so the peak of the sampled file ends up around 98%. If you have told Audiograbber to set the input level to a specific value then Audiograbber will also check the CD-ROM drive as input source. If you tell Audiograbber not to change the input volume and use whatever it is then the currently selected input source will not be changed either. You can manually start the mixer control to look at this, usually there is a speaker icon in the system tray on the computer. By clicking that icon (or manually start the program sndvol32.exe) the mixer program starts. When the mixer program start it shows the output settings for the soundcard instead of the input settings. You will have to go to Options, Properties and tell it to adjust volume for Recording to see the input settings.

Extra settings in the audiograbber.ini file

There are a few extra settings in the audiograbber.ini file which didn't fit in the user interface but some people may find helpful to use. You can open the audiograbber.ini file in a text editor and manually add one or more of the below lines.

ReplaceSpaces=True
MultipleInstances=True
ContinueRipping=True

ReplaceSpaces, if set to true then all spaces in filenames will be replaced by underscores. Some people that moves their files to a Unix system has asked for this feature.

MultipleInstances lets you run more than one audiograbber at a time. You can have two copies of Audiograbber.exe in separate directories and they will then be used with individual settings. This can be useful if you have more than one CD-ROM drive. It is however not recommended that you rip from two programs to the same harddisk at a time. That would make the read head of the harddisk to move a lot between the two files ripped to and may cause problems. Two programs ripping to different harddisks may work however.

ContinueRipping, this is an interesting feature. You need to run two copies of Audiograbber for this feature to be of any use. If you selected this in the ini file and rip from one copy of Audiograbber then it will post a message to the other copy of Audiograbber when finished. The other copy of Audiograbber will then start ripping as soon as the first one is finished. When the second copy of Audiograbber has finished ripping it will post a message to the first one. If there has been a new disc inserted in the first Audiograbber's selected CD-ROM drive then it will start ripping again. If it is still the same disc which has already been ripped then no action is taken. This feature is intended to be used with two copies of Audiograbber, if you are running more than two copies of Audiograbber then it is undefined which of the other copies that will continue ripping.

By using this feature and have the option to select all tracks by default and have the Auto Insert Notification for the drives selected in Control Panel then you will be able to not do anything more than just changing discs. Rip, normalize and encode without any clicks at all! Just insert a new disc once in a while.

Description
Description of the song or the album. For example: "An upbeat song that made quite of a rumble when it was released 1987. Listen carefully to the lyrics!"

Album cover URL
An internet link that points to a picture associated with the disc. Something like
http://www.audiograbber.com-us.net/jackie.jpg

Promotion URL

A link to the artists or distributors homepage. Something like http://www.audiograbber.com-us.net

Microsoft MS Audio

Microsoft MS Audio is Microsoft's answer to MP3. It is basically another file format for compressed audio and the file extensions for such files are .wma. Microsoft itself claims that the sound quality should be the same for a file that is only half the size of an MP3! This may be true or close to true for lower bitrates like 64 Kbit but I am not sure how good it sounds for higher bitrates. I rather stay out of the debates of which formats and which encoders that gives best quality. Other people are more suitable to judge that.
Encoding to wma is however very fast, slightly faster than Xing's MP3 encoder and not so much slower than QDesigns MP2 encoder.
It is definitely a file format to check out and with the power of Microsoft promoting it wma has a great chance to be a widely used file format. The encoder and decoder doesn't cost anything.

You can hopefully find more info at Microsofts own page:
http://www.microsoft.com/windows/windowsmedia/

Audiograbber can now internally compress to MS Audio too (It can also use Fraunhofers MP3 acm codec, BladeEnc's freeware MP3 dll and QDesigns MP2 codec) if   the computer has the proper codecs installed. I am negotiating with Microsoft to get permission to distribute the wmaudioredist.exe file that installs MS Audio on the computer. Until then you might be able to find the file wmaudioredist.exe on some other major MP3 players homepages. Sonique and Winamp, for example.