JellyComet

JellyPitchBtw manual

Pitch correction for one voice, steered by a jellyfish. One puck sets how fast a note is pulled in and how far off its note a voice may be and be left alone, and a display shows the voice as sung and as corrected.

Version 1.3.0. To install it, see the install steps.

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Getting started

Put JellyPitchBtw on a track with one voice on it: a lead vocal, a backing vocal, a solo instrument that plays one note at a time. Choose the song's key and scale at the top left, play the track, and watch the display: the blue line is the voice as sung, the bright line as it comes out, and each note it is pulled to sits behind them as a bar.

At the defaults (the puck at the bottom of the pad, half way across) a note is pulled in over 25 ms and every note is corrected. Drag the puck to the bottom left corner to hear the hard, robotic snap; up and to the right for a correction you barely notice.



The controls

From the top left of the window.

Control	Range	Default	What it does
Power switch (top right)	On / Off	On	Off, the voice passes through uncorrected, as late as the latency the plugin reports, so the track stays in time.
Key and scale	C to B; 13 scales	C, Chromatic	The notes a voice is pulled to. Chromatic is every note: plain tuning.
VOICE (beside the scale)	Low, Normal, High	Normal	Where the voice is looked for: Low 50 to 400 Hz, Normal 80 to 800 Hz, High 150 to 1500 Hz.
The pad: SPEED (left to right)	0 to 200 ms	25 ms	How fast a new note is pulled in. 0 ms snaps at once; 200 ms glides.
The pad: HUMANIZE (bottom to top)	0 to 100 %	0 %	How far off its note a voice may be and be left alone, up to 50 cents at 100 %. 0 % corrects every note.
STRENGTH (display)	0 to 100 %	100 %	How much of the correction is applied. 0 % leaves the pitch as sung.
DETUNE (display)	−100 to +100 cents	0 ct	Moves the corrected voice off the note, for a slightly flat or sharp double.
A4 (display)	415 to 466 Hz	440.0 Hz	The tuning reference, for a band or a recording tuned off 440.
Zoom (top right)	100 to 200 %	100 %	The window's size, kept with the project.

How to use it

The pad

The puck's two directions are the two things that make correction sound natural or not.

- **Left and right is SPEED:** how long a new note takes to be pulled in. Fast (left) is the stepping, robotic effect; slow (right) lets the singer's own slide into a note through.
- **Up and down is HUMANIZE:** how far off its note a voice may be and be left alone. At the bottom every note is corrected; higher up, notes already close stay as sung, so a held note keeps its life and only the ones that are clearly off get moved.

Press anywhere on the pad and the puck jumps there and follows you; press on the puck itself to take hold of it where it is. Shift makes a drag ten times finer, and a double-click puts the puck back to the defaults. The values under the pad move on their own: drag one up or down, use the wheel over it, right-click it to type a value, or double-click to reset it.

The note follows the pitch as it is sung: a wide vibrato that reaches past the half-way point swings to the next note and back, the sound of a hard-tuned vocal. Settings to start from:

For	SPEED	HUMANIZE
The hard, stepping effect	0 to 1 ms	0 %
A tight pop vocal	10 to 25 ms	0 to 20 %

For	SPEED	HUMANIZE
A natural fix you shouldn't hear	50 to 120 ms	20 to 40 %

VOICE

VOICE, beside the key and scale, says where to look for the voice. Click it for its list: Low, Normal and High, each with its range in Hz. Normal fits most singers; take Low for a bass voice that the plugin misses, and High for a high soprano or a whistle. The latency is the same in all three. VOICE isn't automatable: set it and leave it.

The display

The display shows the last four seconds, the newest at the right: the blue line is the voice as sung, the bright line as corrected, the glow between them the correction, and the bars behind them the notes it was pulled to. A rail lies on each note of the scale, the key's brighter. At the lines' head a chip names the note and how far the voice is off it, `G1 +7 ct`.

The values along its top and bottom edges are its controls: drag one up or down, use the wheel over it, or double-click it to reset; Shift is finer.

- STRENGTH below 100 % pulls only part of the way, for a voice that is helped rather than fixed.
- DETUNE moves the result off the note: a copy of the vocal at +8 ct under the original thickens it.
- A4 is the tuning reference.

The jellyfish

The jellyfish listens too. Its bell pulses and lights with the level, and its tentacles hang calm while the voice is on its note (within 5 cents) and stir more the further it is off, all the way from 50 cents. Switched off, it rests.

Good to know

- Latency: 0.25 ms in every VOICE. The host is told, and lines the track up. While a voice is being tuned the sound runs a little further behind, 3.8 ms on average: to move a note the plugin repeats or drops one cycle of the voice now and then, so it is about 2 to 3 ms for a high voice and 5 to 6 ms for a low one.
- Automation: every parameter but VOICE can be automated.
- From 1.2: every setting is kept. The latency was 1 ms.
- From 1.1: every setting is kept. The latency was 3.75 to 10.75 ms by VOICE.
- From 1.0: a project saved with 1.0 opens with its key, scale, SPEED, STRENGTH, DETUNE, A4 and VOICE. REALTIME, VIBRATO, FORMANT and HOLD are gone, and HUMANIZE starts at 0 %.
- Saved with the project: every setting and the zoom.
- CPU: 0.13 % of a core at the defaults. It needs a CPU with AVX2 (Intel Core from 2013, AMD from 2015).
- One voice: chords, a choir on one track or a mix go wrong. Correct each voice on its own track.
- Zoom: the project remembers it, and a new window opens at the zoom you last chose in any JellyComet plugin.
- Hosts: the CLAP passes `clap-validator`.
- Display: X11, or XWayland on a Wayland desktop, with a Vulkan driver.

Troubleshooting

- **No correction, the display stays empty:** check that the power switch is on and that the voice is in VOICE's range; a low voice may need Low.
- **Notes jump to the wrong note:** the key or scale is wrong for the song. Chromatic corrects to the nearest note whatever the key.
- **The track sounds late against the others:** the host has to compensate the plugin's latency; check that its latency compensation is on.
- **The plugin doesn't load:** it needs a CPU with AVX2 (Intel Core from 2013, AMD from 2015) and can't run on an older one; `grep -c avx2 /proc/cpuinfo` prints 0 there. 1.1.0 runs without it.
- **The window stays black:** the editor needs a Vulkan driver (`vulkaninfo` should list your GPU).