

S1 De-Esser

User Guide • Parish Audio

Focused, frequency-selective de-essing for vocals, dialogue, and other sibilant sources.



Product page: <https://parishaudio.com/products/s1-de-esser>

S1 De-Esser is designed to reduce sharp sibilant sounds such as S, SH, T, and CH without simply darkening the entire vocal. It detects energy in a user-selected high-frequency band and applies dynamic reduction only to that band when the detector crosses the threshold.

1. Quick Start

1. Insert S1 De-Esser on the vocal, dialogue, or other source that contains distracting sibilance.
2. Enable Monitor and adjust Frequency until the removed signal is dominated by the harsh S, SH, T, or CH sounds you want to control.
3. Adjust Focus. Lower values cover a broader frequency area; higher values narrow the processing around the selected Frequency.
4. Lower Threshold until S1 begins reacting consistently to the problem consonants.
5. Use Amount to set how assertively S1 responds, then use Range to cap the maximum reduction.
6. Turn Monitor off and adjust Attack, Release, and Mix while listening in context.

7. Watch the De-Essing Reduction meter. The goal is enough movement to control the problem without making the vocal dull or unnatural.

2. How S1 Works

S1 uses frequency-selective dynamic processing. The Frequency control sets the center of the de-essing region, while Focus changes how wide or narrow that region is. S1 then measures activity in that area and applies reduction when the detected energy rises above Threshold.

Only the selected band is reduced. The rest of the signal remains in place, which is why S1 can control sharp consonants without applying a permanent high-frequency cut across the entire performance.

On stereo material, S1 derives a shared detector response from the left and right channels and applies the same amount of reduction to both channels. This keeps the de-essing action linked across the stereo image.

3. Controls

Amount (0–100%)

Controls how strongly the de-esser reacts. Amount affects both the sensitivity of the sibilance detector and the strength of the resulting reduction. Higher values make S1 respond more assertively when sibilant energy is detected.

Practical note: Start around the middle of the range, then increase it only as much as needed. If the vocal starts to sound lispy or overly softened, reduce Amount or Range.

Threshold (-54.0 to 0.0 dB)

Sets the detector level at which de-essing begins. Lower (more negative) settings make S1 react to quieter sibilant events, while higher settings require stronger high-frequency energy before reduction occurs.

Practical note: Use Threshold to decide when S1 should act; use Amount and Range to decide how strongly it should act.

Attack (0.05–20.0 ms)

Controls how quickly the detector responds when sibilant energy appears. Very fast attack times catch the leading edge of sharp consonants, while slower settings allow more of the initial transient through.

Practical note: Fast values are usually useful for very sharp S sounds. Slower settings can sound more relaxed when you want to preserve some consonant articulation.

Release (10–300 ms)

Controls how quickly the detector recovers after a sibilant event. Shorter releases let the processing return to normal quickly; longer releases create smoother, more sustained control.

Practical note: If the vocal sounds like the top end is pumping, try a longer release. If S1 stays reduced for too long after each consonant, shorten it.

Frequency (2.5–12.0 kHz)

Sets the center frequency of the region S1 monitors and reduces. Different voices, microphones, and recordings place troublesome sibilance in different areas, so this control is intended to be tuned by ear.

Practical note: Monitor mode is the fastest way to find the right area. Move Frequency until the removed signal emphasizes the unwanted consonants rather than the body and tone of the voice.

Focus (0–100%)

Controls the width of the processing band around Frequency. Lower values create a broader band; higher values create a narrower, more selective band. Internally, the processing width moves from roughly 2.6 octaves at minimum Focus to about 0.45 octaves at maximum Focus.

Practical note: Broader settings are useful when the harshness is spread across a wider area. Higher Focus can target a more specific sibilant region while leaving nearby brightness alone.

Range (0–36 dB)

Limits the maximum amount of de-essing reduction. Even if the detector asks for more attenuation, S1 will not exceed this value.

Practical note: Range is one of the best safeguards against over-processing. Use only as much maximum reduction as the recording actually needs.

Mix (0–100%)

Blends the processed signal with the original. At 100%, you hear the full de-essed signal. Lower values introduce more of the unprocessed signal for gentler parallel-style control.

Practical note: If the processing is effective but slightly too obvious, try backing Mix down rather than rebuilding the entire setting.

Monitor (On / Off)

Lets you audition the material S1 is removing. This is useful for tuning Frequency and Focus and confirming that the detector is concentrating on unwanted sibilance rather than important vocal detail.

Practical note: Use Monitor as a setup tool, then switch it off before making your final judgment in the mix.

Power (On / Off)

Engages or bypasses S1. The transition is smoothed to reduce abrupt switching artifacts.

Practical note: Level-match by ear when comparing processed and bypassed audio so that louder is not mistaken for better.

4. Meter and Visual Feedback

The De-Essing Reduction meter displays the amount of active reduction, scaled from 0 to 24 dB on the interface. It gives a quick visual indication of whether S1 is applying light smoothing or stronger correction.

The meter is most useful as confirmation, not as a target. A vocal that needs only a few decibels of occasional reduction can be just as correct as one that requires more assertive control.

5. Practical Workflows

Lead Vocal

- Start with Natural Vocal or the default settings.
- Use Monitor to locate the dominant sibilant area, then switch Monitor off.
- Lower Threshold until the strongest consonants trigger reduction.
- Increase Amount until the vocal becomes smoother, then set Range so the hardest events cannot be over-reduced.
- Use Mix below 100% if you want to retain more of the original edge and articulation.

Bright or Heavily Compressed Vocal

- Try a higher Frequency and a moderately focused band if the harshness is concentrated high in the spectrum.
- Use a fast Attack to catch aggressive consonants and a medium Release so the brightness returns naturally after each event.
- Bright Pop and Heavy Ess are useful factory starting points for stronger control.

Dialogue, Podcast, and Voice-Over

- Dialogue Clean is a practical starting point.
- Use a lower Frequency when the harshness sits closer to the upper-midrange than the extreme top end.
- A longer Release can produce smoother, less noticeable movement on spoken material.

Backing Vocals and Vocal Bus

- Use a lower Amount and Range for broad, unobtrusive smoothing across stacked parts.
- Smooth Bus uses a reduced Mix value for gentler blended processing.

6. Factory Presets

Preset	Suggested use
Natural Vocal	Balanced general-purpose starting point for everyday vocal de-essing.
Bright Pop	More assertive settings aimed at bright, forward vocal material.
Dialogue Clean	A spoken-word starting point with a lower target frequency and smoother release.
Air Keeper	A higher, more focused target with a lower reduction ceiling and 90% Mix.
Heavy Ess	Strong, fast de-essing with a larger maximum reduction range.
Smooth Bus	Gentle bus-oriented smoothing with lower Amount, Range, and Mix.
Acoustic Control	Moderate, lower-frequency de-essing suited to softer or less hyped material.

7. Presets, Undo, and Exact Value Entry

S1 supports factory presets and user presets. User presets can be saved, loaded, renamed, and deleted. Parameter changes are tracked for Undo and Redo through the Parish Audio plugin framework.

The numeric readouts beneath the controls are editable. Click a value readout, enter a precise value, and confirm the edit. Frequency entries accept values in hertz or with a “k” suffix (for example, 6.5k).

8. Troubleshooting and Setup Tips

Symptom	What to try
The vocal sounds dull or lispy.	Reduce Amount or Range, raise Threshold, narrow Focus, or lower Mix.

Symptom	What to try
S1 is barely reacting.	Lower Threshold, increase Amount, and confirm that Frequency is centered on the actual sibilant area.
Too much of the vocal is being removed.	Use Monitor to retune Frequency, increase Focus for a narrower band, or reduce Range.
The high end seems to stay reduced too long.	Shorten Release.
The processing sounds jumpy or chatters.	Lengthen Release, reduce Amount, or use a slightly broader Focus setting.
Monitor sounds unusual.	Monitor intentionally isolates the removed component. Use it to identify what S1 is targeting, then turn it off for normal listening.

9. Technical Reference

Processing type	Frequency-selective dynamic de-essing / band reduction
Frequency range	2.5–12.0 kHz center frequency
Focus range	0–100% (approximately 2.6 to 0.45 octaves processing width)
Threshold	-54.0 to 0.0 dB
Attack	0.05–20.0 ms
Release	10–300 ms
Maximum reduction Range	0–36 dB
Mix	0–100%
Channel layouts	Mono and stereo
Stereo behavior	Linked detector/reduction derived from both channels
MIDI	No MIDI input or output
Formats	VST3 on Windows and macOS; Audio Unit on macOS

10. Product and Support

For the latest product information, downloads, and updates:

<https://parishaudio.com/products/s1-de-esser>

Parish Audio website:

<https://parishaudio.com>