

# Altitude

## Vocal Performance Station



## Welcome!

This is the user manual for **Altitude**. Altitude is a vocal performance station with pitch-correction, smart harmonies, midi-instrument playability and built-in modulation for creative sound design. Dial in the classic hard-tune sound or subtly polish a great take. Build lush harmonies that follow your key automatically – on stage or in the studio. Play your voice like an instrument from a MIDI keyboard, or arrange it against existing data in your DAW. Add depth and movement with modulation, from subtle pitch drift to textures that don't exist anywhere else.

Altitude is available for Mac & Windows (AU/VST/AAX plug-in). It has been designed and developed by Klevgrand, a small studio in Stockholm, Sweden.

[Read more at klevgrand.com](https://klevgrand.com)

## LICENSING (DESKTOP ONLY)

Until unlocked, the plug-in output will be silent now and then. To unlock the full version, click the Demo label (bottom left corner) and enter your license file or authorise with the Klevgrand Helper application.

# Overview



## A. Global offsets

Sets the overall offset of pitch and formants.

## B. Scale

Sets the overall scale of the plugin.

## C. Lead module

Pitch-correction and other single-voice parameters.

## D. Harmonies module

Three smart harmonies that follows the lead.

## E. Play module

Play and arrange the input signal with midi like an instrument.

## F. Mixer

Internal mix of all modules.

## G. Modulation

Three modulators with step sequencers.

## H. Vibrato

Adds vibrating pitch shifts.

## I. Note overview

Overview of the input and output notes.

## J. Preset browser

Factory- and user presets.

## K. Settings

Processing options.

## L. Resize

Set the size of the plugin window

## M. Input monitoring

Shows when the plugin receives incoming midi and audio signals.

## N. Bypass

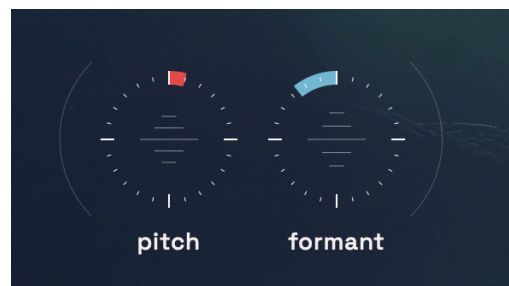
Bypass Altitudes audio processing.

# Global offset

These parameters sets the offset of pitch and formants on all voices in Altitude.

## Pitch

Sets the pitch offset on all voices in Altitude in semi tones. Hold down ALT/OPT to fine tune.



## Formant

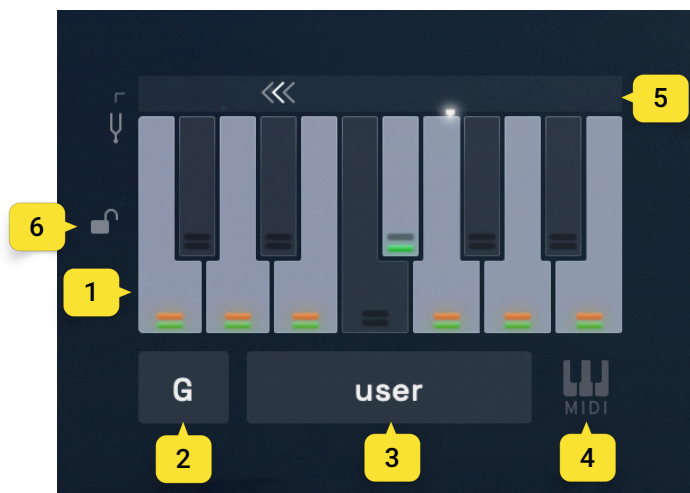
Sets the formant offset on all voices in Altitude in semi tones. Hold down ALT/OPT to fine tune.

# Scale

This sets the scale of the Lead Modules pitch correction and Harmonies Module.

The Lead Module corrects the pitch of the input signal to the closest enabled note. The input signals pitch is visualized with the white dot above the keyboard.

The Harmonies Module outputs notes within the enabled notes of the scale, at set distance(s) from the Lead Module.



## 1. Scale notes

Click a key to enable that note for the scale. This highlights the key for both the Lead Module (green) and the Harmonies Module (orange).

Right-click a key to disable it for the Harmonies Module (visualized by turning off the orange glowing led on that key). This disables that note for the Harmonies Module but leaves it enabled for the Lead Module.

## 2. Root note

Sets the root note of the scale (C, C#, D, D# etc.).

## 3. Scale presets

Click to open a list of pre-made scales (Chromatic, Major, Minor, Penta, Dorian, 5-EDO etc.)

## 4. Midi scale

Click to enable midi to set what notes to be enabled.

Please note, either route midi to your audio track (most DAWs) or open the plugin as an AU MIDI-controlled effect (Logic Pro) for this to work. Set midi-channel in Altitudes Settings menu.

## 5. Micro tuning

Each note can have its own micro tuning. Click above the key and drag left/right to lower/raise the pitch of that note, +/- 50 cent.

## 6. Scale lock

When enabled, the scale will not change when browsing presets.

# Lead module

This module processes the input signal directly without adding further harmonies.

## 1. Pitch correction

**Amount** Set how much pitch correction is applied to the input pitch.

**Speed** Sets the speed of the pitch correction in ms.

**Visualizer** Shows what note the pitch is output to and how much pitch correction is applied to reach that note.

## 2. Width

Sets how much stereo width is applied to the lead signal.

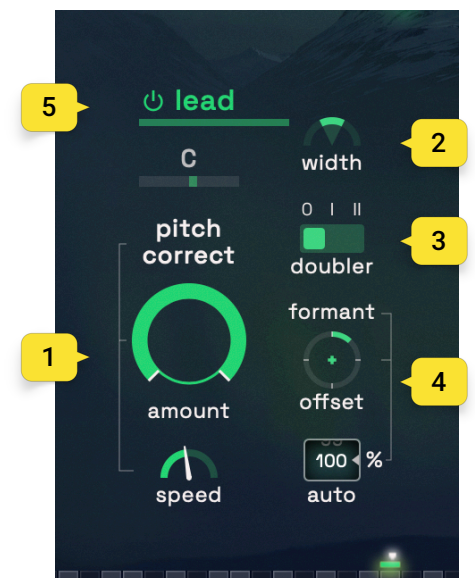
## 3. Doubler

Applies one of two available doubling effects to the lead signal.

0 - No doubling effect

I - Strong doubling effect, with dynamic pitch variation

II - Swirling chorus-like doubling effect



#### 4. Formant

Offset - Offsets the formants of the lead signal up or down

Auto - Set how much the formants of the lead are auto adjusted to offset any pitch shifts.

#### 5. Power on/off

Click to enable/disable the lead module

## Harmonies module

This module adds harmonies that follows the pitch of the Lead module. The distance of each voice follows at steps up or down within the set scale.

#### 1. Harmony distance

Set the distance to the lead note, *within the set scale*. For example, +2 results in a note two steps up in the scale, -6 results in a note six steps down in the scale.

#### 2. Harmony Level

Set the mix level of the harmony.

#### 3. Speed

Set the speed at which the pitch shift works. A fast speed makes fast changes of notes, while a slow speed makes slower, smoother changes.

#### 4. Humanize

Set how much each harmony voice is offset in time.

#### 5. Width

Set how much stereo width is applied to the harmonies.

#### 6. Doubler

Applies one of two available doubling effects to the lead signal.

0 - No doubling effect

I - Strong doubling effect, with dynamic pitch variation

II - Swirling chorus-like doubling effect

#### 7. Formant

Offset - Offsets the formants of the harmonies up or down

Auto - Set how much the formants of the harmonies are auto adjusted to offset any pitch shifts.



## 8. Power on/off

Click to enable/disable the Harmony Module.

# Play

This module pitch shifts the incoming signal to the incoming midi notes.

Please note, either route midi to your audio track (most DAWs) or open the plugin as an AU MIDI-controlled effect (Logic Pro) for this to work. Set midi-channel in Altitudes Settings menu.

### 1. Attack

Sets the time it takes the signal to reach full loudness from when the midi note is triggered.

### 2. Release

Sets the time it takes the signal to quiet completely from when the midi note is released.

### 3. Velocity

Sets how much velocity affects the volume of the signal.

### 4. Width

Sets how much stereo width is applied to the midi-triggered voices.

### 5. Doubler

Applies one of two available doubling effects to the lead signal.

0 - No doubling effect

I - Strong doubling effect, with dynamic pitch variation

II - Swirling chorus-like doubling effect

### 6. Formant

Offset - Offsets the formants of the midi-triggered voices up or down

Auto - Sets how much the formants of the midi-triggered voices are auto adjusted to offset any pitch shifts.

## 7. Power on/off

Click to enable/disable the Play Module.



# Mixer

## 1. Level

Sets the output level of each module.

## 2. Pan

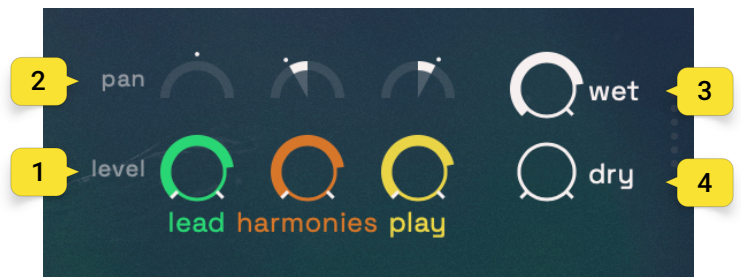
Sets the stereo direction of each module.

## 3. Wet

Sets the output level of the entire wet signal (all modules combined).

## 4. Dry

Sets the output level of the dry input signal.



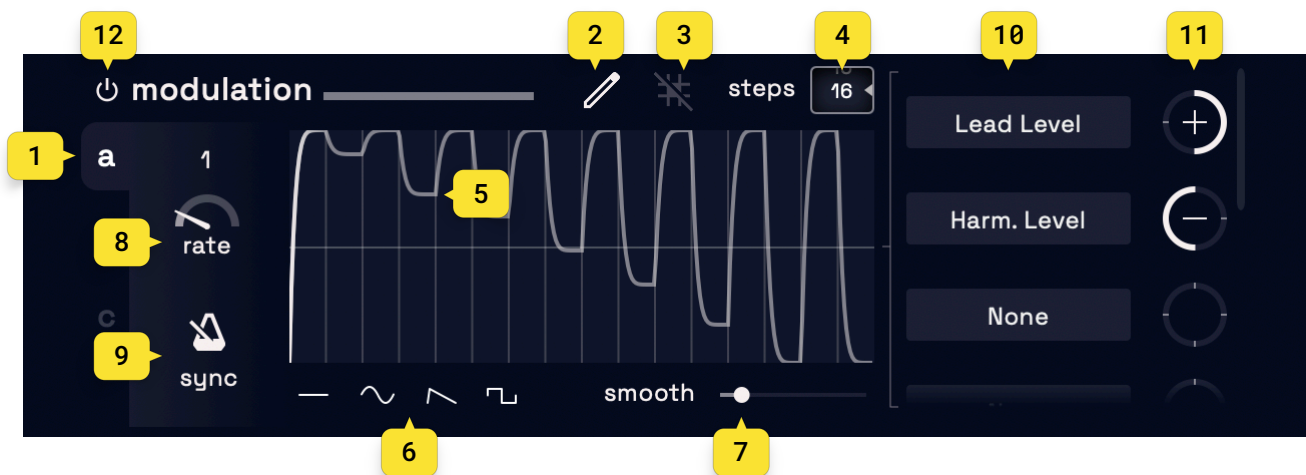
## MULTI-OUT

Altitude comes with multi-out capabilities. Open the plugin as a multi-output and create up to three additional tracks.

When in multi-output mode, the routing is as follows:

- Main out (1-2)- Wet and Dry
- (3-4) - Lead output
- (5-6) - Harmonies output
- (7-8) - Play output

# Modulation



## 1. Step sequencer

This is where one creates the shape and behaviour of one of the three independent modulators (a/ b/c). The modulator loops at the set rate and can affect multiple internal parameters, like Pitch, Formants, Harmony distance, Pan, Level etc.

Click and drag a step to alter it.

## 2. Draw-mode

Click to toggle Draw-mode. In Draw-mode, instead of dragging a step to alter it, click and drag over the sequencer to create a shape.

## 3. Grid

Click to enable vertical grid of the sequencer. When enabled, the values of the sequencer will quantize to the grid.

## 4. Step amount

Sets how many steps in the sequence.

## 5. Step value

Drag or draw to set the value of each step.

## 6. Pre-made shapes (sine, saw, square)

Click to add a pre made shape (flat, sine, saw or square)

## 7. Smooth

Sets the slope of each step

## 8. Rate

Sets the speed of the sequence. Can be set in fixed hz or be synced to the daws tempo.

## 9. Sync

Syncs the speed of the sequence to the daw's tempo.

## 10. Target parameter

Sets the target(s) to be modulated by the sequence shape. Up to 8 targets on each sequencer.

## 11. Modulation amount

Sets how much the sequence modulates the target.

## 12. Power on/off

Enables/disables the Modulation Module.

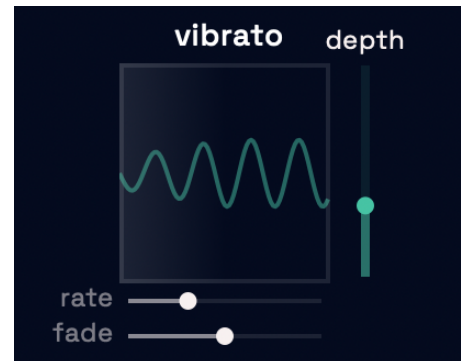
# Vibrato

The vibrato adds vibrating pitch shifts to each voice individually at slightly different rates.

**Depth** Sets how much the pitch shifts.

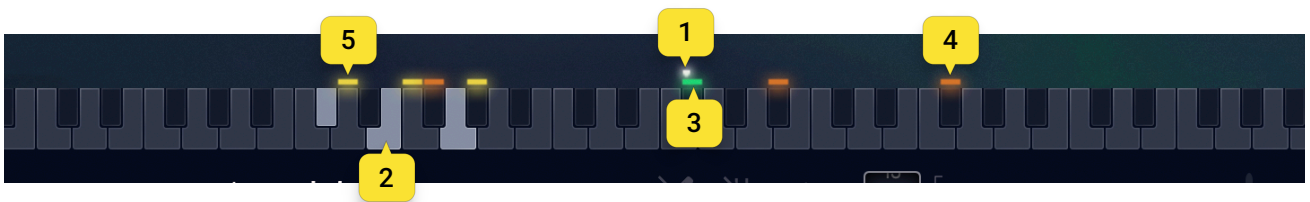
**Rate** Sets how fast the pitch shifts.

**Fade** Sets how long it take on each new note for the vibrato to fade in.



# Note overview

This keyboard shows an overview of the input and output notes.

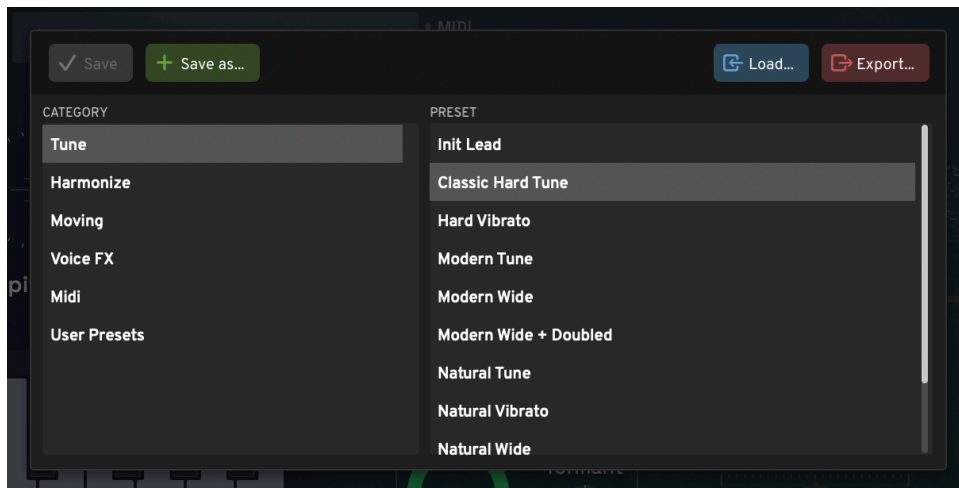


- |                     |  |
|---------------------|--|
| 1. White dot        | The input signals pitch                  |
| 2. Highlighted keys | The triggered midi keys                  |
| 3. Green            | The output note of the Lead module       |
| 4. Orange           | The output notes of the Harmonies module |
| 5. Yellow           | The output notes of the Play module      |

# Preset browser

The preset browser is where all the Altitude factory- and user presets are found. Click on the currently loaded preset to reveal the preset browser containing all factory and user presets, or click on the left/right arrows to step through the list. A preset loads the full state of all parameters.

The factory presets are divided into several categories and contains a wide selection of patches that works great as is, but can also be a good starting point for further tweaking.



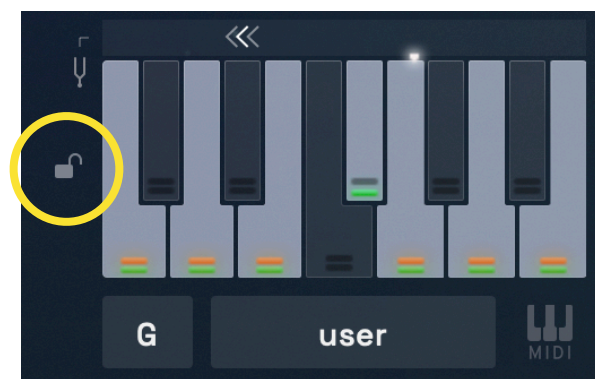
**Save** Overwrites the current patch.

**Save as...** Saves the current patch with a new name.

**Load** Opens the file browser to import a patch from anywhere on the disk.

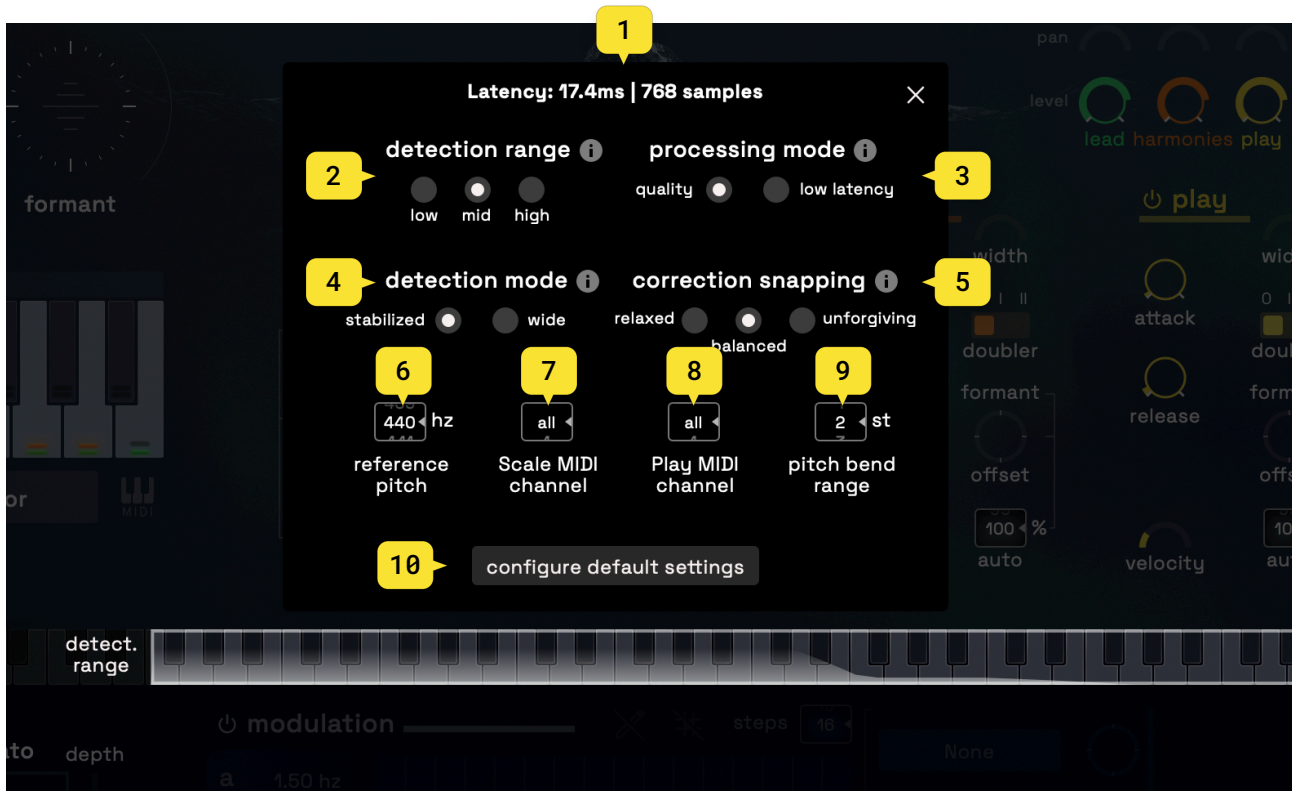
**Export...** Opens the file browser to name and export user presets to anywhere on the disk.

Please note the **Scale lock** function. When enabled, the scale will not change when browsing presets.



# Settings

Click the settings-icon in the top left corner to open the settings menu



## 1. Latency metering

Shows the current settings latency in ms and samples

## 2. Detection range

Sets the range at which the pitch detection works. Notes outside the range will not be processed properly. This setting affects latency and should be set to match the pitch range of the input signal for best results.

Under the settings menu is a visualizer of the set detection range.

## 3. Processing mode

Sets the algorithm for the pitch shift and formant processing.

**Quality** Stable pitch processing with slight latency.

**Low latency** Less precise processing, with zero latency.

## 4. Detection mode

Enable or disable the pitch detection stabilization engine, which reduces pitch estimation errors.

**Stabilized** Recommended for most use cases, such as vocals.

**Wide** Disables the pitch detection stabilization, raw pitch detection for experimental use.

## 5. Correction snapping

Sets how the pitch correction of the Lead Module interprets the input pitch.

**Relaxed** For unsteady or wobbly input pitch

**Balanced** Recommended setting for regular use

**Unforgiving** For extreme precision and experimental use

## 6. Reference pitch

Sets the pitch that is interpreted as A4 for the entire engine

## 7. Scale MIDI channel

Sets the MIDI channel for the Scale

## 8. Play MIDI channel

Sets the MIDI channel for the Play module

## 9. Pitch bend range

Sets how many semitones the pitch bend (midi input) ranges over.

## 10. Configure default settings

Click to configure what settings are loaded as default when opening future instances of Altitude. This does not affect previously opened instances.

**Confirm** Save current settings as default

**Reset factory default** Reset the default settings to factory

**Cancel** Close options and abort.

### Special keys

Hold Alt/Option to finetune a value (e.g. a knob or slider).

Double-click a control to reset it to its default value.

# Specifications / System requirements

Mac	Windows
64 bit AU/VST/AAX plug-in	64 bit VST/AAX plug-in
macOS 10.13+	Windows 10+ with SP1 or higher
Intel or ARM (Apple Silicon) based CPU	

**KLEVGR.**