



# Auburn Sounds Graillon 2

Version 2.7.0

Retuning Voice Changer Processor



# FOREWORD

Thank you for using AUBURN SOUNDS® GRAILLON.

Besides being **the best Free Pitch Correction in the market**, GRAILLON's goal has always been to lead your voice into uncharted territory.

GRAILLON 1 (2015) indeed introduced the novel use of **Pitch-Tracking Modulation (PTM)** applied to speech. This technique was eventually copied in well-known vocal products.

GRAILLON 2 is a more complete solution for voice changing, including the inevitable musical triumph that is **Pitch Correction**. It is widely acclaimed to bring an intuitive and easy voice tuning experience, with a classic sound. What distinguish GRAILLON here is that **it is built upside-down**: with a time-domain algorithm for pitch detection, and a spectral algorithm for shifting.

For maximum impact, combination of these features is key. Masculine modern trap vocals often features GRAILLON with its 3rd PTM slider engaged, in addition to Pitch Correction.

A clean, static, pitch-shifting control was added. This algorithm is tuned **especially for vocals**, and perform well with chords too. For some reason, putting GRAILLON on drums was also adopted by our users.

One of the distinguishing features of GRAILLON is its **low-CPU cost**: you can have dozens of instances if that's what you really want.

You will use GRAILLON to:

- **Get a classic, unmistakable Pitch Correction sound,**
- Make a voice growl,
- Shift the pitch of vocals neatly,
- Reinforce the bass of monophonic pitched sounds,
- Create robotic voices,
- Make a more masculine voice,
- and many other uses...

The FULL Edition of GRAILLON now features Pitch-Tracking Modulation with a new "Ring" mode. Additionally, a gain-independent bitcrusher has been added for more destruction.

**It is strongly recommended to purchase the FULL Edition in order to get the real experience of using GRAILLON 2.**

# INSTALLATION

*First, unzip the content of the AUBURN SOUNDS GRAILLON 2 FREE (or FULL) archive.*

## For macOS users

**Double-click on the `.pkg` installer in the `Mac/` directory.**

- *You may need to reboot your Mac computer to see the new Audio Unit in hosts.*
- *If GateKeeper complains about the Developer being unidentified, try again with Right Click / "Open".*

## For Windows users

**Double-click on the `.exe` installer in the `Windows/` directory.**

- *When using the VST 2.4 format, you may have to enter the right VST 2.4 directory in order for your DAW to find the plug-in.*

## For Linux users

**Open the `Linux/` directory.**

- **VST2:** Copy the LV2 plug-in ( `.lv2` directory) in your LV2 directory.
- **VST3:** Copy the VST2 plug-in `Auburn Sounds Graillon 2.so` in your VST2 directory.
- **LV2:** Copy the VST3 plug-in ( `.vst3` directory) in your VST3 directory.

# UPDATES

## Upgrade to FULL

Purchasing a FULL upgrade on the Auburn Sounds website, or its resellers, always leads to the <https://itch.io> website.

After purchasing or registering an external purchase here, you need to download a new ZIP and **install it on top of the existing FREE plug-in.**

*Your existing FREE sessions will keep working with the FULL product.*

## Getting newer versions

If you can't find links to your purchase, there are two possibilities:

- **Either you linked your purchase to an [itch.io](https://itch.io) account.**  
Go to this page and login: <https://itch.io/my-purchases>
- **Or you did *not* link your purchase to an [itch.io](https://itch.io) account.**  
Go to this page which can send you download links again:  
<https://itch.io/docs/buying/already-bought>

## Should I fear broken sessions?

Session compatibility is broken with each **major** version change.

*eg: Graillon 1.2 to Graillon 2.0*

Session compatibility is preserved with each **minor** version change.

*eg: Graillon 2.3 to 2.4*

# COMPATIBILITY

AUBURN SOUNDS GRAILLON 2 is available as a:

- VST2 plug-in
- VST3 plug-in
- Audio Unit plug-in
- AAX plug-in
- LV2 plug-in

For the following Operating Systems (OS):

- Windows 7 or newer,
- macOS 10.12 or newer,
- Ubuntu 18.04 or newer

Our plug-ins have been tested with a wide variety of Digital Audio Workstations hosts (DAW). However if you find out your DAW isn't well supported, please report a bug at [contact@auburnsounds.com](mailto:contact@auburnsounds.com) .

Supported sampling rates range from 11025 Hz to 192 kHz.

# CHANGELOG

## Version 2.7

- **Support for macOS Ventura.**
- **Support for AAX arm64 for native M1.**
- **NEW** User manual design.
- **NEW** Major/Minor scale menu.
- Fix annoying MIDI note inversion when same timestamp for note on and note off.
- The macOS installer should not need Rosetta anymore.
- Linux: fix animation going too fast in some distributions.
- Fix sluggish controls in Ableton + VST3.
- UI is sharper and using 17mb less RAM.
- Fix Big Sur UI performance.
- Fix macOS mousewheel being extreme with some mouses.
- Fix Ardour + Monterey crash.
- Many resizing fixes.
- First UI opening is a bit faster.

## Version 2.6

- **Resizable UI.** Drag the bottom-right corner to resize the plug-in.
- Fix crash when closing OBS Studio.
- Now comes with a Windows desinstaller.
- Fix latency reporting with LV2 .
- Fix lingering MIDI notes in some hosts.

## Version 2.5

- **Support for Apple Silicon and macOS 11.0 arm64.**  
The minimum macOS supported version is now 10.12.
- **Fixed Linux X11 crash with multiple instances.**  
Closing the second window while the first is opened would crash. This greatly enhances Linux stability.
- Fixed VST3 MIDI Input. It would not work, or crash, in earlier versions.
- Fixed VST3 latency reporting, which was only correct for 44100 Hz.
- Fixed installer when the "Program Files" directory is localized.

## Version 2.4

- Repair MIDI input that was accidentally disabled since two versions.

- Reduced CPU usage of the UI, especially macOS and Linux
- Fix Linux crashes and bugs (eg: when opening or closing the UI).
- Fix detection of VST3 by Bitwig on Linux.
- UI rendering is a bit more detailed.

## Version 2.3

- **New:** Linux x86\_64 support.
- **New:** Windows installer.
- Compatible with macOS 10.15 Catalina.
- Notarization.
- Added AUv2 Audio Component API, brings back GarageBand compatibility.
- Remove high CPU load on stop in AU, VST3, and AAX.
- Fix improper signing of macOS AAX binaries.

## Version 2.2

- **New:** Stereo support across the whole signal chain.
- Added VST3 format.
- Added Mac installer.
- Added Pro Tools bypass support.
- Visual feedback for MIDI input and pitch correction status.
- Add snap points for Pitch Shift.
- Fix wrong audio at startup.
- Fix compatibility with hosts: Open Broadcaster, Audio Hijack.
- Fix pitch-correction turning ugly in FLStudio after tweaking buffer size
- 2x less CPU usage from an open UI.
- **Removed:** 32-bit support on macOS.

## Version 2.1

- **New:** Right click on sliders in Frequency-shifting mode to invert the direction of the frequency shifting for this shifter.
- Add AAX Native and AAX AudioSuite support.
- Faster text drawing.
- Fixed MIDI input in Bitwig Studio.
- Fix crash in Vienna Ensemble Pro.
- Dropped support for Mac OS X 10.7.

## Version 2.0

- Add automatic voice tuner.

- Add pitch-shifter.
- Add bit-crusher.
- Add new pitch-tracking ring modulation.
- Add the ability to shift the base octave of the shifters.
- Because of pitch-shifting latency is not 0 anymore.
- Reworked complete UI.

## Version 1.2

- Fix crash in macOS Sierra upon instantiation, all hosts.
- Graillon now uses 2x less memory.

## Version 1.1

- Graillon is now freemium.
- Now available in Audio Unit format.
- Faster and sharper UI.
- Graillon now uses 30% less memory.
- Fix Cubase crashes in Windows and OS X.
- Fix Audition crash when processing a mono sample.
- Fix Ableton Live crash when scanning plugin.
- Fix Apple Logic crash: threads would stay attached.
- Fix Audacity for Mac crash: was a multi-threading bug.
- Fix Digital Performer bug: no processing in Audio Unit.
- Fix pass-through of key presses to the host.
- Fix restoring state in Ableton Live.
- Fix random crash at opening, waveform was badly initialized.
- Fix slowness and partial update when UI is reopened.
- Changed the JPEG loader, 25% faster first UI load.

## Version 1.0

- Initial release.



# PARAMETERS

## Detect

### **Left / Right**

Pitch detection is performed on a mono-signal, which is an user-defined sum of the left and right channel (default: left).

## Bit Crusher (FULL version only)

**Quantize** Rate of time quantization, expressed in number of samples.

**Bit Reduction** Reduces the number of bits in floating-point mantissa. Therefore, adapts to signal gain.

## Pitch-Shift

**Static Pitch Shift** Changes the pitch of input signal. The input doesn't have to be a voice, but the algorithm is specialized for this kind of input.

**Preserve Formants** Applies original spectral envelope to pitched signal.

## Pitch-Correction

**Enable** Correction Amount. Most useful values are 0 and 100%.

**Smooth** Makes Pitch Transitions faster or more natural. Set to minimum for a robotic effect.

**Snap Range** How far the Pitch is willing to be corrected to stick on an enabled note (default: jump up to 8 semitones). Reference Tunes reference pitch for note A6 (default: 440 Hz).

**Inertia** Reduces Pitch Correction jumps by making choosen notes "stick". This may change actual melody by stabilizing notes. Quite a critical setting.

## Pitch-Tracking Modulation (FULL version only)

**Modulation Selector** Chooses between Ring Modulation and Frequency-Shifting.

**Shifted Voices** Mixes modulated copies of the Pitch-Corrected input voice.

Modulation ratios are fixed fractions of the detected pitch: 1/4, 1/3, 1/2, 2/3.

**Octave** Shifts the fixed modulation ratios by an octave up or down.

## Output

**Lead Voice** How much the Pitch-Corrected, non-modulated input gets mixed.

**Low Cut Filter** Removes some bass energy before Pitch-Tracking Modulation. 12 dB/oct high-pass filter.

**Dry Mix** Mix input signal, delayed to match the Wet signal temporally.

**Output Level** Gain of the output section, after Dry Mix.

**Amount** This makes every other parameter go back to normal continuously.

# CREDITS

## Development, UI, UX, DSP

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## QOI (Quite OK Image format)

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