Ableton [Win] with BandM8

Ableton Live 12 Suite

Basic concept

The BandM8 plugin is an AI-powered music-to-music jamming and composing tool. **It takes an input of a single instrument part and generates output instrument parts that follow the input part.** An input part can be either in the form of a MIDI track for a single instrument (e.g, keyboard) or an audio track of a single instrument (e.g, guitar). The input part can be either prerecorded or played live, with BandM8 responding dynamically in real time. **All output instrument parts are emitted as MIDI**, and need to be routed in your DAW with corresponding MIDI instrument tracks in order to be played and heard.

This document covers the BandM8 plugin setup and usage in Ableton for Windows.

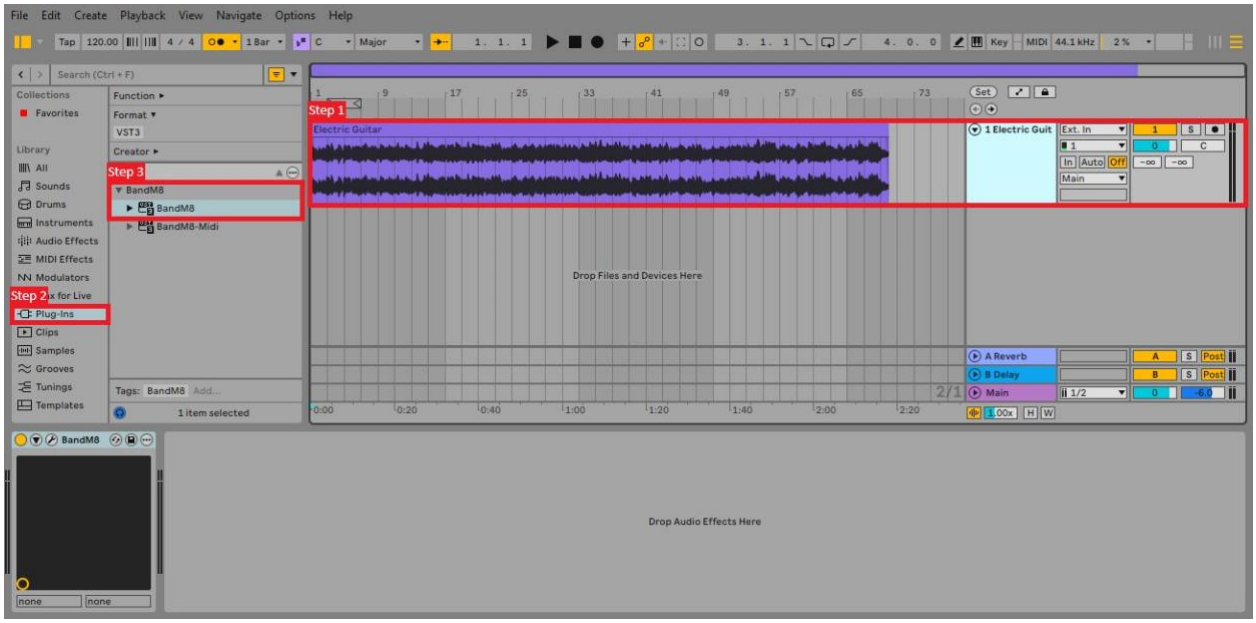
Plugin setup and routing

Input track setup (Audio track)

Step 1 Create a new audio track, or open any audio that you will use as the **Input** track. Select the input track.

Step 2 Select the “Plug-Ins” tab from the Library bar on the left.

Step 3 On the opened menu, find the “BandM8” category, open it, and doubleclick the “BandM8” plugin to insert it into the track.

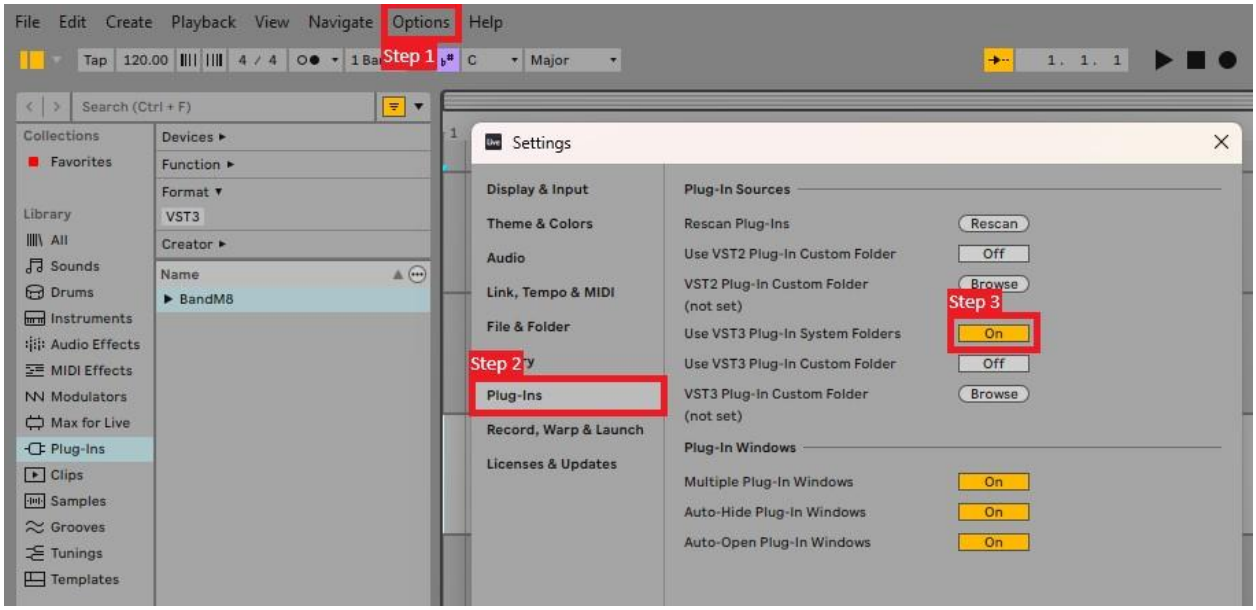


If BandM8 does not appear in the Plug-Ins list:

Step 1 Press “Options” to open the settings menu.

Step 2 Select “Plug-Ins”.

Step 3 Ensure that “Use VST3 Plug-In System Folders” is enabled.



Plugin chain case

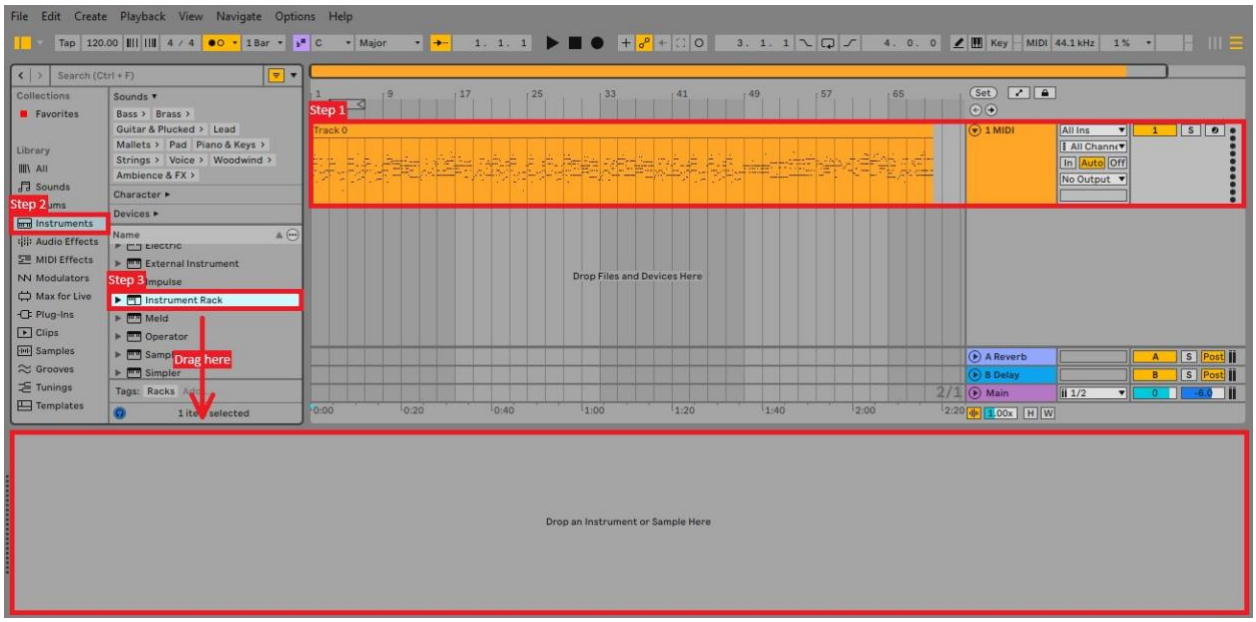
If you are using other plugins on the input track, make sure that the BandM8 plugin is first in the chain, as it requires the cleanest possible input audio (for example, the electric guitar should not be distorted, etc). You can simply drag and reorder the plugins; make sure the BandM8 is the leftmost plugin (see below).

Input track setup (MIDI track)

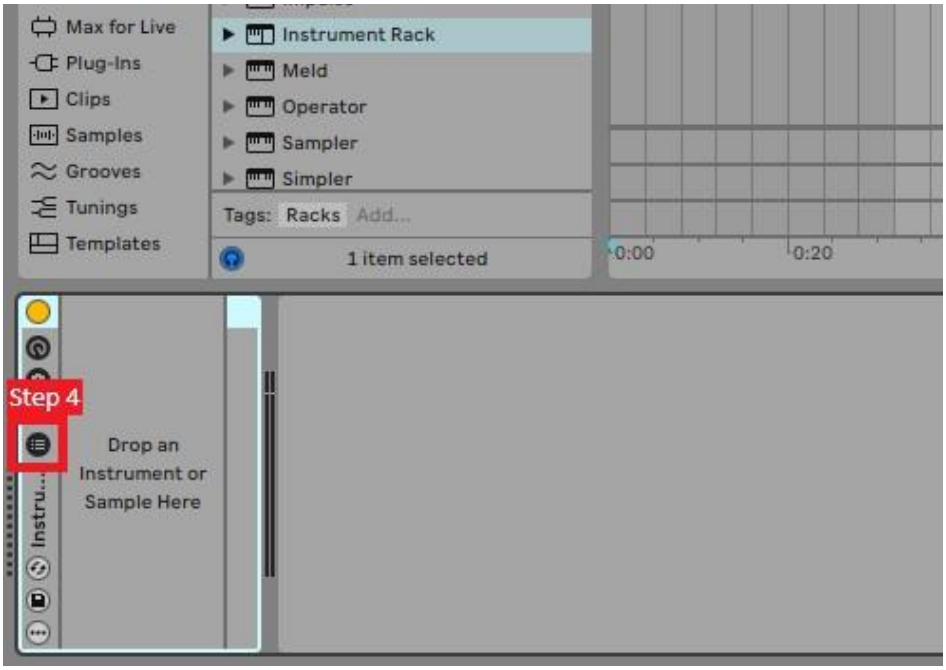
Step 1 Create a new MIDI track that you will use as the **Input** track. Select the input track.

Step 2 Select the “Instruments” tab from the Library bar on the left.

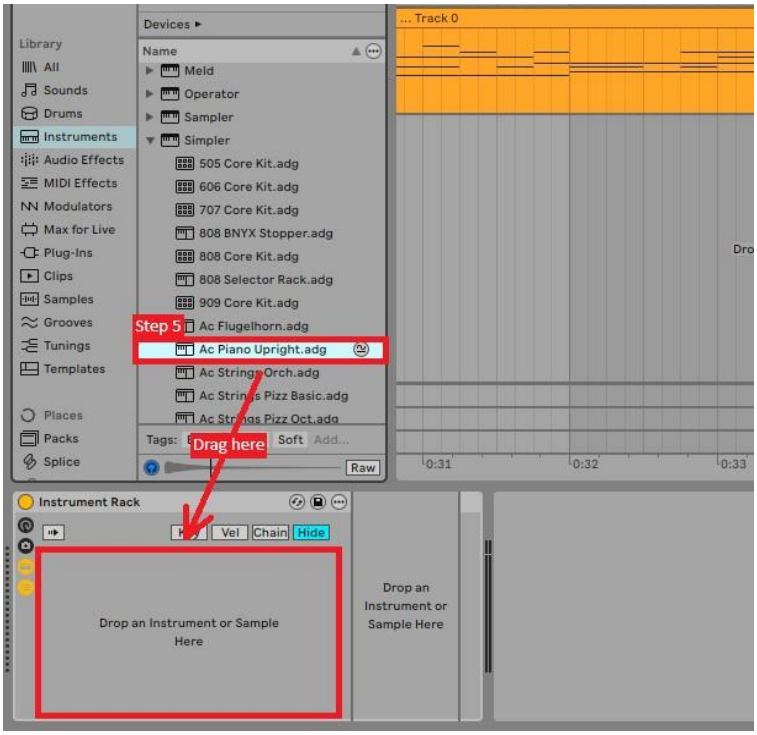
Step 3 On the opened menu, find the “Instrument rack” category and drag it to the instrument area.



Step 4 On the opened window, click on the “List view” to change the Instrument rack view.

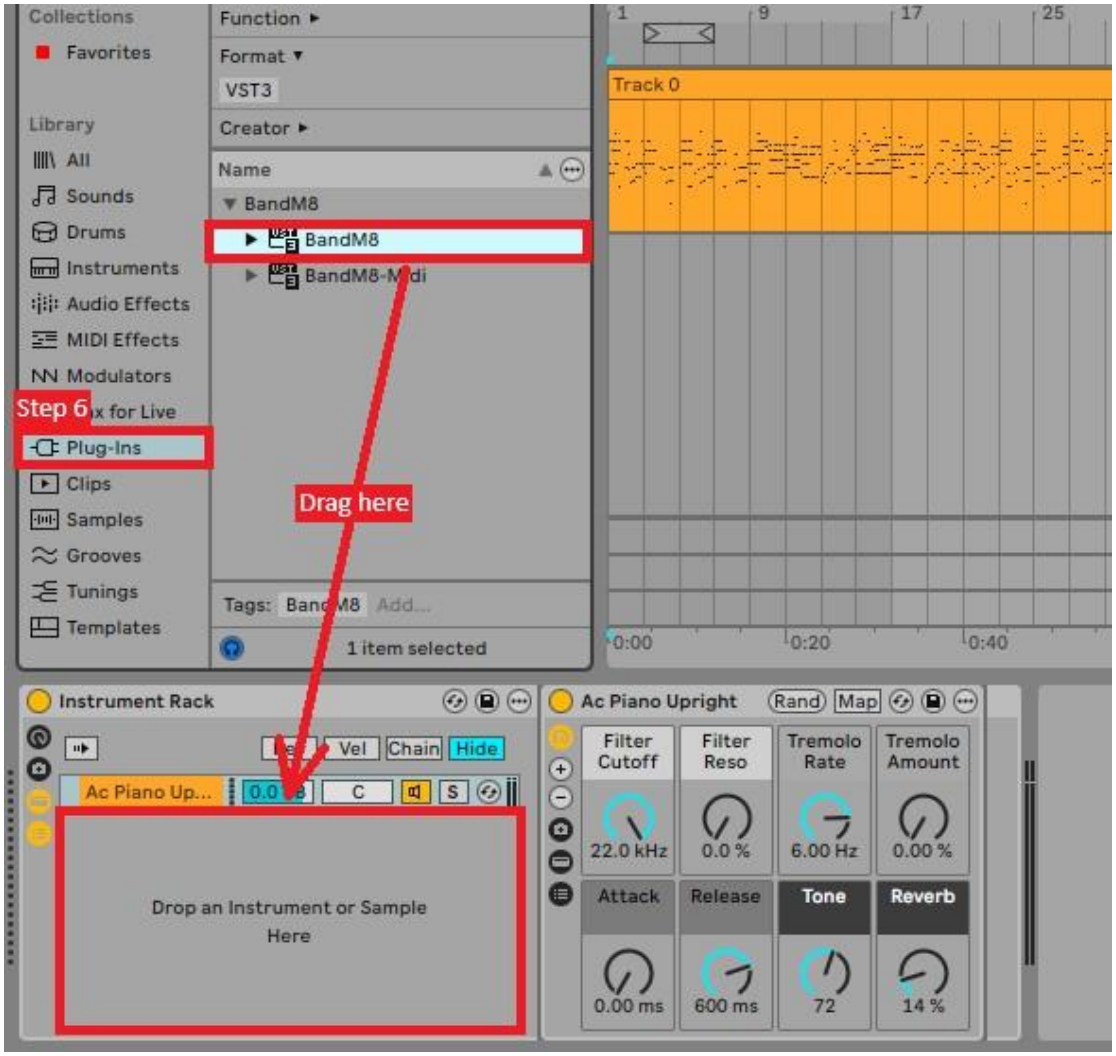


Step 5 Now, as the view is changed, you can go to the instruments list, select any MIDI instrument (e.g. “Ac Piano Upright”), and drag it to the **Instrument Rack**.

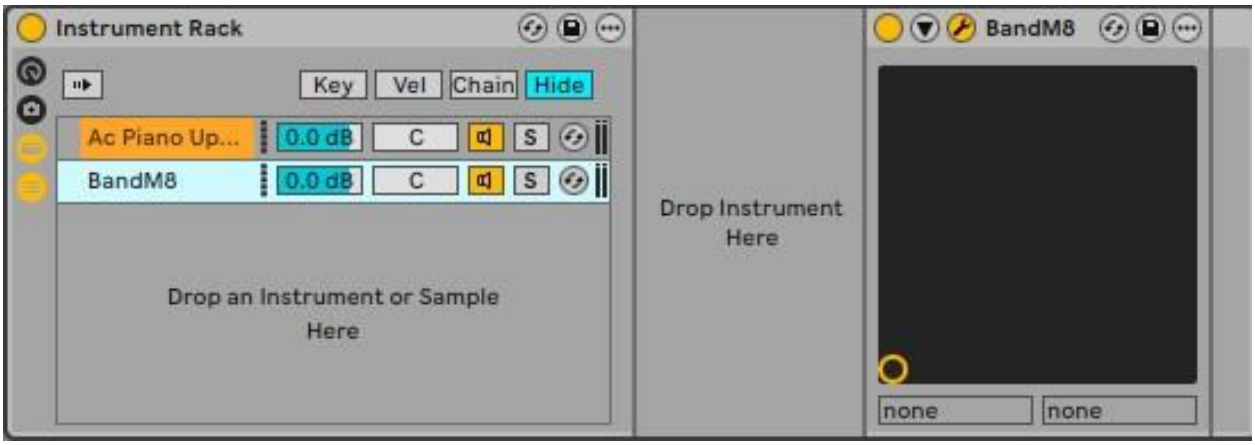


Step 6 After adding the MIDI instrument, you need to add the plugin. Select the “Plug-Ins” tab from the Library bar on the left.

On the opened menu, find the “BandM8” category, open it, select the “BandM8” plugin, and drag it into the **Instruments Rack**.



After creating the Instrument rack, you will have this kind of view.



*MIDI Keyboard as an input

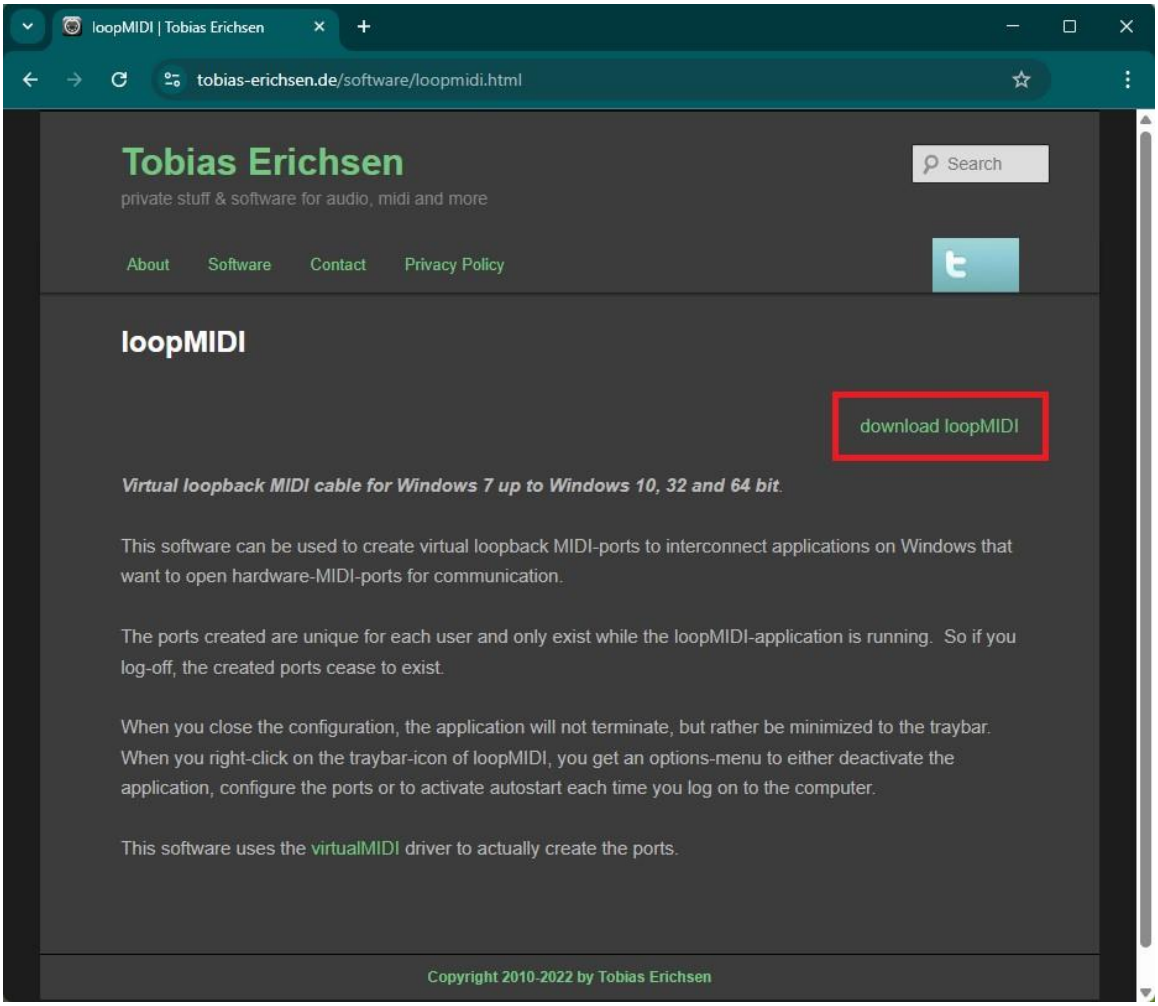
If you are using the MIDI keyboard as an input device, you need to select your MIDI keyboard as a MIDI input. Click the “All Ins” dropdown on the input track and **select your MIDI keyboard from the list**. This is necessary because, by default, it is set to All Ins and will conflict with the MIDI data the plugin emits.

Creating and routing output instrument tracks

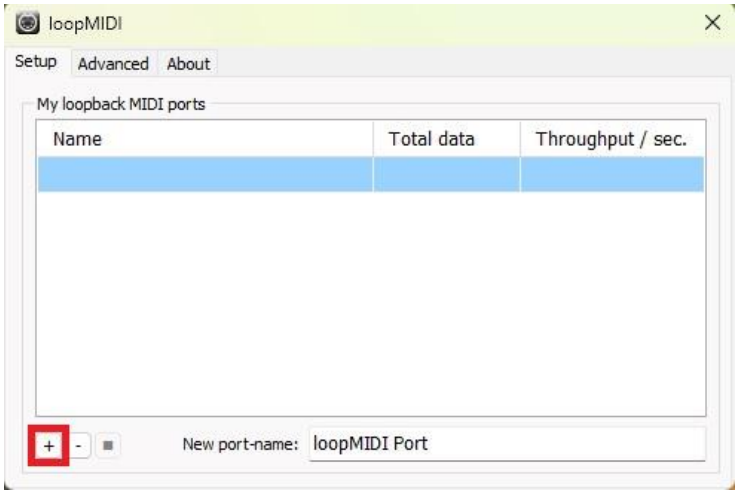
As noted above in the Basic concept section, the BandM8 plugin emits output instrument parts in MIDI instead of audio. So, for the output instruments to be heard, they must be routed to the MIDI tracks with corresponding instruments that would play the sound according to the MIDI notes.

Setting up a virtual MIDI port

In Ableton Live on Windows, routing MIDI between plugins and tracks requires the use of a virtual MIDI port. For this purpose, we recommend using loopMIDI, which allows you to create virtual MIDI ports via a simple user interface.



After installing loopMIDI, launch the application and press “+” to add a new virtual MIDI port:

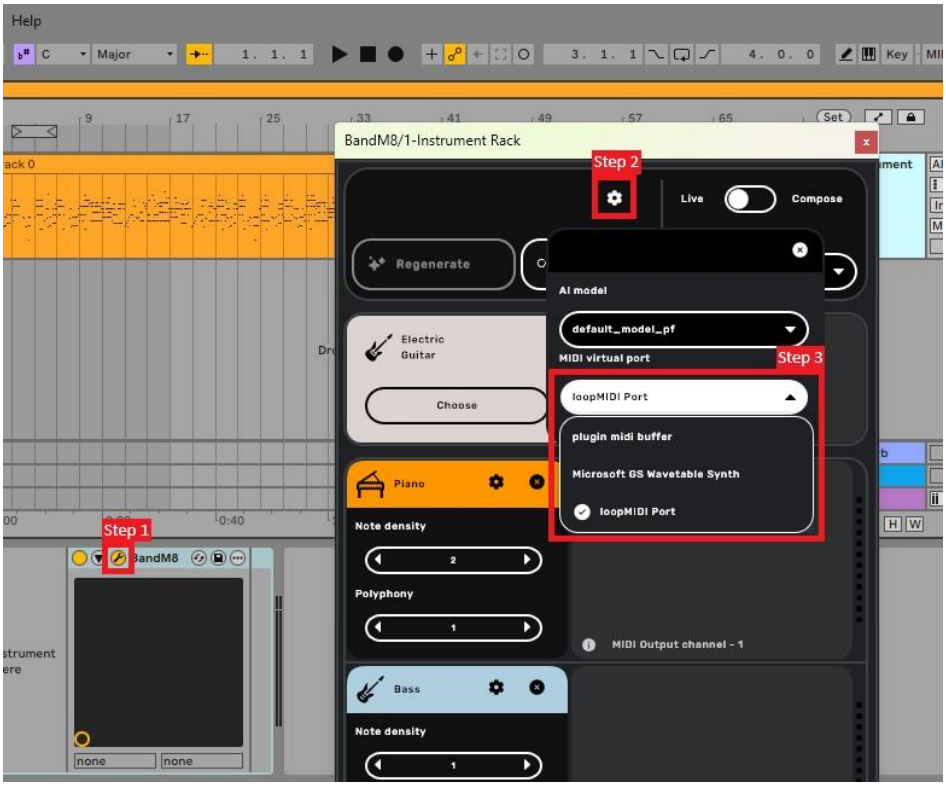


Selecting the virtual MIDI port in BandM8

Step 1 Open the BandM8 plugin window.

Step 2 Click the Gear button at the top of the plugin interface.

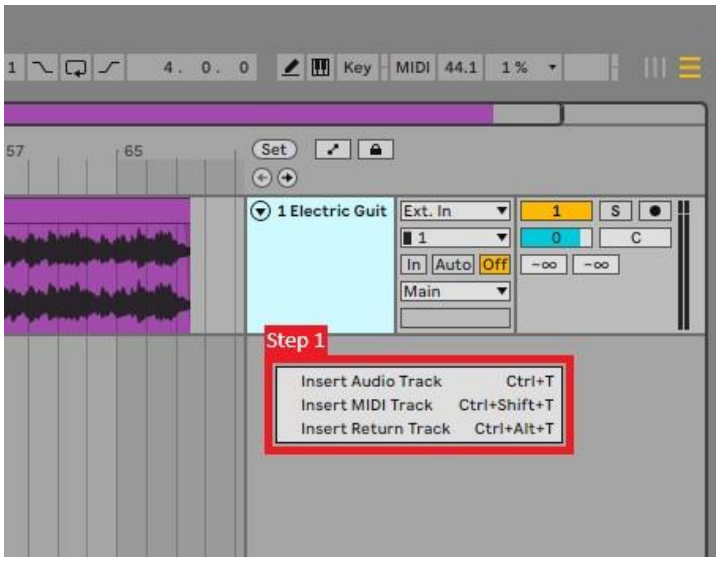
Step 3 In the “MIDI virtual port” dropdown menu, select the created “loopMIDI port”.



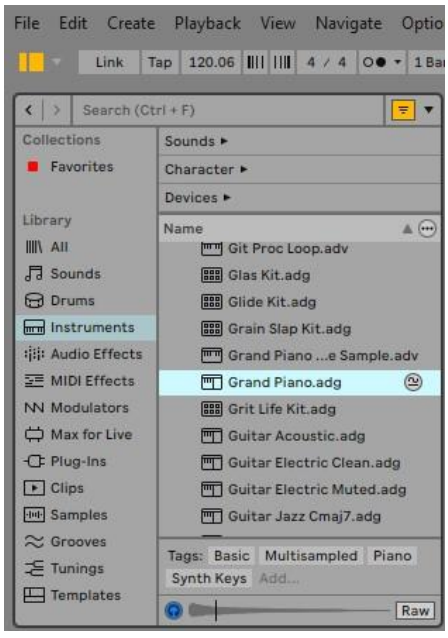
Setting up output instrument tracks

In this section, you will create and set up output instrument tracks for additional instruments. Repeat this process for each output instrument you want to use.

Step 1 Create a MIDI track. To do so, right-click on the right panel and select “Insert MIDI Track”.



To produce sound, the MIDI track requires an instrument. Select the “Instruments” tab from the Library bar on the left and select an instrument, a Grand Piano in this case (see below), and put it on the MIDI track.



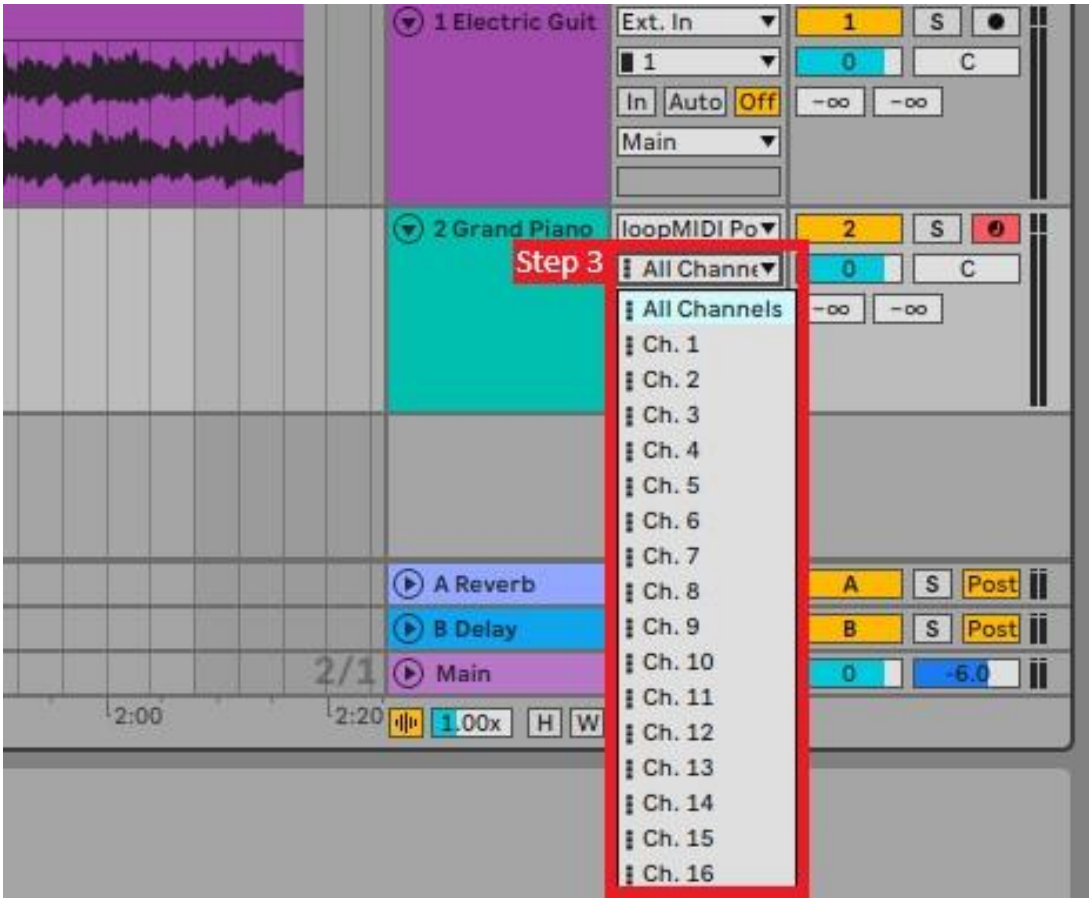
Step 2 (**Live mode only**): The output MIDI track must be routed to BandM8 to receive the sound from the MIDI. The routing is done in two steps: first, select the BandM8 MIDI input by clicking the “All Ins” dropdown and selecting “**loopMIDI Port**” from the list.

* Make sure the **virtual port** selected in your track settings is the same as the one used in the plugin settings – this ensures proper MIDI routing and playback.

Step 3 (**Live mode only**): Select an appropriate MIDI channel. BandM8 emits MIDI for different output instruments on different MIDI channels. By default their values are:

- Piano is on MIDI channel 1
- Organ is on MIDI channel 2
- Strings are on MIDI channel 3
- Drums are on MIDI channel 4
- Acoustic guitar is on MIDI channel 5
- Electric guitar is on MIDI channel 6
- Bass is on MIDI channel 7
- Overdriven guitar is on MIDI channel 8 Lead is on
- MIDI channel 9.

To select a MIDI channel, click the “All channels” dropdown and select the “Ch. 1” (in this case, for the piano output track).



BandM8 Usage

Now, we will describe the BandM8 plugin’s UI and usage.

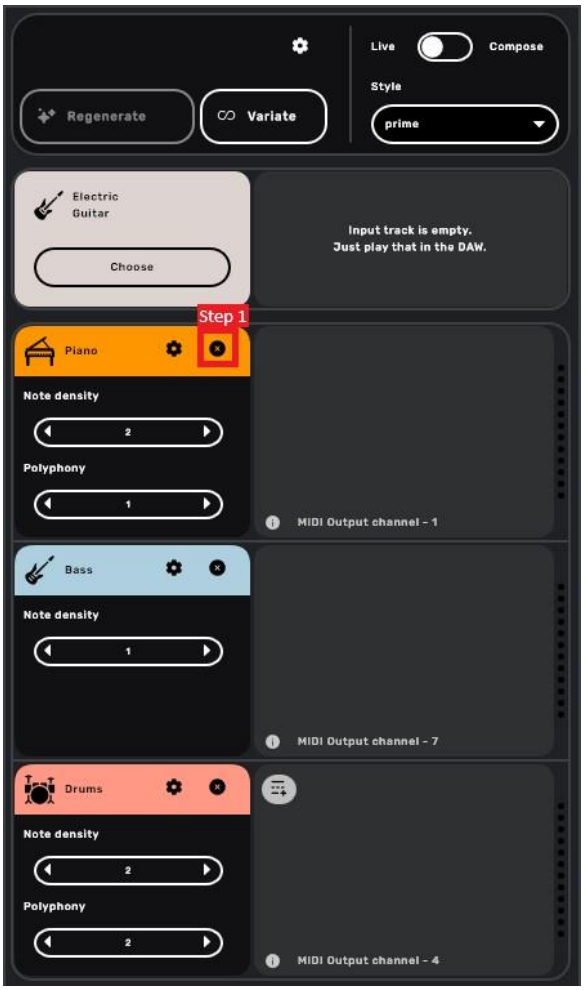
Input instrument setting

Select the instrument you are using as your input. Electric Guitar is the default setting. To change the Input instrument, press the “Choose” button above the uppermost instrument tab and select a different instrument.

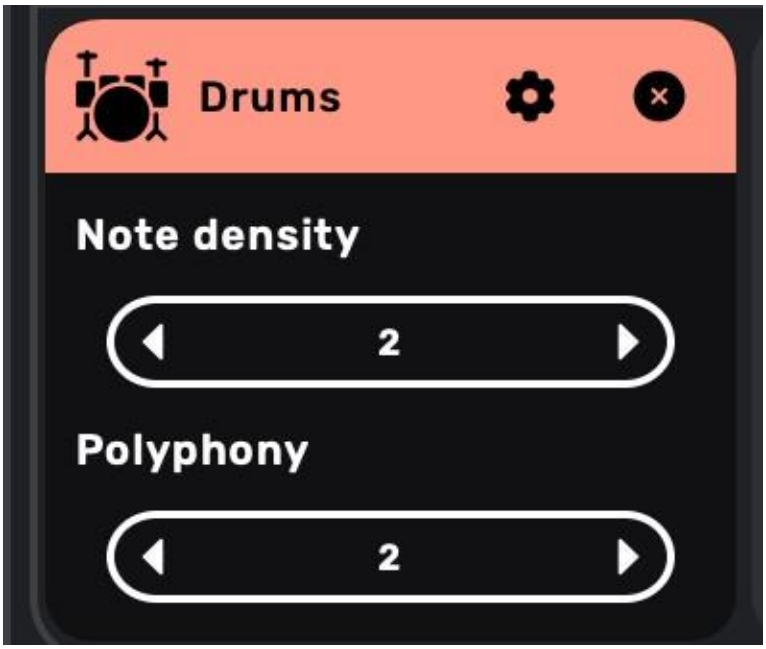
Output instrument settings

The default output instruments are piano, bass, and drums. To change them: Step 1 Click the “X” button to delete the output instrument tab. Step 2 Click “**Choose**” and select the new output instrument.

Up to three simultaneous output instruments are available.



Every instrument has its own basic settings, which affect the generation characteristics.



Note density

This parameter affects the number of notes generated per bar, with higher settings generating more notes and busier parts.

Polyphony

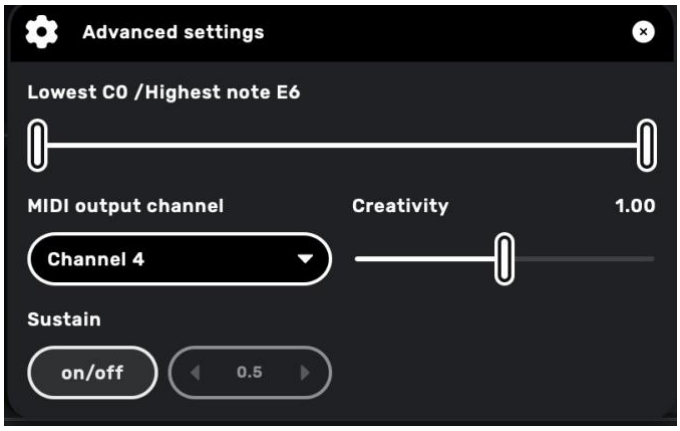
This parameter affects the number of generated notes played simultaneously. The ”Solo” parameter plays (mostly) single notes. The higher the “Polyphony” parameter, the higher the probability of getting chords with more notes.

Advanced output instrument settings

Press the Gear icon on the output instrument tab to open the Advanced settings pop-up.

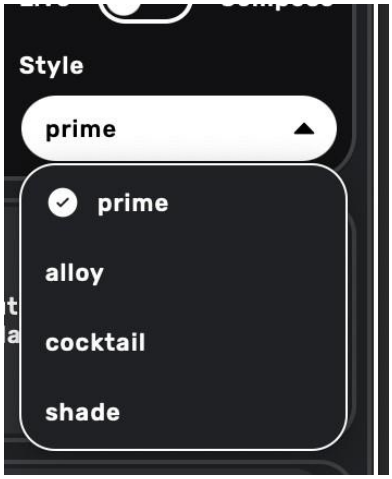
- At the top of the window, a **MIDI note range slider is located**. This slider sets the lowest and the highest possible MIDI note that can be generated for this output instrument. You can adjust it if you would like to shift the notes that are being generated up or down.
- In the middle row of the window, a **MIDI output channel selector is located**. It allows you to override the mapping of output instruments on MIDI channels. The default mapping is detailed in the **Creating and routing output instrument tracks** section above**.**

- Next to the MIDI output channel selector, there is a **Creativity** slider**.** The higher the Creativity, the more **experimental and free** parts are generated for this output instrument. The lower the Creativity, the more **stable and conservative** parts are generated for this output instrument.
- At the bottom of the window, there is a **Sustain** control. When activated, the generated MIDI parts are **periodically sustained, like pressing a sustain pedal on a piano**. It can be beneficial for instruments like the piano and the guitar. When the Sustain is set to “on”, the selector on the right of the “on-off” button regulates the length of each sustained note: the shortest on the “0.5”, the longest on the “1.0”.



Style selection

4 distinct styles react differently to the type of musical input. Try them out.



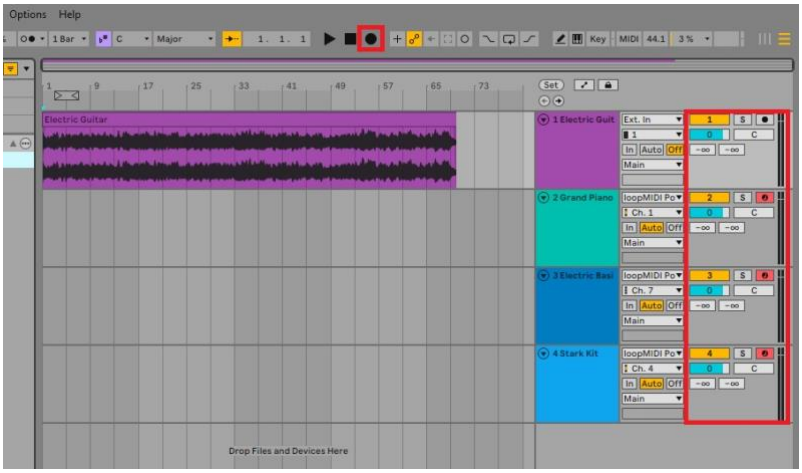
Live mode

BandM8 has two modes: **Live** and **Compose**. This section outlines the usage of Live mode. This mode is enabled by default.

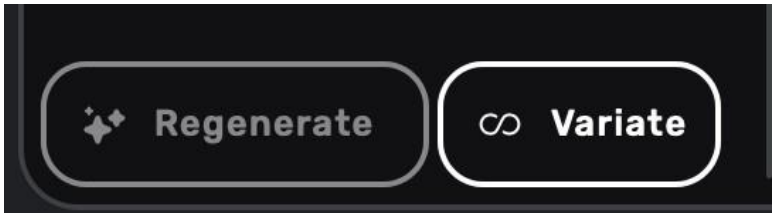
When in Live mode, BandM8 continuously emits MIDI notes for the output instruments in real time, while the input is playing. The input part can either be prerecorded or played live. There are several prerequisites for the input part:

- **The input part can be either in the form of a MIDI track of a single instrument (e.g, piano), or an audio track of a single instrument (e.g, guitar)**
- In the case of an audio track, the instrument's sound should be as clean and dry as possible (undistorted guitar, etc)
- **The input part should be in 4/4 time signature and played/recorded to the click**
- It is advised to structure the input part around a repeating riff or chord progression that is 8 bars long. Stay within the same key for best results, although strictly repeating the riff is not required.

In Live mode, BandM8 emits the MIDI continuously, so in order not to lose the generation, the output MIDI parts should be recorded on the output MIDI tracks in the DAW. Each output MIDI track must be armed for recording. To do this, hold Ctrl and click the Record Arm button (the rectangular button with a dot) on each track, as shown below. The button should turn red. After that, you will need to press the "Record" button in the top center of the screen before each generation. If you are playing the input live, arm the input track for recording as well. Do not arm the input track if you are using a prerecorded input.



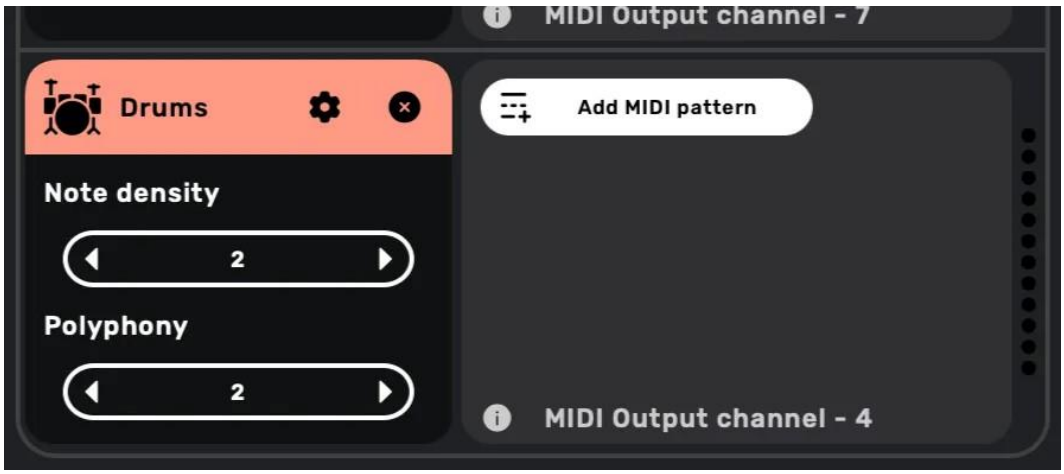
After you've pressed the Record button (see above), **start playing** the live input or wait as your prerecorded input part plays. **The generation starts automatically after approximately** 12 to 16 bars of playing, depending on your computer. The output instruments will kick in and accompany the input.



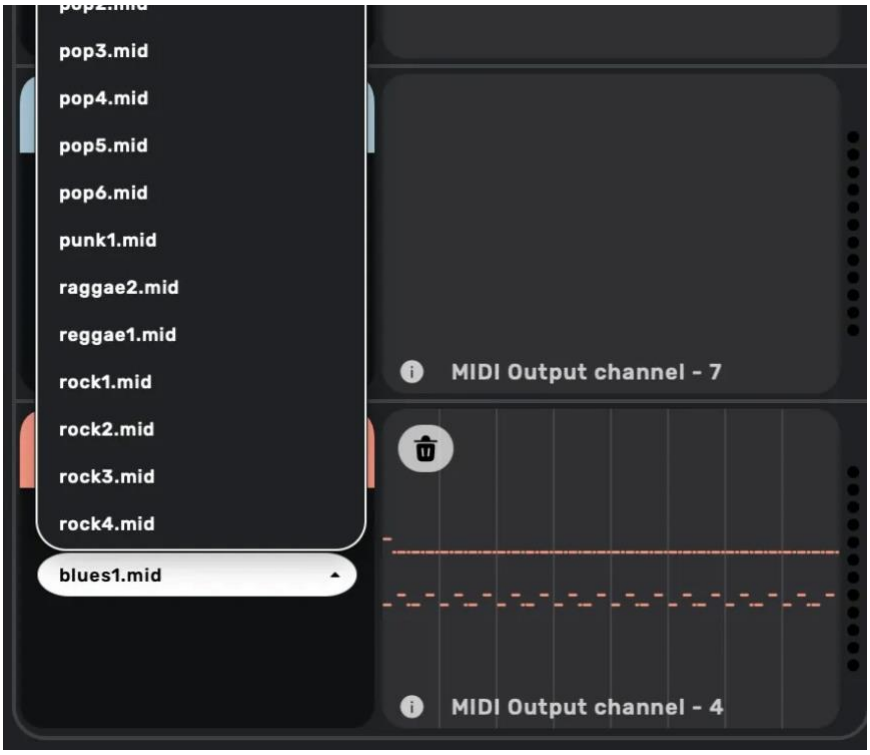
The first generation of outputs will loop every 8 bars unless you activate the **Regenerate** or **Variate** buttons**.**

- **Regenerate** can create a new 8-bar loop based on the input, replacing the previous generation. Tip: Use Regenerate if you do not like the initial output or simply want a radical change.
- The **Variate** feature introduces smooth, gradual changes within the same generation while also reacting to the input in real time, evolving the loop into a responsive interplay with the player. To activate it, press the Variate button. To deactivate it, press the Variate button again.

Drum patterns



By pressing the button “Add MIDI pattern”, you’ll see a drop-down list of drum patterns. Select one to add a drum loop instantly, so you don’t need to play along with a metronome. This also lets you explore different drum styles to accompany your performance in **Live** mode.



If you choose not to use a drum loop, you can switch back to the default view, and while playing in **Live** mode, the plugin will automatically generate drum parts for you.

Compose mode

When in Compose mode, BandM8 generates **several start-to-end accompanying parts for an input part of a set length.** It doesn’t emit output MIDI parts on the fly — instead, it generates multiple complete takes of **MIDI parts** that the user can **drag and drop from the UI into the DAW**.

The Style, input, and output instrument settings are identical to those in Live mode (see above).

To switch the plugin to Compose mode, flip the switch from Live to Compose.

Note: In Compose, you don't need to set up the MIDI In channels for output tracks, as MIDI data isn't emitted from the plugin. You should instead manually drag and drop MIDI parts.

There are several prerequisites for the input part:

- **The input part can be either in the form of a MIDI track of a single instrument (e.g, piano), or an audio track of a single instrument (e.g, guitar)**
- In case of an audio track, the instrument sound should be as clean and dry as possible (undistorted guitar, etc)
- **The input part should be in 4/4 time signature and played/recorded to the click**

In contrast to the Live mode, **the input part doesn't have to follow a repeating 8 bar structure. In Compose mode, the input part can have a longer form, including verses, choruses, etc.** It is possible, but impractical, to play the input part live in Compose mode, as the plugin won't react to it in real time. **Using a prerecorded input part is advised.**

"Hearing" the input

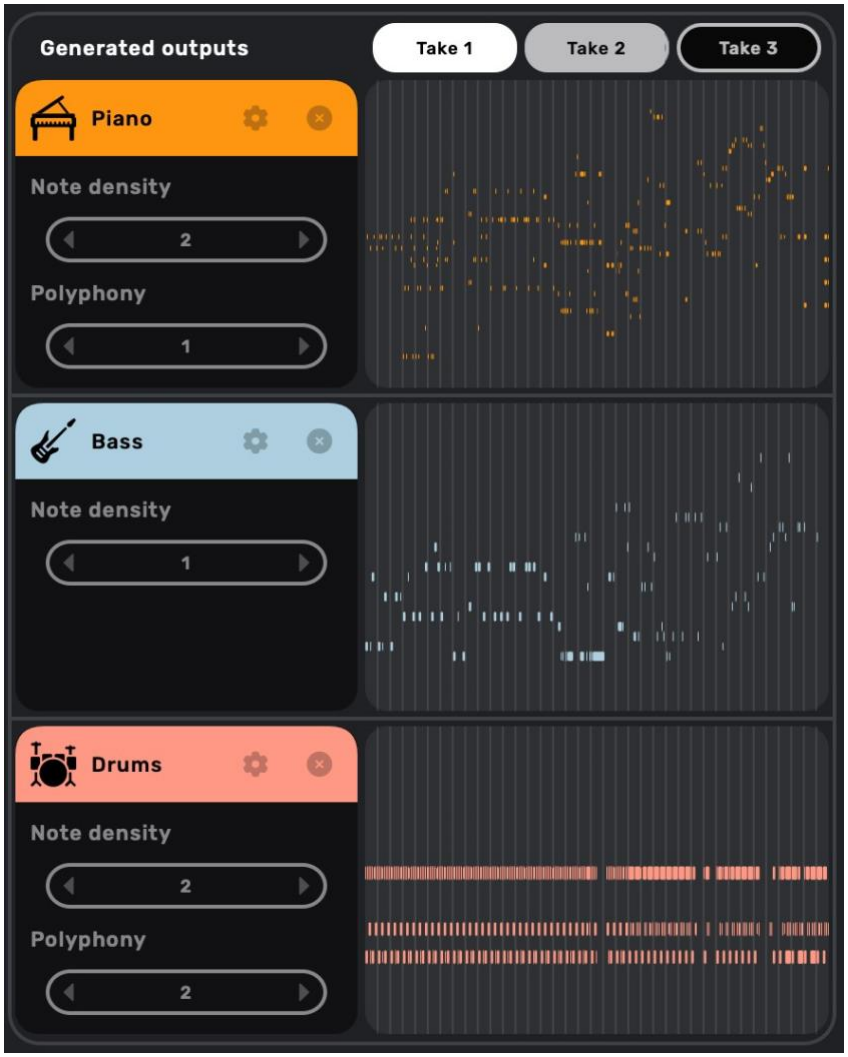
For Compose mode to work, the plugin first needs to "**hear"** the input from start to finish. For the plugin to **hear** the input, start the DAW playback at the beginning of the input, and wait until it plays until the end of the input in real time. After that, stop playback. As the plugin **hears** the input, **it will visualize it** on the input instrument tab (see below) in a form resembling a piano roll. The visualization starts after some delay (approximately 8 bars).

To replace a previously recorded input, use the "trash" button on the input instrument bar and repeat the process described above.

Generating the arrangement

After you've let the plugin "hear" the input part, press the "Generate" button to generate the Takes.

You will have **three Takes** for each output instrument. Each Take is independent from one another (but each one follows the same input). The Take bars on top of the plugin serve as progress bars, indicating the generation progress. You can click them to switch between Takes.

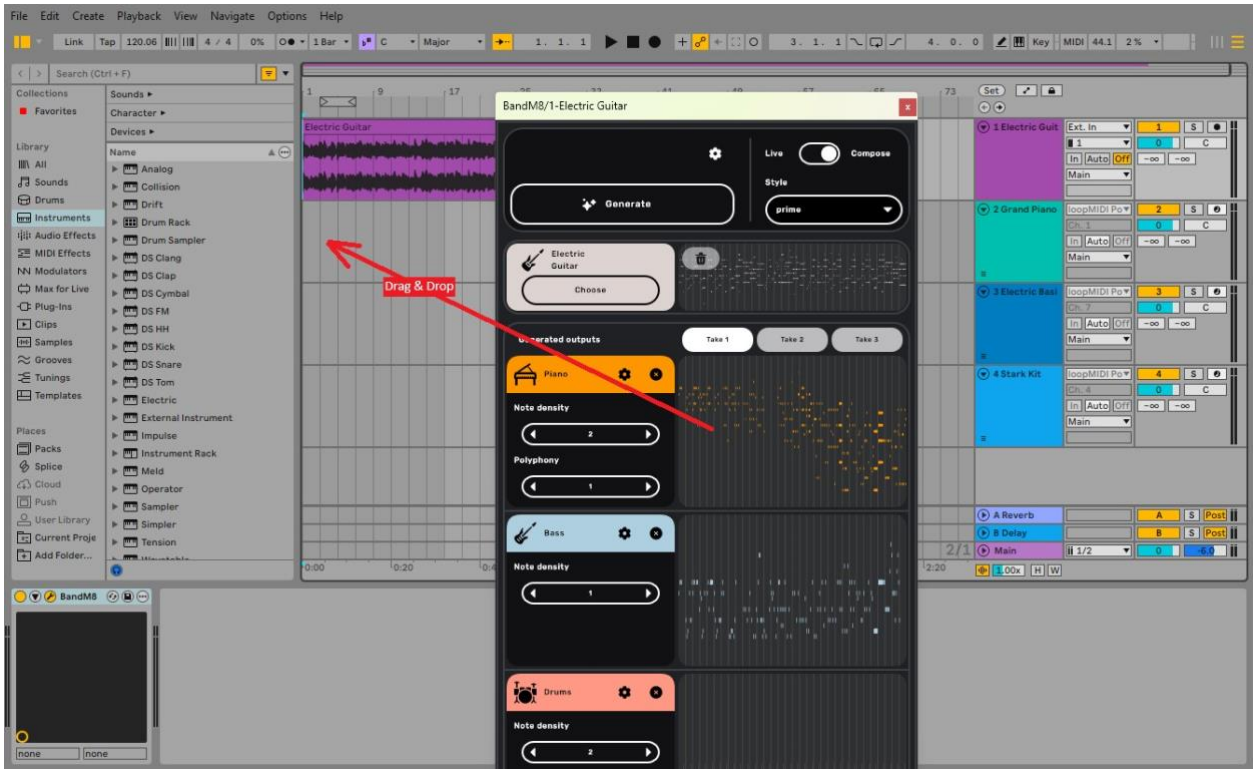


Each output instrument tab now displays generated MIDI parts for each Take. To listen to the generated parts, drag and drop the MIDI outputs onto the corresponding output instrument

MIDI tracks that you set up earlier in your DAW. Make sure the beginning of each part is aligned with the beginning of the input part. To hear the results, just play back the project.

You can press the “Generate” button again to generate further Takes for the same input, or you can change the input as it is described in the **“Hearing” the input** section above.

Note that MIDI tracks in the DAW should have the corresponding instruments on them in order for the MIDI outputs to produce sound.



You may edit the generated MIDI outputs in the DAW. Mix and match different instruments from different takes and/or edit specific sections to refine and craft unique results tailored to your vision.

Enjoy!