

SUBFORGE

INSTALLATION & USER MANUAL

macOS | Version 1.0.0

AAX Native / VST3 / AU | Intel + Apple silicon



ENHANCE. GENERATE. SHAPE.

A practical guide to LFE aux processing,
cinematic impacts and low-frequency control.

START HERE

Give the low end a purpose.

SUBFORGE shapes existing LFE and creates tuned, transient-triggered sub impacts. Use it on a dedicated LFE aux or a supported multichannel bus, then balance the result in the full mix.

PLATFORM	WORKFLOW	AUTHORIZATION
macOS 11 or later Intel + Apple silicon AAX Native, VST3 and AU	MX / FX LFE auxes Mono impact returns 5.1 / 7.1 / 7.1.2 buses	Payhip or Gumroad Two computers per license Fully functional 14-day trial

In this manual

Start with the routing pages for your session, or select a topic below.

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YOUR STARTING POINT

New instances use LFE In, LFE / Main detection, Hybrid and Clean: 45 Hz, Generate 25%, Weight 25%, Drive 0%, HPF 20 Hz and LPF 120 Hz. Existing sessions keep their saved settings.

INSTALLATION / MACOS

One installer. Three formats.

Use a compatible 64-bit DAW on macOS 11 or later. Your DAW may require a newer system. The universal plug-ins support both Intel and Apple silicon.

1 Download the macOS installer.

Use your official Payhip or Gumroad download. Extract the ZIP first if the download is supplied as an archive.

2 Save and close your audio applications.

Quit your DAW and other plug-in hosts before installing or updating.

3 Open the installer package.

Follow the Installer prompts. Install for all users and enter your administrator password when requested. Select AAX, VST3, AU or all three on Installation Type.

4 Reopen your DAW.

Allow the plug-in scan to finish, then look for SUBFORGE under Sound Freak Studios. In Pro Tools, also check the Dynamics category.

FORMAT	USE IN
AAX Native	Pro Tools
VST3	Nuendo, Cubase and other VST3-compatible hosts
AUv2	Logic Pro and other Audio Units-compatible hosts

Updating SUBFORGE

Close the DAW and run the newer installer. Existing session settings, presets and authorization are retained. An installed format left unselected is retained; deselecting it does not uninstall it.

ONE DOWNLOAD FOR TRIAL AND PURCHASE

The same installer supports the 14-day trial and purchased activation. You do not need to install a different plug-in after buying.

ACTIVATION

Activate. Open your session.

Use your purchase email and complete SUBFORGE license key from Payhip or Gumroad. Connect to the internet for first activation.



The three-line menu at the top right opens presets, interface and license settings.

1 Open License settings.

Click the top-right three-line menu, choose License, then Activate / trial / deactivate...

2 Enter your purchase details.

Enter Purchase email and the full Payhip or Gumroad license key. Use the key from your purchase, not an order number or product-page code.

3 Choose Activate.

Wait for the license status to confirm authorization. Close the license window and continue in your session.

TOPIC	HOW IT WORKS
Two computers	A paid license supports up to two computers.
Shared authorization	The installed formats share authorization under the same user account on a computer.
Moving a seat	While online, open License settings and choose Deactivate this computer before activating another computer.

ACTIVATION HELP

Check the complete key, purchase email, internet connection and computer date/time. Contact support privately if you reach the computer limit. Do not publish your complete license key.

TRIAL + OFFLINE USE

Try it in your own mix.

The fully functional trial uses the same plug-in and controls as paid activation. Open License settings to see your current authorization status.

Start the 14-day trial

Connect to the internet, open the top-right menu > License > Activate / trial / deactivate..., then choose **Start 14-day trial**. The trial runs for 14 days from its successful start. Reinstalling or changing plug-in format does not restart it.

Activate your purchase

Open the same license window, enter your purchase email and full key, then choose **Activate** while online. Your DAW session settings remain in place.

Paid offline use

Connect periodically so authorization can renew. After a successful paid authorization or renewal, cached authorization permits up to 30 days of offline use. Trial authorization remains valid only until the original trial expiry.

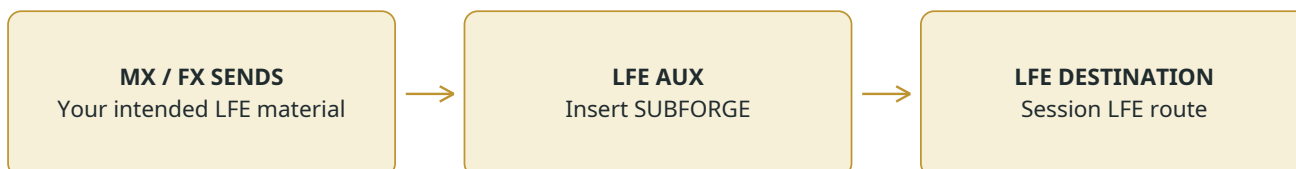
STATE	WHAT TO EXPECT
Trial active	Full processing is available until the trial expires.
Paid and valid	Full processing is available while the authorization is valid.
Unactivated or expired	LFE In passes the input through. Mono/stereo Source-to-Sub is muted. On a multichannel bus, the original audio passes through.
Paid authorization expired	Reconnect to the internet so authorization can renew. Check the status in License settings.

KEEP THE RETURN ROUTED SAFELY

A DAW hard bypass, disable or removal may pass audio around the plug-in. Keep an independent low-pass filter on a Source-to-Sub return and mute the return before changing its routing. Keep computer date and time correct.

Start on your MX or FX LFE aux.

Use this setup when the aux already carries the low-frequency material you want to process. Keep music and effects returns separate when they need different treatment.



1 Insert on the dedicated LFE aux.

Confirm the aux input and its route to the session LFE destination. Bring playback up at a controlled level.

2 Use the LFE Aux starting settings.

Keep Source set to LFE In and Advanced detector source at LFE / Main. New instances already use Hybrid, Clean and a 45 Hz target.

3 Choose what the aux needs.

Use Enhance to shape existing low end without adding generated impacts. Use Hybrid to combine that audio with generated sub. Raise Generate gradually.

4 Balance the output in context.

Set Frequency for the impact and Weight for the tail. Compare at a similar output level and check the entire scene, including the transition after the impact.

STARTING CONTROL	VALUE
Mode / Character / Source	Hybrid / Clean / LFE In
Frequency / Generate / Weight / Drive	45 Hz / 25% / 25% / 0%
Detector / Threshold / Hold	LFE / Main, Energy / -30 dB / 100 ms
HPF / LPF / Output	20 Hz / 120 Hz / 0.0 dB

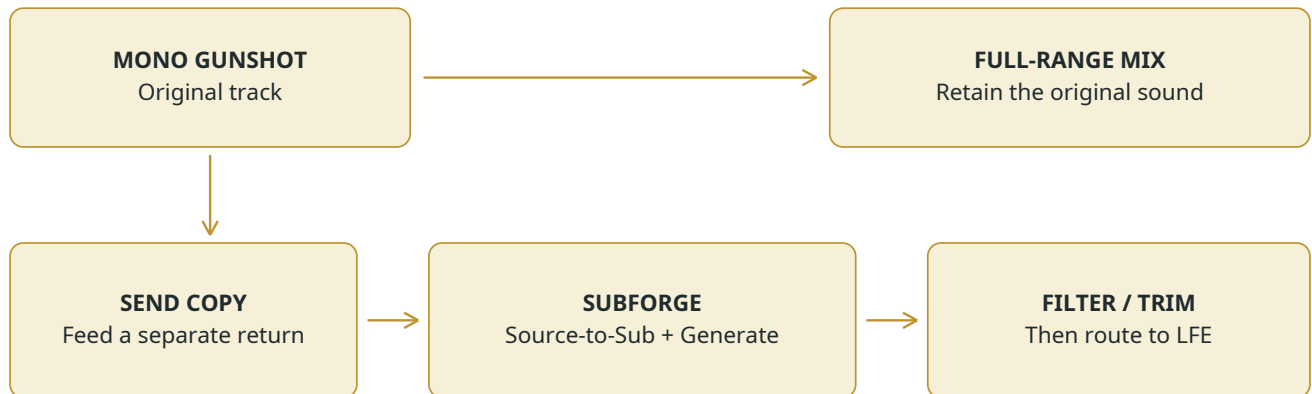
RESTORE THE AUX WORKFLOW

For an existing instance, choose Presets > Load LFE Aux startup preset in the settings menu. This explicitly restores LFE In and LFE / Main as well as the sound settings.

SOURCE-TO-SUB / MONO IMPACT

Turn a gunshot into a sub layer.

Keep the original full-range gunshot on its own route. Use a separate send and return for the generated LFE layer.



1 Create a mono sub return.

Send a copy of the gunshot to the return and route its output to the intended LFE destination.

2 Select Source-to-Sub and Generate.

Use LFE / Main detection. Source-to-Sub removes the original input from SUBFORGE's processed mono/stereo output; Generate supplies the synthesized impact.

3 Set the trigger and the impact.

Set Threshold so the attack triggers reliably. Begin near 45-55 Hz, keep Generate conservative and use a shorter Weight for a tight hit. Add Sweep Depth only when a downward bend suits the sound.

4 Check the sound between hits.

Listen for the intended decay and make sure background detail is not triggering extra impacts. Raise Threshold or increase Hold if needed. Recheck soft and rapid gunshots.

HARD BYPASS CAN PASS THE ORIGINAL SOURCE

Keep a separate downstream low-pass filter and conservative trim on the return. A DAW hard bypass, disable or removal can pass the source around SUBFORGE. Mute the return before bypassing or changing its routing. SUBFORGE's own BYPASS mutes a mono/stereo Source-to-Sub return.

MULTICHANNEL + SIDECHAIN

Choose what triggers the LFE.

The host determines the channel layout. SUBFORGE recognizes the actual LFE channel on supported multichannel buses; the top layout indicator reports that layout.

LAYOUT	PROCESSING
Mono / stereo	No discrete LFE channel metadata. LFE In processes the main input; Source-to-Sub supplies generated output without the original source.
5.1 / 7.1 / 7.1.2	Processes the designated LFE. Other channels pass unchanged with oversampling Off; 2x/4x adds the same declared 16-sample delay to all channels.

DETECTOR SOURCE	LISTENS TO
LFE / Main	The multichannel LFE, or main input on a mono/stereo aux. The default for a dedicated LFE feed.
Front LCR	Left, centre and right on a multichannel bus. On mono/stereo, listens to the main input.
All non-LFE	Available input channels except LFE. May react to other sounds in the scene.
External sidechain	A mono sidechain feed assigned by the DAW. No assigned signal means no external trigger.

Use an external trigger

Enable SUBFORGE's sidechain in the host, route the desired mono trigger to it, and select External sidechain in Advanced. Use Generate or Hybrid. The sidechain controls the impact; it is not mixed into the output.

IN AN ATMOS SESSION

Use a supported LFE feed, aux or multichannel bed layout. Object panning, bed assignment and renderer routing remain in the DAW. Source-to-Sub suppresses the original main input on mono/stereo; on multichannel, mode and the discrete LFE determine the processed output.

INTERFACE

Find your way around.

The main panel handles the sound and output. Expand Advanced for trigger, envelope, enhancement and LFE controls.



LFE Aux in action, with Hybrid / Clean selected.

1 Modes and four main knobs

Select Enhance, Generate or Hybrid. Drive, Generate, Frequency and Weight shape the sound.

2 Engine and meters

IN / OUT show peak and RMS. The lens follows processed/generated energy.

3 Source, filters and output

Choose input role, HPF / LPF, Character, Output and internal BYPASS.

4 Presets and settings

The selector and arrows load factory sounds. The three-line menu opens settings.

5 Advanced panel

Set detection, envelope/sweep, enhancement, quality, polarity and protection.

6 Channel activity

Shows available source channels. Mono input appears in the LFE slot.

READ THE LAYOUT, THEN CHECK THE ROUTE

MONO LFE / STEREO / MULTICHANNEL reports the host layout. It is an indicator, not a switch that reroutes a DAW track.

MODES + MAIN KNOBS

Choose the path. Shape the impact.

The three modes decide whether you hear processed source audio, generated sub, or both.



MODE	WHAT YOU HEAR
Enhance	Existing audio through enhancement, Drive and output filtering. No new generated impacts.
Generate	Triggered sine-based sub only, through Drive and output filtering.
Hybrid	The enhanced existing audio plus generated sub.

CONTROL	RANGE	USE
Drive	0-100%	Adds controlled saturation. Zero Drive stays clean.
Generate	0-100%	Sets synthesized impact level independently of the existing LFE path. Softer qualifying onsets create softer impacts.
Frequency	20-120 Hz	Sets the generated target note and centre of enhancement.
Weight	0-100%	Lengthens the generated decay without adding output gain. Manual Decay overrides this mapping.

TUNED IMPACTS

The generator creates sine-based impacts at your target frequency, with an optional downward sweep. It does not automatically follow the source pitch. Choose Frequency to fit the scene and the other bass elements.

ADVANCED / SOURCE + TRIGGER

Trigger the attack you intend.

The detector starts generated impacts in Generate or Hybrid. A threshold crossing must qualify as a fresh onset; weak fluctuations in an impact tail are rejected.



Threshold: -60 to 0 dB

Sets the minimum detector level. Raise it to ignore quiet detail. The recent impact level can make the effective onset requirement higher during a tail.

Hold: 30-250 ms

Sets the minimum time between generated impacts. Increase it to reject closely spaced events; reduce it for rapid sequences.

Detector source

Choose LFE / Main, Front LCR, All non-LFE or External sidechain. Use LFE / Main on a dedicated LFE aux.

DETECT	RESPONSE
Peak	Reacts to sharp instantaneous peaks.
Energy	Follows signal energy; the LFE Aux starting mode.
Low Freq	Uses conditioned low-frequency energy from the selected main-bus channels.

Watch the event, not just the tail

A dying sound may still contain fresh attacks or stronger reflections. Lower Generate to check whether the extra energy is synthesized, then check the detector source, Threshold and Hold. On a multichannel mix, Front LCR or All non-LFE can respond to unrelated sounds.

EXTERNAL SIDECHAIN

The external sidechain supplies its own mono trigger signal. Shape that feed in the DAW when you need a specific frequency range or transient profile.

ADVANCED / ENVELOPE + SWEEP

Give the impact its movement.

Attack and decay shape the rise and tail. Sweep bends a generated tone down toward Frequency; it does not alter existing audio in the Enhance path.

**Attack: 0.5-30 ms**

Sets the rise of generated energy. Shorter settings feel tighter; longer settings soften the onset.

Weight or Manual Decay

With MANUAL off, Weight sets the decay. Enable MANUAL to use Decay directly, from 50 to 2000 ms. The displayed Decay value is not the active tail control while MANUAL is off.

Sweep Depth: 0-24 st

Starts above the target and bends down. Zero gives an unswept note; 12 st begins one octave above the target.

Sweep Time: 20-1000 ms

Sets how long the downward bend takes. It has no audible effect at zero Sweep Depth.

SOUND	START HERE
Tight impact	Shorter Weight or Manual Decay, low Sweep Depth and modest Generate.
Longer rumble	Increase Weight or Manual Decay gradually. Check overlap with the next sound.
Falling sub hit	Use Generate or Hybrid, add Sweep Depth, then set Sweep Time to fit the gesture.

CHARACTER ALSO AFFECTS THE ENVELOPE

Punch tightens the effective attack and decay. Compare Clean and Punch when matching the tail to the picture. Envelope settings describe a shaped decay, not a hard cut at the displayed time.

ADVANCED / ENHANCEMENT

Bring weight to existing low end.

Enhance reinforces audio already present around Frequency. Use it in Enhance or Hybrid mode. Drive Curve and Character control the tone and feel.



Enhance: 0-100%

Sets the amount of reinforcement around Frequency. It does not generate a new note on its own.

Resonance: 0.3-8.0 Q

Controls the width and emphasis of the enhancement. Higher Q is narrower and more resonant.

Drive Curve

Tube, Solid and Digital offer different saturation shapes. Compare them with Drive raised. All remain clean at zero Drive.



CHARACTER	WHAT CHANGES
Clean	A restrained starting point without the additional Punch envelope or Harmonic saturation emphasis.
Punch	Shortens the effective attack and decay for a tighter generated impact.
Harmonic	Strengthens the saturation character as Drive increases. Zero Drive remains clean.

COMPARE AT A SIMILAR LEVEL

Enhancement can increase low-frequency energy. Adjust Output and listen in the full mix before deciding whether more reinforcement or more resonance is useful.

ADVANCED / LFE CONTROL

Keep the output under control.

Filters, polarity, output trim and sample-peak protection act on the processed output. Main-panel and Advanced filter/output controls are linked.



HPF / LPF

HPF: 10-40 Hz, default 20 Hz. LPF: 60-120 Hz, default 120 Hz. Remove subsonic energy and control the upper edge of the output.

Polarity and Output

+ keeps normal polarity; Ø reverses it. Compare in context when combining sub with other bass. Output / Trim runs from -18 to +6 dB; default 0 dB.

Peak Protect

On limits sample peaks to about -0.18 dBFS. It is not a true-peak limiter. Keep sensible headroom in the complete signal chain.

OVERSAMPLING	ADDED LATENCY	USE
Off	0 samples	The default.
2x / 4x	16 samples	Reduces saturation aliasing. All channels receive the same delay on supported multichannel buses.

APPLY QUALITY CHANGES BY RELOADING

After selecting 2x, 4x or Off, reload or reinitialize the plug-in so the host receives the new latency. Save the session first. Oversampling is not an automation parameter.

Internal BYPASS

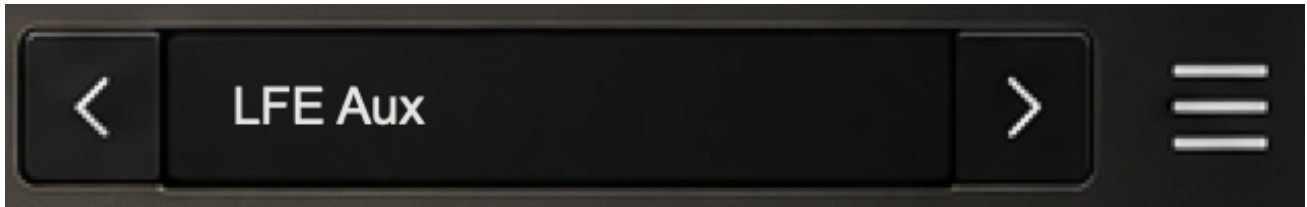
LFE In passes the input through; mono/stereo Source-to-Sub is muted. Non-LFE channels on a multichannel bus remain unchanged except for the common oversampling delay. DAW hard bypass may route audio around the plug-in.

SUBFORGE adds no automatic +10 dB LFE gain. Its output filters are not a replacement for the monitoring system's bass-management crossover.

PRESETS + SETTINGS

Keep a familiar starting point.

Use the top preset selector and arrows for factory sounds. The top-right three-line menu contains Presets, Interface and License.



Factory and user presets

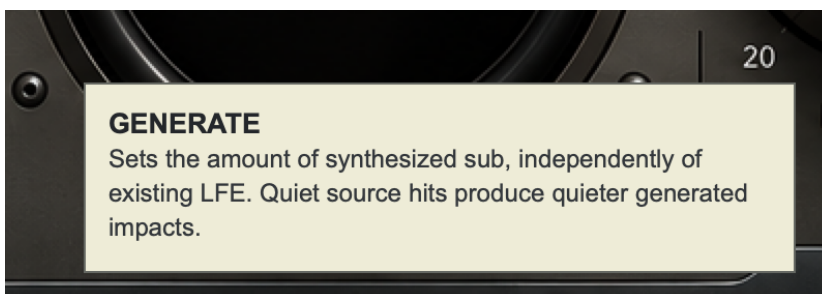
The 14 factory presets provide different starting sounds. Factory selection preserves your input role, detector source, oversampling choice and bypass. Save your own **.subforge** file with Presets > Save preset..., and recall it with Load preset.... User presets restore the complete saved parameter state.

Restore the selected sound or the aux defaults

Restore selected factory preset resets that factory sound while preserving routing and quality. **Load LFE Aux startup preset** also explicitly restores LFE In and LFE / Main. Your DAW session recalls parameter settings without needing an external preset file.

Interface size and Advanced

Choose Compact 75%, Medium 85%, Reference 100% or Large 125% in Interface. Sizes that do not fit the current display are unavailable. You can also resize the editor. ADVANCED shows or hides the lower panel.



Interactive help appears after hovering for about 3.5 seconds.

VALUE ENTRY AND HELP

Drag a knob or use the wheel to adjust. Main knob values appear on hover. Double-click an Advanced numerical readout to type a value, then press Return. Interface > Interactive help switches hover descriptions on or off.

EVERYDAY WORKFLOWS

Fit the sound to the scene.

Treat the presets as starting points. Choose the detector source and input role for your routing before judging a sound.

WORKFLOW	STARTING PRESET	ADJUST FIRST
Dedicated MX / FX LFE aux	LFE Aux	Enhance or Hybrid; Generate; Threshold; Weight.
Existing LFE, no new impacts	Clean LFE / Engine Rumble	Enhance amount, Frequency and output level.
Short gunshot layer	Heavy Gunshot / Tight Punch	Source-to-Sub on a separate mono return; Threshold and decay.
Large cinematic impact	Cinema Impact / Deep Explosion	Generate, Frequency and tail length.
Falling sub effect	Sub Drop	Sweep Depth, Sweep Time and output headroom.
Controlled parallel layer	Controlled Sub / Hybrid Impact	Input role, Generate and interaction with the original bass.

Music low end

Begin with LFE Aux or Clean LFE. Enhance reinforces existing low end without new generated hits. With generation active, check quiet passages and repeated notes as well as the loudest moment.

Effects and explosions

Use a dedicated return for independent control. Match the trigger to the attack, then set the tail to suit the cut. Adjust Frequency in context with the other bass elements.

Overlapping impacts

Hold sets the minimum interval between hits. Distinct attacks can trigger over an existing tail. Check fast sequences at the intended level and with the actual source dynamics.

CHECK MORE THAN THE BIGGEST HIT

Listen before, during and after the impact. Compare soft events, rapid repeats and scene transitions, then save a session or user preset that includes your routing choices.

CONTROL REFERENCE

Keep this page within reach.

The main panel covers daily adjustments; Advanced exposes the detailed controls. Values below are the available parameter ranges.

CONTROL	RANGE / ACTION
Mode	Enhance / Generate / Hybrid
Drive / Generate / Weight	0-100% each
Frequency	20-120 Hz; generator target and enhancement centre
Source (input role)	LFE In / Source-to-Sub
Detector source	LFE / Main / Front LCR / All non-LFE / External sidechain
Threshold / Hold	-60 to 0 dB / 30-250 ms
Detect	Peak / Energy / Low Freq
Attack / Decay	0.5-30 ms / 50-2000 ms; Decay requires MANUAL On
Sweep Depth / Time	0-24 semitones / 20-1000 ms
Resonance / Enhance	0.3-8.0 Q / 0-100%
Character / Drive Curve	Clean, Punch, Harmonic / Tube, Solid, Digital
HPF / LPF	10-40 Hz / 60-120 Hz
Output / Trim	-18 to +6 dB; linked main and Advanced controls
Polarity / Peak Protect	Normal (+) or inverted (Ø) / Off or On
Oversampling	Off / 2x / 4x; reload to apply
BYPASS / ADVANCED	Internal processing bypass / lower-panel visibility

QUICK OPERATIONS

Drag or scroll to adjust a knob. Hover to see main values or help. Double-click an Advanced numeric readout to type. Use the three-line menu for preset files, interface size and license management.

TROUBLESHOOTING

Get back to the mix.

The plug-in is missing

Install AAX for Pro Tools, AU for Logic Pro or VST3 for a compatible host. Quit the DAW before running the installer, then reopen and rescan. Confirm that your DAW supports the OS and channel layout.

There is no generated sub

Select Generate or Hybrid and raise Generate. Check authorization, input/sidechain routing, the detector source and Threshold. A silent or unassigned external sidechain cannot trigger an impact.

The aux becomes silent in Generate

Generate outputs synthesized sub only. It removes the existing-audio path even when no hit triggers. Use Hybrid to retain existing LFE or Enhance to process only that audio.

Extra hits occur during a tail

Check whether the selected detector hears other channels or fresh attacks. Use LFE / Main for a dedicated LFE aux. Raise Threshold, increase Hold and compare Peak/Energy. Lowering Generate helps identify synthesized energy.

The sub sounds weak, uneven or too long

Check source dynamics, Generate, Frequency and output filters. Quiet onsets produce quieter impacts. Compare normal and inverted polarity in context. Use Weight or enable MANUAL and shorten Decay.

Changing Decay or Sweep Time seems ineffective

Decay is active only with MANUAL enabled; otherwise Weight sets decay. Sweep Time has no audible effect when Sweep Depth is zero.

Oversampling does not seem to change

Reload or reinitialize after changing quality. Off has zero added latency; 2x/4x uses 16 samples. Preserve the session settings before reloading.

Activation fails or authorization expires

Check your purchase email, full license key, internet connection and computer date/time. Reconnect to renew paid authorization. After the trial expires, activate a purchase. Contact support for computer-limit issues.

REMOVAL + SUPPORT

Help when you need it.

Save and close your DAW before removing or updating SUBFORGE. Deactivate a paid seat before permanently retiring a computer.

Removing on macOS

Remove only the SUBFORGE bundles from the standard system folders below. Keep authorization data if you intend to reinstall. Removing the plug-in does not restart a trial.

FORMAT	LOCATION
AAX	/Library/Application Support/Avid/Audio/Plug-Ins/ SUBFORGE.aaxplugin
VST3	/Library/Audio/Plug-Ins/VST3/SUBFORGE.vst3
AU	/Library/Audio/Plug-Ins/Components/SUBFORGE.component

Documentation

Getting Started, the User Guide and third-party notices are installed under:

/Library/Application Support/Sound Freak Studios/SUBFORGE/Documentation

You may remove that documentation folder if it is no longer needed.

Technical support

hello@soundfreakstudios.com

Include your computer model, macOS version, DAW and version, plug-in format and SUBFORGE version. State the track/bus layout, input role and detector source. Describe the expected result and the result you hear. Hide complete license keys and purchase details in screenshots.

REINSTALLING OR CHANGING COMPUTERS

Use the same installer for trial and purchased use. Before moving a paid seat, connect to the internet and choose License > Activate / trial / deactivate... > Deactivate this computer. Contact support if you cannot access the old computer or reach the two-computer limit.

[Payhip product](#) | [Gumroad product](#)

SUBFORGE 1.0.0 - macOS Installation & User Manual.
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