

Nero AAC Encoder

Tutorial

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1 Compression using Nero AAC Encoder

Using Nero AAC Reference MPEG-4 & 3GPP Audio Encoder, converting your audio files to MPEG-4 AAC is simplicity itself. The encoder is available for download from our website free of charge.

Convert your source files to MP4 files with crystal-clear audio quality – at compression ratios from ultra-high (corresponds to approx. 58 CDs all packed onto one CD) to high-end audio (2.5:1).

The Nero AAC encoder tool is operated via the command line.

This tutorial will explain how this is done easily and quickly.

The following requirements must be met:

- Nero AAC Encoder is installed on your PC (see downloading Nero AAC Encoder).
- The desired source files are saved in PCM-WAV format (see converting audio CDs to WAV format).

1.1 Downloading Nero AAC Encoder

To download and install Nero AAC Encoder, follow the instructions below:

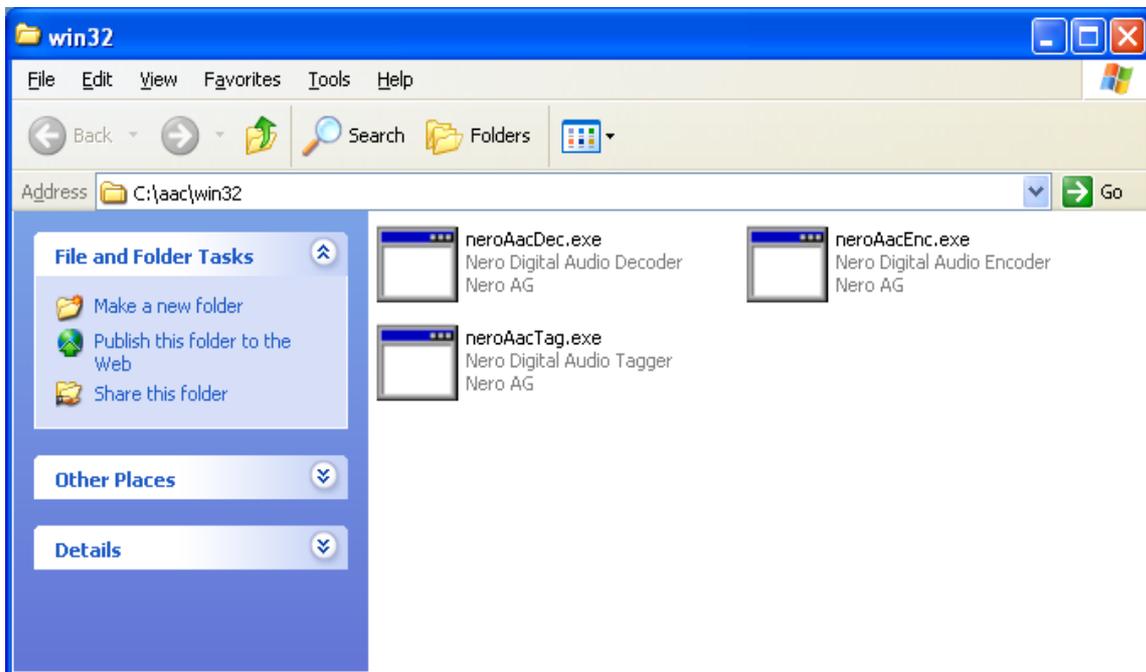
1. Load the ZIP archive to your hard disk.



You can download Nero AAC Encoder for free. The ZIP archive is available from our website under the Support > Support Tools > Tools & Utilities section.

2. Unzip the ZIP archive.

In the archive, in subfolder win32, you will find the encoder (neroAacEnc.exe), the decoder (neroAacDec.exe) and the metadata editor (neroAacTag.exe). These are command-line applications without graphical user interface.



3. On your hard disk, create a folder for the encoder (e.g. C:\aac).



The operation will be simpler if you save the encoder to a folder directly on your hard disk. This saves you entering long path information.

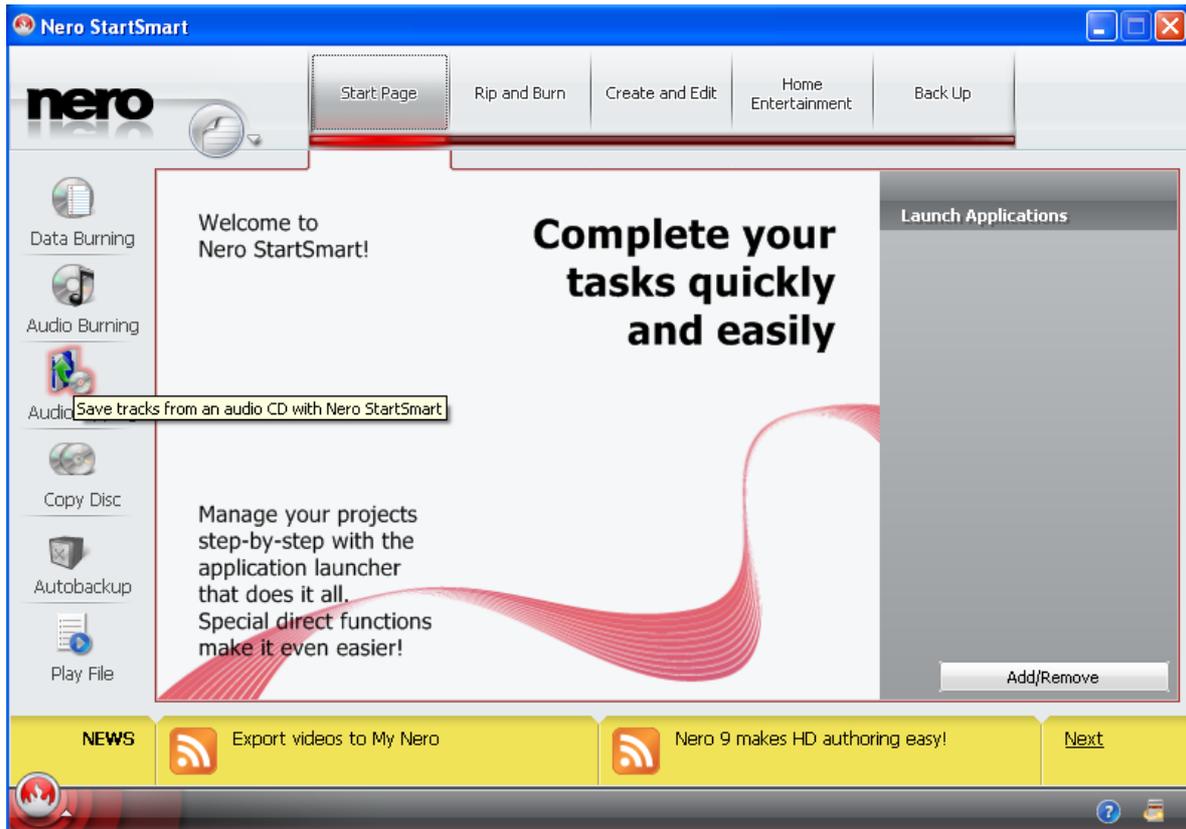
4. Copy the encoder into the folder created.

You have downloaded and installed Nero AAC Encoder. If your audio files are saved in WAV format, you can now use Nero AAC Encoder. If you want to convert your audio files to WAV format first, see converting files to WAV format.

1.2 Converting audio CDs to WAV format

To convert audio CDs to WAV format, follow the instructions below:

1. Insert the desired CD into your computer's drive.
2. Double-click the **Nero StartSmart** icon on your desktop.
The Nero StartSmart window is opened.



3. Click the **Audio Ripping** menu icon.
4. Choose **WAVE** as **Output file format**.
5. In the track list, select the audio tracks you wish to convert into WAV format.



If you want to convert all the audio tracks, simply click the **Select All** button.

6. In the input field **Target directory**, specify where you want the converted audio files to be saved.



Operation is even simpler if you save the files directly to the folder you have created for the encoder (e.g. C:\aac). This saves you entering long path information.

7. Click on the **Rip** button.
The conversion begins and you can monitor the progress in the corresponding dialogue window.
8. Close **Nero StartSmart**.

You have used Nero to convert the audio CD tracks to WAV format.
You can now use Nero AAC Encoder.

1.3 Use Nero AAC Encoder

Nero AAC Encoder is operated via the command line. You can specify quality settings and profile.

The complete command line consists of the following elements:

neroaacenc [options] -if "name of source file" -of "name of target file"



You can also use the decoder to convert MPEG4/3GPP files into PCM WAV format. Further details on this can be found in the readme.txt file contained in the ZIP archive.



Enter the command **neraacenc -help** in the command line and press Enter to display the help text and further command options. Help text is available for every file (encoder, decoder and metadata editor).



The operation will be simpler if you save the encoder and the files to a single folder directly on your hard drive (e.g. C:\aac). This saves you entering long path information.



To avoid error messages, pay careful attention to blanks, hyphens and the precise spelling of the file names when entering data. Entries are not case sensitive. If a file name contains blanks, surround it with inverted commas, e.g. "First song.wav".

This tutorial explains the operation by example of the encoder and files that are saved to C:\aac.

If you want to open the command line now, see opening the command line. If you want to convert a WAV file to MP4 format now, see compressing audio file. If you want to add cover information to already compressed files now, see adding cover information.

1.3.1 Opening the command line

To open the command line of Nero AAC Encoder, follow the instructions below:

1. Go to **Start > All Programs > Accessories** and click **Command Prompt**.

The command prompt window is opened. Current drive letter is indicated at the beginning of the line with cursor (Q in the example here).



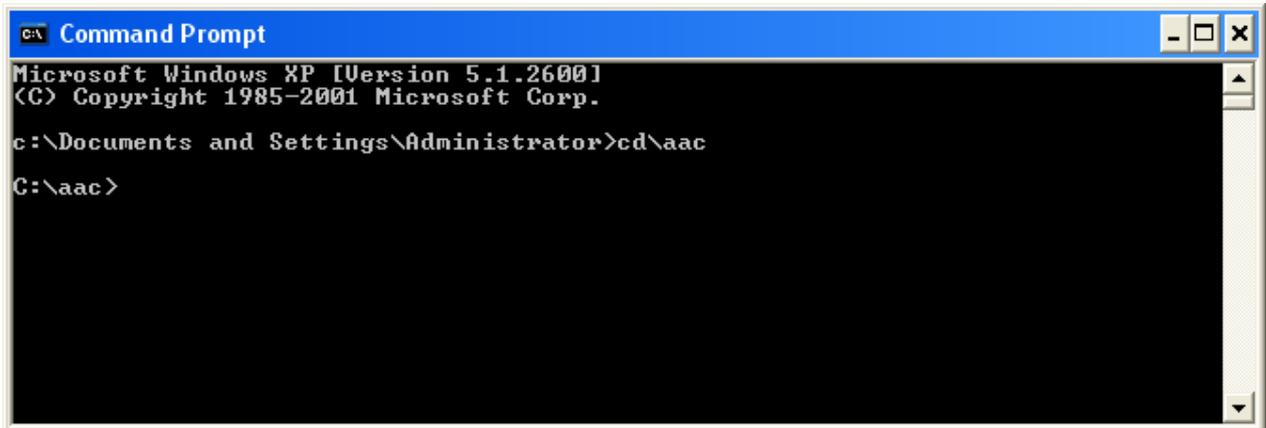
To avoid error messages, pay careful attention to blanks, hyphens and the precise spelling of the file names when entering data. Entries are not case sensitive. If a file name contains blanks, surround it with inverted commas, e.g. "First song.wav".

2. If the folder containing the encoder is saved to a different drive:
 - Change the drive. For this example, you would type **C:** and press Enter. The command line jumps to the desired drive.

```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

Q:\>c:
C:\>
```

3. Enter `cd\` and the directory path of the encoder. For this example, you would enter `cd\aac` and press Enter.
The command line jumps to the created folder.



You have opened the command line for Nero AAC Encoder. You can now make your entries.

1.3.2 Compressing audio file

Use the encoder to convert a WAV file to an MP4 file in MPEG4/3GPP format which takes up only a fraction of the memory.

To enter the complete command line for the compression of a WAV file, follow the instructions below:



To avoid error messages, pay careful attention to blanks, hyphens and the precise spelling of the file names when entering data. Entries are not case sensitive. If a file name contains blanks, surround it with inverted commas, e.g. "First song.wav".

1. Enter **neroaacenc**.

In our example, the command line now looks like this: **C:\aac>neroaacenc**.

2. If you wish, you can now add the desired quality settings.



If no quality settings are entered, the encoder automatically encodes the files in VBR mode at -q 0.5 producing high quality.

The following parameters can be set:

| Parameter | Mode |
|-----------|--|
| -q | Quality level at variable data rate <0.0-1.0> (VBR). |
| -br | Quality level at average data rate <8000-400000> (ABR). |
| -cbr | Quality level at constant data rate <8000-400000> (CBR). |

The variable data rate quality settings result in the following average bitrates:

| Quality | Bitrate (kbit/s) |
|---------|------------------|
| 0.05 | 16 |
| 0.15 | 33 |
| 0.25 | 66 |
| 0.35 | 100 |
| 0.45 | 146 |
| 0.55 | 192 |
| 0.65 | 238 |
| 0.75 | 285 |
| 0.85 | 332 |
| 0.95 | 381 |

3. If you wish, you can now add the desired profile settings.



Selecting a profile is not required and is not recommended. The encoder automatically determines the ideal AAC profile via the quality settings. It should be used only to force LC when you have a device that doesn't support HE.

The following AAC profiles are available:

| Parameter | Profile |
|-----------|-----------|
| -lc | LC-AAC |
| -he | HE-AAC |
| -hev2 | HE-AAC v2 |

In our example we will choose variable data rate that produces 123 Kbits per second. The command line now looks like this: **C:\aac>neroaacenc -q 0.4**.

4. Enter **-if**.
5. If the source file is saved to the same folder as the encoder, enter the file name of the source file now. If the source file is saved to a different folder, enter the entire path now. In our example, the command line now looks like this: **C:\aac>neroaacenc -q 0.4 -if track.wav**.
6. Enter **-of**.
7. If you wish to save the target file to the same folder as the encoder, enter the file name of the target file now. If you wish to save the target file to a different folder, enter the desired path now. In our example, the complete command line now looks like this: **C:\aac>neroaacenc -q 0.4 -if track.wav -of track.mp4**.

```
C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

c:\Documents and Settings\Administrator>cd \aac

C:\aac>neroaacenc -q 0.4 -if track.wav -of track.mp4_
```

8. Press Enter.

```
C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

c:\Documents and Settings\Administrator>cd \aac

C:\aac>neroaacenc -q 0.4 -if track.wav -of track.mp4
*****
* Nero AAC Encoder *
* Copyright 2008 Nero AG *
* All Rights Reserved Worldwide *
* *
* Package build date: Sep 17 2008 *
* Package version: 1.3.3.0 *
* *
* See -help for a complete list of available parameters. *
* *
*****

Processed 29 seconds...

C:\aac>
```

The file is converted.

You have now converted a WAV file to an MP4 file and saved it to the desired folder.

1.3.3 Adding cover information

The downloaded archive contains neroAacTag.exe. Use it to add metadata (embedded album art or textual tags) to a previously created MP4 file or to remove cover information.

The meta data editor neroAacTag.exe should already be located on your hard disk (see downloading Nero Digital Audio Encoder).

To add the cover information for a front cover, follow the instructions below:

1. Open the command line (see opening the command line).



To avoid error messages, pay careful attention to blanks, hyphens and the precise spelling of the file names when entering data. Entries are not case sensitive. If a file name contains blanks, surround it with inverted commas, e.g. "First song.wav".



Enter the command **neroAacTag -help** in the command line and press Enter to display the help text and further command options. A help text is available for every file (encoder, decoder and metadata editor).

2. Enter **neroaactag**.

In our example, the command line now looks like this: **C:\aac>neroaactag**.

3. If the source file, i.e. the previously created MP4 file, is saved to the same folder as the encoder, enter the file name of the source file now. If the source file is saved to a different folder, enter the entire path now.

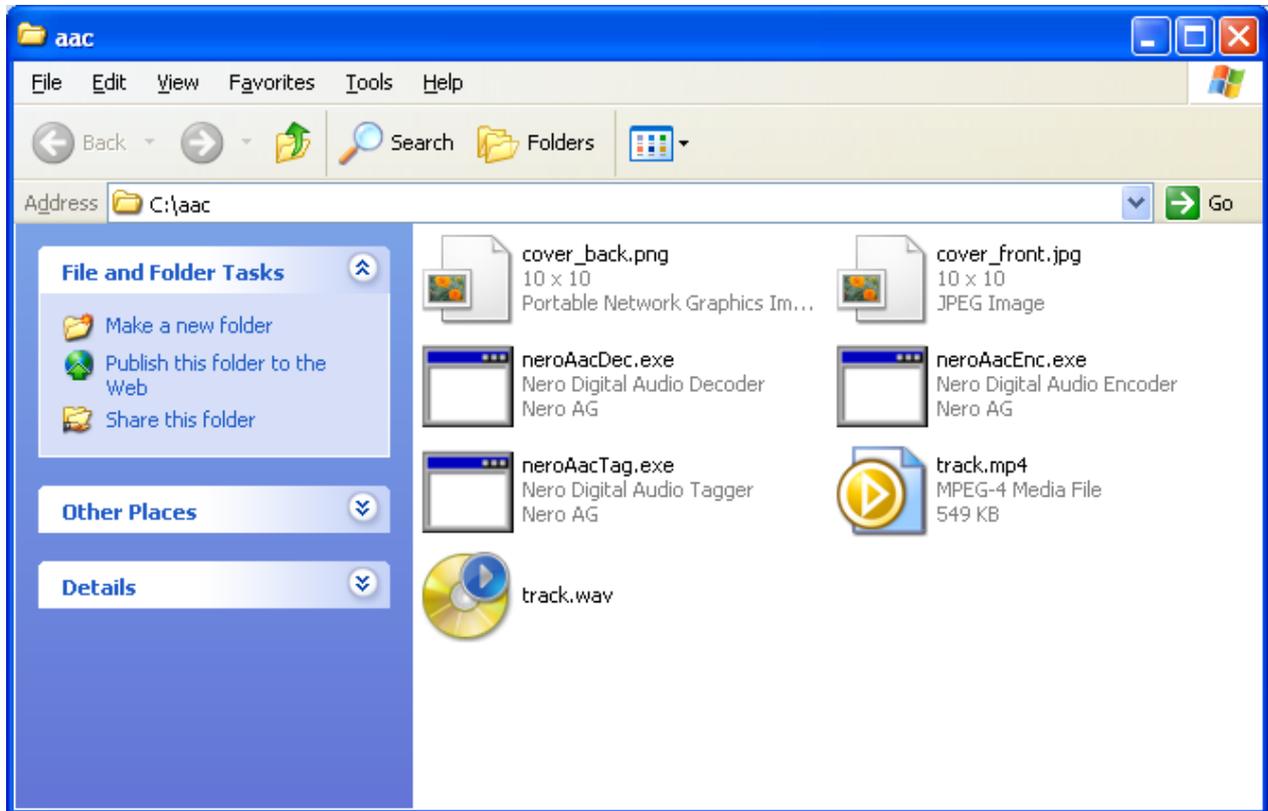
In our example, the command line now looks like this: **C:\aac>neroaactag track.mp4**.

4. Enter **-add-cover:front:**.

5. If the image file containing the cover information is saved to the same folder as the encoder, enter the file name now. If the file is saved to a different folder, enter the entire path now.

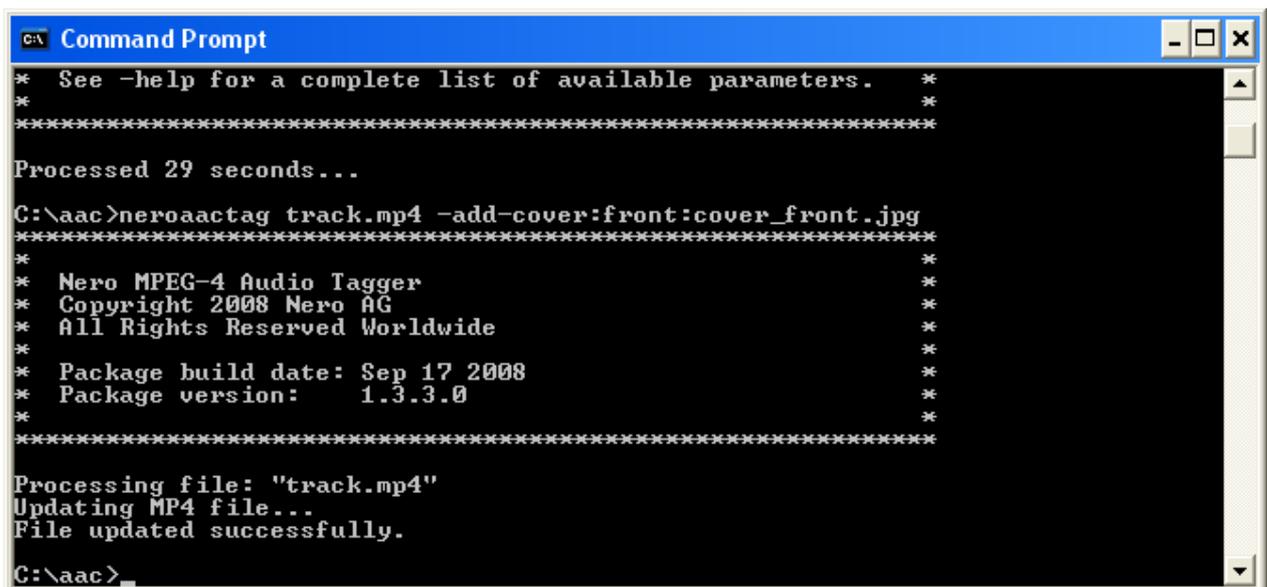


The operation will be simpler if all required files are in a single folder on your hard drive (e.g. C:\aac). This saves you entering long path information.



In our example, the command line now looks like this: **C:\aac>neroactag track.mp4 -add-cover:front:cover_front.jpg.**

6. Press Enter



The cover information is now added to the MP4 file.
You have now saved the cover information to your MP4 file.