



ZYLIA Ambisonics Converter

Reference manual

Based on ZYLIA Ambisonics Converter version 1.4.0

Instruction revision B

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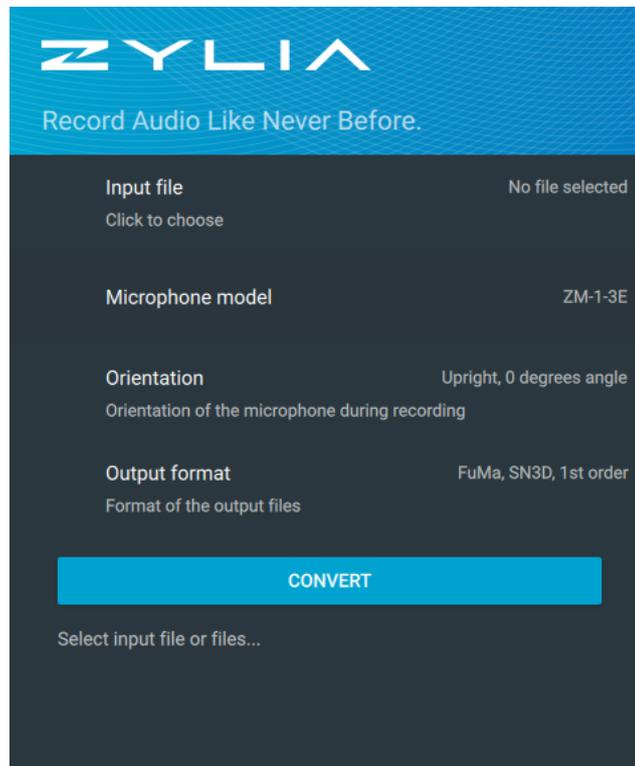
Overview

ZYLIA Ambisonics Converter is a stand-alone application which allows you to transform 19-channel ZYLIA ZM-1 recordings into Ambisonic files compatible with tools for VR and 360° video production.

Workflow Summary

In order to convert audio recorded by ZYLIA ZM-1 into an Ambisonics format perform the following steps:

1. Import 19 channel recording into ZYLIA Ambisonics Converter (you can process your files also in batches)
2. Select correct microphone model
3. Set conversion parameters and microphone orientation
4. Choose folder and export your recording



Installation

To install ZYLIA Ambisonics Converter:

- Download installation file suitable for your operating system from <http://www.zylia.co/zylia-ambisonics-converter-download.html>.
- Run installation package
- Follow instructions in the installator

Windows users should be aware that ZYLIA Ambisonics Converter needs Microsoft Visual C++ Redistributable 2015 to work.

If you have this packet (or higher) already installed, installation of it will finish with an error but the installation of ZYLIA Ambisonics Converter will be finished successfully.

License

Product keys for ZYLIA Software are provided via email to customers which registered on the company website (<http://www.zylia.co/register.html>). If you cannot find the message with your product keys, please check the SPAM folder in your mailbox first. If it is still missing send email to support@zylia.pl

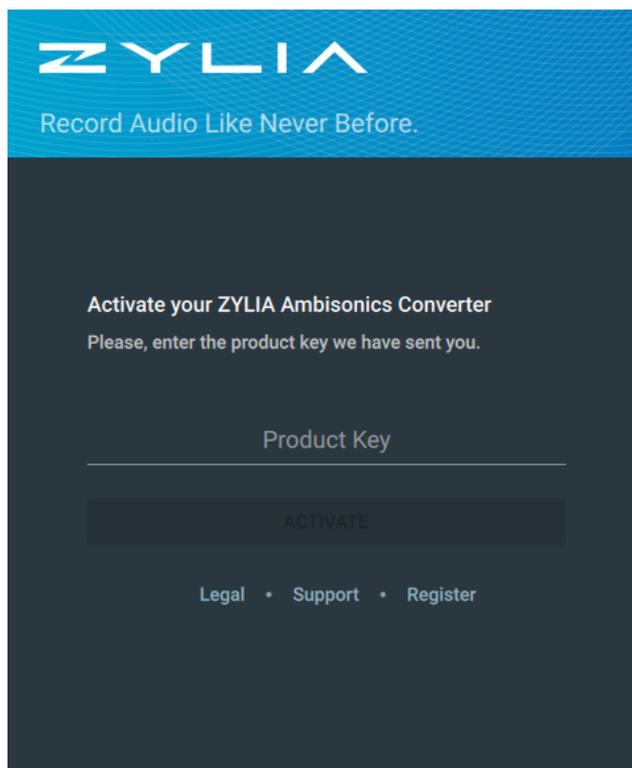
Activation

During first launch of ZYLIA Ambisonics Converter you will be asked for a product key. To activate software successfully an internet connection is required.

To activate:

- Enter the product key
- Click „Activate”





The maximum number of computers on which ZYLIA software can be activated is specified in the End User License Agreement.

Deactivation

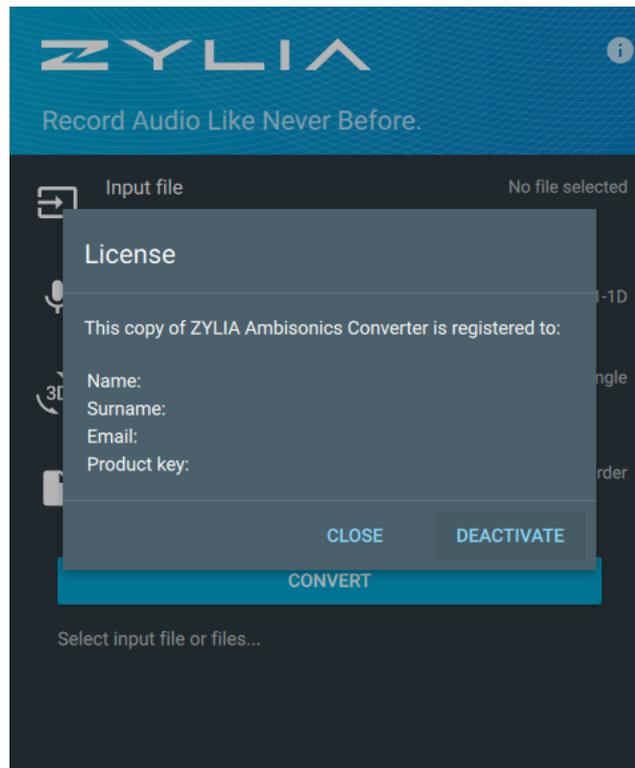
If you want to transfer ZYLIA Ambisonics Converter from one machine to another you can deactivate software.

To deactivate:

- Click on „i” icon
- Select „License” option
- Choose „Deactivate”

After deactivating you will be no longer able to use ZYLIA Ambisonics Converter on this machine. Number of deactivations is unlimited.





Converting

Importing files

ZYLIA Ambisonics Converter converts raw 19-channel recordings in WAV and WavPack format. You can select more than one file and process your recording in batches.

If you used ZYLIA Studio to record you can easily export 19-channel files in:

- *My Session* view – hover over recording and click on the *RAW* icon
- *Mixer* view – click on the *Export* button and select WAV/WavPack recording

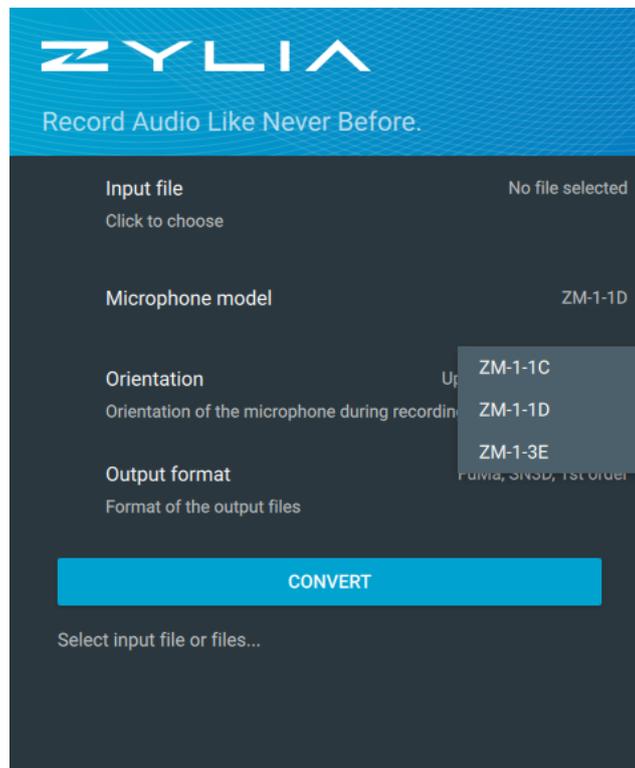
If you used another software to record (e.g. Audacity) you should export your recording with 48 kHz sample rate, 24-bit depth, and all 19-channels in one file.

Microphone model

Due to differences between ZM-1 microphones, it is important to select the correct microphone model. To do so, click on the „Microphone model” option. Setting incorrect microphone model will result in an inferior sound quality.

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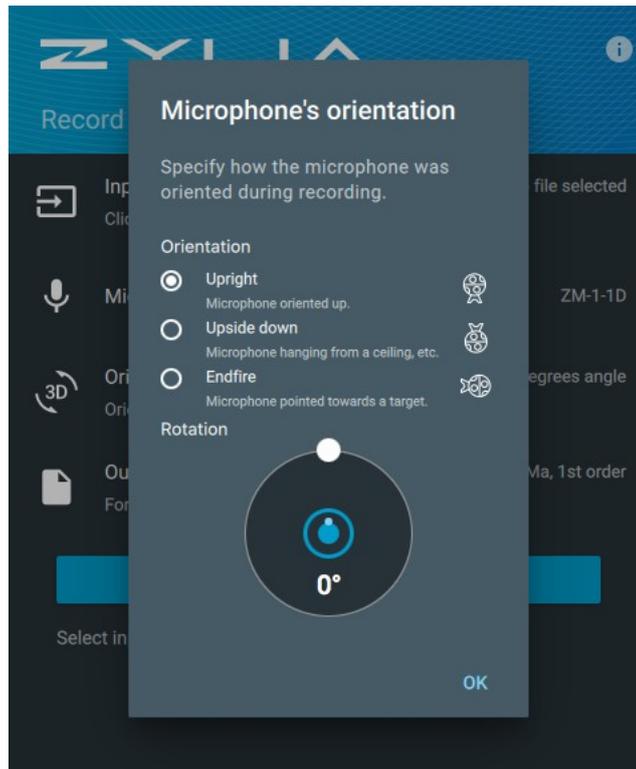
If you are not sure which microphone model you have, please refer to your OS hardware managing facilities.

- On Windows, you can use “Device Manager” application. When connected, your microphone model should appear in “Universal Serial Bus devices” list.
- On macOS use “Audio MIDI Setup” application. Your microphone model should appear in “Audio Devices” window.

Microphone's orientation

ZYLIA Ambisonics Converter enables you to perform conversion to Ambisonics format regardless of the orientation of the microphone during the recording. This gives you the freedom to e.g. mount it upside down below a 360 camera.



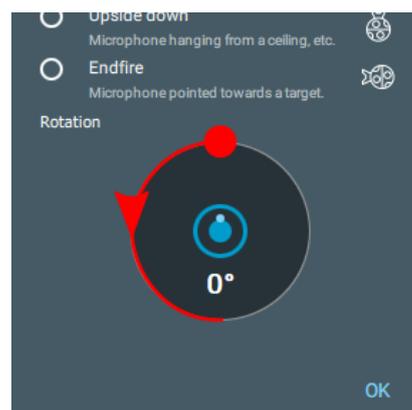
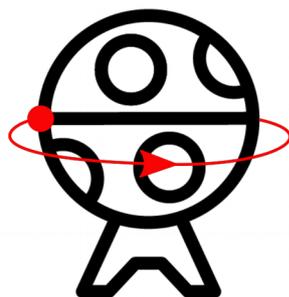


Orientation

Microphone orientation determines how ZYLIA ZM-1 was set with respect to the scene or camera position during recording.

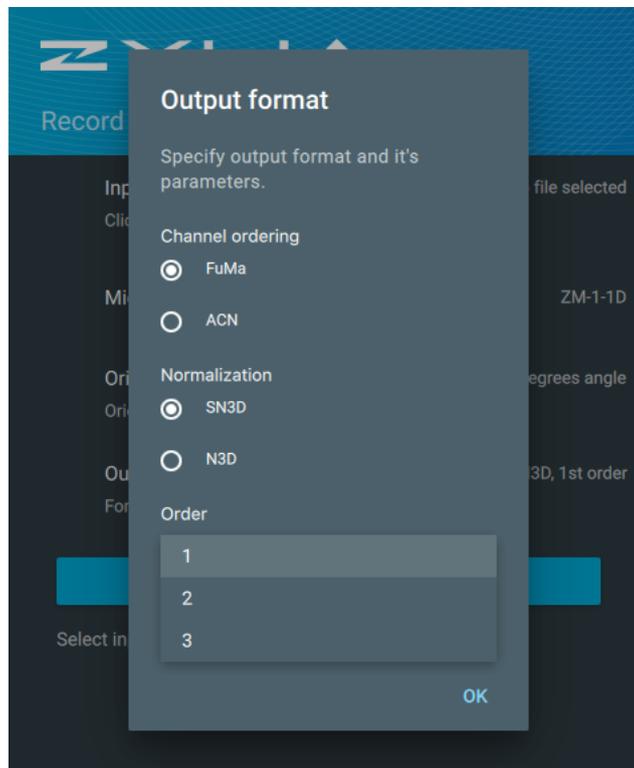
Rotation

Rotation is performed around the vertical axis of ZYLIA microphone to fine-tune the position of white/red dot on its casing. In case you forgot to point your ZM-1 towards the scene during recording, you can fix it here. The clockwise/counterclockwise rotation of the dot in ZYLIA Ambisonics Converter GUI corresponds to the clockwise/counterclockwise rotation of the ZM-1 in the horizontal axis.



Output format

To get compatibility with target media player or further processing chain it is essential to set correct output parameters. ZYLIA Ambisonics Converter gives you the possibility to select any combination of following settings.



Format

Selecting a correct format is crucial in terms of further processing. You should export files in formats that are compatible with software that you will use later.

You can choose between two options:

- FuMa – Furse-Malham channel ordering
- ACN – ACN channel ordering

Normalization

This parameter decides about the normalization method for the spherical harmonic components. You can choose between two common approaches:

- SN3D
- N3D

Choose a standard used by the decoding tool that you are willing to use for further processing of your HOA recordings.



Order

The higher order you set the more channels you get on output. Choosing 1st order results in 4, 2nd order – 9 and 3rd order – 16 output channels. Consider that choosing higher order gives you better localization and spatial impression but also requires more CPU power.

System requirements

- 64-bit Intel system
- Operating system:
 - macOS X 10.9 to the latest
 - Linux Ubuntu 16.04
 - Windows 7, 8.1, 10
- Minimum 2 GB RAM
- 500 MB of free space for ZYLIA Ambisonics Converter installation

Additional space will be required to store converted recordings.

Additional information

ZYLIA Ambisonics Converter end-user license agreement (EULA) is available in application („i” icon → *Legal*) and on the company website (<http://www.zylia.co/zylia-ambisonics-converter-download.html>)

If you require any additional information or if you encounter any technical issues, feel free to contact support@zylia.pl.

Support data export

To export support data:

1. Open ZYLIA Ambisonics Converter
2. Click on the „i” icon
3. Select Version and Updates and click EXPORT SUPPORT DATA.

