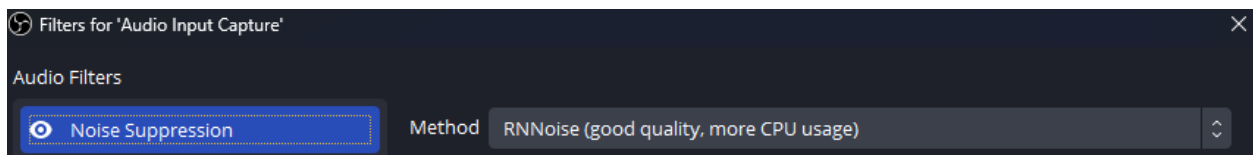# Beginner Audio Guide

2023-12-10

Goals of this Guide

This guide is tested with a HyperX QuadCast microphone. The HyperX QuadCast microphone has a built-in adjustable gain-control, it is recommended for the gain-control of this microphone to be set to the 2nd or 3rd setting from the right.

Whether it is capturing software for recording or live streaming, audio is one of the most important aspects and OBS Studio has a very extensive audio editing selection!
This guide aims to help users set up a quick and effective audio setting aiming to reduce background noise being picked up and boost or reduce the user's voice to set them up to further explore the audio editing capabilities inside OBS Studio.

- To add filters to your audio input capture, click on the three dots next to the volume slider and click on the "Filters" tab.
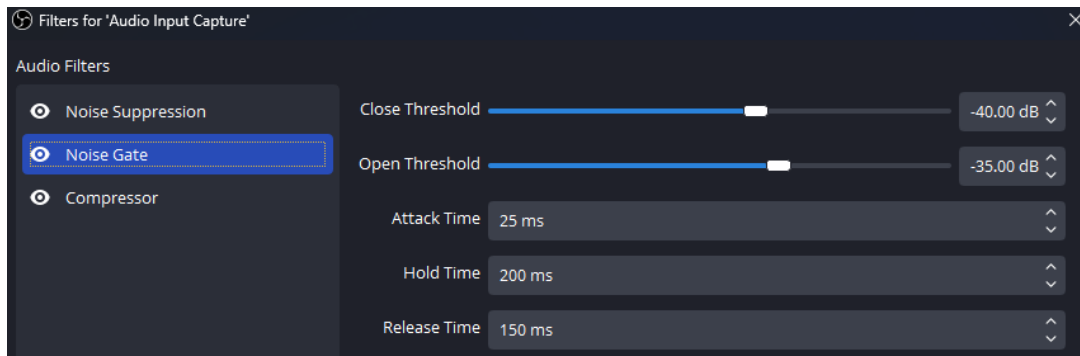
Noise Suppression

- OBS Studio has two built-in noise suppression options:
  - RNNoise is a noise suppression software for OBS users created by Nvidia, a sponsor of OBS. RNNoise is high quality and requires greater CPU usage.
  - Speed is a lower-quality noise suppression filter that provides weaker noise suppression with the gain of less CPU usage.

Noise suppression aims to reduce background noise that is not your voice. Depending on your CPU usage it may be more beneficial to select Speex, however, RNNoise is the preferred option. For further information regarding noise suppression refer to the noise suppression filter knowledge base below.
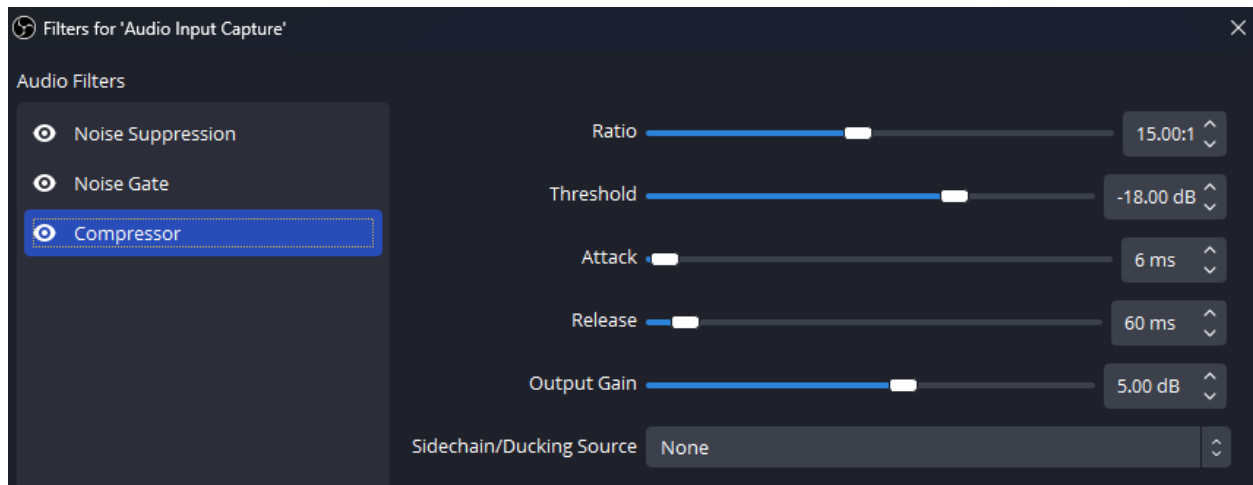https://obsproject.com/kb/noise-suppression-filter

Noise Gate

Noise gates are designed as a threshold for sounds that the mic will allow through the gate to be captured by OBS.

- "Close threshold" refers to any sound below this decibel will not be picked up.
  - We recommend a close threshold setting of -40.00 dB, it is high enough to not allow most background noise through such as fans static.
- "Open threshold" refers to how loud a sound must be for the mic to pick up or allow the audio through the gate.
  - It is recommended that you lower or raise the threshold based on your microphone, background noise, and voice volume. An open threshold set to -35.00 dB is generous to most voice volumes, especially with the audio editing provided in this guide.

For more information on Noise gates check out the knowledge base link below regarding noise gates.
https://obsproject.com/kb/noise-gate-filter

Compressor

A compressor is the final audio edit included in this guide. It is recommended to keep most settings at the default and to research them further to edit to your satisfaction.

This compressor will make adjustments for two things:
1. lower the overall audio input to limit audio peaking
2. increase the volume of the source.

- The "ratio" is responsible for adjusting the audio when it peaks.
  - The default is 10.00 dB but after research, increments of 5.00 dB are effective so if your voice is louder use a ratio of 5 dB.
  - If you are more quiet it is recommended to use 15.00 dB as this will increase your voice volume since peaking will not be as much of a concern.
- "Output gain" is the most straightforward forward and it is used to increase the volume of the source.
  - It is recommended to leave unchanged or lower a little if you have a louder voice
  - If you are quieter, 5.00 dB is a good starting point before adjusting further.

Everyone is unique and while this guide is not definitive it is a starting point for OBS Studio users to acquaint themselves with the software's audio editing capabilities and find what works best for them!