Logic [MacOS] with BandM8

Logic Pro 11

Basic concept

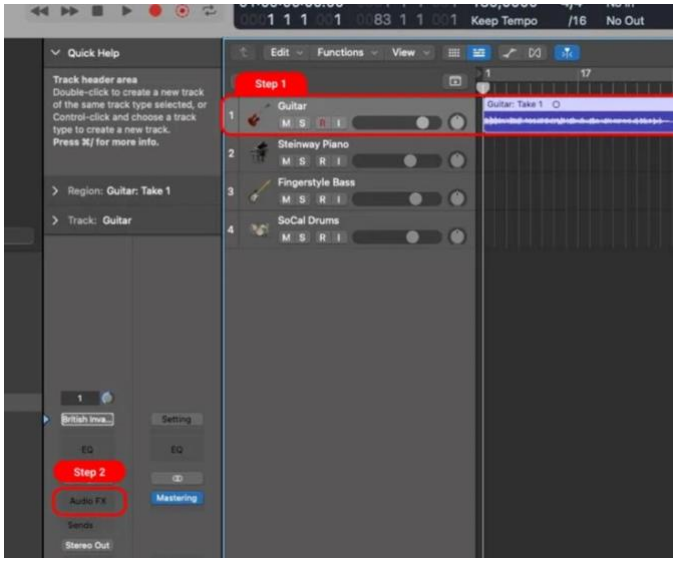
The BandM8 plugin is an AI-powered music-to-music jamming and composing tool. It takes an input of a single instrument part and generates output instrument parts that follow the input part. An input part can be either in the form of a MIDI track for a single instrument (e.g, piano) or an audio track 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 to be played and heard.
This document covers the BandM8 plugin setup and usage in Logic for MacOS.

Plugin setup and routing

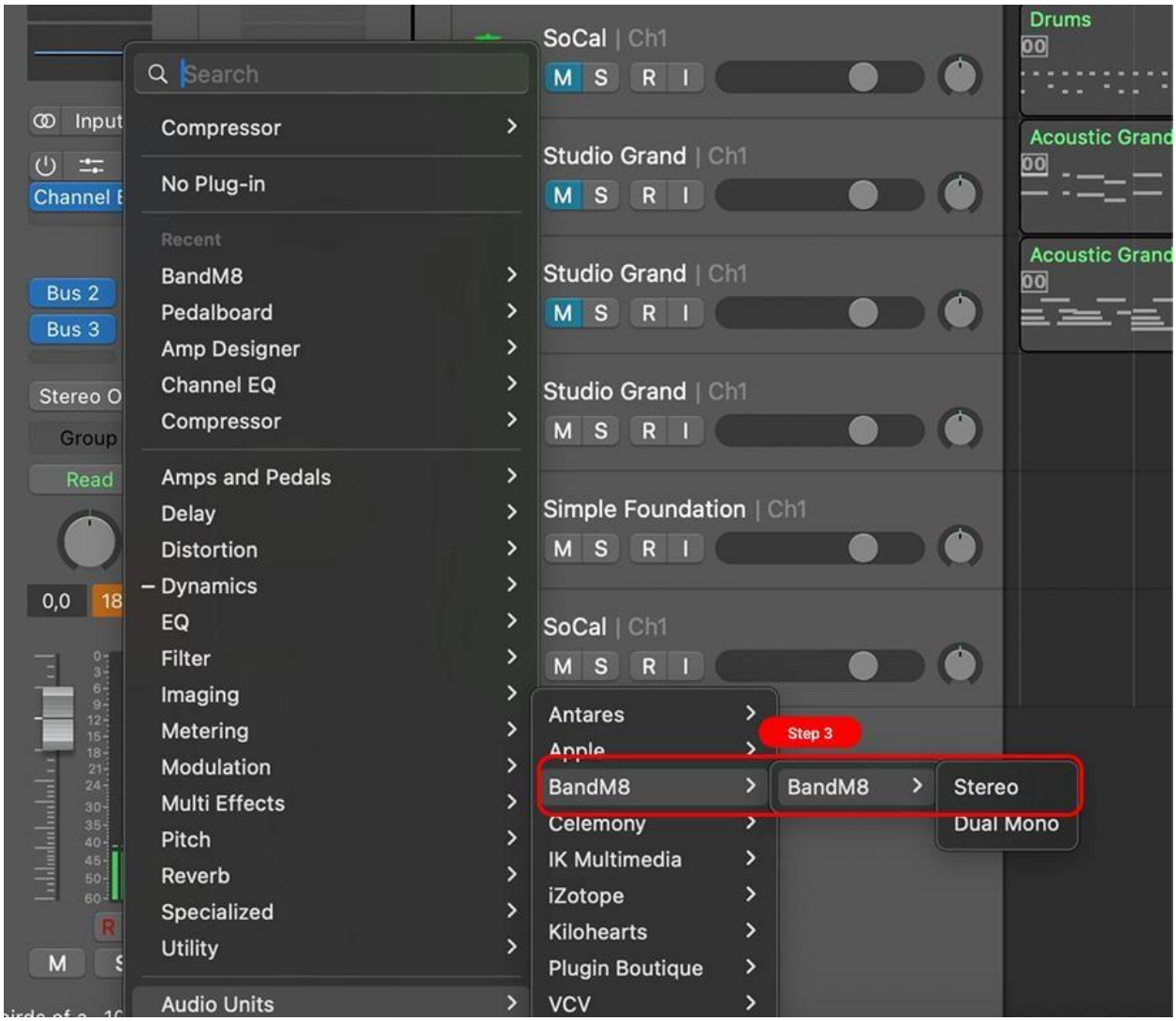
Input track setup

Step 1: Create a new MIDI or audio track that you will use as **Input** track.
Step 2: Select

- “Audio FX” tab from the instrument tool bar (for Audio input).
- “MIDI FX” tab from the instrument tool bar (for MIDI input).

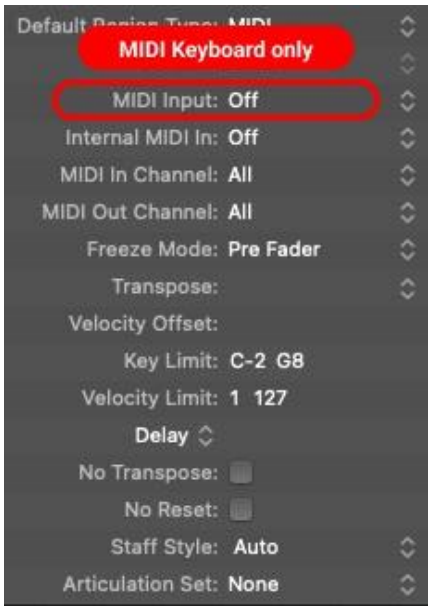


Step 3: In “Audio Units” → “**BandM8**” → select the “BandM8” plug-in for Audio input (mono/stereo does not matter) and the “BandM8 Midi” plug-in for MIDI input. Both plugins are identical in the UI and both are referred to as BandM8.



*MIDI Keyboard case

If you are using a MIDI keyboard click the “MIDI In Port” and select your MIDI keyboard.



Plugin chain case

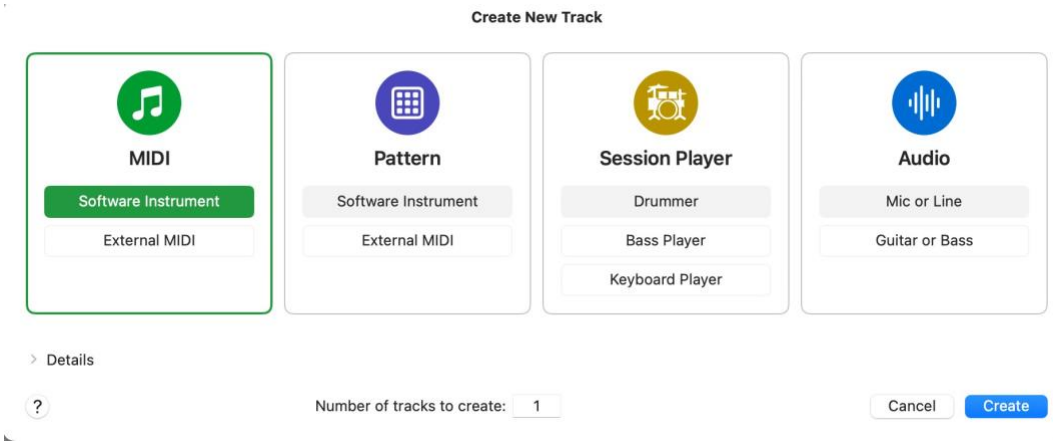
If you are using other plugins on the input track, make sure that the BandM8 plugin is first in the chain, as it requires the cleanest possible input audio (for example, the electric guitar should not be distorted, etc). You can simply drag and reorder the plugins, make sure the BandM8 is on top of the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

Creating and routing output instrument tracks

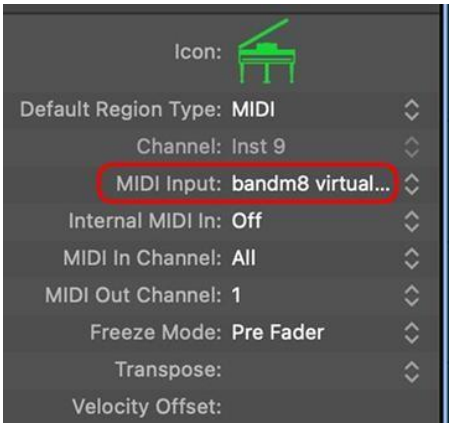
As noted above in the Basic concept section, the BandM8 plugin emits output instrument parts in MIDI instead of audio. Therefore, for the output instruments to be heard, they must be routed to the MIDI tracks with corresponding instruments that play the sound according to the MIDI notes.

In this step, you need to create and set up an output instrument track, for the second and more instruments, repeat the process.

Step 1: Create a new track. To do so, click the “Plus” button above the track headers and choose “Software Instrument” button. Change the instrument to your liking Classic Electric Piano by default).



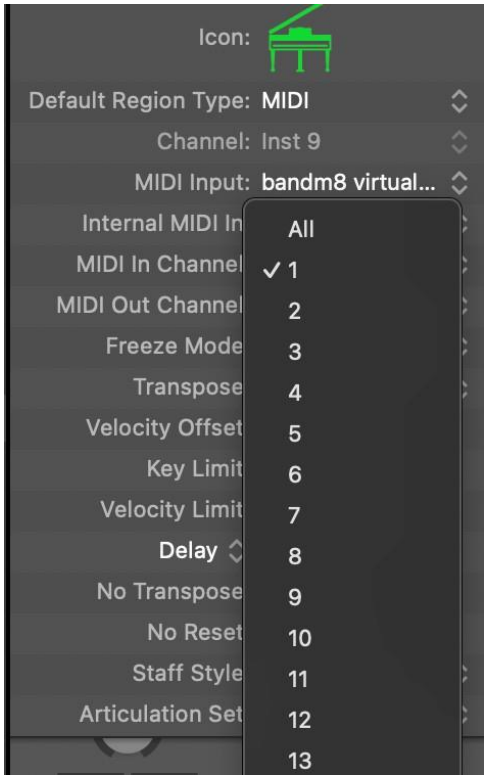
Step 2 Live mode only): Now, the output MIDI track needs to be routed to BandM8 in order to receive and sound the MIDI from it. The routing is done in two steps: first, select the BandM8 MIDI input and click on the “bandm8 virtual port”.



Now select an appropriate MIDI channel. BandM8 emits MIDI for different output instruments on different MIDI channels:

- 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.

Select “MIDI In Channel” and click on “Channel 1” for piano.



BandM8 Usage

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.

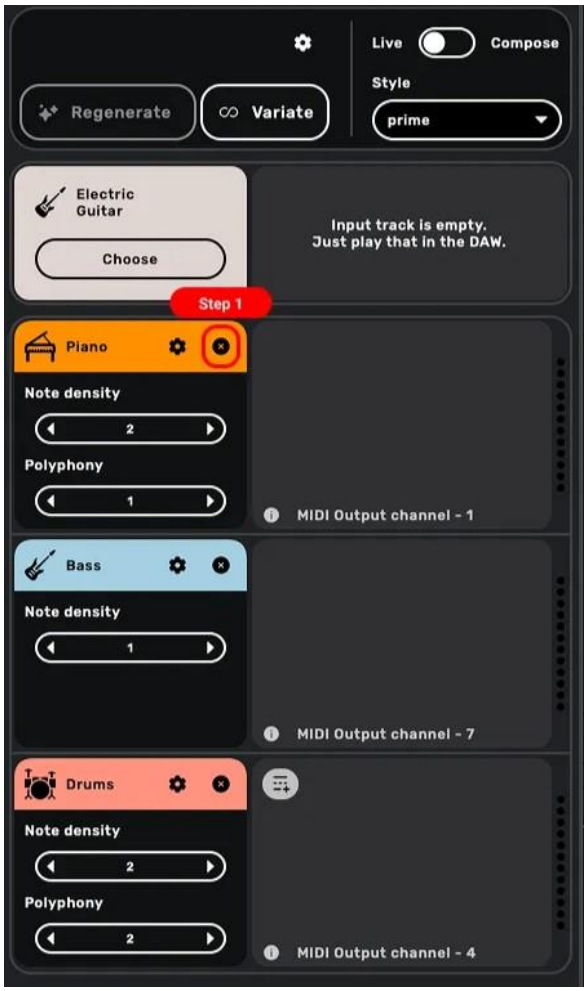
Output instrument settings

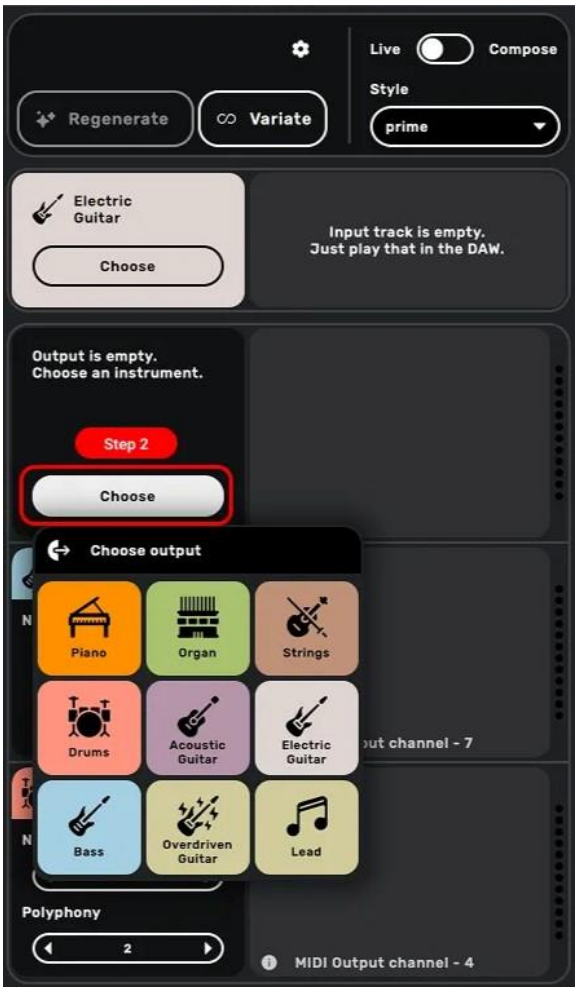
The default output instruments are piano, bass, and drums. To change them:

Step 1: Click the "X" button to delete the output instrument tab.

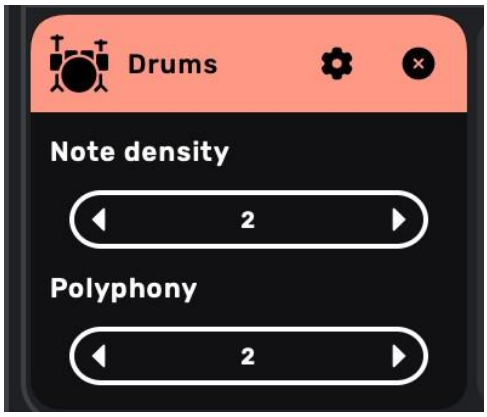
Step 2: Click "**Choose**" and select the new output instrument.

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 producing more notes and busier parts.

Polyphony:

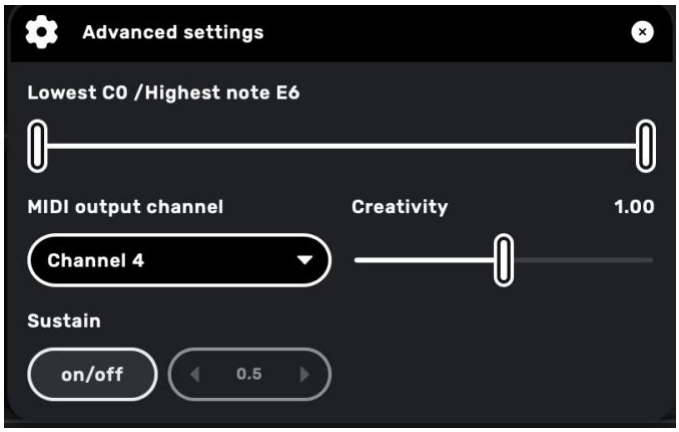
This parameter affects the number of generated notes played simultaneously. The ”Solo” parameter plays (mostly) single notes. The higher the “Polyphony” parameter, the higher the probability of getting chords with more notes.

Advanced output instrument settings

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

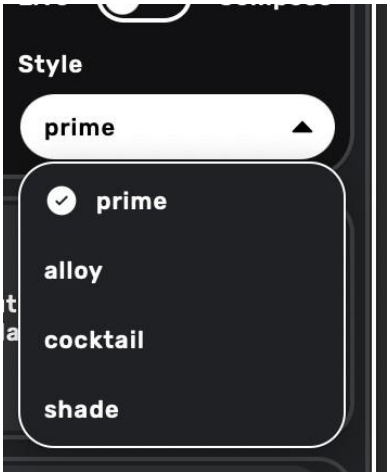
- At the top of the window, a **MIDI note range slider is located**. This slider sets the lowest and the highest possible MIDI note that can be generated for this output instrument. You can adjust it if you would like to shift the notes that are being generated up or down.
- In the middle row of the 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 it is activated, the generated MIDI parts are **periodically sustained, like pressing a sustain pedal on a piano**. It can be beneficial for instruments like piano and guitar. When the Sustain 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.

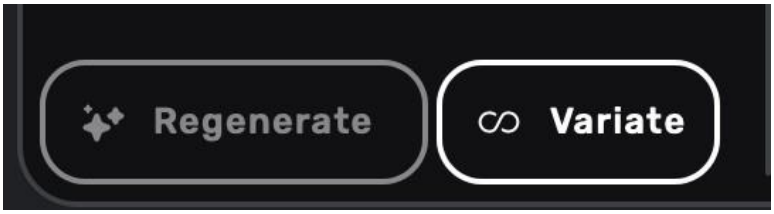
There are several prerequisites for the input part:

- **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/idea 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 MIDI continuously, so to prevent losing the generation, the output MIDI parts should be recorded on the output MIDI tracks in the DAW. Each output MIDI track should be armed for recording (press the R button as shown below for each track; it should be 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.

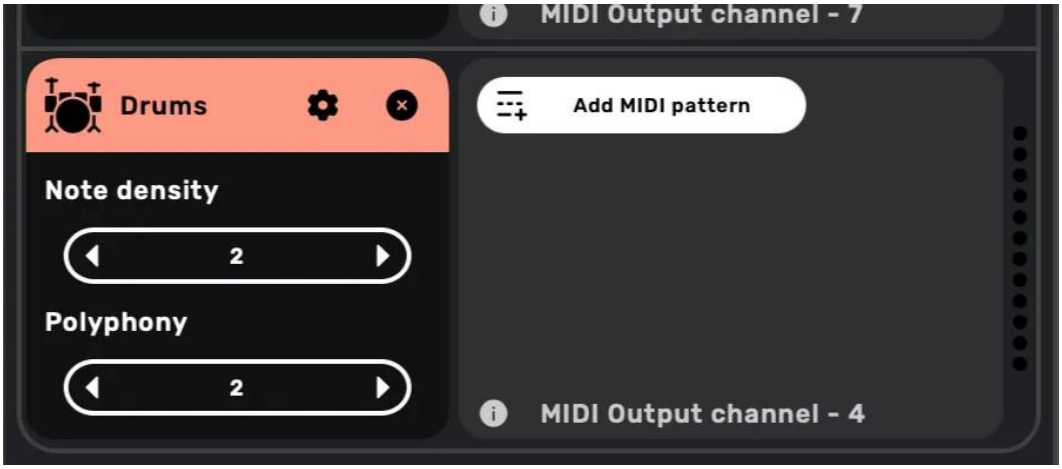
After you've pressed the Record button, **start playing** the live input or just wait as your prerecorded input part plays. **The generation starts automatically after approximately** 12 to 16 bars of playing, depending on your computer. The output instruments will kick in and accompany the input.

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

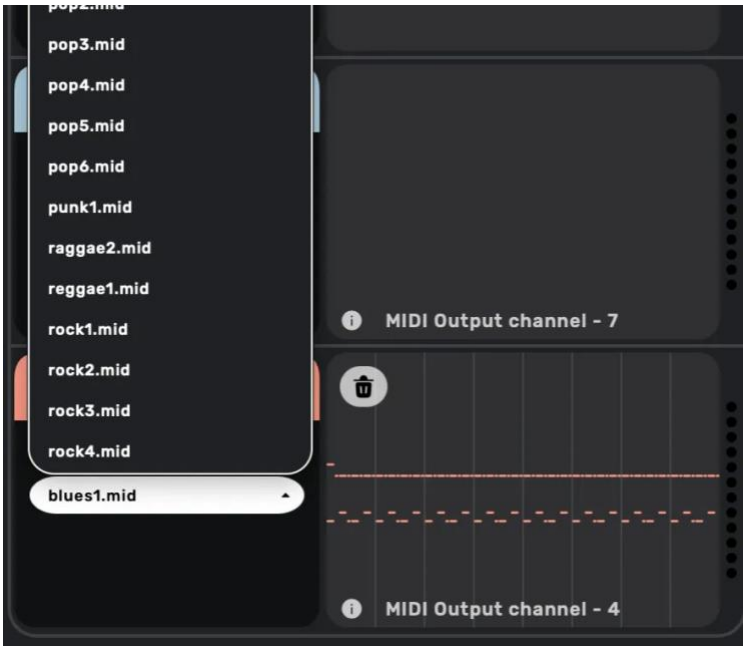


- **Regenerate** can create a new 8-bar loop based on the input, replacing the previous generation. Tip: Use Regenerate if you do not like the initial output or simply want a radical change.
- The **Variate** feature introduces smooth, gradual changes within the same generation while also reacting to 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 (loops):



By pressing “Add MIDI pattern” button, 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.** This process is **not audible in real-time**, as in Live mode. And 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 instruments settings are identical to the 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 clips.

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

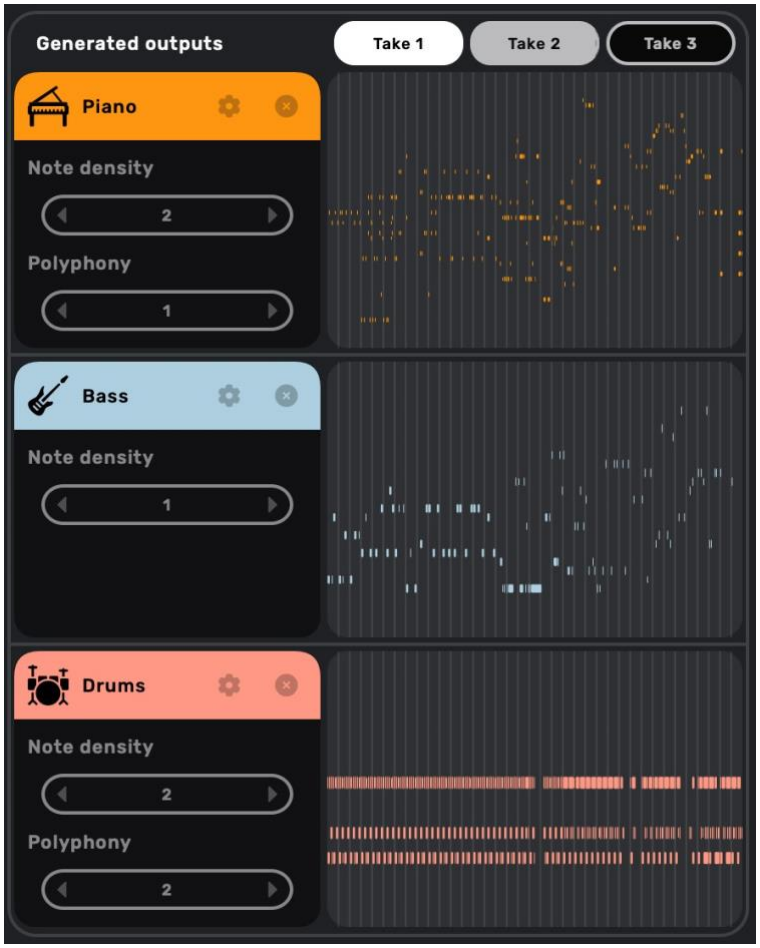
For Compose mode to work, the plugin first needs to "**hear"** the input from start to finish. For the plugin to "**hear"** the input, start the DAW playback at the beginning of the input, and wait until it plays until the end of the input in real time. After that, stop playback. As the plugin **hears** the input, **it will visualize it** on the input instrument tab (see below) in the form of 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

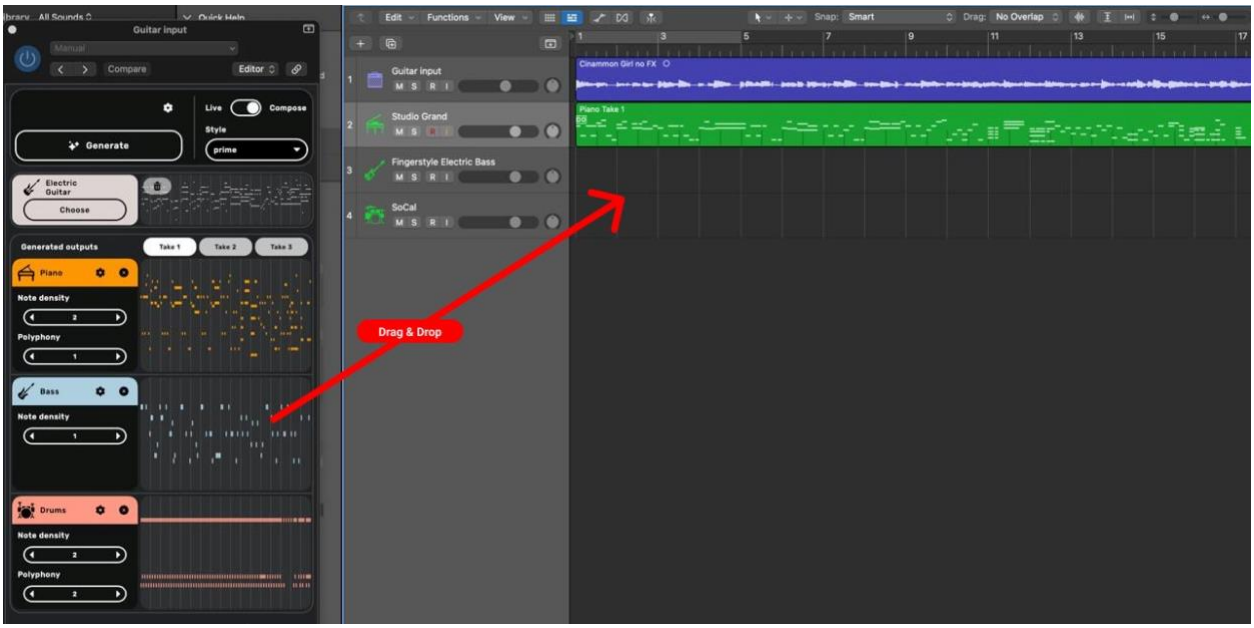
After you've let the plugin "hear" the input part, press the "Generate" button to generate the Takes.

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 to 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 described in the **“Hearing”** section above.



You may edit the generated MIDI tracks 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!