RSL PARADOX

USER MANUAL / VERSION 1.0.5

Boost and cut at the same frequency

A six band dual curve equalizer. Every band carries a boost and a cut that work at once instead of cancelling, the classic passive low-end trick, and one SHAPE knob decides how the two curves sit against each other across all six bands. A valve and transformer stage finishes the signal the way the hardware would.

INPUT • L/R M/S • SIX BANDS • SHAPE • ANALOG • MIX • GAIN MATCH • OUTPUT

RENEGADE SOUND LABS

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01 / ORIENTATION

Start Here

SECTION	WHAT YOU WILL FIND
Interface overview	The faceplate at a glance, the header bar, and how the knobs, buttons and graph respond.
What RSL Paradox is	Why a boost and a cut on the same band do not cancel, and what the plug-in deliberately is not.
The six bands	FREQUENCY, BANDWIDTH, BOOST, ATTENUATE, band power, and SHELF / BELL on LOW and AIR.
Shape	The four stops, CLASSIC, FOCUS, TILT and HOLLOW, and everything between them.
The graph	Reading the boost, cut and net curves, and editing bands by dragging.
Channels	LINK, left / right and mid / side, and editing each channel on its own.
Analog mode, mix and output	The valve and transformer stage, DRIVE, MIX, EQ BYPASS, GAIN MATCH, the meters and power.
Presets and A / B	The factory library, your own presets, and the two compare slots.
Reference	Recipes, installing and activating, troubleshooting, specifications, parameter list and glossary.

Quick start

1. Insert RSL Paradox on a track, a bus or the mix bus. Load a factory preset close to the job, or Initialize to start flat.
2. Click a band name, LOW to AIR, to select it. Its range lights up on the graph and the readout above the graph names it.
3. Set FREQUENCY, then turn BOOST up. Now turn ATTENUATE up on the same band: the two do not cancel. On LOW, at the CLASSIC stop, you get weight underneath and a dip just above it.
4. Turn SHAPE, or click one of the four small curve icons beside it, to hear the same amounts arranged differently: CLASSIC, FOCUS, TILT or HOLLOW.
5. Switch GAIN MATCH on and compare with EQ BYPASS, so you judge the shape of the curve rather than the fact that it is louder.
6. Use the A / B button in the header bar to compare two complete settings.

BOOST AND CUT ARE NOT OPPOSITES HERE On an ordinary equalizer a boost and a cut at the same frequency cancel. On RSL Paradox they are two different curves around the same frequency, so turning both up shapes the band instead of flattening it. That is the whole idea of the plug-in.

ANALOG MODE IS ON BY DEFAULT A new instance runs through the valve and transformer stage. It is subtle at the default DRIVE of 60, and you can switch it off with the ANALOG MODE lever for a clean path.

02 / VISUAL TOUR

Interface Overview

RSL Paradox with the Every Band preset: the graph above, the six band strips below it, the SHAPE and channel controls along the bottom, input on the left and the output, analog and mix controls on the right.

AREA	WHAT IT IS
Header bar	Preset browser, A / B compare, revert, save, import and export, settings, and the power switch.
INPUT	INPUT gain, −24 to +24 dB, and a stereo LED meter with a peak readout.
Graph	The boost, cut and net curves of the channel you are editing, with a node for every band. Drag a node to edit it.
Band strips	LOW, LOW MID, MID, HIGH MID, HIGH and AIR. Each has a power switch, FREQUENCY, BANDWIDTH, BOOST and ATTENUATE.
Footer	SHAPE with its four stop icons, LINK, CHANNEL MODE and GAIN MATCH.
Analog bay	The valves and transformers at the lower left. They light with the signal while ANALOG MODE is on.
OUTPUT	OUTPUT gain, −24 to +24 dB, and a stereo LED meter with a peak

AREA	WHAT IT IS
	readout.
DRIVE / ANALOG MODE	How hard the analog stage is hit, from CLEAN to HOT, and the lever that switches the stage in and out. DRIVE glows hotter as you turn it up, from ember to white-hot.
MIX / EQ BYPASS	The blend of equalized and unequalized signal, and the lever that takes the curves out.

Working the controls

- Drag a knob up or down. While you hover or drag, the caption under INPUT, OUTPUT, DRIVE and MIX shows the value; the band strips show theirs in the window under each knob.
- Double-click a knob to return it to its default. BOOST and ATTENUATE return to 0, BANDWIDTH to its centre, FREQUENCY to the band's default frequency.
- Right-click any knob to type a value. Type "1.2k", "60 Hz" or "+3.5" and press Return; Escape cancels.
- Rest the pointer on a control for a tooltip that says what it does.
- Clicking anywhere on a band strip selects that band, so the graph and its readout follow you.

Window size and settings

RSL Paradox opens at 75 percent of its full 1200 x 870 size. The gear in the header bar opens the settings panel: Window size, from 50 to 150 percent in steps of 25; Interaction glow, which makes the curve light up briefly as you work on it; and Zero latency, described in section 09. The same panel shows the version and has rows for the website, this manual and your preset folder. If your host lets you resize plug-in windows, you can also drag the window between 50 and 200 percent; it keeps its proportions. The size and the glow setting are saved with the session.

02B / PRESETS, COMPARE AND POWER

The Header Bar

The preset pill with its arrows, then A / B, Revert, Save, Import / Export, Settings and Power.

The strip across the top is shared by every Renegade Sound Labs plug-in, so these controls mean the same thing wherever you meet them.

CONTROL	WHAT IT DOES
Preset pill	Shows the current preset. Click the name to browse the factory library by category, your own presets, and Save / Manage Presets. The arrows either side step through the whole list.
A / B	Switches between two complete settings. The letter shows which slot you are hearing; B lights in orange. See section 10.
Revert	Returns every control to the state the current preset was loaded in. Greyed out until something has been edited.
Save	Overwrites the current user preset. On a factory preset, or with nothing loaded, it asks for a name instead. Factory presets are never overwritten.
Import / Export	Import Preset File, Export Current Preset, and Show Preset Folder.

CONTROL	WHAT IT DOES
Settings	The gear. Window size, Interaction glow, Zero latency, the version, website, manual and preset folder.
Power	Takes RSL Paradox out of the path completely. Lit orange means it is processing. This is the bypass your host sees.

- A dim name means no preset is loaded, for instance a session restored without one.
- A bright name means that preset is loaded and unedited.
- An orange name with a dot in front means you have edited it since it loaded. Save to keep the change, or Revert to discard it.

POWER IS NEVER STORED IN A PRESET Recalling a preset or switching A / B cannot silently take the plug-in out of the path, or put it back in.

03 / TWO CURVES, ONE FREQUENCY

What RSL Paradox Is

On a classic passive program equalizer, the boost and the attenuation share a frequency switch but not a curve. Turn both up and they do not cancel: the low end lifts underneath while a dip opens just above it, tightening the bottom instead of simply making it bigger. Engineers have leaned on that trick for decades. RSL Paradox gives every one of its six bands that pair of curves, and makes the relationship between them a single control, SHAPE, shared by all six.

	BOOST	ATTENUATE (CUT)
Amount	0 to 15 dB, its own knob	0 to 15 dB, its own knob
Where it sits	Set by SHAPE: below, at or above the band frequency	Set by SHAPE: below, at or above the band frequency, usually somewhere else from the boost
Width	Set by SHAPE and the band's BANDWIDTH	Set by SHAPE and the band's BANDWIDTH
Colour on the panel	Amber	Blue

What the controls mean

- BOOST and ATTENUATE mean what they say. At the CLASSIC stop, BOOST is the height of the lift and ATTENUATE the depth of the cut, in dB.
- The two load each other on LOW and AIR at the CLASSIC stop, as they do in the passive circuit: with both up, the result is not the sum of two separate curves. That interaction is the sound.
- The graph draws exactly what the audio is doing, so if it looks right it is right.

What RSL Paradox is not

- Not a surgical equalizer. There are no notch filters, high-pass or low-pass filters, and no dynamic bands.
- Not a linear-phase equalizer. The curves shift phase the way analog filters do.
- Not a saturator. ANALOG MODE adds the colour of the circuit, never more than a hardware unit at its rated level would.

Where it sits

PRODUCT	JOB	WHERE
RSL Paradox	Tone shaping with paired boost and cut curves	Bass, drums, vocals, instruments, buses and the mix bus
RSL Dual Core Saturator	Colour and harmonic density	Anywhere, usually tracks and buses
RSL Bastion	Two-stage bus and mastering compression	Mix bus, or the master bus ahead of the final limiter
RSL Master	Finishing to a reference profile	Last insert on the master bus

04 / ONE STRIP PER BAND

The Six Bands

The six band strips. The selected band, MID here, has its name lit. LOW and AIR carry the SHELF / BELL switch.

BAND	FREQUENCY RANGE	DEFAULT	AT THE CLASSIC STOP
LOW	20 to 120 Hz	60 Hz	The passive low-frequency circuit (SHELF), or a bell pair (BELL)
LOW MID	100 to 500 Hz	250 Hz	A bell pair
MID	400 Hz to 2 kHz	700 Hz	A bell pair
HIGH MID	1 to 5 kHz	2.5 kHz	A bell pair
HIGH	3 to 12 kHz	6 kHz	A bell pair
AIR	10 to 20 kHz	14 kHz	The passive high-frequency circuit (SHELF), or a bell pair (BELL)

The ranges overlap, so two neighbouring bands can work in the same region. Every band starts switched on with BOOST and ATTENUATE at 0, which is flat.

Power The lit power button at the top left. Switches the band on or off. The band glides out rather than clicking.

Band name Click to select the band. The selected band's name is lit, and the graph and its readout follow it.

FREQUENCY The band's frequency, within its range. Both the boost and the cut follow it; SHAPE decides where each sits around it. Its white ring shows where it sits in the range. BOOST has an amber ring and ATTENUATE a blue one, so a band's amounts read at a glance, and a band that is switched off goes dark.

BANDWIDTH BROAD to NARROW. Default in the centre. Widens or tightens both curves of the band; on LOW and AIR at the CLASSIC stop it does a little more, described below.

BOOST 0 to 15 dB. Turn clockwise to add. Default 0.

ATTENUATE 0 to 15 dB. Turn clockwise to remove. Default 0. Independent of BOOST.

SHELF / BELL LOW and AIR only. Chooses the circuit or a bell pair at the CLASSIC stop. Dimmed at the other stops.

Shelf or bell, on LOW and AIR

LOW and AIR are the two bands the passive circuit has a section for, so on the CLASSIC stop they run that circuit when SHELF is lit, the default.

- LOW on SHELF: BOOST is a shelf that holds all the way down, and ATTENUATE is a shelf whose corner sits well above it. With both up you get weight underneath and a dip above, which is the low-end trick.
- AIR on SHELF: BOOST is a resonant peak at the frequency, and ATTENUATE is a shelf above it.
- BELL takes the band out of the circuit and makes it an ordinary pair of bells around the frequency, like the four bands between.

A shelf takes everything beyond it with it: a LOW cut on SHELF lowers everything below its corner, an AIR cut everything above. When you want to work on a region without touching the extremes, choose BELL. The switch only matters at the CLASSIC stop, which is why it dims elsewhere: the other stops are bells already.

Bandwidth

- On every bell, turning towards NARROW tightens both curves and turning towards BROAD widens them.
- On LOW at the CLASSIC stop on SHELF, BANDWIDTH sets how far above the boost the dip sits. The centre is the spacing of the original circuit; towards NARROW the dip moves closer in.
- On AIR at the CLASSIC stop on SHELF, BANDWIDTH is the width of the resonant peak. A narrow peak can rise further than a broad one, so when BOOST asks for more than the chosen width can give, the peak narrows by itself and the boost still delivers its dB.

THE FOUR BANDS BETWEEN LOW MID, MID, HIGH MID and HIGH have no circuit to switch away from, so they carry no SHELF / BELL switch. At the CLASSIC stop each is a bell boost under its frequency against a tighter bell cut above it.

05 / ONE KNOB, ALL SIX BANDS

Shape

The footer: the SHAPE knob and the name of the stop it is on, the four stop icons, LINK, CHANNEL MODE and GAIN MATCH.

SHAPE decides how every band's boost and cut relate to each other. It is one knob for all six bands, so it re-voices the whole equalizer at once while your amounts stay where they are. The name under SHAPE always shows the stop you are on, or the nearer of the two you are between with how far you are towards it, for example FOCUS 60%.

STOP	BOOST	CUT	WHAT IT SOUNDS LIKE
CLASSIC	Under the frequency	Above it, tighter	The passive circuit on LOW and AIR; the same idea as bells on the four bands between. Weight against clarity.
FOCUS	Narrow, centred	Wide, centred	A point of emphasis with its surroundings pulled back.
TILT	Above the frequency	Below it	With equal amounts, a gentle tilt around the frequency: brighter above, leaner below.
HOLLOW	Wide, centred	Narrow, centred	A broad lift with a notch in the middle of it. FOCUS turned inside out.

The stop icons

The four small curves beside the SHAPE caption jump straight to a stop: CLASSIC top left, FOCUS top right, TILT bottom left, HOLLOW bottom right. They are drawn from the real curves, and the one you are on, or nearest to, is lit.

Between the stops

SHAPE is continuous. Between two stops each band runs both shapes, sharing its amounts between them, so the curve moves smoothly as you turn the knob and never jumps. Some factory presets sit between stops on purpose. In the host the SHAPE value reads as the stop name at a stop, and as a percentage of the knob's travel in between.

TRY EVERY STOP With a few bands set, sweep SHAPE slowly from end to end while the music plays. The same six pairs of amounts give four quite different equalizers, and the in-between positions are often the right answer.

06 / SEEING BOTH CURVES

The Graph

The graph with MID selected: the readout, the boost (amber), cut (blue) and net (white) curves, and a node for each band on the net curve.

ELEMENT	WHAT IT SHOWS
Readout	The selected band and its range, for example MID BAND / 400 - 2k Hz.
Channel line	The channel you are editing (LEFT + RIGHT LINKED, LEFT, RIGHT, MID + SIDE LINKED, MID or SIDE), the selected band's frequency, and the net response at that frequency in dB.
BOOST	The amber curve: every band's boost added together.
CUT	The blue curve: every band's cut added together.
NET	The white curve: what you actually hear from the equalizer.
Nodes	One per band, sitting on the net curve. The selected band's node is ringed and marked with a dashed line.
Shaded column	The selected band's frequency range.
Dashed curve	When the channels are unlinked, the net curve of the other channel. See section 07.

The graph runs from 20 Hz to 20 kHz and from −18 to +18 dB. When the curves need more room the scale expands, and its grid widens to match.

Editing on the graph

- Click near a node to select that band.
- Drag sideways to change the band's frequency, within its range.
- Grab above the zero line and drag up to add boost; grab below it and drag down to add cut.
- Hold Shift while dragging for fine adjustment.
- Double-click a node to set both its boost and its cut to 0.

07 / LINK, LEFT / RIGHT AND MID / SIDE

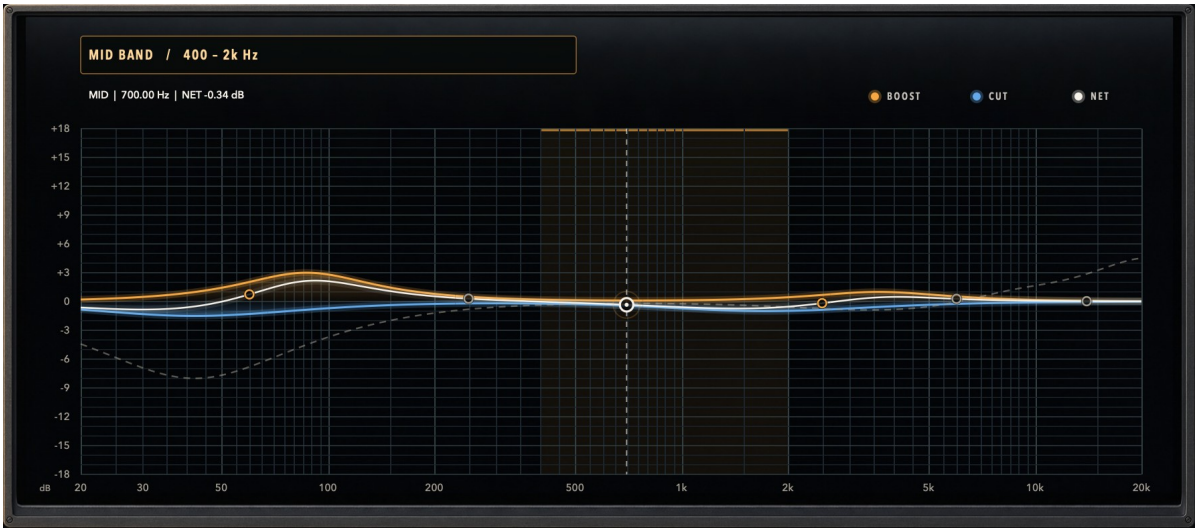
Channels

RSL Paradox has two complete sets of six bands, one per channel. In left / right mode they are the left and the right; in mid / side mode they are the mid (the centre of the image) and the side (its width). Usually the two are linked and you edit one set for both.

CHANNEL MODE in mid / side, unlinked, editing the MID. The first three buttons pick the channel, the last two the domain.

CONTROL	WHAT IT DOES
L/R	Left / right processing. The default.
M/S	Mid / side processing. The channel buttons then read M, = and S.
L or M	Unlinks the channels and shows the left, or the mid, for editing.
R or S	Unlinks the channels and shows the right, or the side, for editing.
=	Links the channels: both run the same bands. Click again to unlink.
LINK	The chain button in the footer. The same switch as =, lit amber when the channels are linked.

- Linked, both channels run the first channel's bands, so you hear and edit one equalizer.
- Unlinking copies the shared settings into the second channel first, so nothing changes at the moment the channels come apart. From there you can edit each on its own.
- Unlinked, the graph draws the channel you are not editing as a dashed curve behind the one you are, so in mid / side you can see the mid while you shape the side.
- Switching between L/R and M/S dips the output for a few milliseconds and brings it back, so the change never clicks.
- Mid / side needs a stereo track. On a mono track RSL Paradox processes the single channel with the first set of bands.



Wide Top, Mono Low, editing the MID. The dashed curve is the SIDE: a deep low cut and an open top end.

08 / THE LAST STAGE OF THE UNIT

Analog Mode, Mix and Output

OUTPUT −24 to +24 dB, after everything. Default 0.

OUTPUT METER Peak level per channel after everything, from −48 to 0 dBFS, with the held peak read out above it.

DRIVE CLEAN to HOT, 0 to 100. How hard the signal hits the analog stage. Default 60. Dimmed when ANALOG MODE is off.

ANALOG MODE The lever and its lamp. ON puts the valve and transformer stage in the path. Default ON.

MIX 0 to 100 percent. The equalized signal against the unequalized one. Default 100.

EQ BYPASS The lever and its lamp. ON takes the curves out while the analog stage stays in. Default OFF.

Analog mode

ANALOG MODE puts the rest of the hardware around the curves: an input transformer ahead of them, and after them a valve stage, an interstage transformer, a push-pull output valve stage and an output transformer. It also gives the two channels the small, fixed differences that two hand-built channels would have. With ANALOG MODE off the path is clean and both channels are identical.

- The input transformer comes before the curves, so it colours what you feed the unit. It is still working when the curves are cutting.
- The first valve stage leads with second harmonic at a working level; the push-pull stage brings in third harmonic as it is pushed harder.
- The transformers thicken the bottom first, and the very bottom octave arrives a fraction of a dB down, as it does on the hardware.
- The valves in the analog bay at the lower left glow with the signal while ANALOG MODE is on, and go dark when it is off or the plug-in is powered off.

Drive

DRIVE sets how hard the signal hits the analog stage and hands the level back afterwards, so it changes the colour and not the loudness. 0 is clean; 100 is the hardware at its rated operating level. INPUT also drives the stage: more input, more colour.

Mix

MIX blends the equalized signal with the signal before the equalizer. The unequalized side is taken after INPUT, so MIX compares like with like, and it is delay-compensated. At 0 you hear only the input gain. Lower MIX with a heavy curve and high DRIVE for parallel equalization: see the Parallel Weight preset.

EQ bypass

EQ BYPASS takes the curves out and leaves the analog stage in, so switching it tells you exactly what the equalizer is doing, separately from the colour of the circuit. To compare against the untouched input instead, use the Power switch in the header bar.

Gain match

GAIN MATCH, the button at the right of the footer, trims the output by the average of what the curves are doing across the audio band, so a boost is judged on its shape and not on being louder. It applies one trim to both channels, so it can never shift the stereo image; it follows MIX; and it stops at 24 dB. The button reads ON or OFF.

Input, output and meters

INPUT −24 to +24 dB, before the equalizer. Default 0. In ANALOG MODE more input drives the circuit harder.

INPUT METER Peak level per channel after INPUT, from −48 to 0 dBFS in 2 dB steps, labelled every 6 dB, with the held peak read out above it. INPUT and OUTPUT's knobs glow with the signal.

Clip hold A full-scale peak holds the top LED and turns the peak readout red for about two seconds. Click the meter to clear it.

Analog bay The valves and transformers. Lit by the input signal while ANALOG MODE is on.

SIX BANDS CAN ADD UP Each band can ask for 15 dB and the curves add together. Watch the output meter's peak readout after big boosts, and use OUTPUT, or GAIN MATCH, to bring the level back.

09 / DELAY AND TRACKING

Latency and Zero Latency

The curves and the analog stage run at twice the session's sample rate, so the high bands stay accurate right up to 20 kHz. That costs 46 samples of latency, about a millisecond, at every setting and every sample rate. RSL Paradox reports it to the host, and every host with delay compensation corrects for it automatically. Every path that skips the processing, MIX, EQ BYPASS and Power, is delayed to match, so switching never shifts the timing.

Zero latency, in the settings panel behind the gear, runs everything at the session rate instead, for tracking or playing live through RSL Paradox. Nothing is reported to the host. The curves are very slightly less exact, and AIR uses its BELL shape whatever its switch says, because the circuit's resonant peak cannot be followed accurately at the session rate. Switching the mode on or off dips the output briefly, like a change of channel mode.

ZERO LATENCY STAYS AS YOU SET IT Zero latency is saved with the session and switches with A / B, but presets never change it: loading any preset, factory or your own, leaves it as it was.

10 / STARTING POINTS

Presets and A / B

RSL Paradox ships 23 factory presets, grouped by category in the preset menu. A preset stores every control except Power and Zero latency, including SHAPE, the channel mode and link, ANALOG MODE and GAIN MATCH. Every factory preset leaves ANALOG MODE on and GAIN MATCH off, and any band a preset does not mention loads flat.

PRESET	CATEGORY	SHAPE	WHAT IT DOES
Initialize	General	CLASSIC	Every control at its default: flat, linked left / right, ANALOG MODE on at DRIVE 60.
Low End Trick	Bass	CLASSIC	LOW at 60 Hz, 7 dB boost against 5 dB cut. The classic move on its own.
Every Band	General	CLASSIC	A little boost and cut on all six bands, to hear what each one does.
Bass Weight and Bite	Bass	CLASSIC	Weight from LOW at 55 Hz, a LOW MID scoop at 250 Hz, and bite from MID at 900 Hz.
Kick Knock	Drums	Between CLASSIC and FOCUS	LOW at 65 Hz for the thump, a LOW MID cut at 380 Hz to clear the box, HIGH MID at 3.5 kHz for the beater.
Snare Focus	Drums	FOCUS	Body at 200 Hz and crack at 4.5 kHz, each a narrow lift on a wider scoop.
Vocal Presence	Vocals	TILT	Mud out at 280 Hz, presence at 3.2 kHz, air at 12.5 kHz.
Air Without Glare	Vocals	TILT	A cut at 5 kHz under a lift at 14 kHz: top end without harshness.
Hollow Guitars	Instruments	HOLLOW	Wide lifts with narrow notches at 350 Hz and 2.2 kHz.
Mix Bus Silk	Mix Bus	CLASSIC	Gentle low trick at 45 Hz, a touch of 180 Hz out, a little presence and AIR at 16 kHz; DRIVE 75.
Wide Top, Mono Low	Mid/Side	TILT	Mid / side, unlinked. The side loses its low end at 60 Hz and opens up at 6 and 14 kHz; the mid keeps its weight.
Parallel Weight	Drum Bus	CLASSIC	A heavy LOW and LOW MID curve at DRIVE 100, blended in with MIX at 45 percent.
808 Sub Foundation	808s	CLASSIC	LOW at 40 Hz, with BANDWIDTH turned towards BROAD so the dip sits further above the boost.
808 Small Speaker Bite	808s	Between CLASSIC and FOCUS	Harmonics at 180 Hz and 800 Hz so the 808 reads on small speakers; DRIVE 75.
Drum Bus Punch	Drum Bus	CLASSIC	LOW at 70 Hz and HIGH MID at 3

PRESET	CATEGORY	SHAPE	WHAT IT DOES
			kHz.
Drum Bus Open Top	Drum Bus	TILT	HIGH at 6.5 kHz and AIR at 14 kHz.
Music Bus Vocal Space	Music Bus	FOCUS	Cuts only, at 1 kHz and 2.5 kHz, to make room for a vocal.
Music Bus Warmth	Music Bus	CLASSIC	A little LOW and LOW MID weight, and a cut on HIGH at 7 kHz.
Acoustic Guitar Detail	Instruments	TILT	Boom out at 250 Hz, detail at 3 kHz and air at 12 kHz.
Keys Body and Air	Instruments	FOCUS	Body at 180 Hz, a cut at 650 Hz, air at 13.5 kHz.
Mid Body, Side Air	Mid/Side	CLASSIC	Mid / side, unlinked. Body and presence on the mid, air on the side.
Side Low Cleanup	Mid/Side	CLASSIC	Mid / side, unlinked. Cuts the side's low end at 65 and 200 Hz; the mid is untouched.
Side Smoothness	Mid/Side	CLASSIC	Mid / side, unlinked. Cuts on the side at 3.5 and 6.5 kHz to soften harsh width.

PRESETS ARE STARTING POINTS Every source is different. Treat the frequencies as the place to start listening, and set the amounts by ear.

Your own presets

Click the preset name in the header bar to browse. Initialize is at the top, the factory presets are grouped by category below it, your own are under User Presets, and Save / Manage Presets at the bottom leads to Save As, Delete, Show Preset Folder and Refresh List.

ACTION	HOW
Save over your preset	Press Save. On a factory preset it asks for a name instead, because factory presets are never overwritten.
Save under a new name	Save As, under Save / Manage Presets.
Delete	Delete, under Save / Manage Presets. Available for your own presets only.
Undo your edits	Revert, in the header bar. Restores the preset as it was loaded.
Find the files	Show Preset Folder, or the Preset Folder row in the settings panel.
Move presets between computers	Import / Export in the header bar, or copy the files from the preset folder.

Presets are .rgpreset files, shared across the Renegade Sound Labs line. Everything on the faceplate, both A / B slots, the window size and the glow setting are also saved with the host session.

A / B compare

The A / B button in the header bar holds two complete settings. Click it to switch: the setting you leave is stored and the other one is recalled. The first time you switch to B it starts as a copy of A, so you can change B and compare. Both slots are saved with the session. Power is not part of either slot.

11 / WAYS OF WORKING

Recipes

The low-end trick

1. Load Low End Trick, or select LOW at the CLASSIC stop with SHELF lit.
2. Set FREQUENCY to the fundamental of the kick or the bass, typically 40 to 80 Hz.
3. Raise BOOST until the bottom has the weight you want, then raise ATTENUATE until the boominess just above it clears.
4. Move BANDWIDTH towards NARROW to bring the dip closer to the boost, or towards BROAD to move it away.
5. Switch GAIN MATCH on and compare with EQ BYPASS.

Presence without harshness

Load Vocal Presence or Air Without Glare. At the TILT stop the boost sits above the band frequency and the cut below it, so a HIGH MID or HIGH band with both up brightens the top while pulling back the region that turns harsh. Adjust FREQUENCY to move the pivot.

Mid / side cleanup

Select M/S, then S to edit the side. Cut LOW or LOW MID on the side to centre the low end, or lift AIR on the side for width. The mid stays as it was, drawn dashed behind the side curve. Side Low Cleanup and Wide Top, Mono Low are ready-made versions.

Parallel weight

Build a heavy curve, raise DRIVE towards HOT, then bring MIX down until the weight sits under the original. Parallel Weight does this at MIX 45 percent.

Finding the right shape

Set your amounts first, then sweep SHAPE slowly from CLASSIC to HOLLOW while the music plays, and stop where it sounds right. The in-between positions are as valid as the stops.

A/B discipline

- Compare with GAIN MATCH on, so louder never wins by default.
- Use EQ BYPASS to hear the curves alone, and Power to hear the input untouched.
- Use the A / B slots to compare two whole approaches, not just two amounts.

12 / RSL HUB

Installing and Activating

RSL Paradox is installed and activated through RSL Hub, the free Renegade Sound Labs app for macOS and Windows. There are no licence keys.

1. Download RSL Hub from renegadesoundlabs.com and sign in with your Renegade Sound Labs account.
2. Install RSL Paradox from RSL Hub. Quit any open DAW first: hosts scan plug-ins at launch.
3. Signed in, RSL Hub activates RSL Paradox on that computer automatically.
4. Reopen the DAW, rescan plug-ins if it asks, and insert RSL Paradox. It is listed under Renegade Sound Labs.

- One account activates up to 4 computers. Manage them from RSL Hub or from your account page on the website.
- RSL Hub keeps the activation renewed in the background while it is running. If an activation ever needs renewing, the plug-in says so, and opening RSL Hub fixes it.
- If RSL Paradox is not activated, it is silent and shows a screen saying why, with Open RSL Hub and Check again. Once the Hub has activated the computer, the plug-in unlocks by itself.

Buying and All Access

Buy RSL Paradox outright, or get it with RSL All Access: every RSL plugin for $18 a month or $180 a year. All Access starts with a 14-day free trial, and no card is needed. During the trial RSL Paradox shows the days left in red in the header bar, beside the RSL logo, for example 7 DAYS LEFT, and LAST DAY OF YOUR TRIAL on the final day. When the trial ends the plug-in locks and offers Start your subscription.

Formats

FORMAT	macOS	WINDOWS
Audio Unit	/Library/Audio/Plug-Ins/Components/RSL Paradox.component	-
VST3	/Library/Audio/Plug-Ins/VST3/RSL Paradox.vst3	C:\Program Files\Common Files\VST3\RSL Paradox.vst3
AAX (Pro Tools)	/Library/Application Support/Avid/Audio/Plug-Ins/RSL Paradox.aaxplugin	-
Standalone	/Applications/RSL Paradox.app	C:\Program Files\Renegade Sound Labs\RSL Paradox\

REQUIREMENTS macOS 11 or later, Apple Silicon or Intel. Windows 10 or later, 64-bit. Mono or stereo tracks; mid / side needs stereo. The standalone app asks for microphone access so it can process live input.

Removing

On macOS, delete the bundles listed above. On Windows, use Settings > Apps > Installed apps. Sessions that use the plug-in will report it missing until it is reinstalled. Your own presets stay in the preset folder until you delete them.

13 / FAST DIAGNOSIS

Troubleshooting

SYMPTOM	CHECK
Plug-in does not appear	Make sure RSL Hub has installed it, restart the host, and force a full plug-in rescan.
Silent, with an activation screen	The computer is not activated. Sign in to RSL Hub, then press Check again. If it says your trial or access has ended, start or renew your subscription in the Hub.
Boost and cut seem to do nothing	The band's power button is off, or EQ BYPASS is on. Check that the band you are turning is the one selected on the graph.
Sound changes with every band flat	ANALOG MODE is on: the valve and transformer stage colours the signal even with the curves flat. Lower DRIVE, or switch ANALOG MODE off.
SHELF / BELL is dimmed	SHAPE is not at CLASSIC. The switch only applies there.
DRIVE is dimmed	ANALOG MODE is off.
Editing one side changes nothing on the other	The channels are unlinked. Click = or LINK to link them.
Output clips after boosting	Lower OUTPUT, switch GAIN MATCH on, or reduce the boosts. Click the meter to clear the clip hold.
AIR sounds different when tracking	Zero latency is on, and AIR uses its BELL shape in that mode. Switch Zero latency off for mixing.
Output is delayed	RSL Paradox reports 46 samples of latency. Make sure host delay compensation is on, or use Zero latency.
Window too small or too large	Gear, Window size.

Support information to include

- Operating system and computer model
- DAW and version
- Plug-in format
- Sample rate and buffer size
- Preset, SHAPE position and channel mode
- Exact steps required to reproduce the issue

Support: hello@renegadesoundlabs.com

14 / SPECIFICATION

Technical Reference

ITEM	SPECIFICATION
Product	RSL Paradox
Developer	Renegade Sound Labs
Manual version	1.0.5
Category	Dual curve equalizer
Bands	Six, each with independent boost and cut, 0 to 15 dB
Shapes	CLASSIC, FOCUS, TILT, HOLLOW, continuously variable between
Channel modes	Left / right or mid / side, linked or independent
Formats	macOS: Audio Unit, VST3, AAX (Pro Tools), Standalone. Windows: VST3, Standalone
Minimum system	macOS 11, Apple Silicon or Intel; Windows 10, 64-bit
Channels	Mono or stereo
Processing	Curves and analog stage at twice the session rate
Latency	46 samples at every sample rate (1.04 ms at 44.1 kHz), reported to the host; 0 with Zero latency
Interface	1200 x 870 points at 100 percent; 50 to 150 percent from the gear; opens at 75 percent
Presets	23 factory presets; user presets as .rgpreset files
Activation	RSL Hub, up to 4 computers per account
Website	https://renegadesoundlabs.com

Parameters as the host sees them

RSL Paradox has 76 automatable parameters. The band parameters exist once per channel: the prefix L/M is the left or mid channel, R/S the right or side. Linked, only the L/M set is in use.

PARAMETER	RANGE	DEFAULT	PANEL
Input	−24 to +24 dB	0 dB	INPUT
Output	−24 to +24 dB	0 dB	OUTPUT
Shape	0 to 100 % (CLASSIC, FOCUS, TILT, HOLLOW)	CLASSIC	SHAPE
Link	On / Off	On	LINK and =
Channel Mode	Left/Right / Mid/Side	Left/Right	L/R and M/S
Analog Mode	On / Off	On	ANALOG MODE

PARAMETER	RANGE	DEFAULT	PANEL
Drive	0 to 100 %	60 %	DRIVE
Mix	0 to 100 %	100 %	MIX
EQ Bypass	On / Off	Off	EQ BYPASS
Power Off	On / Off	Off	Power. Not stored in presets
Gain Match	On / Off	Off	GAIN MATCH
Zero Latency	On / Off	Off	Gear, Zero latency
L/M or R/S [band] On	On / Off	On	Band power button
L/M or R/S [band] Freq	The band's range	The band's default	FREQUENCY
L/M or R/S [band] Boost	0 to 15 dB	0 dB	BOOST
L/M or R/S [band] Cut	0 to 15 dB	0 dB	ATTENUATE
L/M or R/S [band] Bandwidth	0 to 100 %	50 %	BANDWIDTH, BROAD to NARROW
L/M or R/S Low Bell, Air Bell	On / Off	Off (SHELF)	SHELF / BELL

[band] is Low, Low Mid, Mid, High Mid, High or Air. The ranges and defaults of each band's frequency are in the table in section 04.

Glossary

TERM	MEANING
Boost	A lift in level around a frequency, in dB. Amber on the panel.
Attenuate, cut	A reduction in level around a frequency, in dB. Blue on the panel.
Net	What the boost and the cut add up to: the response you hear.
Shelf	A curve that lifts or lowers everything beyond a corner frequency by the same amount.
Bell	A curve that lifts or lowers a region around a centre frequency and leaves the rest alone.
Bandwidth	How wide a bell is. Broad affects more of the spectrum, narrow less.
Passive equalizer	An equalizer whose curves come from a network of coils, capacitors and resistors, followed by an amplifier to make up the level the network takes out.
Mid / side	The sum and the difference of left and right: the centre of the image and its width.
dBFS	Decibels relative to full scale, the loudest level a digital signal can hold.

DESIGN INTENT RSL Paradox is one idea, the boost and the cut working together instead of cancelling, given to every band and made into a single SHAPE control. Set the amounts by ear, choose the shape by ear, and judge the result at matched level.

RENEGADE SOUND LABS

RSL PARADOX

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