Lesson 06 Audio and Sound Design

1 Understanding the audio mixer capabilities of OBS

2 Setting the multi track audio recording

3 Using plugins to expand real time sound design possibilities

4 Accessing copyright free libraries to create sound design for a scene

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Audio Mixer Guide of OBS

General Overview
Each entry in the mixer is made up of 5 parts:

1. The (Volume) Meter - the colored bars that light up as audio goes through a source

2. The Fader - the volume slider for that source

3. Mute button - a speaker icon to mute the source without adjusting the fader

4. Options button - provides extra settings for the source

5. Volume level - The exact value adjusted by the fader or volume % number, measured in decibels

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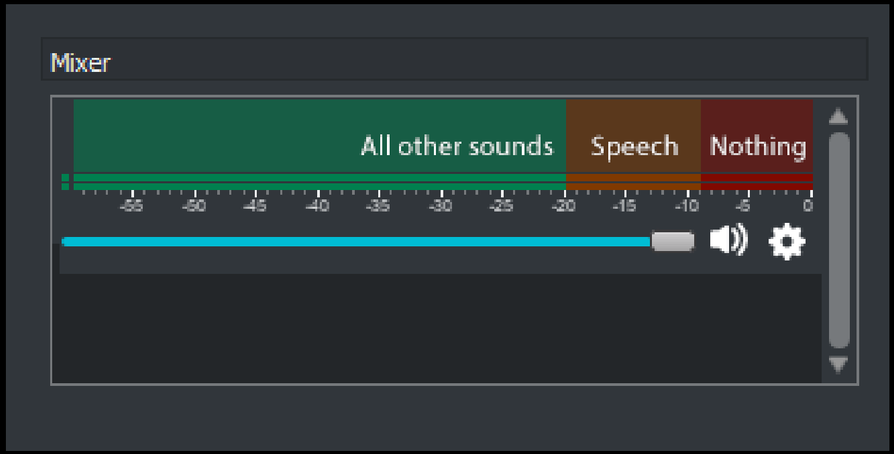
Audio Mixer Guide of OBS

Reading the Volume Meter Zones

The volume meter is made up of 3 primary sections signified by the green, yellow and red



- Red Zone - this area should be avoided as it can cause clipping which sounds unpleasant
- Yellow Zone - Speech (your own & friends') should always stay in here, occasionally touching the red zone
- Green Zone - Everything else including music, game audio and alert sound effects should remain here
- Even if other sounds look to be the same volume as your voice, they may in reality sound louder to viewers

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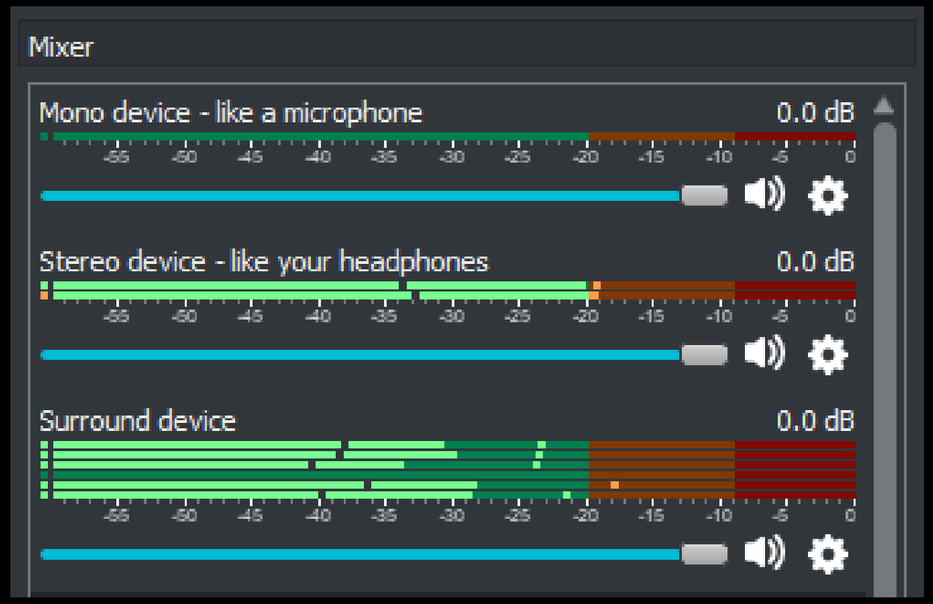
Channels

Each audio source will have at least one volume meter assigned to it.



- (1) Mono source - viewers will automatically hear this in both left and right channels (headphones/speakers)
- (2) Stereo source - left is shown first, right second. Viewers will only hear these as they're assigned.

1. If only the first meter lights up, enable "Mixdown to Mono" in the Advanced Audio Properties, otherwise your viewers will only hear that source in their left channel

(3 or more) Surround source - when Settings->Audio->Channels is set to Stereo (default), you won't see surround channels

1. OBS automatically mixes down surround sources to Stereo unless otherwise specified
2. Ordered as Front Left, Front Right, Front Center, LFE/Sub, Rear Left (5.1), Rear Right (5.1), Side Left (7.1), Side Right (7.1)

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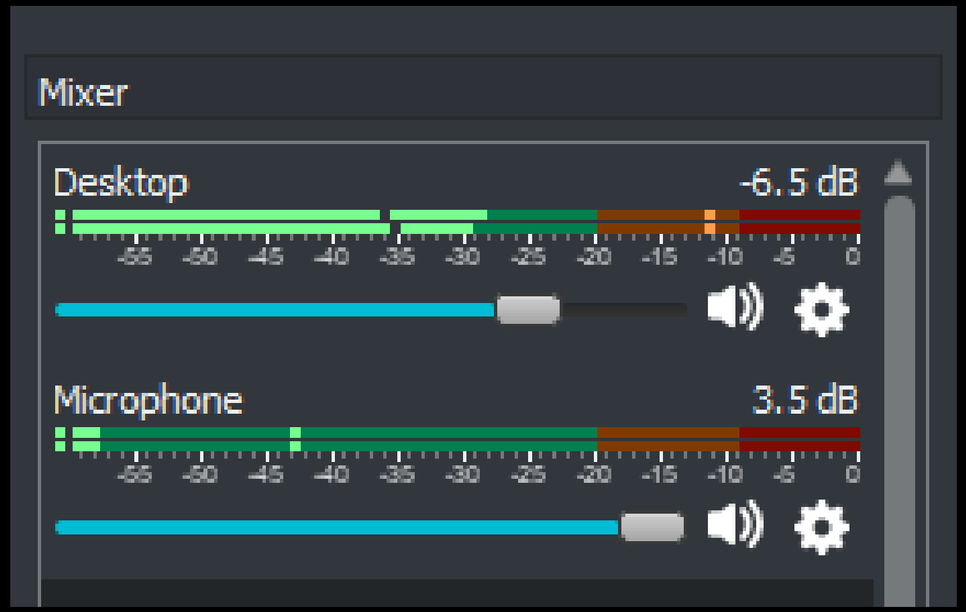
Audio Mixer Guide of OBS

Indicators

Each audio source will have at least one volume meter assigned to it.



1. Left Dot (static): Input level - Live indicator of the volume meter's status (green/yellow/red)
2. Black Dot (always moving): Vu-meter - Shows 'sound pressure', a more accurate indicator of 'loudness'
3. Main Line (always moving): Peak Programme Meter - Has a 'fall-off decay'.
After sound stops the bar will slowly go down rather than displaying completely live data, until it reaches -60 dB (empty) or receives new, louder data

4. Right Dot (sometimes static): Peak - Displays the loudest the meter has been in 20 seconds, a great way to see if you're clipping

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Setting Audio Levels

There are a number of ways to configure an audio source's volume.

As you adjust the volume at each step of the process, listen to the device both as early as possible (some devices will have a 'headphone' output or a 'monitor' jack) and again when it hits OBS using Audio Monitoring via Edit->Advanced Audio Properties.

Always start at the device in question and check:

1. Microphones: check if it has a physical knob (usually labeled "Gain")

2. Physical mixers: these have individual gain knobs for their own sources, and a 'Master' before it's sent to your computer & OBS

3. For other devices including audio interfaces, check their user manuals to see how to configure them, as they may require third party software by the manufacturer.

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Audio Mixer Guide of OBS

Setting Audio Levels

Your Operating System (Windows, macOS, Linux, etc) also has its own volume sliders and mixer

1. Note that some devices may have a 'safe zone' that is well below the 100% mark.

In Windows for example, Control Panel->Hardware and Sound->Sound, under the Recording tab, select the device in question (like your mic) and click Properties. In the Levels tab, right click the % value and choose 'decibels'.

You want this to be at (or around) 0.0dB for the least amount of clipping. It will retain the setting when you switchback to 'percent'.

2. Your system's primary volume slider may affect the volume of the sound that OBS hears, you will need to test on your own system to verify this behavior

3. Individual application volume sliders do affect the volume of the sound that OBS hears

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Audio Mixer Guide of OBS

Finally, be sure to record a session as you normally would and then listen back to the file before going live.

If you still feel the audio needs to be tweaked, now is the time to adjust the Fader within OBS.

If you need something higher than the maximum, you can insertcustom percentage (%) values that can go well above 100% using Edit->Advanced Audio Properties.

Other things to keep in mind:

- Microphones will naturally be quieter than anything computer generated – be itmusic or general sound effects. Take that into account when balancing your audio.

- Voice communication software like TeamSpeak, Discord and Mumble allow you to 'boost' the voice volume of other members (both overall and individual users) above the 100% mark if needed.

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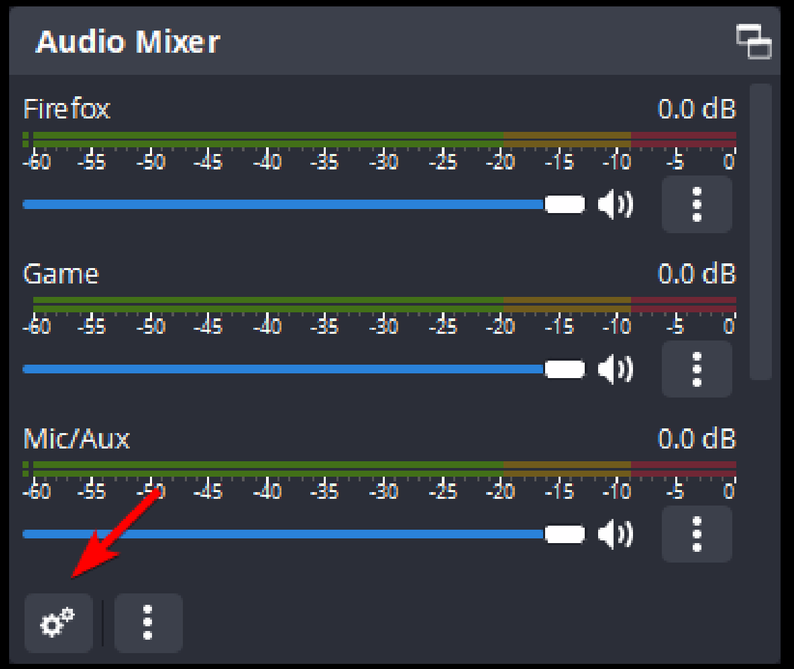
Multiple Audio Track Recording Guide

Setting your audio sources to record to multiple tracks is useful when working with an editor after you are finished recording in OBS Studio.
It is important to note that all standard video players will only play back one audio track at a time so if you are not planning on processing every video through an editor before publishing it, send all of your audio sources to track 1 like you see in the example below.

Instructions

1 In the Audio Mixer dock, click the gear icon at the bottom left to open up the Advanced Audio Properties window
- Note: you can also access this from Edit in the menu bar



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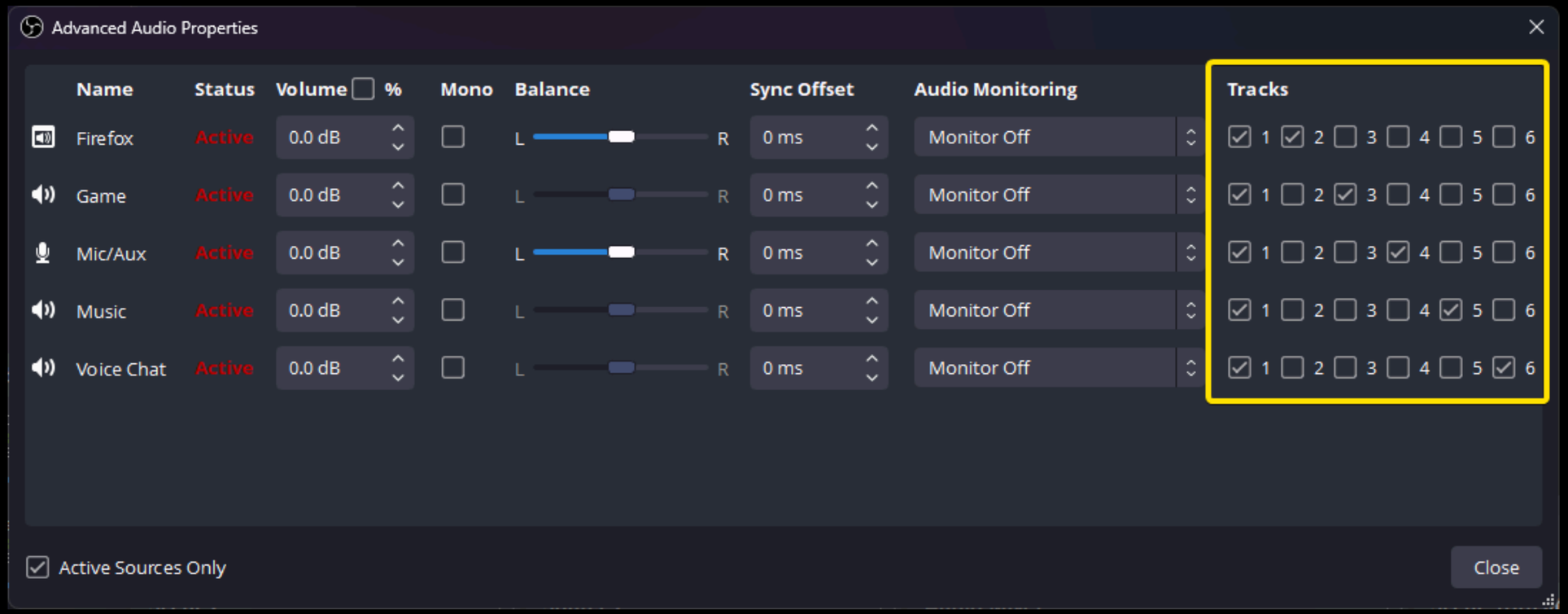
Multiple Audio Track Recording Guide

2. Assign each of your audio sources to its own recording track. In this example, each source is assigned to track 1 to ensure they all pla yback when watching in a standard video player and tracks 2-6 are used to separate the rest of the audio



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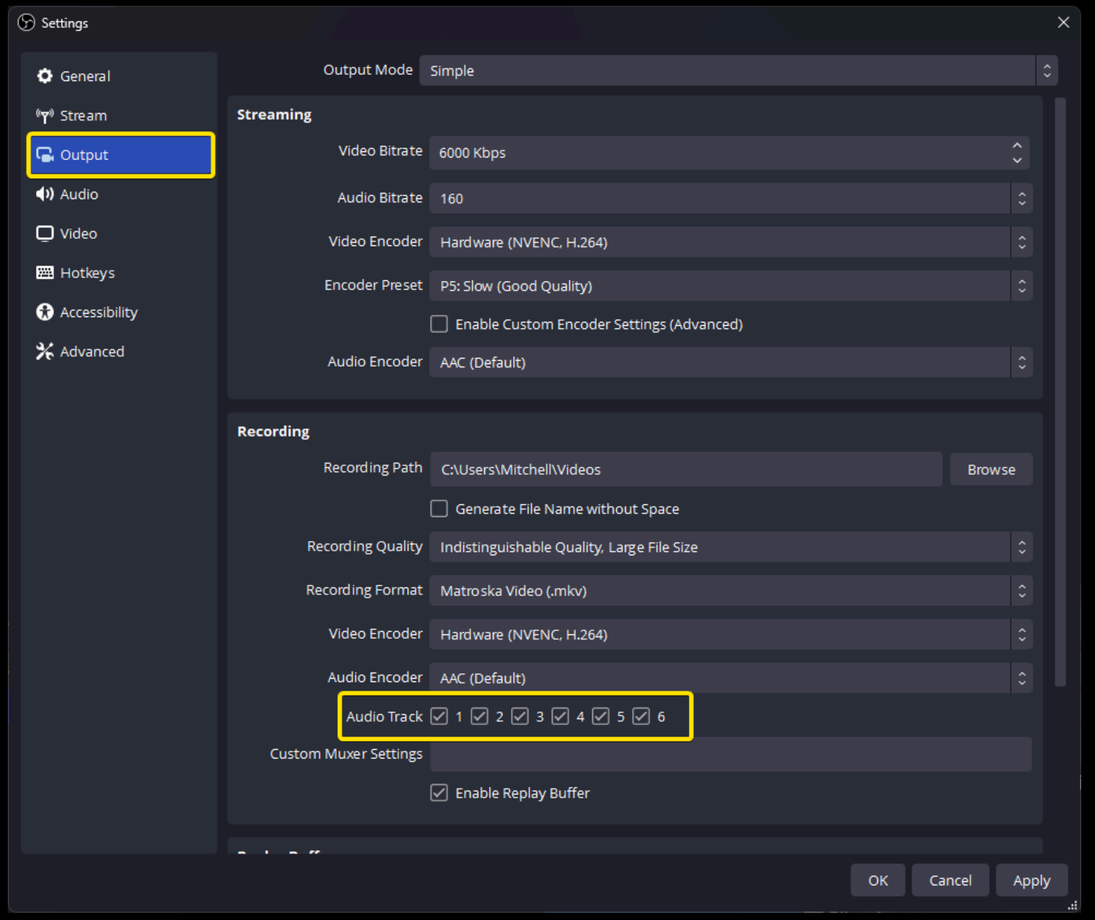
Multiple Audio Track Recording Guide

3. Go to the Settings → Output window and enable the tracks that you would like to record



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VST 2.x Plugin

VST plugins enable being able to apply real time effect audio filters such as delays, echoes.... which can enhance real time sound design possibilities.

OBS Studio supports many VST2.x plugins. Adding a VST plugin is as simple as adding any other audio filter, but there are some limitations. VST1.x, VST3.x, MIDI control/input in VST plugins, and shell VST plugins are not supported at this time.

Suggested VSTs:

- REAPER ReaPlugs VFX suite
- Melda Production

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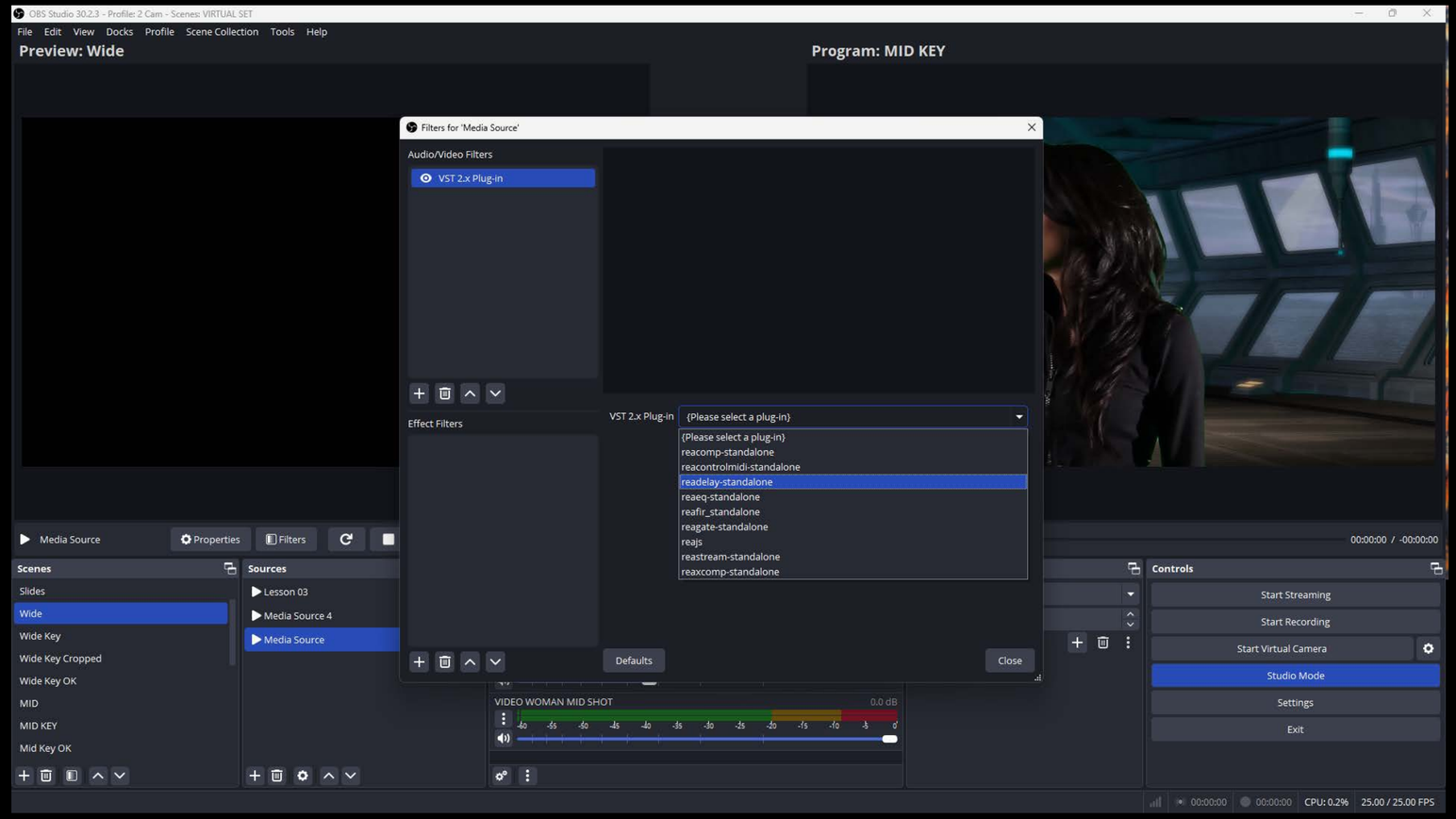
VST 2.x Plugin

Once downloaded and installed you can find them within your software



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Ressources for sound design

While you are creating with DaVinci resolve or any preferred software your sound design to go hand in hand with your scene, you will edit using audio tracks of ambiance sound and music.

Preferably you can record your own ambiance and or music for your scene.

If your equipment and budget doesn't allow the 2 following websites hosts a big number of copyright free audio files

pixabay.com

freesound.org

Remember download files in Wav preferably, mp3 format compress sound

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