ZYLIA Streaming Application
Reference manual

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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.

Installation

Prerequisites

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

- IEM Binaural Decoder plugin
  https://plugins.iem.at/docs/plugindescriptions/#binauraldecoder

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

- Open Broadcast Software
  https://obsproject.com/

  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.

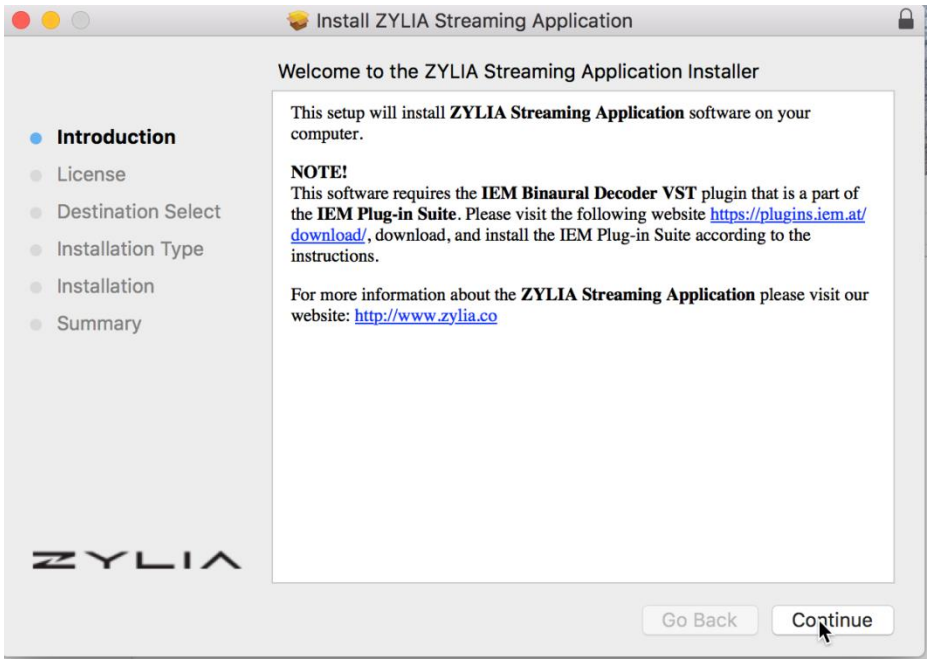
It is also recommended to install SoundFlower or Blackhole Virtual Audio device for additional audio routing possibilities.Because Soundflower is no longer being supported, we recommend Blackholefor latest macOS versions.

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

https://existential.audio/blackhole/

Instructions

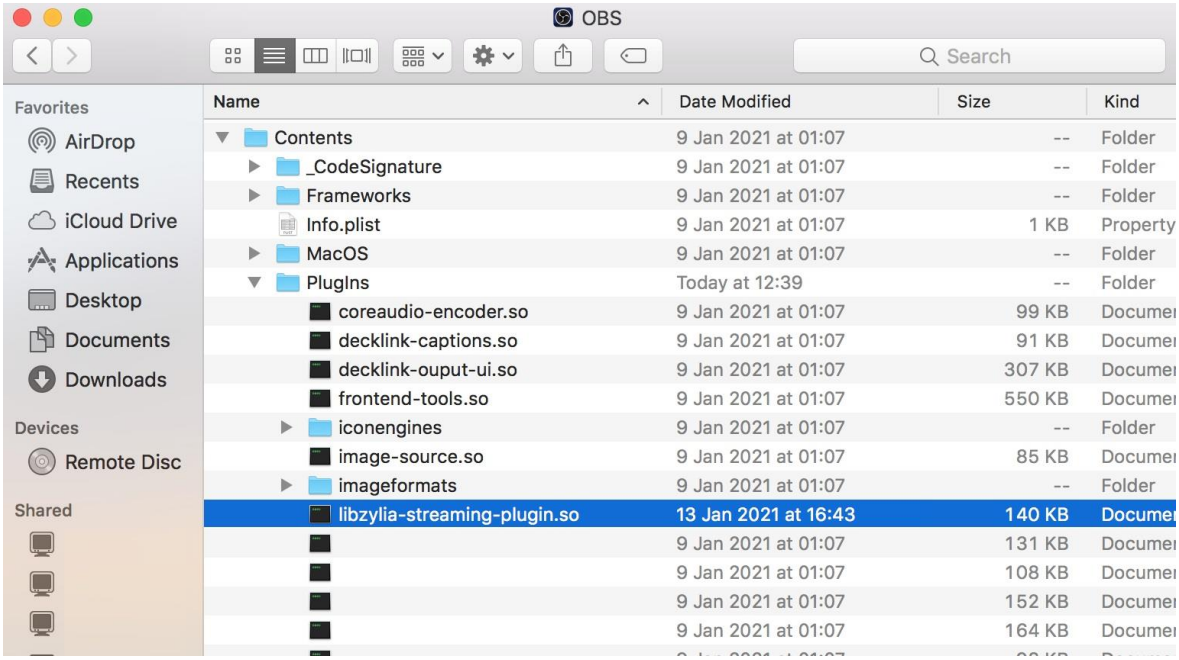
1. Close other applications
2. Download the ZYLIA Streaming Application installer package appropriate for your operating system. Download from:
   https://www.zylia.co/downloads.html
3. Run the installer and follow the displayed instructions.
   The user will be reminded to complete the prerequisites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



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”


OBS
Search
Favorites
AirDrop
Recents
iCloud Drive
Applications
Desktop
Documents
Downloads
Devices
Remote Disc
Shared
Name
Date Modified
Size
Kind
Contents 9 Jan 2021 at 01:07 -- Folder
_CodeSignature 9 Jan 2021 at 01:07 -- Folder
Frameworks 9 Jan 2021 at 01:07 -- Folder
Info.plist 9 Jan 2021 at 01:07 1 KB Property
MacOS 9 Jan 2021 at 01:07 -- Folder
PlugIns Today at 12:39 -- Folder
coreaudio-encoder.so 9 Jan 2021 at 01:07 99 KB
decklink-captions.so 9 Jan 2021 at 01:07 91 KB
decklink-ouput-ui.so 9 Jan 2021 at 01:07 307 KB
frontend-tools.so 9 Jan 2021 at 01:07 550 KB
iconengines 9 Jan 2021 at 01:07 -- Folder
image-source.so 9 Jan 2021 at 01:07 85 KB
imageformats 9 Jan 2021 at 01:07 -- Folder
libzylia-streaming-plugin.so 13 Jan 2021 at 16:43 140 KB
9 Jan 2021 at 01:07 131 KB
9 Jan 2021 at 01:07 108 KB
9 Jan 2021 at 01:07 152 KB
9 Jan 2021 at 01:07 164 KB

Interface

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.

ZYLIA Streaming Application
STREAMING APPLICATION
Settings
OUTPUT TYPE
Ambisonics
Binaural
Open Binaural Plugin Window
AMBISONICS CONVERTER
ZM-1-1C
Output Ambisonics parameters
ORDER
1st
2nd
3rd
CHANNEL ORDERING
ACN
FuMa
NORMALIZATION
SN3D
N3D
Microphone position
ORIENTATION
Upright
Upside Down
End-Fire
ROTATION
ELEVATION
0°

Usage

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.

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 2nd and 3rd order Ambisonics with special version of OBS (OBS Studio Music Edition v25.0.8 - ***https://github.com/pkviet/obs-studio/releases/tag/25.0.8win***).

ZYLIA Streamer OBS plugin is limited to 4 channels, therefore for 2nd or 3rd 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.

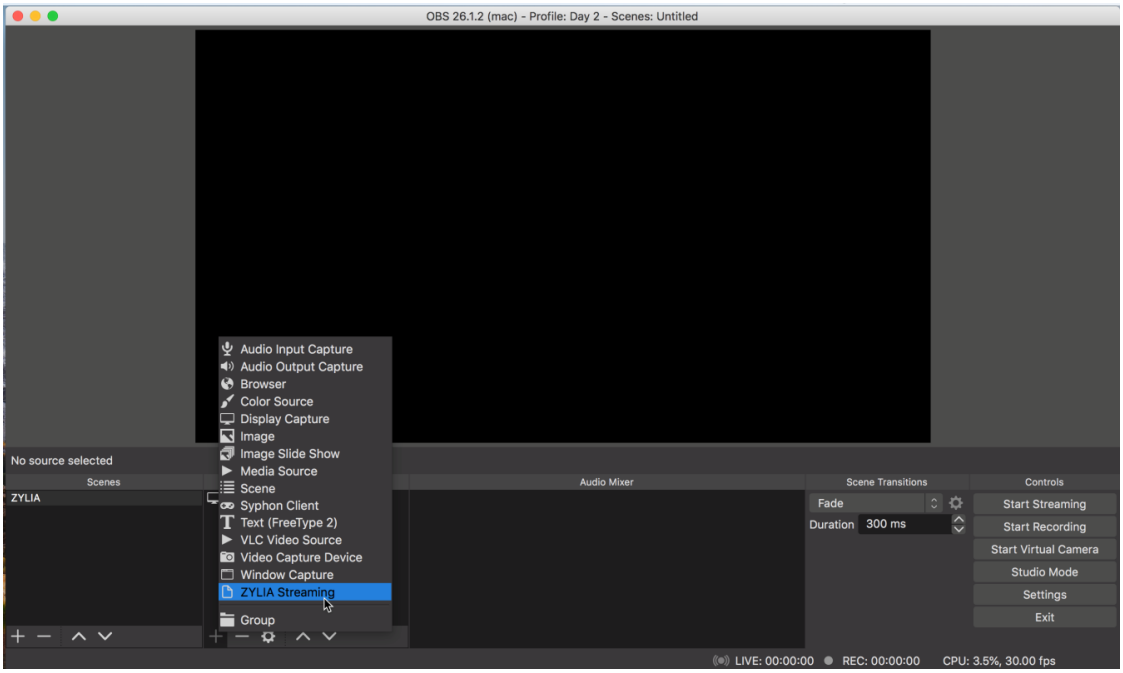
Streaming ZYLIA ZM-1 Binaural or Ambisonics audio to OBS

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

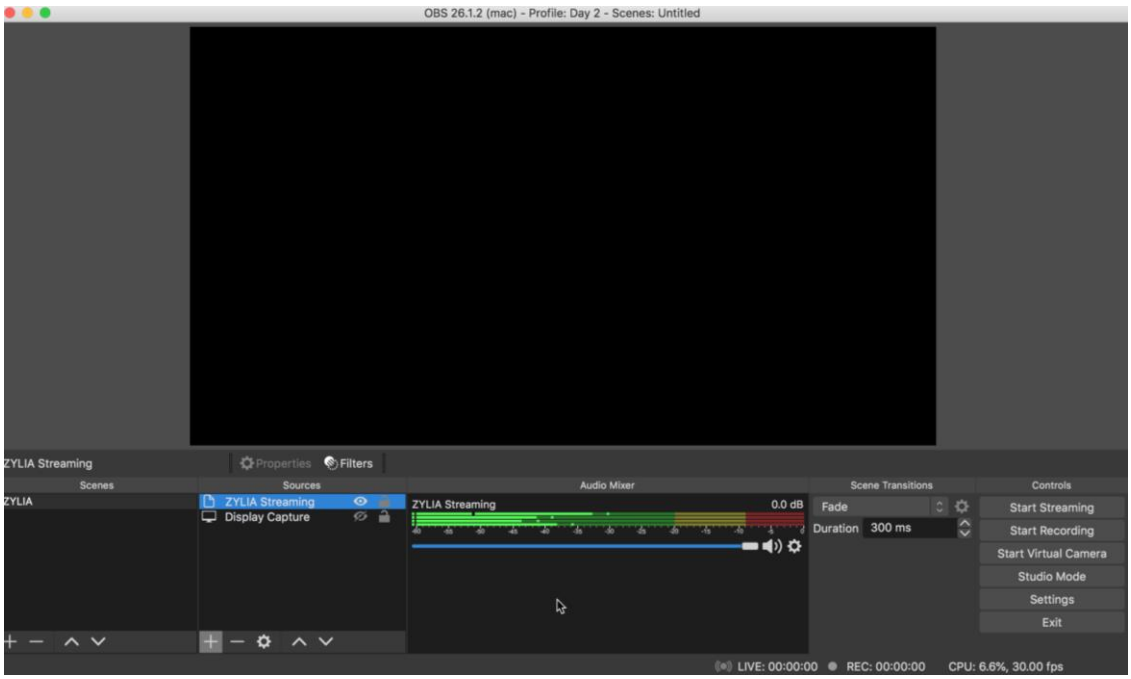
2. Afterward, select your preferred audio processing, binaural or ambisonics. By selecting Ambisonics, make sure OBS is configured to the corresponding number of channels, in this case, 4 Channel output.
Selecting binaural results in 2 channel stereo output.

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)

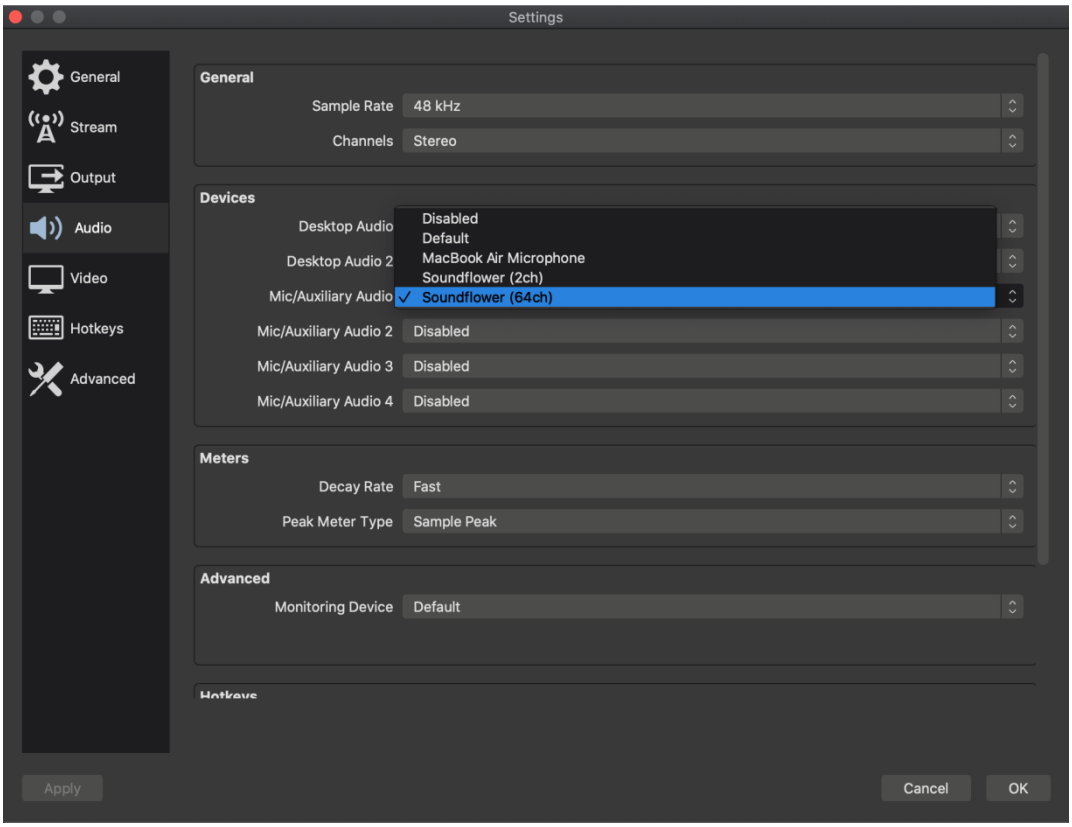


5. On the Media Sources, click **+** to add the source *ZYLIA Streaming*
ZYLIA Streaming source should now appear on the Audio Mixer and you should now be receiving binaural or ambisonics signal.



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/ Black hole*



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

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

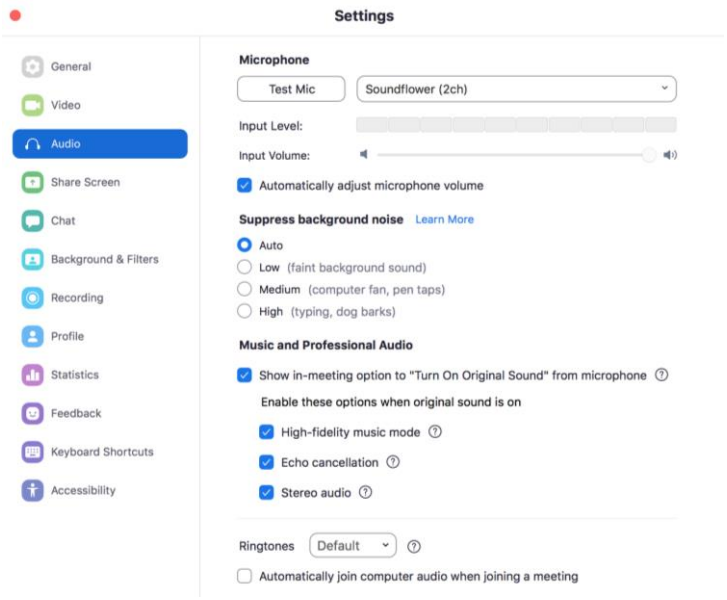
1. To stream audio from ZYLIA Streaming Application to Zoom select on the main settings:
Input: ZYLIA ZM-1 microphone
Output: Soundflower or Blackhole Virtual audio device

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”



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.

Windows Version Compatibility

Using ZYLIA Streaming Application on Windows

The ZYLIA Streaming Application is fully functional on Windows systems, offering users the same high-quality experience as on other platforms. However, it's important to note that the OBS plugin is not currently supported on Windows. To ensure seamless integration and optimal performance, we recommend utilizing a virtual cable Windows device.

Setting Up Your Output Device

To configure your output device, simply use the ZYLIA Control Panel application.

For further assistance or detailed instructions, please refer to the ZYLIA user manual or visit our support page. Our team is dedicated to providing comprehensive support to enhance your streaming experience on the Windows platform.

Support

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

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