BandEcho

16-band multiband delay

by Passoni X Graves



USER MANUAL

Version 1.0.0 · VST3 (Windows, macOS) · Audio Unit (macOS)

help@passoni-music.com · www.passoni-music.com/products/bandecho

1 Welcome

BandEcho splits your sound into **16 frequency bands** and gives every band its own delay time and its own pan position. You draw a curve across the bands and the echoes spread over the spectrum: short and tight in the lows, long and wide in the highs, or any shape you like.

Put it on drums, vocals, synths or a whole bus. Use it for classic echoes, rhythmic patterns that change with frequency, shimmering rooms, or tuned, melodic echoes.

2 Installation and activation

Windows

- Copy **BandEcho.vst3** to `C:\Program Files\Common Files\VST3`.
- Restart your DAW and rescan plugins if it asks.

macOS

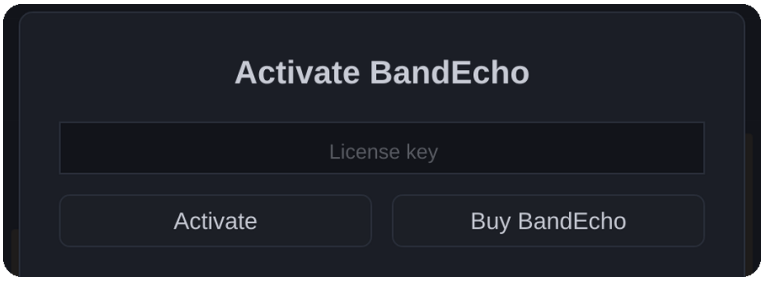
- Copy **BandEcho.vst3** to `~/Library/Audio/Plug-Ins/VST3` and **BandEcho.component** to `~/Library/Audio/Plug-Ins/Components`.
- BandEcho is not yet notarized by Apple, so macOS marks the download as quarantined and may call the plugin “damaged”. It is not. Open Terminal, paste these two lines and press Return:

```
xattr -dr com.apple.quarantine ~/Library/Audio/Plug-Ins/VST3/BandEcho.vst3
xattr -dr com.apple.quarantine ~/Library/Audio/Plug-Ins/Components/BandEcho.component
```

- In Logic, if BandEcho does not appear, run `killall -9 AudioComponentRegistrar` in Terminal and reopen Logic.

Activation

Insert BandEcho on a track. The first time, it asks for your license key (it arrives in your purchase email). Paste it and click **Activate**; an internet connection is needed for this step.



The activation screen. “Buy BandEcho” opens the store page.

- One license works on **2 computers**. The key and your computers are listed under **My library** in your store account, where you can free one.
- To move BandEcho yourself, open **Options > Deactivate this computer** first.
- BandEcho checks the license online at each start, then works offline for up to 30 days. Until activated, it passes audio through untouched.

3 Interface tour



Everything on one screen. The numbers match the list below.

#	Control	What it does
1	Delay / Pan	Which curve the bars show: delay time, or stereo position of each band.
2	Pencil / Line / Curve	The drawing tool for the bars.
3	Banks 1–8	Eight stored curves. The Morph knob glides between them.
4	Preset box and arrows	Choose, step through and save presets.
5	Dice	Randomizes the whole sound.
6	Undo / Redo	Steps back and forward through your last 5 changes.
7	Options	Random curve, Reset, Interpolate, Wave visualization, Skin, license.
8	Band strip	Click to switch a band On, Deselect or Lock.
9	Bars	16 bands, low to high. The height is the delay (or pan) of each band.
10	Filter / Processing	How bands are separated, and Clean or Saturate on the echoes.
11	Knobs	Scale, Feedback, Smooth, Morph, HP, Output.
12	Stereo / Ping Pong	How the echoes move across left and right.
13	Width	Stereo width of the echoes.
14	Warp, Release, Tonal, In-key	Four switches that change how the delays behave.
15	Mix and lock	Dry/wet balance. The padlock stops the dice from changing it.

Tip: hover over a bar to read its band number, centre frequency and value. You can also resize the window: drag the bottom-right corner (60–200 %).

4 Drawing the curve

Each of the 16 bars is one frequency band, from low on the left to high on the right. On the **Delay** tab the height of a bar is how long that band's echo takes (0–1000 ms). On the **Pan** tab it is where that band's echo sits between left and right. Bands repeat on their own and are blended with your dry sound by **Mix**.



The Pan tab: bars above the middle line pan left, bars below pan right.

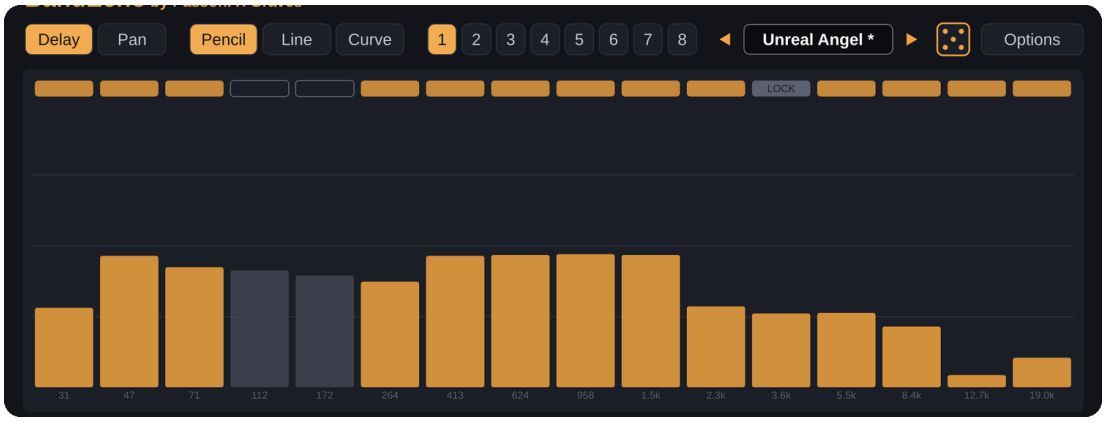
Tool	How it works
Pencil	Click and drag to paint bars freehand. Hold **Shift** for perfectly flat lines.
Line	Drag from one point to another and the bars follow a straight line.
Curve	Click and drag to pull the bars toward the mouse in a smooth shape. Keep the button down to keep pulling.

Exact values

Right-click any bar for **Set value…** (type a number), **Set all bands…** and **Copy this value to all bands**. Delay takes milliseconds (like *250*) or semitones in Tonal mode; Pan takes *L40*, *C* or *R30*.

Band states

Click the small strip above a bar to cycle that band through three states.



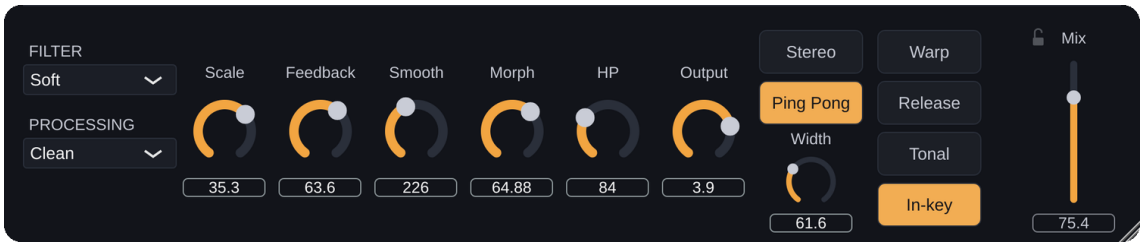
Bands 4 and 5 are Deselected (empty), band 12 is Locked (marked LOCK).

State	Meaning
On	Normal: the band echoes.
Deselect	The band is switched off for the effect and passes through dry, with no echoes.
Lock	The band keeps its value when you press the dice, Random curve or Interpolate.

Banks and Morph

The buttons **1–8** are eight banks, each with its own Delay and Pan curve. The **Morph** knob glides between them: 0 % plays bank 1, 100 % plays bank 8, and in between it blends neighbouring banks. Automate Morph and the whole pattern evolves over time. To fill the banks in between, set bank 1 and bank 8 and choose **Options > Interpolate 1 to 8**.

5 Controls



Filter and Processing, six knobs, Stereo / Ping Pong, Width, four switches and Mix.

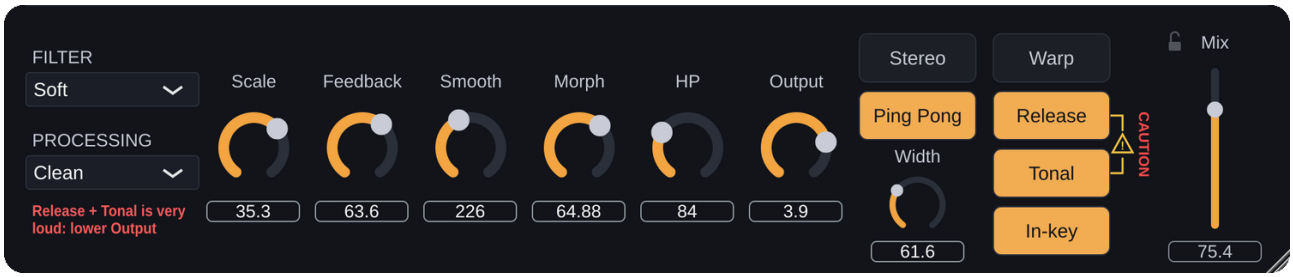
Control	Range (default)	What it does
Scale	–100 to 100 % (50 %)	Stretches all delay times at once, or transposes all pitches in Tonal mode.
Feedback	0–100 % (30 %)	How many repeats you get. Each repeat is quieter by this amount.
Smooth	0–2000 ms (100 ms)	How slowly delay times glide when you change them.
Morph	0–100 % (0 %)	Moves between the 8 banks.
HP	10 Hz–10 kHz (10 Hz)	High-pass filter on the echoes, to keep them out of the low end.
Output	–24 to +12 dB (0 dB)	Level of the echoes.
Width	0–200 % (100 %)	Stereo width of the echoes: 0 % is mono, 200 % is extra wide.
Mix	0–100 % (50 %)	Balance between dry sound and echoes.

Switches

Switch	What it does
Warp	Makes the delay range 10 times shorter, for fine, comb-like and metallic sounds.
Tonal	The bars become pitches, ±24 semitones. Each band echoes as a tuned note, so a curve becomes a melody or chord. Scale then transposes them all.
Release	Echoes fade at the same rate per second whatever their length, so long and short delays die away together.
In-key	On: changing a pitch does not bend the sound. Off: the pitch slides when you move a bar.
Stereo / Ping Pong	Stereo: left and right are delayed separately. Ping Pong: the input is summed to mono and the echoes bounce between left and right.

Filter and Processing

Setting	Character
Soft	Gentle slopes: smooth and natural, bands blend into each other.
Hard (default)	Steep slopes: bands are clearly separate and the effect is most defined.
Lineal	Linear phase: the cleanest, most transparent split, with a little added latency.
Clean	The echoes are left exactly as they are.
Saturate	Adds warm, soft distortion to the echoes. Use Output to compensate for the extra level.



With Release and Tonal both on, a CAUTION bracket appears beside the buttons and a red warning under Processing.

> **Caution:** Release and Tonal together can be very loud. Lower Output (and Mix) before you turn both on.

6 Presets

- The box at the top shows the current preset. An asterisk (*****) means it has changed since it was loaded or saved.
- Click it to pick from **Factory presets** or your own under **User**. The arrows on either side step through them one by one.
- **User > Save preset…** stores everything (all 8 banks, every knob and switch, Filter included). **Show folder** opens where the files live, so you can back them up or share them.
- The **dice** randomizes the sound. Locked bands and a locked Mix stay as they are.
- **Undo / Redo** steps through your last 5 changes.

7 Options and skins

The **Options** menu holds Random curve, Reset (the current curve), Interpolate 1 to 8, Wave visualization (the input signal drawn behind the bars), Skin, your Machine ID, the licensed name and **Deactivate this computer**. Pick a colour under **Skin**; it is remembered for this computer.



The six skins: Yellow (default), Cyan, White, Red, Green and Purple.

8 Quick start

- Put BandEcho on a drum, vocal or synth track and set **Mix** to about 30–50 %.
- Load a factory preset to hear what it can do, then redraw the Delay curve with the Pencil.
- Raise **Feedback** for more repeats and **HP** to clear the lows.
- Try **Ping Pong** and **Width** for space, **Tonal** for melodic echoes, and automate **Morph** for movement.
- Save what you like with **Save preset…**.

9 Troubleshooting and support

Problem	What to do
No effect, the sound passes through dry	BandEcho is not activated, or the license was suspended. Open the plugin and look at the activation screen.
“Computer limit reached”	The key is already on 2 computers. Free one in **My library** in your store account, or use Deactivate on the old computer.
“Check the date”	Your computer’s clock is wrong. Set it to update automatically.
Very loud output	Lower Output and Mix, or turn off Release + Tonal.
Plugin missing in the DAW	Rescan plugins. On macOS check that both files are in the folders above and that the quarantine step was done.

> **Need help?** Write to **help@passoni-music.com** and include your DAW, your operating system and what you see on screen.

Store and downloads: www.passoni-music.com/products/bandecho

Compatibility: VST3 on Windows and macOS (11 or later); Audio Unit on macOS. Apple Silicon and Intel.