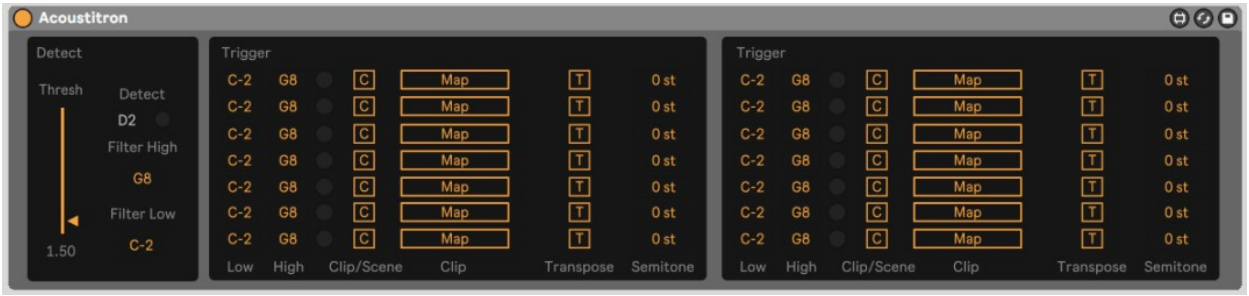
Acoustitron V.1 Max For Live Device User Guide

ACOUSTITRON



Contents

Overview

Acoustitron is a Max for Live device which uses live audio to trigger clips and scenes in Ableton Live. A musician is able to play their instrument into the device, which will detect the notes they are playing. The musician may then map a range of notes to an Ableton clip or scene. When a note within that range is detected, that clip or scene will be triggered. There are parameters for fine tuning the note detection algorithm, as well as options for transposing the triggered clip based on the note played.

Installation

- The M4L Device can be used on any audio track simply by dragging the Acoustitron.amxd file onto that track.
- However, if you want Ableton to remember where the device is located, you must add it to your User Library, located in the leftmost panel.
- Simply drag the Acoustitron.amxd file into the user library.
- I recommend making a folder to store your M4L devices in by right clicking and choosing New Folder.
- You can organize this space how you like!

Uninstall

- If you added Acoustitron to your User Library, simply right click on it, and choose Delete.

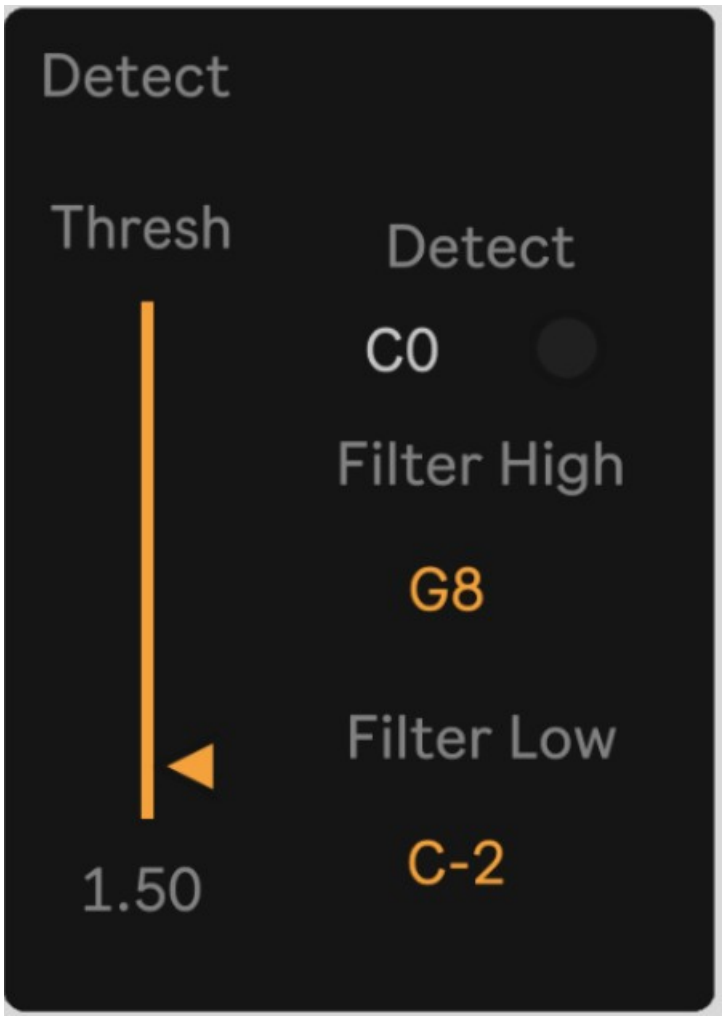
Setup

Place Acoustitron on an Ableton Live Audio Track.
If you would like to play your instrument live into the device:

1. Set the track input to the input you are playing into.
2. Set the track Monitor to Auto.
3. Hear yourself playing, and see notes being detected in Acoustitron.

Detect Panel

This section is used to fine tune the Acoustitron’s note detection algorithm.



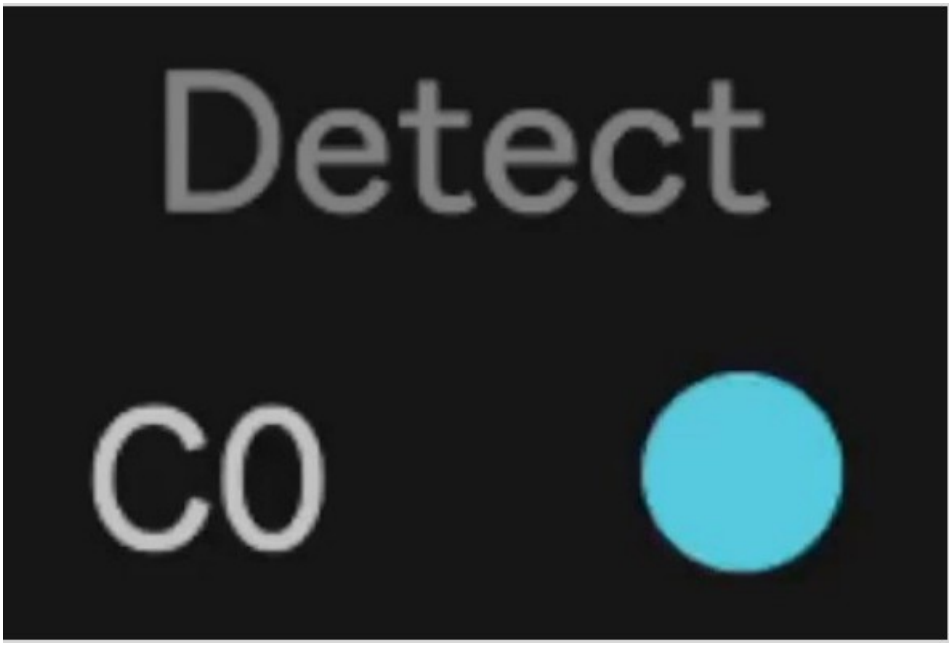
Thresh
Short for “Threshold”, this control sets the minimum “strength” required for a note to activate the detection system. A higher threshold value means Acoustitron will be less sensitive to incoming notes, and the musician will have to play harder to trigger the system.
The default value of 1.5 is usually sensitive enough to accurately capture all notes without mistriggers.

Example

Setting the threshold high will cause quiet notes to be ignored, allowing the user to only trigger the device when they choose to play a note loudly. This allows you to trigger the device organically through expressive playing on your instrument.

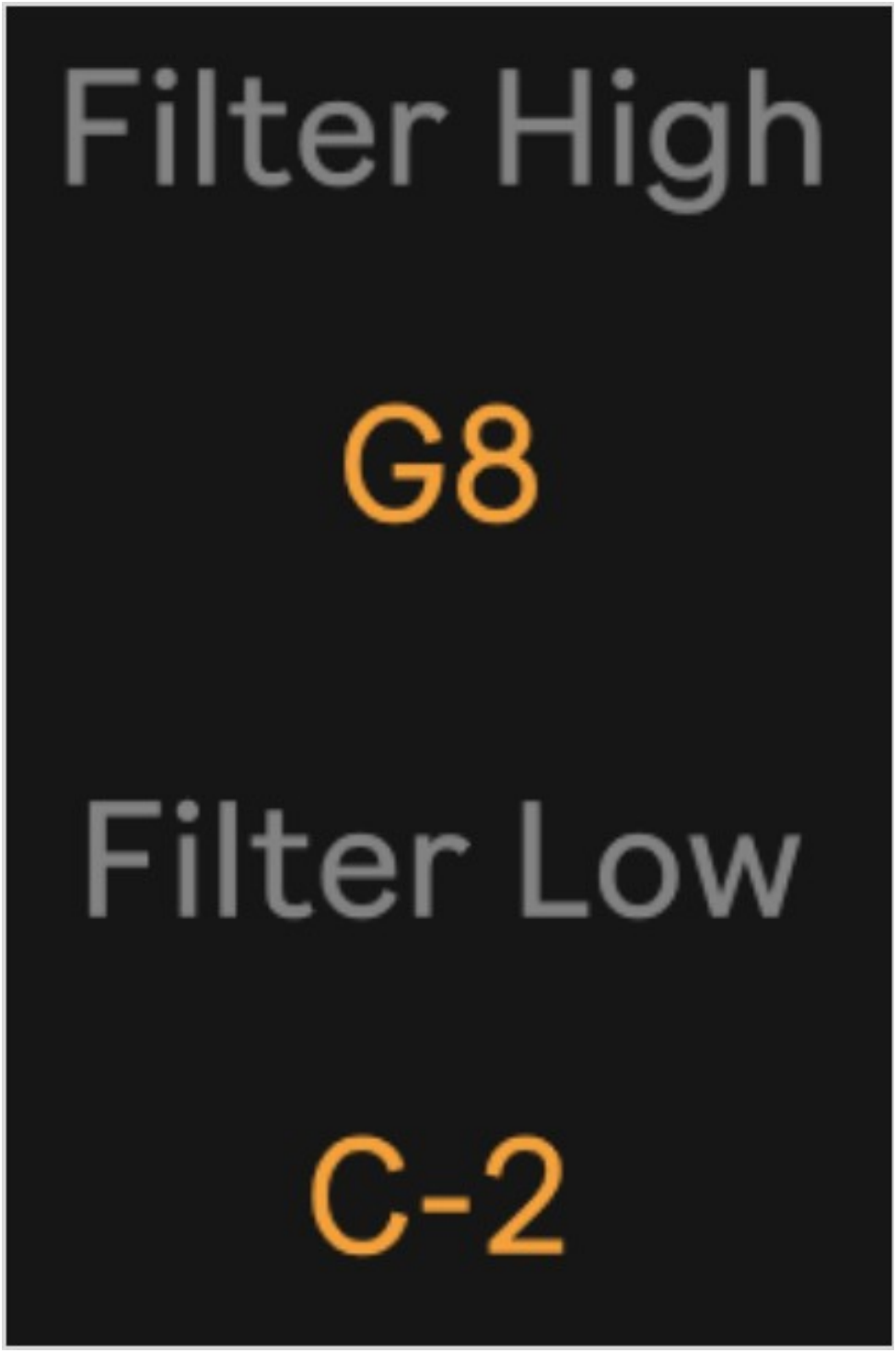
Detect

This section is informational, meaning that the user cannot click or otherwise control it. The note displayed is the last detected note. To the right of the detected note, there is a blue led, which will flash when a note passes the detection threshold.



Filter High and Filter Low

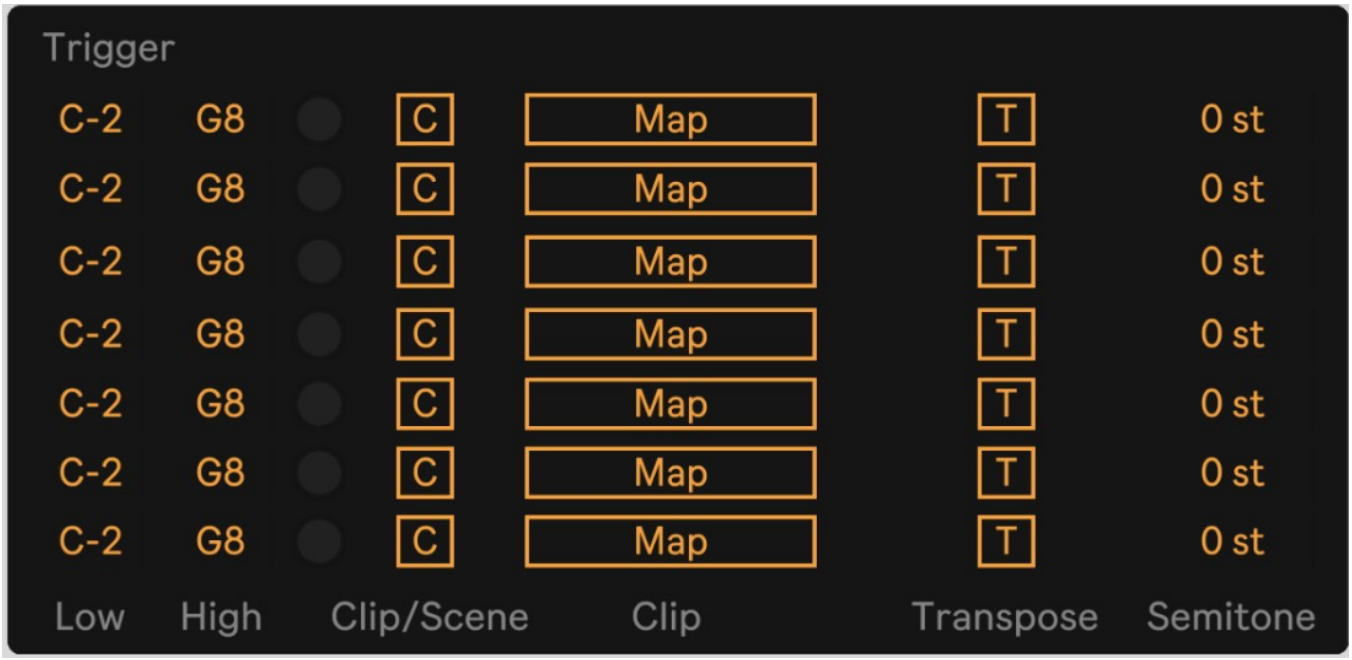
Sets an overall range for the pitch detection algorithm. Only notes *in between* Filter High and Filter Low will be detected. That is, notes above or including Filter Low, and under and including Filter High.



Filter Low
The lowest note that will be detected. Any notes lower than this will be ignored.
Filter High
The highest note that will be detected. Any notes higher than this will be ignored.
Example Usage
This can be useful to globally ignore notes outside of a certain range. For example, if you only wanted to use the first octave of your guitar's low E string to trigger clips. If you set Filter Low to E2 and Filter High to E3, all notes outside of that range will be ignored by the system.

Trigger Panels

This section is used to map the incoming notes to Ableton Live clips or scenes. Each row in the list is one discrete mapping. The user can make up to fourteen mappings per device, seven pereach trigger panel. If needed, more devices can be inserted.



Map

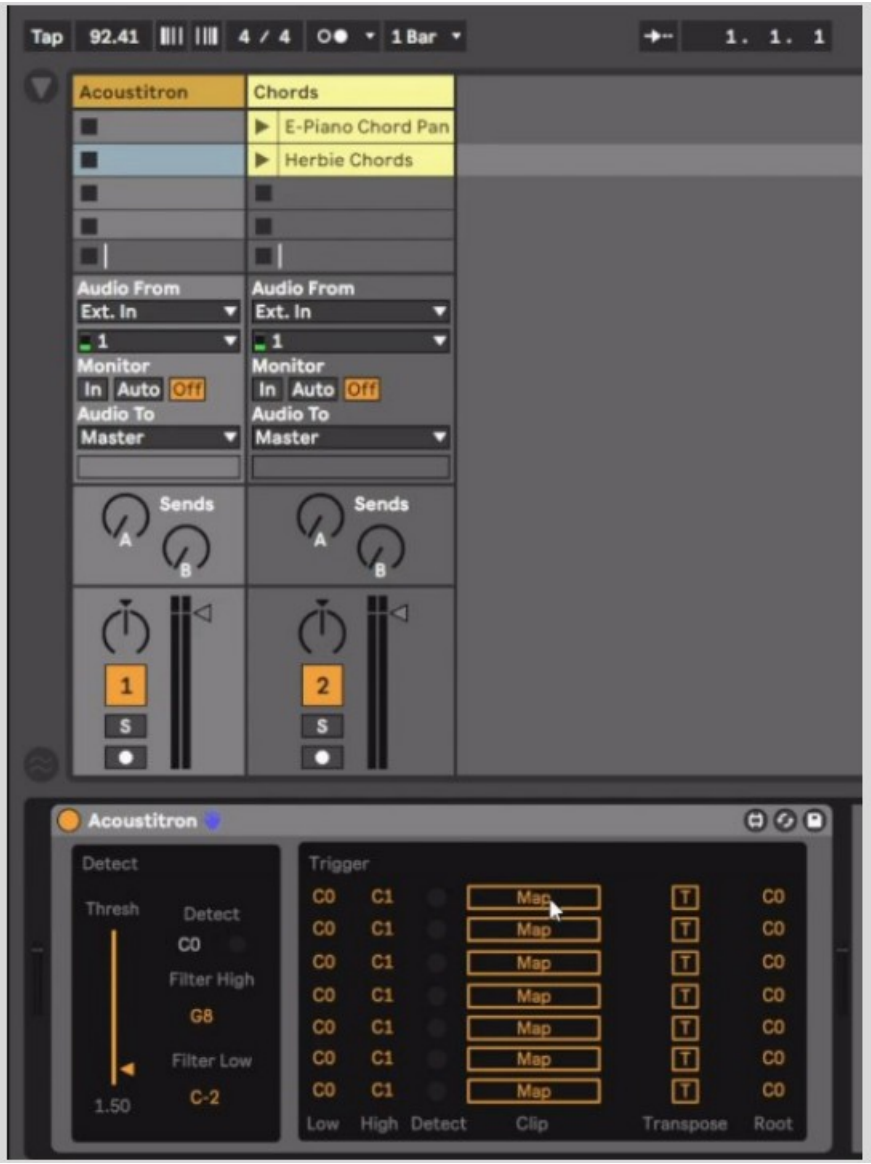
1. To map a note range to a clip or scene, first click the Map button in a row of your choice.
2. The map button will start blinking, indicating it is ready to be mapped.
3. Click an unselected clip or scene in the Ableton window.
4. Returning back to Acoustitron, we see the previously blinking Map button has lit up solid yellow, indicating the mapping is complete.

Altering a Mapping

To alter a mapping, simply click the Map button again. The Map button will begin blinking, and you may click a new clip or scene to replace the old mapping. Clicking the Map button again while it is blinking will cancel this operation and leave the old mapping in place.

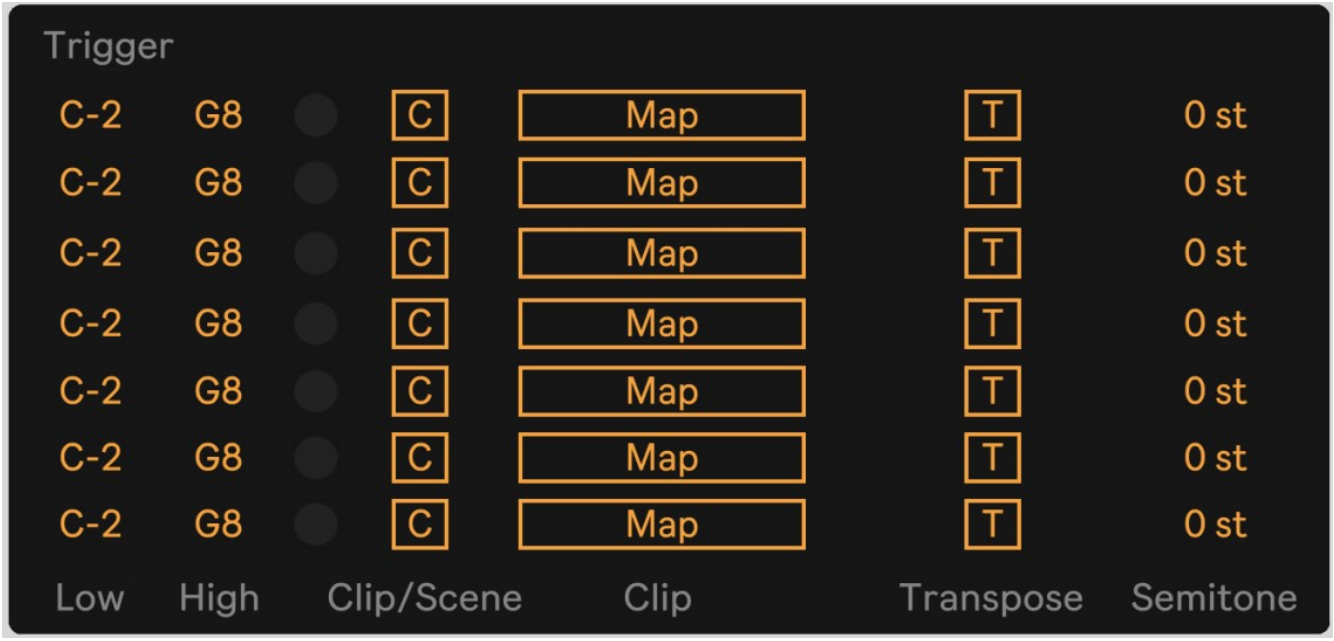
Clearing a Mapping

Once a row has been mapped, a circular X button will appear next to the Map button. Clicking this will clear the Mapping, restoring it to the default state.



Low and High

Similar to Filter Low and Filter High from the Detect panel, these controls set the range of notes that will trigger the mapped clip or scene.



Single Note Mappings

If you would like to map a single note to a clip, simply set both High and Low to that note.

Detect

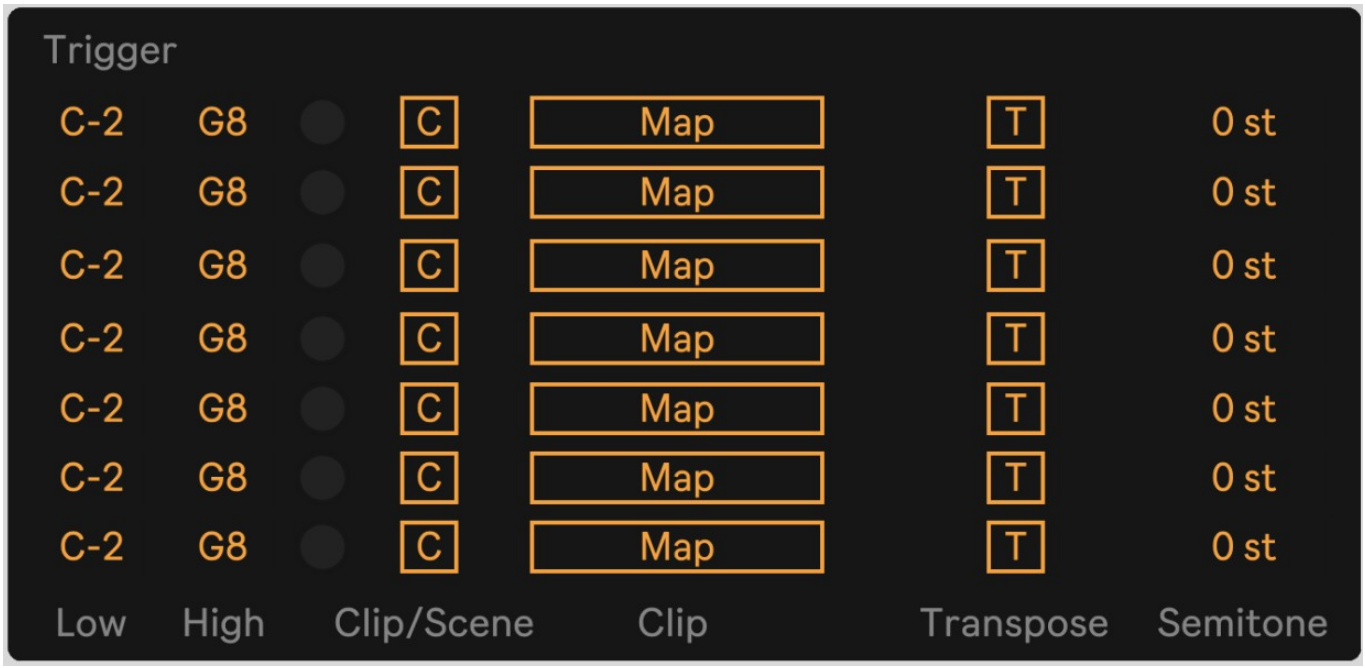
This will flash every time this mapping is triggered. This is affected by the Low and High controls for this mapping.

Clip/Scene

Toggles the mapping between triggering the clip and the scene. When set to Clip, the button will display the letter C. In the mode, the single mapped clip will be triggered. When set to Scene, the button will display the letter S. In this mode, the whole scene will be triggered. If the row was previously mapped to a clip, the scene the clip is a part of will be triggered.

Transpose and Semitone

Mappings can also transpose Audio Clips and Midi Clips on the fly based on the detected note.



Transpose Control

Turn this toggle on to enable transposition for this mapping.

Semitone

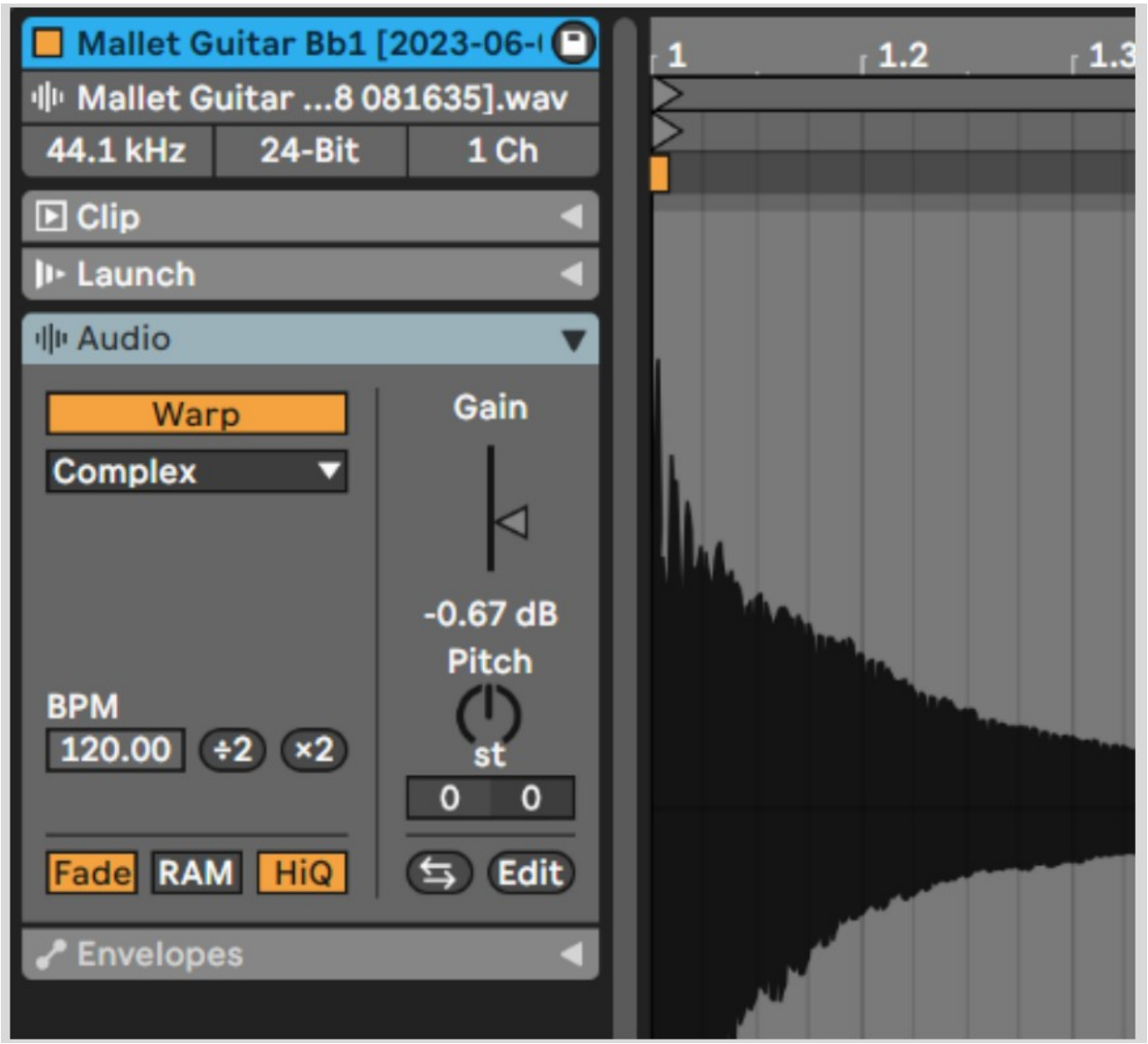
Adjust the transposition up and down in semitones. The transposition's default root note is always C3, so if you play a C3 and Semitone is set to 0, the clip will not be transposed at all. Say for example you set Semitone to +12 instead. Now, when you play a C3, the clip will be transposed up 12 semitones.

Transposing Midi Clips

To transpose a midi clip, simply select the Pitch Midi Effect from the Ableton Live Browser as the first midi effect on the clip's track. Acoustitron will automatically detect the device and use it for transposition. Note that Acoustitron will actively "turn the knob" on the Pitch object, so any user settings made to this control will be overridden if the mapping is triggered.

Transposing Audio Clips

Acoustitron uses Ableton's built in Pitch control to transpose audio clips on the fly. Note that Acoustitron will actively "turn the knob" on the Pitch control, so any user settings made to this control will be overridden if the mapping is triggered.



Example Usage

If you want your clip to play in unison with your instrument, repeatedly trigger the clip with a single note while adjusting the Semitone control until the notes are the same.

You can also use this control to generate harmonies. Using the method above, set the Semitone so the clip sounds the same note as your instrument. Then, adjust the Semitone control to 7 semitones above the current

setting. The clip will now be transposed a perfect fifth above what you play, generating parallel harmonies! When the Transpose function is turned off, the clips will play on the set key no matter which incoming notes are used to trigger them.

Useful Ableton Settings

There are some settings in Ableton that are helpful to know about in order to use Acoustitron to its highest potential.

- **Launching Clips**
- **Session View** (See 7.4.2 Removing Clip Stop Buttons)

ACOUSTITRON

Manual for Acoustitron V1.0.0
Developed by Small World Electronics

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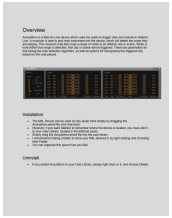
Documents / Resources

	**Acoustitron V.1 Max For Live Device** [pdf] User Guide V.1 Max For Live Device, V.1, Max For Live Device, For Live Device, Live Device