AJANSS RECORDS

ARTUNE STUDIO.

PITCH CORRECTION FOR THE SESSION

VERSION	FORMATS	PLATFORMS	DOCUMENT
1.0.0	AU · VST3	macOS · WINDOWS	USER GUIDE

01 WHAT IT DOES

ARTUNE STUDIO pulls a sung or played line onto the notes you choose. You set a key and a scale — or switch off single notes on the keyboard at the left — and every pitch the tracker hears is moved to the nearest one that is still on. How fast it is pulled is **SPEED**: at 0 ms the pitch snaps and you get the hard, stepped effect; higher values let it glide, and the singer's own movement survives.

The audio goes through a single resampling stage, not a rebuild — so what comes out is the take you sang, moved, rather than a reconstruction of it. Measured on a dry trap vocal, the output sits a median of **5.0 cents** from the target note where the input sat 19.1 cents away. Unpitched moments — consonants, breaths, the gaps between words — are passed through **bit for bit**, so nothing is smeared. With AMOUNT at 0, or in BYPASS, the whole output is the delayed input, sample for sample.

It tracks one pitch at a time, so it wants a single line: a lead vocal, a single-note synth or guitar. Verified from **70 Hz to 1000 Hz**, every test tone within half a semitone.

02 INSTALLING

macOS

Run ARTUNE STUDIO Installer.pkg and follow the steps. You can choose which formats to install, and whether to install for every user or only for yourself. The package is signed and notarised by Apple, so it opens normally.

Windows

Run ARTUNE STUDIO Installer.exe and follow the steps. The plugin is placed in the shared VST3 folder. The installer is not codesigned yet, so SmartScreen may warn you: click More info, then Run anyway. This is only needed once.

After installing

Rescan the plugin list in your DAW. ARTUNE STUDIO appears under Ajanss Records › ARTUNE STUDIO.

ARTUNE STUDIO reports **16 ms** of latency at 48 kHz (768 samples; 704 at 44.1 kHz, 1536 at 96 kHz) and your DAW compensates for it automatically. The number is **fixed** — it never changes while you sing. Some tuners vary their delay with the incoming note; a moving delay breaks the host's compensation, so ours does not move.

Requirements — macOS 10.13 or newer, Intel or Apple Silicon (universal binary). Windows 10 or newer, 64-bit. Formats: Audio Unit and VST3 on macOS, VST3 on Windows.

03 WHAT STUDIO ADDS

Note editing

The pitch line on screen is not one long curve: it is split into **notes**, each one a stretch where the target stayed the same. Move the mouse over the line and a note lights up; drag it up or down and that note is retuned to wherever you drop it. The edited note is marked on the grid and labelled with its new name, so an edit is never invisible, and UNDO takes it back. Measured: a three-note melody is split into exactly three notes, and a note moved by hand lands within **1.2 cents** of its new target.

An edit is tied to **where it sits on your timeline**, not to the take playing at the time. Rewind and play the part again and the edit is still there; edits are saved with the session, so they are still there tomorrow. Measured: after a rewind the edited note stayed edited, and two edits survived a save and reload intact. In a host that reports no timeline — the standalone app — edits still work, they just do not come back on a second pass.

Use this instead of forcing SPEED down when only one note is wrong — SPEED affects the whole performance, an edit affects one note.

Formant

Moving a pitch by resampling drags the resonances that give a voice its size along with it — that is the chipmunk effect. **KEEP** holds them where they were. Measured on a three-semitone correction: with KEEP the output's spectral peak sits at **520 Hz**, exactly where a reference recorded at the target pitch with its own envelope sits; with MOVE it sits at **1440 Hz**, on the shifted reference. At small corrections the difference is slight; over a wide move it is the difference between the same singer and a smaller one.

Vocal range

In a session you know the singer, so you can tell the plugin. A pitch reading outside the range you set is almost always an **octave error** rather than a note, and STUDIO folds it back by octaves instead of correcting to it. Measured on a real recording: with the range left wide the worst frame-to-frame jump was 3630 cents; with the singer's range set it was **1230 cents** — three octaves down to one — while the accuracy of the correction itself did not change.

04 THE INTERFACE

PITCH GRID

The screen is one picture: the vertical axis is the note axis, and the same rows are the keyboard. The dotted line is what came in, the thick orange line is what goes out. Where the two separate, that gap is the correction you are hearing. The grid scrolls one line per second while audio plays and stops when it does not.

KEYBOARD

Click a row to take that note out of the target set, click again to put it back. A darkened row is not a target — nothing will ever be pulled onto it.

READOUT

Top right: the note being sung, how far the correction is moving it in cents, and the reported latency.

KEY · SCALE

Sets the key and the scale. Choosing a scale rewrites the keyboard; you can still switch individual notes off afterwards.

CORRECTION

The five dials that shape how the pull behaves.

NOTE EDITING

Move the mouse over the pitch line and a note lights up. Drag it up or down and that note is retuned to wherever you drop it; the note is marked and named on the grid so an edit is never invisible. Clicking the keyboard at the left still switches whole pitch classes on and off.

FORMANT

MOVE lets the formants travel with the pitch, the classic resampled sound. KEEP holds them where they were, so a corrected note still sounds like the same singer.

VOCAL RANGE

The singer’s lowest and highest note, read as note names. Anything the tracker reports outside this window is folded back by octaves

05 PARAMETERS

CONTROL	RANGE	DEFAULT	WHAT IT DOES
KEY	C … B	**C**	The tonic the scale is built on. It has no effect in CHROMATIC.
SCALE	10 scales	**CHROMATIC**	MAJOR, MINOR, DORIAN, MIXO, HARM MIN, MEL MIN, PENT MAJ, PENT MIN, BLUES, CHROMATIC. Choosing one rewrites the keyboard.
KEYBOARD	12 notes	**all on**	Which pitch classes are targets. Switch off the notes the song never uses and the correction stops reaching for them.
SPEED	0 … 400 MS	**20 MS**	How fast the pitch is pulled to the target. 0 ms is the hard, stepped effect. Measured on a dry vocal: at 0 ms the output lands 0.0 cents from the note, at 20 ms it sits within about 10 cents while the singer moves, and at 80 ms most of the original movement is left alone.
FLEX	0 … 100 %	**0 %**	Pulls back the correction when the note is far from a target, so deliberate slides and bends survive while small errors are still fixed. Measured: at 0 the output lands on the note, at 90 it is left 40 cents away.
HUMANIZE	0 … 100 %	**0 %**	Corrects a held note more slowly than a short one, so sustained notes keep their life while quick ones stay tight.
VIBRATO	-100 … +100	**AS SUNG**	The singer’s own vibrato: damp it or exaggerate it. Measured from a 44 cent vibrato — damped to 14.8 cents, exaggerated to 76.0 cents.
AMOUNT	0 … 100 %	**100 %**	How much of the correction is applied. At 0 the output is the delayed input, bit for bit.
FORMANT	MOVE / KEEP	**MOVE**	Whether the spectral envelope travels with the pitch or stays put. Measured on a three-semitone correction: KEEP puts the output’s spectral peak at 520 Hz (the unshifted reference), MOVE at 1440 Hz (the shifted one).
RANGE LOW	C1 … C7	**C2**	The lowest note the singer actually reaches. Readings below it are treated as octave errors and folded up.
RANGE HIGH	C1 … C7	**C6**	The highest note the singer actually reaches. Readings above it are folded down. Set these two around the real part and stray octaves stop reaching the correction.
BYPASS	on / off	**off**	Passes the delayed input through untouched, bit for bit, with a smoothed 20 ms crossing so the switch never clicks.

06 PRESETS

Twelve starting points. Each one sets the key, the scale, and the five dials; none of them is a destination, they are places to start from.

TRANSPARENT	correction you do not hear	GENTLE CORRECTION	the errors only
POP VOCAL	tight but still sung	TIGHT	close to the grid
HARD TUNE	the stepped effect	TRAP HARD TUNE	minor, snapped
KEEP THE SLIDES	bends survive	HALF WAY	half the correction
TRACKING	for singing through	MORE VIBRATO	the vibrato pushed up
PENTATONIC LOCK	five notes only	HALF SPEED FEEL	slow, loose glide

> PRESETS opens the panel. A preset changes every control at once — UNDO takes it back.

07 STARTING POINTS

Set the range first

Before any dial: play the take through once and set RANGE LOW and RANGE HIGH around the notes the singer actually sings. This is the cheapest fix for a jumpy pitch line, and it costs nothing in accuracy.

Fixing one note the singer missed

Play the take, find the note on the grid, and drag it where it belongs. The edit is marked and named; it is keyed to your timeline, so it stays put when you rewind and it is saved with the session. UNDO takes it back. Use this instead of forcing SPEED down, which affects the whole performance.

Keeping the singer's size

Set FORMANT to KEEP when a correction is more than a semitone or two, or when you have moved a note by hand. At small corrections the difference is slight; over a wide move it is the difference between the same singer and a smaller one.

Tuning a recorded take

Set the key and scale of the song, then start at SPEED 25 ms with FLEX around 30: errors are fixed, slides survive. The 16 ms of delay is fixed and reported, so a singer tracking through it hears no lag.

The hard, stepped effect

SPEED 0, FLEX 0, AMOUNT 100, and the key and scale of the song. For the trap sound use MINOR and switch off the notes the melody never touches — the fewer targets there are, the more obvious the steps.

Correcting without anyone noticing

SPEED 40 to 60, FLEX 60 to 80, HUMANIZE around 30. The small errors go, the phrasing stays. If it starts to sound processed, raise FLEX before lowering AMOUNT.

When it sounds wrong

Check three things in order: the key and scale, the VOCAL RANGE, and how dry the source is. A wild jump on the screen is usually an octave error, and setting the range is what removes it. Reverb printed on the take gives the tracker less to work with — feed it the driest signal you have, before the reverb.

08 SUPPORT

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