

THROAT GOAT

Formant Shifter

Take hold of it and drag. The singer gets bigger, on the same note.

WHAT IT IS

A voice is a buzz through a tube. The buzz sets the pitch and the tube's resonances set who it sounds like, so moving the resonances without moving the pitch changes the size of the singer while they go on singing the same note. One control, in semitones of throat.

There is no knob on the panel. You take hold of the throat itself and drag it open or shut, and double-click puts it back. The eyes narrow as it closes, the folds part with the level, the uvula sways behind them, and every eight seconds or so, with nothing playing at all, it swallows.

INSTALLING

The installer puts each format where your host expects to find it. If you are unpacking by hand, or a host cannot see the plug-in, these are the folders it looks in.

macOS — VST3	/Library/Audio/Plug-Ins/VST3
macOS — AU	/Library/Audio/Plug-Ins/Components
macOS — CLAP	/Library/Audio/Plug-Ins/CLAP
Windows — VST3	C:\Program Files\Common Files\VST3
Windows — CLAP	C:\Program Files\Common Files\CLAP
Linux — VST3	~/vst3
Linux — CLAP	~/clap

A host that scans at startup will not see a plug-in installed while it was running. Quit it fully and reopen — on macOS, Logic and GarageBand also re-run their own validation, which takes a moment the first time.

ACTIVATING

Your licence key arrives by email. Open the plug-in, click **DEMO** in the header beside the name, and paste the key in.

Until it is activated the plug-in runs in demo mode, which is fully functional except that it **drops three seconds of silence once a minute**. The silence sits at the end of each minute rather than the start, so a session never opens on what looks like a plug-in that failed to load. There is no time limit and no feature is withheld.

One key covers **three machines**. The plug-in remembers the activation, so it only asks once per machine. If you run out of seats — a rebuilt machine, a new laptop — write in and they can be freed.

No account is required to use the plug-in, and it does not need to reach the internet again after activating.

CONTROLS

Every control the plug-in exposes to your host, with its real range and default. Read straight out of the build, so this list is what the version you have actually has.

BYPASS

On / Off
default Off

Takes the plug-in out of the signal path. Your host may also have its own bypass; this one is the plug-in's, and it is the one that gets saved with the session and can be automated.

FORMANT

-12 to 12 st
default 0 st

How much bigger or smaller the throat is, in semitones. Nothing else: this plugin exists to get one thing right.

WHAT IT CAN'T DO

It shifts everything in the recording, not just the voice. Room tone, bleed and reverb move with the formants, and only the voice should. Past roughly a fifth in either direction it stops reading as a different-sized person and starts reading as a different-sized room, so a dry, close source gets much further than a live one. It also expects one voice: fed a chord or a full mix there is no single tract to model.

HOW IT WORKS

What it does	Shifts the formants of a voice without moving its pitch — the speaker changes size while singing the same note. Larger throat downward, smaller upward
Processing	A 2048-sample STFT at 75% overlap. The spectral envelope is estimated by cepstral liftering and applied as a real, positive gain per bin, so every phase is left exactly as it was found. It is a time-varying EQ rather than a resynthesis, and it does not smear transients
Pitch	Unchanged, by construction. A per-bin gain cannot move a partial sideways, so the harmonic series stays exactly where it arrived
Latency	2048 samples, reported to the host — about 43 ms at 48 kHz, constant at every setting. Your host will compensate on playback; it is too much to monitor through while tracking
Formats	VST3, AU and CLAP, plus a standalone application
Requirements	macOS 11 or later (Universal, Apple silicon and Intel), Windows 10 or later, and Linux. 64-bit only

Updates and licence

One licence key, no account required, valid on your machines. Updates are free for the life of the product

IF SOMETHING GOES WRONG

There is a **report door inside the plug-in**. Open the settings and choose to report a problem: it sends your host, operating system, sample rate and the plug-in version along with whatever you write, which is most of what anyone would otherwise have to ask you for.

Failing that, hello@mail.audiofreaks.io, or the support page at audiofreaks.io/support.

Two things worth checking first. If the plug-in does not appear, confirm the folder above and restart the host completely. If it is silent for three seconds every minute, it is not faulty — it is not activated.

WHAT'S IN THE DOWNLOAD

- VST3 / AU / CLAP + a standalone app
- A licence key, free, tied to a free account
- Lifetime updates

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Updates are free for the life of the product.