

Bluebox for Eurorack V 1.5.1 Release Notes

These notes cover all changes from 1.1.24.

New Features and Improvements

- **Side chain compression** – use MIDI, Track Audio, or a clock signal to trigger a compression envelope for a track.
- **EQ Spectrum Analyzer & Reset** – watch the frequency response of each track and the main on the EQ screen.
- **USB Audio Improvements**
 - More reliable, sounds better, output selection control. Support for **12 channels in** and **18 channels out**.
 - **Improved iOS support:** addresses audio quality issues with iOS over USB.
- **New Tuner:** Press Tools then tap Tuner, or press Tools twice. Select a track from the meter bridge to see how well your audio maps to the detected note. Use the lower left knob to adjust the base tuning.
- **New Oscilloscope:** Press Tools then tap Scope, or press Tools three times. Select a track from the meter bridge to see the waveforms for each channel of the selected track.
- **Disk mode** – put your bluebox in disk mode and you can drag and drop files between the microSD card and a computer over USB.
- **USB MIDI:** bluebox now receives and sends MIDI over USB.
- **Clock Output Setting:** On the Project Settings screen (Push Proj->B), choose a PPQ option for the Clock Out signal.

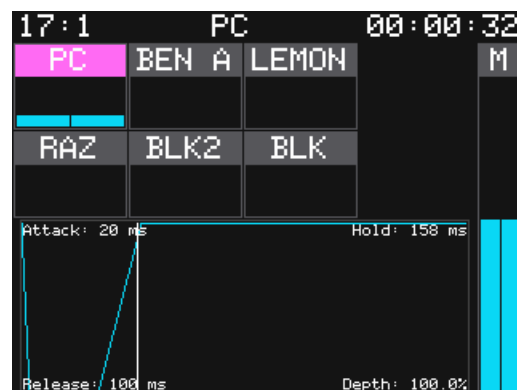
How to Use New Features

Side Chain Compression

Sidechain compression allows the level of a track to be controlled by another signal. Once setup, a compression envelope for a track can be triggered by the audio signal from another track, the internal clock or a MIDI signal. This can create space in a mix, such as between a kick drum and bass, and can also be used as an interesting effect. The source signal triggers the compressor envelope which "ducks" the level of a track.

To use Side Chain Compression

1. Press **TRACK**.
2. Tap the meter bridge to select the track you want to compress.
3. Tap the **SIDE CHAIN** button to enable this feature for this track.
4. Press **TRACK** again. The bottom half of the screen now shows the compression envelope for this track.
5. Press **B** to open the Side Chain Trigger Mode selector.
6. Select a trigger type, then configure the related parameters as shown in the table:



Trigger Mode	Parameters
Clock	• Division (1/16, 1/8, 1/4, 1/2, 1 bar)

Audio	• Source (choose a track) • Threshold (0.0.% to 100.0%)
MIDI	• Channel (1 thru 16) • Note (C#-1 thru G9)
CV	• CV input (CV 1 thru 6) • Threshold

- Press B again to return to the Side Chain view.
- If using Clock as the trigger, push PLAY.
- If using an Audio signal as the trigger, send audio into the selected track.
- If using MIDI as the trigger, send the selected MIDI note in on the selected MIDI channel.
- Send audio to the target track.
- Use the knobs to set the values of the 4 envelope parameters displayed in the four corners of the envelope graph:
 - **Attack** – how quickly the compressor kicks in after receiving a trigger. (0 to 20 ms)
 - **Hold** – how long the compressor stays on. (0 to 500 ms)
 - Release – how quickly the compressor ramps back to 0. (0 to 500 ms)
 - Depth – how much compression is applied (0 to 100%)

When a trigger is received, a vertical white bar appears over the compression envelope graph to demonstrate the progression through the envelope.

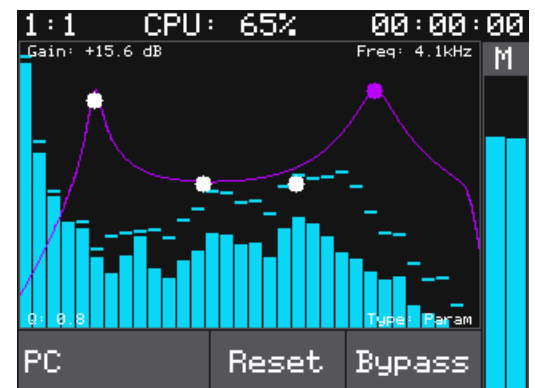
Note: you cannot use a track to trigger compression on itself. You must select a different track.

EQ Spectrum Analyzer

The EQ screen now displays the frequency content of the sound across 32 bands for the currently selected Track or the Main output bus in real time.

To view the Spectrum Analyzer and Use EQ Reset

- Push EQ
- Tap a track in the meter bridge or tap the Main meter to select the signal you want to view and control.
- Push EQ again to enter full screen mode.
- Tap Reset to return the EQ settings for the selected track to the default settings.
- Tap Bypass to stop applying the EQ settings for the selected track. Tap Bypass again to enable the EQ again.



USB Audio Improvements

We have upgraded the algorithm used by bluebox to **send 18 audio outputs** and **receive 12 audio inputs** over USB Audio to a computer or iPhone. From the computer's perspective, this gives you the ability to send up to 12 tracks out to bluebox and capture all three of bluebox's stereo outputs at once. This new algorithm is more stable and has improved audio clarity. We have also given you more control over the USB audio.

- **Expanded outputs:** The audio sent over USB is mapped to USB Audio channels as follows:
 - **1-12:** The 12 input channels of the mixer.
 - **13-14:** Main output 1 & 2.
 - **15-16:** Outputs 3 and 4.
 - **17-18:** Stereo FX return.

Push Main then B to access USB Audio controls:

- **USB Rcv:** this controls whether bluebox for Eurorack will receive audio over USB.
- **1 though 12:** controls whether bluebox for Eurorack will receive audio over USB for each input. The USB Rcv setting can override this. Map each corresponding input port to a track on the TRACK -> B screen to hear the USB Audio.

Disk Mode

Disk Mode connects the microSD card to your computer as a USB drive so you can manage bluebox files without removing the microSD card. Note that any unsaved changes to your current bluebox project will be lost when you enter Disk Mode. Also, the mixer features will stop working while you are in Disk Mode.

1. Save any changes to your project if needed: Press **PROJ**, then tap **Save**.
2. Connect a USB cable between the bluebox **Power** port and your computer.
3. Press **TOOLS**.
4. Tap the **Disk Mode** button, then tap **Yes** to confirm.
5. The bluebox microSD card should now appear as a removable drive on your computer.
6. Manage your files as needed.
7. Use your file browser on your computer to Eject the drive from your computer.
8. Press **MIXER** to exit Disk Mode and return to mixer mode.

Noteworthy Bug Fixes

- Bluebox stopped producing audio when receiving USB and TRS audio on the same track.
- 44.1 kHz audio over USB had issues with aliasing.
- Punching In now plays the armed track before or after the punch in.

Known Issues

- USB Recv defaults to on with inputs 1&2 configured to receive USB Audio. As a result, by default on a new project, if you have USB audio connected and running you will not hear audio that is sent in over inputs 1 and 2 until you change this setting. To change the setting, press Main->B. Change the settings for USB Rcv and the track numbers under it.
- **Invalid Clock Setting:** On the Project Settings screen (Push Proj->B), you can choose a PPQ option for the Clock In and Clock Out signals. There is no Analog Clock input on bluebox for Eurorack. Therefore, this setting is ignored.