MG9 AUDIO

MGEQ

A free equalizer that shows exactly what you hear.



USER MANUAL

VERSION 1.0.1

WINDOWS · MACOS

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1 WELCOME

MGEQ is an equalizer for mixing and mastering: up to 24 bands, three processing modes, dynamics on every band, and a black glass display that shows exactly what you hear.

WHAT IT DOES

- **24 bands, ten shapes.** Bell, low and high shelf, low and high cut from 1 to 96 dB/oct or brick wall, notch, band pass, tilt shelf, tilt and all pass.
- **Three modes.** Zero Latency for tracking and most mixing; Analog Phase for the curve and the phase of an analog equalizer, right up to 20 kHz; Linear Phase, with five resolutions, when the phase must not move at all.
- **Every band where you want it.** Stereo, left, right, mid or side; in surround, up to 9.1.6, on the speakers you choose.
- **Dynamics on every band.** A band can cut or boost only when the level crosses its threshold, listening to its own region, a custom range or the side chain.
- **Focus.** Spectral dynamics: each frequency of the band reacts on its own, so only what sticks out moves.
- **Character.** Clean, Satin or Tube, applied to the tonal part only.
- **A live analyzer.** Input and output spectra, Peak Pick (drag a peak to make a band), Peak Hold, and Overlap, which shows where two sources fight for the same frequencies.
- **Tools that save time.** Curve Draw (draw the curve, MGEQ places the bands), Tone Match (bring your track closer to a reference) and Session Map (every MGEQ of your session on one screen, adjustable from there).
- **Everyday comfort.** Presets, A/B, 64 undo levels, MIDI Learn, sizes from 85 to 200 % and Full Screen.

> MGEQ is free, and you may use it in your productions, commercial ones included. It is made by MG9 Audio.

2 INSTALLATION

WINDOWS (VST3, 64-BIT)

1. If Windows blocked the download: right-click the zip, choose **Properties**, tick **Unblock**, then **OK**. Unzip it (right-click, **Extract All**).
2. Copy the whole `MGEQ.vst3` folder into `C:\Program Files\Common Files\VST3\`, or into any folder your host scans for VST3 plugins.
3. Restart your DAW and rescan the plugins if needed. MGEQ is listed under **MG9 Audio**.

Standalone application. `MGEQ.exe` runs without a DAW, on the input of your audio interface. It is optional.

MACOS (AUDIO UNIT AND VST3)

1. Double-click `MGEQ-1.0.1-macOS.pkg`.
2. The installer is not signed by Apple, so macOS blocks it the first time. Click **Done** (never **Move to Trash**).
3. Open **System Settings › Privacy & Security**, scroll to **Security**, click **Open Anyway** next to the installer's name and confirm with your password.
4. Follow the installer. It places the Audio Unit and the VST3 in `/Library/Audio/Plug-Ins`. Then restart your DAW.

The archive's `README.txt` explains each step in detail.

REQUIREMENTS

- **Windows:** Windows 10 or 11, 64-bit, and a 64-bit VST3 host (Ableton Live, FL Studio, Cubase, Reaper, Studio One, Bitwig...).
- **macOS:** Apple Silicon or Intel, macOS 10.13 or later, and an Audio Unit or VST3 host (Logic Pro, Ableton Live, Cubase, Reaper, FL Studio, Studio One, Bitwig...).

UNINSTALL

Delete `MGEQ.vst3` (and `MGEQ.component` on a Mac), then rescan in your DAW. Your presets stay in the presets folder (chapter 10).

3 QUICK START

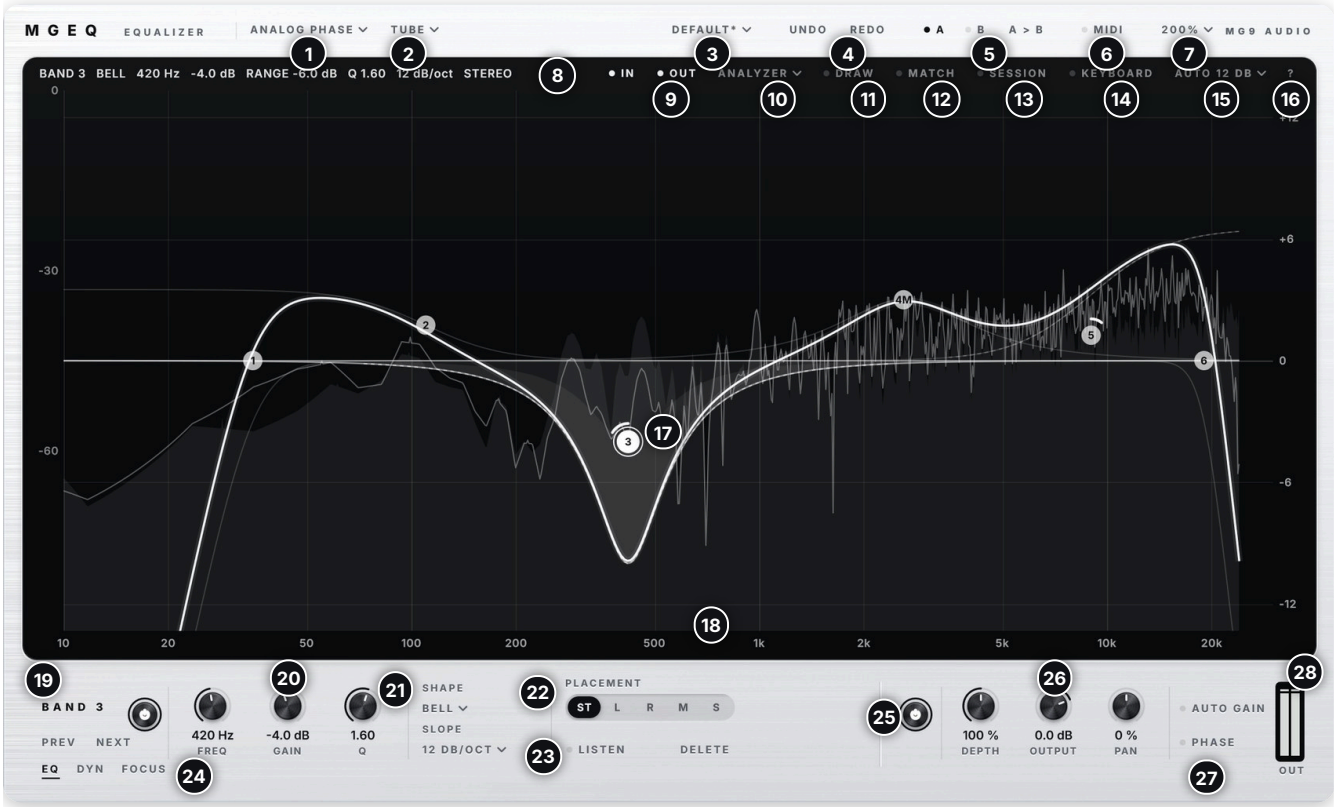
1. **Insert MGEQ** on a track, a bus or your master. It opens flat, in Zero Latency. Press play: the input spectrum appears as a soft veil, the output as a line.
2. **Double-click on the screen** to add a band where you clicked: a bell (a low cut at the far left, a high cut at the far right).
3. **Drag the point**: left and right for the frequency, up and down for the gain. Turn the **wheel** on the point for its Q (the width). Hold Shift for fine moves.
4. **Rest the mouse on the spectrum** for a second: it freezes and its peaks appear (Peak Pick). Drag one to put a bell exactly on it. Move the mouse away to let the spectrum run again.
5. **Fine-tune** with the knobs at the bottom, or double-click a point and type its values (`2k` , `A4` ...).
6. **Compare and keep**: A and B hold two settings, Ctrl + Z undoes, and the preset menu saves your work.

> The scale of the curve follows your gains on its own (AUTO): it glides from ±3 to ±6, 12 or 30 dB when a band needs it, and never moves while you drag a point. A point dragged beyond the scale waits at the edge with a small arrow; the view widens when you let go.



Peak Pick: the spectrum is frozen and its peaks are marked. Drag one to make a band; move the mouse away to resume.

4 THE INTERFACE



1 Mode: Zero Latency, Analog Phase, Linear Phase (and its resolution).

2 Character: Clean, Satin, Tube.

3 Preset menu (a * means changed).

4 Undo and redo.

5 Settings A and B, and A > B to copy one onto the other.

6 MIDI Learn.

7 Size, scale and Full Screen.

8 The band under the mouse or selected, in plain words.

9 IN and OUT: input veil, output line.

10 Analyzer settings, Peak Hold, Peak Pick, Overlap.

11 DRAW: Curve Draw.

12 MATCH: Tone Match.

13 SESSION: Session Map.

14 KEYBOARD: a piano under the scale, bands snap to notes.

15 Scale of the curve: AUTO, or ±3, 6, 12, 30 dB.

16 Every gesture and shortcut, in a bubble.

17 A band: drag it, turn the wheel on it, right-click it.

18 Frequency scale: drag to zoom and move, double-click for the whole spectrum.

19 The selected band, PREV and NEXT, and its power button.

20 Frequency, gain and Q of the selected band.

21 Shape and slope.

22 Placement: ST, L, R, M, S.

23 LISTEN (hear only this band) and DELETE.

24 Pages: EQ, DYN (dynamics), FOCUS.

25 Bypass of the whole plug-in.

26 Depth, output gain and pan.

27 Auto Gain and phase (polarity).

28 Output meter; click it to clear the clip light.

The numbered points on the curve are the bands. A letter after the number shows the placement (L, R, M, S). The thin curves are each band alone; the bright curve is the result. A dashed curve, when there is one, is the right channel.

5 BANDS

SHAPES

SHAPE	WHAT IT DOES
Bell	Boosts or cuts around the frequency; Q sets the width. Its slope (12 to 96 dB/oct) makes the sides steeper.
Low Shelf, High Shelf	Boosts or cuts everything below, or above, the frequency. Q shapes the knee.
Low Cut, High Cut	Removes everything below, or above. Slope from 1 to 96 dB/oct by steps of 1, then Brick Wall. Q shapes the corner: 1 is the flattest, higher values add a resonance.
Notch	Removes a narrow band. Q sets the width.
Band Pass	Keeps only the band around the frequency.
Tilt Shelf	Half the gain below the frequency, half above, in opposite directions.
Tilt	A straight slope across the whole spectrum, pivoting on the frequency.
All Pass	Changes the phase only, never the level (not in Linear Phase).

PLACEMENT AND SPEAKERS

ST acts on both channels, **L** or **R** on one. **M** and **S** work in mid/side: M on what both channels share (the center), S on what differs (the sides). **Split Left/Right** and **Split Mid/Side**, in the band menu, turn one band into two.

On a surround track (up to 9.1.6), a **SPEAKERS** key appears on the EQ page: choose the speakers each band acts on (all, front, surrounds, heights, or any speaker). The others stay untouched.

THE BAND MENU

Right-click a point: Shape, Slope, Placement, Split Left/Right, Split Mid/Side, Enabled, Proportional Q (the bell narrows as its gain grows), Dynamic, Copy, Delete Band. Right-click the background: Paste Bands, Select All Bands, Reset All Bands.

TYPING A VALUE

Double-click a point, type the frequency, then **Tab** for the gain and the Q; **Enter** applies, **Esc** cancels. Frequencies can be written `2k`, `2.5k`, `440`, or as a note: `A4`, `C#2+13` (13 cents above C#2).

6 MOUSE AND KEYBOARD

WHERE	GESTURE	EFFECT
Background	Double-click	A band where you clicked (with **Alt**: a dynamic bell).
Background	Drag	A rectangle selects several bands.
Point	Drag	Frequency and gain. **Shift**: fine; **Alt**: one axis only; **Ctrl**: Q.
Point	Click, **Ctrl**-click	Select it; add it to the selection.
Point	**Alt**-click	Band on or off.
Point	Double-click	Type its values.
Point	Wheel	Q (a cut: its slope).
Point	**Ctrl** + wheel	Gain, 0.5 dB per notch.
Point	**Alt** + wheel	Dynamic range, 1 dB per notch.
Elsewhere	**Ctrl** + wheel	Zoom the frequencies around the mouse.
Elsewhere	**Shift** + wheel	Move along the frequencies (a sideways swipe on a touchpad too).
Frequency scale	Wheel, drag	Zoom; drag sideways to move. Double-click: the whole spectrum.
Spectrum	Rest 1 s	Peak Pick: drag a peak to make a band.
Keyboard	**↑** **↓**	Gain of the selection, 0.5 dB.
Keyboard	**Ctrl** + **↑** **↓**	Q of the selection (a cut: its slope).
Keyboard	**Ctrl** + **←** **→**	Frequency of the selection, one semitone.
Keyboard	**←** **→**, **Tab**	Previous or next band.
Keyboard	**B**	Selection on or off.
Keyboard	**Delete**	Delete the selection.
Keyboard	**Ctrl**+**D**, **Ctrl**+**A**	Duplicate the selection; select every band.
Keyboard	**Ctrl**+**Z**, **Ctrl**+**Y**	Undo, redo.
Keyboard	**Ctrl**+**C**, **Ctrl**+**V**	Copy and paste bands.
Keyboard	**Ctrl**+**S**	Save the preset.
Keyboard	**Esc**	Close what is open (Session Map, Tone Match, Peak Pick), then clear the selection, then leave Full Screen.
Keyboard	**F11**	Full Screen on or off.

Shift makes every adjustment fine: 0.1 dB, Q ×1.03, 10 cents. On a Mac, use **Cmd** where this manual says **Ctrl**, and **Option** for **Alt**. The keys work when MGEQ's window has the keyboard focus (click its screen first).

7 MODES, CHARACTER AND OUTPUT

MODES

MODE	SOUND	LATENCY
Zero Latency	A digital EQ matched to the analog curve. The most precise below about 10 kHz; the top octave can differ slightly at 44.1 and 48 kHz.	None
Analog Phase	The curve and the phase of an analog equalizer, right up to 20 kHz: MGEQ works inside at 176.4 kHz or more.	About 1 ms
Linear Phase	No phase shift at all: every frequency stays aligned in time. For mastering, or for sources recorded with several microphones. The screen shows the real curve, which is less precise in the lows at low resolutions.	53 ms to 1.4 s

LINEAR PHASE RESOLUTION	LOW	MEDIUM	HIGH	VERY HIGH	MAXIMUM
Latency at 44.1 / 48 kHz	2560 samples (53 ms)	4608 (96 ms)	8704 (181 ms)	16896 (352 ms)	66048 (1.4 s)

Changing mode or resolution fades out, swaps and fades back in, and MGEQ tells your host its new latency so tracks stay aligned. Rendered offline, two exports are identical.

CHARACTER

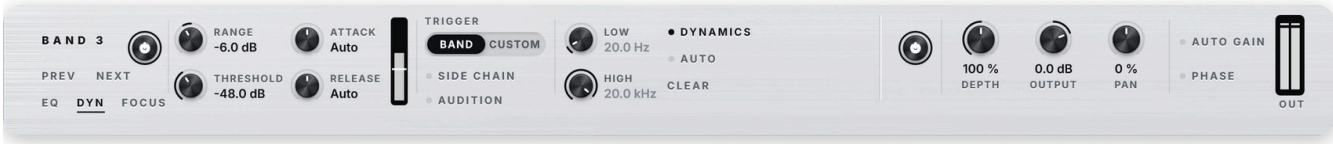
CLEAN adds nothing: a flat MGEQ returns your audio bit for bit. **SATIN** adds soft odd harmonics, **TUBE** second and third harmonics, a little more in the lows. Only the tonal part is colored (bells, shelves, tilts): cuts, notches and band passes come after it, so a low cut never distorts the whole mix.

OUTPUT

- **DEPTH** scales every gain at once, from 0 (flat) to 200 % (twice as much).
- **OUTPUT** from silence to +36 dB, and **PAN**, in left/right or mid/side.
- **AUTO GAIN** keeps the loudness steady while you equalize, so you judge the tone, not the level.
- **PHASE** inverts the polarity. The power button bypasses MGEQ with a short fade.

8 DYNAMICS AND FOCUS

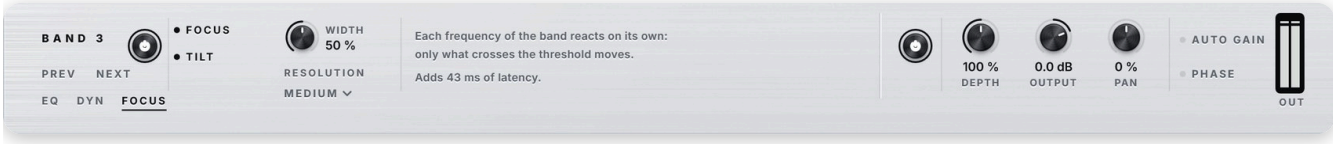
A dynamic band moves only when the sound asks for it: it cuts a harsh resonance when it rings, or lifts a detail when it fades, and leaves everything else untouched.



THE DYN PAGE

- **DYNAMICS** turns the dynamics of the selected band on. **CLEAR** resets them.
- **RANGE**: how far the band can move, up to ±30 dB. Negative cuts (compression), positive boosts (expansion).
- **THRESHOLD**, or **AUTO**: MGEQ follows the level of the trigger over the last seconds and sets it for you.
- **ATTACK** and **RELEASE**: Auto chooses them from the frequency (fast in the highs, slower in the lows); turn them to go from ×0.1 to ×10.
- **TRIGGER**: **BAND** listens to the band's own region, **CUSTOM** to the range set by **LOW** and **HIGH**. **SIDE CHAIN** listens to the side-chain input instead; **AUDITION** lets you hear what the band listens to.
- The small meter shows the trigger level against the threshold.

On the screen, a dynamic band draws its curve at rest, its moving curve, and a dashed curve at the end of its range. The ring around its point shows the range, and the part that is filled shows how much it moves right now. Alt + double-click creates a dynamic bell, Alt + wheel sets the range.



THE FOCUS PAGE

With **FOCUS** on, each frequency of the band reacts on its own: only what crosses the threshold moves, the rest of the band stays still. It is the right tool for resonances, harshness and sibilance that move from note to note.

- **WIDTH**: how many neighboring frequencies react together.
- **TILT**: weights the highs so they react as readily as the lows.
- **RESOLUTION**: Low, Medium or High. Focus adds 21, 43 or 85 ms of latency at 48 kHz, in every mode.

9 THE ANALYZER

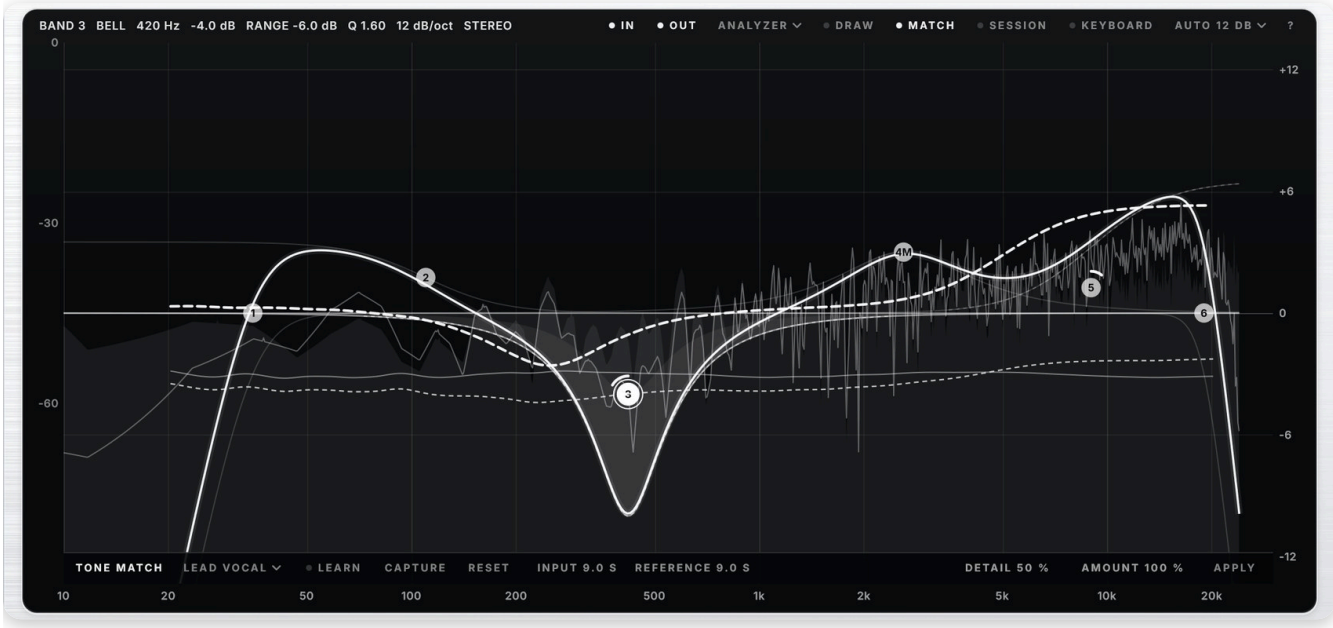
- **IN** shows the input as a soft veil, **OUT** the output as a line. Each line rises quickly and falls smoothly; when playback stops, it fades away.
- **ANALYZER** menu: **Range** (60, 90 or 120 dB), **Resolution** (Low to Maximum), **Speed** (Slow, Medium, Fast), **Tilt** (0 to 6 dB/oct; 4.5 makes a balanced mix look flat), **Peak Hold** and **Clear Peak Hold**, **Peak Pick**, **Overlap**.
- **Peak Pick.** Rest the mouse on the spectrum for a second: it freezes, its peaks are marked, and a line at the bottom says what to do. Drag a peak: a bell lands on its frequency with the width of the peak, and you set its gain in the same gesture. The spectrum runs again when you move the mouse away, click elsewhere, turn the wheel, press Esc, or after six seconds. You can turn Peak Pick off in the menu.
- **Overlap.** Compare with the side chain or with another MGEQ of the session: their spectrum is drawn dotted, and hatching marks where both meet within 3, 6 or 12 dB, where the two sources fight for the same frequencies.
- **KEYBOARD** draws a piano under the frequency scale; bands snap to notes while you drag (hold Shift to move freely).

10 TOOLS

CURVE DRAW

Press **DRAW** and draw the curve you want on the screen. MGEQ places the bells that follow it. The bands already in place are replaced (one undo brings them back).

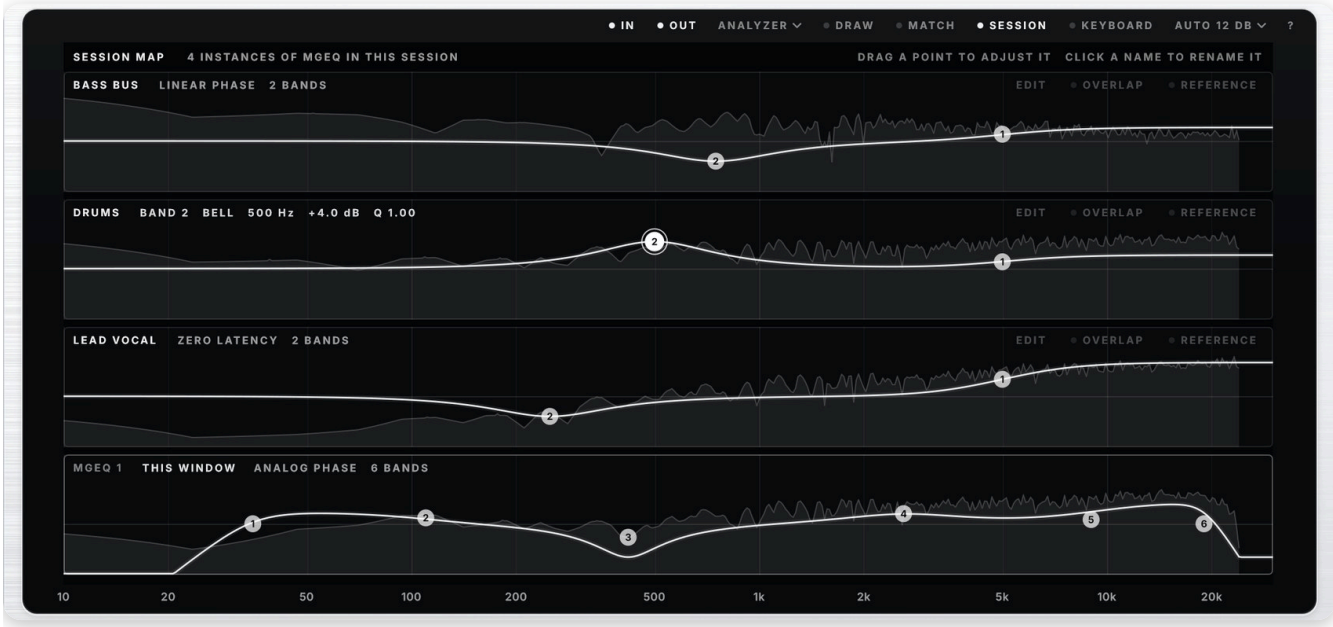
TONE MATCH



1. Press **MATCH** and choose the reference: the side chain, another MGEQ of the session, an audio file, or your own input captured earlier.
2. Press **LEARN** and play: MGEQ averages the spectra of your track and of the reference (the counters show the seconds learned). The bold dashed curve is the correction.
3. Set **DETAIL** (from broad strokes to fine resonances) and **AMOUNT**, then press **APPLY**: the bands that bring your track closer replace the bands in place, in one undo.

CAPTURE turns what MGEQ has learned of the input into the reference: learn another moment of the same song, then apply. **RESET** forgets what has been learned.

SESSION MAP



Press **SESSION**: every MGEQ of your session appears, one small screen each, in the order of your tracks, with its live spectrum, its curve and its points, on the same frequency scale. Adjust any of them right there, with the same gestures as the main screen; each change goes into that instance's own undo history (Ctrl+Z on the map undoes it there). **EDIT** opens an instance in this window (**BACK** returns), **OVERLAP** compares its spectrum with this one, **REFERENCE** makes it the Tone Match reference, and a click on a name renames it. Esc closes the map.

Names come from your tracks. Ableton Live does not tell plug-ins their track name, so MGEQ reads it from its window title: open each MGEQ's window once (Windows; on a Mac, give names by clicking them). Hosts that run each plug-in in its own process (Bitwig, Reaper in that mode) only show the instances of that process.

PRESETS, A/B AND UNDO

The preset menu holds 14 factory presets and your own: Save, Save As, Rename, Delete, Copy Settings and Paste Settings (as text, to share a setting), Save as Default for New Instances, Open Presets Folder. Your presets are `.mgeqpreset` files in `%APPDATA%\MG9 Audio\MGEQ\Presets` on Windows, `~/Library/MG9 Audio/MGEQ/Presets` on a Mac. A and B keep two settings in your session; undo goes back 64 steps (host automation is not recorded).

MIDI LEARN

Route a MIDI track to MGEQ, open the **MIDI** menu, choose a target, and move a knob of your controller. The targets follow the selected band, so one knob can shape any band; Previous Band, Next Band and Delete Band can be assigned too. Forget an Assignment, Clear All, Revert to Default and Save as Default manage the map. In Logic, an audio effect receives no MIDI, so MIDI Learn is not available there.

SIZE AND FULL SCREEN

The size menu (top right) offers Small, Medium and Large, a scale from 85 to 200 %, and **Full Screen** (F11): MGEQ fills the screen it is on. Esc or F11 leaves it.

11 SPECIFICATIONS, LICENSE AND SUPPORT

ITEM	VALUE
Formats	VST3 (Windows, macOS), Audio Unit (macOS), standalone application (Windows). 64-bit. Apple Silicon and Intel.
Channels	Mono, stereo, surround up to 9.1.6 (16 channels); side-chain input.
Sample rates	44.1 to 192 kHz.
Bands	24, ten shapes. Frequency 10 Hz to 30 kHz, gain ±30 dB, Q 0.025 to 40, slopes 1 to 96 dB/oct and brick wall.
Latency	Zero Latency: none. Analog Phase: about 1 ms. Linear Phase: 53 ms to 1.4 s. Focus adds 21 to 85 ms.
Automation	Every setting of every band, plus mode, character, depth, output, pan and bypass.
Undo	64 levels per instance, A/B, copy and paste as text.

LICENSE

MGEQ is free, and you may use it in your productions, commercial ones included. Please do not sell it or share the file elsewhere: link to the MG9 Audio page instead. It is provided as is, without warranty.

SUPPORT

News, updates and support: **patreon.com/c/MG9Audio** and **mg9records.com**.

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