Contents

Introducing Auto-Tune SoundSoap

Thank you for using Auto-Tune SoundSoap! We hope this user guide provides you with all the information you need to use Auto-Tune SoundSoap in your workflows.

About SoundSoap

Almost everyone has experienced some kind of undesirable background noise in their recordings at one point or another. Maybe an amazing video of your kids also captured a noisy air conditioner, or that interview you recorded has a distractingly loud highway buzzing in the background.

Were loud fans supposed to be part of your podcast? Have a loud humming sound in your recording caused by a bad cable? Maybe you want to remove clicks and crackles from an old LP collection, or eliminate hiss from your audio cassette collection – the list goes on and on.

SoundSoap makes rescuing these recordings effortless - no experience necessary!

Types of Noise

If you're using Auto-Tune SoundSoap, chances are you've run into some sort of undesirable noise in your digital media. You may have encountered camera motor noise picked up by a built-in microphone – or perhaps there's an annoying hiss in your archived audio cassette collection.

Maybe there's a distracting 60Hz hum in your podcast caused by a bad cable used while recording. Or perhaps you're removing clicks and crackles from an old LP collection to a digital file.

Whatever the case may be, such noises can be incredibly detrimental to the quality of your projects. Situations like these call for the advanced broadband noise, hum, and rumble reduction, click and crackle reduction, de-clipping, and de-essing offered by Auto-Tune SoundSoap.

While SoundSoap can do a great deal to reduce noise from digital files, there may be situations where the desired audio signal is lower than the signal of noise, making it impossible to fully remove the noise. In cases like this, SoundSoap may not entirely remove the noise, but will significantly reduce its presence.

Broadband Noise

Broadband Noise refers to a type of noise that is composed of a broad range of frequencies. Tape hiss, air-conditioner noise, white noise, and pink noise are common examples of broadband noise.

Hum

Hum refers to a type of noise that is typically composed of a single frequency like 50 or 60 Hz. Hum is often associated with audio equipment being used on faulty electrical circuits, equipment that is not properly grounded, or even electrical power cables being in close proximity to audio signal cables.

Rumble

Rumble refers to a type of very low-frequency noise, usually occurring at 40 Hz or below. A good example of rumble is the low frequency noise produced by a turntable motor commonly found in recordings of vinyl records.

Clicks and Crackles

Clicks and Crackles are common artifacts found in recordings made from vinyl records.

Clicks are the result of recording (digitizing) a scratch on a vinyl record. They're audible in a digital recording because of an abrupt change in volume in a very short period of time.

Crackles are audibly similar to clicks, but are instead caused by tiny surface imperfections on a vinyl record. Crackles tend to be quieter, are more densely concentrated than clicks, and produce a sound similar to something "sizzling" in a frying pan.

Clipping

Clipping is a form of audio distortion that occurs when the signal is overdriven beyond its maximum volume range, and reduces the sound quality and intelligibility of material. This commonly occurs when audio is recorded too loud.

Sibilance

Sibilance refers to the high frequency components of certain vocal sounds, especially "s" and "sh". Sibilance lives in the 5 to 10 kHz frequency range, and can cause problems if over-emphasized in a recording.

Controls

Global Controls

Antares Logo

Click on the **Antares logo** in the top left corner to open the Antares Central application.

Antares Central is a standalone application used for managing Antares license activations. Check out the support article [here](#) to learn more.

Waveform/Spectrogram Toggle

Click on these icons to toggle between **Spectrogram** and **Waveform** View in the [Wash Window](#).

Spectrogram View is the default Wash Window view:

The **Broadband Noise Reduction** (NR) Controls are available on the right side of the wash window while in Spectrogram View.

Adjust the horizontal white lines to specify the range of frequencies affected by the Noise Reduction algorithm.

This is Waveform View:

While in Waveform View, click and drag the horizontal lines to adjust the threshold level used by the Downward Expander.

Settings "Gear Icon"

Click the gear icon to open the Settings menu.

Bypass

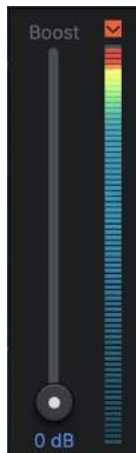Click on this icon to bypass Auto-Tune SoundSoap in your DAW.

Level

The **Level** slider is used to adjust the gain of the source audio.

If your source audio is too quiet, SoundSoap may have trouble detecting and removing unwanted noise.

Boost

Use the **Boost** slider to increase the gain of the output audio. Be careful not to overuse this setting – it can cause clipping if set too high.

Clipped audio is indicated by the red box above the boost meter. Click on the red box to clear the clipping meter.

Wash Window

What is the Wash Window?

The Wash Window provides a visual representation of the noise reduction process in real-time.

While in Spectrogram View, the Wash Window displays the frequencies present in the audio before and after applying noise reduction. The center line divides the Wash Window into two halves, representing the "before and after".

Frequency Distribution

In Spectrogram View, the lowest frequencies are displayed on the lower end of the Wash Window, and the highest frequencies are at the top.

Black represents silence, or no energy around a particular frequency, while the shades of blue represent varying intensities of energy surrounding particular frequencies.

After loading your audio into SoundSoap, you'll see it move from left to right.

Visually, removing broadband noise with SoundSoap will remove or reduce the saturation of some of the blue areas. You will notice that the Noise Tuner setting changes what is considered noise based on what is displayed in the Wash Window.

On the right side of the Wash Window, you'll see lighter or fewer shades of blue than on the left side, depending on the Noise Reduction setting.

When the Noise Only button is enabled, the Wash Window will only display what SoundSoap recognizes as noise.

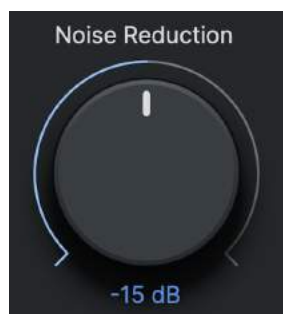# Noise Reduction "De-Noise"

Power Button

Press this button to apply noise reduction to the source audio according to the current broadband tool settings.

When the button is off, SoundSoap will not remove broadband noise, and it is normal to hear any broadband noise that is present in the original media.

Noise Reduction Knob

Use the **Noise Reduction** knob to manually adjust the amount of noise reduction applied to the source audio. Alternatively, click the Learn button to set the amount of noise reduction automatically.

Noise Reduction operates independently of the De-Click and De-Clip knobs, as well as the Enhance slider.

Noise Tuner

The **Noise Tuner** knob differentiates noise from the desired audio signal.

Turning the Noise Tuner knob all the way to the right sets a higher threshold value, and eliminates more audio content.

The Noise Tuner can be set automatically by first using the Learn button. This method is ideal when the media file being cleaned has an isolated area of the noise by itself.

Whether you're using a learned noise profile or a flat noise profile, the Noise Tuner knob behaves in exactly the same way – it simply sets how much of the audio is considered noise.

Noise Only
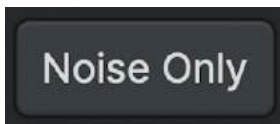
When the **Noise Only** button is enabled, SoundSoap processes the audio according to the current broadband noise reduction controls, and outputs only the broadband noise being reduced. This makes it easy to monitor which frequencies are removed by SoundSoap.

Track
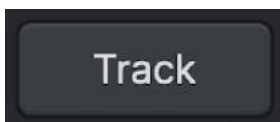
Track will automatically reduce the amount of noise reduction applied to the audio during louder parts of the material. This minimizes the amount of artifacts introduced by noise reduction.

Learn
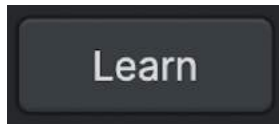
The **Learn** button is what makes Auto-Tune SoundSoap so powerful and easy to use.

This feature is used to isolate the noise contained in a file, and automatically sets the values for the Noise Tuner and Noise Reduction controls.

To use this feature, start by finding a section of isolated noise in your audio, and use that section to learn the noise. Start playback and hold down the Learn Noise button. SoundSoap will analyze the audio playing until you release the Learn Noise button.

SoundSoap will create a noise profile based on the section of isolated noise, and determine the best settings for the Noise Tuner and Noise Reduction knobs.

When using a learned noise profile, more noise reduction is applied in the frequency ranges where it is needed.

Please keep in mind that noise profiles are created "behind the scenes" and are not visible or accessible within the SoundSoap interface.

To reset/clear the noise profile, option/alt-click on the Learn Noise button.

Repair

The Repair controls help to remove [clicks](#), [crackles](#), and [clipping](#) from your audio.

De-Click

When the **De-Click** knob is in its leftmost position, it is inactive. Moving it towards the right removes more clicks and crackles. The ideal setting will vary depending on the audio material you are attempting to restore.

The general rule for this control is to use the lowest setting possible, which successfully eliminates the clicks and crackle present in your digital media file.

The De-Click knob operates independently of all other controls.
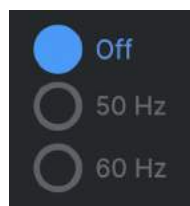
De-Clip
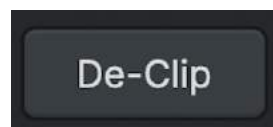
SoundSoap's **De-clipper** produces stunning restorations of clipped audio. Use this setting to automatically fix distortion on audio that was recorded too loud.

De-Hum

The De-Hum controls help you eliminate unwanted hum in your recordings caused by electrical interference.

Frequency

Select 60Hz for regions using 60Hz electrical systems (North/South America), and 50Hz in regions using 50Hz systems (Africa/Asia/Australia/Europe).

Harmonics

Audio affected by unwanted hum tends to include several harmonics of the fundamental hum frequency. The Harmonics knob lets you control the number of hum harmonics removed from the source audio.

Turn the harmonics knob to the right to increase the number of harmonics reduced by the hum reduction algorithm.
Because hum reduction is a filtering process, set the number of harmonics as low as possible so as to not remove more audio frequencies than needed.
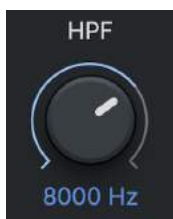
De-Ess

The De-Ess section helps remove audible sibilance from vocal recordings and performances.

The HPF and Threshold knobs work in conjunction with one another. Choose settings that cause the most gain reduction to happen during audible sibiance, and not during vowels or soft consonants.

HPF

The High Pass Frequency control sets the frequency of the high pass filter, which is used as a sidechain input to the compressor.

Threshold

The Threshold control sets the threshold level of the compressor.

Enhance

The Enhance Slider adds "sparkle" back into the audio signal by boosting frequencies that may have been lost in degraded media. Use the L, M, and H buttons to toggle which frequencies are boosted by the Enhance slider. You may select up to two frequency ranges to boost.

The frequency ranges of each selection are outlined below:

- L - Boost Lows (0-250Hz)
- M - Boost Mids (500Hz-6kHz)
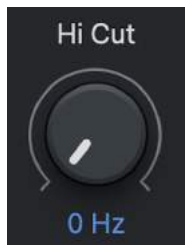- H - Boost Highs (6kHz and up)

Lo Cut
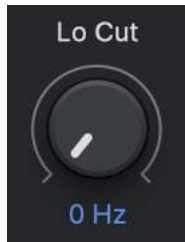
Also known as a High Pass Filter, this type of filter removes lower frequencies from an audio signal.

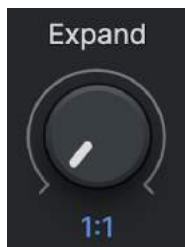Turn the knob to the right to adjust the filter's rolloff frequency.

Hi Cut

Hi Cut Filters remove higher frequencies from an audio signal. This type of filter is also known as a Low Pass Filter.

Turn the knob to the right to adjust the filter's rolloff frequency.

Expand

Auto-Tune SoundSoap includes a downward expander with an adjustable compression ratio and threshold. This parameter applies compression to quiet the audio below a given threshold level.

The downward expander is an effective tool for reducing low-level noisy audio. The compression ratio determines the amount of compression applied to audio below the threshold.

To adjust the threshold level, enable Waveform View in the Wash Window, and click and drag the white horizontal lines to the desired level.

Settings

The **Settings Menu** gives you quick access to the settings of Auto-Tune SoundSoap.

Display

The **Display** setting lets you set Waveform or Spectrogram View as default in the Wash Window. After making your selection, click "Save All Settings as Default".

Appearance

Use this setting to change the **Appearance** of Auto-Tune SoundSoap. You may select Light Mode, Dark Mode, or have Auto-Tune SoundSoap follow your system display setting.

Reset Window Size

You can resize the Auto-Tune SoundSoap GUI by clicking and dragging on the bottom right corner of the plug-in window. Use this setting to go back to the default window size.

Enable OpenGL Drawing

Auto-Tune SoundSoap uses OpenGL for improved graphics on computers with compatible graphics card hardware.

If the Antares logo does not appear in the Preferences window, that indicates that your system does not support OpenGL, and you should uncheck the box.

View Tooltips

When this setting is on, hover your mouse over any of the controls in Auto-Tune SoundSoap for a brief explanation of what the control does.

View Help Topics

Click on this setting to open the Auto-Tune SoundSoap Help Page in your web browser.

Save All Settings As Default

Toggle this setting on to save current settings as default when opening new instances of Auto-Tune SoundSoap.

If you want to make a temporary change to the preferences just for this instance, without overwriting your default preferences, untoggle this setting.