

# **ZYLIA Streaming Application** Reference manual

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v1.0

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### **Overview**

**ZYLIA Streaming Application** is an application for MacOS which allows for quickly setting up the ZYLIA ZM-1 microphone for streaming of Ambisonics or binaural audio to other applications such as OBS, Zoom and other live audio streaming software.

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# Installation

#### **Prerequisites**

Before installing ZYLIA Streaming Application, the following prerequisites are necessary:

 IEM Binaural Decoder plugin <u>https://plugins.iem.at/docs/plugindescriptions/#binauraldecoder</u>

Install this plugin by following the instruction on the website: <u>https://plugins.iem.at/docs/installation/</u>

- ZYLIA Ambisonics Converter plugin Product Key
- Open Broadcast Software
   <u>https://obsproject.com/</u>

To use ZYLIA Streaming Application with OBS, install or update OBS to the latest version of this software. If you already have it installed, you can update it by opening OBS – Help – Check for updates.

It is also recommended to install SoundFlower or Blackhole Virtual Audio device for additional audio routing possibilities. Because Soundflower is no longer being supported, we recommend Blackhole for latest macOS versions.

https://github.com/mattingalls/Soundflower/releases

https://existential.audio/blackhole/

#### Instructions

- 1. Close other applications
- 2. Download the ZYLIA Streaming Application installer package appropriate for your operating system. Download from: <u>https://www.zylia.co/downloads.html</u>
- Run the installer and follow the displayed instructions. The user will be reminded to complete the prerequisites before installation.

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4. ZYLIA Streaming application includes ZYLIA Streamer OBS plugin, an OBS plugin capable of streaming audio directly from ZYLIA Streaming Application to OBS.

You can verify this plugin is installed by:

MacOS: Open Finder, locate OBS application. Right click – Show package Contents.

Under Plugins you should find "libzylia-streaming-plugin"

• • •	S OBS			
< >			Q Search	
Favorites	Name ^	Date Modified	Size	Kind
AirDrop	Contents	9 Jan 2021 at 01:07		Folder
	CodeSignature	9 Jan 2021 at 01:07		Folder
Recents	Frameworks	9 Jan 2021 at 01:07		Folder
iCloud Drive	info.plist	9 Jan 2021 at 01:07	1 KB	Property
Applications	MacOS	9 Jan 2021 at 01:07		Folder
	🔻 🚞 Plugins	Today at 12:39		Folder
Desktop	coreaudio-encoder.so	9 Jan 2021 at 01:07	99 KB	Docume
🖺 Documents	decklink-captions.so	9 Jan 2021 at 01:07	91 KB	Docume
Downloads	decklink-ouput-ui.so	9 Jan 2021 at 01:07	307 KB	Docume
Downloads	frontend-tools.so	9 Jan 2021 at 01:07	550 KB	Docume
Devices	iconengines	9 Jan 2021 at 01:07		Folder
Remote Disc	image-source.so	9 Jan 2021 at 01:07	85 KB	Docume
Ŭ	imageformats	9 Jan 2021 at 01:07		Folder
Shared	libzylia-streaming-plugin.so	13 Jan 2021 at 16:43	140 KB	Docume
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# Activation

In order to activate ZYLIA Streaming Application, the user requires **ZYLIA Ambisonics Converter Plugin** Product Key.

Simply enter the product key on the field and click Activate.

To obtain a product key for the software, the user may purchase ZYLIA Ambisonics Converter software available through https://shop.zylia.co/

• • •	ZYLIA Streaming Application	
		۵
		٥
Settings OUTPUT TYPE Ambisonics Binaural	Activate your software Please, enter the product key we've sent you Product key ACTIVATE	
Open Binaural Plugin Window	TRIAL MODE	

#### **Deactivation**

If you don't want to use the application on a particular machine, you can deactivate this copy. Click on the cog icon, choose *License* and click DEACTIVATE.

You are able to reactivate the software by entering the product key.

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## Interface

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ZYLIA Streaming Application is composed of two main panels:

On the Left panel:

- Start streaming button. Click it to enable the audio streaming to the assigned output. Click again to stop.
- Settings. Audio device Input and Output.
- Output type: Choose between Ambisonics 16 channel or Binaural audio
- Open Binaural Plugin window: Opens IEM Binaural Decoder plugin settings. (Ambisonics order, type of normalization and headphone presets)

On the Right panel:

 ZYLIA Ambisonics Converter plugin window. Here you can select your settings for conversion from the ZM-1 signal input to the Ambisonics domain.
 For more information, please refer to ZYLIA Ambisonics Converter plugin Reference manual available through: https://www.zylia.co/downloads.html

On the top right corner you will find the Settings button for ZYLIA Streaming Application containing End User Agreement and Third-Party Licenses.



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### Usage

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After the application has been activated, the ZYLIA ZM-1 microphone may be connected to the computer.

To set the Input for the ZYLIA ZM-1 microphone, click on *Settings* and select your ZM-1 microphone as the *Input*.

As the output, you may select between multiple options, such as Aggregate Device, Soundflower/ Blackhole and ZYLIA Streamer OBS plugin (this plugin is limited to 4 channels).

The selected *Output* should be chosen depending on your streaming platform.

Below you will find different use cases for Zoom videoconferencing application and OBS.

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	O 1st	O ACN	O SN3D
OUTPUT TYPE	o 2nd	o FuMa	0 N3D
• Ambisonics	Audio S	ettings	
0 Binaural	Output: ZYLIA Stre	amer OBS Plugin	~
	Input: Zylia ZM-1		~
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After setting the input and output, you can choose one of the following presets:

• Binaural Output: The ZM-1audio signal is processed by ZYLIA Ambisonics Converter and IEM Binaural Decoder plugin, resulting in the 2-channel binaural audio output.

By clicking *Open Binaural Plugin Window* you may alter between Ambisonics Orders, input normalization and headphone equalization.

• Ambisonics Output: ZM-1 audio signal is processed by ZYLIA Ambisonics Converter plugin, resulting in B-Format output.

**NOTE:** It is possible to stream 2<sup>nd</sup> and 3<sup>rd</sup> order Ambisonics with special version of OBS (OBS Studio Music Edition v25.0.8 - <u>https://github.com/pkviet/obs-</u> <u>studio/releases/tag/25.0.8win</u>).

ZYLIA Streamer OBS plugin is limited to 4 channels, therefore for 2<sup>nd</sup> or 3<sup>rd</sup> Ambisonics order streaming, use Soundflower/Blackhole 16 channel as the Output device.

The user should be aware of the audio format limitations of the streaming platform.

#### Streaming ZYLIA ZM-1 Binaural or Ambisonics audio to OBS

1. In order to receive the input from the ZYLIA ZM-1 to OBS, the user should select on the *Settings*: Input: ZYLIA ZM-1 microphone

Output: ZYLIA Streamer OBS plugin

2. Afterward, select your preferred audio processing, binaural or ambisonics. By selecting Ambisonics, make sure OBS is configured to the corresponding number of channels, in this case 4 Channel output.

Selecting binaural results in 2 channel stereo output.

3. Click on the Red button to Start Streaming.

4. Open OBS and configure your session according to the audio output selected. (OBS – Settings – Audio – General – Channels: Stereo or 4.0)

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#### ZYLIA Streaming Application Reference Manual



	OBS 26.1.2 (mac) - Profile: Day 2 - Scenes: Untitled		
y Audio Input Captur ⊲) Audio Output Captur Browser ✓ Color Source □ Display Capture □ Image			
No source selected Media Source			
Scenes	Audio Mixer	Scene Transitions	Controls
Text (FreeType 2)		Pade V 12	Start Streaming
► VLC Video Source			Start Recording
Video Capture Devi	9		Start virtual Camera
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	(®) LIVE: 00	:00:00 • REC: 00:00:00 CPU: :	3.5%, 30.00 fps

5. On the Media Sources, click + to add the source ZYLIA Streaming.

ZYLIA Streaming source should now appear on the Audio Mixer and you should now be receiving binaural or ambisonics signal.

• • •		OBS 26.1.2 (mac) - Profile: Day 2 - Scenes: Untitled		
ZYLIA Streaming	Properties 📎 Filters			
Scenes	Sources	Audio Mixer	Scene Transitions	Controls
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			Duration 300 ms	Start Recording
				Start Virtual Camera
				Studio Mode
		₽.		Settings
1				Exit
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		(@) LIVE: 00:00:0	00 • REC: 00:00:00 CPU:	6.6%, 30.00 fps

6. In alternative to use ZYLIA Streaming plugin, you may choose to select Soundflower/Blackhole as the main output on the ZYLIA Streaming App.

To use this setting in OBS, click on Settings – Audio Devices – SoundFlower/ Blackhole

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ZYLIA

		Settings	
General	General		
	Sample Rate	48 kHz	
A Stream	Channels	Stereo	
Output	Devices		
Audio	Desktop Audio	Disabled	
	Dockton Audio 2	Default MacBook Air Microphone	
Video	Desktop Audio 2	Soundflower (2ch)	· · · · · · · · · · · · · · · · · · ·
	Mic/Auxiliary Audio	/ Soundflower (64ch)	<b>\$</b>
Hotkeys	Mic/Auxiliary Audio 2	Disabled	
Advanced	Mic/Auxiliary Audio 3	Disabled	
	Mic/Auxiliary Audio 4	Disabled	
	Meters		
	Decay Rate	Fast	
	Peak Meter Type	Sample Peak	
	Advanced		
	Monitoring Device	Default	
	Hatkove		
Apply			Cancel OK

In order to configure audio and video streaming in OBS please refer to the following guides: <u>https://obsproject.com/wiki/</u>

#### Streaming ZYLIA ZM-1 Binaural audio to Zoom videoconferencing application.

1. To stream audio from ZYLIA Streaming Application to Zoom select on the main settings:

Input: ZYLIA ZM-1 microphone

Output: Soundflower or Blackhole Virtual audio device

2. As for now, Zoom only supports stereo audio, therefore choose Binaural as your audio configuration. Enable the stream.

3. In Zoom, open Settings – Audio. As the Microphone or input device, select Soundflower or Blackhole virtual audio device.

4. Also in Zoom, In "Music and Professional Audio" enable "Show in-meeting option to Turn On Original Sound". Enable as well "Stereo audio"

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5. When starting a videoconferencing, you will now have the option to "Turn On Original Sound" and you will transmit binaural audio from ZYLIA Streaming Application.

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### Support

In case of any technical problems please check our online support center at <u>www.zylia.co/support</u>.

If you have any questions regarding ZYLIA Streaming Application and its configuration, please contact **support@zylia.pl**.

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