



ECHELON AUDIO

EA-DS

Two-Knob De-Esser

USER MANUAL · v1.1.0



The EA-DS interface. Every control is documented below; hover any control in the plugin for the same description as a tooltip.

WHAT EA-DS IS

EA-DS is a two-knob de-esser: **Threshold** sets how loud an ess has to be before the unit reacts, **Frequency** says where the ess lives. A sidechain filter (HP or BP) listens only to that region, and when it crosses the threshold the unit pulls down — either the whole signal (WIDE) or only the band above Frequency (SPLIT). Range caps how far it will ever pull, so a de-essed vocal still sounds like a vocal.

Monitor solos the sidechain band so you can slide Frequency straight onto the harshest 'ss', and DELTA plays only what is being removed — the honesty check for any de-esser.

Matched Bypass is on by default: bypass compares at equal loudness, so the only thing you judge is the sound.

SIGNAL FLOW

IN → detector (HP or BP sidechain at Frequency → Threshold) → gain computer (Range ceiling) → WIDE: whole signal ducks / SPLIT: only the band above Frequency ducks → OUT · Monitor: sidechain band solo · DELTA: output minus input

The detector is fed through the sidechain filter — HP hears everything above Frequency, BP hears one octave around it. When the filtered level crosses Threshold the gain computer pulls down by up to Range dB, with fast attack-and-release ballistics voiced for sibilance.

In WIDE the reduction is applied to the full signal; in SPLIT the signal is divided at Frequency and only the high band is reduced, leaving the body of the voice untouched. Monitor and DELTA are listening modes only — they never change what is printed.

EVERY KNOB, SWITCH AND SELECTOR

FRONT PANEL CONTROLS

Control	Range · default	What it does
Threshold	-60...0 dB · -30	Level the sibilance has to cross before the de-esser reacts. Lower = more ess caught.
Frequency	2 kHz...16 kHz · 6 kHz	Where the ess lives. Use Monitor to solo the band and slide it onto the harshest 'ss'.
Range	0...24 dB · 12	The most it will ever pull down — a ceiling on the de-essing so it stays natural.
Sidechain HP / BP	HP / BP · HP	HP: detect everything above Frequency — the general de-ess. BP: detect one octave around Frequency — surgical, ignores the very top air.
WIDE / SPLIT	WIDE / SPLIT · SPLIT	Wideband ducks the whole signal when an ess hits — simple, a touch of pump. Split: only the high band above Frequency moves; the body of the voice is untouched. The transparent choice.
Monitor	off / on · off	Solo the sidechain band so you can dial Frequency right onto the ess.

METERS AND DISPLAY

Element	What it shows
Gain Reduction	The GR bezel: how much the ess is being pulled down, in dB. Range caps it, so the needle never travels past the Range setting.
Power lamp	She's on.

SHARED ACROSS THE ESSENTIALS LINE

CHASSIS BUTTONS

Every Essentials unit shares one chassis, so the footer strip works the same way on all twelve. The buttons below are present on EA-DS; the ones the unit does not need are simply not there.

Button	What it does
Presets	Use-named factory starting points plus your saved USER presets. Pick one, tweak, then + Save your own; Del removes a USER preset (factory presets cannot be deleted).
A / B	Two independent settings slots. Click to flip between A and B while the audio runs; both slots are saved with the session.
A>B (copy)	Copy the current slot into the other one, so B starts from A and you only change the one thing you are auditioning.
ARTIST	The five-knob face: the same engine with only the controls that matter for a performance-led session, at a size that reads across the room. Toggle back for the full panel at any time.
DELTA	Hear only what the unit is changing — output minus the latency-aligned input. If it sounds wrong here, it sounds wrong in the mix. The honesty check for any move.
BYPASS	Bypass the whole plugin.
= (Matched Bypass)	Bypass compares at equal loudness — no louder-is-better trick. On by default.
SAVE	Store the current settings as a USER preset you can recall anytime.

PRESETS

Factory presets are named for the job, not the setting — pick the one that describes your source, then adjust by ear. Any change you make can be stored as a USER preset with + Save.

Vocals — Lead Vocal Gentle · Bright Vocal Tame · Harsh Ess Surgical · Male Vocal Low Ess · Female Vocal High Ess · Rap Vocal De-Ess · RnB Vocal Silk · Pop Vocal Clean · Aggressive Sibilance · Subtle Polish · Deep Male De-Ess · Airy Female De-Ess · Rap Ad-Lib Tame · Whisper Vocal Control · Ultra Bright Tame · Doubled Vocal De-Ess · Soft Ess Smooth · Vocal Bus Gentle · Broadcast VO De-Ess

Drums and cymbals — Overhead Cymbal Sizzle · Cymbal Bus Tame · Hi-Hat Sizzle Cut · Overhead Split Tame

Instruments — Acoustic Gtr Pick · Sax Sibilance

CALIBRATION AND LEVEL

Like every Essentials unit, EA-DS is built around the analog convention **0 VU = -18 dBFS**. Feed it a signal whose average sits around -18 dBFS and every default, every preset and every meter reading lands where it was voiced to.

Threshold (-60...0 dB) is read against the level of the **sidechain band**, not the whole track — a filtered ess sits well below the full-band peak, which is why the default lands at -30 dB. If your vocal runs hot or cold of the 0 VU reference, Threshold simply shifts by the same amount; the GR bezel tells you when you are catching only the esses.

LATENCY

EA-DS reports its latency to the host (the latency-aligned DELTA path and the SPLIT band divide); the DAW compensates automatically, so a de-essed vocal stays in time with its doubles and the dry track.

TIPS

- Switch Monitor on, sweep Frequency until the 'ss' is loudest and ugliest in the solo, then switch Monitor off. That is the whole setup.
- Start in SPLIT with Range at 6–8 dB and lower Threshold until the GR bezel moves only on the esses. If the body of the voice dips, Threshold is too low.
- WIDE is the right call on a bright overhead pair or a full mix where a broad duck feels more natural than a notch — keep Range low (6 dB) so the pump stays under the radar.
- BP ignores air above the ess: use it when HP is dulling breath and cymbal sheen along with the sibilance.
- Check the move with DELTA. If you hear words instead of just 'ss' and 'ts', raise Threshold, lower Range or narrow the sidechain with BP.

Echelon Audio · EA-DS · drag a knob to adjust, Shift-drag for fine control, double-click to reset, right-click or double-click a value to type it.
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