



ECHELON AUDIO

EA-PQ

Passive Tube Program Equalizer

USER MANUAL · v1.1.0



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

WHAT EA-PQ IS

EA-PQ is a passive tube-style program equalizer: two broad, forgiving sections that shape the extremes of a track rather than operate on it. The Low Frequency section has a shelving **Boost** and a broad **Atten** cut that both hang off the same selectable frequency — turn them up together and you get the famous simultaneous boost/cut trick: weight below, a dip just above, and a low end that is bigger and cleaner at once.

The High Frequency section has a bell **Boost** with selectable frequency and a **Bandwidth** control from broad and musical to sharp and surgical, plus a separate high-shelf **Atten** at its own frequency for taming harshness or over-bright air. **Tube** switches the tube + output-iron stage in or out; **Output** trims the result.

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

SIGNAL FLOW

IN → Low shelf Boost / Low Atten (same Low Freq) → HF bell Boost (HF Boost Freq · Bandwidth) → HF shelf Atten (HF Atten Freq) → Tube + output iron (on/off) → Output → OUT · Delta: output minus latency-aligned input

The passive curves come first: the low section's boost and cut overlap by design, then the high bell and the high shelf. The result runs through the tube + output-iron stage when Tube is on (the analog glue — a little density and softness on top of the curve) or straight through when it is off, for clean EQ only. Output is the final trim.

Delta monitors output minus the latency-aligned input, so what you hear is exactly the curve (and the tube colour) you have dialled in.

EVERY KNOB, SWITCH AND SELECTOR

FRONT PANEL CONTROLS

Amounts run 0–10 like the front of a passive program EQ: they are not dB figures, and the sections interact on purpose.

Control	Range · default	What it does
Low Freq	20 / 30 / 60 / 100 Hz · 60	Selects the corner for both the low boost and the low attenuation — they share it.
Low Boost	0...10 · 0	Resonant low shelf lift at the selected frequency.
Low Atten	0...10 · 0	Broad low cut just above the boost — pair with Boost for the trick.
HF Boost Freq	3k / 4k / 5k / 8k / 10k / 12k / 16k · 5k	Where the high boost bell sits.
HF Boost	0...10 · 0	Bell lift at the selected high frequency.
Bandwidth	0...10 · 4	Width of the HF boost — broad (musical) to sharp (surgical).
HF Atten Freq	5k / 10k / 20k · 10k	Where the high shelf cut starts.

Control	Range · default	What it does
HF Atten	0...10 · 0	High shelf cut — tames harshness/air.
Output	-12...+12 dB · 0	Overall level trim.
Tube	off / on · on	Passive tube + output-iron warmth — the analog glue. Off = clean EQ only.

METERS AND DISPLAY

Element	What it shows
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-PQ; 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 — Vocal Air · Vocal Presence · Vocal Silk · Rap Vocal Bright · Female Vocal Air · Male Vocal Warmth

Drums — Snare Crack · Snare Snap · Kick Punch + Air · Drum Bus Punch · Cymbal Sizzle

Bass and low end — Low-End Trick (Kick/Bass) · Bass Weight · 808 Girth · Bass DI Weight · Sub Bass Focus

Guitars and keys — Acoustic Sparkle · Acoustic Guitar Shimmer · Electric Guitar Body · Piano Sparkle · Synth Pad Smooth · Synth Lead Cut

Master and bus — Master Sheen · Master Glue Warm · Master Air Lift · Master Low Tighten · Dull Mix Brighten

Utility — Init (Flat) · Dull Tape Tame · Harsh Tame

CALIBRATION AND LEVEL

Like every Essentials unit, EA-PQ 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.

The curves themselves do not care about level, but the tube + output-iron stage does: feed it around 0 VU and Tube adds glue; run it several dB hot and it starts to lean on the programme. If a source is hitting hard, pull Output back or trim upstream and let the Matched Bypass tell you whether the colour is earning its place.

LATENCY

EA-PQ reports a small latency to the host (the tube stage's oversampling plus the latency-aligned Delta path); the DAW compensates automatically. Delta is always time-aligned to the dry signal.

TIPS

- The low-end trick: Low Freq 60, Boost 4–5, Atten 3–4. The boost adds weight, the cut just above it clears the mud, and the kick or bass gets bigger and tighter at the same time.
- For vocal air, leave the low section alone and use the HF bell at 10k–12k, Boost 3–4, Bandwidth 6–7 — broad, not surgical. Pull Low Atten up a notch or two to clear chest mud.
- Boost and attenuate the highs together: HF Boost at 5k with Bandwidth 3–4 for presence, then HF Atten at 10k or 20k a couple of points to take the edge off. The combination is smoother than either alone.
- Tube on is the default because the iron is most of the sound. Flip it off for a clean curve on a bus you have already coloured elsewhere — and check with Matched Bypass so level does not sway the decision.
- Use DELTA to hear exactly what the curves are adding. If the delta is mostly hiss, narrow the Bandwidth or drop the HF Boost frequency a step.

Echelon Audio · EA-PQ · drag a knob to adjust, Shift-drag for fine control, double-click to reset, right-click or double-click a value to type it.
Support: info@echelon.audio