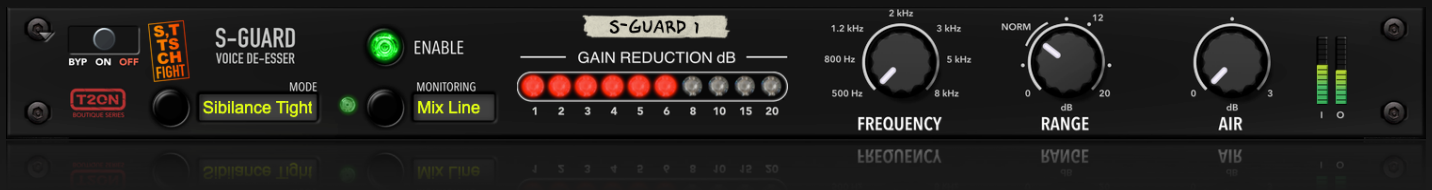
S-GUARD

VOCAL DE-ESSER

[RACK EXTENSION]
MANUAL

PRODUCT OF TURN2ON

FX device by Turn2on Software



S-Guard is a precision split-band de-esser built to control sibilance – the sharp "S," "T," and "Ch" sounds that make vocal recordings feel harsh, sharp, or fatiguing – without dulling the rest of the voice.

Every vocalist has moments where a bright mic, a close pop-filter distance, or simply their own articulation pushes sibilance too far forward in the mix. Left alone, it reads as harsh on bright monitors and painfully sharp on earbuds and phone speakers. Turned down with a blunt tool, it drags the whole vocal's clarity and "air" down with it. **S-Guard** exists to fix only the problem frequencies, and leave everything else exactly as it was.

What it fixes: sharp esses and hard consonants, harsh Ch/Sh transients, upper-midrange edge on loud or belted passages, and inconsistent sibilance across a performance that moves between whispers and full voice.

How it works: S-Guard splits the incoming signal into frequency bands and applies dynamic gain reduction only to the band containing sibilance – the low and mid content that carries the body and warmth of the voice passes through completely untouched. Four selectable detector modes reshape how the compressor listens to the signal, so the same control set adapts to a breathy spoken-word take just as well as an aggressive, belted performance.

Why **S-Guard** over a conventional one-knob de-esser: most simple de-essers apply a single wideband filter or a single fixed detection curve, which forces a compromise between catching sibilance and preserving tone. **S-Guard**'s split-band core, combined with per-mode detector tuning and dual audition monitoring (hear exactly what the compressor is reacting to, and what it's working on, before you commit to a setting), gives you both surgical control and a fast, ear-driven workflow – you tune by listening, not by guessing.

S-Guard's architecture was originally inspired by the classic three-band approach of the dbx® 520 De-Esser™, a hardware unit respected for keeping de-essing musical rather than clinical. From that starting point, **S-Guard**'s design grew into something considerably more capable: a continuously variable crossover point, four purpose-built detection modes instead of one fixed behavior, a parallel stage to restore lost air, and dedicated monitoring paths for tuning by ear. The result keeps the musicality of the classic approach while adding the flexibility a modern vocal chain needs.

History

S-GUARD VOICE DE-ESSER

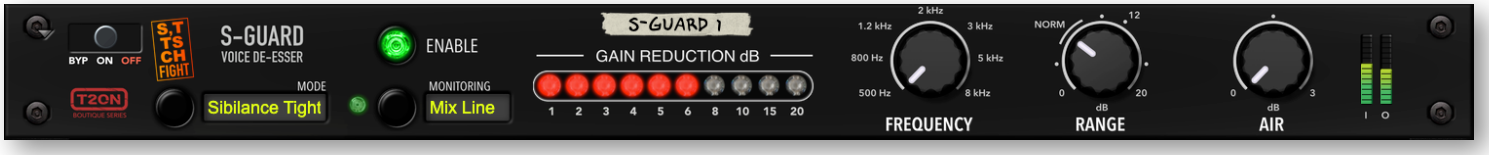
Sibilance control is almost as old as vocal recording itself. Early engineers had no dedicated tool for it at all – they rode the fader by hand through every hard "S," a technique that demanded constant attention and was never perfectly repeatable from take to take.

The first dedicated de-essers arrived as simple wideband compressors triggered by a high-passed sidechain: any time energy above a fixed frequency got loud enough, the whole signal's gain was pulled down. This worked, but it was blunt – pulling the entire vocal down to tame just the top end meant de-essing and dulling happened together, an unavoidable trade-off of the design.

Split-band (multiband) de-essers were the next real step forward, and the design popularized by hardware units like the dbx 520 became an industry reference point. By physically separating the frequency range that needed control from the range that didn't, engineers could finally compress sibilance without touching the body of the voice – a meaningfully more transparent result that set the template most de-essers still follow today.

Modern software de-essers extended that template further: continuously variable crossover points instead of fixed bands, multiple detector behaviors instead of one fixed response curve, and audition/monitoring tools that let engineers hear the detection and target signal directly rather than tuning by trial and error alone.

S-Guard sits at this modern end of that lineage. It keeps the transparent, split-band philosophy that made the classic hardware approach trustworthy, and adds the detection flexibility and monitoring workflow that a wide range of modern vocal styles – podcast, spoken word, pop, aggressive vocal performance – actually require. It's built for engineers who want the classic sound with a modern, adaptable interface



PARAM	DESCRIPTION
DETECTION MODE	4-position switch selecting the internal detector behavior: - **Sibilance Tight** (fast, narrow, targets hard S/T transients), - **Voice Smooth** (gentle, averaging response for soft S and breathy/spoken material), - **V-S Wide** (broad detection bandwidth for Ch/Sh and upper-midrange harshness), - **D-S Dynamic** (adaptive envelope response for performances that swing between whisper and belt).
MONITORING	3-position switch for auditioning the signal at different points in the chain: **- MIX** (the full processed output: Low, Mid, and de-essed High bands, including Air), **- S-DETECT** (isolated High band, post-compression, solo'd from Low/Mid – hear the sibilance band with the compressor working on it), **- HF ONLY** (isolated High band, pre-compression – hear exactly what's available to be de-essed).
FREQUENCY	Sets the crossover split point between the Mid and High bands, continuously variable from 500 Hz to 8 kHz. Content above this point is subject to de-essing; content below is passed through untouched. Use the S-DETECT monitor mode to fine-tune this by ear.
RANGE	The main de-essing intensity control, calibrated from 0 to 20 on the dial. Higher settings apply more gain reduction to sibilant content. On steady reference material the dial tracks closely with the gain-reduction meter; on real vocal transients, actual gain reduction will vary with the material, as is expected of any dynamics processor.
AIR	High-shelf boost. Restores high-frequency sheen that can be lost during aggressive de-essing, without re-introducing the sibilance that was just removed

PARAM	DESCRIPTION
INPUT TRIM	Calibration control that adjusts the level of the incoming signal before it reaches the crossover and detector stages. Factory-calibrated so the Range knob and gain-reduction meter read accurately out of the box; most users will never need to adjust it
OUTPUT TRIM	Calibration control compensating for any overall level change introduced by processing, applied after the bands are summed. Paired with Input Trim to keep unity gain through the effect when de-essing is inactive.

REAR PANEL CONTROLS

HOW TO USE

1. Insert on the vocal track: Place S-Guard on the vocal channel, ideally after any corrective EQ but before tonal/creative EQ and saturation, so it's working on a clean, representative signal.

2. Set Monitoring to HF ONLY: Solo the High band before you touch anything else. This lets you hear exactly what content is available above the crossover point, with no compression applied yet.

3. Set the Frequency knob: While still in HF ONLY, sweep Frequency until the isolated band contains sibilance and hard consonants, but as little of the vowel body as possible. Too low and you'll hear the voice's tone in the solo; too high and you'll miss real esses.

4. Choose a Detection Mode: Pick Tight for hard, sharp S/T; Smooth for soft or breathy sibilance; Wide for Ch/Sh and upper-mid harshness; Dynamic for a performance that swings between quiet and loud. If you're not sure, start with Tight and switch while listening in step 6.

5. Switch Monitoring to S-DETECT: This solos the High band post-compression, so you can hear the compressor actively working. Confirm it's grabbing the sibilant bursts and not chattering on unrelated content, if it is, revisit Frequency or try a different Mode.

6. Set the Range knob by ear: Switch Monitoring to MIX and bring Range up gradually while listening to the full vocal. Stop as soon as the harshness is controlled, use the Gain Reduction LED meter as a visual guide, but trust your ears over the number.

7. Add Air if needed: If the de-essed vocal sounds slightly dulled or closed-in on top, add a small amount of Air (start around 1 dB) to restore sheen without reintroducing sibilance.

8. Bypass to confirm: Use Enable On/Off to A/B against the untouched signal. You should hear the harsh consonants controlled and the rest of the voice essentially unchanged. If the whole vocal sounds different, Range is likely set too high or Frequency too low.

TIPS & TRICKS:

• Tune Frequency and Mode by ear in HF ONLY and S-DETECT before ever touching Range, setting Range first on an untuned detector is the most common reason a de-esser sounds unmusical.

• If Range needs to be pushed unusually high to control sibilance, the Frequency split is probably set too high (missing the sibilant band) rather than the vocal being unusually harsh, recheck Frequency before adding more Range.

• On a performance with big dynamic swings (whisper to belt), try Dynamic mode before reaching for automation on the Range knob, it's built to adapt across exactly that kind of material.

• A small amount of de-essing on several passes (light Range, checked against the source) usually sounds more natural than one aggressive pass, heavy single-pass settings are where pumping and lisping artifacts show up.

• If sibilance still sounds harsh after de-essing, the issue may not be level but a resonant peak – try a narrow static EQ cut in addition to S-Guard rather than pushing Range further.

• Re-check your settings after any change to mic, room, or performer, detector tuning that works for one voice or recording chain will often need re-balancing for another.

• Use the Air knob sparingly, it's a restoration tool for sheen lost to de-essing, not a general high-shelf brightener. If you want more overall air, use a separate EQ after S-Guard.

TIPS & TRICKSBETTER TO USE WITH:

S-Guard is designed to sit cleanly alongside the rest of a vocal chain rather than replace any of it. For best results, consider its position relative to these other processors:

Corrective EQ (before S-Guard): Fix tonal problems:resonances, proximity buildup, harsh mic peaks, before S-Guard, so the detector is reacting to a clean signal rather than compensating for uncorrected tone.

Compressor / level control: Can be placed before or after S-Guard depending on the source. Before: helps present a more consistent level to S-Guard's detector, useful on inconsistent performances. After: lets S-Guard react to the true, unleveled dynamics of the take, which suits Dynamic mode well.

Creative / tonal EQ (after S-Guard): Apply broad tonal shaping, brightening, or character EQ after S-Guard, so any added top-end doesn't reintroduce sibilance that was already controlled.

Saturation / distortion (after S-Guard): Harmonic saturation can generate new high-frequency content, including new sibilance-like energy. Running it after S-Guard avoids feeding unaddressed harshness into the rest of the chain.

Reverb / delay sends: De-ess before sending to time-based effects – sibilance captured in a reverb tail is much harder to control after the fact than at the dry source.

REAR PANEL

CONNECTORS

AUDIO I/O	Mono or Stereo connections for audio signals.
CV INPUTS	Use these CV inputs to control the main parameters by external CV source curves
SIGNAL ROUTING	TRUE MONO / STEREO DE-ESSER EFFECT

S-GUARD

VOICE DE-ESSER

Reason Studios Add-on Shop

Re Rack Extension
PRODUCT OF TURN2ON
T2ON TURN2ON SOFTWARE

Turn2on

Rack Extension Developer

contacts: https://turn2on.com/
support@turn2on.com

Thanks to all beta-testers

T2ON TURN2ON SOFTWARE

Thank you very much for supporting us by choosing our products.
This allows us to develop future interesting and creative effects / utilities / instruments in the Rack Extension format.
We try to keep prices as low as possible. Don't hesitate to contact support with any questions regarding our products or to offer your own ideas for product updates or even new products you would like developed.