ULTIMATE VOCAL

Your voice. Its character. Your control.

Version 1.11.0 | User Guide



New: Breath Control below De-esser, whole-chain Retro Warmth, Rider / Level Comp and your own User presets.

For Audio Unit compatible hosts on Apple Silicon Macs running macOS 12 or later. Pitch correction is not included.

TRIAL, ACTIVATION AND PROCESSING STATUS

The Trial & Activation banner is always above the main interface. On first use it shows PROCESSING OFF / DRY BYPASS until you explicitly start the free 14-day trial or activate a purchased license. Click the banner to open the panel. No trial starts automatically. A valid trial or activated license enables processing; other license states pass latency-aligned original audio. Controls and presets are retained while processing is unavailable.

If changing a control has no audible effect, check this banner first, then the host bypass, the plug-in Bypass, the module ON button and Master mix. The output VU and peaks measure the final audio after the license gate, including dry bypass. Compression and rider activity are shown inactive while licensed processing is unavailable. Activating a license restores the saved processing settings without recreating the chain.

FIRST VOCAL

Insert ULTIMATE VOCAL as an audio effect on a vocal track. Set Input so the incoming recording has useful headroom, leave Master mix at 100% for an initial full-chain audition and compare at a similar Output level. Enable only the modules you need. The plug-in has a fixed 16-sample processing delay (0.33 ms at 48 kHz) from its Harmonics alignment. The audio interface, host buffer and other inserts add their own delay. There is no Tracking/Mix selector or pitch-correction stage in this version.

CHARACTER AND WORKFLOW

Retro - Tube now adds a softer top, a restrained low-mid body and gentle peak rounding across the processed chain, including the Space returns. It works even with Harmonics and the final limiter switched off. Modern - Transistor leaves this new whole-chain stage neutral and retains its existing transistor Harmonics and firmer compressor knee. These are original character models, not measured captures of named hardware. They do not change pitch or latency.

RETRO WARMTH

Open MASTER / LIMITER and use WARMTH. 65% is the new starting point. Increase it for a softer upper treble and more rounded high-level peaks; reduce it to keep more edge. Its processing is stereo-linked and is independent of the limiter ON switch. It retains its setting but has no effect in Modern. At 0%, the earlier Retro path is preserved. Master Mix blends this warmth with the original, so lower Mix also reduces its effect.

New plug-in instances and factory starts use 65%. Existing saved projects and user sounds from 1.9.1 or earlier load with Warmth at 0% to preserve their earlier sound. Click RETRO to adopt the new 65% starting point when the value is 0%, then adjust WARMTH to taste and save. Double-clicking the Warmth dial resets to the legacy 0%. Changing the host's circuit parameter alone does not overwrite a saved Warmth setting.

Under the hood: an original broad high shelf, a very small low-mid contour and a stereo-linked soft-knee envelope stage. At 65%, a quiet 10 kHz sine is approximately 1.9 dB lower at 48 kHz, while 1 kHz is essentially unchanged. Higher-level peaks receive gentle additional gain reduction; this is character, not transparent loudness matching. Harmonics remains the separate saturation module. The Tone EQ graph shows Tone EQ's response, not this later whole-chain contour. This is a designed voicing, not a physical tube measurement or automatic mastering system.

SIGNAL PATH

Input feeds the optional fixed 80 Hz Low Cut, then the vocal production chain. Tone EQ, Vox Control, De-esser with optional Breath Control, Resonance, Vocal Level and Harmonics form the reorderable serial section. Echo, Doubler, Reverb and Galaxy add parallel returns. Retro Warmth follows the serial modules and parallel returns. Master mix blends the processed chain against the latency-aligned original; Output follows this blend. Final limiter then Tape/Vinyl process the result. When Final limiter is enabled, an additional sample guard protects the selected sample ceiling after the media stage. Global Bypass returns the latency-aligned original. A host's own bypass and delay compensation are host functions.

PITCH CORRECTION AND OLDER PROJECTS

This release does not include pitch correction, the tuner, formant shifting or transposition. Place your preferred separate tuning plug-in before Ultimate Vocal if needed. Earlier Ultimate Vocal projects and saved sounds remain readable, but their pitch/mode fields are inactive and ignored. The downstream processing is retained; the old tuning sound is not reproduced. Bounce or preserve an earlier project with the development version if you need its original tuned performance. Original preset files are not rewritten. The DAW must refresh its delay compensation after updating the plug-in.

TONE EQ

Enable Tone EQ before shaping High pass, Low shelf, Body, Presence and Air. Remove unnecessary low-frequency energy before adding brightness. The detailed bell uses Dynamic frequency, Bell gain and Bell width; Dynamic depth and threshold make its reduction respond to the signal. Tone low pass can soften the upper end. Watch the reduction display and listen at equal level; more Air is not automatically more intelligibility.

VOX CONTROL

Compression threshold, Ratio, Attack and Release shape vocal dynamics. A higher ratio is firmer; a slower attack can preserve more of the initial sound. Makeup changes level after compression. Compression mix lets you blend the compressed contribution. Expander controls quieter passages; setting it too aggressively can remove word endings. Character and Vox ceiling are part of the dynamics stage. Match level before comparing Retro and Modern responses.

DE-ESSER

Tune De-ess frequency to the sibilance you want to control. Set Sensitivity and Amount while listening to the full phrase. Listen to sibilance auditions what is removed; turn this audition off before judging the complete vocal or exporting. Use reduction only where needed, rather than removing the singer's articulation.

BREATH CONTROL



Open DE-ESSER from the signal-flow row. Breath Control is the separate section below the sibilance controls, with its own illuminated ON switch. It works even when the De-esser itself is Off. Both live at the same movable serial stage; the route LED lights when either is active. Breath Control starts Off in new instances, factory sounds and older projects. Enable it deliberately on an isolated vocal.

Quick start: turn BREATH CONTROL on, set Reduction around 6-9 dB, and play a phrase with an audible inhalation in the gap. Press LISTEN REMOVED BREATHS. You should mainly hear the breath being attenuated. If words enter this audition, reduce Sensitivity or lower Max Level. Turn Listen off and compare the full phrase. Keep enough breath to preserve the performance.

Reduction is the maximum attenuation, 0-24 dB. The knob displays a negative dB cut; the adjacent meter shows the actual gain reduction. At 0 dB, the audio is unchanged. Max Level is the highest input RMS level allowed to qualify (-60 to -10 dBFS, starting at -30). Raise it for louder breaths; lower it to protect quiet singing. Detection listens after Input and the optional 80 Hz Low Cut, before compression, independent of module order. Thus this threshold refers to that signal, not the output VU.

Sensitivity adjusts the acceptance of breath-like noise and the confirmation time. Start at 50%. Higher values accept more events and respond sooner; lower values are more selective. Recovery (40-400 ms, starting at 120) controls the return from attenuation after the breath. Recognized periodic voice reopens quickly regardless of this setting to protect the next word. Detection itself is causal and takes time to confirm: the start of a breath can remain audible. No new waveform delay or host compensation is added; the plug-in remains at 16 samples.

LISTEN REMOVED BREATHS auditions the removed signal with output alignment, isolated from downstream colour and reverb; Output trim and the enabled final sample ceiling still apply. It also enables Breath Control and exits sibilance Solo. Selecting sibilance Solo exits breath Listen. Turn audition off before normal mixing or

export. These listen switches are saved with the sound, so check them after loading presets. Breath attenuation and its meter are inactive when the license is unavailable.

The original detector combines low level, broad spectral balance, weak periodicity, duration and a short voice-protection hold. Stereo channels share one attenuation so the image remains stable; opposite-polarity vocals do not cancel in detection. This is a conservative breath-like-event assistant, not AI source separation or guaranteed breath recognition. Whispered or breathy words, long soft consonants and background noise can resemble breaths. Review the removed signal and automate the ON switch or use manual edits for difficult passages. Use on a dry isolated vocal, not a complete mix.

RESONANCE

Resonance looks for local spectral prominence across analysis bands. Set its depth and sensitivity while listening to vowels and sustained notes. Full voice, Low mids and Presence focus the treatment. It is signal-dependent processing, not a promise to remove every unwanted room or microphone sound. Watch the band display and avoid flattening the performance unnecessarily.

VOCAL LEVEL: RIDER OR LEVEL COMP

Choose Rider for gentle automatic level following, or Level Comp for a more forward compressed vocal with automatic makeup. The shared ON switch enables the selected mode. Level Settings opens its larger view. Each mode retains its own controls when you switch; both are saved in projects and presets. This stage can be moved within the serial chain.

Rider: Target is the measured RMS level it works toward; Range limits gain movement in either direction. Speed controls the response time. Floor pauses riding below the useful voice. The activity display shows the applied lift/cut and history. It holds its previous gain below Floor rather than acting as a noise gate.

Level Comp: turn Compression up from 0 to 36 dB to lower the internal threshold and progressively increase the ratio and makeup together. Start around 6-12 dB, listen to full phrases, and use Output to match the listening level. The numeric setting is compression depth, not the actual gain reduction: the meter shows actual compression. Higher settings can make quiet phrases, breaths and background noise more prominent. The automatic makeup is a fixed depth-dependent curve, not loudness matching.

Gate is a gentle downward expander. -80 dB disables expansion. Raise it carefully to reduce quiet background sound without removing soft words. Its gain reduction is displayed separately from compression. Output trims the selected compressor path from -24 to +6 dB. With Compression above zero, a linked sample-peak guard limits this module to -1 dBFS. This guard has no look-ahead and is not a certified true-peak limiter; later modules can increase peaks again. At Compression 0, Gate Off and Output 0, Level Comp is transparent. Rider does not use this guard.

This is original Lynch processing inspired by simple vocal-compressor workflows. It does not contain Waves code and is not an exact Renaissance Vox emulation. Vox Control remains the separate detailed compressor with independent ratio, attack, release, makeup and parallel blend. Use Vocal Level alone for simplicity, or combine modest amounts deliberately.

INPUT LOW CUT 80 Hz
The header button activates a fixed 80 Hz high-pass filter at 12 dB/octave, before every sound module and independent of their order. It reduces rumble, plosives and unnecessary low-frequency energy before compression and saturation. It is independent of Tone EQ's variable high pass. Leave it off when a deep voice needs its full low end, or compare before committing. Switching is smoothed. It adds no delay. The input VU

remains a reading of the original input signal. At Master mix below 100%, the dry portion retains its original full bandwidth. Global Bypass also returns the original.

HARMONICS

Choose Preamp, Tape, Console, Overdrive, Distortion or Fuzz character, then set Drive. Harmonic mix blends the coloured contribution; Harmonics wet output changes only that contribution before blending. Harmonic tone and high/low cuts shape the wet path. The original input and output stages still affect the overall level. Use a low amount for subtle colour or deliberately push it for a character effect; compare the result in the track, not only in solo.

ECHO

Echo Amount feeds the return. Choose Clean or Tape, free milliseconds or Sync with a musical division, then set Feedback for repeats. Low/high cuts help the repeat sit behind the singer. Ducking reduces the return while the voice is present; Recovery sets how it comes back. Width changes stereo behaviour. Audition the gaps between phrases when setting the return, and check a mono mix.

DOUBLER

Amount adds the double, Width spreads it and Motion changes its small variations. It is a synthetic doubling treatment, not a second recorded take. Check intelligibility and mono compatibility when widening a lead vocal.

REVERB

Choose Plate, Chamber or Cloud, then set Amount, Decay and Predelay. Low/high cuts shape the returned space. Ducking and Recovery let the singer remain clear while the tail appears around phrases. Width is independent of decay. Long decays need careful return levels in a busy arrangement.

GALAXY

Galaxy is a separate diffuse echo-cloud return, with Echo time, long Tail, Diffusion and Motion. Set Amount conservatively first. Width reaches beyond ordinary stereo spread; check it in mono. Low/high cuts, damping, predelay and warmth shape its tone. Duck and Recovery control how it sits under the vocal. Pump, pump rate and shape add tempo-related movement. Galaxy sync changes time to host musical divisions; it does not change the song tempo.

FINAL LIMITER

Choose the available Tube or Transistor circuit, then set Drive, Ceiling and Release. Air and Width are final-stage controls. Reduction indicates active limiting; a lower ceiling and more drive can change the sound substantially. Treat the ceiling as sample-peak control, not a certified true-peak or streaming-loudness guarantee. Check the complete song and downstream processing before delivery.

TAPE / VINYL

The shared module switch enables the chosen Media mode. Tape has saturation, drive, tone, blend, output and 15/30 ips character choices. Vinyl offers 12-inch 45 RPM, LP 33 1/3 RPM and shellac 78 RPM character choices, with wear, crackle, surface noise, tone, blend, output and independent filtering. These are original algorithmic interpretations. Crackle and noise are intentional when enabled; reduce them for a clean delivery. Media processing follows the final limiter, so recheck final peaks after changing it.

PRESETS, STATE AND AUTOMATION

Save your DAW project to retain the complete AU instance. The plug-in's selector now contains Factory, Artist and User folders. The arrows browse the factory starts. Artist presets are original stylistic starting points, not artists' actual chains or endorsements. Module Presets change only that module; the input Low Cut is global and is not reset by a Vocal Level module preset.

SAVE opens the User folder by default and writes a .ultimatevocal sound file. Give it a descriptive name. It becomes available under User in the selector. LOAD opens the same folder and can also import compatible older sound files from elsewhere. USER opens the folder in Finder. Reopening the selector refreshes the file list, including files saved by another instance. Invalid and oversized files are not listed. Existing files are not migrated or rewritten automatically.

User folder on macOS: ~/Library/Audio/Presets/Lynch Audio Lab/Ultimate Vocal/User. In Finder, choose Go > Go to Folder and paste that path. Back up this folder with your projects. The tilde means your own home folder. Saving a file elsewhere does not copy it into User automatically.

Logic's plug-in setting menu stores host-format .aupreset files separately, using Logic's own save dialog. It is a different preset system: a .ultimatevocal file appears inside Ultimate Vocal, not automatically in Logic's header menu. Both preserve the sound settings. Old 129-address Ultimate Vocal sounds open with Rider selected and the new input Low Cut off. The level mode and input filter require 1.9.0 or later; Retro Warmth requires 1.10.0. Older versions cannot reproduce the new warm contour. Breath Control requires 1.11.0; older projects open with it Off.

Automation includes Vocal Level mode, compression, gate, output and the input Low Cut. Switches are smoothed; retain a short lead-in before a take so envelopes settle. A saved project preserves parameters, not the temporary meter history. Preserve the original dry recording when printing processing.

METERS AND GAIN STAGING

Input and output show the signal reaching the chain and its result. Module reduction and rider displays describe the corresponding processing, not the microphone preamp's analogue gain. If the original recording is clipped, lowering Input prevents additional overload but cannot reconstruct the lost waveform. Compare with Bypass at a similar listening level and use the mix context to judge colour and dynamics.

TROUBLESHOOTING

No effect: check module On, Master mix, Bypass, return amounts and trial/activation status.
Only sibilance: switch off the De-esser's Listen audition.
Too much monitoring delay: use the host's lower buffer option, review other inserts and the audio route. Hardware/direct monitoring is a separate interface function.
Need pitch correction: insert a separate pitch processor before Ultimate Vocal. Old pitch automation cannot activate hidden correction.
Long tails: lower Echo feedback, Galaxy tail and Reverb decay, and check sustained audio in the source.
Unexpected noise: inspect Vinyl crackle/noise and earlier recordings; disable optional character stages to identify the source.
A saved sound is missing: open the User folder with USER, check that the file ends in .ultimatevocal, and reopen the preset selector. Logic .aupreset files are managed separately by the host.

HOST CONTROL REFERENCE - ACTIVE AND LEGACY

The AU retains 141 stable parameter addresses for existing projects. Ten are inactive legacy compatibility fields; 131 control the current production chain. Names, ranges and initial values below describe this contract. Indexed host values refer to the choices displayed by the interface; they are not audio units. On/off values are 0/1. A loaded factory or user preset can intentionally differ from the initial values. Module order indexes a permutation of the six serial modules rather than a gain amount.

000 Input	-24 to 24 dB	initial 0
001 Output	-24 to 12 dB	initial 0
002 Master mix	0 to 100 %	initial 100
003 Bypass	0 to 1 (host value)	initial 0
004 Module order	0 to 719 (host value)	initial 0
005 Legacy - Perfect Pitch	0 to 1 (host value)	initial 0
006 Legacy - Pitch mode	0 to 2 (host value)	initial 0
007 Legacy - Key	0 to 11 (host value)	initial 0
008 Legacy - Scale	0 to 4 (host value)	initial 0
009 Legacy - Pitch correction	0 to 100 %	initial 100
010 Legacy - Retune	0 to 200 ms	initial 65
011 Legacy - Humanize	0 to 100 %	initial 65
012 Legacy - Formant	-4 to 4 st	initial 0
013 Legacy - Transpose	-7 to 7 st	initial 0
014 Tone EQ	0 to 1 (host value)	initial 0
015 High pass	20 to 350 Hz	initial 75
016 Low shelf	-12 to 12 dB	initial 0
017 Body	-12 to 12 dB	initial 0
018 Presence	-12 to 12 dB	initial 0

019 Air	-8 to 12 dB	initial 0
020 Dynamic frequency	150 to 14000 Hz	initial 2800
021 Bell gain	-12 to 12 dB	initial 0
022 Bell width	.3 to 8 (host value)	initial 1.4
023 Dynamic depth	0 to 12 dB	initial 0
024 Dynamic threshold	-60 to 0 dB	initial -26
025 Vox Control	0 to 1 (host value)	initial 0
026 Compression	-48 to 0 dB	initial -22
027 Ratio	1 to 12 :1	initial 3
028 Attack	.5 to 80 ms	initial 8
029 Release	30 to 1000 ms	initial 180
030 Expander	-80 to -20 dB	initial -80
031 Makeup	-12 to 18 dB	initial 0
032 Compression mix	0 to 100 %	initial 100
033 Dynamics character	0 to 100 %	initial 30
034 Vox ceiling	-18 to 0 dB	initial -1
035 De-esser	0 to 1 (host value)	initial 0
036 De-ess amount	0 to 100 %	initial 40
037 De-ess frequency	2500 to 11000 Hz	initial 6200
038 De-ess sensitivity	-30 to 0 dB	initial -13
039 Listen to sibilance	0 to 1 (host value)	initial 0
040 Resonance	0 to 1 (host value)	initial 0
041 Resonance depth	0 to 9 dB	initial 3
042 Resonance sensitivity	-24 to 0 dB	initial -9
043 Resonance focus	0 to 2 (host value)	initial 0
044 Vocal Level	0 to 1 (host value)	initial 0
045 Rider target	-36 to -9 dB	initial -18
046 Rider range	0 to 12 dB	initial 6
047 Rider response	100 to 2000 ms	initial 500
048 Rider noise floor	-80 to -30 dB	initial -55
049 Harmonics	0 to 1 (host value)	initial 0
050 Harmonic drive	0 to 100 %	initial 18
051 Drive character	0 to 5 (host value)	initial 0
052 Harmonic mix	0 to 100 %	initial 100
053 Harmonic tone	-100 to 100 %	initial 0

054 Echo	0 to 1 (host value)	initial 0
055 Echo Amount	0 to 100 %	initial 18
056 Echo time	30 to 2000 ms	initial 375
057 Echo feedback	0 to 80 %	initial 30
058 Echo high cut	800 to 16000 Hz	initial 6500
059 Echo low cut	20 to 1600 Hz	initial 180
060 Echo ducking	0 to 100 %	initial 60
061 Echo recovery	50 to 1800 ms	initial 320
062 Echo width	0 to 100 %	initial 80
063 Echo sync	0 to 1 (host value)	initial 1
064 Echo division	0 to 11 (host value)	initial 6
065 Echo character	0 to 1 (host value)	initial 0
066 Doubler	0 to 1 (host value)	initial 0
067 Double amount	0 to 100 %	initial 18
068 Double width	0 to 100 %	initial 80
069 Double motion	0 to 100 %	initial 30
070 Reverb	0 to 1 (host value)	initial 0
071 Reverb Amount	0 to 100 %	initial 18
072 Reverb decay	.3 to 12 s	initial 2.4
073 Predelay	0 to 180 ms	initial 28
074 Reverb high cut	1000 to 16000 Hz	initial 7500
075 Reverb low cut	20 to 1600 Hz	initial 200
076 Reverb ducking	0 to 100 %	initial 60
077 Reverb recovery	50 to 2000 ms	initial 420
078 Reverb width	0 to 150 %	initial 100
079 Reverb character	0 to 2 (host value)	initial 0
080 Final limiter	0 to 1 (host value)	initial 0
081 Final ceiling	-18 to 0 dB	initial -1
082 Final release	30 to 500 ms	initial 100
083 Final air	0 to 6 dB	initial 0
084 Final width	0 to 150 %	initial 100
085 Circuit mode	0 to 1 (host value)	initial 0
086 Galaxy	0 to 1 (host value)	initial 0
087 Galaxy Amount	0 to 100 %	initial 35
088 Galaxy echo time	60 to 2000 ms	initial 390

089 Galaxy tail	3 to 60 s	initial 48
090 Galaxy diffusion	0 to 100 %	initial 85
091 Galaxy motion	0 to 100 %	initial 35
092 Galaxy width	0 to 200 %	initial 150
093 Galaxy damping	800 to 14000 Hz	initial 6500
094 Galaxy Duck	0 to 200 %	initial 65
095 Galaxy recovery	50 to 2500 ms	initial 650
096 Galaxy predelay	0 to 200 ms	initial 24
097 Galaxy low cut	20 to 1200 Hz	initial 100
098 Galaxy sync	0 to 1 (host value)	initial 0
099 Galaxy division	0 to 11 (host value)	initial 5
100 Galaxy warmth	0 to 100 %	initial 18
101 Galaxy high cut	200 to 20000 Hz	initial 20000
102 Galaxy pump	0 to 100 %	initial 0
103 Galaxy pump rate	0 to 11 (host value)	initial 8
104 Galaxy pump shape	0 to 100 %	initial 50
105 Limiter circuit	0 to 2 (host value)	initial 2
106 Limiter drive	0 to 12 dB	initial 0
107 Tape / Vinyl	0 to 1 (host value)	initial 0
108 Tape drive	0 to 12 dB	initial 3
109 Tape tone	-100 to 100 %	initial 0
110 Tape blend	0 to 100 %	initial 100
111 Tape speed	0 to 1 (host value)	initial 1
112 Tape output	-12 to 6 dB	initial 0
113 Tape saturation	0 to 100 %	initial 75
114 Harmonics wet output	-18 to 6 dB	initial 0
115 Media mode	0 to 1 (host value)	initial 0
116 Record format	0 to 2 (host value)	initial 0
117 Record wear	0 to 100 %	initial 25
118 Record crackle	0 to 100 %	initial 0
119 Record surface noise	0 to 100 %	initial 0
120 Record tone	-100 to 100 %	initial 0
121 Record blend	0 to 100 %	initial 100
122 Record output	-18 to 6 dB	initial 0
123 Legacy - Processing mode	0 to 1 (host value)	initial 0

124 Vinyl low cut	20 to 2000 Hz	initial 20
125 Vinyl high cut	500 to 20000 Hz	initial 20000
126 Tone low pass	500 to 20000 Hz	initial 20000
127 Harmonics low cut	20 to 2000 Hz	initial 20
128 Harmonics high cut	500 to 20000 Hz	initial 20000
129 Vocal Level mode	0 Rider / 1 Level Comp	initial 0
130 Level compression	0 to 36 dB	initial 12
131 Level gate	-80 to -20 dB	initial -80 (Off)
132 Level output	-24 to +6 dB	initial 0
133 Input low cut 80 Hz	0 Off / 1 On	initial 0
134 Retro warmth	0 to 100%	legacy initial 0; new factory 65
135 Breath Control	0 Off / 1 On	initial 0
136 Breath reduction	0 to 24 dB cut	initial 9
137 Breath max level	-60 to -10 dBFS	initial -30
138 Breath sensitivity	0 to 100%	initial 50
139 Breath recovery	40 to 400 ms	initial 120
140 Listen to reduced breaths	0 Off / 1 On	initial 0

PLATFORM

Apple Silicon Mac, macOS 12 or later, AU-compatible host. This installer is an Audio Unit effect, not a standalone recording application.

TRIAL AND ACTIVATION

The full 14-day trial starts only when you choose Start trial. No subscription or automatic charge. A permanent purchase allows up to three computers, with online activation followed by offline use. Presets and project settings remain after expiry. See UltimateVocal-Trial-and-Activation-EN.txt for activation, deactivation and expiry behaviour.
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