

\$ixty Thou\$and

Mastering & Restoration Suite - User Guide

B2BITZ (www.b2bitz.com) - plug-in version 1.0

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1. What is \$ixty Thou\$and?

\$ixty Thou\$and is a mastering and restoration plug-in in one window. It combines three things:

- **A 21-band "spectral" engine** - every one of 21 frequency bands (20 Hz to 20 kHz) can carry EQ, compression, stereo width, Haas delay, noise fill, transient shaping, reverb and saturation. You drive it with the big **VIBE** knob and its presets, with the twelve **ANALOG EQ** knobs, and directly band by band in the **BPROC** window. All three add up on the same 21 bands.
- **A chain of 13 processors** (the **PROCESSORS** panel on the right) - matching, resonance removal, multiband and M/S balance, transient tools, reverbs, saturation, compressors, the **AIR** cleaner for AI-generated (Suno) music, a flanger/phaser - in an order you can change by dragging.
- **MAX**, a loudness maximizer that is always the very last stage.

Several processors **learn** from your song: you play the densest part once, press LEARN, and they set themselves up for that material.

Signal flow

Input -> AIR FRAMES correction (only when a song file is loaded in AIR) -> the 21-band engine (VIBE + Analog EQ + BPROC) -> VIBE's 3D widening -> the PROCESSORS chain in the order shown -> AUTO GAIN -> TILT -> VOLUME -> SUB -> MAX -> VOL MATCH (listen-only) -> monitoring (STEREO / MID / SIDE / SWAP) -> output.

2. Installation

\$ixty Thou\$and is a **VST3 plug-in for Windows (64-bit)**.

1. Download and run **SixtyThousand_Setup.msi**.
2. The installer puts the plug-in in the standard folder C:\Program Files\Common Files\VST3, where every VST3 host finds it.
3. Start your DAW and rescan plug-ins if it doesn't show up right away.
4. Insert "Sixty Thousand" on your master bus (or on a stem you are mastering).

To update, simply run the newer installer - it replaces the old version. Your sessions, presets and license are kept.

3. Licensing

Without a license the plug-in is fully functional, but about every 17 seconds it plays a short, audible click, so it can be evaluated but not used on a finished master. BYPASS does not remove the click.

After purchasing a Full License (PURCHASE button at the bottom of the left panel, or www.b2bitz.com) you receive by email the address the license is registered to and a license code. To unlock:

1. Click **LICENSE** (top left).
2. Enter the email address and paste the code exactly as received.
3. Click **UNLOCK**. The window confirms "Unlocked - thank you!" and later shows "Registered to: your

email".

The license is stored on your computer and unlocks every instance and every project on that machine. A Full License is a one-time purchase for the computers you personally own and includes free updates of this major version.

4. The window at a glance

- **Left - VIBE panel:** presets, the big VIBE knob, BAND SHIFT, the kick detector, AUTO GAIN / VOL MATCH, TILT, VOLUME and SUB, and the main buttons (BYPASS, LICENSE, RESET, BPROC).
- **Middle - ANALOG EQ:** twelve broad "musical" EQ knobs with their own presets, and on top the four EQ model buttons (CLEAN / MASTER / RICH / PASSIVE).
- **Right - PROCESSORS:** the list of the processing chain on top, the page of the selected processor below, and the shared LEARN button.

Tips:

- Hover over any control to see a short explanation (tooltip).
- Double-click a knob to return it to its default value (on most knobs).
- The small **100%** button at the bottom left cycles the window size 100% / 125% / 150%. The choice is remembered for all instances.
- The keys **STEREO / MID / SIDE / SWAP** in the middle of the bottom row are for monitoring (section 5, Buttons).

5. The VIBE panel (left)

Presets and the VIBE knob

Use the arrows beside the preset name to browse the VIBE presets ("n / 9" shows the position): **Grand Spectrum, Claude Polish, Claude Warm Analog, Claude Club Punch, Claude Wide Cinematic, Claude Vocal Forward, Claude Vintage Tape, Claude Deep Dark, Claude Rock Energy.**

The **VIBE knob** works in two halves:

- **0 - 50%:** fades in the selected preset's 21-band recipe (EQ, compression, width, Haas, reverb...). At 50% the preset plays at its full, intended strength - turning further does not make the preset stronger.
- **0 - 100%:** over the whole range the knob also adds **3D widening** - a spatial M/S treatment that opens up the middle of the stereo image. Above 50% its built-in width limiter is gradually released, so the image gets wider and more open.

Grand Spectrum is the neutral starting preset: it carries no band recipe, so the knob only controls the 3D widening. A new instance starts with the knob at 0 (no effect).

Each VIBE preset remembers its own knob position, so you can switch between presets and come back to the same setting.

The ring around the knob shows the shape of the current sound across the 21 bands, with a softer glow that moves with the compression happening right now.

BAND SHIFT BOTTOM / TOP

The two knobs left and right of the VIBE knob move the whole 21-band grid (they are not filters):

- **BOTTOM** moves the lowest band: left down to about 13 Hz, right up to 30 Hz (centre = 20 Hz).
- **TOP** moves the highest band: left down to about 17 kHz, right up to 23 kHz (centre = 20 kHz).

Turn both the same way to shift the whole spectrum, apart to stretch it, towards each other to squeeze it. Presets, Analog EQ and BPROC keep their band assignments and simply play higher or lower. The frequencies shown in the BPROC window follow live.

Kick detector: KICK THR, LO-CUT, KICK FREQ

One shared kick detector drives everything that reacts to the beat: **REVERSE** verb, the **M/S PUMP**, the **HAAS PUMP** in the BPROC window and the **KICK** LED (under the BPROC button), which flashes on every detected hit.

- **KICK THR** - how loud the kick band must hit to count (lower = more hits).
- **KICK FREQ** - the detector listens only below this frequency (the kick band, default 100 Hz).
- **LO-CUT** - the detector ignores rumble below this frequency (left end = OFF).

Set it while watching the KICK LED: it should flash on every kick and stay dark between them.

AUTO GAIN, VOL MATCH and GAIN MATCH

- **AUTO GAIN** (on by default) continuously matches the processed loudness back to the input, so stronger settings don't simply sound "better" because they are louder. It measures loudness the way LUFS does (weighted like the ear), so a bass boost is only partly taken back - switch it off if you want the full level change. The **GAIN MATCH** readout shows how much it is correcting right now. TILT, VOLUME, SUB and MAX come after it. It remembers the correction it learned, so playback and renders start straight at the matched level.
- **VOL MATCH** is listen-only: it turns the plug-in's final output (after MAX) down to the input's loudness so you judge the sound, not the level. **Switch it off before rendering.**

TILT, VOLUME and SUB

Three sliders at the bottom: **TILT** tilts the overall tone (dark <-> bright) and **VOLUME** trims the output level; double-click resets them to 0 dB. **SUB** adds a fat, dense low end: a bump of up to about +4.5 dB around 50 Hz (about +3 dB from 35 to 80 Hz) with a fast limiter on the sub band, so the bass gets fuller without its peaks jumping out. 0% = off (default), 100% = full effect, values in between blend it in. All three come after AUTO GAIN and before MAX - with MAX on, SUB's extra bass also takes part of the loudness, so judge it with VOL MATCH.

Buttons

- **BYPASS** - switches all processing off for A/B comparison (the delay stays the same, so the comparison is time-aligned).
- **RESET** - returns the VIBE knob (and every preset's remembered position), all Analog EQ knobs (including SHIFT/Q) and the whole BPROC window to flat. The PROCESSORS settings are not touched.
- **LICENSE** - the licensing window (section 3).

- **BPROC** - opens the 21-band window (section 7).
- **PURCHASE** - opens the purchase page in your browser.
- **STEREO / MID / SIDE / SWAP** (bottom row, middle) - monitoring of the plug-in's output: **STEREO** = normal (default), **MID** = only what both channels share, on both speakers, **SIDE** = only the difference between the channels (the stereo width), on both speakers, **SWAP** = left and right swapped. They also work with BYPASS. They change the real output, so a render made with MID, SIDE or SWAP on sounds that way - switch back to STEREO before rendering. The choice is not saved with the project (it always opens in STEREO).

6. The ANALOG EQ panel (middle)

Twelve knobs at 40, 80, 125, 250, 500, 1k, 2k, 4k, 6.5k, 8k, 10k and 14k Hz. Each knob is bipolar (centre = neutral) and, instead of a single bell, plays a whole musical move across the 21-band engine (EQ plus compression, width, Haas, reverb...) defined by the selected Analog EQ preset. Fully up and fully down are two different sounds of that preset.

Under every knob are two small knobs (drag to set, the value pops up; double-click = 0):

- **SHIFT** - moves everything that knob does down (left) or up (right), by up to one octave.
- **Q** - makes that knob's EQ wider (left) or narrower (right).

Presets (arrows beside the name): **Default, Claude Master Macro, Claude Trance EDM, Claude Club Techno, Claude Pop Gloss, Claude Rock Power, Claude HipHop Knock, Claude Fix Problems, Claude Fix Lifeless Mix.**

Every Analog EQ preset remembers its own knob positions and **all presets with turned knobs play together** - you can, for example, add a little "Fix Problems" under "Pop Gloss". RESET clears all of them.

EQ model: CLEAN / MASTER / RICH / PASSIVE

The four buttons at the top of the panel choose the model of the EQ itself - how every EQ bell of the 21-band engine is shaped and coloured. They change the sound, not the settings: the same VIBE, Analog EQ and BPROC moves are simply played by a different equalizer. The model applies to all EQ (VIBE, Analog EQ, BPROC EQ and EQ M / EQ S); the other band effects (compression, width, Haas, reverb...) are not affected.

- **CLEAN** - precise, neutral, symmetrical bells. The reference and the default.
- **MASTER** - mastering-console character: wide bells make gentle moves, narrow bells hit harder, and every move comes out roughly half as strong as with CLEAN. Adds a very slight analog colour (a touch of 3rd harmonic, a soft top-end roll-off). For subtle, polished final EQ.
- **RICH** - full, open and musical. Boosts get a broad, smooth skirt and add harmonics (2nd and 3rd) only to the frequencies you boost, so they sound fuller and more expensive; cuts stay clean.
- **PASSIVE** - the character of a passive (coil and capacitor) equalizer: each bell has a fixed width in hertz, so low-mid moves are very broad and smooth, upper-mid moves focused, and high boosts turn into a wide, soft "air". Completely clean, no added harmonics.

Switching the model changes the loudness a little (MASTER is the quietest) - compare the models with **VOL MATCH** on.

7. The BPROC window (21 bands, direct)

Click **BPROC** to open the band processor: 21 columns (one per band, frequency on top) with a live spectrum behind them. This is the most direct layer - use it to push one specific band when VIBE or Analog EQ got you most of the way.

Modes (buttons on top)

- **EQ** - stereo EQ per band; **EQ M / EQ S** - EQ of the Mid or the Side only. How the EQ sounds depends on the EQ model chosen in the Analog EQ panel (CLEAN / MASTER / RICH / PASSIVE).
- **COMP** - dynamic gain per band: up = the band is pulled down when it gets loud (ducking), down = it is pushed up (expansion).
- **WIDE** - stereo width per band.
- **HAAS** - a micro-delay between left and right per band. The **L** and **R** sliders set the delay times (1-30 ms); small values get more room on the slider and can be set in 0.1 ms steps below 10 ms. In HAAS mode a row of keys appears under the bars, one per band, each showing that band's L/R delays:
 - **Click a key** - the L and R sliders now show and set only that band. Click it again to go back to all bands. **Ctrl/Shift+click** adds or removes more bands. With no key active, the sliders set every band.
 - **P (PUMP)** - every kick lifts the band's Haas to the level of its bar, then it falls back to zero. P glows with the band's pump, and a yellow line on the bar shows the level the band is playing right now.
 - **R (release)** - how fast the pump falls back to zero (10 ms - 2 s, default 150 ms). Drag up/down (Shift = fine), double-click = default.
- **FILL** - adds programme-following noise to the band (positive = wide stereo, negative = mono).
- **TR** - transient designer: up = sharper attack, down = softer.
- **RV** - per-band reverb send (the time is set by the slider that appears on top).
- **SAT** - saturation: warm tube character below the BLEND frequency, brighter exciter above it.

Mode-specific settings (detector/target Q in COMP, release and drive in FILL, reverb time in RV, BLEND in SAT) appear as small sliders in the top bar.

Mouse

- **Hover** over a band to preview a value at the mouse height, **click** to commit it. Moving away without clicking returns the old value.
- Click near the **left or right edge** of a column to move that band's frequency down or up (unless the lock is on).
- **Right-drag** up/down sets the band's Q (in COMP modes right-drag from one band to another sets which band is ducked/boosted).
- **Double-click** a band to reset it.

Other buttons

- Reset arrow - resets the whole BPROC window (all modes and Q).

- **Lock** - frequencies locked, only amounts can change.
- **FLAT** - shows the spectrum relative to pink noise (-4.5 dB/oct), so a balanced mix looks flat.
- **±6 / ±20** - adjustment range: ±6 dB for mastering, ±20 dB for bigger moves.
- **Colour dots (right)** - analyzer colour theme.

The dashed **ghost bars** show the total each band really gets (VIBE + Analog EQ + this window); the hover tooltip shows it after the sign Σ (sum). In HAAS mode the total left/right delays are written at the top of each column.

8. The PROCESSORS panel - chain, LEARN

The chain list

The two rows at the top list the processors in signal order (1 -> 13, then MAX):

1 MATCH, 2 RESO, 3 MULTI, 4 M/S, 5 TRANS, 6 VERB, 7 CRUSH, 8 COMP, 9 NY, 10 GLUE, 11 REVERSE, 12 AIR, 13 SWEEP, then MAX.

- **Click the name** to open that processor's page.
- **Click the dot (LED)** to switch it on/off without opening it.
- **Drag a cell** to move the processor to another place in the chain. MAX is fixed - always last.

Every processor also has its own **ENABLE** button on its page. All processors start switched off.

LEARN

Several processors adapt to your song: **RESO, MATCH, MULTI, M/S, NY and GLUE**. A page that still needs it shows an orange "LEARN NEEDED" banner.

1. Play the densest, loudest part of the song (a chorus/drop).
2. Press **LEARN** (top right). It measures for up to 30 seconds.
3. Press **STOP** after 15-30 s (or let it stop by itself).

One LEARN sets all learning processors at once, whether they are switched on or not. Learn again when you load a different song. The status line on the graph shows what was found.

9. MATCH - tonal balance match

Gently tilts the song's overall tonal balance toward a target, using the spectrum measured by LEARN.

- **TARGET selector - NOISE** (a noise-colour slope set by the TARGET knob), a genre profile: **EDM, HIPHOP, POP, ROCK, TECHNO** (the average balance of reference songs of that genre), or **REFERENCE** - your own song(s).
- **LOAD** - pick one or more reference songs (WAV, AIFF, FLAC, MP3). They are analysed in the background (the selector shows ANALYSING...), then the target switches to **REFERENCE** by itself - "REF: song name", or "REF: N songs" for the average of several. No restart needed, and the reference is saved with your project. A new LOAD replaces it; files that can't be used are listed.
- **TARGET** - the slope for NOISE: -3 dB/oct = pink noise, -6 dB/oct = brown noise.

- **AMOUNT** - how much of the match is applied (default 50%).
- **MAX** - the largest boost or cut it may use.
- **LOW / HIGH** - below LOW and above HIGH the match fades out over one octave.
- **M/S** - matches Mid and Side separately (genre profiles only).
- **FINE** - a much more precise match: 29 points (every third of an octave) instead of 10 (one per octave), following the song's real spectrum instead of its smoothed outline. With FINE, **MAX** up to ± 12 dB makes it really copy the target. FINE works on the Mid / stereo; with M/S the Side keeps the normal match.
- **SMOOTH** (FINE only) - how fine the copied detail is: 1.0 oct = broad, 0.50 = default, 0.25 = most detailed. Very fine settings also copy what belongs to the reference songs themselves (bass notes, voices) - listen to the low end and the vocal.

The graph shows the correction curve (with FINE also the song's fine curve and the fine target).

10. RESO - resonance remover

LEARN finds up to 7 resonances (ringing, honky or harsh peaks) and notches them.

- Points 1-7 on the graph: **drag** a point to change its frequency and gain, **mouse wheel** changes its Q, **double-click** switches it on/off. Or select a point with the **POINT 1-7** buttons and use **FREQ / GAIN / Q** and **ON**.
- **DEPTH** - how much of every cut is applied (100% = each resonance flattened to the spectrum's trend).
- **DYNAMIC** - off = static cuts. On = each cut only works as far as its resonance sticks out at the moment (never deeper than GAIN x DEPTH) - transparent when nothing rings.

11. MULTI - multiband balance

Keeps each of five bands (LOW, LO-MID, MID, HI-MID, HIGH) near its normal share of the mix, learned by LEARN - like an automatic multiband that only acts when a band drifts.

- Graph: drag the **green line** of a band to set its normal share, drag the **blue bars** to move the crossovers, click the **dot** to switch a band on/off (off = left untouched).
- Per band: **RANGE** - the most it may be turned down; **UP** - the most it may be turned up when it falls below its share (OFF = cut only); **S** - solo the band.
- **DYNAMICS: MARGIN** (how far a band may drift before anything happens), **RATIO** (how strongly the drift is pulled back), **ATTACK**, **RELEASE**.
- **RESET** - back to how everything was right after the last LEARN (double-click = factory defaults).

12. M/S - stereo width per band

Moves the song's width profile (Side vs Mid, in five bands) toward targets, and can make the width breathe with the kick.

- Graph: drag the **green line** = target width per band, **blue bars** = crossovers, the **grey bars** (drag

their top edge) = the BAND REVERB level per band, **dot** = band on/off.

- Per band: **PUMP** (+ = narrower on the kick and wider between kicks, - = the opposite), **RELEASE** (how fast the width comes back after a kick), **S** (solo).
- **PUMP ATTACK** - how fast the width follows a kick (the kicks come from the shared kick detector, section 5).
- In a break (no kick for about two kick intervals) PUMP fades out by itself and the width returns to normal; the first kick after the break brings the pump straight back.
- **WIDTH: AMOUNT** (how far toward the green targets), **MAX** (largest side boost/cut per band), **LIMIT** (the Side is never louder than this relative to the Mid; OFF at the right end).
- **BAND REVERB: TIME, SPREAD** (0% = mono, 150% = extra wide), **FLANGER** and **PHASER** (the SWEEP page's effects on this reverb; their speed and depth come from the SWEEP page).
- **RESET** - back to the state after the last LEARN (double-click = factory defaults).

13. TRANS - upward compression and transients

- **COMP UP** - upward compressor ratio (1.0:1 = off ... 64:1): lifts quiet details by up to about +20 dB.
- **TRANSIENT** - boosts the attacks (0% = off, 100% = up to about +9 dB).
- **LIMIT** with **CEILING** - a limiter after both that flattens the lifted peaks to the ceiling.

The graph shows the last 3 seconds: green = COMP UP lift, orange = transient boost, red = limiter reduction.

14. VERB - glue reverb

A short, barely audible shared room that makes a mix sound like one space - felt more than heard.

- **MIX** (typically -30 to -22 dB), **SIZE, DECAY, DAMP** (top-end damping), **LOW CUT** (the low end below it stays dry), **WIDTH**.
- **FLANGER / PHASER AMOUNT** - the SWEEP page's effects on the reverb only (speed and depth from the SWEEP page).

The graph shows the early reflections (left up, right down) and the tail decay.

15. CRUSH - FET exciter

An analog-style FET stage that adds harmonics to two bands; both can run together.

- **HIMID** (around 1.2 kHz: presence, body of vocals and guitars) and **HIGH** (above about 1.2 kHz: air, edge, sparkle) switch the bands on.
- **DRIVE** - how hard the band hits the FET stage (more harmonics: 2nd first, then 3rd).
- **LEVEL** - how much of the crushed band is added back.
- **SOLO** - hear only what the crusher makes. Switch off before rendering.

16. COMP - feedback compressor

A smooth feedback compressor with a soft knee. Each channel works on its own, while the stereo difference also feeds the detector.

- **THRESH**, **ATTACK** (0 = instant), **RELEASE**, **RATIO** (1.1 = barely ... 2.4 = strongest).
- The graph shows the gain reduction of the last 3 seconds.

17. NY - New York parallel compression

A heavily squashed copy is mixed under the untouched mix - density and loudness without losing the transients.

- **THRESH** (set by LEARN), **RATIO**, **ATTACK**, **RELEASE**.
- **TARGET GR** - the average squash LEARN aims for; also the copy's make-up gain.
- **MIX** - how loud the squashed copy sits under the mix.
- **LOW CUT** - removes the copy's low end (no pumping bass); **AIR** - high-shelf lift on the copy (the classic NY sheen).

18. GLUE - bus compressor

A classic bus compressor that "glues" the mix together.

- **THRESH** and **MAKEUP** are set by LEARN so the average gain reduction equals **TARGET GR**.
- **RATIO**, **ATTACK** (slower lets the front of each hit through), **RELEASE**, **AUTO RELEASE** (program dependent; the RELEASE knob is then not used).
- **SC HPF** - the compressor ignores bass below this frequency.
- **MIX** - below 100% = parallel compression.

The graphs show the input/output curve and the gain reduction of the last 3 seconds.

19. REVERSE - reverse swell

A creative effect: after every kick a reverb swells up from silence toward the next beat - the opposite of a normal reverb tail. It uses the shared kick detector (section 5); the LED next to ENABLE flashes on every hit.

- **TEMPO** - the song's tempo (BPM); **LENGTH** - the swell length relative to the beat (0.85x = a little shorter than one beat).
- **CURVE** - how the swell rises (gradual or sudden at the end).
- **WET** - the reverb level; **DECAY** - its tail.
- **LPF / HPF** - shape the reverb's tone.

The display shows the swell after each hit.

20. AIR - cleaner for AI-generated music

AIR removes the typical artefacts of AI music generators (Suno and similar): metallic ringing, glassy tones, swishy highs, a too even, "frozen" top end and the frame artefacts of the generator. It has its own sub-tabs, presets and live readouts.

Presets and AUTO

- Built-in presets (marked *): **Cymbal ringing (B)**, **Anti-metal (B + noise)**, **Top breathing (B + anti-metal + expand)**, **Full Suno repair (frames + top breathing)**. Built-ins change only their own settings, on top of what you have. **SAVE** stores your own preset, **DEL** deletes it.
- **AUTO** - the fastest way: it applies Full Suno repair and adds what this song needs. It measures the whole song file (the one loaded in FRAMES; if none is loaded it asks for it): **TOP FILL 200%** for a dark top, **SIDE HF 100%** for a too wide top, **AIR REBUILD 50%** when the file has a codec cliff (e.g. an MP3). The result is shown next to the button and the reasons in its tooltip.

RING

A notch on the main metallic ring (typically 9.5-10.5 kHz).

- **FREQ, DEPTH, Q** of the notch; **MONITOR** - level of the band you hear with BAND SOLO.
- **FIND** - sets FREQ to the worst peak between 7.5 and 12.5 kHz in what is playing now. **SET FROM DE-RING** - takes the strongest ring the de-ringer has learned.
- **CASCADE** (two half-depth notches, gentler phase), **ADAPT DEPTH / ADAPT Q** (follow how strongly / how narrowly it rings right now), **BAND SOLO** (hear only the ring band - for tuning FREQ).

FILL

Refills the notched hole with music-following noise (Adaptive Noise) so the highs don't sound dull. **FILL 0%** = off (the exciter too).

- **FILL Q, BOOST, SAFE GAP** (gap left around the ring), **AIR GLOSS** (12-18 kHz band), **TRANSIENT, WIDTH, EXCITER; SOLO FILL** - hear only the fill.

HIGH

HIGH REPAIR: a gentle high shelf, a narrow shimmer notch and a final low-pass. Presets **SAFE, STRONG, ULTRA** (only the low-pass), **CUSTOM**; knobs **AMOUNT, SHELF FREQ/DEPTH, SHIMMER FREQ/DEPTH, SMOOTH; REMOVED SOLO** - hear what it takes away.

DE-RING

A spectral suppressor of narrow, standing resonances (**DE-RINGER** switches it on).

- **AMOUNT** (up to 100% = a peak flattened to the spectral envelope), **THRESHOLD** (how far a peak must stick out), **LOW / HIGH** (working range), **STATIONARITY** (how long a peak must stand still - higher is safer for cymbals), **MAX CUT, CONTOUR** (pulls the top above 10 kHz to the natural slope).
- **TOP FILL** - gives back, as smooth noise, the top-end energy the ring and cymbal cuts took (at most 3 dB over the background): 100% = what was taken, 200% = strong. The readout "fill +x dB" shows

it working.

- **M/S** (Mid and Side separately), **HD** (twice the frequency resolution), **HQ** (denser analysis, about 2x CPU), **DELTA** (hear only what is removed).

DE-RING+

Extras of the de-ringer (DE-RINGER must be on): **AIR REBUILD** (synthesises the missing top above a codec cliff, only when a cliff is detected) and **AIR WIDTH**, **DENOISE** (codec swish), **CYMBAL** (narrow metallic lines on cymbal tails), **ANTI-METAL** (glassy lines 2-12 kHz), **GLUE NOISE** (very quiet music-following hiss that masks glassiness), **NEUTRAL** (slow tonal-balance corrector - start at 20-40%), **RESYNTH** (experimental: smooth noise replaces part of harsh episodes).

DE-EXC

A dynamic attenuator of the top band above the **CROSSOVER** (**DE-EXCITER** switches it on): **AMOUNT**, **BREATH** (more top attenuation in quieter parts), **DENSITY** (static exciter signature), **MAX CUT**, **RELEASE**, **TRANSIENT** (ducks sharp HF spikes), **SIDE HF** (narrows a too wide top, only the Side), **EXPAND** (lets the top breathe between hits); **M/S**, **DELTA**.

HUMANIZE - a gentle random pitch drift of the whole mix (AI vocals are often too even): about 4-5 cents is clearly less mechanical. **SLOW** = tape-like drift, **FAST** = natural micro-jitter.

FRAMES

AI generators work in short frames and leave a trace of that grid (standing glassy tones and a "buzz" of the highs). FRAMES removes them from an analysed copy of the song:

1. Click **LOAD SONG FILE** and choose the same file that is playing (WAV, AIFF, FLAC or MP3). It is analysed in the background (a few seconds per minute of music).
2. Play the song - the plug-in finds the position automatically ("SYNC: locked").
3. **COMB** removes the standing grid tones, **BUZZ** undoes the frame buzz.

MONITOR (with +0 to +30 dB) plays only what FRAMES removes. The correction is applied at the plug-in input, only while AIR is on and the sync is locked. **CLEAR** unloads the file. The file is remembered with your session.

21. SWEEP - flanger and phaser

A tempo-synced flanger followed by a phaser. Both LFOs follow the song position (bar 1 = start), so renders always match what you heard.

- **ON** - switches the flanger / phaser on.
- **DRY/WET** (default 10%), **BARS** (how long one sweep takes, 4 bars ... 1/4 triplet), **SWEEP** (how far the LFO moves).

The same flanger and phaser can be added to the reverbs with the AMOUNT knobs on the VERB and M/S pages.

22. MAX - level maximizer

The fixed last stage (after AUTO GAIN, TILT and VOLUME). **Off by default.**

- **TARGET** - loudness the output is driven to (LUFS): -9 = loud, -11 = modern pop, -14 = streaming. The drive is automatic.
- **CEILING** - highest true peak allowed (-1 dBTP is safe for MP3/AAC).
- **MAX DRIVE** - the most the auto drive may add (stops quiet material being blown up).
- **MULTIBAND** - how much the 5-band stage trims each band's peaks before the limiter (0 = only the limiter); the five band knobs (LOW below 120 Hz, LO-MID 120-500 Hz, MID 500 Hz-2 kHz, HI-MID 2-7 kHz, HIGH above 7 kHz) set how hard each band is trimmed, scaled by MULTIBAND; the bars above them show the reduction.
- **SMOOTH / PUNCH** (5-band mode) - gentle 4:1 soft-knee trimming, or the punch limiter's algorithm per band.
- **DIRT** - a soft clipper after the limiter for punch with a little distortion: OFF at the left end, then its threshold 0 to -12 dB (lower = dirtier).
- **PUNCH / CLEAN** (limiter) - PUNCH is clean on held notes with a little grit on kick bass; CLEAN is a transparent true-peak brickwall.
- **MATCH A/B** - listen-only: turns the output back down to the input's loudness. Switch off before rendering.

The meters show DRIVE, LIMIT (gain reduction), LUFS and PEAK.

The auto drive remembers the level it learned (also when the project is saved): play the song - at least its loudest part - through the plug-in before rendering, and the render starts right at the target level. A song never played through the plug-in starts at 0 dB drive and rises to the target during the first seconds.

23. Latency

The plug-in reports one constant latency to your DAW (about 207 ms at 48 kHz), whether processors are on or off. Your DAW compensates for it automatically, so playback and renders stay in time, and switching processors never makes the DAW restart the plug-in (no dropouts). The delay is only noticeable when you play or record live through the plug-in - for that, bypass it in the DAW.

24. Quick start

1. Insert \$ixty Thou\$and on the master bus.
2. If the song is AI-generated: open **AIR**, enable it, press **AUTO** and choose the song file.
3. Play the densest part of the song, press **LEARN**, stop after 15-30 s.
4. Switch on **MATCH** (pick a genre or NOISE, or LOAD your own reference song) and **RESO**; add **MULTI** and **M/S** if the balance or width needs help.
5. Turn the **VIBE** knob up for 3D widening, or choose a VIBE preset (full strength at 50%).
6. Shape the tone with one or two **ANALOG EQ** knobs; fine-tune single bands in **BPROC**.
7. Add character to taste: **TRANS** for punch and detail, **CRUSH** for harmonics, **COMP / NY / GLUE** for density, **VERB** for glue.

8. Switch on **MAX**, set TARGET and CEILING.
9. Compare with **VOL MATCH** and **BYPASS** - and switch VOL MATCH, MATCH A/B and all SOLO buttons off and set the monitoring back to STEREO before rendering.

25. Troubleshooting

I hear a click every few seconds. That's the unlicensed-demo click - enter your license (section 3).

A page shows "LEARN NEEDED". Play the densest part of the song and press LEARN, then STOP.

The sound is quiet / only part of the mix plays. Check the SOLO buttons (MULTI, M/S, CRUSH, AIR BAND SOLO / SOLO FILL / REMOVED SOLO, DELTA, FRAMES MONITOR).

My render is quieter than what I heard. VOL MATCH or MAX's MATCH A/B was still on.

The start of my render is quieter (or louder) and then settles. Play the song through the plug-in once (at least the loudest part) before rendering - AUTO GAIN and MAX then start the render at the level they learned.

My render is mono, has no centre, or left and right are swapped. The monitoring key was left on MID, SIDE or SWAP - set it to STEREO.

Knobs don't change anything. Check BYPASS, the processor's ENABLE / LED in the chain list, and that VIBE presets need the knob above 0.

AIR FRAMES says "searching". Play the same file that was loaded; the sync locks after a few seconds of music.

The BPROC frequencies are not where I expect. Check BAND SHIFT BOTTOM / TOP and the band frequency moves in BPROC.

26. Support

Questions, feedback or a license problem? Visit www.b2bitz.com or reply to the email your license code came from.

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