ZYLIA

ZYLIA Ambisonics Converter Plugin
Reference manual

Based on ZYLIA Ambisonics Converter Plugin version 1.2.0

Instruction revision A

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Overview

ZYLIA Ambisonics Converter Plugin is a VST/AU plugin which enables conversion to the Ambisonics format directly within a Digital Audio Workstation (DAW). Thanks to ZYLIA Ambisonics Converter Plugin the whole recording system becomes even more powerful enabling new features for 3D audio production and surround recording.

ZYLIA Ambisonics Converter Plugin transforms a single 19 channel ZYLIA ZM-1 recording into an Ambisonic file that is compatible with top class tools for VR and 360 video production.

ZYLIA Ambisonics Converter Plugin brings Ambisonic presets that can be used to create a sound for 360 videos for YouTube or Facebook. There is no need for time-consuming recording each source separately and spatial processing. Now it is possible to convert the entire sound scene recorded with ZYLIA to the Ambisonics format.

Workflow Summary

In order to process audio previously recorded by ZYLIA ZM-1 do the following:

1. import 19 channel recording into your DAW as a single track,
2. add ZYLIA Ambisonics Converter Plugin to the plugin chain of the track with your multichannel file,
3. set output Ambisonics parameters and the microphone position within ZYLIA Ambisonics Converter Plugin,
4. connect outputs from ZYLIA Ambisonics Converter Plugin to a new track within a DAW.

In order to process audio which comes directly from ZYLIA ZM-1 do the following:

1. select ZM-1 as an input device for a new track in a DAW,
2. add ZYLIA Ambisonics Converter Plugin to the plugin chain of the mentioned track,
3. set output Ambisonics parameters and the microphone position within ZYLIA Ambisonics Converter Plugin,
4. connect outputs from ZYLIA Ambisonics Converter Plugin to a new track within a DAW.

Important: ZYLIA Ambisonics Converter Plugin requires 48000 Hz sample rate.

Installation

To install ZYLIA Ambisonics Converter Plugin:

- Download installation file suitable for your operating system from
  http://www.zylia.co/zylia-ambisonics-converter-plugin-download.html

- Run the installation package

- Follow instructions in the installer

ZYLIA Ambisonics Converter Plugin by default will be installed in:

- C:\Program Files\Common Files\VST (Windows)

- Library/Audio/Plug-ins/VST (macOS).

Before the first launch make sure that the folder with ZYLIA plugin is included in the VST scanning path in your DAW (usually you can set it up in your DAW Preferences).

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 an email to support@zylia.pl.

Activation

ZYLIA Ambisonics Converter Plugin works in two modes:

- **Trial** – all application functions are available for 30 days. The trial mode can be used once on the particular machine.

- **Activated** – unlimited access to all application features.

During the first launch of ZYLIA Ambisonics Converter Plugin, 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
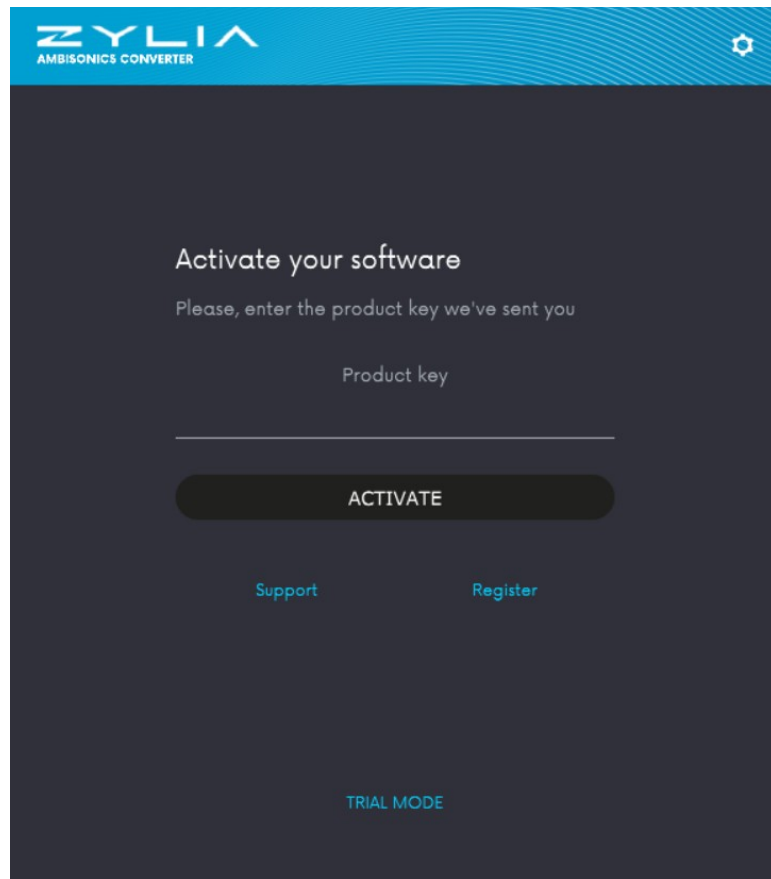
The maximum number of computers on which ZYLIA software can be activated is speci-fied in the End User License Agreement.

Deactivation

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

To deactivate:

• Click on the cog icon

• Choose DEACTIVATE

After deactivating you will be no longer able to use ZYLIA Studio PRO on this machine. The number of deactivations is unlimited.

Plugin setup

Microphone model

Due to differences between ZM-1 microphones, it is important to select a proper microphone model. To do so, use menu located in a top right area of plugin window. Setting an invalid microphone model will result in inferior sound quality.

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 on "Universal Serial Bus devices" list.

- On macOS use "Audio MIDI Setup" application. Your microphone model should appear in "Audio Devices" window.
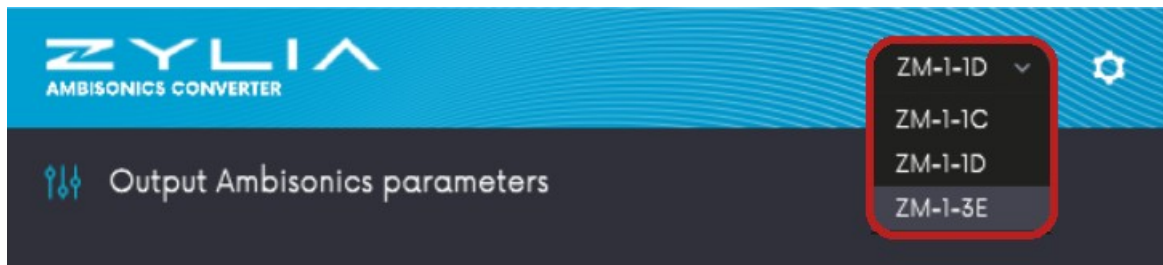
Microphone's orientation

ZYLIA Ambisonics Converter enables you to perform conversion to the 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.
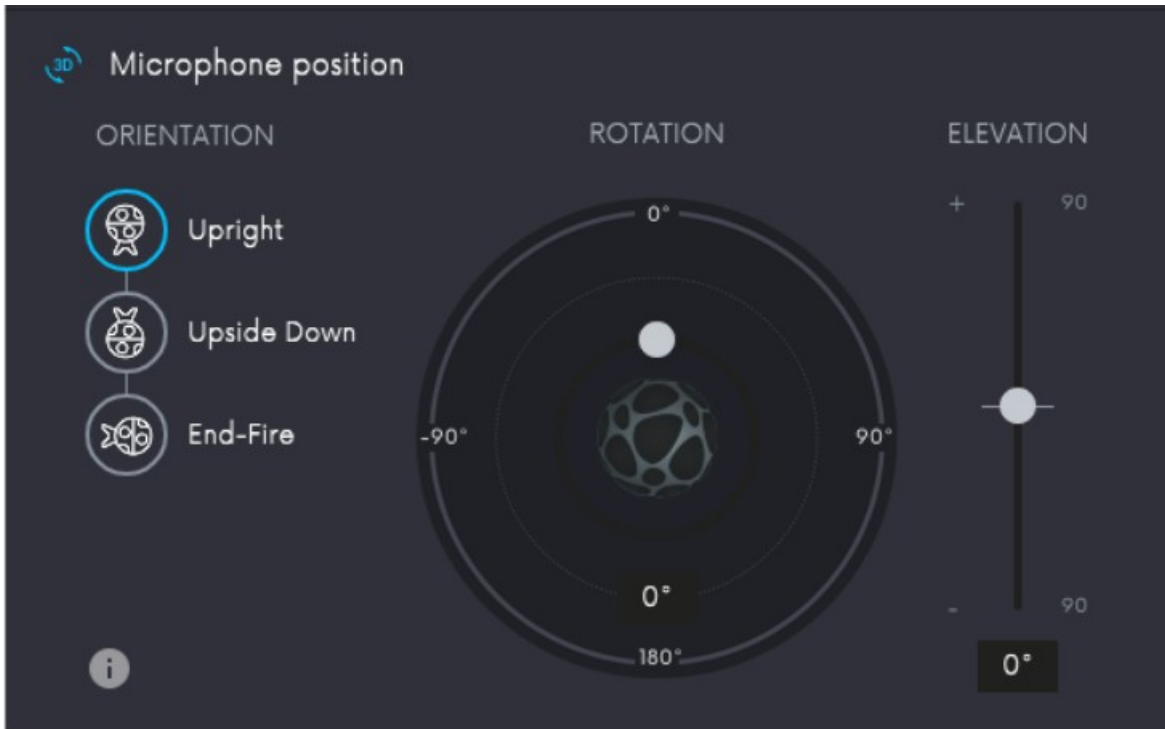
Orientation

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 the 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.
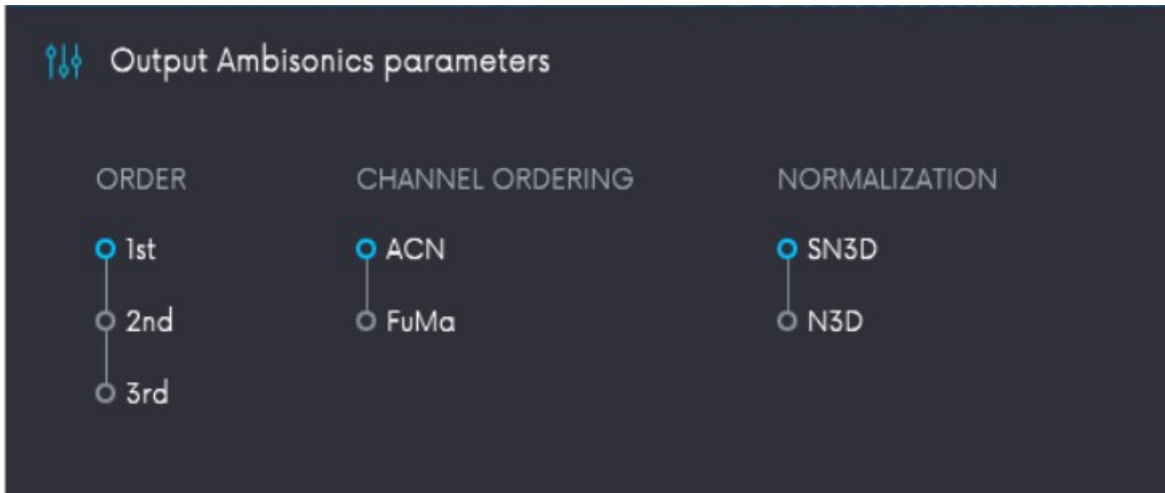
Elevation

With the elevation slider, you can adjust the angle of elevation of ZYLIA microphone.

Output format

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

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 a higher order gives you better localization and spatial impression but also requires more CPU power

Channel ordering

Selecting a correct format is crucial in terms of further processing. You should export files in formats that are compatible with the 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.

AAX limitations

Due to the fact that Pro Tools since version 12.8.2 supports a maximum of 16 channels per track, ZYLIA Ambisonics Converter Plugin in the AAX version works slightly different than the VST/AU version. It processes the first 16 channels from ZYLIA ZM-1 recording − bottom three microphones are omitted. The plugin has limited capabilities in terms of the Ambisonics - 1st and 2nd order are available.

System requirements

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

Additional information

The End User License Agreement (EULA) of ZYLIA Ambisonics Converter Plugin is available on the company website (http://www.zylia.co/zylia-ambisonics-converter-plugin-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 file with ZYLIA Ambisonics Converter plugin support data:

- click on the cog icon in the upper right corner of the plugin
- choose *Version and updates*
- click on *SUPPORT DATA* button and save the file.