RATTLE CAN COLLECTIVE

NILS

The vocal chain that mixes itself.

What NILS does, why it does it that way, and how. Written for artists, producers and engineers deciding whether NILS belongs on their vocals.
Version 2.6.13, November 2026.



Rattle Can Collective LLC, Washington, USA

rattlecancollective.com/nils

NILS in one press

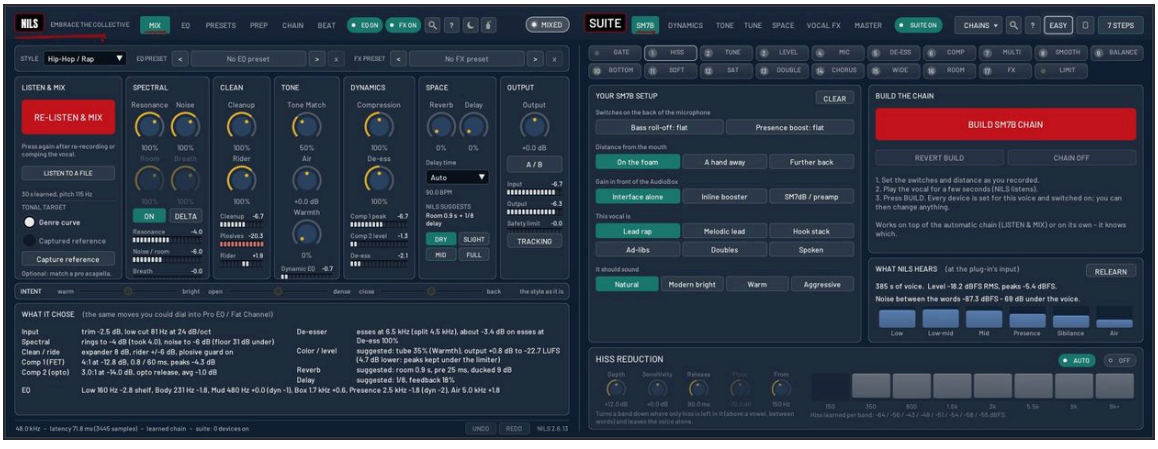
Put NILS on a vocal, press LISTEN & MIX and play thirty seconds. NILS measures that voice, designs a complete mixing chain for it, runs the chain, and writes out every move it made so you can change any of it.

What it is	A complete vocal production chain in one plugin: the automatic mix, a 19-device vocal suite, a cleaner for raw recordings, pitch correction, and mastering for the streaming services.
Who it's for	Rappers, singers and producers who record their own vocals, and engineers who want a fast, honest starting point. Tuned for hip-hop first; its five styles also cover pop and R&B, rock, worship and country, acoustic, and spoken word.
Where it runs	Windows and Mac as VST3, AU, CLAP and AAX (Pro Tools), and standalone on Akai MPC hardware with NILS for MPC, which comes with every serial.
What's included	One serial activates the plugin on Windows and Mac, NILS Prep (the stand-alone vocal prep app) and NILS for MPC. Activation is offline: no iLok, no account.

Why NILS exists

NILS was built by producer Lloyd Cris over a year of mixing Rattle Can Collective's own records. The problem it answers is simple: most artists recording at home can't afford a mix engineer or a rack of plugins, and most vocal plugins do one job each (EQ, compression or tuning), leaving the building of the chain to you.

> "I wanted one plugin that takes a vocal from raw to finished, masters the song, and shows every move it makes, so you're never guessing what it did."
>
> **Cristopher Johnson (Lloyd Cris), founder, Rattle Can Collective**



The full window in a CUSTOM color scheme: the automatic chain on the left, the SUITE on the right.

The rules NILS is built on

Nothing changes until you ask.	A fresh NILS passes your audio through untouched. The sound changes only when you press LISTEN & MIX, pick a preset or switch a device on, and every suite device starts switched off.
Design for this voice, not a preset.	Every setting of the automatic chain comes from measurements of your take: its level, dynamics, tone, sibilance, noise floor and room.
Show the work.	WHAT IT CHOSE lists every decision in plain numbers, the same moves you could dial into your own plugins. BEFORE → AFTER shows what changed on your take.
Everything stays yours.	Every knob scales what NILS designed (100 % is exactly its design), any stage can be taken over by hand, and 200 steps of undo cover every change.
Know when to leave a vocal alone.	2.6.13 A vocal that is already mixed gets gentle moves instead of a rebuild.

NEW IN 2.6.13 It knows a finished vocal

Not every vocal you put NILS on is raw. A pro acapella, a sample-pack vocal or your own finished stem is already mixed, and rebuilding it does more harm than good. LISTEN & MIX now recognizes a finished vocal and gives it gentle moves instead of a rebuild: it keeps its body, and its "s" sounds are not pushed brighter. A raw take still gets the full treatment. Songs mixed in earlier versions sound exactly as they did until you press LISTEN & MIX again.



The MIX page after a listen: the chain as cards in the order the signal meets them, INTENT underneath, and WHAT IT CHOSE across the bottom.

Five styles from one listen

Every listen builds the chain for all five styles (Hip-Hop / Rap, Pop / R&B, Rock / Worship / Country, Acoustic / Singer-Songwriter and Spoken Word / Podcast), each with its own tone curve, so changing style is instant.

Aim it where you want it

INTENT leans the mix warm or bright, open or dense, close or back, and NILS fits the whole chain again to your lean. **Captured reference** aims the EQ at a professional acapella's tone and dynamics instead of the style curve.

How LISTEN & MIX works

LISTEN & MIX does what an engineer does first with a new vocal: listen closely, find the problems, then build a chain that fixes them without flattening the performance.

LISTEN	MEASURE	DESIGN	RUN	SHOW
Thirty seconds of voice, live or from a file. Only singing or rapping counts.	Level, dynamics, tone, sibilance, noise, hum, the room, breaths, clicks, clipping and pitch.	A full chain for every style, all from the same listen.	The chain plays live on your track.	WHAT IT CHOSE writes out every decision; BEFORE → AFTER grades the result.

Stage	What it does	Why it's done this way
Input	Finds a take recorded into the red and redraws the flat tops of the clipped samples before anything else hears them.	Clipping can't be fixed by EQ or compression later, and every stage after it would make the distortion louder.
SPECTRAL	Turns down rings that stand out of the voice, the hiss and hum floor, the room's tail, breaths (to a set distance under the voice for each style) and mouth clicks. Each job runs only where NILS found the problem.	A home take carries its room and its noise, and the compressors that follow would raise them. Taking them out first, and only where measured, leaves the voice itself alone.
CLEAN	An expander holds noise down between words, notches sit on steady hum or whine, a plosive guard catches pops, and a rider brings quiet lines up and loud lines down.	Compressors behave best on an even, clean signal. Riding the level first means less squashing later.
TONE	An eight-band EQ fitted to your voice and aimed at the style's tone curve, with dynamic bands that dip only when their region builds up. Air adds a top shelf; Warmth adds 8x-oversampled saturation and an air exciter.	It corrects this voice, not a generic curve. Tone Match starts at 50 % for a natural result, and Warmth starts at zero, so you hear the clean vocal first and add color on purpose.
DYNAMICS	A fast FET-style compressor catches peaks, a slow opto-style compressor smooths the level, and the de-esser sits where your esses actually are.	Two gentle stages, the classic studio approach, sound more natural than one hard one. The de-esser starts natural and gentle; turn it up for a harsh take.
SPACE	A reverb and a tempo-synced delay designed from your delivery and ducked under the dry vocal: a fast verse gets a short room and a slap, a sustained hook a longer plate and a quarter note.	Space should fit the performance, not a preset. It starts dry so you choose the amount: DRY, SLIGHT, MID or FULL, one click each.
OUTPUT	Levels the vocal to –18 LUFS (lower if the take's peaks would come too close to the limiter), with a –1 dBFS true-peak safety limiter at the very end.	A known level makes every vocal sit the same way in your session. A / B plays the untouched vocal at the same loudness, so you judge the sound, not the volume.

You stay in charge

Automatic plugins earn trust by being open about what they did. NILS is automatic by default and yours whenever you want it.

WHAT IT CHOSE	Every decision in plain numbers: the input trim and low cut, what SPECTRAL took, both compressors (ratio, threshold, attack, release), where the esses are, the saturation, the reverb and delay, and every EQ band.
BEFORE → AFTER	The measures NILS' own test bench grades a mix by, on your take as it came in and as the chain leaves it: distance from the style curve, esses against the voice, mud, the strongest ring, the noise floor, phrase-to-phrase spread, plosives and loudness.
Knobs that scale the design	On the MIX page, 100 % is exactly what NILS designed. Turn Compression down, De-ess up or Warmth in, and the rest of the design holds.
Take over any stage	The CHAIN page opens the automatic chain stage by stage. Your EQ edits are stored as offsets on top of NILS' design, so a new listen keeps them.
A / B and PREV	Hear the untouched vocal at matched loudness, or the chain from the listen before this one, to compare two comps by ear.
Undo, CHAINS and FIND	200 steps of undo and redo. CHAINS saves every project's chain by itself, in a library you can reload anywhere. FIND (Ctrl+K) searches every control, preset, page and chapter.
TRACKING	Record through NILS at about 4 ms (at 48 kHz) instead of the mix's latency, then press it again to mix.

Two ways in

EASY is where a new NILS opens: one compact window with LISTEN, four cards with the controls most sessions touch, and WHAT IT CHOSE. ADVANCED opens the full window with every control, and the cards drive the same settings, so nothing is lost switching between them.

The 7 EASY STEPS take one vocal from raw to finished: LEVEL, EQ, MULTIBAND, COMPRESSION, DE-ESS, SATURATION and BLEND, plus optional effects. Each step says what NILS hears and what to do, measured against your whole song through the NILS on your master bus, for ten genres from Rap and Drill to R&B, Lo-Fi and Afrobeats.

Help is built in: a full manual in the plugin (F1 opens it at the page you're on), a tooltip on every control, and 25 tutorial videos installed with NILS.

The SUITE: 19 devices

Behind the automatic chain sits a complete vocal mixing rack. Every device starts switched off, and most of them set themselves from what they hear (AUTO).

SM7B

Builds a whole chain in one click for a Shure SM7B on a small interface. It knows the mic's low output and proximity effect, sets the gain from the measured level, and says when an inline booster would help.

HISS takes preamp hiss out from under the words while the voice sounds.

DYNAMICS

Gate for the pauses; **vocal compressor** with eight characters and 300 presets fitted to your voice; **multiband** in 3 to 16 bands; **leveler**, a vocal rider; a second **de-esser** that tells an "s" from a bright vowel; and a look-ahead true-peak **limiter**.

TONE

MIC for the SM7B's usual moves; **tone smoother**, a 26-band resonance suppressor; **vocal softener** for spiky onsets; **tone balance** over 16 bands; **saturate** (tube, tape and grit, 8x oversampled); and **bottom end cleanup**: weight for a thin vocal without the mud.

TUNE

Pitch correction from transparent to the hard-tune sound, plus transposition. It measures pitch every 5 ms and keeps the formants where they are, so it still sounds like you. FIND KEY finds the key for you. Notes already in tune pass untouched.

SPACE

Vocal doubler with up to four extra takes, **chorus**, **pitch widener**, and a **room reverb** with six rooms whose tail ducks while you sing or rap.

VOCAL FX

Seven effects locked to your song's tempo and bars: stutter, tape stop, pitch bend, auto high-pass, auto low-pass, auto pan and auto fade.

900 presets come with it: 300 EQ, 300 compressor and 300 FX rack presets. The EQ and FX rack presets combine, and the MIX knobs work on top of every preset.



TUNE: pitch correction that keeps the formants, with FIND KEY.



DYNAMICS: gate, compressor, multiband, leveler, de-esser and limiter.

Before and after the mix

A vocal doesn't start or end at the mix, so neither does NILS. It covers the road from a raw take to a master the streaming services play right.

PREP and NILS Prep

PREP turns a raw recording into a clean, even, mix-ready WAV before you mix it. It works on the whole take at once, which a live plugin can't: it cleans the pauses, evens out the phrases, rides the syllables, tames pops and esses, fixes what the mic and the room added, and sets a known loudness. Your original file is never changed. NILS Prep is the same tool as a stand-alone app, so a vocal can be prepared before it ever enters a DAW.



PREP: a raw take in, a mix-ready WAV out.

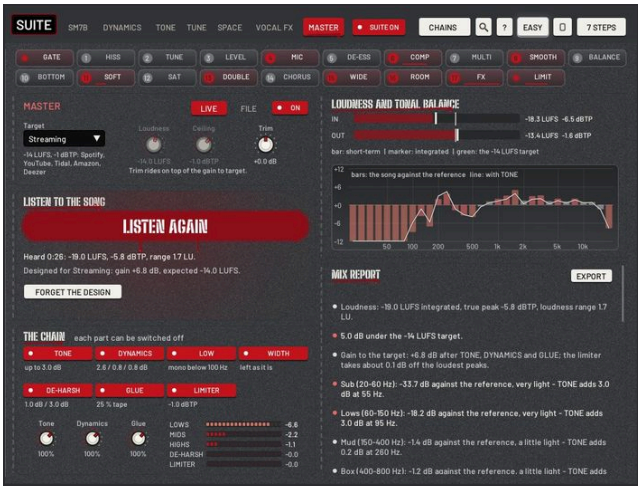
BEAT: the vocal against the beat

A plugin on the vocal track only hears the vocal. Route the beat into NILS' sidechain and IN THE MIX measures both, every 20 milliseconds, in sixteen bands from 80 Hz to 14.5 kHz, so you can see where the vocal and the beat fight.

MASTER and the MIX REPORT

A second NILS on the master bus listens to the whole song once, measures it the way a mastering engineer would, and designs a mastering chain for it: tone, dynamics, low end, width, glue, loudness and true peak. Pick a target (Streaming, Apple Music, Loud, Club, Spotify Loud or your own) and it masters to it live.

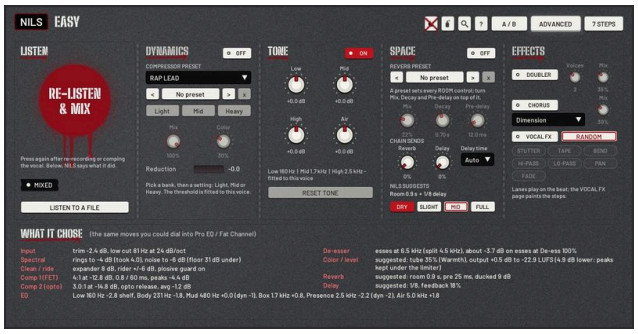
The **MIX REPORT** is the honest part. A plugin on the master bus can't move your faders, so NILS tells you what only a change in the mix can fix: one line per finding, with a green, amber or red light, and a line on how the vocal sits in the song. **MASTER PREP** does the same from a mix file and renders a mastered WAV.



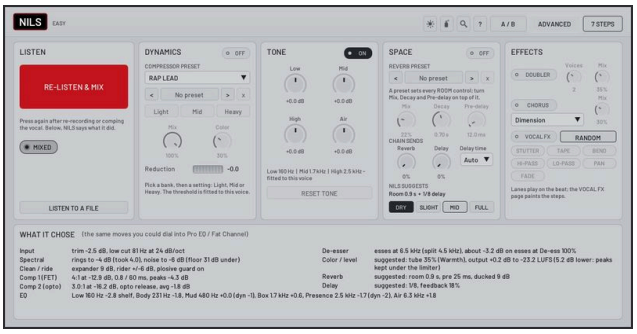
MASTER after listening to the song: the designed chain and the MIX REPORT.

Make it look like yours

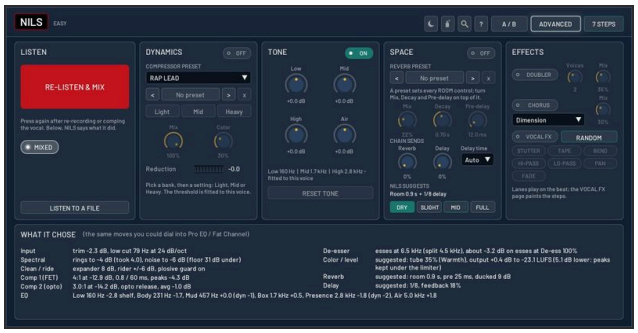
You stare at a plugin for hours. Most plugins come in one look. NILS gives you three, and in CUSTOM it hands you the color picker: no skin files, nothing to install.



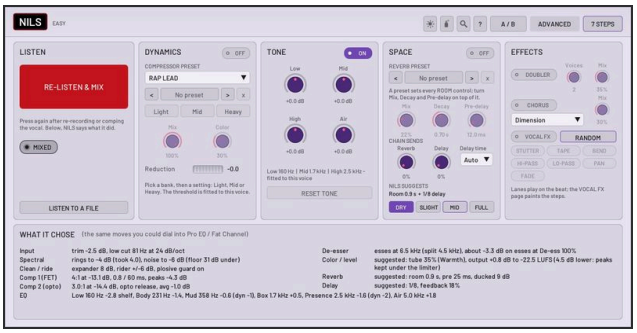
RATTLE CAN: the collective's wall, spray-can caps for knobs.



CALM: flat and quiet, in DARK or LIGHT.



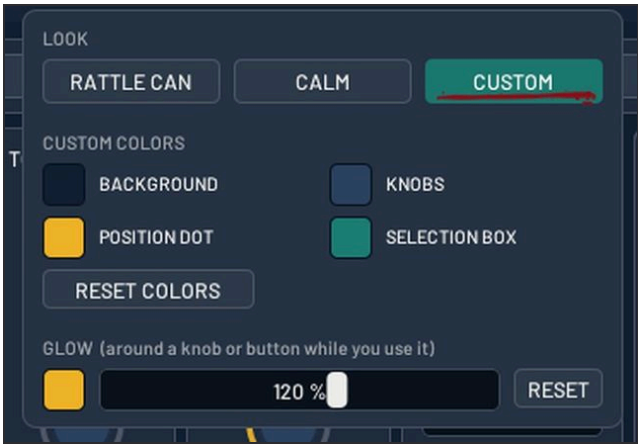
CUSTOM: navy, slate knobs, a gold dot, a teal selection box.



CUSTOM: lavender, violet knobs, a pink dot; the words turn dark by themselves.

NEW IN 2.6.13 CUSTOM, in your colors

Click the spray can in the header, choose CUSTOM, and pick four colors: the **background**, the **knobs**, the **position dot** on each knob, and the **selection box** (whatever is selected or on). Drag in the color wheel or type a hex code, and the window changes as you pick. Words follow the background on their own, light on a dark page and dark on a light one, so any color stays readable.



The LOOK menu in CUSTOM: four colors, then the glow's color and strength.

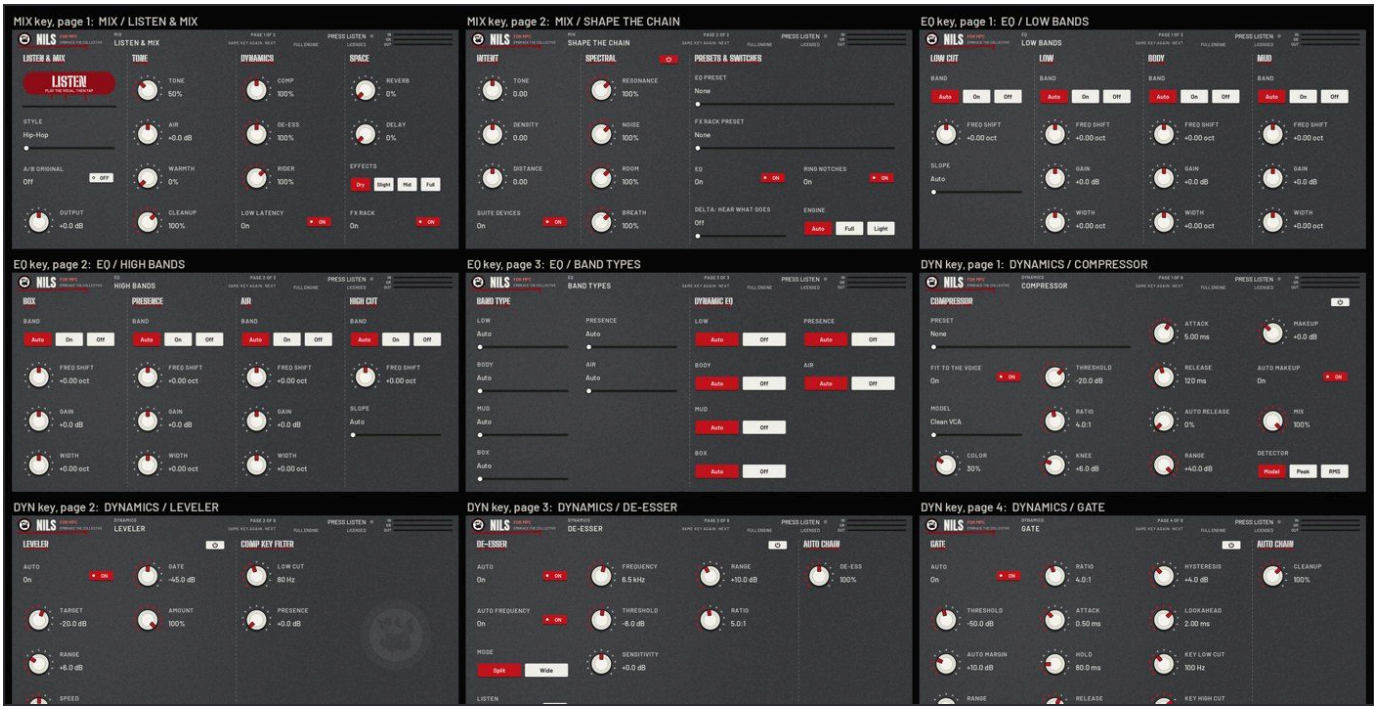
The glow

In every look, a knob or button glows while you turn or press it, so you always see what you're touching. It ships in the collective's deep red; set its color and strength (off to 200 %) in the same menu. Your look is remembered for every NILS window and changes nothing about the sound.

NILS for MPC

The whole NILS vocal chain runs on standalone Akai MPC hardware, with no laptop and no DAW. It comes with every NILS serial at no extra cost.

Press LISTEN, play the vocal, and NILS builds the chain for that voice on the MPC itself, then puts every part of it on the touch screen and the Q-Links: 29 pages on six keys covering MIX, EQ, dynamics, tone, space and effects, and the automatic chain. The MPC XL and MPC Live III run the full NILS; older MPCs and Force run its LIGHT engine, picked automatically. NILS for MPC needs MPC OS 3.10.1 or later and has its own free 72-hour trial.



Some of NILS for MPC's pages, as they appear on the MPC's screen.

What sets NILS apart

A chain built from your voice	Not a preset with your name on it: a full chain measured and designed from thirty seconds of your take, for every style at once.
It shows every move	WHAT IT CHOSE and BEFORE → AFTER put every decision and its effect in plain numbers, so NILS teaches as it works.
It respects a finished vocal	Already-mixed vocals get gentle moves, not a rebuild.
Built for home recordings	De-clipping, room and noise removal, hum notches, an SM7B chain builder and hiss reduction: the problems of real home takes, handled first.
The whole road in one serial	Prep, mix, pitch correction, effects and mastering, plus NILS Prep and NILS for MPC.
No subscription, no iLok, no account	One serial, activated offline, covers Windows, Mac, NILS Prep and the MPC.
Works where you work	Pro Tools (including the free Pro Tools Intro), Studio One, Logic and GarageBand, any VST3 or CLAP host, and the MPC.
Yours to look at	Three looks, your own colors, and a glow you can tune.

One NILS or a rack of separate plugins

Job	Built from separate plugins	With NILS
A starting point	Pick the plugins, load presets, tweak each by ear	**Press LISTEN & MIX and play thirty seconds**
Knowing what changed	Open each plugin and read its panel	**WHAT IT CHOSE lists every move in one place**
Raw-take cleanup	Separate repair and noise tools	**SPECTRAL in the chain, PREP and the NILS Prep app**
Pitch correction	A separate plugin	**TUNE, with FIND KEY**
Mastering	A separate plugin or a paid service	**MASTER, with a written MIX REPORT**
Hardware	Usually computer only	**Also runs standalone on Akai MPC**
Licensing	Varies by vendor: accounts, iLok or subscriptions	**One serial, offline, no account**
The look	Set by each vendor	**Three looks and your own colors**

The details

Windows	Windows 10 and 11 (64-bit): VST3, CLAP and AAX (Pro Tools). Code-signed installer.
Mac	macOS 10.15 or later (Apple silicon: macOS 11 or later): VST3, Audio Unit, CLAP and AAX, one universal build for Intel and Apple silicon. Signed and notarized by Apple.
Pro Tools	Intro, Artist, Studio and Ultimate load the AAX, on Windows and Mac.
Akai MPC	NILS for MPC, included: full engine on MPC XL and MPC Live III, LIGHT engine on older MPCs and Force. MPC OS 3.10.1 or later.
Latency	Compensated by your DAW while mixing. TRACKING mode answers in about 4 ms at 48 kHz for recording through NILS.
In the installer	The plugin, NILS Prep, the full manual, a quick start and 25 tutorial videos.
Free trial	72 hours with everything unlocked. No card, no sign-up, no internet connection needed.
Activation	One serial activates NILS on Windows and Mac, NILS Prep and NILS for MPC. Offline: no iLok, no online account.
Editions	Founder Edition: $99 for the first 300 copies sold, with every future NILS update included. Retail: $299, with bug fixes for its version. Prices as of November 2026; current pricing is on the product page.
Support	support@rattlecancollective.com

Hear it on your own voice

The best way to judge NILS is on a vocal you recorded. Download the free trial, put NILS on the track, press LISTEN & MIX and play thirty seconds.

rattlecancollective.com/nils

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