



ECHELON AUDIO

EA-EQ

Utility Paragraphic Equalizer

USER MANUAL · v1.1.0



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

WHAT EA-EQ IS

EA-EQ is the utility equalizer of the Essentials line: a clean paragraphic with **4 to 12 bands**, each one a Bell, Low Shelf, High Shelf, High-Pass or Low-Pass with its own frequency, gain, Q and filter slope. There is no colour stage and no character switch — it is the honest tool for cutting mud, clearing a lane, tilting a master or carving a telephone effect, and it costs nothing in latency.

The curve display is the main control surface: drag a node to move it, scroll it for Q, double-click to switch a band on or off, click empty space to add one. The band strip below gives every value a knob and a typed entry, Undo / Redo covers every move, and the **Analyzer** (new in this version) draws a live spectrum behind the curve so you can see what each move is doing — display only, zero latency, off by default.

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

SIGNAL FLOW

IN → **Channel select** (Stereo · Left · Right) → **Band 1** → **Band 2** → ... → **Band N** (Bell / Low Shelf / High Shelf / HP / LP) → **Output trim** → **OUT** · **Delta: output minus input** · **Analyzer: display tap (in + out)**

Bands run in series in slot order; a band that is off, or above the active Bands count, is skipped and costs nothing. Channel decides whether the bands process both sides or only the left or right — a quick way to make a single-side or M/S-style move without another plugin.

The Analyzer taps the signal before and after the bands for the display only; the audio path is identical whether it is on or off.

EVERY KNOB, SWITCH AND SELECTOR

FRONT PANEL CONTROLS

The per-band controls below appear once per band (up to twelve). Every value can be dragged on the knob, scrubbed on the readout, or typed by double-clicking it.

Control	Range · default	What it does
Band On/Off	off / on · off	Enable or bypass just this band.
Band Type	Bell / Low Shelf / High Shelf / HP / LP · Bell	Bell, Low / High Shelf, or High-Pass / Low-Pass filter.
Frequency	20 Hz...20 kHz · spread 40 Hz-15 kHz across the bands	The band's centre (Bell) or corner (shelf / filter) frequency. Drag knob or double-click the value to type.
Gain	-18...+18 dB · 0	Boost or cut at this band, ±dB. (HP/LP filters have no gain.)
Q / Bandwidth	0.30...40 · 0.71	Higher Q = narrower & surgical; lower Q = broader & musical.
Filter Slope	6 / 12 / 24 / 48 dB/oct · 12	Steepness in dB/octave — 6, 12, 24, or 48. Applies to HP and LP bands.

Control	Range · default	What it does
Bands	4...12 · 8	How many EQ bands are active (4–12). Add bands for more surgical control; unused bands are skipped and cost nothing.
Channel	Stereo / Left / Right · Stereo	Process Stereo (both), or Left / Right only — handy for M/S-style or single-side moves.
Output	-12...+12 dB · 0	Overall output trim, ±12 dB. Drag to change; double-click to type.
Undo / Redo	—	Undo the last change (Cmd/Ctrl+Z); Redo the change you just undid (Shift+Cmd/Ctrl+Z).

METERS AND DISPLAY

Element	What it shows
EQ Curve	Drag a band node = frequency + gain · scroll a node = Q / bandwidth · double-click a node = enable/disable · click empty space = add a band. The solid line is the combined response of every active band.
Analyzer (Anlz)	Live spectrum behind the curve — what comes in (dim) and what leaves (lit) — so you can see what each move is doing. Display only: the audio is untouched whether it is on or off. Off by default.
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-EQ; 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.

Button	What it does
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 — Vocal Air + HP · Rap Vocal Clarity · Vocal De-Mud + Presence · Vocal Warmth · Vocal Broadcast · Vocal Sibilance Tame · Bright Vocal Pop · De-Ess Broadband

Drums — Drum Bus Shape · Kick Punch · Snare Crack · Hi-Hat Tame

Bass and low end — Bass Guitar Shape · 808 Clean Sub

Guitars and keys — Electric Guitar Cut · Acoustic Guitar Natural · Piano Clarity · Synth Lead Presence · Synth Pad Warm

Master and bus — Bright Master Tilt · Master Air Lift · Master Tilt Warm · Mix Bus Clarity · Full Mix HP Clean

Utility — Init (Flat) · Mud Cut · Telephone · Presence Boost · Warmth Add · Low Mud Scoop

CALIBRATION AND LEVEL

Like every Essentials unit, EA-EQ 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.

A clean EQ has no sweet spot to hit, but its gain does: a big boost on a hot source can clip the next stage. Use Output to give back what a boost adds (or what a cut takes away) and let Matched Bypass do the level-matching while you judge the curve.

LATENCY

EA-EQ is zero-latency: every band is a minimum-phase filter, there is no look-ahead and no oversampling, so it reports 0 samples to the host and is safe on a live input or a monitor path. The Analyzer is a display tap and adds nothing.

TIPS

- Start with a High-Pass on band 1: 24 dB/oct at 30–40 Hz on a mix, 80–120 Hz on a vocal. Most muddy mixes are fixed before a single bell is touched.

- Cut narrow, boost broad. Find a resonance with a high-Q bell boosted +6, sweep until it jumps out, then flip the gain negative and widen slightly.
- Turn the Analyzer on while you hunt a problem and off once you have found it — trust the display to locate, trust your ears to decide how much.
- Channel Left or Right lets you fix a one-sided problem (a guitar amp's hiss, a hi-hat bleed) without touching the other side or reaching for M/S tools.
- Use DELTA on a cut: if the delta is the tone you wanted to keep, you are cutting too wide or too deep. Undo, narrow the Q, try again.

Echelon Audio · EA-EQ · 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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