



fEq

Equaliser and Tone Processor
Plugin

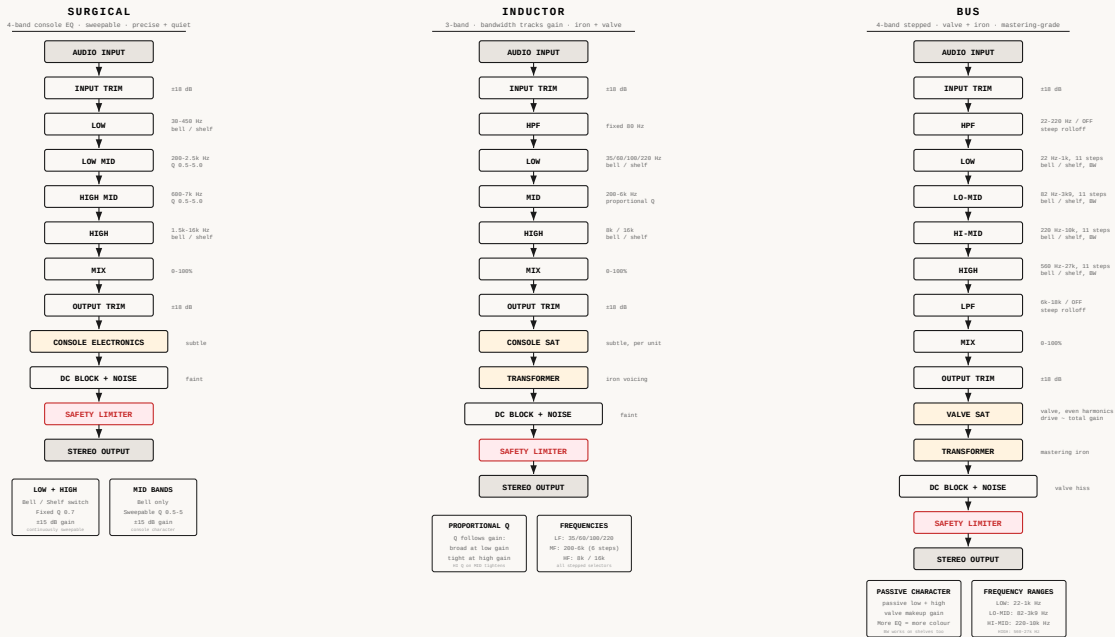
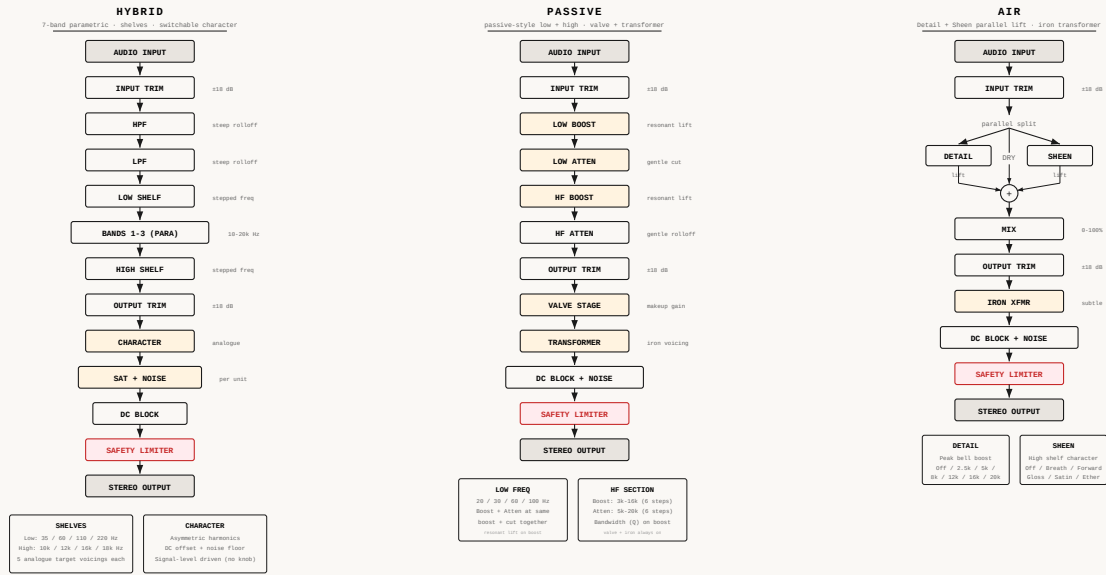
Product Manual

Build 1.0

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fEq - SIGNAL FLOW

HYBRID · PASSIVE · AIR · SURGICAL · INDUCTOR · BUS



LEGEND

- I/O point
- Non-linear / analogue stage
- Linear / filter stage
- Safety limiter (always active)

— Signal flow

----- Dry bypass path

NOTES:

1. Every stage runs warm; bypass is a soft A/B, not a wire.
2. All moves are click-free, even under fast automation.
3. A safety limiter is always active in every mode.
4. Each instance has its own unique analogue character. Same serial number = same character.
5. Hybrid: the Character switch takes the unit from clean to coloured.
6. Passive: valve + iron always on; resonant lift on boost.
7. Air: only the added lift is blended in, never the dry twice.
8. Surgical: 4-band fully parametric. All frequencies continuously sweepable. Subtle console character always active.
9. Inductor: Proportional Q - bandwidth narrows as gain increases. HQ Q button on MID for tighter curve. Fixed 80 Hz HPF.
10. Bus: stepped gain always positive, with a BOOST/OUT switch. Valve drive scales with total EQ gain. BW shapes shelf resonance.

What fBox Is

fBox is a complete analogue mixing ecosystem - individual plugins, a universal rack processor, and a full 32-channel mixing console with built-in tape machine - built around a single idea: every piece of hardware that ever left a factory floor had its own personality, and your plugins should too.

Most plugin companies model hardware. They pick one unit, capture it as accurately as they can, and sell that one model to everyone. Your copy is identical to mine. The compressor on your kick is the same compressor on your vocal. It has always worked this way - and it is the reason in-the-box mixes sound in the box.

fBox is built on the opposite principle. Every plugin instance carries a unique serial-seeded analogue character, generated the moment it is created. Load three fComps in one session and you have three different compressors, each with its own voice. That serial is fixed to the instance forever - it never resets, and it travels with the session.

The choice is yours. Open a fresh instance whenever you like and it is a different unit with its own voice - or find one you love and keep it. Save it, recall it, and mix through it for as long as you like: the same character, every time. Learn how it sounds and it becomes an instrument you know. And a unit you keep is yours alone - its serial exists on no one else's machine, the same way a piece of hardware you buy is one specific unit and no other. Bought once, owned permanently, no subscription.

This is not emulation. This is character at the instance level.

What fEq Is

fEq is six different equalisers in one plugin. Not six presets and not six voicings of the same circuit - six separate machines, each with its own controls, its own layout and its own sound. You pick one from the Mode selector in the header and the whole front panel changes to suit it.

Mode	In a nutshell
Hybrid	A full seven-band parametric with per-band stereo placement, and a Character switch that takes it from clean to coloured.
Passive	A broad, musical tone shaper. Boost and cut at the same frequency at once, the way only a passive design can.
Air	A top-end specialist. Detail and Sheen, nothing else.
Surgical	Four fully sweepable bands, precise and quiet. The one you reach for to remove something.
Inductor	Iron and valve, and a bandwidth that tightens as you push. The one that pushes back.
Bus	A stepped mastering EQ built for the whole mix.

Every fEq instance has its own unique serial number, which gives it subtly different analogue character - just as two units of the same hardware model will never sound exactly identical. The serial is shown at the bottom of the interface, and you can keep an fEq you like, pin it, and carry it between projects (see **Units and Patch Cards**).

fEq is part of the fBox ecosystem and shares the same analogue-modelling approach as the fBox Console, Rack and the rest of the range. Load it in your DAW, drop it into a channel or bus insert in the fBox Console or the dawless fBox Console Standalone, or put it in a slot in the fBox Rack - fEq runs anywhere the fBox suite does. Its settings and its serial are saved with your session wherever it is running, and every parameter is fully automatable from your DAW.

fEq takes mono or stereo. On a mono track it works in mono; feed it mono into a stereo output and it opens up to stereo, so nothing is ever lost.

Getting Started

Sound working in two minutes

1. Load fEq on a track, a bus, an fBox Console insert or an fBox Rack slot.
2. Pick a mode from the Mode selector in the header. If you are not sure, start with Hybrid.
3. Switch a band In, set its frequency, and turn its gain.
4. Watch the IN and OUT meters and use the trims to keep the level sensible.
5. Use the mode's Bypass to A/B what you have done.

If you want a place to start: Hybrid or Surgical for cleaning up a track, Passive or Inductor for making something sound bigger or sweeter, Air for the top end only, and Bus for a whole mix or a bus.

Tip: Every mode keeps its own settings. Dial something in on Passive, switch to Surgical to do a different job, and Passive is exactly as you left it when you come back. Only the selected mode is in the signal path, so you can audition all six on the same source without losing any of them.

New to EQ?

Two rules will get you most of the way. Cut narrow, boost wide: a problem is usually one small spot, but a sound you want more of usually needs a broad lift. And listen in the mix, not on its own - a track that sounds perfect solo is often wrong the moment everything else comes back.

The other habit worth building early is to make the sound smaller before you make it bigger. Take out what is in the way first and you will need far less boosting afterwards. Small moves stack: four bands doing 2 dB each sound more natural than one band doing 8 dB, and that holds in every mode here.

Tip: Give the ear a rest. If you have pushed the same band for ten minutes you have stopped hearing it. Bypass, walk away, and come back - the fault you were chasing is either obvious again or it was never really there.

Interface

The interface has the input meters down the far left, the output meters down the far right, and the controls for the current mode in the centre. The header runs across the top, and the panel below it changes completely with the mode you select - each mode has its own controls and its own layout.

Across the top

Control	What it does
Mode	Choose one of the six EQ modes. The panel changes to match.
Quality	Eco, Studio or Master (see Quality).
Unit	The unit menu - roll a new unit, save or recall one, and pin a default (see Units and Patch Cards).
Reset Engine	Clears any fault and resets the internal DSP without changing your settings.
Help	Opens the built-in help window.
RESET	An indicator, not a button. It shows in red only if fEq detects invalid audio arriving, and clears when the signal is clean again.

In each mode's panel

Whatever the mode, you will always find the trim, link and bypass controls for that mode, and a column of three buttons:

Button	What it does
Reset	Return the controls to their defaults. Reset only clears the mode you are in - the other five keep their settings. The serial number does not change.
Save Patch Card	Save the whole unit (every setting across all six modes) to a patch card.
Load Patch Card	Load a patch card - it asks whether to recall its unit or just apply its settings.

The OVERLOAD indicator lights below the controls when output levels exceed 0 dBFS. The watermark at the bottom shows the build version and this instance's unique serial number. A small resize handle sits at the bottom right: click it for Small (75%), Medium (100%) or Large (150%).

Common Controls

Every mode has its own copy of these, and they behave the same way in all six. Because each mode keeps its own set, the trims you dial in Passive are still there when you come back to it from Surgical.

Input Trim

Range: -18 dB to +18 dB. **Default:** 0 dB. Sets the level going into the EQ. In the modes with saturation in them, this is also how hard you lean on the circuit: more level in means more colour.

Output Trim

Range: -18 dB to +18 dB. **Default:** 0 dB. Sets the level leaving the EQ. Use it to match levels so you are judging tone and not loudness when you A/B.

Link

On or off. **Default:** off. With Link on, moving one trim moves the other the opposite way, so adding 3 dB in takes 3 dB out. This is how you drive a mode harder without the whole thing getting louder, which is the only fair way to hear what the drive is actually doing.

Bypass

Takes the EQ out of the signal so you can hear what you have changed. This is a soft bypass: the Input Trim, the Output Trim and the unit's own character stage stay in circuit, so a bypassed fEq is not a wire. That is deliberate - it is an A/B of the EQ curve, not of the box. For a completely clean comparison use your host's own bypass.

Mix

Range: 0 to 100%. **Default:** 100%. Blends the EQ'd signal against the untouched signal. Air, Surgical, Inductor and Bus have a Mix; Hybrid and Passive do not.

Tip: Pulling Mix down is how you do parallel EQ: push a big, aggressive curve and then blend it in underneath the original, which keeps the body of the sound while adding what you were after. It is particularly good with heavy top-end boosts, which can sound harsh at full strength and lovely at 40%.

Choosing a Mode

The six modes are genuinely different machines, not variations on one. This is where each is strongest. You can move between them freely and nothing you set is lost.

Hybrid

Seven bands, wide ranges, and per-band stereo placement. The most flexible of the six and the one to reach for when you do not know yet what the sound needs. Clean by default, coloured when you want it.

Passive

Two areas only, low and high, on stepped frequencies with big dial ranges. The controls interact rather than staying in their lanes, and the low section will boost and cut at the same frequency at once, which is the whole trick of this kind of EQ. Broad, flattering, hard to make sound bad.

Air

Detail and Sheen. Two lifts aimed at the top end and nothing else. For vocals, acoustic guitars, overheads and anything that needs to sound expensive without sounding brighter.

Surgical

Four fully sweepable bands with adjustable Q on the two mids. The quietest and most precise of the six. This is where you go to remove something.

Inductor

Stepped frequencies, iron and valve saturation, and a bandwidth that tightens as you turn the gain up. Push it and it pushes back. Drums, bass, guitars, anything that needs attitude.

Bus

Stepped frequency ladders on all four bands plus stepped filters, with adjustable bandwidth and Cut and Shelf switches. Built for the master bus and for group buses, where you want small, repeatable moves you can dial back in from memory.

Hybrid Mode

Hybrid is the workhorse: seven bands, wide ranges, and a Character switch that takes it from a clean, transparent EQ to a coloured analogue one. All seven bands start switched out. Click In on a band to bring it into the circuit.

Band	Range and steps
HPF	10 Hz to 20 kHz. Default 20 Hz.
Low shelf	35, 60, 110 or 220 Hz. Gain -18 to +18 dB. Default 60 Hz.
Band 1	10 Hz to 20 kHz. Gain -18 to +18 dB. Q 0.3 to 18. Default 200 Hz, Q 0.8.
Band 2	10 Hz to 20 kHz. Gain -18 to +18 dB. Q 0.3 to 18. Default 1 kHz, Q 0.8.
Band 3	10 Hz to 20 kHz. Gain -18 to +18 dB. Q 0.3 to 18. Default 5 kHz, Q 0.8.
High shelf	10, 12, 16 or 18 kHz. Gain -18 to +18 dB. Default 12 kHz.
LPF	10 Hz to 20 kHz. Default 20 kHz.

Q sets how wide a band is. At 0.3 it is very broad and gentle, the sort of move you feel rather than hear. At 18 it is a narrow spike, for finding and removing a single ringing note. Most musical work lives between about 0.7 and 2.

The Character switch

On or off. **Default:** off. With Character off, Hybrid is clean: it does the EQ you asked for and nothing else. Switch Character on and the unit's analogue behaviour comes into the signal - the weight, the colour and the small imperfections that belong to this particular fEq and no other.

Character is not a fixed amount. It grows with how much work the EQ is doing: the more bands you have in and the harder you drive the trims, the more of it you hear. A single gentle band with Character on is barely coloured at all. Six bands working hard with the input pushed is a very different sound. Character is a Hybrid control; the other five modes have their analogue behaviour running at all times and have no switch for it.

Tip: Use Hybrid with Character off when you want the EQ to be invisible and only the curve to matter - fixing a problem, matching two takes, tucking something into a mix. Switch Character on when you want the EQ to be part of the sound.

Tip: Starting points if you are new to it. Vocal presence: switch Band 3 In, 3 kHz, gain +2, Q 1. Add weight: low shelf In, 110 Hz, +2. Clear mud: Band 1 In, 300 Hz, -3, Q 1.5. Tame harshness: Band 2 In, 3 kHz, -3, Q 2. Clean up the bottom: HPF In at 30 to 40 Hz. Bring one band in at a time and A/B each with Bypass.

Band Placement

This is what makes Hybrid different from an ordinary parametric. Every one of the seven bands has its own placement selector underneath it, so you can run a mid-only cut and a sides-only lift at the same time from one instance.

Placement	What the band works on
Stereo	Both channels equally. The normal setting and the default.
Mid	Only what both channels share: the centre of the image. Usually the lead vocal, the bass, the kick and the snare.
Sides	Only the difference between the channels: the width. Usually room, reverb, doubled guitars and anything panned wide.
Left	Only the left channel.
Right	Only the right channel.

A low cut set to Sides pulls the bass into the centre and stops it smearing the width. A gentle high shelf on Sides adds air to the width while leaving the vocal alone. A small Mid cut makes room for a vocal without dulling the guitars either side of it. Left or Right fix a problem that only lives on one channel, which is common with live recordings and old stereo files.

Note: Placement needs a stereo signal to have anything to work on. On a genuinely mono output the selectors grey out. Most DAWs feed a mono track to fEq as mono in, stereo out, so the output is still stereo and the selectors stay live - Mid and Sides simply have nothing to separate until there is real stereo width in the signal.

Tip: Start small with Mid and Sides. A couple of dB does more than you expect, and it is easy to end up with a mix that sounds impressive in stereo and falls apart in mono - so check it in mono before you commit.

Passive Mode

A broad tone shaper with a low section and a high section. The amount dials run 0 to 10 rather than in dB, and they are not linear: the first half of the travel is gentle and the second half gets increasingly strong. That is how this kind of circuit behaves, and it means you can be precise at the bottom of the dial and dramatic at the top. Passive has no Mix control.

Low section

Freq: 20, 30, 60 or 100 Hz (default 60 Hz). **Boost:** 0 to 10 (default 0). **Atten:** 0 to 10 (default 0). Boost and Atten share the same frequency, and you are meant to use both together. Turning both up does not cancel out: the boost lifts the bottom and the attenuation pulls down just above it, and what you are left with is a bigger low end with the mud taken out of the way.

High section

Boost Freq: 3k, 4k, 5k, 8k, 10k, 12k or 16k (default 5k). **Boost:** 0 to 10 (default 0). **Bandwidth:** 0 to 10 (default 5) - sets how wide the high boost is; low numbers are broad and gentle, high numbers focused and more obvious. **Atten Freq:** 5k, 10k or 20k (default 10k). **Atten:** 0 to 10 (default 0). The high boost opens the top out rather than just raising a shelf, and the attenuation is a separate frequency, so you can boost at 10k for air and pull down at 5k to take the hardness out at the same time.

Tip: Try Boost 5 with Atten 3 or 4 on a kick or a bass and listen to how much cleaner it is than boost alone. Passive is the mode to reach for when something is dull or thin rather than wrong - it is not built for removing a specific problem, but it will make almost anything sound bigger.

Tip: Starting points. Kick drum: Low Freq 60 Hz, Boost 5, Atten 4 for weight with the mud cleared out from under it - drop to 30 Hz for a deeper sub kick. Bass guitar: the same trick at 60 Hz, Boost 4, Atten 3. Air on a vocal: HF Boost Freq 10k, Boost 4, Bandwidth 4. Weight on a whole mix: Low Freq 30 Hz, Boost 3, Atten 2. Smooth a bright source: HF Atten Freq 5k, Atten 3. Everything here likes a gentle hand - keep the dials in the lower half to start.

Air Mode

Two lifts aimed at the top end, and nothing else - Air only adds, there is no cut here. The two work as a pair. Detail is a focused bell: a bump centred on the frequency you pick, that lifts around that spot and leaves everything either side of it alone. Sheen is a high shelf: it lifts everything from its frequency upward, so it opens out the whole top rather than picking one point. Detail finds the frequency where a sound speaks; Sheen adds air above it.

Detail

Freq: Off, 2.5k, 5k, 8k, 12k, 16k or 20k (default 8k). **Gain:** 0 to 10 (default 5). A focused bell lift at the frequency you pick - the presence and articulation control for consonants on a vocal, pick noise on an acoustic, stick on a snare. Set Freq to Off to take it out.

Sheen

Character: Off, Breath, Forward, Gloss, Satin or Ether (default Gloss). **Gain:** 0 to 10 (default 5). A broad high shelf with a voicing rather than a set frequency. Each name places the shelf higher and gives it a different slope: Breath is low and very wide for body on a thin vocal; Forward pushes a buried sound to the front; Gloss is sparkle and air, the general purpose setting; Satin is smooth and silky right at the top for strings and acoustic guitars; Ether is extreme air, so high it barely reads as a tone change. Set Character to Off to take the Sheen section out.

Mix

Range: 0 to 100%. **Default:** 100%.

Note: Air arrives doing something. Out of the box Detail is at 8k and Sheen is on Gloss, both at halfway, so you hear a change the moment you switch to this mode. To start from nothing, set both Freq and Character to Off and bring them in one at a time.

Tip: Air is the mode for making something sound expensive. It is a finishing tool, not a corrective one - if a sound is harsh, Air will make it harsher. Fix it in Surgical first and then add Air.

Tip: Starting points. Vocal presence: Detail 5k at 4, Sheen on Forward at 4. Acoustic guitar sparkle: Detail 8k at 3, Sheen on Satin at 5. Overheads and cymbals: Sheen on Gloss at 4, Detail Off. Open a dull mix: Sheen on Gloss at 3, Mix 100%. If it starts to hiss, drop the Detail gain first.

Surgical Mode

Four fully sweepable bands. The quietest and most precise mode, and the one to use when you need to remove something specific. The signal passes through the bands in order.

Band	Range and controls
LF	30 to 450 Hz. Gain -15 to +15 dB. Bell or low shelf. Default 100 Hz, bell.
LMF	200 Hz to 2.5 kHz. Gain -15 to +15 dB. Q 0.5 to 5. Default 600 Hz, Q 1.
HMF	600 Hz to 7 kHz. Gain -15 to +15 dB. Q 0.5 to 5. Default 3 kHz, Q 1.
HF	1.5 to 16 kHz. Gain -15 to +15 dB. Bell or high shelf. Default 8 kHz, bell.

Mix: 0 to 100%, default 100%. The LF and HF bands are bells until you press Shelf. A bell lifts or cuts around the frequency and leaves everything either side of it alone; a shelf takes everything below (or above) the frequency with it. Use a bell to fix a spot, a shelf to change a whole end of the sound. Surgical is where you clean up: boxiness sits low in the LMF range, harshness in the low part of HMF, and sibilance high in HF.

Tip: To find a problem, a narrow boost swept slowly will make it jump out - set a band to a high Q and a moderate boost, sweep until the thing you do not like leaps forward, then turn the gain down past zero into a cut and narrow it until only the problem goes. Then widen it slightly: a cut that is too narrow often sounds more artificial than the problem did.

Important: Do not mistake the sweep for the fault. Anything sounds harsh under a big enough narrow boost, so you are listening for the spot that is worse than the rest, not just for something that sounds bad. Keep the boost modest and trust the cut. And cut before you boost - most of what people fix with a boost was really a cut somewhere else.

Tip: Starting points. De-box a vocal: LMF 400 Hz, -4, Q 1.5. Room for the bass: LF 80 Hz, -3, bell. Vocal clarity: HMF 3 kHz, +2, Q 1. Tame a harsh source: HMF 3.5 kHz, -4, Q 2, then HF 9 kHz, -2, shelf. Weight on almost anything: LF 100 Hz, +2, shelf. These are corrective moves - reach for a shelf when you want to shape a whole end of the sound instead.

Inductor Mode

Stepped frequencies and a circuit that colours as you push it. The bands get narrower as you turn the gain up and wider as you back off, so a small move is broad and gentle and a big move is focused. You cannot set that separately - it is how the mode behaves, and it is why big moves here still sound musical.

Control	Range and steps
HPF	In or Out (default Out). A fixed high pass at 80 Hz for clearing rumble.
LF	35, 60, 100 or 220 Hz. Gain -15 to +15 dB. Bell or low shelf. Default 100 Hz.
MF	200, 350, 700 Hz, 1.5k, 3k or 6k. Gain -15 to +15 dB. HI Q switch narrows the band. Default 1.5 kHz.
HF	8k or 16k. Gain -15 to +15 dB. Bell or high shelf. Default 8 kHz.
Mix	0 to 100%. Default 100%.

Inductor has saturation built into it in two places - the iron in the low end and the valve stage after the bands - and both respond to level. That means the Input Trim is a tone control here as much as a level control. Push it and the mode thickens; back it off and it cleans up. Use the Link so you can drive it without the level running away from you.

Tip: *The MF band with HI Q engaged is the one that gets used most: a cut around 350 Hz takes the box out of almost anything, and a boost at 3k pulls a guitar or a snare straight to the front. This is the mode for attitude - drums, bass, guitars, room mics - and the wrong choice for a delicate acoustic or for surgical work.*

Tip: *Starting points. Snare crack: MF 3k, +5, HI Q on; LF 220 Hz, +2, bell; Input Trim +3 with Link on. Drum bus size: LF 100 Hz, +3, shelf; HF 8k, +2, shelf; HPF In; Mix 70%. Electric guitar cut: MF 1.5k, +4, HI Q off; LF 100 Hz, -3, shelf. Push the Input Trim for more grit, back it off to clean up.*

Bus Mode

A stepped mastering EQ. Every frequency is on a ladder rather than a sweep, which sounds like a limitation and is actually the point: you can hear a move, write it down and dial the same one again next week. Bus is built for the master and for group buses. It has valve and transformer character running at all times, so even with every band flat it is doing something to the sound.

Filters

HPF: Off, 22, 39, 68, 120 or 220 Hz (default Off). **LPF:** Off, 6k, 7k5, 9k, 12k or 18k (default Off).

Bands

Each of the four bands has a stepped Freq, a Gain from 0 to 5 in half steps (default 0), a Cut switch that flips the band from a boost to a cut, a Shelf switch that flips it from a bell to a shelf, and a Bandwidth from 1.5 to 3.0 (default 2.0) where low numbers are narrow and focused and high numbers broad and gentle. There is a Mix, 0 to 100%, default 100%.

Band	Stepped frequencies
Low	22, 33, 47, 68, 100, 150, 220, 330, 470, 680 Hz, 1k. Default 100 Hz.
Lo-Mid	82, 120, 180, 270, 390, 560, 820 Hz, 1k2, 1k8, 2k7, 3k9. Default 560 Hz.
Hi-Mid	220, 330, 470, 680 Hz, 1k, 1k5, 2k2, 3k3, 4k7, 6k8, 10k. Default 2k2.
High	560, 820 Hz, 1k2, 1k8, 2k7, 3k9, 5k6, 8k2, 12k, 18k, 27k. Default 8k2.

The gain range only goes to 5, and that is on purpose. On a full mix, 1 dB is a real move and 3 dB is a big one. If you find yourself wanting more than this mode offers, the problem is probably in the mix rather than in the master.

Tip: The band frequencies overlap heavily. Two bands set near each other with small gains sound smoother and more natural than one band doing the same amount of work - split a 3 dB move into two 1.5 dB moves either side of the frequency. Drive the character with the Input Trim if you want more of it, and use the Link so the level stays put while you decide.

Tip: Starting points. Gentle master polish: Low 68 Hz at 1, BW 2.5; High 12k at 1, shelf, BW 2.5; HPF 22 Hz. Open the top smoothly: High 8k2 at 1 and Hi-Mid 6k8 at 1, both small, instead of one big shelf. Tighten a bass-heavy master: Low 47 Hz, 2 dB, Cut on. Keep every move to 1 or 2 dB - if you want more, the problem is in the mix, not the master.

Meters

Vertical meters down the far left (input) and far right (output) show the left and right levels in real time. A small clip indicator sits at the top of each meter and lights if the signal gets too hot. Click a meter to switch it between Peak and RMS - the label reads PK or RMS to show which mode it is in.

Peak follows the instantaneous highest sample level, so it jumps with every transient and shows the true maximum the signal reaches. RMS shows the average energy over a short window, so it sits steadier and reads much closer to how loud the signal actually sounds - the classic VU-style reading.

Tip: Use Peak to watch headroom and make sure nothing is clipping - keep the peaks below 0 dBFS. Use RMS to judge loudness and to balance one part against another by how loud they actually sound, since two sounds can share the same peak but sit at very different loudness. Peak for safety, RMS for balance.

The OVERLOAD indicator appears when output levels exceed 0 dBFS. If it lights up often, pull the Input Trim or Output Trim down. Watch both meters together in a mode with saturation in it: if the output reads higher than the input you are adding level as well as tone, and the tone will seem better simply because it is louder. Pull the Output Trim down, or use the Link, until they match and judge it again.

Automation

Every on-screen control in every mode is exposed to your DAW and can be written and read through its automation lanes like any other parameter - the mode selector, every band's frequency, gain, Q and switches, the placement selectors, the trims, Link, Mix and Bypass, and the Hybrid Character switch. Quality is not automatable; it is a per-unit setting rather than a mix move, so it stays out of your automation lanes.

Automating the mode selector switches the whole EQ mid track, which is a large change rather than a subtle one. It works, but it is a sound effect, not a mix move. The complete state of all six modes, plus the serial, is saved inside your session - whether that is your DAW, the fBox Console, the Console Standalone or the Rack.

Units and Patch Cards

fEq's character lives in its serial number. There are two ways to keep and move your work: units (the character) and patch cards (the whole setup).

The unit menu

A unit is the EQ's character on its own - its serial and the analogue voice that serial produces, with no settings attached. The Unit button opens the menu:

Menu item	What it does
New Unit	Roll a fresh unit with a new serial and a new voice.
Save Unit...	Save the current unit so you can recall it later. Saved units live in Documents/fBox Units/fEq.
Load saved unit	Recall a unit you saved, or browse for a unit file.
Recall my pinned unit	Jump back to your pinned default.
Pin this unit as my default	Make this unit the one every new instance opens with - this is how you keep one unit for good.
Use a new unit each time	Go back to a fresh unit on each new instance.

Patch cards

A patch card is a portable copy of the whole unit - its serial and every setting across all six modes - written to a single file. Your unit is also saved with your session; a patch card is for carrying a unit between instances and projects. Save Patch Card writes the current unit to a patch card, a file you choose the home for. Load Patch Card reads one back in: if the card was saved on a different unit, it asks how to bring it in:

Option	What it does
Recall Unit	Bring back the exact unit the card was saved on - its character and all its settings.
Apply Settings Only	Keep your current unit and drop the saved settings on top.

A patch card carries its identity, so a card saved for a different fBox product is refused with a note.

Important: *A unit is the character; a patch card is the character plus every setting on top of it. Both save the serial, so the exact voice comes back with them.*

Quality

The Quality selector sets the processing quality of the analogue stages:

Tier	Use
Eco	Lowest CPU. Sounds great for tracking and dense sessions.
Studio	The sweet spot for mixing. Richer saturation and enhanced quality on the analogue path. The default.
Master	Maximum quality. For final mixes and mastering.

Tip: Studio is the right choice for normal use. Drop to Eco if your computer is struggling; switch to Master for a final mix or master. When you bounce offline, fEq uses its highest quality whatever tier is selected, so your renders are always full quality.

Performance and CPU

The quality of the analogue stages costs CPU. fEq gives you the same Eco / Studio / Master control the rest of the range uses, so you can mix light and render heavy.

Mix at Eco, render at Master

Mix at Studio, or drop to Eco if your machine struggles - the sound still plays, just at lighter quality. Then, when you bounce, switch to Master and let your DAW render. The render is offline, so it takes as long as it needs and comes out at full Master quality however much the live playback stuttered. Close editor windows you are not using, and freeze or bounce the track when you want the heavy processing to run offline.

Analogue Character

Every instance of fEq generates a unique serial number, shown in the bottom-right watermark. It defines the unit's hardware character throughout the signal path - where the bands actually sit, how wide they are, the colour of the saturation, and the noise floor underneath it all.

On real analogue hardware, no two units from the same line sound identical. Set two of them to the same 3 kHz presence boost and listen carefully: one sits slightly higher, the other slightly lower. One is a touch wider. The iron in one warms the bottom a little differently. Push them both and one glows where the other grows. That is not a fault, it is what hardware is.

fEq models these variations throughout. The same serial always produces the same unit, different serials produce different units, and the serial is saved with your session - whether that is your DAW, the fBox Console, the Console Standalone or the Rack - and with any unit or patch card you keep. In Hybrid, the Character switch is what brings this into the signal; with it off, Hybrid is clean. The other five modes carry their character at all times.

Tip: *You cannot dial a unit's character to order any more than you can a real one - but you can learn it, and you can keep it. Find one you love, pin it, and it is the fEq you open every time. If you want two identical units, save a patch card from one and load it on the other with Recall Unit - the serial and all its character transfer with the card.*

What fEq Writes To Your Computer

For transparency, here is everything fEq writes and where. It writes nowhere else, and sends nothing anywhere unless you choose to.

Folder	Contents
Documents/fBox/Diagnostics	Plain-text diagnostic logs, kept so a crash can be worked out afterwards.
Documents/ fBox Units	Your saved units, so you can find, back up and share them.
AppData/Roaming/fBoxAudio (Windows)	Your licence, and a small settings file recording which unit you have pinned.

Patch cards go wherever you save them. The EQ's own state lives in your session, not in a file of its own. Nothing is filed away somewhere you did not pick, and nothing is written to your Desktop.

When something goes wrong

Diagnostics are written automatically as fEq runs and survive a crash or freeze. If you hit a problem, zip the whole Documents/fBox/Diagnostics folder and email it to support@fboxaudio.com - send the entire folder, since what else was running alongside fEq often explains the problem. Tell us what you were doing, what you expected, and what happened. The logs are plain text; you are welcome to read them, but you do not need to.

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