



# Auro-Codec Encoder

User manual

Application version: v1.1

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# Contact Information

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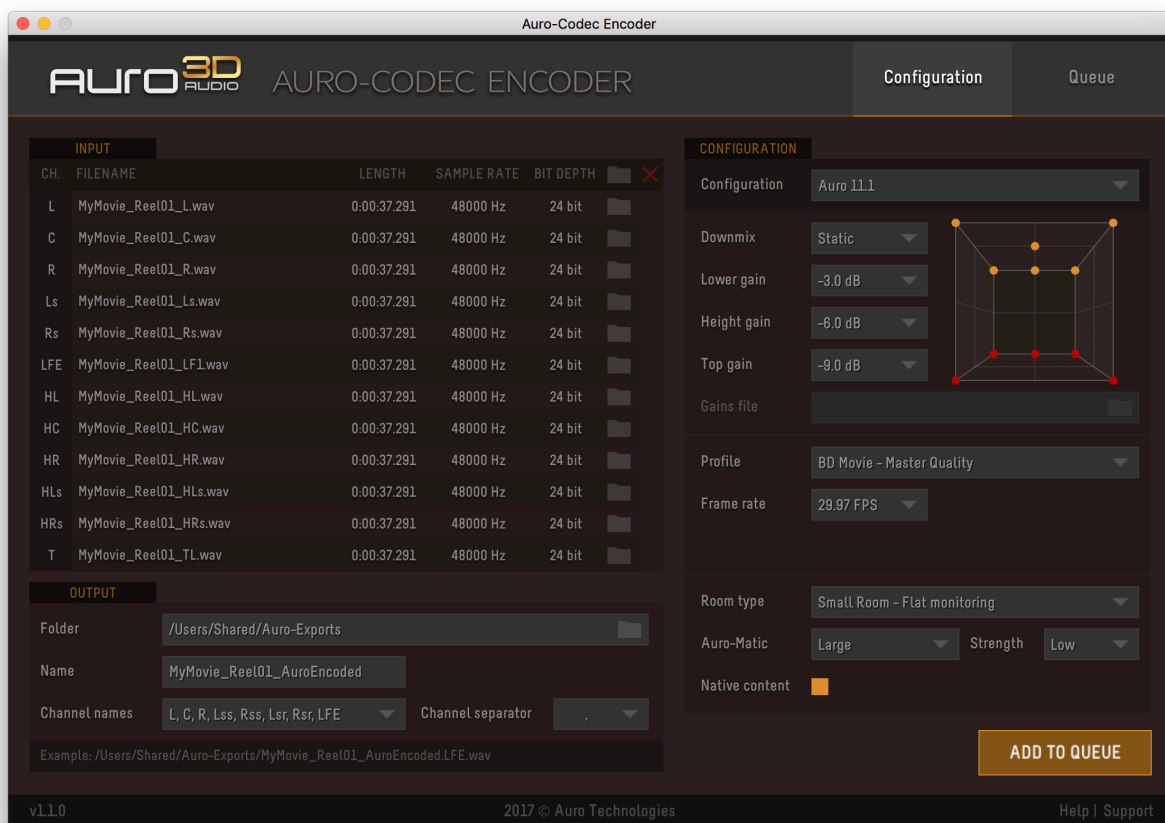
# Introduction

The Auro-Codec Encoder is part of the Auro-3D® Creative Tools Suite and works as a standalone application, outside your DAW. The application was conceived to enable the content creator in encoding their multi-channel 3D content into Auro-3D encoded multi-channel .wav files, compatible with existing Blu-ray players.

The application allows the user to:

- Select or drag and drop the input .wav files, individually or in group
- Specify the output path, base name and parameters for the encoded Auro-Codec files
- Specify the configuration parameters
- Add encodings to a queue
- Each queue item has its own status and progress bar
- A global progress bar indicates the status of all the encoding progress
- Start/stop encoding the queue

Below are some screenshots:



Auro-Codec Encoder

AURO-CODEC ENCODER

Configuration

Queue

QUEUE

NR	NAME	CONFIGURATION	PROFILE	STATUS
1	MyMovie_Reel01_AuroEncoded	Auro 11.1	BD Movie - Master Quality	✓
2	MyMovie_Reel02_AuroEncoded	Auro 11.1	BD Movie - Master Quality	✗
3	MyMovie_Reel03_AuroEncoded	Auro 11.1	BD Movie - Master Quality	✓
4	MySoundtrack_FinalMix_AuroEncoded	Auro 9.1	BD Music - Master Quality	—

DETAILS

Configuration	Auro 11.1
Downmix	Static: -3/-6/-9 (dB)
Profile	BD Movie - Master Quality
Frame rate	29.97 FPS
Length	0:00:37.291
Room type	Small Room - Flat monitoring
Auro-Matic	Large
Strength	Low
Native Content	Yes
Status	Completed successfully
Encoding time	8.9s
Encoding speed	x4.2 (125 FPS)

98%

STOP ENCODE

STATUS

Encoding started: MyMovie\_Reel01\_AuroEncoded  
 Encoding completed successfully: MyMovie\_Reel01\_AuroEncoded  
 Encoding started: MyMovie\_Reel02\_AuroEncoded  
 Encoding aborted by the user: MyMovie\_Reel02\_AuroEncoded  
 Encoding has been stopped.  
 The user started the queue.  
 Encoding started: MyMovie\_Reel03\_AuroEncoded  
 Encoding completed successfully: MyMovie\_Reel03\_AuroEncoded  
 Encoding started: MySoundtrack\_FinalMix\_AuroEncoded

v1.1.0

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# Chapter 1: Installing Auro-Codec Encoder

## 1.1. System requirements and Compatibility

Since the Auro-Codec Encoder runs outside your DAW, no dependencies on other installed software packages apply.

Supported Operating Systems:

- Mac OS X 10.8+
- Windows 7+ 64-bit

## 1.2. Installation

After purchasing the software, users must first download the latest software version using the provided download link.

If the download link has expired, contact support for a new one:

[support@auro-technologies.com](mailto:support@auro-technologies.com) or <https://support.auro-technologies.com/>

### 1.2.1. Installation on Mac

1. Extract the .zip file downloaded from the Auro Technologies website, then double click **Auro-Codec Encoder.pkg** to start the installation.
2. Follow the installation instructions.

### 1.2.2. Installation on Windows

1. Extract the .zip file downloaded from the Auro Technologies website, then double click **Auro-Codec Encoder Setup.exe** to begin the installation.
2. Follow the installation instructions.

## 1.3. Uninstallation

### 1.3.1. Uninstallation on Mac

To uninstall Auro-Codec Encoder, simply drag the application to the Trash.

### 1.3.2. Uninstallation on Windows

To uninstall Auro-Codec Encoder:

- Go to:  
**Control Panel > Programs > Uninstall a program** (Category view)  
or  
**Control Panel > All Control Panel Items > Programs and Features** (Small/Large icons view).
- Select or right-click 'Auro-Codec Encoder' from the list and click the uninstall button.

## 1.4. Licensing

To use the Auro-Codec Encoder, it is required to install an **Auro-Codec** license on a 2nd generation (or higher) iLok USB key.

For more information about iLok, visit:













[www.ilok.com](http://www.ilok.com)

# Chapter 2: Using Auro-Codec Encoder

## 2.1. Managing the Configuration Tab

### 2.1.1. Input section

This section provides information about your audio files and gives you a quick overview.

INPUT					
CH.	FILENAME	LENGTH	SAMPLE RATE	BIT DEPTH	
L	MyMovie_Reel01_L.wav	0:00:37.291	48000 Hz	24 bit	
C	MyMovie_Reel01_C.wav	0:00:37.291	48000 Hz	24 bit	
R	MyMovie_Reel01_R.wav	0:00:37.291	48000 Hz	24 bit	
Ls	MyMovie_Reel01_Ls.wav	0:00:37.291	48000 Hz	24 bit	
Rs	MyMovie_Reel01_Rs.wav	0:00:37.291	48000 Hz	24 bit	
LFE	MyMovie_Reel01_LF1.wav	0:00:37.291	48000 Hz	24 bit	
HL	MyMovie_Reel01_HL.wav	0:00:37.291	48000 Hz	24 bit	
HC	MyMovie_Reel01_HC.wav	0:00:37.291	48000 Hz	24 bit	
HR	MyMovie_Reel01_HR.wav	0:00:37.291	48000 Hz	24 bit	
HLs	MyMovie_Reel01_HLs.wav	0:00:37.291	48000 Hz	24 bit	
HRs	MyMovie_Reel01_HRs.wav	0:00:37.291	48000 Hz	24 bit	
T	MyMovie_Reel01_TL.wav	0:00:37.291	48000 Hz	24 bit	

Here are some of the features explained:

1. The **folder button** next to each row can be used to select exactly 1 audio file.
2. The **folder button** in the header can be used to select multiple audio files.
3. The red cross icon in the header is the **Clear All button**. It is used to clear the entire input table. A warning message is given, before any action is performed.
4. An entry in the input table can be selected by clicking on it. Navigation is possible using up and down arrows on the keyboard. An entry can be deleted by first selecting an entry, then hitting the **DEL button** on the keyboard.
5. **Drag and drop** is supported. When dragging exactly 1 file, the hovered area on the table will highlight exactly 1 entry. When dragging multiple files or a directory, the entire table will highlight.
6. An **automatic Configuration detection** occurs when using the multi-import button (in the header) or when drag and dropping multiple files or a directory. The application will try to deduce the mix layout, based on the different filenames and their channel naming. When the detection fails, an error message will be shown and manual linking to your audio files will be necessary. When the detection succeeds, the Configuration is updated to reflect the set of audio files and the audio files are filled in in the Input table.



## 2.1.2. Output section

This section is used to shape the filename structure of the encoded audio files.

The screenshot shows a dark-themed interface for the 'OUTPUT' section. It contains the following elements:

- Folder:** A text input field with the value '/Users/Shared/Auro-Exports' and a folder icon on the right.
- Name:** A text input field with the value 'MyMovie\_Reel01\_AuroEncoded'.
- Channel names:** A dropdown menu showing 'L, C, R, Lss, Rss, Lsr, Rsr, LFE'.
- Channel separator:** A dropdown menu showing a period '.'.
- Example:** A text field at the bottom showing the resulting filename: '/Users/Shared/Auro-Exports/MyMovie\_Reel01\_AuroEncoded.LFE.wav'.

Here are some of the features explained:

1. **Folder:** specifies where your encoded audio files will be written.
2. **Name:** specifies how your encoded audio files will be named. The file names will all start with this 'base name'.
3. **Channel names:** this component specifies the naming convention that is used in the encoded audio files, as well as the Input table naming in the channel column.
4. **Channel separator:** specifies which character is used between the base name and the channel for each of the encoded audio files.
5. **Example:** when all fields are filled in properly, an example is shown at the bottom of the Output section.

### 2.1.3. Configuration section

This section is used to configure the encoding with parameters like a downmix method, the frame rate and embedded metadata.

The screenshot displays the 'CONFIGURATION' section of a software interface. It features several settings:

- Configuration:** A dropdown menu set to 'Auro 11.1'.
- Downmix:** A dropdown menu set to 'Static'.
- Lower gain:** A dropdown menu set to '-3.0 dB'.
- Height gain:** A dropdown menu set to '-6.0 dB'.
- Top gain:** A dropdown menu set to '-9.0 dB'.
- Gains file:** A text input field with a folder icon on the right.
- Profile:** A dropdown menu set to 'BD Movie - Master Quality'.
- Frame rate:** A dropdown menu set to '29.97 FPS'.
- Room type:** A dropdown menu set to 'Small Room - Flat monitoring'.
- Auro-Matic:** A dropdown menu set to 'Large'.
- Strength:** A dropdown menu set to 'Low'.
- Native content:** A checkbox that is checked, indicated by an orange square.

To the right of the gain settings is a 3D cube diagram with yellow dots at the top corners and red dots at the bottom corners, representing a spatial audio field.

Here are some of the features explained:

1. **Configuration:** shows the mix layout of the Input section
2. **Downmix**
  - a. Static: Fixed values throughout the complete encoding. You can apply different values for the lower layer, height layer and top layer separately. Possible values are: 0.0dB, -3.0dB, -6.0dB, -9.0dB.
  - b. Dynamic: Values are read from a file and change constantly throughout the encoding. Every channel has its own downmix value. The file must be a .txt and is exported from our Pro Tools plugins.
3. **Profile & Frame rate**
  - a. BD Movie – Master Quality: When using this profile, the Frame rate shows you several options (23.976, 24, 25, 29.97, 30 FPS). Together, they will form the block size that the encoder will use.

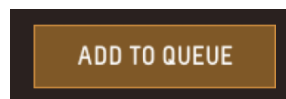
- b. BD Music – Master Quality: When using this profile, the Frame rate cannot be altered. A fixed block size is used.

#### 4. **Metadata parameters**

- a. Room type: The room type parameter indicates the type and calibration of the mixing room. It can be any of the following 4 values: No room type defined (0), Large Room – X-Curve (1), Large Room – X-Curve II (2), Small Room – Flat monitoring (3).
- b. Auro-Matic preset: There are 4 presets available: Small (0), Medium (1, default), Large (2), Speech (3)
- c. Auro-Matic strength: The strength can have values 0 up to 15. The application provides 4 options to set: Low (3), Medium (7, default), High (11) and Extreme (15).
- d. Native content: This flag indicates whether the content is originally created (recorded and/or mixed) in the Auro-3D format. When disabled, this means the content was up-mixed with Auro-Matic or another up-mixing technique.

### 2.1.4. Adding an encoding to the Queue

Clicking on the **Add to Queue** button will add an entry in the Queue (See Queue Tab).



1. The **Add to Queue** button will only enable when all fields are filled in. This includes all the input files and the output folder and name. As soon as one of these elements is deleted, the button will be disabled again.
2. When adding an entry into the queue, a check is being done to see if the output files already exist. This includes both effective files (= files already existing on the disk), as well as virtual files (=files that are queued and will be written later on to the disk).
3. After adding the first entry, the Queue Tab is automatically made active.

## 2.2. Managing the Queue Tab

The Queue Tab gives an overview of all the entries that were pushed, using the Add to Queue button. Every item has its own status and details. There are 3 sections, a global progress bar and an encode button available on the Queue Tab:

### 2.2.1. Queue section

This section gives an overview of the queued encodings.

QUEUE				
NR	NAME	CONFIGURATION	PROFILE	STATUS
1	MyMovie_Reel01	Auro 11.1	BD Movie - Master Quality	✓
2	MyMovie_Reel02	Auro 11.1	BD Movie - Master Quality	✗
3	MyMovie_Reel03	Auro 11.1	BD Movie - Master Quality	<div></div>
4	MySoundtrack_FinalMix	Auro 9.1	BD Music - Master Quality	🕒

Here are some of the features explained:

1. Every entry is a separate encoding that was added to the queue from the Configuration Tab.
2. Each entry has its own status. This is made visible with the following icons:
  - a. A clock (🕒): The entry is queued and waiting to be encoded.
  - b. A green checkbox (✓): The entry has completed successfully.
  - c. A red cross (✗): The entry has failed or has been aborted (by pressing the Stop Encode button).
  - d. A progress bar (📊): The entry is currently being encoded.
3. Failed or aborted items can be rescheduled with the Reschedule button. This button will only appear on failed or aborted items. After rescheduling an entry, the button will de-activate automatically. If your rescheduled entry fails again, you can reschedule that entry again, but not the first one. Failed or aborted entries can only be rescheduled once.

Status	Aborted	RESCHEDULE
Status	Aborted	RESCHEDULE

4. Entries can be deleted from the queue. Simply select the entry you wish to delete and hit the DEL key on your keyboard. Depending on the Status, you get a warning before deletion. The following cases will omit the warning message:
  - a. When an encoding has been completed before.
  - b. When an encoding has failed or was aborted, but has already been rescheduled.
5. Navigation is possible using the UP and DOWN keys on the keyboard.

### 2.2.2. Details section

This section shows the details of a selected queue entry.

DETAILS	
Configuration	Auro 11.1
Downmix	Static: -3/-6/-9 (dB)
Profile	BD Movie - Master Quality
Frame rate	29.97 FPS
Length	0:00:37.291
Room type	Small Room - Flat monitoring
Auro-Matic	Large
Strength	Low
Native Content	Yes
Status	Completed successfully
Encoding time	8.9s
Encoding speed	x4.2 (125 FPS)

Here are some of the features explained:

1. This section shows the Configuration parameters of the selected queue entry.
2. It also shows an Encoding time: a timer will run during the encoding and after an encoding is done, the duration of the encoding will be displayed.

### 2.2.3. Status section

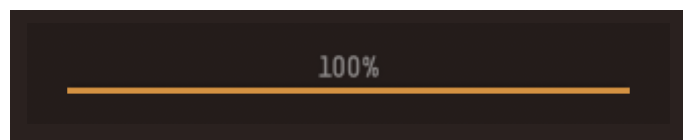
This section shows the queue actions: adding entries to the queue, deleting entries from the queue, when an encoding is started and ended, if an encoding has failed, etc.



Besides the 3 sections, we also have a **global progress bar** and the **encode button**.

### 2.2.4. Global progress bar

The global progress bar indicates the progress of all queue entries together.



### 2.2.5. Encode button

The encode button has 3 states: Start Encode, Stop Encode and a Disabled state. Encoding of the queue can be started and the button will be toggled to the 'Stop Encode' state. You can abort the encoding by pressing the Stop Encode button. A warning will appear prior to the actual aborting. After all encodings are completed (successful or aborted or failed) or when no encodings are queued, the button will go to the disabled state.



## 2.3. Keyboard shortcuts

Here is a list of available keyboard shortcuts:

<b>Configuration Tab:</b>	
<u>Global:</u>	
CONTROL + TAB	Moves to the Queue Tab.
<u>Input section:</u>	
UP	Moves the selected audio file upwards.
DOWN	Moves the selected audio file downwards.
<u>Output &amp; Configuration sections</u>	
TAB	Moves the cursor to the next element.
SHIFT + TAB	Moves the cursor to the previous element.
ESC	Cancels the editing of the Output Folder and Output Name elements.
<b>Queue Tab:</b>	
<u>Queue section:</u>	
UP	Moves to the next queue entry.
DOWN	Moves to the previous queue entry.

## 2.4. Consulting this manual

This manual is installed as part of the Auro-Codec Encoder application.

It can be accessed by:

1. Clicking the **Help** link in the footer of the application window.
2. (Windows) Start > All programs > Auro-Codec Encoder > Auro-Codec Encoder - User Manual

## 2.5. Checking Copyright information

The copyright notice for the Auro-Codec Encoder application is always visible in the footer of the application window.

## 2.6. Reporting an issue with Auro Technologies Support

Auro Technologies is always looking for ways to improve and enhance their products. In case you run into unwanted behaviour or want to run an idea for improvement by us, don't hesitate to report it to us.

1. Clicking link **Support** in the footer of the application window.
2. Send us an email at [support@auro-technologies.com](mailto:support@auro-technologies.com).