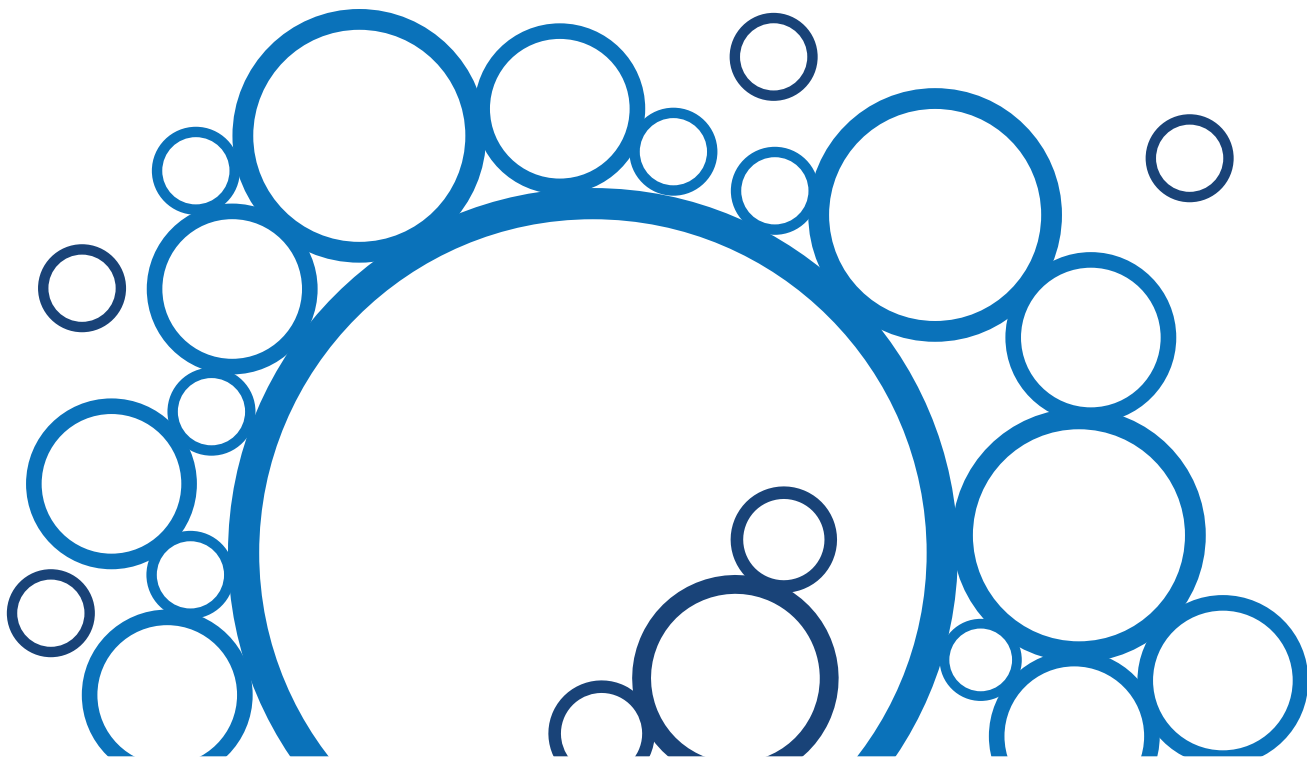# bias
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SOUNDSOAP PRO 2
PROFESSIONAL AUDIO RESTORATION & NOISE REDUCTION

SOFTWARE USER GUIDE

SOUNDSOAP PRO 2

PROFESSIONAL AUDIO RESTORATION & NOISE REDUCTION

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SOFTWARE USER GUIDE

SoundSoap Pro User Guide

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Ninety days of complimentary technical support assistance for a single incident is available with the initial purchase of current Type 2 BIAS products (Peak LE, SoundSoap 2).

The support period begins when the product is initially registered and authorized.

Type 3 products (OEM versions) and legacy products (Deck, Deck LE, Deck SE) are excluded.

An additional thirty days of complimentary technical support assistance for a single incident, beginning on the expiration of the initial ninety days of complimentary support described above, is available with the purchase of paid upgrades to current Type 1 and Type 2 BIAS products.

To receive e-mail or telephone technical support, you will need a valid serial number and must be registered for a current BIAS product. Please keep your original product serial number (located on your original owner's certificate) in a safe place as it will be required for support.

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support@bias-inc.com

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Credits:
SoundSoap Pro software: David Tremblay, Guillermo Garcia, David Ralley, Andrew Kimpton, Wayne Jackson, Steve Berkley, Eric Eizenman, Rick Sustek, Eric Johnson.

BIAS Authorization Manager software: Ben Ventura, Dan Spirlock

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User's Guide:
Zac Wheatcroft

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SoundSoap Pro User Guide

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Contents

CHAPTER 1:
INTRODUCING SOUNDSOAP PRO

SoundSoap Pro User Guide

Chapter 1: Introducing SoundSoap Pro

Welcome!

Thank you for purchasing BIAS SoundSoap Pro! SoundSoap Pro is a professional noise reduction plug-in for Audio Units, RTAS/AudioSuite, and VST host applications. It features tools for removing hum, rumble, clicks, crackle, and broadband noise – and also includes a noise gate. SoundSoap Pro is a "universal restoration solution" – as it contains all of these powerful noise reduction tools within a single interface – and it can be "plugged-into" virtually any host application that supports the aforementioned plug-in formats.

SoundSoap Pro shares some of the same technology that has made the original SoundSoap such a popular application/plug-in – tools such as the intelligent noise learning algorithm and Noise Only mode are also a part of SoundSoap Pro.

SoundSoap Pro adds the ultimate in parameter control – as well as new Click & Crackle removal tools, a global spectrogram, and many other visual feedback tools that help in the audio restoration process. This powerful collection of controls requires a totally different user interface, which allows access to these many parameters in a logical and easy to use manner. SoundSoap Pro features a tab-based user interface, with dedicated tools for specific noise types. These tabs are arranged to suggest an order of processing to the user that produces optimal results. There is no restriction however, on using these tools – individual tools may be toggled on or off, depending on the types of noise present in the digital media file at hand, and they may be used in any order desired. SoundSoap Pro also offers advanced preset control – the settings for all four tools are saved into a preset, but individual tool settings may be loaded at will.

SoundSoap Pro can be used within practically any Audio Units, RTAS/AudioSuite, or VST host – on both Mac and Windows platforms. Users of Peak, Pro Tools, Logic, Cubase, Nuendo, Premiere, WaveLab, Sonar, Sound Forge, and many other applications that support plug-ins may easily add SoundSoap Pro's powerful noise reduction technology directly into their application of choice.

SoundSoap Pro is the perfect solution for removing unwanted hiss, room noise, rumble, electrical hum, click & crackle, and other background noise from almost any digital media file – including digital video (DV), digital audio workstation tracks, cassette/analog tape recordings, vinyl LP recordings, and other sources.

We're sure you'll find SoundSoap Pro to be a powerful and useful tool, allowing you to enhance the quality of your digital audio and video projects.

SoundSoap Pro Features:

- Powerful, professional noise reduction

- Convenience – includes AudioSuite/RTAS, Audio Units, and VST format plug-ins

- Easy-to-use tab-based user interface with dedicated tools for specific noise types

- Launch Tab – Contains Getting Started information to help you quickly get up to speed with SoundSoap Pro's controls

Global Tools (available within each tab):

- Spectrogram

- Global Presets

- Noise Only mode

- Processing Bypass Buttons

- Automation (parameters automatable within compatible host applications)

- Numerical Value Entry

- Floating Tool Tips/Broadband Slider Values

Hum & Rumble Reduction Tab:

- Hum Frequency Slider

- Q (Bandwidth) Slider

- Depth Slider

- Harmonics Slider

- Harmonics Tilt Knob

- Hum Meter

- Rumble Slider

Click & Crackle Tab:

- Sensitivity Slider

- Click Threshold Slider

- Crackle Threshold Slider

- Click Indicator

Broadband Tab:

- Threshold/Reduction View Slider

- Threshold Sliders

- Reduction Sliders

- Threshold/Reduction Slider Grouping

- Meters

- Learn Noise/Extract Button (Snapshot/Timed)

- Adaptive Button

- Adaptive Speed Knob

- Adaptive Offest Knob

- Attack Knob

- Release Knob

- Attack Tilt Knob

- Release Tilt Knob

- Slider Values Checkbox

- Preserve Attacks Checkbox

Noise Gate Tab:

- Attack Knob

- Release Knob

- Threshold Slider

- Reduction Depth Slider

- Visual Waveform Display

- Left, Right, & L+R Waveform Display Buttons

- Freeze Waveform Display Button

Who is SoundSoap Pro designed for?

SoundSoap Pro is designed for the demanding audio professional who requires high-quality noise reduction/removal, coupled with the convenience of using their editing environment of choice. SoundSoap Pro uses advanced noise reduction technology and an

innovative user interface to provide access to a wide array of controls – allowing incredible noise reduction in a minimal amount of time, with minimal artifacts.

With access to virtually any imaginable noise reduction parameter, SoundSoap Pro offers powerful tools that are easy to use, and should allow anyone to achieve amazing results.

What's New in Version 2?

SoundSoap Pro 2 offers several updates, enhancements, and new features, which are described below:

- *Adaptive Noise Reduction –* Automatically reduces broadband noise in cases where the noise floor's RMS level and spectrum change slowly over time.

- *Adaptive Noise Extraction –* A semi-automatic learn mode that does not require an isolated section of noise in order to create a noise profile.

- *Floating Tooltips/Parameter Values –* Floating windows containing helpful tips and/or paramenter values now appear when the mouse cursor passes over knobs, sliders, and other interface elements.

- *Preserve Attacks Checkbox –* Preserve Attacks is an option designed to minimize the application of broadband noise reduction in audio material containing many transients.

Minimum System Requirements

To use SoundSoap Pro on a Mac – you will need:

- G4, G5, or Intel-based Mac (≥ 800 mHz processor recommended)

- Mac OS 10.4, 10.5

To use SoundSoap Pro on a Windows PC – you will need:

- Intel P3/P4, Athlon w/SSE Instructions (≥ 2 GHz processor recommended)

- Windows XP Home/Professional or Windows Vista (SP2 or higher required for Windows XP)

Both:

- Compatible Audio Units, RTAS/AudioSuite, or VST host application

- 512 MB RAM

- 40 MB available hard drive space

For the most up-to-date info, please visit:

http://www.bias-inc.com/soundsoappro/

About Your User Guide

SoundSoap Pro is designed to be simple and intuitive. Your User Guide is designed to help set up and use SoundSoap Pro for noise reduction/removal as quickly as possible.

This User Guide assumes that you are familiar with standard Mac and/or Windows operating techniques, including:

- Setting up, starting, and using your computer

- Choosing commands from menus

- Double-clicking, selecting, shift-selecting, and dragging with the mouse

- Opening, copying, saving, and deleting files

- Opening, closing, scrolling, moving, re-sizing, and selecting windows

If you don't know how to perform these tasks, please refer to the documentation that was included with your computer, and spend a little time learning about your operating system before going any further. This will make using SoundSoap Pro much easier and effective.

The chapters in your SoundSoap Pro User Guide are arranged in the order in which you would typically perform tasks when the need arises to remove unwanted noise from your media.

- Chapter 1 introduces you to SoundSoap Pro and explains some of the requirements for using it

- Chapter 2 explains how to install, register, and authorize your computer to run SoundSoap Pro

- Chapter 3 explains the various features in SoundSoap Pro and how they are used to reduce/remove noise

- Chapter 4 demonstrates how to use SoundSoap Pro

⚠️ *Look for important tips and notes whenever you see this exclamation mark*

Help with SoundSoap Pro

SoundSoap Pro offers two types of help. The first type, appears in the Launch Area of the SoundSoap Pro interface.

Clicking the See More button displays more of the Getting Started Tips, or more of the Launch Screen info (version number, etc)

This type of help contains quick getting started tips. You can vary the amount of text shown at any time by clicking the "See More" button.

The second, and more comprehensive type of help is the SoundSoap Pro User Guide. Clicking the Help ("?")

Button opens a PDF version of the user guide, which is installed in the following locations:

SoundSoap Pro's Help button

On Mac systems:

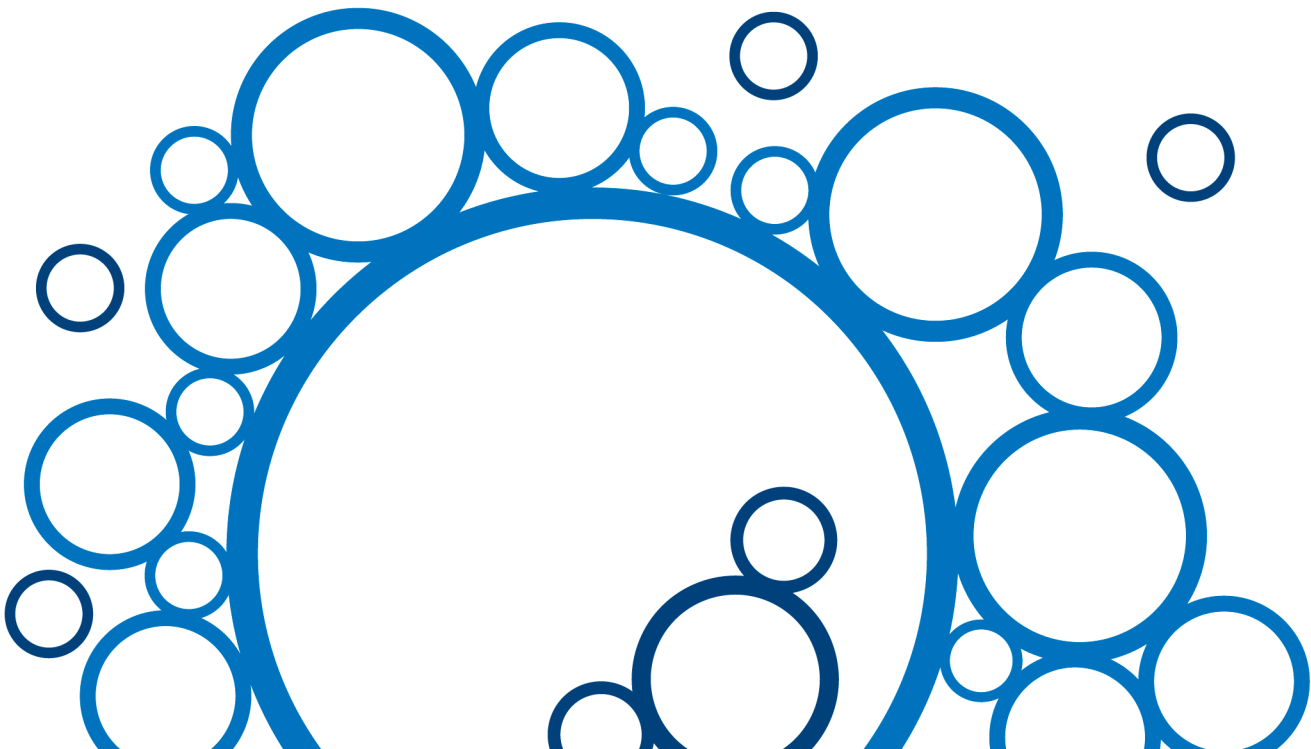/Macintosh HD/Library/Documentation/BIAS/SoundSoap Pro/

On Windows systems:

C:\Program Files\BIAS\SoundSoap Pro\

Conclusion

Now that you know a little about SoundSoap Pro, proceed to the next chapter to learn how to install and start using it.

CHAPTER 2:
INSTALLATION, REGISTRATION, AND AUTHORIZATION

Chapter 2:
Installation, Registration,
and Authorization

Installing SoundSoap Pro

SoundSoap Pro's auto-installer software makes installation very easy. The steps below will guide you through the process.

Your complete SoundSoap Pro system consists of:

- CD-ROM installer

- Serial number

- Authorization File

⚠️ *Before you install SoundSoap Pro, please check the Minimum System Requirements on Page 17.*

To install SoundSoap Pro on a Mac:

1. If you are using any virus protection software, turn it off or temporarily remove it, and restart your Mac.

2. Insert the SoundSoap Pro installer CD-ROM into your CD-ROM drive – when its icon appears on your computer's desktop, double-click the Install SoundSoap Pro icon.

3. When prompted about the Installer package running a program to determine if it can be installed, click the Continue button.

4. When the Installer dialog appears, click the Continue button.

5. Read the Software License Agreement – then click the Continue button to proceed.

6. Click the Agree button if you agree to the terms of the Software License Agreement.

7. Select the hard drive/volume on which you wish to install SoundSoap Pro, and click the Continue button.

8. Click the Install/Upgrade button (depending on the configuration of your user account, you may need to enter your account password. If prompted for your password, enter it and click the OK button. If you do not know your account password, please contact your system administrator for assistance).

9. When the installation is complete, a message will appear indicating that the installation was successful. Click the Close button to quit the Installer. (Don't forget to turn back on any virus-protection software that you may be using the next time you restart the computer).

What SoundSoap Pro installs on Mac systems:

The SoundSoap Pro installer places a number of files on your computer. The files and install location are described below:

Audio Units Hosts: (Peak, Logic Pro, Digital Performer, etc.)

SoundSoap Pro automatically installs the Audio Units format plug-in into the following directory:

/Mac HD/Library/Audio/Plug-Ins/Components/

RTAS/AudioSuite Hosts (Pro Tools):

SoundSoap Pro automatically installs the RTAS/AudioSuite format plug-in into the following directory:

/Macintosh HD/Library/Application Support/
Digidesign/Plug-Ins/

VST Hosts: (Peak, Cubase SL/SX, Nuendo, etc.)

SoundSoap Pro automatically installs the VST format plug-in into the following directory:

/Mac HD/Library/Audio/Plug-Ins/VST/

Documentation

An electronic (PDF format) version of the SoundSoap Pro User Guide, and a Read Me file with late-breaking information are both installed into:

/Mac HD/Library/Documentation/BIAS/SoundSoap Pro/

⚠️ *Check the documentation included with your host application for more information on where it expects plug-ins to reside in order to function properly.*

To install SoundSoap Pro on a Windows PC:

1. If you are using any virus-protection software, turn it off or temporarily remove it, and restart your computer.

2. Insert the SoundSoap Pro Installer CD-ROM in your CD-ROM drive. If the SoundSoap Pro Setup program does not automatically launch, double-click the Install SoundSoap Pro icon.

3. When the InstallShield Wizard for BIAS SoundSoap Pro appears, click the Next button.

4. Read the Software License Agreement, and then click

the "I accept the terms in the license agreement" radio button to continue with installation.

5. To install SoundSoap Pro into the default directory (recommended), click the Next button (Vista users – skip this step).

6. In the Setup Type dialog, choose the Typical option (Vista users choose the Complete option), and click the Next button.

7. In the Select Program Folder dialog, click the Next button to continue with installation.

8. In the Ready to Install dialog, click the Next button to continue with installation.

9. When you are finished installing, click Finish to exit the installer.

⚠️ *At the end of installation, the Installer program will instruct you to authorize the plug-in – this is described later in this chapter.*

What SoundSoap Pro Installs on Windows Systems:

The SoundSoap Pro installer places a number of files on your computer. The files and install location are described below:

RTAS/AudioSuite Hosts (Pro Tools):

SoundSoap Pro automatically installs the RTAS/AudioSuite format plug-in into:

\Program Files\Common\Digidesign\DAE\Plug-Ins\

VST Hosts: (Cubase SL/SX, Nuendo, Sonar, etc.)

SoundSoap Pro installs the VST format plug-in into the VstPlugIns folder of your VST host program.

Documentation

An electronic (PDF format) version of the SoundSoap Pro User Guide, and a Read Me file with late-breaking information are both installed into:

\Program Files\BIAS\BIAS SoundSoap Pro\

If you would like to register and authorize SoundSoap Pro at this point, launch the host program you will use (which is installed into your Applications folder by default), and have your Owner's Certificate handy, and follow the directions in the next section.

Registration & Authorization

SoundSoap Pro must be authorized to work on your computer. You must register SoundSoap Pro with BIAS in order to authorize it. The registration and authorization process is outlined below.

Serial Number-Based Authorization System

SoundSoap Pro's standard authorization system consists of the following components:

- **BIAS Authorization Manager –** A simple application for managing BIAS software licenses.

- **Serial Number –** Located on Owner's Certificate.

- **Registration Account –** Your registration and authorization information on the BIAS Server.

- **Authorization Request File –** A file transferred from your computer to the BIAS server, which adds the computer you are authorizing to your BIAS Registration Account.

- **Authorization File –** A file transferred from the BIAS server to your computer, which authorizes it to run SoundSoap Pro.

⚠ *You must register with BIAS in order to authorize your computer – SoundSoap Pro will not launch unless your computer is authorized to run it.*

The registration/authorization process provides the following services:

- Registers your software with BIAS – making you eligible for technical support and product updates.

- Authorizes your computer so it can run SoundSoap Pro. You may authorize up to two computers for use with SoundSoap Pro – for example, a studio or office computer, and a laptop for home or mobile use.

⚠ *Keep in mind that for each license of SoundSoap Pro – the software may only be used by one user, on one computer system at a time. If you have used both of your authorizations, and need to authorize a new computer, you will need to first de-authorize one of the authorized computers before you are issued a new authorization for the new computer.*

About Registration, Authorization, and Trial Modes:

When SoundSoap Pro is first launched, you will be prompted to either authorize it or run it in trial mode. For full functionality, authorize it with the included serial number.

Requirements for Registration & Authorization:

1. SoundSoap Pro must be installed.

2. Your serial number must be available. Depending on how you obtained SoundSoap Pro, the serial number will be provided in various ways:

   - In New Retail or Upgrade Packages – On the Owner's Certificate

- In Downloaded Purchases – In an email receipt from BIAS

Owner's Certificate

Thank you for your BIAS software purchase!
IMPORTANT – READ CAREFULLY

► This owner's certificate is the most important part of your new software purchase – keep it in a safe place! You will need your serial number(s) to qualify for technical support, upgrades, free updates, and special offers.

► You may authorize your software by following the steps in the BIAS Authorization Manager. An internet connection is required to complete the authorization process.

Products Licensed to you
Product   Serial Number

Your Serial Number is located here!

Your serial number appears on the Owner's Certificate, included in the SoundSoap Pro package, or on the electronic receipt from a downloadable purchase (not shown here).

3. A computer with internet access must be available.

To Register & Authorize SoundSoap Pro on a computer with internet access:

1. Launch SoundSoap Pro – when first launched on an unauthorized computer, you will be prompted to authorize it or run it in Trial mode. Click the "Authorize" button to continue to the BIAS Authorization Manager – you will need to enter an administrator password to proceed.

2. Select the product you wish to authorize, and enter your serial number and email address.

> ⚠️ *If you use more than one email address, be sure to make a note of which one you registered with – this will make managing your BIAS Registration Account faster and simpler in the future.*

3. Click the "Authorize" button. SoundSoap Pro is now authorized – click the "Done" button to exit the BIAS Authorization Manager.

> ⚠️ *If the computer on which you plan to run SoundSoap Pro does not have internet access, you may use another computer to aid in the authorization process – see the following section for directions on how to do so.*

To Register & Authorize SoundSoap Pro on a computer without internet access:

1. Launch SoundSoap Pro – when first launched on an unauthorized computer, you will be prompted to authorize it or run it in trial mode. Click the "Authorize" button to continue to the BIAS Authorization Manager – you will need to enter an administrator password to proceed.

2. Select the product you wish to authorize, and enter your serial number and email address.

3. Click the "Alternate Authorization" button.

4. In the Alternate Authorization dialog, click the "Generate Alternate Authorization" button to generate an Authorization Request File.

5. Transfer the Authorization Request File that is generated to a computer with internet access (via LAN, CD-ROM, flash drive, iPod, etc.).

6. After transferring the Authorization Request File to the internet-equipped computer, double-click the Authorization Request File – doing so will automatically open your web browser, transmit the Authorization Request File to the BIAS server, and download your Authorization File to the computer's default download directory.

7. Locate the downloaded folder containing the Authorization File (called "X_BIAS SoundSoap Pro"), and transfer it back to the host computer on which it will be used.

8. In the BIAS Authorization Manager's Alternate Authorization dialog, go directly to the "To Finalize the Alternate Authorization Process" section and click the "Open Authorization File" button.

9. Locate the Authorization File that was transferred back to the host computer in Step 7, and click the "Open" button. SoundSoap Pro is now authorized – click the "Done" button to exit the BIAS Authorization Manager.

If you do not have internet access on any computer, please contact BIAS for assistance at:

US Toll-Free: 1-800-775-2427
International: +1-707-782-1866

The BIAS Authorization Manager can be found in the following location, should you later need to deauthorize or reauthorize SoundSoap Pro:

⚠️ **Mac Systems –** *Macintosh HD/Applications/BIAS Authorization Manager*

Windows Systems – *C:\Program Files\BIAS\BIAS Authorization Manager\BIAS Authorization Manager.exe*

Deauthorizing a Computer

If you need to de-authorize a particular computer that will no longer be used to run SoundSoap Pro, you can do so by following the steps below.

⚠️ *The computer running SoundSoap Pro must be connected to the internet in order to deauthorize it.*

To De-Authorize a Computer:

1. Launch the BIAS Authorization Manager from your hard drive (or launch the BIAS Authorization Manager program from your installer CD-ROM).

2. In the BIAS Authorization Manager, select SoundSoap Pro as the product you wish to de-authorize – the serial number and email address used to authorize that product will be automatically recalled and will appear in the Serial Number and Email Address fields.

3. Click the Deauthorize button.

4. Click the Deauthorize button to confirm the deauthorization process – the Deauthorization Successful dialog appears.

5. Click the OK button – then click the Done button in the BIAS Authorization Manager.

2

Conclusion

Now that you have installed, registered, and authorized SoundSoap Pro, please proceed to the next chapter to learn about using SoundSoap Pro.

CHAPTER 3:
SOUNDSOAP PRO USER INTERFACE & CONTROLS
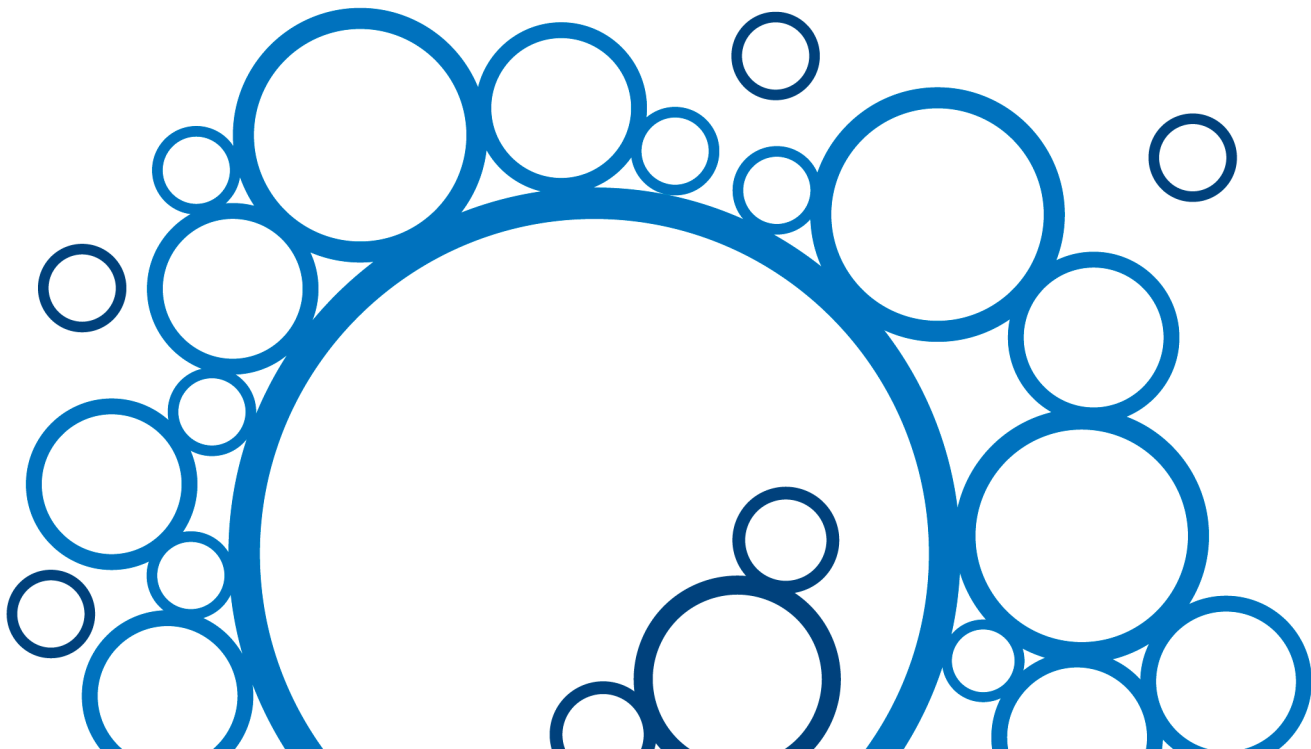
Chapter 3:
SoundSoap Pro User
Interface & Controls

Introduction

This chapter explains key SoundSoap Pro concepts and functions, and what each control in the user interface is used for.

A Brief Explanation of Noise Types

If you are using SoundSoap Pro, chances are you have run into some sort of undesirable noise in your digital media files. SoundSoap Pro offers many tools and precise control, allowing you to easily and effectively remove practically any type of unwanted audio signal — clicks, pops, crackle, hiss, hum, rumble, HVAC system noise, SMPTE timecode crosstalk, camera motor noise – and many other types of noise from a wide variety of digital audio and video media files. Such noise can be a big distraction from the desired audio signal, resulting in an unprofessional-sounding final product.

While SoundSoap Pro can do a great deal to reduce noise from a file, there may be situations in which the desired audio signal is lower than the level of noise, making it impossible to fully remove the noise. In cases like this, SoundSoap Pro may not entirely remove the noise, but may be able to significantly reduce its presence. The types of noise that SoundSoap Pro is designed to reduce are outlined below:

Hum

The type of noise known as "hum" is typically composed of a fundamental frequency (such as 60 Hz) and its harmonics, and is often associated with audio equipment being used on faulty electrical circuits, or equipment that is not properly grounded.

Rumble

Rumble is a type of noise similar to hum, but typically occurs at lower frequencies, usually around 40 Hz or below. An example of rumble would be the low frequency noise from phonograph turntables – often present in recordings made from vinyl records. The rumble filter may also be effective in removing other types of low frequency noise.

Clicks/Crackles/Pops

This category of noise is generally identified by random abrupt transients in an audio signal. When examined closely in a waveform editor, these transients will usually appear as abrupt "spikes" which do not fit within the overall pattern of an audio waveform. Clicks and crackles are often found in recordings made from vinyl records. Pops are a common result of performing cut/copy/paste type edits on audio or video media, especially when the editing platform does not accurately make these edits at zero-crossings (sections of the audio signal with zero amplitude). Pops may also result from

faulty electronic equipment, which can sometimes produce pops at regular intervals in an audio or video recording – or from clocking problems with digital transfers.

Broadband Noise

Broadband noise is any noise that is composed of a broad frequency spectrum. Tape hiss, room noise, air-conditioner noise (as well as noise from other types of appliances, lighting systems, etc.), buzzing, white noise, and pink noise, are common examples of "broadband" noise.

Getting Started with SoundSoap Pro

SoundSoap Pro is designed to be used as a plug-in within your favorite AudioSuite/RTAS, Audio Units, or VST-compatible host application, on Mac OS X or Windows XP and Vista. SoundSoap Pro was designed to provide professional-quality audio restoration, but also to be very simple to use, with maximum control over parameters that can reduce/remove the types of noise described in the previous section.

While SoundSoap Pro does offer some level of automated processing, and carefully adjusted default settings, it is important to understand what each control does, in order to use the best possible settings to address particular types of unwanted noise. The next section introduces SoundSoap Pro's graphical user interface.

Take a few moments to familiarize yourself with the various knobs, buttons, sliders, and visual feedback tools, and then move on to the next section, for detailed descriptions on how they are used.

SoundSoap Pro Controls Explained

The SoundSoap Pro GUI (graphical user interface) was specifically developed to provide the ultimate in control over a large number of parameters, while still being intuitive to use. The interface contains many controls to reduce most types of broadband noise, hum, rumble, or clicks, crackles, and pops from most digital media files.

The interface is based around five individual tabs – each contains tools that address a specific noise type. These tabs are, in order from left to right:

- Launch/Getting Started Tips

- Hum & Rumble

- Click & Crackle

- Broadband

- Noise Gate

The recommended way to use SoundSoap Pro is to start from the left side of the interface, and work your way to the right through the tabs that contain the noise reduction tools relevant to the type of unwanted noise at hand. For example, in a situation where there is hum, crackle, and broadband noise, you could start with the left-most tab (Hum & Rumble). Once the hum is removed, leave that tab active, and move one tab to the right, to the Click & Crackle tool. When any clicks/crackles present are removed, leave it active, and move along to the Broadband tab, and so on.

Do not turn on a tab if it does not contain tools relevant to the type of noise that needs to be reduced. For example, if you are restoring cassette recordings that contain only broadband noise, the Hum & Rumble and Click & Crackle tools should be turned off.

SoundSoap Pro's various controls are detailed below on a tab-by-tab basis, as they appear in the plug-in:

Global Controls (Available in all interface tabs):

While SoundSoap Pro offers several noise-specific tools, it also features tools that are "global" – meaning they can be accessed at any time, even when working between different noise reduction tools. For example, you may be fine-tuning Broadband noise reduction settings, and using the built-in spectrogram as a visual aid. Then, you may need to switch over to the Click & Crackle tool to make another adjustment. Since the Spectrogram operates globally, it is always in view, regardless of which tool is selected. What is particularly nice about the layout of the SoundSoap Pro interface, is that each tab contains a thumbnail representation of that tool's current settings. This makes it easy to move between various tabs, while still monitoring the settings of each tool. Below is a brief description of these "global" tools, and how they operate.

SoundSoap Pro Preset Save Button – Saves a SoundSoap Pro preset – which saves the settings for all four tools.

The SoundSoap Pro custom preset save button

SoundSoap Pro Preset Load Button – Recalls a previously stored SoundSoap Pro plug-in – with the option to load either a tool-specific preset, or one that reflects the overall state of the plug-in.


The SoundSoap Pro custom preset load button

> ⚠️ *SoundSoap Pro can use either its own form of advanced presets, which can load either the state of an individual tool, or the state of all the tools – or, it can use the usual host-provided presets available in each plug-in format.*

Host-Provided Preset Save Button – Saves a preset, of the host-provided variety (see alert above). Host provided presets only save a snapshot of the state of the entire plug-in.

Host-Provided Preset Load Button – Recalls a host-provided preset, which is a snapshot of the overall state of the SoundSoap Pro plug-in.

Load Preset   Save Preset
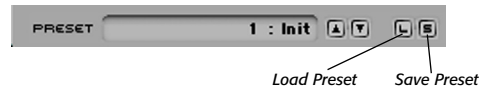
Host-provided preset controls for the VST version of SoundSoap Pro, as shown within BIAS Peak – host provided preset controls will vary in appearance depending on host, format, and platform.

A/B/C/D Compare Buttons – The A/B comparison feature is common in audio plug-ins, and gives the ability to preview different settings before committing to them. Essentially, various tool settings are made and assigned to memory location "A" – another group of settings can then be assigned as "B" – and then clicking the A or B buttons in the interface instantly toggles between the two. As SoundSoap Pro is geared toward professional restoration, and offers many fine-tuning options, it features not just two comparison modes, but instead includes four A/B/C/D "snapshot" style comparisons. These four unique settings can be compared instantly, before committing to any file processing or saving presets. These memory locations are similar to saving and loading presets, but are instantaneous and temporary, and do not require selecting presets from a menu to load them. Only the active "snapshot" may be saved within a preset for later recall.

A/B/C/D Compare snapshot assignment buttons

Help Button – Clicking the Help button opens the SoundSoap Pro User Guide, which is installed into your system – see Chapter 2 for details.


The Help button

Noise Only Mode Button – The Noise Only button changes the audio output of SoundSoap Pro. When in Noise Only mode you hear what is being removed from the audio signal, based on the current settings. Noise Only is an essential feature, as it lets you verify whether your settings are optimal, and that you are not removing any of the desired signal. If you're using Noise Only mode, and hear any of the desired audio signal, you can continue to make adjustments until you are only removing noise.

Noise Only mode allows you to monitor just what's being removed

Spectrogram – SoundSoap Pro's spectrogram is another essential tool, which provides visual feedback regarding the state of the file being restored. It features an animated color display which scrolls from right to left as a file is played through SoundSoap Pro. White and red graphics appear in the spectrogram to represent the following:

White = Input signal prior to noise reduction
Red = Input signal after noise reduction
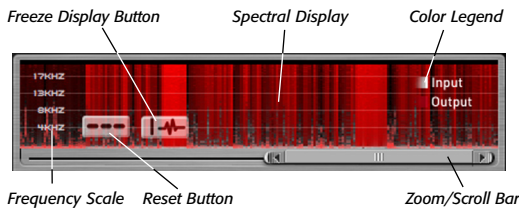
Hovering your mouse over the display brings up a reset button – which clears any graphical data out of the spectrogram – as well as a Freeze Display button. The Freeze Display button temporarily stops the spectrographic display, and can also help conserve CPU power. In addition to this graphical display, the spectrogram contains a frequency scale – which varies depending on the tab in the foreground. The spectrogram provides valuable information about where in the frequency spectrum noise occurs in a given file, as well as what frequencies are being removed. Directly beneath the spectrogram is a horizontal slider, which is used for both scrolling backward and forward in time, as

well as for increasing or decreasing the zoom level (precision) at which the spectrogram data is viewed.

> ⚠ *When working in the Hum & Rumble tool, the spectrogram's frequency scale changes from 4 Hz – 20 kHz to 4 Hz – 1 kHz, so as to give greater display precision when analyzing and removing hum and rumble – which characteristically occur in the lower portion of the frequency spectrum.*

Tool Tabs/Tool State Thumbnails – The bottom portion of the SoundSoap Pro interface contains the "tabs", each of which contains specific noise reduction tools. Clicking a tab brings a specific set of parameters to the foreground.

Each of SoundSoap Pro's Tabs contains a thumbnail representation of its tool settings, allowing you to easily monitor all settings at all times

Each tab also contains a miniature thumbnail display of the settings currently active within that tool. The tab-based interface is an essential part of streamlining the way SoundSoap Pro operates. It allows many controls to be placed within a fairly small area, and also allows the state of any tool's primary settings to be monitored at any time – even when working with a different noise reduction tool. For example, if you're working in the Noise Gate tool, and need to know what your current settings are for the Broadband Release knob, you can simply glance at the Broadband thumbnail, and view its settings, without having to leave the Noise Gate tab.

You have now learned about SoundSoap Pro's Global Tools – please continue on to the next section to learn about the Launch Tab.

Overview of Launch Area:

Preset Save Button

Preset Load Button

A/B/C/D Compare Buttons

Help Button

Noise Only Mode Button

Enable Tooltips Checkbox

Credits Screen

"See More" button

Getting Started Tips

Recommended Processing Order

Launch Tab

Launch Tab

Hum & Rumble Tab
(with tool settings thumbnail)

Click & Crackle Tab
(with tool settings thumbnail)

Broadband Tab
(with tool settings thumbnail)

Noise Gate Tab
(with tool settings thumbnail)

SoundSoap Pro

bias

PRESETS: SAVE LOAD → A → B → C → D ? NOISE ONLY

ENABLE TOOLTIPS

SoundSoap Pro

v. 2

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SEE MORE

Getting Started With SoundSoap Pro:

SoundSoap Pro combines four powerful noise reduction and restoration tools all in a single plug-in. In the lower section of the SoundSoap Pro interface

STEP 1   STEP 2   STEP 3   STEP 4

F
Q
R
H: 3

CL
CR

S: 5   A: 25
O: 0   R: 50

T
R
A: 30   R: 100

HUM & RUMBLE   CLICK & CRACKLE   BROADBAND   NOISE GATE

LAUNCH AREA

Launch Area

Credits/Info Screen – This area of the Launch Tab contains product credits, and version number information.

Use the Getting Started section of the Launch Tab to get going quickly – you can view more text by clicking the See More button

Enable Tooltips – When active, hovering your mouse over a control brings up helpful tips.


Getting Started Tips – The Getting Started Tips section of the Launch Tab contains useful information about how each tool works.

You've now learned a bit about the Launch Tab, the next section describes SoundSoap Pro's Hum & Rumble Tool.

Hum & Rumble Tool

On/Bypass Radio Buttons/Checkbox – These controls allow the Hum & Rumble tool to be turned on or off, while other tools remain active. They are useful for comparing the difference between having the Hum & Rumble tool on or off.
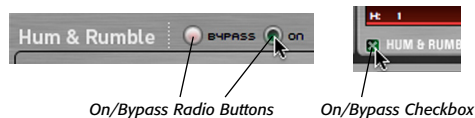
Hum & Rumble Tools may be turned on or bypassed using the radio buttons in the tool area, or with a checkbox in the tab

Hum Meter – SoundSoap Pro's Hum Meter is another visual aid, which along with your ears, is useful for helping to locate the fundamental frequency causing a particular hum. Typically, most hums occur at either 50 Hz or 60 Hz – however, there may be cases in which they occur at other frequencies. The Hum Meter works in conjunction with the Hum Frequency Slider. To find a hum's fundamental frequency, simply sweep the Hum Frequency Slider while listening to a media file containing hum. As you get closer and closer to the fundamental frequency, the Hum Meter's reading intensifies. When you see the strongest reading in the Hum Meter, you've found the fundamental frequency responsible for causing the hum, and can then use other Hum & Rumble controls to adjust how much the hum is reduced.
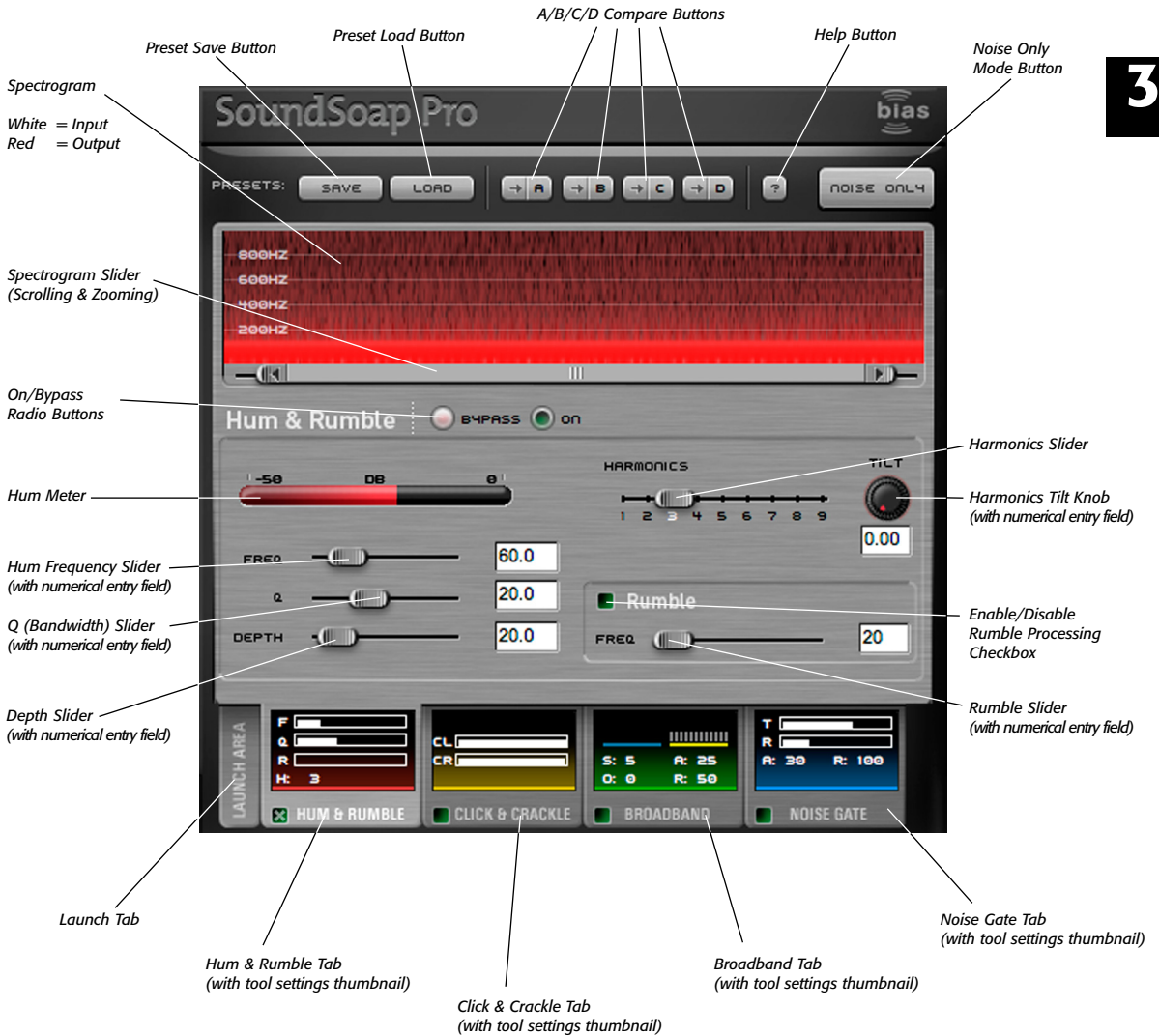

The Hum Meter provides visual feedback that helps identify a hum's fundamental frequency

Hum Frequency Slider – The Hum Frequency Slider allows you to reduce a specific frequency, and has a range of 20 Hz – 20 kHz. Moving this slider determines the fundamental frequency that will be targeted (a specific value may also be entered by typing a value in the numerical entry field). If the frequency causing a hum is unknown, the Hum Frequency Slider may be swept as the noisy media file is played, and the Hum

Overview of Hum & Rumble Tool:

Preset Save Button

Preset Load Button

A/B/C/D Compare Buttons

Help Button

Noise Only Mode Button

Spectrogram

White = Input
Red = Output

Spectrogram Slider
(Scrolling & Zooming)

On/Bypass
Radio Buttons

Hum Meter

Hum Frequency Slider
(with numerical entry field)

Q (Bandwidth) Slider
(with numerical entry field)

Depth Slider
(with numerical entry field)

Launch Tab

Hum & Rumble Tab
(with tool settings thumbnail)

Click & Crackle Tab
(with tool settings thumbnail)

Broadband Tab
(with tool settings thumbnail)

Noise Gate Tab
(with tool settings thumbnail)

Harmonics Slider

Harmonics Tilt Knob
(with numerical entry field)

Enable/Disable
Rumble Processing
Checkbox

Rumble Slider
(with numerical entry field)

Meter, located directly above the Hum Frequency Slider, will register activity as you approach the offending fundamental frequency. The setting that gives the strongest reading in the Hum Meter is the frequency (or very close to it) causing the hum problem.

Parameters can be adjusted with a slider, by entering a numerical value, or using the Up/Down Arrow keys on your keyboard

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SoundSoap Pro's knobs, sliders, and numerical fields can be controlled in a variety of ways:

• By clicking and dragging with a mouse (knobs are controlled by dragging up or down).

• By hovering the mouse cursor over the desired control, (or its accompanying numerical field) and rotating the mouse's scroll wheel.

• When numerical fields are in an editable state (i.e., after clicking in them with the mouse), their values may be changed by typing in new values, or by using the Up/Down Arrow keys on your keyboard – be sure to press the Return or Enter key on your keyboard to exit an editable field.

Q (Bandwidth) Slider – The Q Slider determines the bandwidth of the notch filter being applied to a particular frequency. The range of the Q slider is from 10 to 50. A larger Q value affects only a very narrow frequency range, and a smaller value affects a wider frequency range. Hum will vary depending on the source – a very narrow Q (higher value) will eliminate only the frequency set with the Hum Frequency Slider, and will do very little to frequencies that are very close, either higher or lower. On the other hand, a wider Q (smaller value), will still affect the same fundamental frequency, but will also affect some of the surrounding frequencies. Ideally, the narrowest Q (largest value) possible should be used, so as to affect just the offending frequency. If the Hum Meter shows a strong reading, but some hum is still audible, it's best to experiment with the

Q value setting, as well as the Depth and Harmonics Sliders.

Q (bandwidth) values can be adjusted with a slider, or by entering a numerical value

Depth Slider – The depth slider controls the amount of audio being cut out by the notch filter responsible for eliminating hum, and is directly related to both the Q Slider and Hum Frequency Slider. The Depth slider has a range of 0 dB (no audio being cut out) to 50 dB of reduction. The Depth setting cuts the most audio at the fundamental frequency, as determined by the Hum Frequency Slider, and affects the surrounding frequencies proportionally, depending on the Q value that is used.

Notch filter depth can be adjusted with a slider, or by entering a numerical value

Harmonics Slider – The Harmonics Slider designates how many harmonics of the fundamental frequency should be removed in either direction from the fundamental frequency. The range of harmonics that can be removed is 1 – 9, always as integers, never as fractions. When dealing with hum, there is always a fundamental frequency, and commonly there are harmonics at other frequencies, due to resonance. Harmonics typically will have similar characteristics to the hum found at the center frequency, but will be proportionally lower in amplitude. For example, a 60 Hz hum may have harmonics at higher frequencies, such as 120 Hz, 180 Hz, 240 Hz, and so on. Assuming the fundamental frequency is 60 Hz, a setting of "3" on the Harmonics Slider would also remove the hum that occurs at 120 Hz and at 180 Hz.

SoundSoap Pro can eliminate up to 9 harmonics of the fundamental frequency

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Harmonics Tilt Knob – The Harmonics Tilt Knob allows you to fine-tune the relationship between how much of the fundamental frequency is cut, and how much of the signal is cut at each harmonic.

The Harmonics Tilt Knob allows fine-tuning of harmonic reduction

It is common for a hum that occurs at a certain harmonic of the fundamental frequency to have a lower amplitude than the hum at the fundamental frequency. The Harmonics Tilt Knob controls the relationship between the depth of each successive notch filter created by the Harmonics slider. With a value of "0.00", each additional notch created by raising the value of the Harmonics slider cuts at the same value as the notch placed at the fundamental frequency.

For example, if the Hum Depth slider is set to cut by 20 dB, and the Harmonics Tilt Knob is set to "0.00", each additional notch created by increasing the value of the Harmonics slider will also cut each harmonic by 20 dB. However, if the Hum Depth slider is set to cut by 20 dB, and the Harmonics Tilt Knob is set to "0.50", then each successive notch created by increasing the value of the Harmonics slider will cut at half the depth of the previous notch.

Rumble Reduction Slider – The Rumble Reduction Slider focuses on very low frequency noise, commonly known as "rumble". Rumbles typically occur around 40Hz or below, and SoundSoap Pro's Rumble reduction tool has a range of 20 Hz – 100 Hz. The Rumble reduction tool is a high-pass filter (it lets high frequencies pass through, while blocking low frequencies), with a slope of 12 dB and a Q value of .5.


Separate Rumble reduction control is available for very low frequency noise

Global Tools – As with all the other tool tabs, SoundSoap Pro's global tools may be accessed from within the Hum & Rumble tab. These global tools include Preset Buttons, A/B/C/D Compare Buttons, Help Button, Noise Only Mode Button, Spectrogram, and the ability to monitor other tool settings with the Tool Tabs/Tool State Thumbnails. These tools are described in more detail at the beginning of this section.

This concludes the overview of the Hum & Rumble Tool – the next section covers Click & Crackle reduction with SoundSoap Pro.

Click & Crackle Tool

On/Bypass Radio Buttons/Checkbox – These controls allow the Click & Crackle tool to be disabled, or bypassed, while other tools remain active. They are useful for comparing the difference between having the Click & Crackle tools on or off.
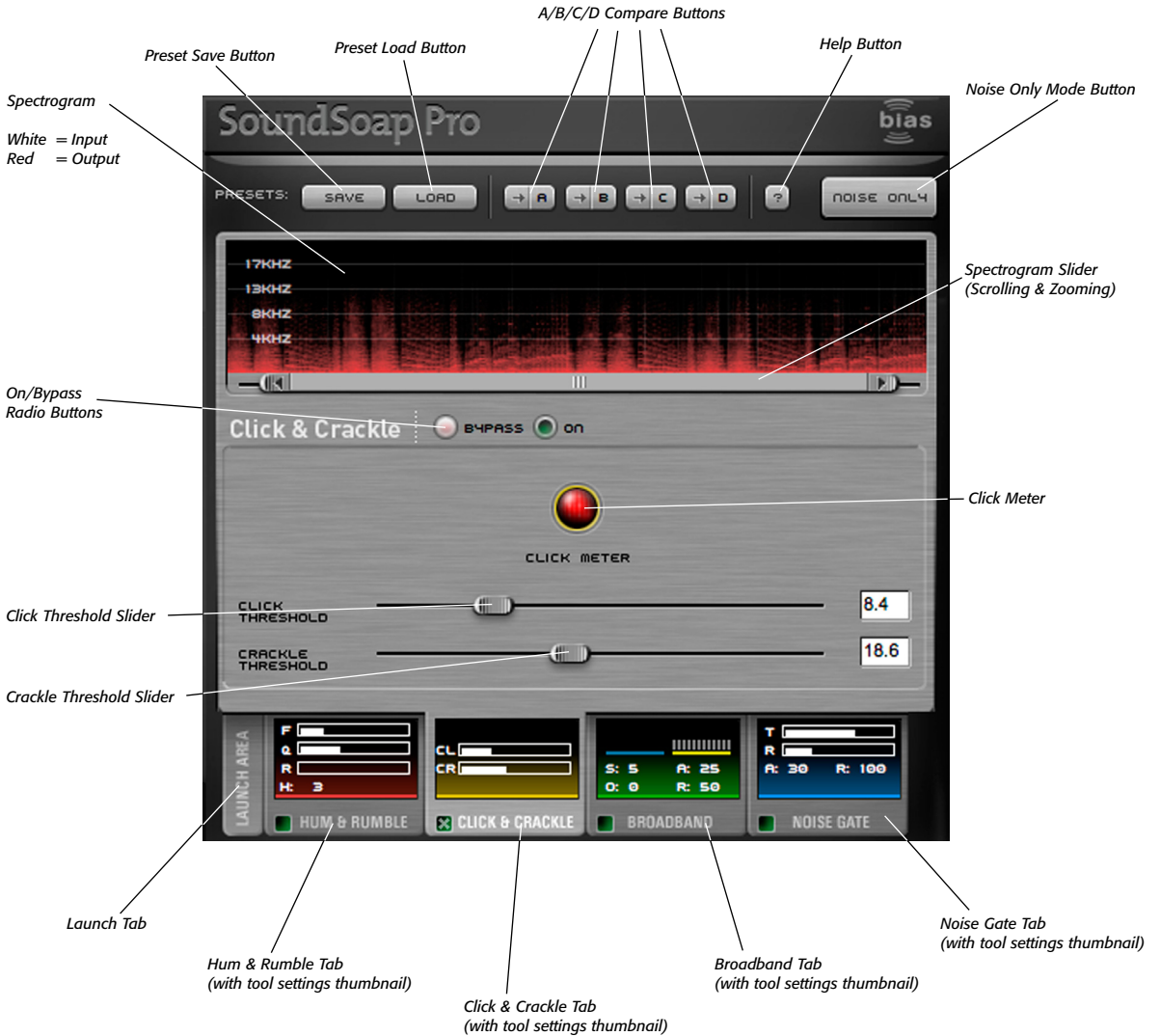

On/Bypass Radio Buttons   On/Bypass Checkbox
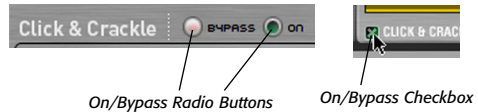
Click & Crackle Tools may be turned on or bypassed using the radio buttons in the tool area, or with a checkbox in the tab

Click Threshold Slider – The Click Threshold slider dictates how bad clicks must be to be detected and removed. The Click Threshold slider's range is 1.00 dB – 30.00 dB, and defaults to 30 dB. When clicks are present in the media file being restored, if they fall below the threshold value, they remain unaltered – if they're above the threshold, they are removed. The general rule with the Click Threshold slider is, moving it to the left will remove more clicks, and moving it to the right removes fewer clicks.

The Click Threshold slider allows fine-tuning click reduction

Overview of Click & Crackle Tool:

A/B/C/D Compare Buttons

Preset Save Button

Preset Load Button

Help Button

Noise Only Mode Button

Spectrogram

White = Input
Red   = Output

Spectrogram Slider
(Scrolling & Zooming)

On/Bypass
Radio Buttons

Click Meter

Click Threshold Slider

Crackle Threshold Slider

Launch Tab

Hum & Rumble Tab
(with tool settings thumbnail)

Click & Crackle Tab
(with tool settings thumbnail)

Broadband Tab
(with tool settings thumbnail)

Noise Gate Tab
(with tool settings thumbnail)

Crackle Threshold Slider – The Crackle Threshold slider dictates how bad crackle must be to be detected and removed. The Crackle Threshold slider's range is 10.0 dB – 30.0dB, and defaults to 30 db. When crackle is present in the media file being restored, if it falls below the threshold value, it remains unaltered – if it's above the threshold, it's removed. The general rule with the Crackle Threshold slider is, moving it to the left will remove more crackle, and moving it to the right removes less crackle.

The Crackle Threshold slider allows fine-tuning crackle reduction

Click Meter – The Click meter is another of SoundSoap Pro's visual aids. It illuminates in red to indicate that a click is being repaired.

The Click Meter – When settings detect click & crackle, the meter lights up, as in the picture on the right

Global Tools – As with all the other tool tabs, SoundSoap Pro's global tools may be accessed from within the Click & Crackle tab. These global tools include Preset Buttons, A/B/C/D Compare Buttons, Help Button, Noise Only Mode Button, Spectrogram, and ability to monitor other tool settings with the Tool Tabs/Tool State Thumbnails. These tools are described in more detail at the beginning of this section.

Congratulations! You've now learned about SoundSoap Pro's Click & Crackle Tools – the next section discusses the Broadband Tool...

Broadband Tool

On/Bypass Radio Buttons/Checkbox – These controls allow the Broadband tool to be disabled, or bypassed,

while other tools remain active. They are useful for comparing the difference between having the Broadband tool on or off.
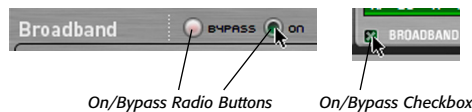
Broadband Tools may be turned on or bypassed using the radio buttons in the tool area, or with a checkbox in the tab

Slider Values Checkbox – When the Slider Values checkbox is checked, Threshold and Reduction values and frequency ranges are displayed when the mouse cursor passes over the Threshold and Reduction sliders.
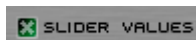
Preserve Attacks Checkbox – When the Preserve Attacks checkbox is checked, SoundSoap Pro detects and preserves transients in the audio signal.
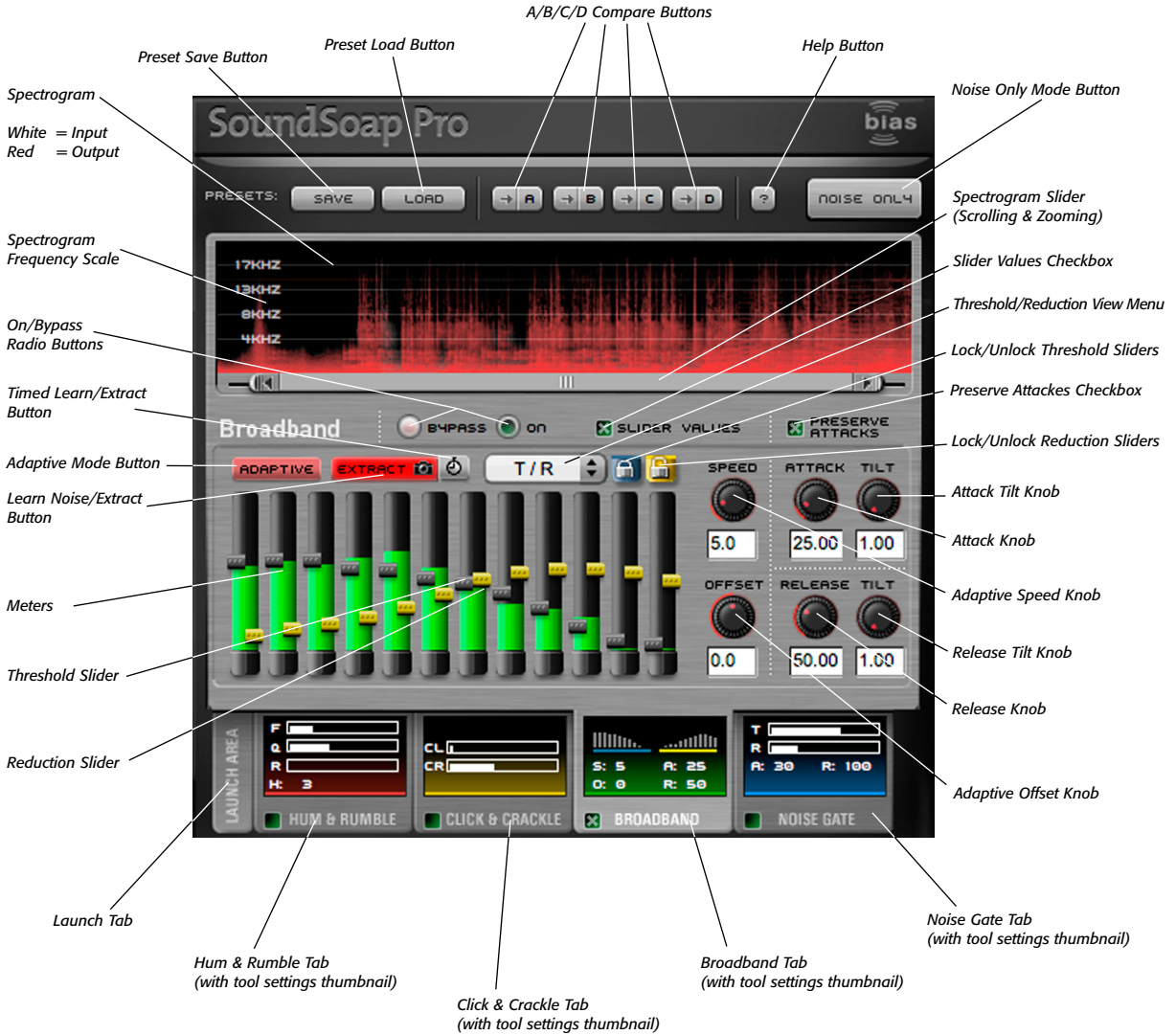

Since the dynamic range changes very rapidly in audio transients, this feature helps prevent broadband noise reduction from being applied excessively to these areas, which may introduce audible artifacts.

Transients are portions of the audio content which contain large changes in dynamic range in a very short period of time – for example, recorded drums or plucked guitar strings.

Adaptive Button – The Adaptive button controls whether SoundSoap Pro is in Adaptive mode or in standard learn mode, and also acts as a modifier for the Snapshot and Timer controls (see next section on Adaptive Extraction). When active, Adaptive mode allows automatic broadband noise reduction for audio sources in which the RMS (or average) level of the noise floor

Overview of Broadband Tool:

A/B/C/D Compare Buttons

Preset Save Button

Preset Load Button

Help Button

Spectrogram

White = Input
Red = Output

Noise Only Mode Button

Spectrogram Slider
(Scrolling & Zooming)

Spectrogram
Frequency Scale

Slider Values Checkbox

Threshold/Reduction View Menu

On/Bypass
Radio Buttons

Lock/Unlock Threshold Sliders

Timed Learn/Extract
Button

Preserve Attackes Checkbox

Adaptive Mode Button

Lock/Unlock Reduction Sliders

Learn Noise/Extract
Button

Attack Tilt Knob

Attack Knob

Meters

Adaptive Speed Knob

Threshold Slider

Release Tilt Knob

Reduction Slider

Release Knob

Adaptive Offset Knob

Launch Tab

Noise Gate Tab
(with tool settings thumbnail)

Hum & Rumble Tab
(with tool settings thumbnail)

Broadband Tab
(with tool settings thumbnail)

Click & Crackle Tab
(with tool settings thumbnail)

and frequency spectrum change over time. In Adaptive mode, there is no need to use SoundSoap Pro's Learn functions – simply turn on Adaptive mode, start playback, and the unwanted broadband noise is reduced.

Adaptive Mode Button acts as a modifier   *Snapshot Extraction*   *Timed Extraction*

⚠️ *Also see the section on Speed & Offset Knobs, which are related to Adaptive noise reduction. These appear later in this chapter.*

Extract Button – In Adaptive mode, the Learn button changes to Extract. Unlike the standard learn mode, Adaptive Extraction does not require an isolated area of noise to create a profile and perform noise reduction. Adaptive Extraction is designed to reduce broadband noise that does not change over time.

- **Snapshot Extraction Button –** This control is used to activate Snapshot Extraction. This type of Adaptive Extraction takes just a single click, and uses SoundSoap Pro's Adaptive algorithm to extract a noise profile. Once Snapshot Extraction begins, it can take up to thirty seconds to extract a noise profile. The amount of time it takes to extract a noise profile will vary, depending on the value of the Speed knob. A lower value will result in faster but less accurate Snapshot Extraction, and a higher value takes longer to create a noise profile, but the profile created is more accurate. Snapshot extraction is ideal for creating a noise profile by analyzing a relatively short section of a media file.

⚠️ Note that the time it takes to create a noise profile using Snapshot Extraction is not directly correlated to the value of the Speed knob.

- **Timed Extraction Button –** This control is used to start and stop Timed Extraction. This type of Adaptive Extraction requires one click of the Timed Extract button to start the extraction process, and a second click to stop extraction and create a noise profile that is averaged over the learned duration. Timed Extraction is ideal for creating a noise profile by analyzing a relatively long section of a media file.

Learn Noise Button – The Learn Noise button is used to automatically "learn" a profile of frequencies responsible for causing a particular type of broadband noise. There are two modes of operation available with the Learn Noise button. The standard (i.e., non-adaptive) Learn modes are designed for use with noisy media files that contain a distinct area of unwanted noise.


Adaptive Mode Button (Inactive)   *Snapshot Learn*   *Timed Learn*

- **Snapshot Learn –** The first mode, called "Snapshot" Learn, (represented by a camera icon) is accessed by pressing the Snapshot Learn button once audio playback has been started. SoundSoap Pro analyzes a short amount of audio (from the current playhead position) to create a noise profile, and then automatically snaps the twelve Threshold sliders to the appropriate positions to reduce/remove the unwanted broadband noise. Snapshot Learn mode is ideal for cases where only a very short section of isolated noise is available for creating a noise profile.


- **Timed Learn –** The second mode is "Timed" Learn, and is represented by a Clock icon. To use this mode, one would initiate playback, then click the portion of the Learn Noise button with the clock

icon. SoundSoap Pro continues to analyze audio (beginning from the original playhead position) that is played until the Timed Learn Noise button is clicked a second time. At this time, the twelve Threshold sliders are snapped into the appropriate position to reduce/remove the broadband noise present, based on the average noise profile learned over the duration indicated by the user. Timed Learn mode is ideal for cases where a media file contains a relatively long (i.e., a few seconds or more) section of just the unwanted noise, which can be used to create a more accurate noise profile.
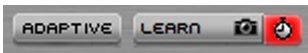
Meters – The twelve meters in the Broadband Tool indicate the level of audio contained within each frequency range. The meters on the left-most side of the interface indicate low frequency ranges, while the meters on the right-most side of the interface indicate high frequency ranges – with meters between these two extremes indicating the midrange frequencies between the two. The actual frequency range of each band is not fixed – it depends on the learned noise profile.
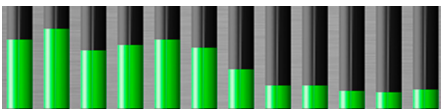
The meters indicate audio level in each frequency band, and help in fine-tuning settings for individual bands

Threshold/Reduction View Menu – This menu allows viewing just the Threshold sliders, just the Reduction sliders, or both Threshold and Reduction sliders simultaneously. By default, the Threshold/ Reduction Control slider is set to the center position, so that both Reduction and Threshold sliders are visible and adjustable.
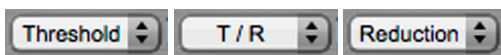
The Threshold/Reduction Control menu allows viewing just Threshold sliders, just Reduction sliders, or both simultaneously

Threshold Sliders – The Threshold sliders set the level that the signal must exceed for processing to be enabled in each frequency range. The sliders default to being locked together, so that moving one slider moves all the other sliders. Individual sliders may be fine-tuned by unlocking them and moving them independently. You can optionally choose to lock any number of sliders together so they can be adjusted in unison. By default, the Threshold sliders are set to a value of -96 dB, and have an overall range of 0 dB to –96 dB.

Threshold sliders may be moved in groups or independently

Reduction Sliders – The Reduction sliders control the amount of noise reduction being applied to a particular frequency range. Reduction sliders can be used in a number of ways. They may all be locked together and moved simultaneously by moving a single slider – or they may be temporarily unlocked, moved to a desired arrangement, locked back together and moved uniformly at their respective positions. In addition, they can all be unlocked and moved independently of each other – or, some sliders may be locked together, while others remain unlocked and can be moved independently. By default, the Reduction sliders are set to a value of –15 dB, and have an overall range of 0 dB to -40 dB.

Reduction sliders may be moved in groups or independently

Lock/Unlock Controls – These controls are used to lock and unlock the Threshold or Reduction sliders, so the desired sliders may be moved as a group, or individually.

- **Master Lock/Unlock Buttons –** The Master Lock/Unlock controls are located above the Threshold/Reduction sliders, and are used to lock or unlock all Threshold or Reduction sliders simultaneously.

- **Lock/Unlock Threshold Sliders Buttons –** These controls allow independent locking or unlocking of each Threshold slider, and are useful for grouping or ungrouping some but not all Threshold sliders. By default, all the Threshold sliders are locked together.

Above: All Threshold sliders locked together – they move together
Below: All Threshold sliders unlocked – they move independently

- **Lock/Unlock Reduction Sliders Buttons –** These controls allow independent locking or unlocking of each Reduction slider, and are useful for grouping or ungrouping some but not all Reduction sliders. By default, all the Reduction sliders are locked together.

Above: All Reduction sliders locked together – they move together
Below: All Reduction sliders unlocked – they move independently

Speed Knob – The Adaptive noise reduction algorithm takes a little time to adapt to a given noise source, and the Speed knob allows this to be fine-tuned. A higher value results in a longer adaptation time, while lower values result in faster adaptation time. The Speed knob's units are in seconds. By default, the Speed knob is set to 5 seconds.

The Speed knob controls how quickly the adaptive broadband noise reduction adapts to and reduces noise

Offset Knob – In Adaptive mode the Broadband Threshold sliders are automated and not accessible ("greyed out"). The Offest knob allows fine-tuning of the Adaptive noise reduction algorithm's dynamic noise profile, and is similar to moving all the Threshold sliders

as a group when working in non-Adaptive mode. A higher value results in raising the noise profile, and reduces more noise, while a lower value lowers the noise profile and provides less noise reduction. By default, the Offset knob is set to 0 dB.

The Offset knob allows fine-tuning the adaptive broadband noise reduction algorithm

⚠ *Note that the Speed and Offset knobs are only available when in Adaptive noise reduction mode, and appear greyed out when using standard Snapshot or Timed Learn modes.*

Attack Knob – The Attack knob sets the attack time in milliseconds for each frequency band, and controls how fast broadband noise reduction is turned on when the audio signal exceeds the threhold for that band. By default, the Attack value is set to 75 milliseconds.

The Attack knob controls how fast broadband noise reduction is turned on

Release Knob – The Release knob sets the release time in milliseconds for each frequency band, and controls how quickly broadband noise reduction is turned off when the audio signal falls below the threshold for that band. By default, the Release value is set to 100 milliseconds.

The Release knob controls how fast broadband noise reduction is turned off

Attack Tilt Knob – The Attack Tilt knob adjusts the ratio of Attack between the lowest and highest frequency bands. By default, the Attack Tilt knob's value is set to 1.0.

The Attack Tilt knob varies the ratio of Attack values between low and high frequency bands

For example, if the Attack Knob's value is set to 50 ms, and the Attack Tilt knob is set to "1.00", then the Attack time for the lowest frequency band will be 50 ms, as will be the Attack time for all other frequency bands. If however, the Attack Tilt knob is set to "2.00", then the Attack time for the lowest frequency band remains at 50 ms, but the Attack time for the highest frequency band will be 25 ms – or, a 2:1 ratio between the lowest and highest frequency bands. In this case, moving to the right from the lowest frequency band to the highest, each successive band will have an incrementally faster attack time.

Release Tilt Knob – The Release Tilt knob adjusts the ratio of Release between the low frequency bands and the high frequency bands. By default, the Release Tilt knob's value is set to 1.0.

The Release Tilt knob varies the ratio of Release values between low and high frequency bands

For example, if the Release Knob's value is set to 50 ms, and the Release Tilt knob is set to "1.00", then the Release time for the lowest frequency band will be 50 ms, as will be the Release time for all other frequency bands. If however, the Release Tilt knob is set to "2.00", then the Release time for the lowest frequency band remains at 50 ms, but the Release time for the highest frequency band will be 25 ms – or, a 2:1 ratio between the lowest and highest frequency bands. In this case, moving to the right from the lowest frequency band to the highest, each successive band will have an incrementally slower release time.

Global Tools – As with all the other tool tabs, SoundSoap Pro's global tools may be accessed from within the Broadband tab. These global tools include Preset Buttons, A/B/C/D Compare Buttons, Help Button, Noise Only Mode Button, Spectrogram, and the ability to monitor other tool settings with the Tool Tabs/Tool State Thumbnails. These tools are described in more detail at the beginning of this section.

You've now learned about SoundSoap Pro's Broadband Tool – the next section goes over the Noise Gate Tool, which can be used to eliminate any residual noise leftover after using the previously mentioned tools.
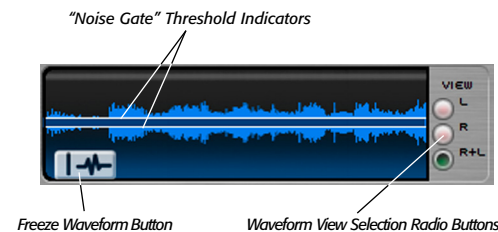
Noise Gate Tool

On/Bypass Radio Buttons/Checkbox – These controls allow the Noise Gate tool to be disabled, or bypassed, while other tools remain active. They are useful for comparing the difference between having the Noise Gate tool on or off.
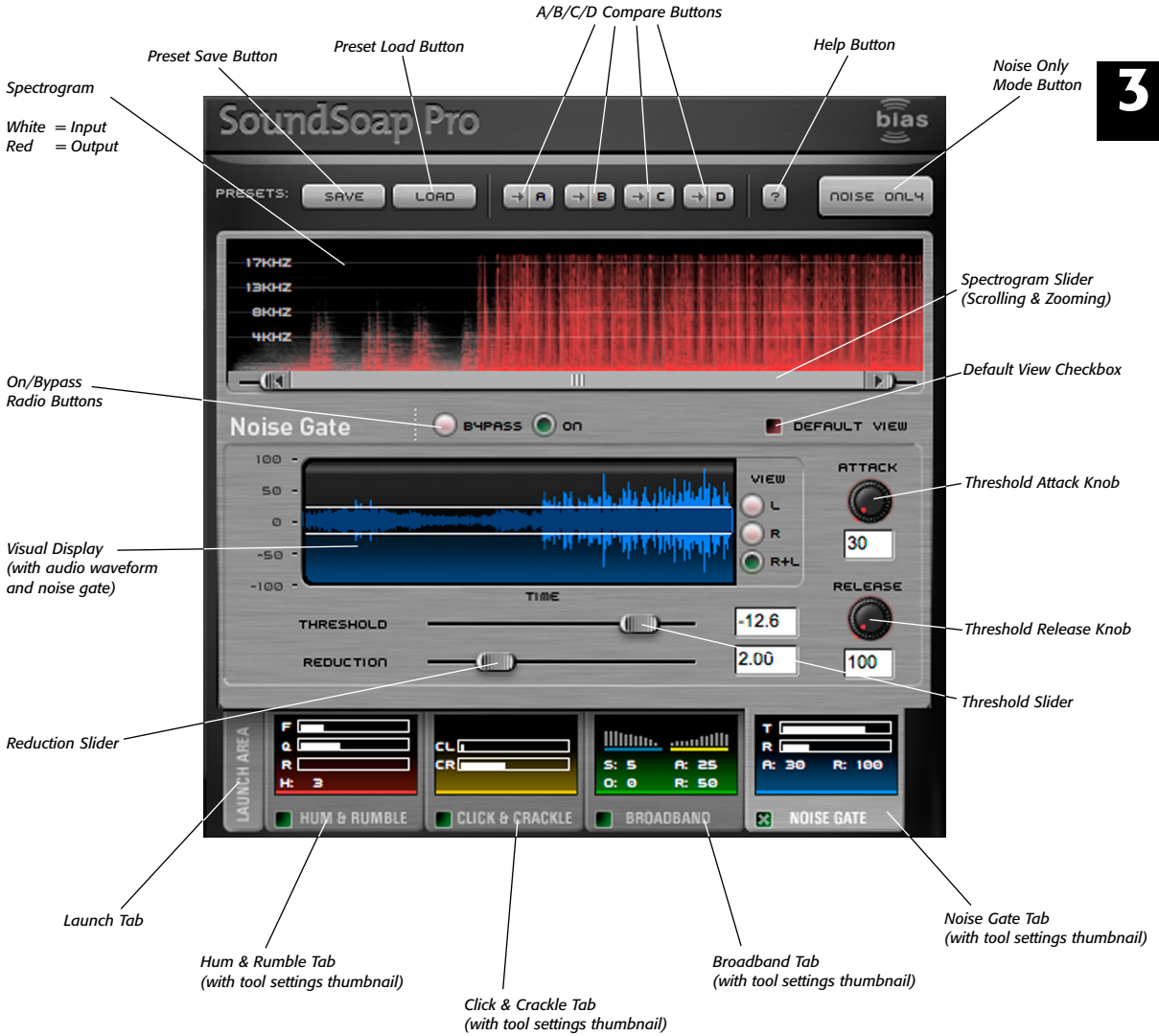

On/Bypass Radio Buttons   On/Bypass Checkbox
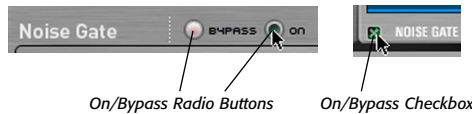
Noise Gate Tools may be turned on or bypassed using the radio buttons in the tool area, or with a checkbox in the tab

Visual Display – The Noise Gate's visual display shows the audio waveform being processed, as well as the noise gate's threshold indicators.

"Noise Gate" Threshold Indicators

Freeze Waveform Button   Waveform View Selection Radio Buttons

Various elements of the Noise Gate's visual display

Overview of Noise Gate Tool:

Preset Save Button

Preset Load Button

A/B/C/D Compare Buttons

Help Button

Noise Only
Mode Button

Spectrogram

White = Input
Red = Output

3

On/Bypass
Radio Buttons

Spectrogram Slider
(Scrolling & Zooming)

Default View Checkbox

Threshold Attack Knob

Visual Display
(with audio waveform
and noise gate)

Threshold Release Knob

Threshold Slider

Reduction Slider

Launch Tab

Noise Gate Tab
(with tool settings thumbnail)

Hum & Rumble Tab
(with tool settings thumbnail)

Broadband Tab
(with tool settings thumbnail)

Click & Crackle Tab
(with tool settings thumbnail)

Options for viewing the waveform include displaying just left or right channel data, or adding the left and right channels together and displaying the overall audio data for the two channels as a single audio waveform. In addition, there is a Freeze button that appears when the mouse cursor is placed over the visual display. Clicking the button temporarily pauses waveform scrolling, and clicking the button when the waveform is paused starts it scrolling again.

Threshold Slider – The Threshold slider determines the audio level required for the Noise Gate to open. The threshold level is represented by a pair of parallel white horizontal lines, which appear superimposed over the audio waveform in the visual display. Audio signals which exceed the Threshold slider's setting are not affected, and do not have noise reduction applied to them. By default, the Noise Gate Threshold slider is set to a value of 20 dB, and has a range of 0 dB to –60 dB.

The Noise Gate's Threshold can be adjusted with a slider, or by entering a value

Reduction Slider – This slider provides a proportional amount of noise reduction, and only affects audio which falls below the threshold setting. A lower value for the Reduction slider provides a lower ratio between the threshold level to the amount of noise reduction, whereas a higher setting increases this ratio. By default, the Noise Gate's Depth slider is set to a value of 2.00, and has a range of 1.00 to 5.00.

The Noise Gate's amount of Reduction can be adjusted with a slider, or by entering a value

Threshold Attack Knob – The Threshold Attack knob determines how quickly the Noise Gate opens. By default, the Attack value is set to 30 milliseconds, and has a range of 10 milliseconds to 500 milliseconds.

The Noise Gate's Attack can be adjusted with a knob, or by entering a value

Threshold Release Knob – The Threshold Release knob determines how quickly the Noise Gate closes. By default, the Release value is set to 100 milliseconds, and has a range of 50 milliseconds to 1000 milliseconds.
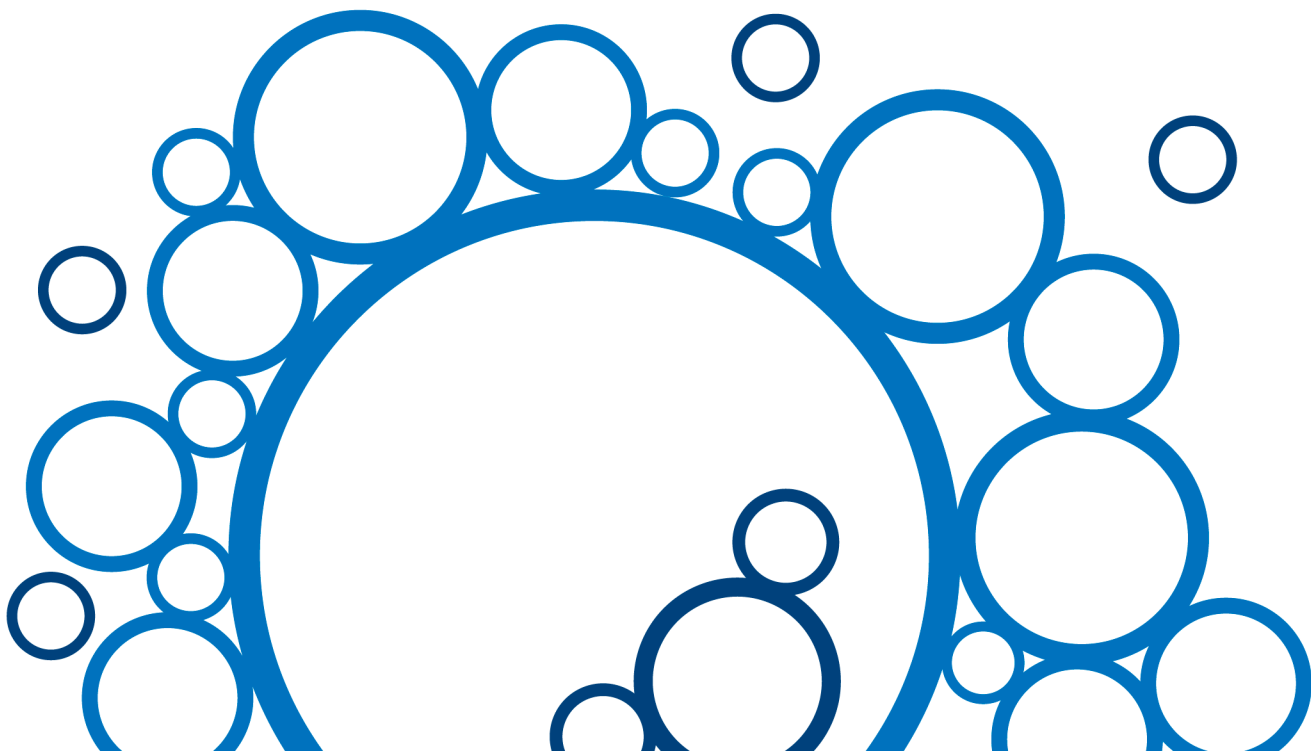

The Noise Gate's Release can be adjusted with a knob, or by entering a number

Conclusion

Congratulations! You've now learned about all of SoundSoap Pro's powerful noise reduction tools. Please continue on the the next chapter, which gives step-by-step directions on how to use SoundSoap Pro.

CHAPTER 4:
USING SOUNDSOAP PRO

Chapter 4:
Using SoundSoap Pro

Introduction

This chapter covers the basic operation of SoundSoap Pro with BIAS Peak as a host application. If you are using a different host, the steps for instantiating the plug-in may vary slightly, but operation of its controls will be very similar.
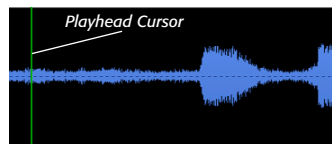

A good place to start "learning" noise – notice the playhead cursor is placed at the beginning of a section that contains just noise

Evaluating Noise Content

SoundSoap Pro contains many different tools for removing/reducing noise. In some situations, you may wish to use all the tools at the same time, and in others, you may only need to use a single noise reduction tool to remove/reduce a very specific kind of noise.

Each of the noise reduction tools is contained within one of the interface "tabs" – each tab contains a checkbox to enable or disable processing. If the file you are cleaning does not contain Hum & Rumble, for example, it's a good idea to disable the Hum & Rumble tool so as not to inadvertently remove low frequency audio content. By default, all tools are turned off.

A bad place to start "learning" noise – in this case, as soon as playback starts, SoundSoap Pro would be attempting to learn the noise within a section of audio that contains the material we're trying to preserve

In this case, there's only a very short section of noise by itself, so we create a very short loop, and learn noise within the loop – as it repeats a few times, SoundSoap Pro is given enough noisy audio to determine the noise profile
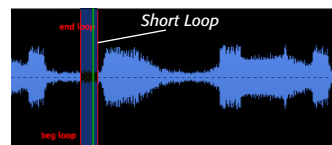
Tips for Learning Noise

When working with Snapshot and Timed Learn modes, it's important to only use the Learn function in areas that contain just the unwanted noise, and none of the desired content. The pictures below illustrate some tips on how and where to use these Learn modes.

If your host application supports looping, this is a technique that can be invaluable for Snapshot and Timed Learn modes. For example, you might be trying to remove background noise from a dialogue track that has two alternating speakers, and only very short pauses containing ambient noise between their words. By setting up a very short loop between words or phrases, SoundSoap Pro can "Learn Noise" as audio playback repeats within this short loop a number of times, and provides enough audio material for SoundSoap Pro to create a noise profile.

Creating Broadband Noise Profiles

SoundSoap Pro offers several ways to work with broadband noise reduction, and the method used will depend largely on the given content, and the noise it contains. Using SoundSoap Pro's broadband noise learning modes is described below.

Adaptive Mode

Adaptive mode provides fully automated broadband noise reduction, and is designed for cases where the broadband noise changes over time.

Adaptive Mode Button   *Snapshot*   *Timed*
acts as a modifier   *Extraction*   *Extraction*
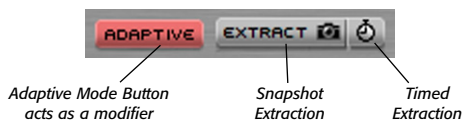
Using Adaptive mode is very simple – click the Adaptive button, and start playback in your host – SoundSoap Pro's Adaptive algorithm "adapts" to the broadband noise in the recording, and reduces it.

The Adaptive algorithm can be fine-tuned using the Speed knob – which adjusts how quickly and accurately the algorithm adapts, and removes noise – and the Offset knob, which offers a way to adjust the automated (and thus inaccessible) broadband Threshold sliders. More information about the Speed and Offset controls is included in Chapter 3.

> ⚠️ *When using Adaptive Extraction or Standard Learn modes (i.e., any modes that create a static noise profile), it is important to create and apply noise reduction to media files with the same audio sample rate. For example, you would not want to use the Learn function on a 44.1 kHz file, and then apply noise reduction using that learned profile to a file with a sample rate of 48 kHz. Doing so may result in less accurate noise reduction and/or artifacts.*

Adaptive Extraction Mode

This semi-automatic noise reduction mode takes advantage of the Adaptive algorithm's ability to automatically set Threshold levels. However, instead of operating dynamically, it extracts the automated Threshold level settings, and converts them into a static noise profile that can be manually edited. Adaptive Extraction mode is ideal for cases where a recording contains static broadband noise, and no area of isolated noise in which to use SoundSoap Pro's standard "Learn Noise" method of creating a noise profile. The actual amount of noise reduction applied can be adjusted using the Reduction sliders. Adaptive Extraction Mode offers two options for use, described below:

- **Snapshot Extraction –** This method of Adaptive Extraction requires just a single click of the Snapshot Extraction button, while in Adaptive mode. Once Snapshot Extraction begins, it can take up to thirty seconds to extract a noise profile. The amount of time it takes to extract a noise profile will vary, depending on the value of the Speed knob. A lower value will result in faster but less accurate Snapshot Extraction, and a higher value takes longer to create a noise profile, but the profile created is more accurate.

> ⚠️ *Note that the time it takes to create a noise profile using Snapshot Extraction is not directly correlated to the value of the Speed knob.*

- **Timed Extraction –** This method of Adaptive Extraction requires one click of the Timed Extraction button (while in Adaptive mode) to start the extraction process, and a second click to stop extraction and create a noise profile.
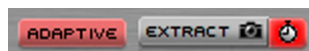
Standard Learn Modes (Non-Adaptive)

There are two modes of operation available with the Learn Noise buttons. The standard (i.e., non-adaptive) Learn modes are designed for use with noisy media files that contain distinct areas of just the unwanted noise.

Adaptive Mode Button   Snapshot   Timed
(Inactive)   Learn   Learn

•   **Snapshot Learn –** Snapshot Learn mode is ideal for creating a noise profile in recordings that contain short, but clearly defined areas of noise by itself amid the desired audio content. Using Snapshot Learn mode generally entails placing the host's playback cursor at the beginning of an area of isolated noise, starting playback, and then clicking the Snapshot Learn Noise button – after about half a second, SoundSoap Pro creates an editable noise profile. The actual amount of noise reduction applied can be adjusted using the Reduction sliders.

•   **Timed Learn –** Timed Learn mode is ideal for creating a noise profile in recordings that contain relatively long (i.e. at least several seconds) and clearly defined areas of noise by itself amid the desired audio content. By learning over a longer period of time, Timed Learn mode creates an averaged noise profile, which can sometimes be more accurate than the noise profile created by learning over a shorter period of time, and shorter sample area.

Using Timed Learn mode entails placing the host's playback cursor at the beginning of an area of isolated noise, starting playback, and then clicking the Timed Learn button. SoundSoap Pro creates an initial noise profile, just as in Snapshot Learn mode, but continuously updates it as playback continues. Clicking the Timed Learn button a second time (at the end of the area of isolated noise, before any desired content is played) stops the learning process and finalizes the learned noise profile, which can be edited if desired. The actual amount of noise reduction applied can be adjusted using the Reduction sliders.

> ⚠ *Before committing to a particular noise sampling mode, you may wish to try a few, and save the results of each to one of SoundSoap Pro's ABCD snapshots. By saving each noise profile to one of the temporary memory snapshots, you can quick compare each, as you decide which works best for the restoration project at hand. More information on using ABCD snapshots appears later in this chapter.*

Using SoundSoap Pro (with BIAS Peak as a Host Application)

Most of the steps here will translate directly into working with SoundSoap Pro in other hosts – though it is normal for the operation to vary slightly depending on the plug-in format and implementation in each host.

For more information on using plug-ins in your host, consult the documentation provided with it. SoundSoap Pro will operate in a similar fashion to the other plug-ins included with it.

The first step in reducing noise is to open a noisy media file in Peak, then open the SoundSoap Pro plug-in. The following steps will guide you through your first attempts at noise reduction.

To Eliminate Hum:

1. Launch Peak.

2. Open a noisy file.

3. Audition this file in Peak, to get an idea of the hum that needs to be cleaned up.

4. From the Plug-Ins menu, choose Insert 1>BIAS>SoundSoap Pro – the SoundSoap Pro interface appears.

5. Click the Hum & Rumble Tab to bring it to the foreground.

6. Confirm that this tool is turned on – click the On radio button, or check the checkbox in the Hum & Rumble Tab.

7. Start playback of the file by pressing the Space Bar.

8. As the file plays, sweep the Hum Frequency Slider slowly back and forth and look for activity in the Hum Meter. When you see activity in the Hum Meter, try to fine-tune the Frequency Slider's position so as to get the strongest reading in the Hum Meter. If you know the exact frequency at of the hum, you may also type this value in the field to the right of the Hum Frequency slider – press the Return or Enter Key.

9. Once you have determined the hum's fundamental frequency, use the Depth slider to create a notch filter to cut the audio signal's strength at this frequency.
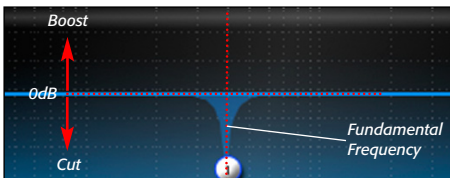
The BIAS Freq EQ illustrates what SoundSoap Pro is doing behind the scenes – The Depth Slider creates a notch filter, which cuts out certain frequency ranges

10. Use the Q slider to adjust the bandwidth of the notch filter – a smaller Q value results in a wider notch, with more of the frequencies surrounding the fundamental frequency being affected – a larger Q value creates a narrower notch, and affects fewer of the frequencies around the fundamental frequency. Ideally, you'll want to use the largest Q value (narrowest notch) that effectively eliminates the hum, so as to avoid removing frequencies that do not contain hum.
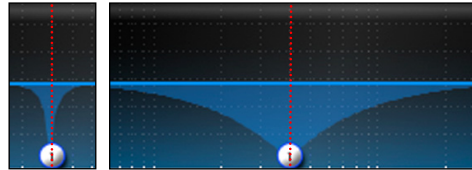
The BIAS Freq EQ illustrates the effect of different Q values – a high Q value (left) creates a narrow notch filter, and affects fewer surrounding frequencies – a low Q value (right) creates a wide notch filter, and affects more of the surrounding frequencies

11. If you still hear a hum after setting the Hum Frequency slider, depth, and Q sliders, you can use the Harmonics slider to eliminate additional harmonics of the fundamental frequency.

12. If the hum reduction controls do not make a difference in reducing the hum, perhaps this "hum" is a rumble – or perhaps has a broadband noise component to it. You may wish to enable the Rumble slider and make adjustments to affect the lower frequencies that cause rumble, and also experiment with using the Broadband Tool in conjunction with the Hum & Rumble tool.

⚠ *Using the Spectrogram as a visual aid can help determine where in the frequency spectrum certain kinds of noise occur.*

⚠ *A good technique for confirming your noise reduction settings is to switch SoundSoap Pro into "Noise Only" listening mode. In Noise Only mode, you will hear just the noise being removed with the current noise reduction settings. If you hear any of the audio that should be kept in the file, adjust the parameters until you only hear the undesired noise.*

The steps above outline the basic operation of the Hum & Rumble tool – for more details on other parameters not mentioned here, please refer to the Hum & Rumble section in Chapter 3: SoundSoap Pro User Interface & Controls.

To Eliminate Click & Crackle:

⚠️ *At this point, you're either trying to eliminate click & crackle from the same file in which hum was eliminated in the previous section, or you're opening a different file that contains click & crackle – if you're working with the same file, ignore steps 1 and 2.*

1. Launch Peak.

2. Open a file that contains click & crackle.

3. Audition this file in Peak, to get an idea of the noise that needs to be cleaned up.

4. Click the Click & Crackle Tab to bring it to the foreground.

5. Confirm that this tool is turned on – click the On radio button, or check the checkbox in the Click & Crackle tab.

6. Adjust the Click Threshold slider – moving it toward the left reduces more clicks and moving it to the right reduces fewer clicks.

7. Adjust the Crackle Threshold slider – moving it toward the left reduces more crackle and moving it to the right reduces less crackle.

⚠️ *The Click Meter gives valuable visual feedback – when the Click Meter lights up, it indicates that your current settings are effectively detecting and repairing Clicks.*

⚠️ *A good technique for confirming your noise reduction settings is to switch SoundSoap Pro into "Noise Only" listening mode. In Noise Only mode, you will hear just the noise being removed with the current noise reduction settings. If you hear any of the audio that should be preserved, adjust the parameters until you only hear the undesired noise.*

The steps above outline the basic operation of the Click & Crackle tool – for more details on other parameters not mentioned here, please refer to the Click & Crackle section in Chapter 3: SoundSoap Pro User Interface & Controls.

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To Eliminate Broadband Noise (Basic Steps):

⚠️ *SoundSoap Pro offers several ways to create broadband noise profiles, each best suited for specific cases. The steps below outline using the fully automated Adaptive mode – for more information on working with other methods of creating noise profiles, please see the section on Creating Broadband Noise Profiles earlier in this chapter.*

⚠️ *At this point, you're either trying to eliminate broadband noise from the same file in which hum and click & crackle were eliminated in the previous two sections, or you're opening a different file that contains broadband noise – if you're working with the same file, ignore steps 1 and 2.*

1. Launch Peak.

2. Open a file that contains broadband noise.

3. Audition this file in Peak, to get an idea of the broadband noise that needs to be cleaned up.

4. Click the Broadband Tab to bring it to the foreground.

5. Confirm that this tool is turned on – click the On radio button, or check the checkbox in the Broadband Tab.

6. Click the Adaptive button.

7. Start playback – as SoundSoap Pro analyzes the various frequencies responsible for the broadband noise, you'll see the Threshold sliders moving, as they adapt to the variations in the noise.

⚠️ *Note that the Threshold sliders appear greyed out, and their positions cannot be manually adjusted in Adaptive mode. While the Threshold sliders cannot be moved while in Adaptive mode, the Offset knob allows fine-tuning the dynamically-generated adaptive noise profile, which is similar to moving all the Threshold sliders as a group when working in a non-adaptive mode.*

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8. Adjust the yellow Reduction sliders until they are removing the desired amount or broadband noise.

Advanced Steps:

9. Adjust the Speed knob to control how quickly the Adaptive algorithm "adapts" to the broadband noise in the current recording. A lower value translates to a longer adaptation time, with a more accurate noise profile. A higher value allows the algorithm to adapt more quickly, but with less accuracy.

10. Adjust the Offset knob to trim the level of the automatically created noise profile. Raising the Offset value (and hence the noise profile) results in slightly more noise reduction, and lowering it provides slightly less. (Using the Offset knob is similar to moving all the Threshold sliders as a group when working in a non-adaptive mode.)

11. With the yellow Reduction sliders grouped together (as they are by default), move them all downward until they are not removing any broadband noise.

12. Move them all upward as a group until you can no longer hear any broadband noise.

13. Now, click the lock icon for the yellow Reduction sliders.

14. Starting on the lowest band (left-most slider), lower it all the way – you will most likely hear a low frequency component of the broadband noise become audible as you do this. Raise this slider to the lowest position that effectively removes this low frequency component.

15. Repeat Step 12 for each slider, moving from the lowest frequency bands on the left, all the way through the highest bands on the right. This technique applies variable amounts of noise reduction in each frequency band, ensuring that desired content is preserved, and unwanted noise is removed.

⚠️ *A good technique for confirming your noise reduction settings is to switch SoundSoap Pro into "Noise Only" listening mode. In Noise Only mode, you will hear just the noise being removed with the current noise reduction settings. If you hear any of the audio that should be kept in the file, adjust the parameters until you only hear the undesired noise.*

SoundSoap Pro's Threshold and Reduction sliders may also be ungrouped, and moved independently. This is an extremely useful feature that allows you to customize exactly how much noise reduction is being applied in different parts of the frequency spectrum. By taking advantage of this you can more effectively reduce noise in particular frequency bands, while leaving others untouched. This results in the cleanest possible signal, and avoids introducing audible artifacts.

The steps above outline the basic operation of the Broadband tool – for more details on other parameters not mentioned here, please refer to the Broadband section in Chapter 3: SoundSoap Pro User Interface & Controls, and to the section on Creating Broadband Noise Profiles, earlier in this chapter.

To Eliminate Residual Noise with the Noise Gate:

If you've already used the Hum & Rumble, Click & Crackle, and Broadband tools on a noisy file, chances are there's little if any residual noise left. If some noise is still present, and your audio material has areas

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of what should be silence, this is a perfect opportunity to use the Noise Gate to eliminate the remaining noise.

> ⚠️ *At this point, you're either trying to eliminate any residual noise from the same file in which hum and click & crackle were eliminated in the previous two sections, or you're opening a different file that contains broadband noise – if you're working with the same file, ignore steps 1 and 2.*

1. Launch Peak.

2. Open a file that contains noise.

3. Audition this file, to get an idea of the noise that needs to be cleaned up.

4. Click the Noise Gate Tab to bring it to the foreground.

5. Confirm that this tool is turned on – click the On radio button, or check the checkbox in the Noise Gate Tab.

6. Adjust the Threshold slider – moving it to the left lowers the threshold (more noise can pass through), and moving it to the right raises the threshold (only audio exceeding this threshold will pass through the gate).

7. Adjust the Reduction slider – moving it to the left lowers the amount of reduction, and moving it to the right increases the amount of reduction.

> ⚠️ *A good technique for confirming your noise reduction settings is to switch SoundSoap Pro into "Noise Only" listening mode. In Noise Only mode, you will hear just the noise being removed with the current noise reduction settings. If you hear any of the audio that should be kept in the file, adjust the parameters until you only hear the undesired noise.*

Applying SoundSoap Pro Settings

The steps below outline how to apply SoundSoap Pro settings to a media file in Peak – if you are using SoundSoap Pro in another host application, please check that host's documentation for information on how to apply/render plug-in settings to files.

To Apply SoundSoap Pro Settings:

1. Make desired settings.

2. Select the range of audio you wish to apply the current noise reduction settings to – if no selection is made, the entire file will be processed.

3. Choose "Bounce" from the Plug-Ins menu

> ⚠️ *Be sure to disable SoundSoap Pro after "bouncing" in Peak. If you leave SoundSoap Pro active, you will hear the processed file being played through SoundSoap Pro in realtime, giving the effect of twice the amount of noise reduction. For your convenience, Peak presents a dialog box after bouncing, with options to turn plug-ins off, or to leave them active if you need to process additional files. If you would like to save your current settings, be sure to save a preset first!*

Using Presets

SoundSoap Pro allows custom presets to be saved and recalled – this is particularly useful for saving parameter configurations that effectively reduce noise types that users may encounter on a regular basis. For instance, if a commonly used recording enviroment always introduces a particular kind of noise, creating a preset makes it much faster and easier to eliminate this noise from recorded material.

SoundSoap Pro features advanced presets, offering numerous advantages over conventional host-based presets. When a SoundSoap Pro preset is saved, all parameter settings are saved. However, when this preset is later recalled, all the parameter settings within that preset may be loaded – or, individual tool settings may be loaded.

The usual host-provided presets for each plug-in format are also supported, though these will not include the ability to load individual tool settings. BIAS recommends using SoundSoap Pro's advanced presets rather than host-provided presets.

To Save a SoundSoap Pro Preset:

1. Configure noise reduction parameters as desired.

2. Click the Save Preset button.

3. Name your preset and choose a save location.
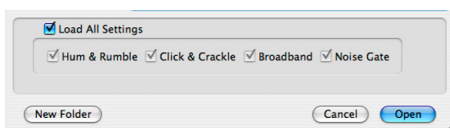
4. Click the Save button.

To Load a SoundSoap Pro Preset:

1. Click the Load Preset button.

2. Navigate to the directory where you have saved your SoundSoap Pro presets – choose (highlight) the desired preset.

3. Click the Open button – SoundSoap Pro loads the preset, and sets all parameters to the value reflected in the preset.


To Load Individual Tool Settings from a Preset:

1. Click the Load Preset button.

2. Navigate to the directory where you have saved your SoundSoap Pro presets – choose (highlight) the desired preset.

3. Uncheck the Load All Settings checkbox, as well as those for tools which you do not wish to load parameters – by default, all the tool's checkboxes are checked, so as to load all parameter settings within a preset.
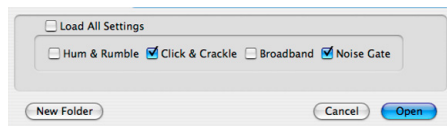
4. Click the Open button – SoundSoap Pro loads only the parameters for tools that are checked. All selected tool parameters are set to the values reflected in the preset – tools that do not have parameters loaded are set to their default values, and remain inactive until turned on.

Using A/B/C/D Comparisons ("Snapshots")

In addition to user-definable presets, SoundSoap Pro also features A/B/C/D comparisons. This feature allows temporary snapshots of tool settings to be made, and is useful for deciding what parameter settings will work best for removing the unwanted noise at hand.

> ⚠ *A/B/C/D snapshots are temporary – if you want to use one of these snapshots in the future, in another noise reduction session, be sure to save a preset!*

To Set a Snapshot (A):

1. Configure noise reduction settings as desired.

2. Click the Assign Snapshot A button.

To Set a Second Snapshot (B):

1. Configure noise reduction settings as desired – with settings slightly different than those used for Snapshot A.

2. Click the Assign Snapshot B button.

To Compare Snapshot A and Snapshot B:

1. Click the Recall Snapshot A button – parameters "snap" into the memorized positions.

2. Click the Recall Snapshot B button – parameters now "snap" into the positions memorized when you assigned snapshot B.

The currently active Snapshot is indicated by a red border around the active Snapshot's Assign and Recall buttons.

The process for loading additional snapshots is similar – just apply the directions above to the Assign and Recall buttons for Snapshots C & D.

Parameter Automation

SoundSoap Pro's various controls may be automated (i.e. applied dynamically) within hosts that support parameter automation. For more information, please consult your host's documentation on how to automate parameters.

Conclusion

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You have now learned the fundamentals of using BIAS SoundSoap Pro. We hope you enjoy using it for many audio restoration projects!

SoundSoap Pro User Guide