

USER MANUAL

_POLYBRUTE CONNECT

ARTURIA

_The sound explorers

Special Thanks

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Congratulations on Purchasing the Arturia PolyBrute and Downloading PolyBrute Connect!

The PolyBrute is Arturia's first polyphonic analog hardware synthesizer, not to mention the most sophisticated we have ever made. This genuine analog instrument features 6 voices of polyphony with two voltage-controlled oscillators per voice, Arturia's unique Steiner-Parker style filter as well as the "Ladder" filter inspired by classic American synths, a stunning ability to Morph between two totally different sounds within a single Preset, step sequencing and arpeggio pattern editing via the interactive Matrix Panel, and so much more.

On a personal note, as the former editor of *Keyboard Magazine*, I have played and reviewed more synthesizers than I can remember – both new and classic – and I have never encountered anything that sounds quite like the PolyBrute or presents its myriad expressive possibilities in such an inimitable way. If you've ever been lucky enough to ride in a Citroën automobile, you know that French designers do things in a way that's different but also makes you want to repeat the experience. The PolyBrute is different in that way – and sounds gorgeous. It has been a singular privilege to work with one while writing this manual, but also a challenge, because I would routinely get so lost in playing the PolyBrute that I was afraid I wouldn't finish this very document on time!

PolyBrute Connect is a free software editor/librarian designed to enhance your enjoyment of the PolyBrute and make integrating it into your musical workflow smooth. It operates in stand-alone mode or as a DAW plug-in. In the latter application, you can sequence and automate the PolyBrute from a virtual instrument track just as though it were a soft synth, with PolyBrute Connect seamlessly handling two-way communication and bridging the gap between your DAW and the synthesizer. It is also an invaluable tool for synthesists engaged in sound design work for film or experimental music, weekend gigging musicians who want to whip up a bank of authentic sounds for their musical style, and everyone in between.

We will enumerate more of its features in the next chapter, fittingly titled [Welcome](#).

Special Message Section

Specifications Subject to Change:

The information contained in this manual is believed to be correct at the time of printing. However, Arturia reserves the right to change or modify any of the specifications without notice or obligation to update the hardware that has been purchased.

IMPORTANT:

1. The product and its software, when used in combination with an amplifier, headphones or speakers, may be able to produce sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high level or at a level that is uncomfortable. If you encounter any hearing loss or ringing in the ears, you should consult an audiologist.
2. It is important that you read the included Safety Manual thoroughly and fully understand the instructions.

NOTICE:

Service charges incurred due to a lack of knowledge relating to how a function or feature works (when the product is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owner's responsibility. Please study this manual carefully and consult your dealer before requesting service.

Introduction

Thank you for your purchase of the Arturia PolyBrute!

Dear Musician,

We personally thank you for purchasing a PolyBrute, our most ambitious, demanding, and we hope successful labor of love in our more than two-decade history. Since our very first product Storm – a complete virtual music production studio featuring classic synth emulations – we have strived to up the ante with every musical tool we've developed, keeping what moves you as a musician foremost in mind.

The original MiniBrute (2012) was our first foray into analog hardware synths, and we never could have imagined it would earn such a following that we could grow the Brute family – and our brand into a hardware synth company – to the extent we now have. The PolyBrute you are probably powering on at this very moment exists only because of musicians like you who tried our synths and said, "Yes, more of this, please!"

So, we present PolyBrute Connect not just as an adjunct piece of utility software for your instrument, but as a thank-you gift for believing in our vision. We literally could not have done it without you.

Musically yours,

The Arturia team

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1. WELCOME TO POLYBRUTE CONNECT!

Arturia has developed some of the most respected, innovative, and desirable analog synthesizers, MIDI controllers, and audio interfaces in the world. Wherever possible, we supplement these creative products with software that extends and enhances their capabilities.

PolyBrute Connect (PBC) is custom-designed software that works with your Arturia PolyBrute synthesizer. This analog powerhouse is the ultimate expression of the sound of Arturia, at once celebrating the history of synthesis and crafting its future.

PolyBrute Connect functions as an editor/librarian that gives you complete control over your PolyBrute from your Apple Mac or Windows PC, lifting your music-making and synthesis to new heights.

Features of PolyBrute Connect:

- Control most parameters of your PolyBrute synthesizer remotely.
- Access important and hidden settings more easily than on the PolyBrute unit itself.
- Save, load, search, name, and filter PolyBrute presets by types and styles.
- Two-way communication: Adjust a control on the PolyBrute, and its twin onscreen moves the same amount. Adjust a control onscreen, and the PolyBrute's sound and behavior reflects this immediately.
- Integrate the PolyBrute into your favorite DAW just like a virtual instrument plug-in.
- Automation and total recall of PolyBrute settings in a DAW project.
- VST, AU, and AAX plug-in formats included, plus stand-alone version.
- Easily set the keyboard split point for split presets.
- Update the PolyBrute firmware directly.



! Note that PolyBrute Connect is not a virtual instrument or "soft synth" by itself. For you to hear sound, it must be connected to a PolyBrute hardware unit whose audio outputs are connected to a listening system.

2. OVERVIEW

2.1. Installation

2.1.1. Register your PolyBrute

If you have not already done so, [create a My Arturia account](#), then register your PolyBrute using the serial number or QR code on the enclosed registration card. You can also find the serial number on the sticker on the bottom of your unit. This will make sure you're the first to be notified of updates to this software and the [firmware \[p.9\]](#) of the PolyBrute itself.

2.1.2. Download Arturia Software Center

Found on the [Downloads & Manuals](#) page of the Arturia website, this software lets you control all your Arturia product licenses, activations, and updates from a central place. Download the .pkg file (Mac) or .exe file (Windows). Then, open the file and follow the onscreen instructions to install.

2.1.3. Get PolyBrute Connect

You will now be able to download PolyBrute connect from within Arturia Software Center (ASC). It should auto-detect your computer type and offer the correct package for Mac or Windows. Alternately, you can download PBC from the [Downloads & Manuals](#) page.

2.1.4. Formats

Both the Mac and Windows installers will install the stand-alone version of PolyBrute Connect and offer checkboxes to install Audio Units (for Logic, MainStage, and most third-party software on macOS), VST (for most recording and media creation software on Windows and some on Mac), and AAX (for Pro Tools on Mac and Windows) plug-in-formats.

On Windows, installing PBC will also install the Arturia USB MIDI driver, allowing multi-client MIDI operation. No such driver is necessary on Mac.

If you are concerned with saving disk space, you may uncheck the boxes for the formats you don't intend to use – though they take up a minimum of room. You can always re-run the installer and add them later.

2.2. Connecting your PolyBrute

Connect your PolyBrute to your Mac or PC using a USB cable, then power your PolyBrute on. Once installed, PolyBrute Connect will synchronize with your PolyBrute automatically in both the plug-in and stand-alone versions.



! Use a USB cable no longer than 3m (approximately 10 feet). This will ensure glitch-free communication.

Note that you must use USB because PolyBrute Connect does not communicate with the synthesizer over standard 5-pin MIDI connections.

2.2.1. Disconnection

If the USB cable is unplugged or the PBC application is quit, the PolyBrute will retain the most recently loaded preset along with the settings you most recently adjusted.

If the USB cable is unplugged or the PolyBrute is powered off, the PBC window will be greyed out and display the message "Please connect the PolyBrute to your computer."

2.3. About this Manual

This is not intended to be a complete user guide to the PolyBrute synthesizer itself. The full PolyBrute manual may be downloaded from Arturia's [Downloads & Manuals](#) page.

2.4. About Using PolyBrute Connect in a DAW

PolyBrute Connect is not only a full-fledged editor and librarian for the PolyBrute. It also lets the synthesizer work in a DAW as though it were a virtual instrument, meaning you can sequence notes, automate knob twists, and more.

Nearly all current DAWs offer dedicated virtual instrument tracks so you don't have to create separate audio and MIDI tracks like back in the day. A virtual instrument track is the correct type of track in which to host the PBC plug-in.

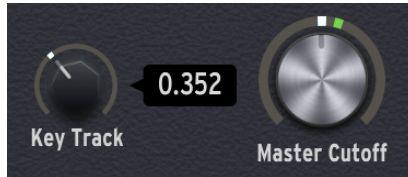
However, PolyBrute Connect is not a stand-alone virtual instrument or "soft synth". It's a means to control the PolyBrute hardware synth. So you *will* need to create a separate audio track to record it, and plug its audio outputs into your recording interface. (We like this thing called the AudioFuse for that, by the way.)

To sum up, the virtual instrument track tells the PolyBrute what to do; the audio track captures the results.

2.5. Common Control Behaviors

Some onscreen procedures are intuitive, such as click-dragging a knob or slider, pushing a button, selecting a pop-up menu, and so on. However, there are some ways to use PBC that make it even deeper and more flexible, and which may not be obvious at first glance.

2.5.1. Value Pop-Ups




Hover over any control, and the PBC window will display a pop-up (a.k.a. tool tip) of its current value. It will also show a name and/or quick description of the control's function in the lower left corner of the bottom status bar.

2.5.2. Reset Parameters to Default

To return any control to its default value for the current preset, simply double-click it.

2.5.3. Fine Adjustments

Some parameters, such as the knobs and envelope sliders, have a very wide range. You can make finer adjustments to these than you can on the PolyBrute synth itself in many cases. Once you get close to the desired value, simply right-click (or hold Control) and drag the cursor. Make sure you are in the center area of the knob or on the slider itself. The "collars" around the knobs and vertical strips next to the sliders are for setting A and B values for [Morphing \[p.7\]](#).

 To make precise adjustments easier, you can resize the window in the main PolyBrute Connect Menu in the top task bar, and also by pressing Command (macOS) or Control (Windows) then the + or - signs on your computer's numeric keypad (not the ones above the QWERTY area).

2.5.4. Morphing

A standout feature of the PolyBrute is that it can smoothly morph between two states of values for most control settings within a single preset, using the Morph knob or the Morphée 3-D controller.

Though this is covered in the PolyBrute manual, it's worth going over here because you may use morphing just as much in PBC as on the PolyBrute itself.

Morphing is more than a simple crossfade or what some synths call a "scene" or a "macro" – it's a continuous interpolation that covers all possibilities for parameter values in between two extremes: A and B. In other words, each preset is really *two* presets in one.

- If the Morph knob is all the way at A, any setting you make on any morphable control applies only to state A.
- Likewise for B.
- If the Morph knob is halfway between A and B (12 o'clock), settings you make affect both states equally.
- If it's more towards one state than the other, the PolyBrute figures out how much change to apply to A versus B proportionally.

The result is like having an extra hand for almost every knob, slider, and switch on the PolyBrute. The advantage of PBC is that when you turn the Morph knob, you can see which other controls move and exactly how much.

We will cover the specifics of how to control Morphing from PBC in [Chapter 4, Main Controls \[p.29\]](#).

2.6. The PolyBrute Connect Window

Let's have a big-picture look at all the main sections of the PBC interface. In upcoming chapters, we will go over each of these sections in detail.



| Number | Section | Description |
|--------|--|--|
| 1 | Top Task Bar [p.10] | Select and explore presets, resize window, adjust audio/MIDI settings in stand-alone mode, and more. |
| 2 | Main Controls [p.29] | Poly/mono/unison and timbrality behavior, Glide and main Morph knobs, Morph Edit knob, and mirror of all main PolyBrute synth controls. |
| 3 | Keyboard Tab [p.41] | The first (and default) of four tabbed views for the lower third of the PBC window. Displays the GUI keyboard and performance controllers. |
| 4 | Matrix Tab [p.50] | Displays a scrollable view of the modulation Matrix in place of the GUI keyboard. |
| 5 | Preset Settings Tab [p.56] | Displays further settings that affect the whole Preset, as well as the Sequencer and Motion Recorder, in place of the GUI keyboard. |
| 6 | Global Settings Tab [p.64] | Displays settings common to all Presets in the PolyBrute, including MIDI channels and knob behavior. |
| 7 | Bottom Status Bar [p.69] | Shows the name of the control the mouse hovers over, has firmware update and MIDI panic buttons, and displays CPU usage. |

2.7. Important Things to Know as You Begin

2.7.1. Multiple Instances

Multiple instances of PBC may be open at the same time, as you might want to use it in multiple tracks in your DAW. However, only one may actively sync to the PolyBrute at a time. If an instance is already in place, opening another will display the message, "This instance needs to be connected to the hardware to be used. Connecting will retrieve the PolyBrute preset in this instance." Clicking **Connect** will re-synchronize the PolyBrute with the latest instance.

Likewise, although we would be delighted if you owned more than one PolyBrute synthesizer, PolyBrute Connect only supports a single hardware unit at this time.

2.7.2. Updating the Firmware

It is crucial that your hardware unit is running the latest firmware. The latest firmware version is always designed to work with the latest version of PBC, and incompatible versions may not sync.

You can update the firmware directly from PBC in three ways, which are detailed in [Chapter 9, The Bottom Status Bar \[p.69\]](#)

3. THE TOP TASK BAR



The Top Task bar is where you manage Presets and groups of Presets, and contains a few other important utilitarian settings as well.



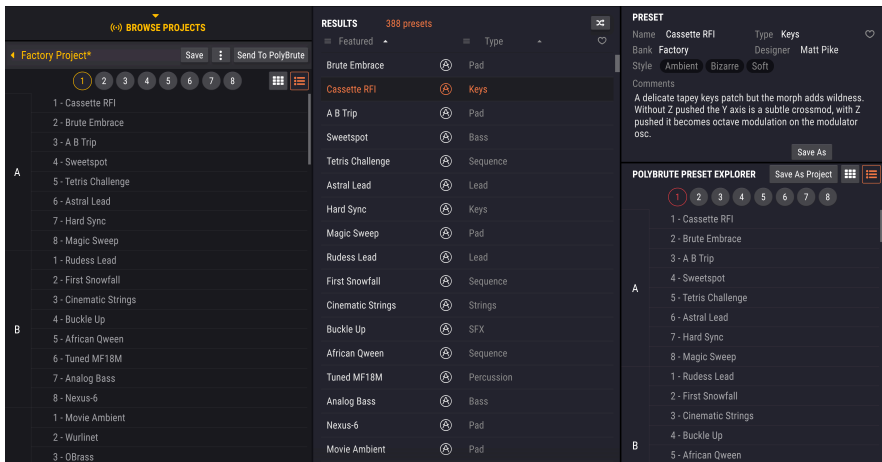
| Number | Section | Description |
|--------|--|---|
| 1 | Main Menu [p.12] | Save and import/export Presets, resize PBC window, audio/MIDI settings, and more. |
| 2 | Master Preset Browser [p.17] | Search for Presets by name, type, and style. Manage projects (backups of PolyBrute memory stored on your computer). |
| 3 | Quick Preset Select [p.27] | Quick menu of Presets, either all types or filtered. |
| 4 | Preset Name [p.27] | The name of the Preset currently loaded in the PolyBrute. |
| 5 | Left-Right Arrows [p.28] | Step through Presets incrementally. |

3.1. Before We Begin, Where Do Presets Live?

Most of what you'll need the Task Bar for is to search, load, and save Presets, and there are a number of different ways to do this. First, though, we should get clear on where Presets are located.

Physically, a Preset may reside in one of two places: inside the PolyBrute or on your computer. When PolyBrute Connect first syncs with the PolyBrute, it receives all Presets from the hardware. PBC has a [Master Preset Browser \[p.17\]](#) that can deal with Presets in both areas, but searches are first performed among the presets stored on the computer. This is ideal for managing Presets within a DAW.

The Master Preset Browser has three sub-browsers for managing presets: the [Project Browser \[p.19\]](#), [Results Pane \[p.24\]](#), and [PolyBrute Preset Explorer \[p.26\]](#):



Left to lower right: Project Browser, Results Pane, and PolyBrute Preset Explorer.

Clicking on any Preset name anywhere loads it into the PolyBrute individually. The Project Browser can also load entire banks. Only the PolyBrute Preset Explorer (lower right) accesses the entire Preset contents of the PolyBrute directly. That is, clicking something here is equivalent to selecting a Preset on the Matrix panel.

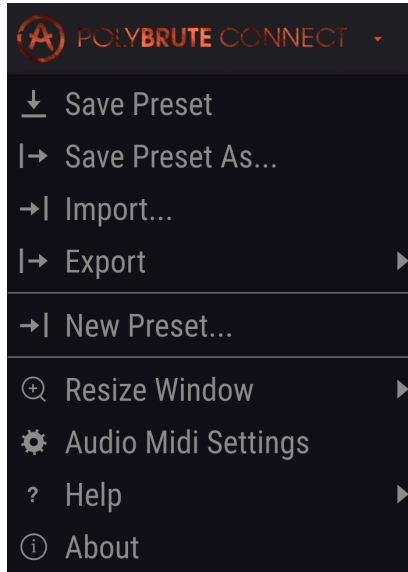
3.1.1.1. Text Color Meanings

PBC keeps track of where you selected the current preset, as indicated by the text color of the preset name that is always at the center of the Top Task Bar:

- Yellow: From the Project Browser.
- White: From the Results Pane.
- Red: From the PolyBrute Preset Explorer (or the PolyBrute itself).

We will detail the operations of these sections later in this chapter, and knowing the above concepts ahead of time will be vital to doing so.

3.2. Main Menu



This is like the File menu in any software, where you save and load items. It has a few other important settings, too.

3.2.1. Save Preset

Saves any “live” changes you’ve made into the current location of the place from which the preset was selected. The text color conventions from [above \[p.11\]](#) are followed.



! For any saving to the PolyBrute’s internal memory, make sure the Memory Protect switch on the rear of the unit is set to Off.

3.2.2. Save Preset As

Saves your changes with renaming and tagging options:

↓ Save As

NAME (1) Reshaped Keys

AUTHOR (2) Seb Rochard

BANK (3) User

TYPE (4) Keys

STYLES (5)

| | | | | | | |
|---------|------------|----------|---------|--------|------------|------|
| Acid | Aggressive | Ambient | Bizarre | Bright | Complex | Dark |
| Digital | Ensemble | Evolving | FM | Funky | Hard | Long |
| Noise | Quiet | Short | Simple | Soft | Soundtrack | |

COMMENTS (6) Don't bother me. I'm playing my PolyBrute.

Cancel Save

1. Rename the Preset.
2. Change the author (designer) name. Created a sound you love? Give yourself credit here!
3. Select the bank in which the Preset will be saved.
4. Select the type of sound for the Preset – bass, brass, lead, pad, strings, and more. This will help searching in the [Master Preset Browser \[p.17\]](#).
5. Tag one or more styles that describe the Preset. This lets the Preset Browser be more specific. You can choose as many as you like, but you probably don't want opposite styles like Hard and Soft for the same Preset.
6. Add any additional descriptive comments. These also show up in the Preset Browser.

3.2.3. Import and Export

These are for saving the PolyBrute's Presets to your computer as a file (Export), or for loading information into PBC on your computer (Import) for eventual transfer into the PolyBrute. You can import and export individual Presets or entire Banks. In both cases, the file extension is ".pbx" and whether it's a Preset or a Bank is identified in the filename.

3.2.4. New Preset

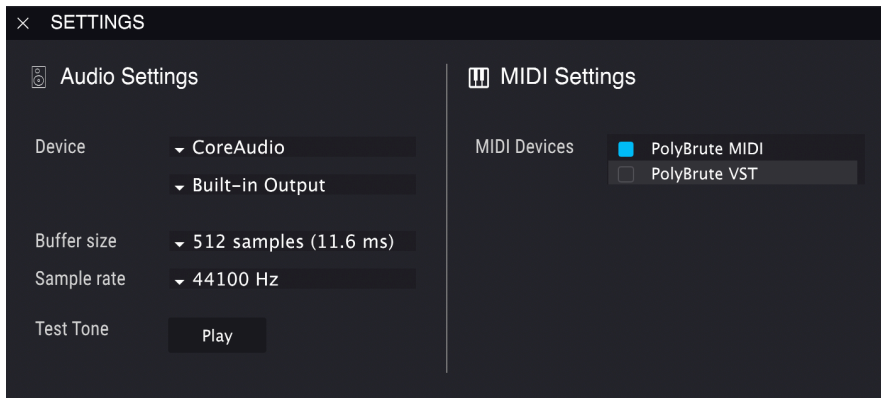
Sets your PolyBrute to the Default Preset to give you a "blank slate" for creating your own sounds from scratch.

3.2.5. Resize Window


Change the PBC window size in increments from 50 to 200 percent. Larger sizes are great for making fine control tweaks, like the Edit A and Edit B points of a knob or slider's Morphing range. Or, make it smaller to see the entire interface without scrolling, or to squeeze it into a computer display crowded with plug-ins.

You can also increase or decrease the zoom level by pressing Command + or - on Mac, and Control + or - on Windows.

3.2.6. Audio MIDI Settings



This only appears in stand-alone mode. When using PBC as a plug-in, these settings are handled in your DAW or host software preferences. This area selects audio and MIDI devices, sample buffer settings, and toggles communication ports between the PolyBrute and your computer.


 ! For PBC to function, an external audio device (e.g. an audio interface) must be selected from the drop-down menu. This may be the internal audio of the computer if no external interface is available.

3.2.6.1. PolyBrute MIDI and PolyBrute VST Ports

These virtual ports will appear in your DAW's MIDI preferences as well as OS-level control panels like the Mac's Audio MIDI Setup.

- **PolyBrute MIDI** is for notes and control messages sent from the PolyBrute itself, i.e. if you play its keyboard.
- **PolyBrute VST** is for proprietary communication between PBC and the PolyBrute.

 ! PolyBrute VST should generally be left unchecked at all times as activating it may create conflicts.

 ! When PolyBrute Connect is active, MIDI continuous controller (CC) messages are not sent or received, so that the software may communicate with the PolyBrute using its own protocol.

3.2.7. Help

Directs you to information resources on the [Arturia website](#) for PolyBrute and PBC.

3.2.8. About

Displays your current version of PBC and "movie credits" of the people who worked on it. Click anywhere to dismiss this window.

3.3. Master Preset Browser

Those four lines look like books on a shelf, don't they? That's because clicking them brings up the deepest and most flexible way to manage PolyBrute's extensive library of Presets. It's divided into 8 easy-to-use panes.



PolyBrute Connect Preset Library

| Number | Pane | Description |
|--------|--|--|
| 1 | Search Bar [p.17] | Enter any search words. |
| 2 | Type Filter [p.18] | Refine your search by instrument type. |
| 3 | Style Filter [p.18] | Refine your search by Presets' sonic character. |
| 4 | Bank Select [p.18] | Decides whether to search Factory or User banks. |
| 5 | Project Browser [p.19] | Manage Projects within PBC and send them to the PolyBrute. Fills the left third of the window when open. |
| 6 | Results Pane [p.24] | Displays search results of everything you did in areas 1-4. |
| 7 | Preset Info [p.25] | Summary of the Preset name, type, style, bank, author, and comments. |
| 8 | PolyBrute Preset Explorer [p.26] | Browse Presets in a way that mirrors their locations on the Matrix panel when it's in Presets mode. |


More details on these, one by one:

3.3.1. Search Bar

Type anything here. PBC will find any Preset name, type, and/or style that contains all or part of what you're looking for. *Clear All* resets the Type and Style filters so that none are active. Search results displayed will be for Presets stored in PBC (on your computer).

3.3.2. Type Filter

These narrow your search to the specified Type of instrument. Select multiple types with Command-click (Mac) or Control-click (Windows). Orange text indicates an active filter. Click the selected button again to remove it if you want to search across multiple instrument Types.



♪ The Template Types offer a head start programming your own sounds without beginning from the blank slate of the Default Preset. They cover many "greatest hits" of synthesis techniques. "Reverse engineering" these – studying how all the parameters are set – is a great way to learn about synthesis.

3.3.3. Style Filter

Styles represent the musical influence, character, and "vibe" of the Preset. You may click on multiple styles at once.

3.3.3.1. How Search and Filters Interact

In the picture above, some of the Type and Styles buttons are greyed out. That's because a given Type might not have a Preset in every Style, nor a Style in every Type. The Type and Style filters cooperate in a process of elimination: the more Styles you select, the more specific the results will be.

Likewise, typing any text in the Search Bar narrows the field even more. For example, select Brass and Funky, then type in "fat" and the search result will be any funky brass Preset that has "fat" in the name, such as *Fat Brass of 2026*.

3.3.4. Bank Select

Click one button or the other in this simple area to decide whether to search in the Factory or User Banks of the PolyBrute. Select multiple banks by using Command-click (macOS) or Control-click (Windows). The process of elimination applies here, too. If no Preset in a Bank fits your search terms and filters, that Bank button will be greyed out.

If no Bank is selected, all Presets from all Banks will be displayed in the results pane.

It is also possible to create more User Banks. Their buttons will appear in this area.

In addition, Arturia releases cool new Banks for the PolyBrute approximately once per month. These can be downloaded from [our dedicated PolyBrute sounds page](#).

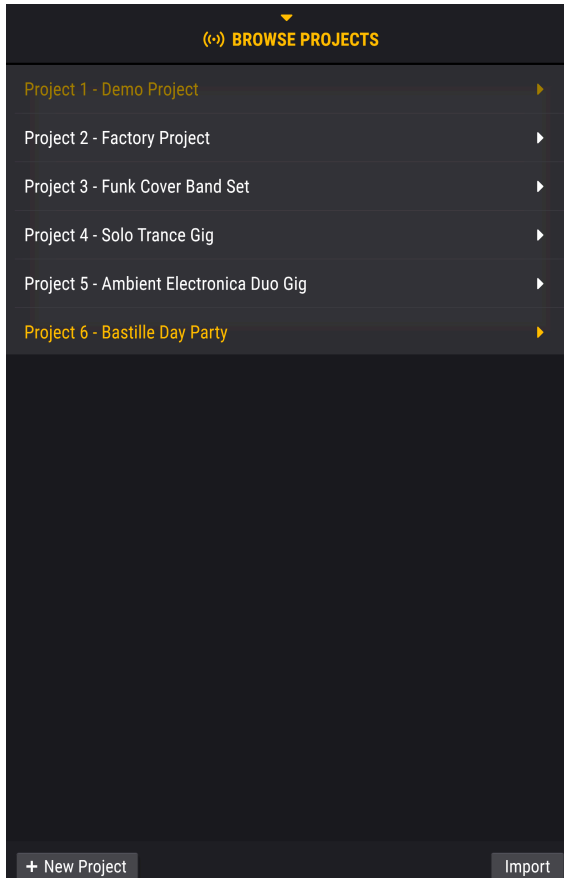
3.3.5. Project Browser

Projects are a powerful way to back up and organize Presets, keeping a page-and-row based organization similar to the one on the PolyBrute. You can create as many projects as you like.



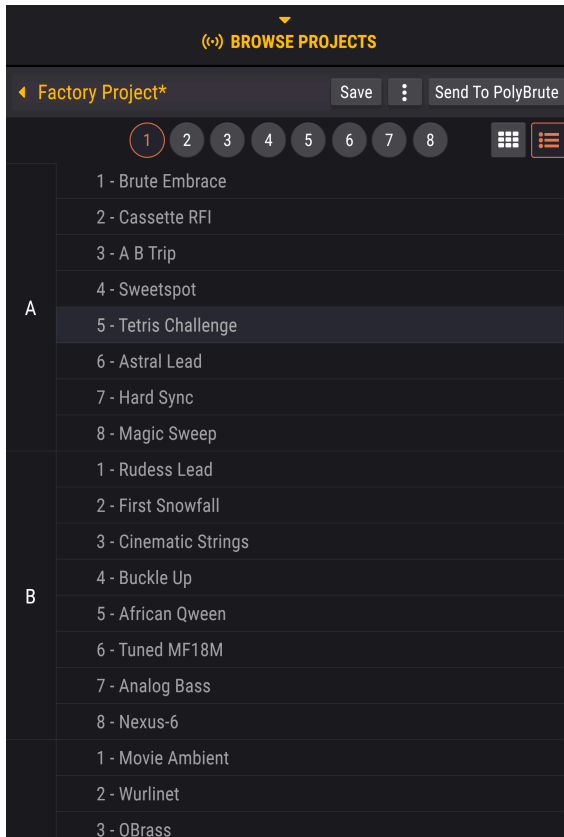
♪ Projects are ideal for making set lists for different gigs, bands you play in, studio sessions, and venues. Note that loading a Project can take a few minutes because any Project contains 768 Presets (though some of these may be the "Init" Preset).

Click the yellow *BROWSE PROJECTS* text to get started. The Project List will pop up.



- Clicking anywhere on a Project in the list loads it into the browser, but does not yet send all the Presets to the PolyBrute (we'll get to that shortly).
- The *+New Project* button at lower left prompts you to name and save a new project.
- The *Import* button loads a project file saved on your computer.
- To export a Project file to your computer, right-click on it in the list. There is also a delete option here.

Once a Project loads, this pane appears:



Here is where things get really cool.

- Simply click-and-drag any Preset from the Results Pane (see below) into a slot in the Project and it will replace the former Preset.
- It does this by making a copy, so the original Preset is not affected.
- You will still hear live Preset changes from the PolyBrute as you select Presets within a Project.
- If you collapse the Project Browser, the currently loaded Project List will still be there when you reopen it.
- This makes it easy to build a workflow where you search for Presets using the Filters, then add them to projects, then repeat.

3.3.5.1. List View and Grid View

We've been working with the Project Browser in List view. There is also a Grid view, toggled by the icon with 9 squares. Grid view directly mirrors the Presets mode of PolyBrute's Matrix panel.



- You can click-and-drag from the Results Pane directly onto a button (cell) in Grid view.
- Once the Project is sent to the PolyBrute (still not yet), the same Matrix button will recall that Preset.
- Hovering the mouse over a cell will display the Preset name in the bottom left area of the screen.

3.3.5.2. Moving Presets Within the Project

Presets may be freely click-dragged around in the Project List and Grid views and, again, these changes will be reflected once the Project is sent to the PolyBrute.

- In List view, dragging a Preset between two other Presets' locations *inserts* it between the two.
- In Grid view, dragging a Matrix button to another button *duplicates* the first button's Preset, overwriting the new location's contents.
- In both views, buttons 1-8 across the top select which of the PolyBrute's "pages" the Presets below are saved into.

3.3.5.3. Selecting Multiple Presets

PBC supports multi-item selection in the Project Browser List view, the Results Pane, and the Preset Explorer. This follows the conventions of your computer OS. - Shift-click (macOS and Windows) selects the full range of Presets in between and including the first and last items clicked. - To select non-contiguous items, hold Command (macOS) or Control (Windows) and choose the Presets you want.

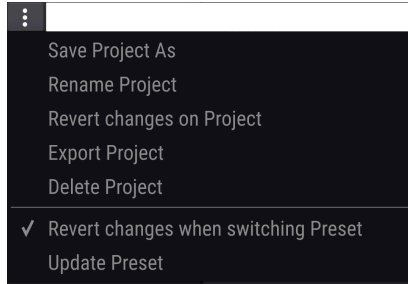
When multiple items are dragged into a project, however, they always populate contiguous (next to each other) locations, beginning with the first Preset in the first location where you dropped them. This is true even if the original selection was non-contiguous.

3.3.5.4. Save Button


This simply saves the Project, still without overwriting any Presets in the PolyBrute itself. The button only appears if the Project has been edited since being loaded.

3.3.5.5. Project Menu

Click the button with 3 vertical dots to open the Project Menu, which covers housekeeping tasks.



- **Save Project As** saves changes to the current Project as a copy. You will be prompted to enter a new name. This is ideal for building variations on the same project, e.g., changing up your set list at a regular gig.
- **Rename Project** renames the current project without saving it as a copy.
- **Revert Changes on Project** cancels all live edits you may have done to Presets within that Project.
- **Export Project** saves the current Project to your computer with the file extension “.pbproject.”
- **Delete Project** deletes the current project, with a warning dialogue.
- **Revert changes when switching Preset** If this is checked, when you save a Project. PBC will save only live edits you have made to the *current* Preset. If unchecked, saving the Project saves all live edits made to all Presets in the Project.
- **Update Preset** does a one-time save of edits made to the current Preset. So if you then “Revert Changes on Project,” the current Preset will keep its most recent edits.

 Leave “Revert Changes when switching Preset” unchecked if you want to jockey between presets, make edits to each, then make sure they all get saved when you save the Project.

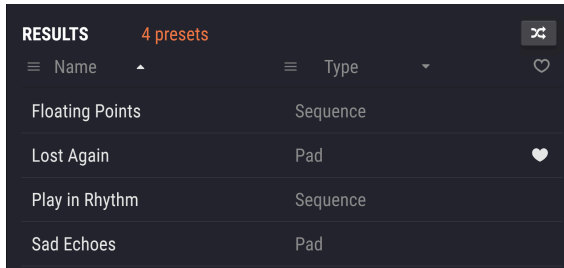
3.3.5.6. Send To PolyBrute

When you finish assembling your Project, this is the magic button! It sends the entire Project to the PolyBrute’s User memory, overwriting all contents there. A warning dialogue will prompt you to confirm. Any location not occupied by a Preset will be set to the Default *Init* Preset.

 Since the PolyBrute has room for a *lot* of Presets, this can take a few minutes.

3.3.6. Results Pane

The results of using the Search Bar, Type Filter, and Style Filter appear here. If there are no search criteria, this will simply be a list of every Preset currently in PBC on your computer. Here's a picture of the 4 Presets that are all Ambient, Complex, and Evolving:



Top to bottom, there are just a few important convenience features here:

3.3.6.1. Shuffle

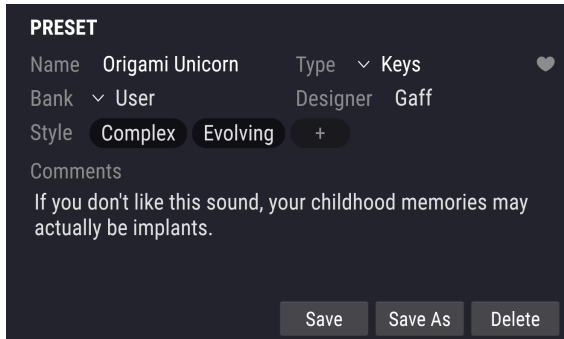
The button with weaving arrows randomly shuffles the order of the Preset list. Why do this? With longer lists of results, you might click around and not hear exactly what you're looking for. Shuffling might discover it faster than scrolling through the whole list.

3.3.6.2. Sort Functions

These work like the ones at the top of any file window on your computer.

- **Featured/Name option:** With *Featured* selected, the Results Pane will display all featured Presets (indicated by an Arturia logo) at the top of the list if no search has been done. If search criteria are active, it will display any featured Presets that fit first, followed by everything else that fits the criteria. With *Name* selected, featured Presets are mixed in with all others (search or no search) in ascending alphabetical order.
- The **Type** column can likewise switch to sort by Designer or Bank. If a Type Filter was part of your search, the types will be the same for all Presets anyway.
- Plus, you might be partial to a particular sound designer of PolyBrute Presets and want to find more of their stuff – or quickly call up Presets you've created under your own name.
- The small arrows switch each column between ascending and descending alphabetical order.
- You can "favorite" a Preset by mousing towards the right side of its row until a heart appears, then clicking.
- If you click the heart in the sorting row, your favorites (those that fit the search criteria) always appear at the top of the list, regardless of other sort settings.

3.3.7. Preset Info



This shows all relevant info about the current Preset in one place: its name, Type, Bank, Designer, and any Styles that apply. If you entered this information when doing a [Save Preset As \[p.13\]](#), here it is! The Save As option works the same from here.

If working in the User bank, you can edit all this info from here, changing the name, Type, and Designer; adding or removing Style tags; and typing comments. Save (overwrite) and Delete options appear too, as shown.

Note that editing and saving Preset Info only affects Presets stored on the computer, i.e. Presets whose [names \[p.27\]](#) appear in white.

3.3.8. PolyBrute Preset Explorer

This is like a [Project Browser \[p.19\]](#) that works in the other direction. Where the Project Browser is a “sandbox” where you can experiment with Preset lists and then send them into the PolyBrute as a group, the Preset Explorer directly accesses Presets in the PolyBrute’s User memory, lets you move and replace them, then save the whole thing as a project.

3.3.8.1. Dragging Presets from the Results Pane

Presets can be click-dragged from the Results Pane into the Preset Explorer just like with the Project Browser. The same rules for dragging in [Multiple Presets \[p.22\]](#) apply.

3.3.8.2. List View and Grid View




*Grid view button on left;
List view on right.*

Like the Project Browser, Preset Explorer has List and Grid views, the latter corresponding to the button layout on the Matrix panel. Here, though, moving Presets *within* Preset Explorer will always create a copy in the new location, evicting its previous occupant.

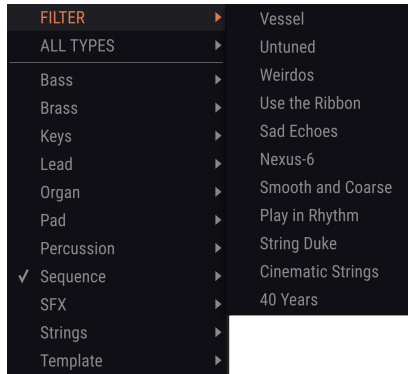
3.3.8.3. Save As Project

This button saves the current order of Presets as a new Project, which will then be available in the Project Browser.

 ! Again, the transfer can take a few minutes.

3.4. Quick Select Menu

With all those fancy options in the [Master Preset Browser \[p.17\]](#), do we really need another way to choose Presets? We think we do. Where the master Browser is a great tool for discovery and pre-planning, the Quick Select Menu is more for when you know what you're looking for, or just want to grab a cool Preset and start playing.



Quick Select is a contextual drop-down menu with three sorts of parent options: All Types, Filter, or one of the PolyBrute's 11 instrument Types. The text in the [Top Task Bar \[p.10\]](#) will say one of these things, depending on how the last Preset was selected. Click it to open the menu.

- **FILTER** applies any active Style Filters. The submenu shown above lists the choices for Presets that are both Ambient and Soundtrack, for example.
- **ALL TYPES** shows a submenu of every Preset in the PolyBrute. It also clears any active Filters from the Library.
- **Instrument Types** (Bass, Brass, Keys, etc.) simply show all the Presets of the chosen Type in the submenu.

In all cases, Quick Select is searching through Presets stored in PBC that might otherwise appear in the [Results Pane \[p.24\]](#), only without you performing a search. Mouse to a Preset, click, and it loads into the PolyBrute instantly.

3.5. Preset Name

Notice that in the picture [at the start of this chapter \[p.10\]](#), the Preset name and left/right arrows are white. In the very next picture, they're red. There's a reason for this. When you select a Preset in PBC, the text and arrows appear white. If you select a Preset on the PolyBrute itself or from the [PolyBrute Preset Explorer \[p.26\]](#), they turn red. Choose a preset in the [Project Browser \[p.19\]](#) and the name and arrows appear in yellow.

In either case, an asterisk (*) after the Preset name means it has been modified – even if you've tweaked one control just a little. This is to remind you to save that Preset if you like what you hear! (An asterisk means the same thing after a Project name.)

3.6. Preset Left and Right Arrows

If a Preset filter category is active, the arrows in PBC will step through only the Presets in that category.



! If you make any changes you like to a Preset, or create your own from scratch, remember to [save it \[p.12\]](#) before changing presets by any means. Otherwise you will lose your changes. PBC does not provide an "Are you sure?" dialogue box.

4. MAIN CONTROL AREA



This section is a mirror of most of the controls on the PolyBrute's main panel, including all parameters that affect the sound of the synth Presets. We will not so much be covering what all these controls *do* in terms of synthesis because that is detailed in depth in the [PolyBrute Manual](#).

Instead, this chapter will focus on the important features of how each type of control *behaves*, especially in relation to the PolyBrute's exciting Morphing ability.

4.1. Where Is the Matrix Panel?

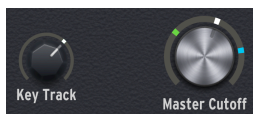
You don't immediately see an onscreen counterpart for the Matrix Panel buttons on the synth itself. To access it, click the [Matrix Tab \[p.50\]](#) above the [GUI Keyboard \[p.41\]](#).

This displays only the *Mods* mode of the Matrix, i.e. modulation routings. We determined that other modes, such as the Sequencer, are best experienced on the PolyBrute synth hardware.

4.2. Control Types and Behaviors

This area of PBC includes four different types of controls: knobs, sliders, switches, and menu buttons.

4.2.1. Knobs and Sliders



These operate straightforwardly enough – simply (left) click and drag the mouse up or down. A pop-up tool tip will display the value as you change it, and the left corner of the bottom [Status Bar \[p.69\]](#) will display the name of the control.

4.2.2. Switches



These include “radio buttons” that toggle once choice at a time, such as the Voice Parameters at the upper left or the LFO Waveform selectors (just to name two examples).

Other switches, notably the filter routing switches in the Mixer section, offer more than one option at a time, e.g. each VCO and the Noise generator can be routed to the Steiner Filter, the Ladder Filter, or both.

4.2.2.1. Switches with Extra Options

Certain switches have extra options – such as [Morph A and B settings \[p.34\]](#), accessed by right-clicking. These include:

- Filter routing switches.
- LFO 1 and 2 waveform selectors.
- Sync switch for all LFOs.
- Retrigger switches on all LFOs.
- LFO 3 Single switch.
- LFO 3 XLFO 1 switch.

4.2.3. Menu Buttons



These commonly appear as text surrounded by a rectangle. Clicking one displays a pop-up menu of options. In some cases, these provide more direct and immediate access to parameters found in the Settings menus on the PolyBrute itself.

4.2.4. Morphable and Non-Morphable Controls

Most of these controls are subject to the PolyBrute's Morph function, but a handful are not because it doesn't make sense to Morph the parameters they control within a Preset. How can you tell if a control is morphable? Glad you asked!

4.2.4.1. Morphable Knobs and Sliders



Knobs that can be Morphed have a "collar" or "halo" around their circumference. Hover the mouse over this area to highlight it. You will see up to three "needle" indicators.

- The blue needle indicates the A value.
- The green needle indicates the B value.
- The white needle indicates the current value, as determined by the position of that control itself or of the Morph knob. So, we also call this the "Morphed value."

With sliders, the indicator needles show up in a vertical strip to their immediate right.



4.2.4.2. Setting A and B Morph Values

You can set the A and B limits of each morphable knob or slider – that is, how far it will go when the main Morph knob is fully at A or at B. Simply hover in the “collar” or vertical strip, then:

- Hold the left mouse button and drag to adjust the A (blue) value.
- Hold the right mouse button and drag to adjust the B (green) value.

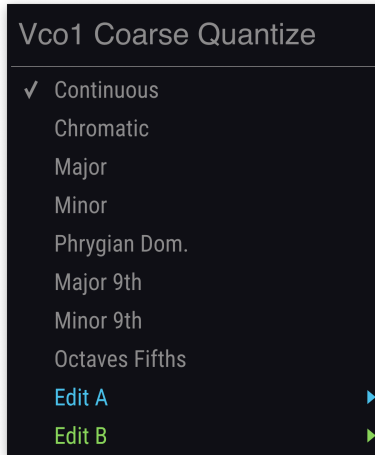
When dragging with the left mouse button, the pop-up value (tool tip) is displayed in blue. When dragging with the right mouse button, it's green.

If you can't see all 3 needles, this is because the current value is covering up one or both. Turn the main Morph knob to the halfway point and/or move the control you want to adjust, and the needles should become visible.



♪ You can also “reverse the polarity” of any control simply by setting its B value lower than its A value.

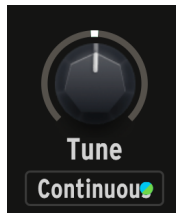
4.2.4.3. Morphable Menu Items



The PolyBrute can even morph between 2 different choices on some of the menus brought up by the menu buttons. Above, the menu for VCO1 Coarse Pitch Quantization has been accessed by clicking the button just below its Tune knob. Note the last two items, *Edit A* and *Edit B*.

Mousing to either of these brings up a submenu that duplicates the choices in the main menu. So, for example, the VCO1 Tune knob (which is itself a different Morphable parameter!) could change the pitch continuously when the Morph knob is at A but quantize to the major scale (or other intervals) when the Morph knob is at B, resulting in a glissando effect.

Even though this appears to be an either-or choice, if the Morph knob is anywhere between its two extremes, the PolyBrute will actually “split the difference.” The control will react proportionally, not abruptly switch from one behavior to the other.



When the selection in the *Edit A* submenu is different than *Edit B*, blue and green dots appear in the menu's button to indicate this, as shown above.

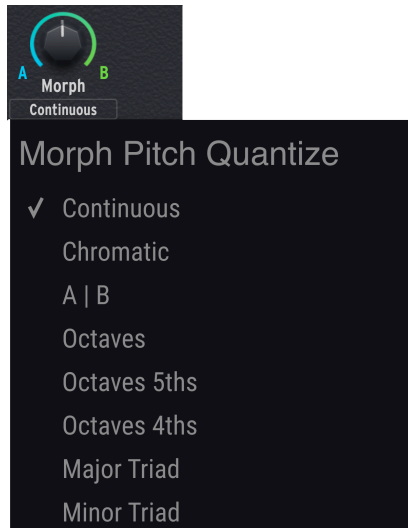
4.2.4.4. Morphable Switches

Some switches in the Main Controls area, such as those in the LFO section, are Morphable as well. It's easy to find out if one is: Just right-click it and a pop-up menu will appear with *Edit A* and *Edit B* options, as it does for Menu Buttons.



The screenshot above was taken with the Morph knob turned midway. VCO1 is feeding both filters in equal amounts, therefore both the orange (Steiner) and blue (Ladder) indicators are partially lit. Turn the Morph knob one way or the other, and one will get brighter while the other fades out in proportion. This shows that VCO1 was set to feed just the Steiner Filter with the Morph knob all the way at A, and just the Ladder Filter with it all the way at B.

4.2.4.5. Morph Pitch Quantize Menu



This is an important area to call out by itself. Just below the onscreen Morph knob is the button that brings up the above menu. If the Morph knob affects the pitch of a Preset (i.e. by changing the tuning of one or both VCOs), you can choose how this will be heard:

- **Continuous:** A continuous sweep.
- **Chromatic:** A glissando up or down the chromatic scale.
- **A|B:** The pitch changes abruptly as the Morph knob crosses its middle value.
- **Octaves:** Up or down in octaves.
- **Octaves 5ths:** Up or down in intervals of octaves and fifths.
- **Octaves 4ths:** Up or down in intervals of octaves and fourths.
- **Major Triad:** Arpeggio-like playing through the notes of a basic major chord.
- **Minor Triad:** Arpeggio-like playing through the notes of a basic minor chord.

These give you more pleasant and musically interesting options than just a continuous pitch-bend style sweep.

4.2.4.6. The Morph Edit Switch



This provides four choices allowing you to quickly rearrange how a Morph is set up:

- **Copy A To B:** Copies all Morphable settings from the extreme A position to the extreme B position.
- **Current To A:** Copies all settings corresponding to the current Morph position to the A position.
- **Current To B:** Copies all settings corresponding to the current Morph position to the B position.
- **Swap A/B:** Swaps the settings of the A and B positions.



Since Morphing is related to creating [split Presets \[p.47\]](#), these options can help get you to a good starting point for doing so.

4.2.5. The Morphing Mindset

While many synthesizers can change multiple settings with the sweep of a single controller, no other synth handles Morphing quite like the PolyBrute. It can seem a bit weird at first, but once you harness its potential, any similar abilities on other instruments start to feel primitive.

4.2.5.1. One Preset Really Is Two

Most synthesizers handle a morph, “scene,” or “macro” move in terms of an offset from the value stored in the Preset. In the PolyBrute, the A and B values truly do represent 2 independent Presets that just happen to share the same name and memory location.

Imagine someone who’s superpower is that they can shape-shift into 2 different-looking people – or pause anywhere in the shifting process to combine them. They still only need one apartment. *That* is a PolyBrute Preset!

4.2.5.2. Best Practices

One benefit of setting up Morphs in the PBC software is that you get visual feedback of how the A and B values relate to the current values for nearly all the controls in any given Preset. Another is that between the pop-up values and ability to resize the window, you can get very precise.

If there's a downside, it's that the PBC window can become rather busy if you set up a lot of Morphs within a Preset, so you may prefer to do it all on the PolyBrute hardware.

The controls onscreen will follow all your moves except for in certain situations, such as:

- If using the X/Y surface of the Morphée controller to control Morphing.
- If modulating the Morph function with, say, an LFO.

However you like to do it, we recommend this method to keep things simple and the music flowing:

1. Turn the Morph knob all the way to the A position.
2. Set all the Morphable controls for how you would like A to sound.
3. Turn the Morph knob all the way to the B position.
4. Set all the Morphable controls for how you would like B to sound.
5. Unless you want a precise setting for a certain point in the Morph knob's travel, don't worry about making settings to the in-between places.
6. [Save the Preset \[p.10\]](#) and let the PolyBrute work its magic when you turn the Morph knob!

4.2.5.3. Morphing and DAW Automation

A final note on using PBC inside a DAW or host program: The current (white needle) values of most controls are VST/AU/AAX parameters and thus can be automated in a DAW.

However, the A and B values (blue and green needles, or *Edit A* and *Edit B* menu items) are not VST/AU/AAX parameters and therefore cannot be automated.

4.3. PolyBrute 2.0 Additions

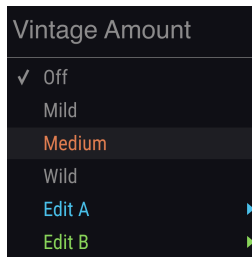
We've added a couple of things that correspond to new features as of PolyBrute firmware version 2.0. If you haven't already installed it (and the latest version of PolyBrute Connect), go to our [Downloads page](#) to get it. There, you will also find the most current user manual for the PolyBrute synthesizer, with details about these features.

4.3.1. Chord Mode Indication



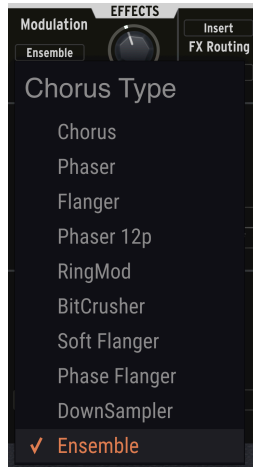
If all three lights next the Polyphony button are lit, that means the PolyBrute is in chord memory mode. This is entered by holding the Polyphony button on the PolyBrute hardware, then playing a chord. (Single notes will then trigger and transpose the chord.) You cannot enter chord mode by clicking the button onscreen; however, you can exit it.

4.3.2. Vintage Amount



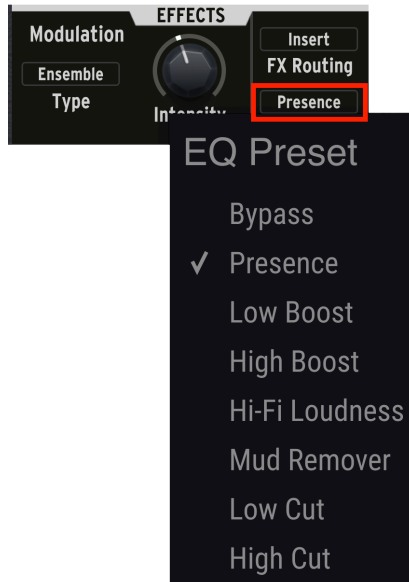
In PolyBrute 1.0, the menu button directly beneath the Fine Tune knob selected different amounts of pitch variation to simulate the instability of vintage analog synthesizers. There is now a second menu button that imparts variation to a group of other parameters. These include oscillator pulse width, filter cutoff and resonance, LFO rates (when not synced to tempo) and more.

4.3.3. Ensemble Effect



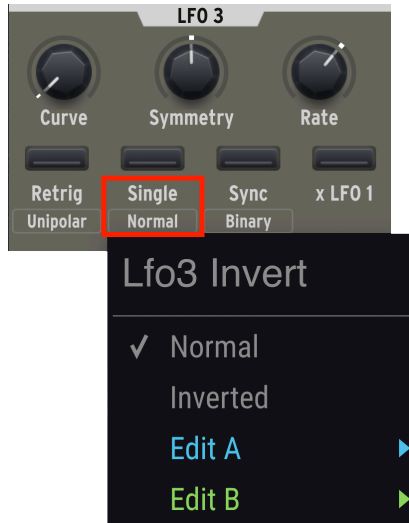
The Modulation effects now include an Ensemble effect at the bottom of the pop-up menu.

4.3.4. EQ Curves



The new EQ curves, which impart a fixed curve on the signal, can now be selected via a menu button to the right of the Effects Intensity knob.

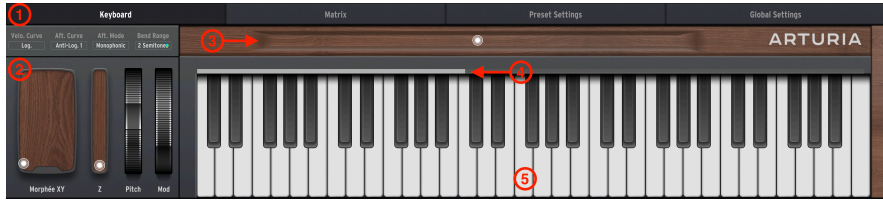
4.3.5. LFO3 Curve Invert



The ability to invert the curve of LFO3 is accessed onscreen beneath the Single function.

5. KEYBOARD TAB AND GUI KEYBOARD

This is the first of four important areas you can select using the tabs immediately above it, and is displayed by default when PolyBrute Connect is started.

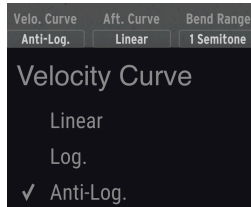


| Number | Section | Description |
|--------|---|---|
| 1 | Keyboard Response Controls [p.42] | Pop-up menus for velocity curve, aftertouch curve, aftertouch mode, and pitch-bend range. |
| 2 | Performance Controllers [p.45] | Graphical interfaces for the Morphée 3D controller, pitch-bend wheel, and modulation wheel. |
| 3 | Ribbon Controller [p.46] | Onscreen mirror of the PolyBrute ribbon controller. |
| 4 | Split Point Bar [p.47] | Quickly set the keyboard split point for Presets that use Split Timbrality. |
| 5 | GUI Keyboard [p.48] | Simple onscreen keyboard that mirrors notes played, whether by your fingers, a DAW/sequencer, or the PolyBrute's onboard sequencer and arpeggiator. |

5.1. Keyboard Response Controls

Here you will see 4 menu buttons that activate pop-up menus. Three control the response of the PolyBrute keyboard (Velocity Curve, Aftertouch Curve, and Aftertouch Mode); the fourth sets the range of the pitch-bend wheel.

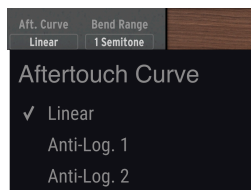
5.1.1. Velocity Curve



This menu offers three options for how the PolyBrute keyboard responds to velocity:

- **Linear:** The PolyBrute responds in an even fashion as you strike the keys with more force. Basically, X amount more or less physical force = X amount higher or lower MIDI velocity.
- **Log:** The PolyBrute responds according to a *logarithmic* curve. Instead of a linear relationship, there's an actual curve. This decreases the effort required at low velocities, but striking the keys harder then produces less of an increase.
- **Anti-Log:** The PolyBrute responds according to an anti- or *inverse logarithmic* curve. This increases the effort required at low velocities, but striking the keys harder produces more of an increase.

5.1.2. Aftertouch Curve



The PolyBrute's keys also sense channel aftertouch. Rather than the velocity of the initial strike, this is extra pressure you apply *after* your finger has pressed the key(s). The options here are similar to Velocity.



Remember that Velocity and Aftertouch can affect a lot more than just volume. The VCF and VCA Envelopes include sliders for how much velocity affects them. More importantly, both Velocity and Aftertouch are modulation sources in the Matrix. You can use either to control nearly anything!

5.1.3. Aftertouch Mode

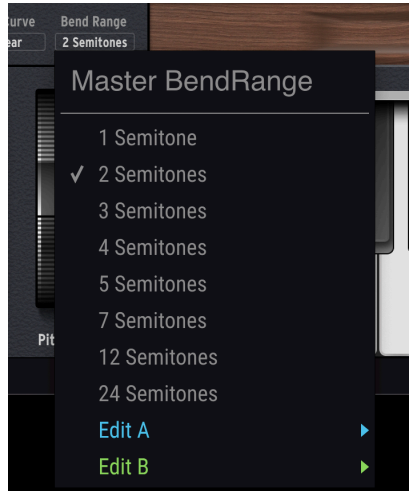


As of firmware 2.0 the PolyBrute features duophonic aftertouch. This means that aftertouch can be made to affect only the most recently played notes. This is great for soloing with aftertouch over, say, a pad you want to sound steady.

- **Monophonic:** Aftertouch affects all voices, i.e. standard channel aftertouch.
- **Duophonic:** Aftertouch only affects the last played note, or group of notes that was played simultaneously.
- **Duo Upper Split:** Same as Duophonic, but only applies to the Upper part in a split or layer.
- **Duo Lower Split:** Same as Duophonic, but only applies to the Lower part in a split or layer.

These choices correspond to *Settings > Expression Control > Aftertouch Settings* on the PolyBrute hardware.

5.1.4. Bend Range




This menu controls how much the pitch-bend wheel raises and lowers the pitch. There are 8 choices, ranging from 1 semitone (a chromatic half-step) to 24 semitones (two full octaves).

5.1.4.1. Bend Range Is Symmetrical

At this time, the bend range affects both the up and down directions of the pitch-bend wheel by the same amount.

5.1.4.2. Bend Range Is Morphable

Notice the *Edit A* and *Edit B* options in the menu. This offers different bend amounts for states A and B of a given Preset. If the Morph knob is anywhere between the two, the bend range will adjust proportionally, not skip abruptly.

 Here's a cool application for Morphing the Bend Range: The A value could be one or two semitones for subtle, old-school synth soloing while the B value is 12 or 24 semitones for performing guitar-god style "dive bombs."

5.2. Performance Controllers



These are pretty straightforward mirrors of the performance controllers on the PolyBrute itself. From left to right, we have the Morphée XY Pad, the Morphée Z Strip, the pitch-bend wheel, and the modulation wheel.

5.2.1. Morphée XY Pad

Morphée is a revolutionary 3D controller that combines an XY pad and a pressure-sensitive Z axis. All 3 of its axes can act as separate modulation sources in the [Matrix \[p.50\]](#) (via rows J, K, and L).

Moving the “puck” in this area is the same as dragging your finger along the surface of the Morphée 3D controller on the PolyBrute. There is one important difference:



- On the PolyBrute hardware, you can control how fast the Morphée “lets go” – or whether it lets go at all – once you lift up your finger. This can be set in the [Preset Settings \[p.56\]](#) area of PBC.
- With the onscreen Morphée XY Pad in PBC, the puck and therefore anything its X and Y axes are affecting (via a modulation routing) always remains wherever you dragged it with the mouse. To return the puck to zero position (bottom left) onscreen, double-click it.

5.2.2. Morphée Z Strip

Moving the puck up and down onscreen is equivalent to pressing the Morphée controller inwards on the PolyBrute. (We had to give it its own graphic because while Morphée is a 3D controller, computer screens are still a 2D interface!)

Like with the XY Pad, the puck will latch in whatever position you drag it onscreen. On the hardware, the Z axis is spring-loaded and will always snap back to its “zero” position.

Again, to zero it out onscreen, double-click on the puck.

5.2.3. Pitch-Bend Wheel

This wheel functions exactly as on the hardware, always snapping back to center position as soon as you let go with the mouse.

5.2.4. Modulation Wheel

This wheel functions exactly as on the hardware, always remaining in the last position it was moved to with the mouse.

5.3. Ribbon Controller

The PolyBrute has a responsive and programmable ribbon controller, cleverly blending into the wooden rail just above the keyboard. This area is an onscreen mirror of its behavior.

Like the Morphée XY Pad, the release of the physical ribbon can be controlled in [Preset Settings \[p.56\]](#). In PBC, its puck stays put where you’ve dragged it with the mouse.

Once again, double-click the puck to return it to its default center position.

5.4. Split Point Bar



This bar represents the range of the lower part when the Timbrality is set to Split. To change the upper/lower keyboard split point, simply drag the right edge of the bar left or right.

On the PolyBrute itself, the split point is set by holding the Timbrality button while in Split mode, then striking a key.

i The split point remains the same relative to the PolyBrute's physical keys, regardless of how Octave Shift is set. Also, the GUI keyboard controls the upper part of the split. The lower part may be played from a DAW by setting the track to the same MIDI channel as "Lower In," found in the Global Settings tab.

5.4.1. How Splits Work

On many synths, splits are set by putting different Presets in different keyboard zones. The PolyBrute instead leverages Morphing to create splits within *the same* Preset. Here's how this works:

- The **Lower** part always plays the preset *as if* the Morph knob and all settings it affects were turned all the way to state A, regardless of where the Morph knob actually is set.
- The **Upper** part plays the sound that occurs based on however much the Morph knob is *actually* turned towards state B, whether that's part way or all the way.

In other words, with the Morph knob set all the way at A, you will hear no difference between the Upper and Lower parts. You will hear a progressively more dramatic difference as you turn the Morph knob towards B.

i It's therefore best to use the Lower part for something you'd prefer to be relatively static, like a solid, rubbery analog synth bass sound. Since there are no practical limits on how different you could make state B, you could Morph the Upper part into something completely different – say, a lush pad or gliding portamento lead. (Anyone up for playing the "Doctor Who" theme?)

5.4.2. Splits and Polyphony

It is even possible to use Splits with the PolyBrute in Mono or Unison mode, without one side of the split robbing from the other. We cover this in more detail in the chapter on [Preset Settings \[p.56\]](#), specifically, the settings for Lower Voicing.

5.4.3. Splits and the Sequencer

In Split mode, the lower zone of the GUI keyboard defines the area of the PolyBrute's keyboard that transposes the Sequencer/Arpeggiator, while the upper zone defines the area (of the Upper part) that can be played "live" on top of it.

5.5. GUI Keyboard



The Graphical User Interface (GUI) Keyboard can both reflect what is being played on the PolyBrute and be used to play the PolyBrute's Upper part.



♪ Make sure that the MIDI port "PolyBrute MIDI" is activated in the audio-MIDI settings of your DAW (or in stand-alone mode of PBC) in order to use the graphical keyboard.

5.5.1. Monitoring Notes with the GUI Keyboard

Whether you're playing the PolyBrute live, playing back MIDI notes from a virtual instrument track in your DAW, or using the PolyBrute's internal sequencer or arpeggiator, the GUI keys will mimic every note played.



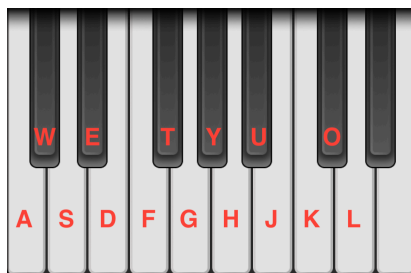
♪ Slowing down the tempo of a sequence or arpeggiator pattern is a great way to "reverse engineer" it and learn to play it by watching the keys.

5.5.2. Playing the PolyBrute from the GUI Keyboard

Likewise, you can play the PolyBrute from the onscreen keys. A couple of things to know:

- The Y axis of any black or white key controls **velocity**. Click higher on the key for softer velocities; lower on the key for greater ones.
- Make sure the VCA Envelope's Velocity slider is set to maximum in order for this to work.
- The **range** of the GUI Keyboard always corresponds to the PolyBrute's Octave Shift buttons being set at 0, regardless of where they're actually set on the hardware.

5.5.3. Playing the Computer Keyboard

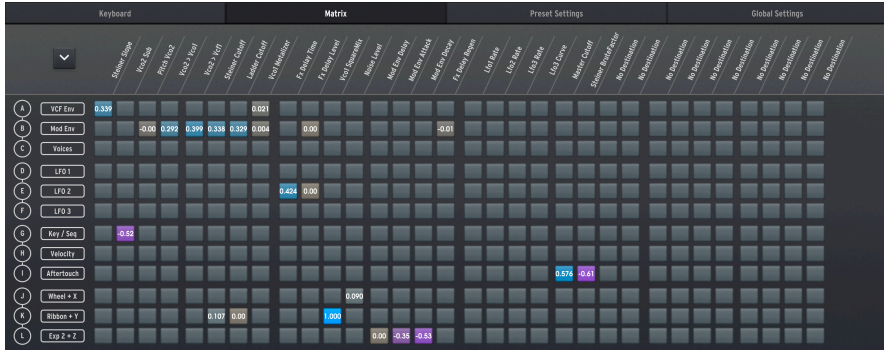


PBC has a limited ability to play the first 15 notes on the PolyBrute (starting with the lowest C) from your computer keyboard, though this will always transmit fixed velocity. The above diagram shows which keys on a standard American QWERTY keyboard correspond to the notes.

Other keys also toggle octave shift:

- American QWERTY keyboard: Z and X.
- Azerty keyboard: W and X.
- Dvorak keyboard: A and Y.

6. THE MATRIX TAB AND VIEWS



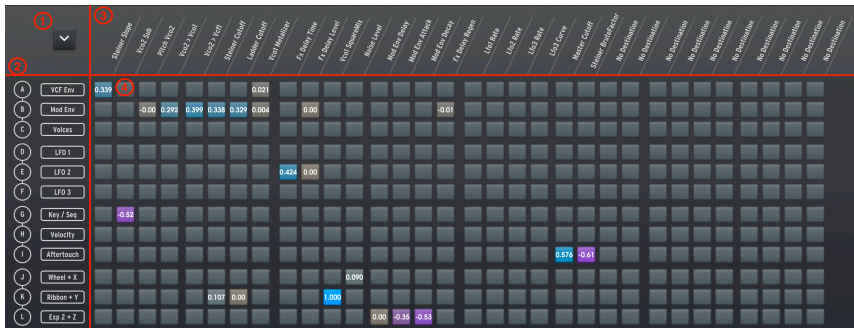
“No one can be told what the Matrix is.” – Laurence Fishburne in the classic sci-fi movie “The Matrix”

“We can tell you what ours is, and it’s much more fun.” – Arturia

The PolyBrute’s modulation Matrix is the largest and deepest ever in any analog polysynth, except perhaps for huge modular systems. In fact, it’s like a modular-synth patch bay that doesn’t require cables.

This tabbed section corresponds to the *Modes* mode of the synthesizer’s Matrix Panel. Onscreen, things do not look exactly like the Matrix Panel on the PolyBrute. This is because PolyBrute Connect shows *all* the modulation routings at once: 12 sources into 32 possible destinations. That’s 384 buttons! As quick as the PolyBrute Matrix panel is, the Matrix view in PBC can be even quicker for assigning modulation routings.

Let’s break down its 4 major sections, then cover how to set routings.



| Number | Section | Description |
|--------|---------------------------------------|---|
| 1 | View Toggle [p.51] | Switches between partial and full Matrix views. |
| 2 | Sources [p.51] | 12 modulation sources, labeled vertically. |
| 3 | Destinations [p.51] | 32 possible modulation destinations, labeled horizontally. |
| 4 | Matrix Buttons [p.54] | Set routings between any source row and destination column. |

6.1. View Toggle

Click this arrow icon to switch between full and partial views of the Matrix. The full view fills most of the PBC window so you can see all the modulation routings at once. The partial view confines the Matrix to the same space as the GUI Keyboard, and is better for working with the Matrix and other controls at the same time. You can scroll vertically in the partial view using a wheel mouse.

6.2. Sources

Modulation Sources are fixed, listed vertically down the left side of the Matrix view, and correspond to rows of Matrix Buttons.

6.3. Destinations

Destinations are listed horizontally across the top of the Matrix view, in diagonal text, and correspond to *columns* of Matrix Buttons. This area always stays visible, even when scrolling through the Matrix in partial view.

6.3.1. Changing Destinations

Modulation destinations in the PBC Matrix are not fixed. You can assign any Destination to any column in one of two ways:

6.3.1.1. The “Learn” Method



This works best when the Matrix is in partial view, you're also looking at the main synth controls, and you want to find a Destination visually.

1. Click any of the 32 Destination column names. The name will highlight in light blue and all controls that can act as modulation Destinations will turn bright purple.
2. Click a control to assign it to that column. The name of that control now appears in place of the old name, still highlighted.
3. Click the new name to un-highlight it and return all the controls to normal.



! Controls do not affect live synth settings when in purple "learn" mode.

6.3.1.2. The Menu Method

| | | | | |
|---------------------|--------------------|---------------------|---------------|---------------|
| Destination 1 | Ladder Cutoff | Lfo2 Amp | No Connection | No Connection |
| No Destination | Ladder Resonance | Lfo3 Rate | No Connection | No Connection |
| Morph | Ladder VCF Env Amt | Lfo3 Symmetry | No Connection | No Connection |
| Pitch Global | Ladder Drive | Lfo3 Curve | No Connection | No Connection |
| Pitch Vco1 | Ladder OutLevel | Lfo3 Amp | No Connection | No Connection |
| Pitch Vco2 | Ladder Pan | Vca | No Connection | No Connection |
| Vco1 SawTriMix | Vcfs ParaSerie | Master GlideTime | No Connection | No Connection |
| Vco1 SquareMix | Master Cutoff | Voice Pan | No Connection | No Connection |
| Vco1 Pw | Vcfs KeyTrack | Global Pan | No Connection | No Connection |
| Vco1 Metalizer | VCF Env Velo | Fx Modul. Intensity | No Connection | No Connection |
| Vco2 SawTriMix | VCF Env Attack | Fx Delay Level | No Connection | Amount 2.L2 |
| Vco2 SquareMix | VCF Env Decay | Fx Delay Time | No Connection | Amount 1.K7 |
| Vco2 Pw | VCF Env Sustain | Fx Delay Regen | No Connection | Amount 1.K6 |
| Vco2 Sub | VCF Env Release | Fx Reverb Level | No Connection | Amount 1.J2 |
| Noise Colour | VCA Env Velo | Fx Reverb Time | No Connection | Amount 1.J1 |
| Sync | VCA Env Attack | Fx Reverb Damping | No Connection | Amount 2.I1 |
| Vco2 > Vco1 | VCA Env Decay | Vibrato Depth | No Connection | Amount 2.G1 |
| Vco2 > Vcf1 | VCA Env Sustain | Vibrato Speed | No Connection | Amount 1.E8 |
| Noise > Vcf2 | VCA Env Release | Stereo | No Connection | Amount 1.E7 |
| Vco1 Level | Mod Env Delay | MotionRec Rate | No Connection | Amount 1.D6 |
| Vco2 Level | Mod Env Attack | No Connection | No Connection | Amount 1.F6 |
| Noise Level | Mod Env Decay | No Connection | No Connection | Amount 1.F5 |
| ✓ Steiner Cutoff | Mod Env Sustain | No Connection | No Connection | Amount 1.E4 |
| Steiner Resonance | Mod Env Release | No Connection | No Connection | Amount 1.E3 |
| Steiner Slope | Lfo1 Rate | No Connection | No Connection | Amount 1.E2 |
| Steiner VCF Env Amt | Lfo1 Phase | No Connection | No Connection | Amount 1.D1 |
| Steiner BruteFactor | Lfo1 Amp | No Connection | No Connection | |
| Steiner OutLevel | Lfo2 Rate | No Connection | No Connection | |
| Steiner Pan | Lfo2 Fade | No Connection | No Connection | |

This is ideal for quickly assigning a destination you already know you want and/or when the Matrix is in full view. It also lets you find the handful of Destinations that do not correspond to a physical control on the PolyBrute (e.g. the overall VCA).

1. Right-click any of the 32 destination names to see a drop-down menu of all destinations.
2. Left-click the desired Destination.

6.3.1.3. What Are the Amount Destinations?

The "Amount" Destinations at the end of the above menu correspond to the PolyBrute's 64 possible slots for modulation routings. That's right: Modulation amounts for active routings can *themselves* be Destinations.

The numbers and letters after the word "Amount" correspond to where the modulation routing is found on the PolyBrute hardware: page, then row (source), then destination (column). For example, "Amount 1.E4" refers to page 1 (as accessed by pressing Assign button 1 on the hardware), row E (LFO2 as source), and whatever destination is assigned to column 4, which happens to be the Ladder Filter Pan in this case.

You may have also noticed that active routings turn bright purple in purple "Learn" mode, which also lets you adjust the amounts.

6.4. Matrix Buttons

These function just like on the *Mods* mode of the PolyBrute Matrix Panel, letting you route modulation Sources to Destinations.

You can freely route one Source to multiple Destinations, or affect the same Destination with multiple Sources. The only limit is that the PolyBrute Preset can handle a maximum of 64 routings at the same time.

6.4.1. Setting a Routing

Simply click the button at the intersection of the Source row and Destination column you wish to connect. A pop-up knob will appear:

6.4.1.1. The Amount Knob



This adjusts the modulation amount, as though you were turning the silver Amount knob on the PolyBrute. The modulation amount can be positive or negative, as displayed by the number in any active Matrix Button.

i ♪ Try this: Routing velocity (row H) to the Master Filter Cutoff with a positive value makes the sound to become brighter as you play the keys harder. A negative value makes the sound darker in response to more velocity.

- Click the **X** to hide the knob graphic but leave the modulation routing in place.
- Click **Mute** to remove the modulation routing entirely.

6.4.1.2. Modulation Amounts Are Morphable!

As in the [Main Control Area \[p.29\]](#), any amount knob has a “collar” in which you can drag the blue and green needles to set limits for that Amount as it relates to the A and B positions of the Morph knob.

This means that how much any Destination(s) affect one or more Sources can change based on the Morph state of your PolyBrute.

Conversely, the Morph knob itself can be a modulation Destination. The combination of these two factors allows for unique expressive possibilities with virtually endless variations.

6.4.1.3. What the Button Colors Mean



The colors of the Matrix Buttons in PBC give extra visual feedback about whether a modulation routing is in place and, if so, whether its amount is positive or negative.

- **Grey:** No modulation routing.
- **Tan:** Routing active with amount or offset of zero.
- **Blue:** Routing active with positive amount or offset.
- **Purple:** Routing active with negative amount or offset.

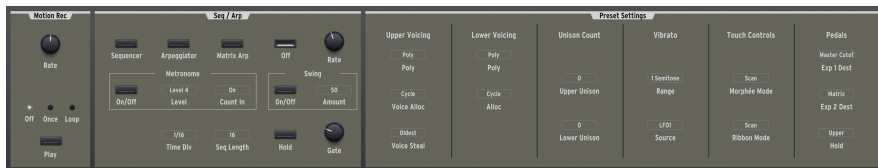
You may ask yourself, “What’s the difference between no routing (grey) at all and one that’s turned on but set at zero (tan)? Remember that modulation amounts can also be destinations of other routings – but only if the first routing is active.



♪ To follow up on our previous example, suppose you wanted to modulate Master Cutoff by way of velocity. But you wanted to have the amount that velocity affects it in turn change by way of an LFO. This could be accomplished by first setting up the velocity-to-Master-Cutoff routing, leaving its offset at zero, then sending the LFO to an [Amount slot \[p.53\]](#) that corresponds to the first routing. We don’t just modulate – we modulate our modulation!

As a final visual touch, the button colors turn brighter or darker in proportion to the Amount knob position.

7. THE PRESET SETTINGS TAB



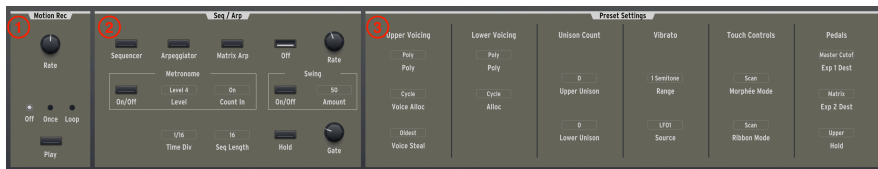
This tab access settings saved at the Preset level in the PolyBrute. Like with the main synth controls, everything here can be different depending on the Preset.

7.1. Direct Access

An advantage of this section is that it provides quick visual access to settings that are otherwise found by pressing the Settings button on the PolyBrute and then navigating its menus. While that's not difficult, here in PBC most of these same settings are conveniently visible at once and can be changed with a click.

7.2. Preset Settings Window

The window displayed when the Preset Tab is clicked has three main areas:



| Number | Section | Description |
|--------|--|---|
| 1 | Motion Recorder [p.56] | Controls for the PolyBrute's Motion Recorder. |
| 2 | Seq/Arp [p.57] | Settings for the PolyBrute's Sequencer and Arpeggiator. |
| 3 | Preset Settings [p.59] | Preset-based settings for voice allocation; unison voice count; vibrato; and behavior of the Morphée, ribbon, and pedals. |

7.2.1. Motion Recorder

These mirror the hardware controls for the PolyBrute's Motion Recorder, which can record any one control move, then play it back in either one-shot or looped fashion. You still must Record-Arm the Motion Recorder on the PolyBrute itself, but the note that triggers recording can be played from PBC.

Refer to section 5.10 of the [PolyBrute User Manual](#) for details on using the Motion Recorder.

7.2.2. Sequencer and Arpeggiator



This section is called **Seq/Arp** for short. As in the chapter on [Main Controls \[p.29\]](#) we'll focus on the behaviors of the different control types – switches, knobs, and menu buttons – and the benefits thereof.

7.2.2.1. Switches

The first 4 switches select the sequencer/arpeggiator mode:

- **Sequencer**
- **Arpeggiator**
- **Matrix Arpeggiator**
- **Off**

Note that the Play Mode options at lower left only appear when either the Sequencer, Arpeggiator, or Matrix Arpeggiator are turned on.

i The Matrix Arpeggiator is a hybrid of the sequencer and arpeggiator that creates patterns based on up to six held notes. You can then edit these patterns on the Matrix Panel. For more information, refer to section 8.4 of the [PolyBrute User Manual](#).

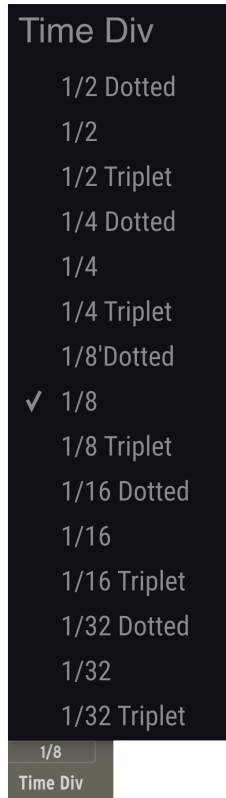
There are also switches to turn the Metronome on and off, turn the Swing function on and off, and toggle the Hold function, which acts like a “foot-free” sustain pedal unless the PolyBrute is in Sequencer mode. (Because there, you’d simply start and stop patterns.)

7.2.2.2. Knobs

Knobs in this section are straightforward. They mirror the Rate and Gate functions of the Seq/Arp.

i Gate is the “window” the Seq/Arp gives each note in the pattern to sound. At maximum, notes have a length of 2 steps. Set at minimum, you can hear only tiny snippets of the notes.

7.2.2.3. Menu Buttons



This is one of those cases where direct access to functions otherwise accessed in PolyBrute menus is very useful. Here, pop-up menus control key behaviors and options of the Sequencer/Arpeggiator.

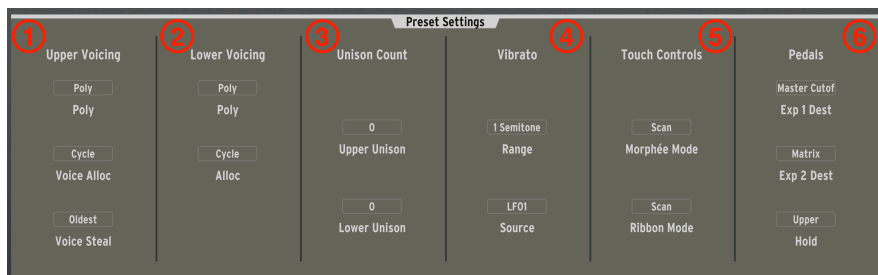
- **Metro Level** offers 4 choices of volume level for the metronome.
- **Count In** makes the metronome provide a pre-count before the Sequencer starts recording.
- **Swing Amount** adjusts the degree of Swing (when the Swing switch is on), creating a behind-the-beat feel popular in musical genres from jazz to hip-hop to EDM.
- **Time Div** (shown above) decides what rhythmic value each step in the sequence or arpeggio plays, from half-notes to 32nd-notes, including dotted and triplet values. This can make a pattern play slower or faster at a given overall tempo.
- **Seq Length** allows you to set any step length for the sequence, from 1 to 64 steps. You can thus create patterns with exotic time signatures if you like.
- **Play Mode** determines the note order of patterns, and offers different choices in Sequencer/Matrix Arp mode versus Arpeggiator mode. This menu button disappears when the Seq/Arp is off.

7.2.2.4. What's Not Here?

Transport controls (Tap, Record, Stop, Play), sequence management functions (copy/paste, erase notes, etc.), and of course, the Matrix Buttons that edit patterns in *Sequencer* mode must be accessed from the PolyBrute hardware at this time. While we love PBC for many things, recording and editing patterns is the most fun on the actual Matrix Panel's buttons.

7.2.3. Preset Settings

Here, you can precisely manage 7 "under the hood" areas that affect the sound and behavior of a PolyBrute Preset.



| Number | Section | Description |
|--------|---------------------------------------|---|
| 1 | Upper Voicing [p.60] | Manages polyphony for the Preset or upper part of a Split/Layer. |
| 2 | Lower Voicing [p.61] | Manages polyphony for the lower part of a split/layer Preset. |
| 3 | Unison Count [p.61] | Sets voice usage for upper and lower unison modes. |
| 4 | Vibrato [p.61] | Controls PolyBrute stand-alone vibrato effect. |
| 5 | Touch Controls [p.62] | Adjusts touch response of Morphée 3D controller and Ribbon controller. |
| 6 | Pedals [p.63] | Assigns PolyBrute's expression pedal inputs to various destinations. Assigns Hold pedal to upper or lower part. |

7.2.3.1. Upper Voicing

This section controls the upper part of a split or layer, or the whole Preset if it is not a split or layer.


Poly sets Poly, Unison, or Mono behavior for voices in the Upper part.

Voice Alloc (allocation) determines how the PolyBrute uses its 6 voices of polyphony as new notes are played.

- *Cycle*: Cycles through available voices.
- *Reset*: Keeps using the first available voice until it needs to be stolen.
- *Unison*: Available voices are stacked if one note is played, then divided as more notes are added, for a thicker sound.
- *Reassign*: Like Cycle, but reuses a voice when the same note is played.

If the **Poly** parameter is set to Unison or Mono, the **Voice Alloc** parameter changes to **Legato**, with the following options:

- *On*: Legato playing will not retrigger the Envelopes.
- *Off*: Legato playing will retrigger the Envelopes.
- *Glide*: If any Glide (portamento) is used, legato playing is required to trigger it.

 *Legato* means playing a new note before you have fully released your finger from the previous one. It opposite is *staccato*. Experiment with these settings to hear the differences.

Voice Steal decides what happens if playing new notes makes the PolyBrute run out of voices.

- *Oldest*: The first of all currently held notes is silenced to reallocate the needed voice.
- *Lowest*: The note with the lowest velocity is silenced instead.
- *None*: The PolyBrute will not play any new notes until you manually release some notes to free up voices.

Note that voice stealing is shared between the upper and lower parts, which is why there is no separate setting for the lower part.

If the **Poly** Parameter is set to Unison or Mono, the **Voice Steal** parameter changes to **Priority**, with the following options:

- *Lower*: During legato playing, lower notes always preempt higher ones.
- *Higher*: During legato playing, higher notes always preempt lower ones.
- *Last*: During legato playing, the most recent note played always preempts the previous one.

7.2.3.2. Lower Voicing

You can manage the polyphony of the lower (A) part separately in split or layered Presets. This, for example, lets you restrict a synth bass to monophonic voicing in the lower part to free up voices for chords in the upper part.

Poly offers Poly, Mono, and Unison options in the pop-up menu.

Alloc functions like the **Voice Alloc** parameter in the [Upper Voicing \[p.60\]](#) section, with the same options: Cycle, Reset, Unison, and Reassign.

As in the Upper Voicing section, if the **Poly** Parameter is set to Unison or Mono, the **Alloc** parameter changes to **Legato** and a **Priority** menu box appears.

7.2.3.3. Unison Count

Here, you can place limits on how many voices the upper and lower parts will use when the **Voice Alloc** of the upper part and/or the **Lower Poly** parameter of the lower part is set to *Unison*. Options for each part are 2, 3, 4, or 6 voices. If the total for both parts is more than 6, voice stealing is certain to occur, making the Steal setting even more relevant.

7.2.3.4. Vibrato



The PolyBrute features a stand-alone vibrato (pitch modulation) for this commonly applied musical effect.

Range can be 1, 2, 7, or 12 semitones (a half-step, whole-step, perfect 5th, or octave, respectively).

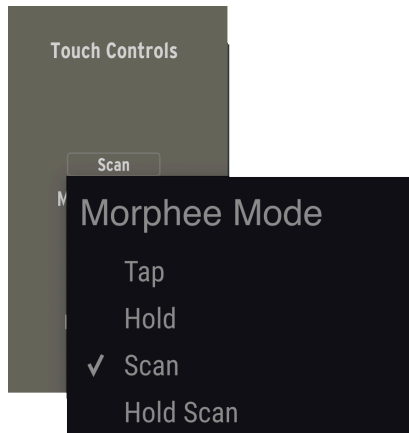
Source (shown) lets you choose LFO1 as the vibrato source, or one of three speeds of sine wave so as to leave the LFO free for something else.

Vibrato depth and speed are also independent modulation Destinations in the [Matrix View \[p.50\]](#).

Vibrato Is Morphable! Note that both the Range and Source menus have *Edit A* and *Edit B* options, relating to the value for each when the Morph knob is at either extreme.

7.2.3.5. Touch Controls

Here you can adjust the response of the PolyBrute's exclusive Morphée 3D controller, which combines an XY touchpad with a spring-loaded pressure sensor, as well as the Ribbon controller above the keyboard.



Morphée Mode governs how Morphée responds to your finger position on the XY surface of the PolyBrute hardware.

- *Tap*: Ties the X and Y values to your absolute finger position. When you let go, the release time is instant.
- *Hold*: Like Tap, but when you let go, the X and Y axes remain at the last values you touched.
- *Scan*: Starts at the first-sensed finger position and averages out the axes' ranges as you move in any direction. Reverse direction, and the normal range is restored. Release time is fast but not instant.
- *Hold Scan*: Like Scan, but when you let go, the X and Y axes remain at the last values you touched.

Ribbon governs the PolyBrute's integrated Ribbon controller, which can be both a pitch-bender and a modulation Source (row L in the Matrix). Here you can adjust its response. The options are:

- *Tap*: Ties the Ribbon position value to your absolute finger position (e.g. upper right will always be maximum for both axes). When you let go, the release time is instant.
- *Hold*: Like Tap, but when you let go, the Ribbon remains at the last values you touched.
- *Scan*: Starts at the first-sensed finger position and averages out the Ribbon's ranges as you move in either direction. Release time is fast but not instant.
- *Slow Scan*: Like Scan, but at a slower rate, allowing for finer-grained performance gestures.

7.2.3.6. Pedals

The PolyBrute includes 2 TRS input jacks for **Expression pedals** (also called continuous or sweep pedals). These menus assign their destinations, which are almost the same for both, with one exception:

- *Master Cutoff*
- *Morphée X Axis*
- *Morphée Y Axis*
- *Morphée Z Axis*
- *Ribbon*
- *Modulation Wheel*
- *Volume* (Exp. pedal 1 only)
- *Matrix* (Exp. pedal 2 only)

The *Matrix* option for Exp. 2 adds a pedal plugged into this input to Source row L in the modulation [Matrix \[p.50\]](#). It will then function alongside the Z axis of the Morphée to modulate destinations of your choosing.

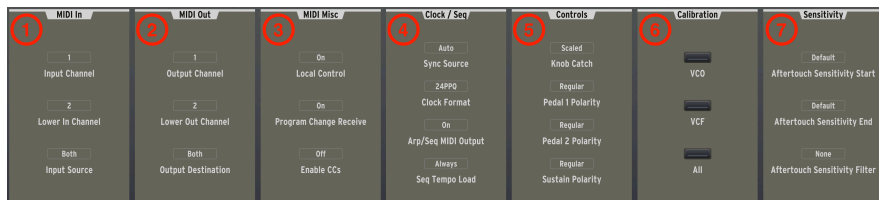


♪ Assigning pedals to one or more of the above Sources keeps your hands free for playing the PolyBrute while still performing expressive modulation gestures – something two-handed keyboardists will appreciate!

The **Hold pedal** (a switch pedal) can simply be set to affect the upper or lower part. This is ideal for holding a pad or drone with the pedal as you solo using the other part of a split, leaving one hand free to adjust controls.

8. THE GLOBAL SETTINGS TAB

The final of the 4 tabbed sections is for utilitarian settings that affect the PolyBrute as a whole, regardless of which Preset is currently loaded.




| Number | Section | Description |
|--------|---|--|
| 1 | MIDI In [p.64] | Controls MIDI input and physical port settings. |
| 2 | MIDI Out [p.65] | Controls MIDI output and physical port settings. |
| 3 | MIDI Misc [p.65] | Local control and program change receive on/off, and toggle whether PolyBrute sends and receives MIDI continuous control messages. |
| 4 | Clock/Seq [p.66] | Source for tempo sync and other time-based settings. |
| 5 | Controls [p.67] | Sets knob behavior and polarity of pedals. |
| 6 | Calibration [p.67] | Tunes and calibrates PolyBrute's VCOs and VCFs. |
| 7 | Sensitivity [p.68] | Adjusts aftertouch sensitivity. |

8.1. MIDI In

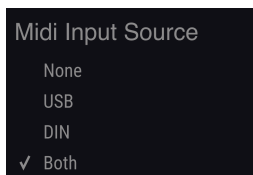
These 3 pop-up Menu Buttons determine how the PolyBrute receives MIDI messages.

Input Channel choices are 1 to 16, plus *All* (omni) and *None* (PolyBrute will not respond to MIDI messages.)

Lower In Channel lets the lower part receive MIDI messages on a different channel (if desired) when the Preset is in Split Timbrality. Options are the same as above. This is useful because the GUI Keyboard controls only the Upper part, and you may want to trigger the Lower part separately from a MIDI track in your DAW.

 When PolyBrute Connect is active and the PolyBrute is played in [Split mode](#) [\[p.47\]](#), USB MIDI send and receive channels are fixed at 1 for the upper part and 2 for the lower part. This improves Sequencer/Arpeggiator performance when using Splits.

Input Source (see below) controls which physical input the PolyBrute uses to receive MIDI: the USB port, the traditional 5-pin MIDI input (DIN), neither, or both.



8.2. MIDI Out

These 3 pop-up Menu Buttons determine how the PolyBrute transmits MIDI messages. Other than controlling output, their options and operations are identical to the [MIDI In \[p.64\]](#) section.

8.3. MIDI Misc

This section contains 3 settings, all of which are simply on or off.

Local Control means the PolyBrute's own keyboard – as well as knobs and sliders that have a CC assigned – controls its sound engine.

Program Change Receive lets the PolyBrute receive MIDI Program Change and Bank Change commands from an external source.

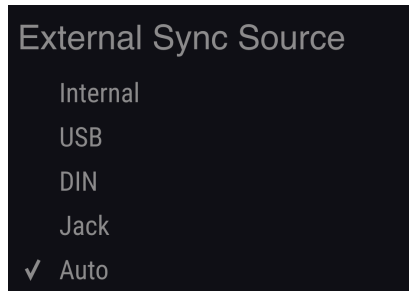
Enable CCs decides whether the PolyBrute's knobs and sliders send and receive MIDI Continuous Controller messages.

 Circumstances where you might turn off local control include playing the PolyBrute from another MIDI-capable keyboard routed through your DAW. Program Change Receive is useful if, for example, you'd like to record and automate Preset changes from within a DAW project.

8.4. Clock/Seq

When using the PolyBrute with other music-making devices such as sequencers or drum machines, every device should agree on which is “boss” when it comes to sync and tempo. Those settings are handled here.

Sync Source



- *Internal*: The PolyBrute only uses its internal clock for time-based matters. Use this setting if your PolyBrute is the “boss” of other devices.
- *USB*: PolyBrute syncs to an external clock received via MIDI over the USB connection.
- *DIN*: PolyBrute syncs to an external clock received via MIDI over the 5-pin MIDI input.
- *Jack*: PolyBrute syncs via the 1/8” Sync input on its rear panel. (Its Sync input and output are for sending and receiving sync with non-MIDI gear using standard pre-MIDI protocols.)
- *Auto*: PolyBrute syncs to an external source if one is present but uses its internal clock if one is not.

External Clock Format deals with the subdivisions of time sent and received by the PolyBrute. This is especially important with non-MIDI sync as described above. The options are:

- *One Step*: Advances the Sequencer/Arpeggiator one step for each clock impulse received.
- *2PPQ*: Sends and receives 2 pulses per quarter-note.
- *24PPQ*: Sends and receives 24 pulses per quarter-note.
- *48PPQ*: Sends and receives 48 pulses per quarter-note.

Arp/Seq MIDI Output toggles whether the PolyBrute’s Sequencer/Arpeggiator transmits MIDI note data via the method set in [MIDI Out \[p.65\]](#). You would turn it on for recording a sequence or arpeggio as MIDI in a DAW, for example.

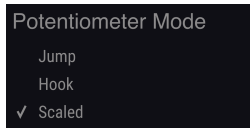
Seq Tempo Load determines whether loading a new Preset changes the tempo of the internal Sequencer/Arpeggiator to the Preset’s stored value. There are three options:

- *Always*: Loading a new Preset always loads the new tempo.
- *If Paused*: Loading a new Preset loads the new tempo only if the Sequencer/Arpeggiator is not running. (Meaning, it will not disrupt the tempo of a playing sequence.)
- *Off*: Loading a new Preset never changes the tempo.


8.5. Controls

Here you can set the finer points of how the PolyBrute's knobs control their parameters, as well as pedal polarity.

Knob Catch



- *Jump*: As soon as you move a knob (or slider), its parameter value jumps to its physical position. This can create audibly abrupt changes.
- *Hook*: No change occurs until the knob's physical position sweeps past its stored value.
- *Scaled*: The parameter starts changing as soon as you move the control, but the range is averaged out to cover the remaining values in the direction of travel. This is best for combining instant response *and* smooth sounding changes.

 When you first load or change Presets in PolyBrute Connect, the positions of the controls onscreen always indicate the values stored with the Preset, not the physical positions of the hardware controls.

Pedal 1 Polarity has two settings: *Regular* and *Inverted*. The latter reduces the input value as you press Exp. pedal 1 further down.

Pedal 2 Polarity works identically for Exp. pedal 2.

Sustain Polarity is useful because some sustain pedals use a normally-open circuit and others use a normally-closed one. Flipping the polarity remedies the familiar situation where notes are sustaining with the pedal released, then stop when you press it. There's also an *Auto-Detect* option.

8.6. Calibration

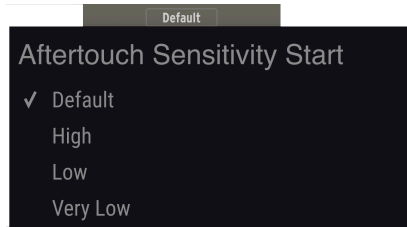
While the PolyBrute synthesizer is much more stable than analog synths of yesteryear, it *is* fully analog and therefore sometimes benefits from calibration. Clicking one of these switches starts an auto-routine that tunes the PolyBrute's analog VCOs, calibrates its VCFs, or does both processes in succession.

8.7. Sensitivity

The three parameters in this section let you precisely adjust the PolyBrute's aftertouch response to your playing style.

On one hand, it's normal to apply some unintentional extra pressure to a key after your initial key strike, so you don't want to trigger aftertouch prematurely – especially if it's modulating some Destination that has a dramatic effect on the sound.

On the other hand, you don't want to have to dig in *too* hard to hear it. Plus, since aftertouch is a continuous controller, you want it to respond smoothly as you increase finger pressure, not go from nothing to full-blast too quickly.



Aftertouch Sensitivity Start gives you four options for how much pressure it takes for the PolyBrute to register aftertouch, as shown above. Higher values mean *less* pressure is required.

Aftertouch Sensitivity End adjusts how much physical pressure it takes for the PolyBrute to register maximum (127) aftertouch.

Aftertouch Sensitivity Filter adds an additional curve between the keys sensing a given amount of pressure and the sound engine responding. There are three options: *None*, *Fast*, and *Slow*, from fastest to slowest. At the *Slow* setting, you will definitely hear a delay between your fingers applying full pressure and the aftertouch-modulated parameter (like vibrato or filter cutoff) responding fully.

9. THE BOTTOM STATUS BAR



The strip at the very bottom of the PolyBrute Connect window provides a handful of useful information and functions. There are just 4, from left to right:



| Number | Function | Description |
|--------|---|--|
| 1 | Current Parameter Name [p.69] | Shows the parameter currently being adjusted. |
| 2 | FW Update Button [p.69] | Opens the Firmware Update window. |
| 3 | Panic Button [p.70] | Sends all-notes-off and all-sounds-off MIDI command. |
| 4 | CPU Meter [p.70] | Monitors CPU Usage |

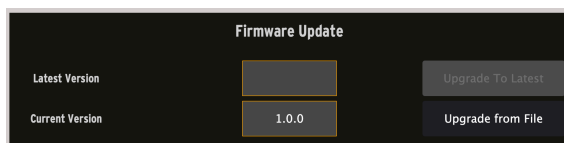
9.1. Current Parameter Name

This area simply displays a duplicate of the parameter of the knob, slider, switch, or Menu Button you're currently adjusting or hovering over with the mouse pointer.

9.2. Firmware Update

Keeping your PolyBrute's firmware up to date will ensure it runs smoothly and often fix any issues known by the Arturia tech support team. There are 3 ways this can happen:

9.2.1. Directly From PBC



Click the *FW Update* button located at the right side of the bottom status bar. The dialogue above will appear. The bottom field displays the firmware version currently in your PolyBrute; the top displays the latest available from Arturia. If the top field is blank, you are up to date. If not, click the *Upgrade To Latest* button and the process will begin. PBC and the PolyBrute will now display progress bars. You won't need to download anything via a browser or find any files – PBC communicates directly with Arturia and does all the work. Note: This method requires an active internet connection.



! Never power off your PolyBrute or disconnect the USB cable while a firmware update is in progress.

9.2.2. Manually from File

If you have downloaded new firmware from the [Arturia support page](#), click the *Upgrade From File* button. A dialogue box will then prompt you to choose the file location. Then, the process will begin as above.

9.2.3. Automatically

If you have an active internet connection and your firmware is behind the latest version, PBC will warn you upon opening that you need to update in order to proceed. The process should begin automatically as soon as PBC confirms its connection to the PolyBrute.

9.3. Panic Button

Occasionally – and especially in studios or on stages where a lot of MIDI devices are interacting – notes or sequences get stuck. Clicking the Panic Button will send an all-notes-off *and* all-sounds-off message to the PolyBrute, silencing it. (Beyond all-notes-off, all-sounds-off deals with problems that aren't necessarily MIDI events, such as feedback from a runaway delay effect.)

This is a momentary operation and will not block new note-on messages the PolyBrute is receiving because, for example, a DAW project is still playing.

9.4. CPU Meter

This is a bar-style meter that monitors PolyBrute Connect's use of your computer's CPU resources. As PBC is an editor/librarian for the PolyBrute hardware synthesizer, its impact on your CPU should be little to nothing.

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