USER MANUAL

_PIANO V

ARTURIA

_The sound explorers

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Special Messages

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 software that has been purchased.

IMPORTANT:

The 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.

NOTICE:

Service charges incurred due to a lack of knowledge relating to how a function or feature works (when the software 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

We would like to thank you for purchasing Piano V3, our 12-in-1 acoustic piano.

We have painstakingly studied and modelled every nuance of this acoustic instrument to provide you with the classic sound and experience of legendary pianos. But we didn't stop there – we've expanded on the original design with new features that make these classic pianos a powerhouse instrument adapted to a modern workflow.

As with all of our products, we believe in offering the best of both worlds in a single package and letting you choose how you want to use it - either use the original features on the main panel for a classic experience, or dive deep into the advanced features to create sounds not possible with the acoustic model.

We hope using it will bring excitement and joy to your music making!

The Arturia Team

Table Of Contents

1. INTRODUCTION

We'd like to thank you for purchasing Piano V3, our virtual acoustic piano. You now possess not one, but twelve authentic piano models, and you can carry all of them under your arm wherever you go! We are confident Piano V3 will become the foundation of many great tracks in your studio and the path to unforgettable moments on stage.

It is difficult to overstate the impact the piano has had upon the world of music. Nearly every church, every concert hall, every school, and untold millions of homes on every continent possess at least one piano, if not more. From the simplest of songs to the most complex of concertos, the piano has been the compositional tool, the compelling accompaniment, and the soaring soloist for over four centuries.

We are certain Piano V3 will take you places you never dreamed you could go with a piano, both physically and creatively!

1.1. What is Piano V3?

Piano V3 is a vital member of our extensive family of virtual instruments. Not only have we faithfully modeled the sound and behavior of this essential instrument, but we have also taken it far beyond what a physical piano can do.

We conducted an extensive analysis of every component that makes the piano what it is, and with Piano V3 we allow you to combine these components into variations so subtle and so extreme as to bring the impossible to life.

Piano V3 runs both as a standalone instrument on Windows and macOS and as a plug-in in all major formats inside your DAW. It has easy MIDI learn functionality for hands-on control of most parameters, and as a plug-in also allows parameter automation for greater creative control.

1.2. History of the piano

The hammered dulcimer is one of the earliest ancestors of the piano. Its origins can be traced back to the Middle Ages, and it continues to be used in the modern era. However, its age-old limitations may have spurred the existence of the piano, due to an increasing demand for instruments that could play chords, not just the dulcimer's usual maximum of two notes at once.

Enter the harpsichord and the clavichord, each with its own strengths and weaknesses. The harpsichord allowed the user to play chords, but since its method of generating notes involved plucking a string with a quill when a key was pressed, it was not possible to control the dynamics of the notes. They always played at the same volume unless the player engaged a second set of strings by pulling a lever. All things taken together, the harpsichord was loud enough to be heard even in a large ensemble setting, but it was not able to be played with much subtlety.

The clavichord solved some of the problems faced by the dulcimer and harpsichord but had others of its own. It did allow the user to play multiple notes at once, and to play them dynamically (i.e. louder and softer), but the instrument was too quiet to be used in a concert setting.

And thus, the stage was set for the arrival of a new instrument. First invented around the year 1700 by Bartolomeo Christofori, the *pianoforte* (literally, "soft loud") combined the best features of both the harpsichord and clavichord: it could be played with great sensitivity and intensity, with a tone and power that could hold its own in any musical ensemble.

The first pianofortes (*piano*, for short) were small by today's standards, having keyboards that spanned only 5 octaves. What's more, the sustain pedal mechanism was not available for a number of decades, itself going through multiple variations until the player was able to operate it by foot instead of by hand or with a knee.

Additional variations have included the number of pedals and their functions, the composition of the materials used for the hammers and strings, and the types of wood used for the soundboards.

But perhaps the most critical sonic development was the use of multiple strings for the higher notes. This idea also went through various stages until the piano arrived at its current configuration: one string per note in the bass, two per note in the middle, and three per note in the higher registers. The doubling and tripling of those strings keep their notes from being overwhelmed by the bass notes.

1.3. The sound is always in style

The piano is rivalled perhaps only by the acoustic guitar as the instrument with the most direct connection between the musician and the music. One person, one instrument, no amplification; it is the perfect combination for personal expression and musical intimacy.

The only thing the guitar has in its favor over the piano, is that you can take one with you anywhere and make just as much music in a forest as you can on the streets. But then again, with a laptop computer, a controller keyboard like the Arturia KeyStep, and Piano V3, that advantage has been virtually eliminated.

The sound of a piano can be found in nearly any style of music. It is equally at home in living rooms and saloons, concert halls and jazz clubs, recording studios and cathedrals. A random sample of the music of Western culture would produce an eclectic list of piano-centric compositions such as:

- The Beatles: "Oh! Darling", "Hey Jude"
- Ludwig van Beethoven: "Moonlight Sonata", "Für Elise"
- Dave Brubeck: "Blue Rondo A La Turk"
- Ray Charles: "Georgia On My Mind", "Hit The Road, Jack"
- Steely Dan: "Aja"
- Earth, Wind & Fire: "After The Love Has Gone"
- Emerson, Lake & Palmer: "Karn Evil 9: Second Impression"
- George Gershwin: "Rhapsody in Blue"
- Scott Joplin: "Maple Leaf Rag"
- Jerry Lee Lewis: "Whole Lotta Shakin' Goin' On"
- Trent Reznor: "What If We Could?", "Hand Covers Bruise"
- Cat Stevens: "Morning Has Broken"

This diverse and influential group all have one thing in common: *the piano*.

1.4. To piano and beyond!

We have been relentless in our pursuit of the most accurate recreation of a piano that can be achieved in software. And we believe we have succeeded.

But as always, once we had harnessed the underlying power of the piano, we knew we could also unleash that power in ways that are physically impossible. Everything from the composition of the hammers and their position, to the type of piano and its condition, to the number and placement of microphones, to the size of the room housing the piano, can be changed instantly and all at once.

Here's an overview of the features at your disposal:

- Twelve virtual piano models available, from traditional to unusual
- Two types: Upright and Grand
- Change every parameter instantly by selecting a new preset
- Instant access to tone-shaping features that normally require a technician to adjust:
    - Master tuning, detuning and stretch tuning
    - Hammer type, hardness, and position, relative to the strings
    - Noise levels for the hammers, dampers, and pedals
    - Soundboard resonance
    - Velocity curve shaping and presets
- Lid position (open, slightly open, and closed)
- Placement, level, and stereo width of four microphones
- Compressor
- Multiple convolution reverb models
- 3-band Master EQ with 3 fully parametric bands
- Preamp with overdrive and added harmonics

2. ACTIVATION AND FIRST START

2.1. Register and Activate

Piano V3 works on computers equipped with Windows 7 or later and macOS 10.10 or later. You can use the standalone version or use Piano V3 as an AAX, Audio Units, VST2, or VST3 instrument in your DAW (Digital Audio Workstation).

Once Piano V3 has been installed, the next step is to register the software.

This is a simple process that involves a different software program – the Arturia Software Center.

2.1.1. The Arturia Software Center (ASC)

If you have not already installed the ASC, please go to this web page: Arturia Downloads & Manuals

Look for the Arturia Software Center at the top of the page, and then download the version of the installer that suits your system (macOS or Windows).

Follow the installation instructions and then:

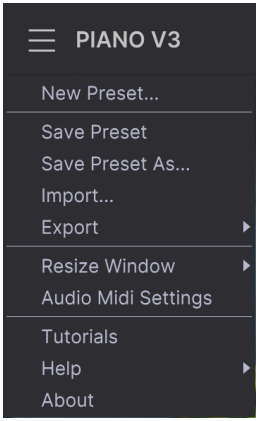
- Launch the Arturia Software Center (ASC)
- Log in to your Arturia account
- Go to the My Products section of the ASC
- If you've bought Piano V3 as a part of the V Collection, click on V Collection to open the list of included instruments
- Click the Activate button

That's all there is to it!

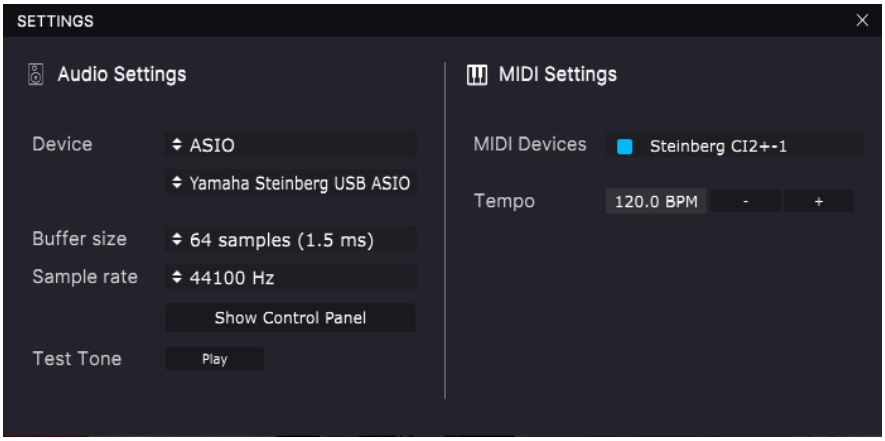
2.2. Initial setup

2.2.1. Audio and MIDI settings: Windows

At the top left of the Piano V3 application is a pull-down menu. It contains various setup options. When using Piano V3 as a standalone instrument (i.e. not inside a DAW), you will need to go to this menu and choose the Audio MIDI Settings option to get sound and MIDI flowing in and out.



You will then see the Audio MIDI Settings window. This works in the same way on both Windows and macOS, although the names of the devices available to you will depend on the hardware you are using.



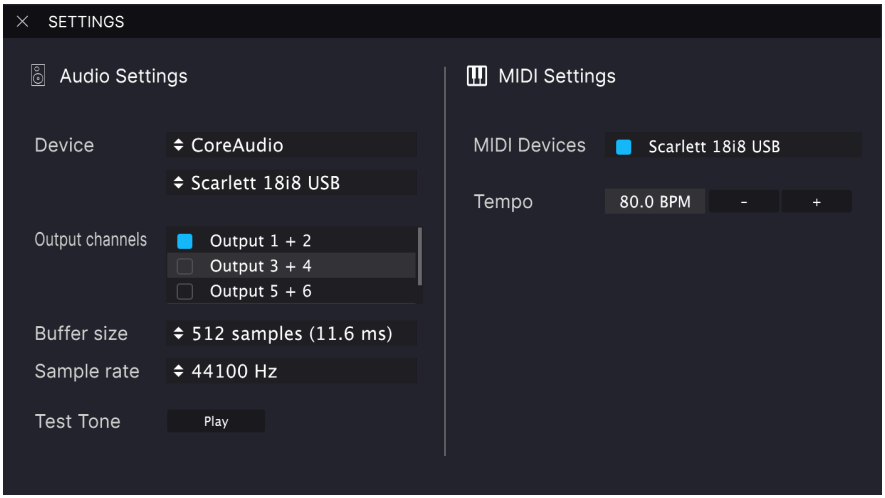
Audio and MIDI settings window (PC)

Starting from the top you have the following options:

- **Device** lets you choose which audio driver you want to use to route sound out of the instrument. This might be your computer's own driver like Windows Audio, or an ASIO driver. The name of your hardware interface may appear in this field.
- **Output Channels** lets you select which of the available outputs will be used to route audio out. If you only have two outputs, only two will appear as options. If you have more than two, you can select a specific pair of outputs.
- The **Buffer Size** menu lets you select the size of the audio buffer your computer uses to calculate sound. A smaller buffer means lower latency between pressing a key and hearing the note. A larger buffer means a lower CPU load as the computer has more time to think but can result in a small latency. Find the optimum buffer size for your system. A fast, modern computer should easily be able to operate at 256 or 128 sample buffer size without creating pops or clicks in the sound. If you are getting clicks, try raising the buffer a little. The latency is displayed in milliseconds on the right-hand side of this menu.
- The **Sample Rate** menu lets you set the sample rate at which audio is sent out of the instrument. The options here will depend on the capability of your audio interface hardware though even most computers' own hardware can operate at up to 48kHz which is perfectly fine. Higher sample rates use more CPU power, so unless you have a good reason to go up to 96kHz, then 44.1k or 48k is usually fine.
- The **Show Control Panel** button will jump to the system control panel for whatever audio device is selected. This option is only available if you are using an external audio interface driver.
- **Play Test Tone** helps you to troubleshoot audio issues by confirming whether sound can be heard through the correct device.
- Your connected MIDI devices will appear in the **MIDI Devices** area. Click the check box to accept MIDI from the device you want to use to trigger the instrument. In standalone mode, Piano V3 listens to all MIDI channels, so there's no need to specify a channel. You can specify more than one MIDI device at once.

2.2.2. Audio and MIDI settings: macOS

The process is very similar to initial setup for Windows and the menu is accessed in the same way. The difference is that macOS uses CoreAudio to handle audio routing and the audio device selection is made in the second dropdown menu. Apart from that, the options work the same way as described in the Windows section.



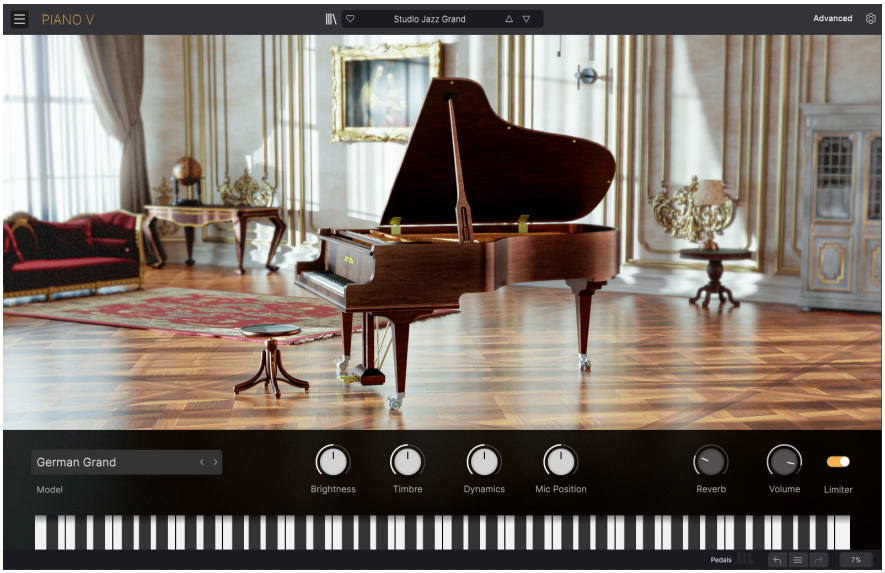
macOS Audio and MIDI settings window (macOS)

2.2.3. Piano V3 as a plug-in in your DAW

Piano V3 comes in VST2, VST3, AU, and AAX plug-in formats for use in all major DAW software such as Cubase, Logic, Pro Tools and so on. You can load it as a plug-in instrument and its interface and settings will work the same way as in standalone mode, with a couple of differences.

- You can automate numerous parameters using your DAW's automation system.
- You can use more than one instance of Piano V3 in a DAW project. In standalone mode you can only use one at once.
- Any additional audio effects your DAW has available may be used to process the sound, including delay, chorus, filters, etc.
- You can route Piano V3's audio outputs more creatively inside your DAW using the DAW's own audio routing system.

3. USER INTERFACE

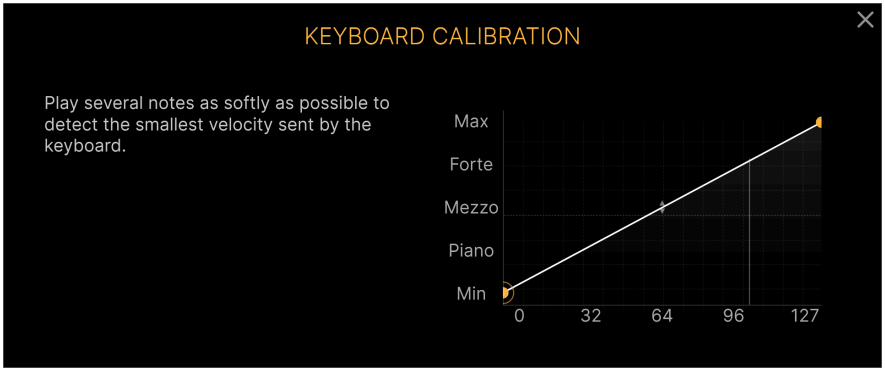


Piano V3 is packed with great features, and in this chapter we'll make sure you know what each one does. We think you'll be amazed by the huge range of sounds that can be created with this instrument.

And while Piano V3 is very flexible, there's nothing complicated about it. That will always be the main focus of every Arturia product – to unleash your creativity while remaining easy to use.

3.1. Keyboard Calibration

The first time you start Piano V3, it encourages you to fine-tune the way this instrument responds to your MIDI keyboard. All keyboards are different, and making these adjustments will make your playing more joyful and musical.



Keyboard Calibration

Just follow the calibration instructions on the screen. After some steps, the process will be complete.

If you choose, you can skip this process for now. You can always get back to it later. The Keyboard Calibration feature can be found under the Advanced tab in the main piano V3 window.

3.2. Fine/coarse editing

Editing in Piano V3 is mostly carried out with the left mouse button. For finer detail, you may want use the right mouse button.

3.3. The toolbar

The toolbar that runs along the top edge of the instrument provides access to many useful features. Let's look at them in detail.

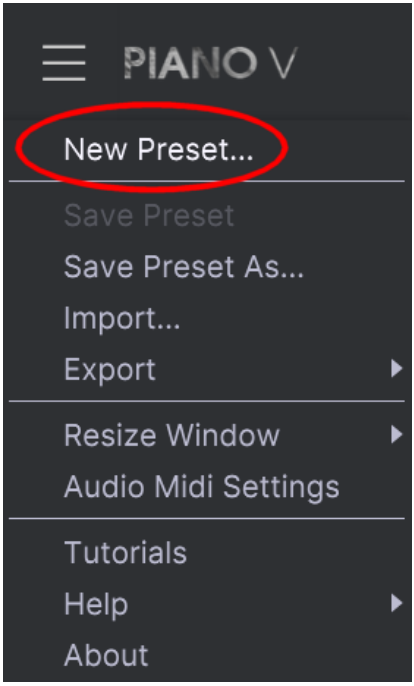
The first group of options can be found by clicking on the three horizontal lines at the top left-hand corner of the instrument window.

We'll go through each of these functions in the following sections.

3.3.1. The Piano V menu

3.3.1.1. New Preset

If you want to create a new piano sound from scratch, pressing New Preset is a quick and convenient starting point with everything set to default values.

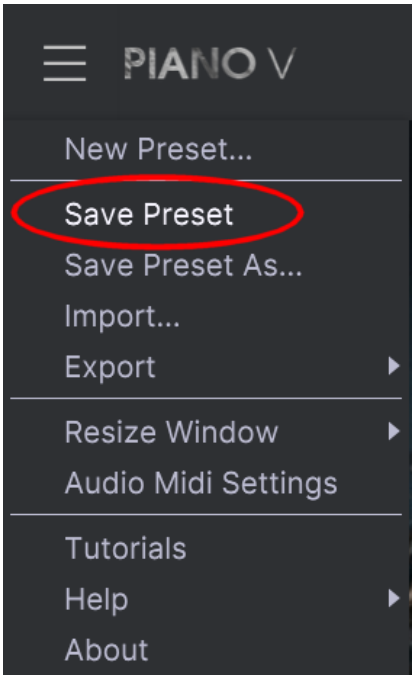


New Preset

!: Please be careful! If you have just created the piano of your dreams, clicking New Preset will reset everything to default values. Here's how to get back on track:
- Use the Undo button in the lower right corner (an arrow pointing up and left).
- Use your computer's undo function (Ctrl+Z or Cmd+Z)

3.3.1.2. Save Preset

!: This option will overwrite the active preset with any changes you have made, so if you want to keep the source preset intact, use the Save As option instead. See section Save Preset As... [p.16] for information about this.



Save Preset

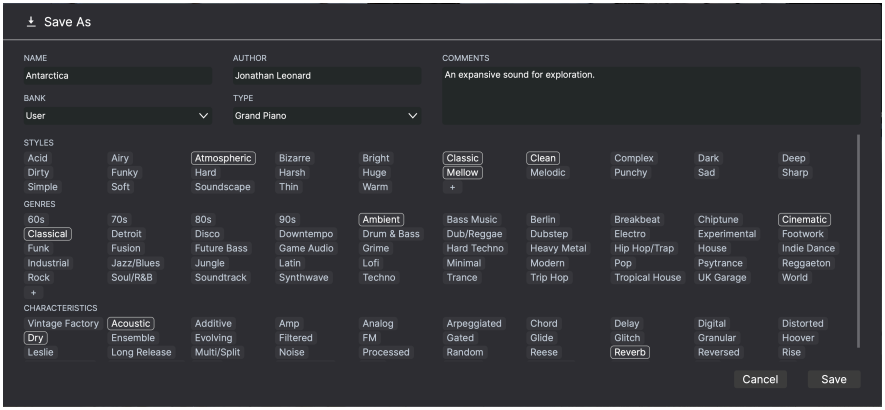
3.3.1.3. Save Preset As…

If you select this option you are presented with a window where you can enter information about the preset. In addition to naming your preset you can enter the Author name, select a Bank and Type, select tags that describe the sound, and even create your own Bank, Type, and Characteristics. This information can be read by the preset browser and is useful for searching the preset banks later.

You can also enter freeform text comments in the Comments field, which is handy for providing a more detailed description.

If you want to add a Style, Genre, or Characteristic, you can create new ones by clicking the small + sign in each section.

> !: Save Preset As… is great for saving a preset that you want to be able to recall later – in this instrument and on this computer. However, if you want to use this preset on another computer or even share it with your friend, please use the Export Preset instead.

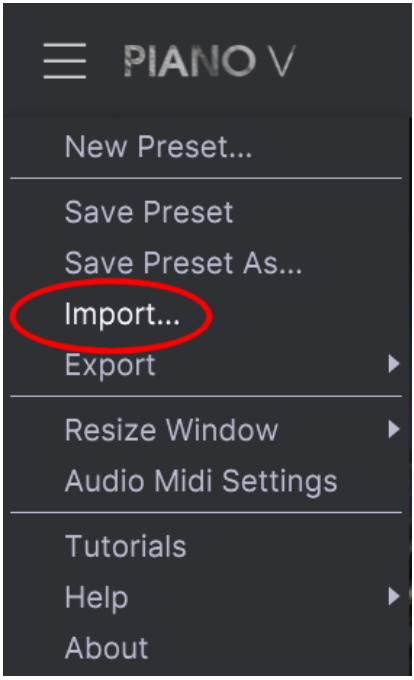


The Save Preset As window

3.3.1.4. Import…

This command lets you import a file that was originally exported by Piano V3. It can be either a single preset, an entire bank of presets, or a playlist. Presets are stored in the **.pianox** format, while playlists are given the extension **.playlist**.

After selecting this option, the default path to these files will appear in the window, but you can navigate to whichever folder you prefer to use.



The Import Preset window

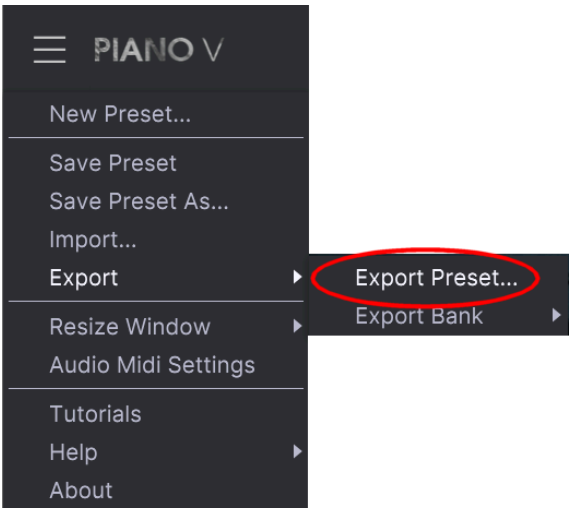
3.3.1.5. Export menu

The Export menu has several options for exporting files from Piano V3, which enables you to share your sounds and playlists with other users. You could also use these options to transfer files to another computer.

Export Preset

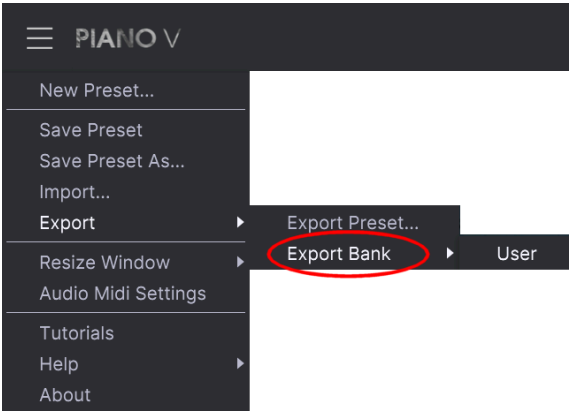
You can export and share a single preset using this command. The default path to these files will appear in the window, but you can create a folder at another location, if you like.

> !: Export Preset is the preferred method if you want to share a preset with a friend. If you only intend to use the current preset in future songs on the computer in front of you, Save Preset As... is a more practical method.



Export Bank

This option can be used to export an entire bank of sounds from the instrument. This is useful for backing up, moving, or sharing presets.



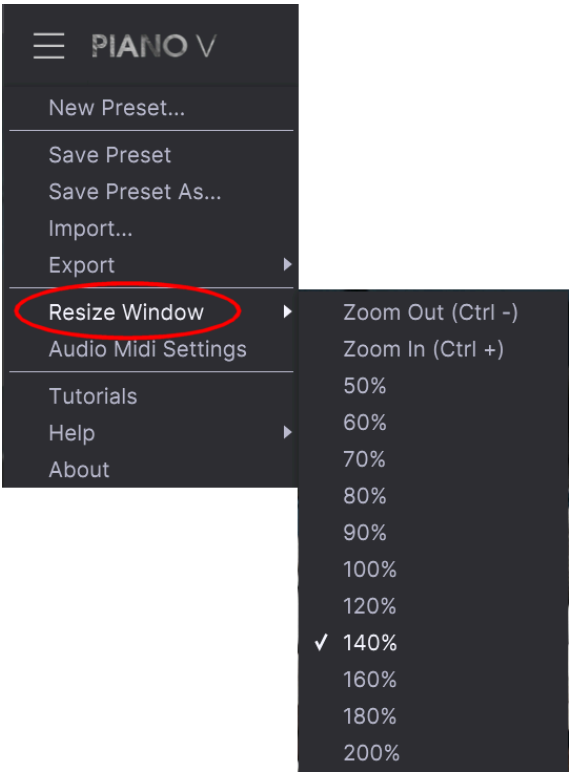
Selecting a Bank to export

3.3.1.6. Resize Window options

The Piano V3 window can be resized from 50% to 200% its original size without any visual artifacts. On a smaller screen such as a laptop you might want to reduce the interface size so it doesn't dominate the display. On a larger screen or a second monitor you can increase the size to get a better view of the controls. The controls work the same at any zoom level but the smaller ones can be harder to see at the smaller magnification values.

If you're using a high-resolution screen (e. g. 4K or higher), resizing will probably be necessary.

As in many other applications, you can easily resize the Piano V3 window with these keyboard shortcuts. Windows: Ctrl plus + or – macOS: Cmd plus + or –



The Resize Window menu

3.3.1.7. Audio Midi Settings

Here you manage the way the instrument transmits sound and receives MIDI. See the section Audio and MIDI settings [p.8] for full details on this.

3.3.1.8. Tutorials

Clicking on Tutorials will extend the Piano V3 window to the right. Clicking the cogwheel symbol in the upper right corner does the same job.

The Tutorials tab provides friendly instructions that describe many of the functions in Piano V3. Clicking the Next and Prev buttons at the bottom of this window allows you to navigate.

3.3.1.9. Help

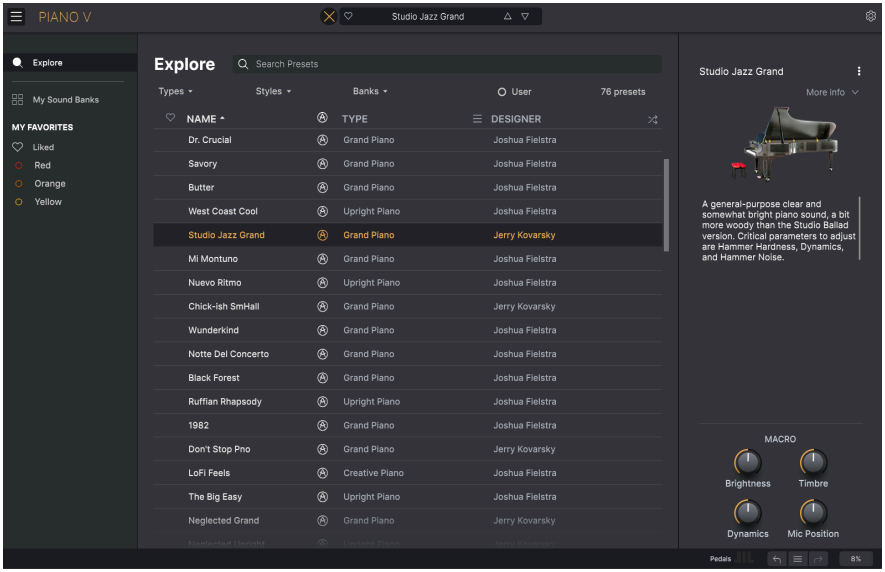
The Help button has two sub-menus. User Manual opens up a webpage with inspirational and informative video clips plus direct download links to manuals in five languages and the Piano V3 software itself. FAQ takes you to a page with Frequently Asked Questions. This can often be a quick way to find answers along the way.

3.3.1.10. About

In this window you can view the Piano V3 software version and developer credits. Click on the About window to close it.

3.3.2. Preset Browser overview

Presets can be viewed by clicking the Preset Browser button (III\ ) near the center of the top toolbar. See the Preset Browser [p.36] chapter for full details on this. The Filter, search field and up/down arrows in the toolbar all assist with preset selection.



The Preset Browser

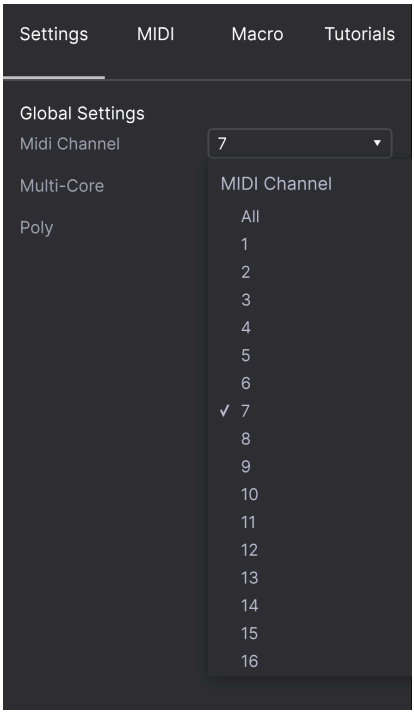
3.4. The Side Panel

The Side Panel icon (the cogwheel in the top right corner) takes you to a panel with four tabs: Settings, MIDI, Macro, and Tutorials.

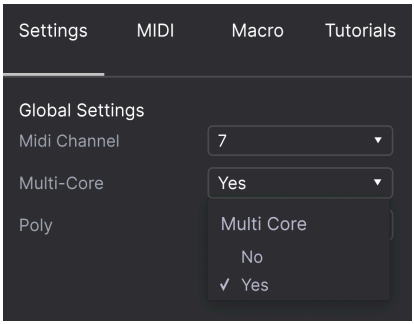
3.4.1. The Settings tab

3.4.1.1. MIDI Channel setting

This window indicates the current MIDI channel setting. Click on it and it will expand to show the full range of values you can select (All, 1-16).



3.4.1.2. Multi-Core



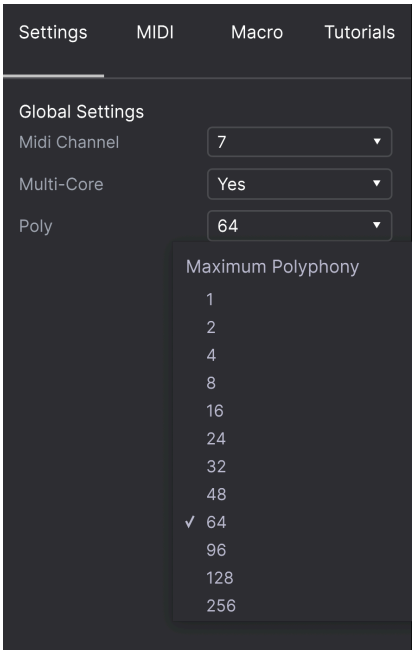
The Multi-Core feature, enabled

The Multi-Core button instructs Piano V3 to take advantage of multi-core processing as it generates the sounds. If the CPU meter in the lower toolbar is nearing its maximum, you may want to use this feature.

> ♪: Some DAWs are not able to use multi-core rendering, so there will be no difference if you toggle the button. Please refer to the specifications for your computer if you don't already know whether it has a multi-core processor.

3.4.1.3. Poly

Click on this field to specify the maximum polyphony of Piano V3. The range goes from 1 to 256 note polyphony.



The Polyphony selection window

3.4.1.4. A note about polyphony

An acoustic piano has full polyphony, i.e. 88 keys played at the same time would produce 88 "voices" (not counting the extra strings on most notes). Holding the sustain pedal and striking a key repeatedly simply causes the same "voice" to be retriggered, although with a different attack profile and other timbral variations.

But on a virtual instrument, holding the sustain pedal and playing a single note repeatedly will require more than one voice or else the first note(s) will cut off unnaturally. And in some pieces of piano music, the performer will sustain all the notes in an arpeggio that spans the length of the keyboard, often with many notes and/or chords repeated on the way up or down the keys. Each of these struck, sustained, and repeated notes needs to be processed independently so it can be added to the calculations that are being done "behind the scenes".

To allow for any foreseeable musical scenarios, then, it may seem that you should maximize the polyphony of Piano V3 with a setting of 256 voices. But there's a trade-off: The more active notes there are, the higher the CPU load will be. (There's a CPU load indicator at the bottom of the instrument window.)

The engineers at Arturia have been very clever with the voice-stealing algorithm, though. For example, they took into account the fact that as a note decays to a certain point, it may no longer be audible. And if it is not audible it might not be needed, especially after a sufficient number of additional notes have been played.

It was a complicated process, but they made Piano V3 smart enough to make some very musical decisions about which notes to keep and which to "borrow". So you will probably find that a polyphony setting of 256 (or even 128) is not necessary. We think you will discover that settings well below 128 are completely transparent and natural to your ear, even during solo piano performances.

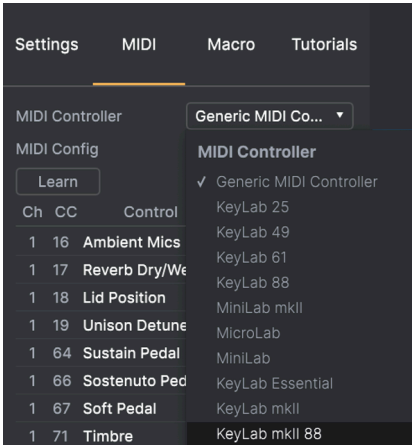
And a setting of 1 does not make Piano V3 truly "monophonic", either. For example, it will allow chords to be played if the notes are triggered at the same time. But with a low polyphony setting, active voices are more likely to be "stolen" when the sustain pedal is held, for example, or immediately after a key is released (when the note would normally take a small amount of time to decay).

All that to say, that we can't tell you what the proper polyphony setting is for your music and your system. You'll have to experiment until you find a realistic balance between CPU load and a natural-sounding piano performance. But we've given you a lot of options for the polyphony value, so you should be able to find a setting that works well for you.

3.4.2. The MIDI tab

3.4.2.1. MIDI Controller

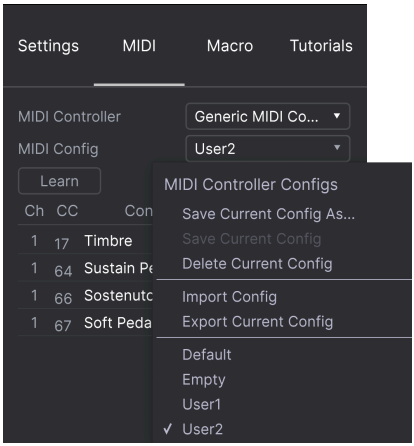
The second tab under the cogwheel covers the MIDI settings in Piano V3. First, you can choose what controller/keyboard you're using. There are presets for a number of Arturia keyboards. If you're using a keyboard of another brand, Generic MIDI Controller is a good starting point.



Selecting a MIDI Controller

3.4.2.2. MIDI Config

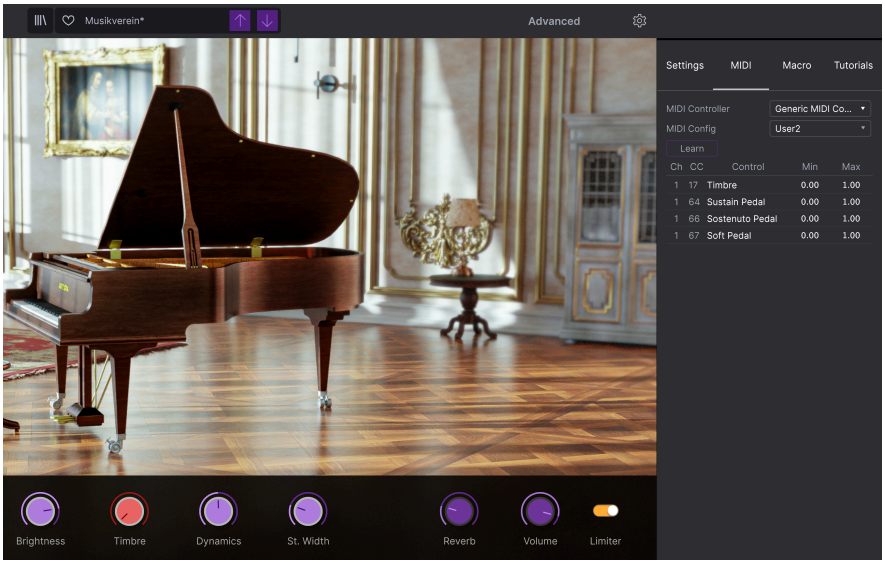
This pull-down menu lets you save, delete, import and export various MIDI controller configurations. These functions are very similar to saving, importing, and exporting presets. You can also reset to default values or empty all settings. Should you accidentally empty all MIDI settings, simply click Default to get back to square one.



MIDI Config

3.4.2.3. MIDI Learn

Clicking on the Learn button activates learning mode. MIDI-assignable parameters will be shown in purple, which means you can map physical buttons, knobs, faders, or pedals to those destinations inside the instrument. A typical example might be to map a real expression pedal to the Output Gain control, or buttons on a controller to the Preset selection arrows so you can change the preset from your hardware keyboard.



MIDI Learn, with purple knobs ready to be selected

The Pedals can be mapped also:

Assignable pedals

Assigning/unassigning controls

After pressing the Learn button, you can click on a purple item to put that control into learning mode. Move a physical knob, fader, or button on your controller and the target goes red, indicating that a link has been made between the hardware control and the software parameter.

Timbre has been selected and assigned to an external controller

You can right-click on a control to unassign it.

Min/Max value settings

There are also minimum and maximum value numbers that you can use to restrict the parameter change range to something other than 0% – 100%.

Example: You might want to control the Master Volume, but you don't want the full range of -60 to +12 dB. By clicking and dragging the Min value to, say, -30 dB and the Max value to 0 dB, you have narrowed the range to a more useful setting. No matter how far you turned the controller knob, you won't accidentally make the sound too quiet or too loud when performing.

In the case of switches which only have two positions (on or off), those would normally be assigned to buttons on your controller. But it is possible to toggle those with a fader or other control if you like.

Absolute/Relative control option

If you right-click on a Control name in the list, you can change the operation from Absolute to Relative. This choice is useful when using a specific type of control – one which sends only a few values to indicate the direction and speed at which a knob is turning, as opposed to sending a full range of values in a linear fashion (0 – 127, for example).

To be specific, a "relative" knob will send values 61 – 63 when turned in a negative direction and values 65-67 when turned in a positive direction. The turn speed determines the parameter response. Refer to the documentation of your hardware controller to see if it has this capability. If so, be sure to switch this parameter on when setting up its MIDI assignments.

When configured this way, movements of the physical control (usually a knob or a fader) will change the software parameter by starting at its current setting, rather than being an "absolute" control and snapping it to some other value as soon as you start to move it.

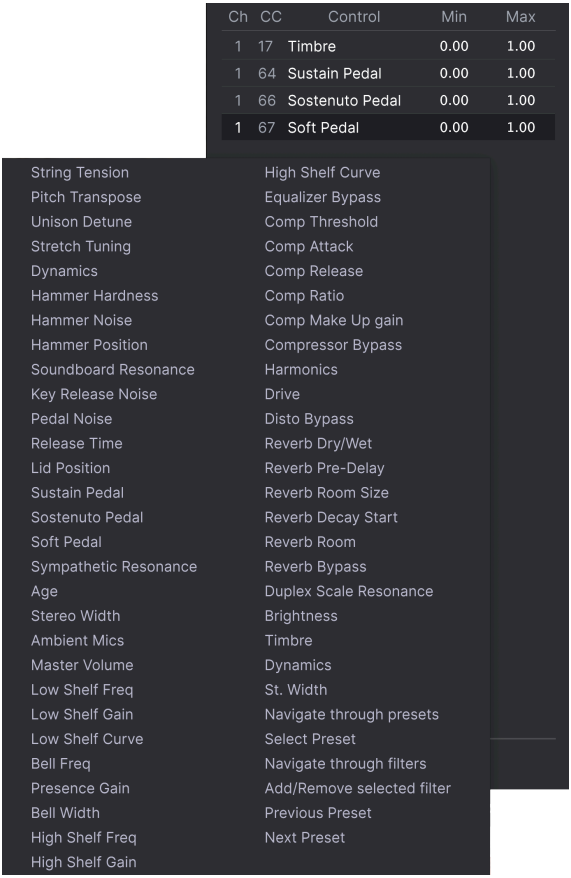
This can be a great feature when controlling things like volume, filter, or effect controls, since you won't usually want them to jump noticeably from their current setting when they are modified.

Delete

Another right-click option is Delete, which removes the MIDI control function you're pointing at. Be careful!

Change Parameter

The last option is called Change Parameter and does just that. By clicking on Change Parameter, you will see a long list of Piano V3 specific parameters that can be altered via MIDI control. Do you want to change the piano lid position with the flick of a switch? No problem!



MIDI controllable parameters

Reserved MIDI CC numbers

Certain MIDI Continuous Controller (MIDI CC) numbers are reserved and cannot be reassigned to other controls. These are:

- PitchBend
- Ctrl Sustain On/Off (CC #64)
- Ctrl Sostenuto On/Off (CC #66)
- Ctrl Soft Pedal On/Off (CC# 67)
- Ctrl All Notes Off (CC #123)

All other MIDI CC numbers may be used to control any assignable parameter in Piano V3.

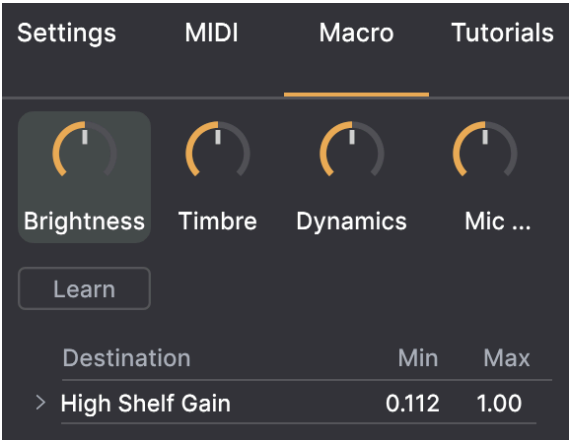
Add Control

If you want to be able to remotely control a specific function in Piano V3, clicking on "+ Add Control" in the lower part of the side panel provides you with a list of control targets.

Here's how it works. Click on + Add Control. Select a target from the list. This item will now be added to the controller list. Turn a knob or press a button on your controller. The controller and the target will now be connected. As usual, you can fine tune the Min and Max values by clicking and dragging the numbers.

3.4.3. The Macro tab

This tab handles assignments for the four Macro knobs at the right side of the lower toolbar. You can assign multiple parameters to each one, then MIDI Learn the Macro itself to a physical control if you want.



!: Macros are saved at the Preset level.

3.4.3.1. Macro slots

Click one of the Macro knobs to select which Macros you want to work with. The default names are Brightness, Timbre, Time, and Movement, but you can rename them by double-clicking in the name field. The knob above it corresponds to the knob of the same name in the Lower Toolbar.

3.4.3.2. Making Macros

Click the Learn button in the Macro tab and you will see that the process works much like MIDI assignments – available destinations turn purple and ones already assigned turn red. Click on a purple control on-screen and its name will appear on the list.

To remove a parameter from the Macro, control- or right-click its name in the list and select Delete. Parameters under Macro control have Min and Max values and may be scaled by dragging up or down directly on the number, similarly to MIDI assignments. To reverse the polarity of a parameter (i.e. have it go down when you turn the Macro knob up and vice-versa), set the minimum value higher than the maximum.

!: There are no rules for which parameter(s) to put in a given Macro. In theory you could name a Macro after a favorite pet and group a handful of unrelated parameters there. In practice it's probably better to keep things more descriptive.

3.4.3.3. Macro Curves

Beyond simple scaling, you can customize a curve that determines how each parameter under the Macro's control proceeds from its minimum to maximum value and back when you turn the Macro knob. Click the > icon next to the parameter name to open the curve window.

The Macro Curve can be freely edited

Click on the curve to add a breakpoint, represented by a small circle. You can then drag the point and the curve segments between it and its nearest neighbors will change accordingly. Right- or control-click on a point to remove it. The first and last breakpoints cannot be removed.

> !: A simple diagonal line would produce a linear curve, but the potential fun here is to make things non-linear.

3.4.4. The Tutorials tab

In this tab, which can also be opened by selecting Tutorials from the Main Menu, you can click on titles for the individual chapters, which in turn will take you through different areas of Piano V3 in steps. The parts of the panel to focus on are highlighted as you go.

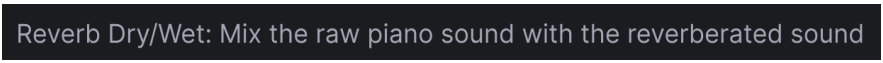
> !: If you're editing a Preset, make sure to save it before opening the Tutorials because doing so will load a new Preset and overwrite your changes. The Tutorials also take over the Side Panel space when in use.

3.5. The lower toolbar

The Lower Toolbar runs along the bottom of the Piano V3 user interface and provides quick access to several important parameters and useful bits of information.

3.5.1. Tooltips

On the left-hand side of the lower toolbar you will see a text that confirms what function you're tweaking or when you're holding your mouse pointer over a function. Often there is also a friendly text briefly describing the function.

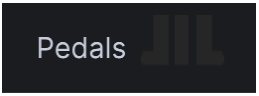


Describing the current control's function

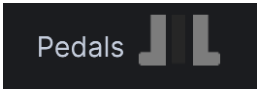
3.5.2. Pedals

Near the middle of the lower toolbar is a text saying Pedals and three pedal symbols; Soft, Sostenuto, and Sustain. They allow you to toggle these functions even without a controller keyboard attached to your computer.

If you click one of these pedals to activate it, it remains active until you click on it again or press a corresponding external pedal.



The toolbar pedals, inactive



Soft and Sustain pedals active

3.5.2.1. The Sostenuto pedal

The functions of the sustain and soft pedals will be immediately obvious, but unless you've worked with a sostenuto pedal it could be confusing at first.

A sostenuto pedal is like a "targeted sustain" pedal. It will sustain only the notes you define for it and will let the others continue to work normally. Follow these steps and you will see how it works.

- Make sure the other pedals are not being pressed.
- Play a note and keep holding down the key.
- Click the Sostenuto pedal icon (the middle one).
- Release the key. It should continue to sustain.
- Play a glissando across the keys in the area of the note you pressed earlier. Only that note will sustain; the others will play but will not sustain.

There are many compositions that utilize the Sostenuto pedal. And now you can write some of your own!

3.5.3. Undo/Redo

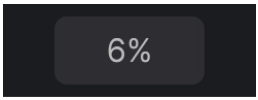
Just like in most other applications, being able to Undo can be a lifesaver. The Undo button in Piano V3 is located in the lower toolbar as an arrow pointing up and to the left.

Redo repeats the last edit before you clicked on Undo. Its icon is an arrow pointing up and to the right.

3.5.4. Undo History

Between the Undo and Redo buttons is an icon with three horizontal lines. Clicking on it will reveal the Undo history, allowing you to select a certain step in the edits you just made.

3.5.5. CPU meter / Panic button



The CPU meter is used to monitor how much of your computer's CPU is being used by the instrument. The main tools for reducing too high CPU usage are increasing the audio buffers and reducing polyphony.

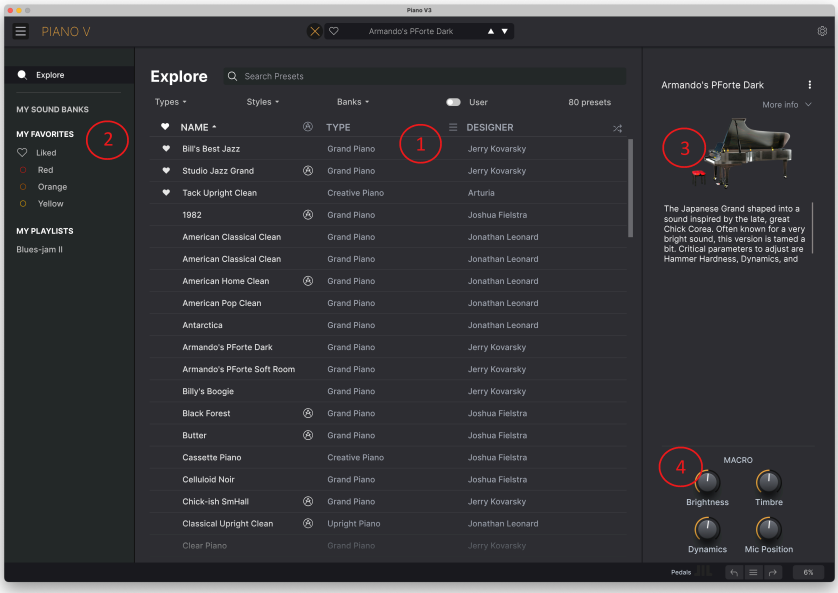
The Panic button can be pressed to reset all MIDI signals in the event of stuck notes or other issues.

4. THE PRESET BROWSER

The Preset Browser is where you search, load, and manage sounds in Piano V3. It has different views but they all access the same banks of Presets.

To access the search view, click the browser button (the icon looks a bit like books on a library shelf). To close the browser, click the X that appears in its place.

The browser has four main areas:



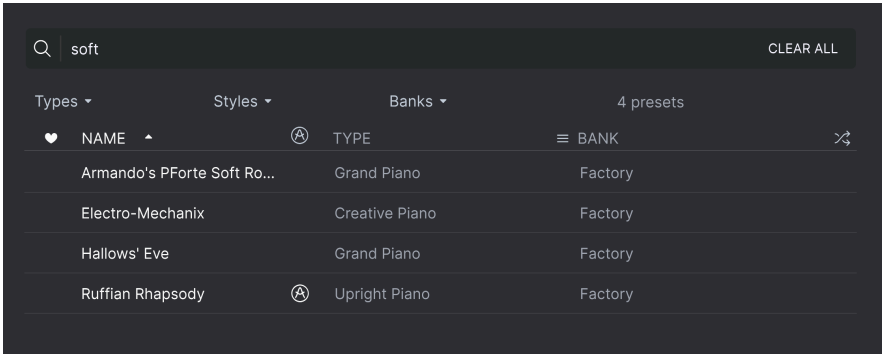
The full Preset Browser window

Number	Area	Description
1.	Search and Results [p.37]	Search presets with text strings, and by tags for Type and Style.
2.	Sidebar [p.42]	Manage banks and Playlists.
3.	Preset Info [p.44]	Summary of Bank and Tags, Designer name, and description info for current Preset.
4.	Macro Knobs [p.46]	Large size duplicates of Macro knobs in lower toolbar.

4.1. Search and Results

Click on the Search field at the top and enter any search term. The browser will filter your search in two ways: First, by matching letters in the Preset name. Then, if your search term is close to that of a Type or Style [p.38] it will include results fitting those tags as well.

The Results list beneath shows all Presets that fit your search. Click the X icon at right to clear your search terms.



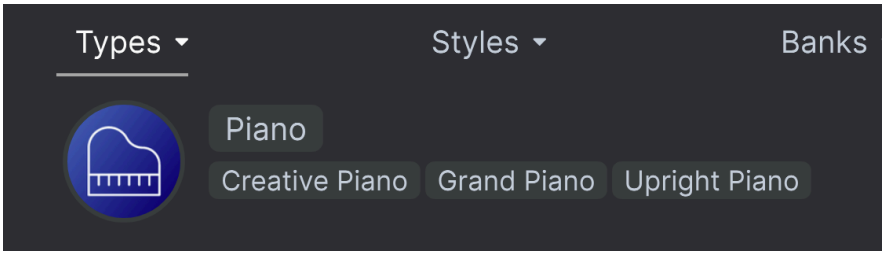
Filter by typing text in the Search field

4.2. Using Tags as a Filter

You can narrow (and sometimes expand) your search using different tags. There are two kinds of tags: *Types* and *Styles*. You can filter by one, the other, or both.

4.2.1. Types

Types are categories of instruments and musical roles: bass, leads, strings, pads, organs, and more. With a clear search bar, click the **Types** button to bring up a list of types. Notice that each type also has several sub-types:



Click any one of them, and the results will show only Presets that match that tag. You can also select multiple Types using Cmd-click (macOS) or Ctrl-click (Windows). For example, if you aren't sure whether the preset you're looking for was tagged with Keys or Pad, select both to broaden the search.

Results columns can be inverted by clicking the arrow buttons to the right of their titles (Name, Type, Designer).

4.2.2. Styles

Styles refine your search according to further musical attributes. Accessed by the **Styles** button, this area has three further subdivsions:

- *Genres*: Identifiable musical genres such as decades, Trance, Techno, Synthwave, Disco, etc.
- *Styles*: General "vibe" such as Atmospheric, Dirty, Clean, Complex, Mellow, etc.
- *Characteristics*: Sonic attributes such as Analog, Evolving, Distorted, Dry, Rise, etc.

Click on any tag to select it. Click again (or right-click) on any selected tag to de-select it. Notice that when you select a tag, several other tags usually disppear. This is because the browser is narrowing your search by a process of elimination. De-select any tag to remove that criterion and widen the search without having to start all over again.

4.2.3. Banks

Next to the **Types** and **Styles** buttons is the **Banks** button, which lets you do your search (using all the methods above) within the factory bank or user banks.

4.3. Search Results window

Click the **Show Results** button if you cannot already see your list of results. Click the sort arrow to reverse the alphabetical order of any column.

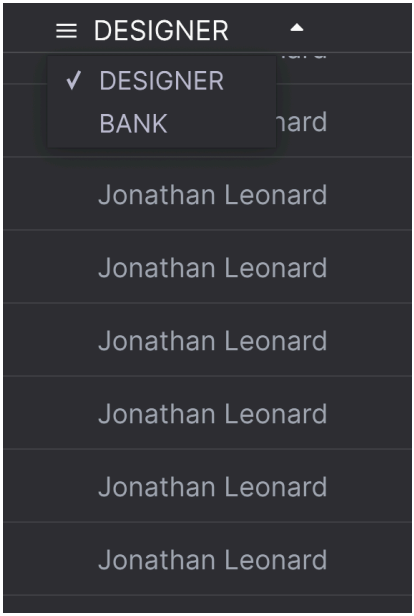
4.3.1. Sorting the Preset Order

Click the **NAME** header in the first column of the Results list to sort Presets in ascending or descending alphabetical order.

Click the **TYPE** header in the second column to do the same thing by Type.

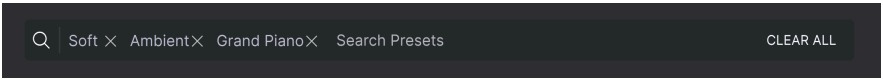
Click the **Arturia logo** to the left of **TYPE** to bring factory-featured Presets to the top of the list. These will appear just under any Presets you have liked [p.41].

The third column has two header options: **DESIGNER** and **BANK**. Click the icon with three horizontal lines to choose between the two. Then click either header name as with the other two columns to switch the alphabetical order.



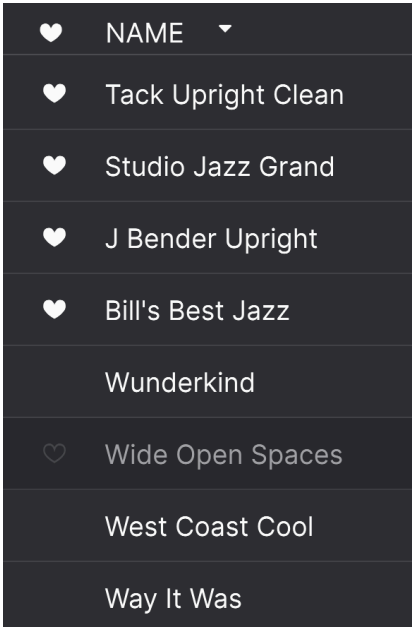
4.3.2. Clearing Tags

Just below the Types, Styles, and Banks buttons, you will see labels for all the active tags in a search. Click the X next to anyone to remove it (and thus broaden the results). Click **Clear ALL** to remove all tags.



4.3.3. Liking Presets

As you explore and create Presets, you can mark them as Liked by clicking the **heart** next to their names. Later, click on the heart icon to put all of your favorites at the top of the Results list.

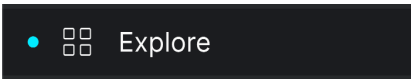


Use as many of the sorting and filtering features as you need and you will find the exact sound you want every time.

4.4. Sidebar

The leftmost section of the Preset Browser determines what is displayed in the Search and Results [p.37] section.

The topmost option is:



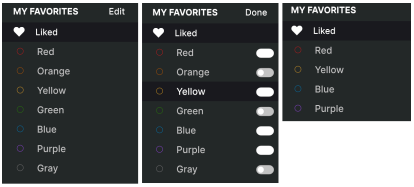
The **Explore** section is the default, letting you search the current bank of Presets loaded into Piano V3 as we did in the previous section.

4.4.1. My Sound Banks

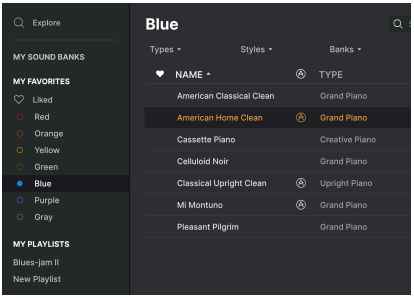
Clicking **My Sound Banks** brings up a window with all of the currently available Sound Banks, starting with the Factory bank. User banks appear next to it, and can be deleted, renamed, or exported by right-clicking them.

4.4.2. My Favorites

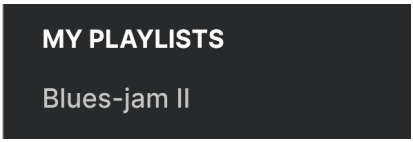
The middle part of the Sidebar has a menu called **My Favorites**, which allows you to color-code certain groups of Presets for easy access. It also includes the **Liked group**, so you can quickly find Presets you've marked with the heart icon. To decide which colors you'd like to display, hover over **My Favorites** and click **Edit**. Then use the buttons to select which colors you'd like to see or hide, and then click **Done**.



To add Presets to a particular set of Favorites, simply drag and drop them over the appropriate color. Then click on the color itself to display your grouping.



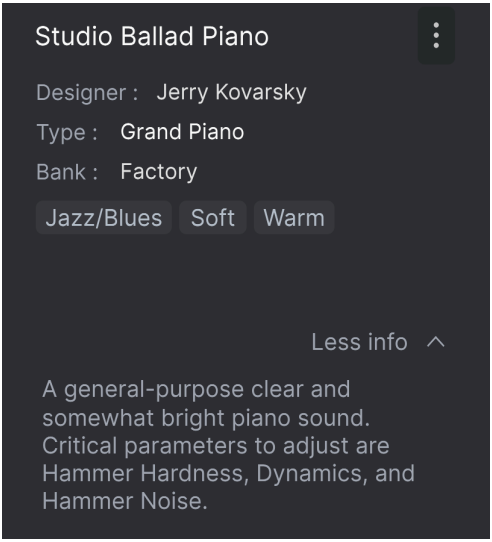
4.4.3. My Playlists



The bottom part of the sidebar displays any Playlists you have created or imported. Playlists are a very powerful management tool for set lists for gigs. Learn more about them in the Playlists section [p.47] below.

4.5. Preset Info Section

The right side of the browser window shows specific information about each Preset. The information for User Presets (but not Factory ones) may be changed here: Name, Type, Favorite, etc.

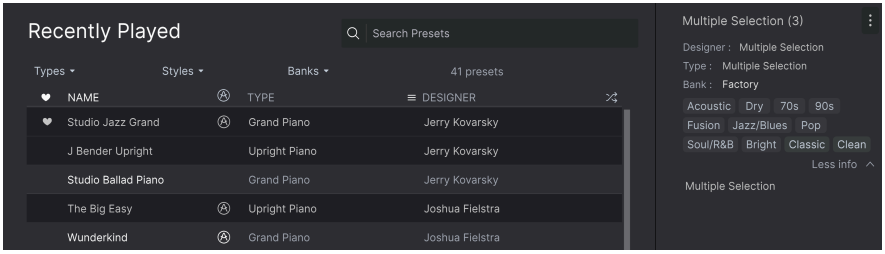


To make the desired changes, you can type in the text fields, use one of the pull-down menus to change the Bank or Type, and click the + sign to add or delete Styles.

Types and Styles changes you make here are reflected in searches. For example, if you remove the "Funky" Style tag and then save that Preset, it will not show up in future searches for Funky sounds.

4.5.1. Editing Info for Multiple Presets

If you'd like to move several Presets to a different bank while preparing for a performance, or enter a single comment for several presets at the same time, it's easy to do. Simply hold command (macOS) or ctrl (Windows) and click the names of the Presets you want to change in the Results list. Then enter the comments, change the Bank or Type, etc., and save the preset.



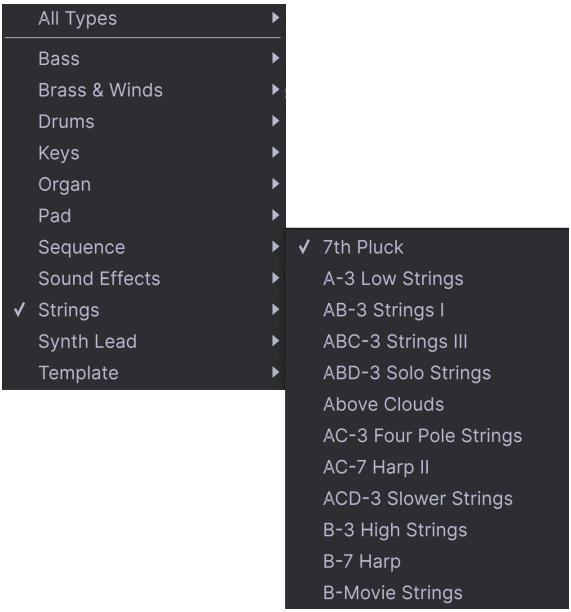
♪ If you want to alter the information for a Factory Preset you must first use the *Save As* command to re-save it as a User Preset. After this the Info section will gain Edit and Delete buttons at the bottom of the window.

4.6. Preset Selection: Other Methods

Click on the Preset name in the center of the upper toolbar to bring up a drop-down menu. The first option in this menu is **All Types**, and it brings up a submenu of literally every Preset in the current bank.

Below this are options that correspond to the Type tags. Each of these brings up a submenu of all Presets of its Type.

If you have an active search by Type and/or Style, the up/down arrows to the right of the Preset name will step through only the results that conform to your search.



However, "All Types" in the drop-down menu always ignores those criteria. Likewise for the Type choices below the line – they always include all Presets within that Type.

4.7. Macro Knobs

These are simply larger duplicates of the Macro knobs in the bottom toolbar. Move one and its partner moves with it.

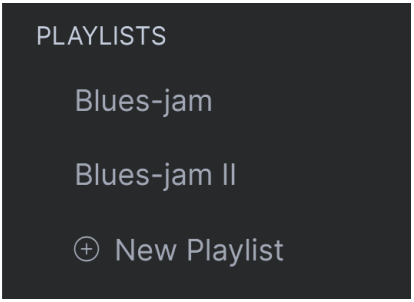
Assigning parameters to Macros is covered in the Macro Tab [p.32] section of Chapter 3.

4.8. Playlists

To the left in the Preset Browser window is a feature titled Playlists. This collects Presets into different groups for different purposes, such as a set list for a particular performance or a batch of presets related to a particular studio project.

4.8.1. Add a Playlist

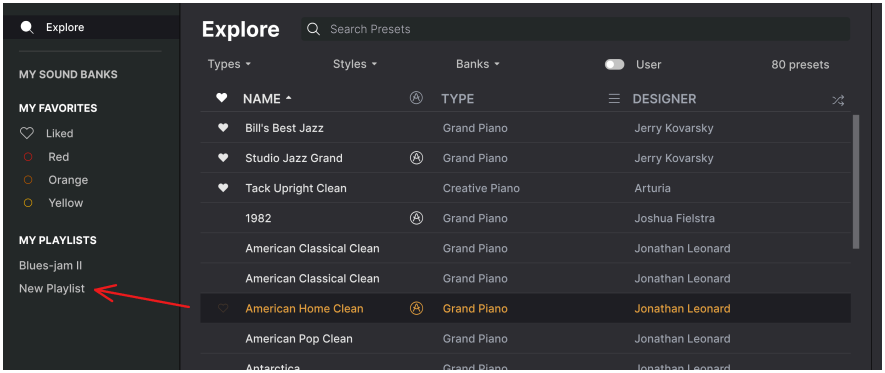
To create a playlist, click the **New Playlist** button at the end of the list.



Give the Playlist a name and it will appear in the Playlists menu in the Sidebar.

4.8.2. Add a Preset

You can use all of the options in the Explore window to locate Presets for your Playlist. When you find a desired Preset, click-drag it onto the Playlist name.

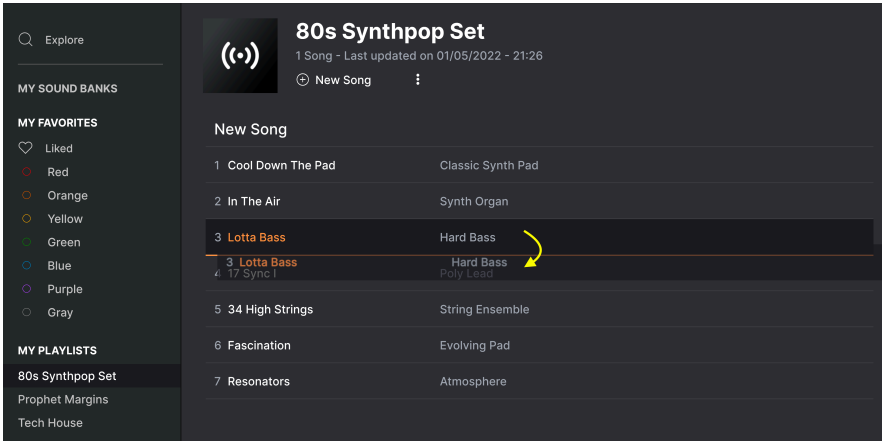


Click and drag from the Search Results list onto one of the playlists

To view the contents of a playlist, click on the playlist name.

4.8.3. Re-order the Presets

Presets may be reorganized within a playlist. For example, to move a preset from slot 1 to slot 3, drag and drop the preset to the desired location.

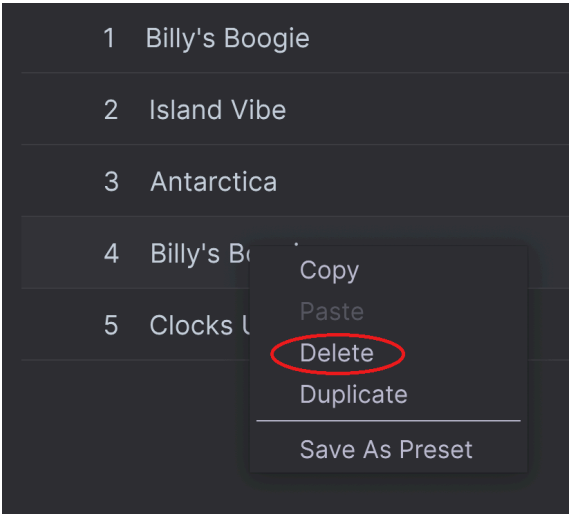


The white line indicates you're dragging one Preset between two others

This will move other Presets up in the list to accommodate the new location of the Preset you just moved. A white line will briefly appear at the "insert point."

4.8.4. Remove a Preset

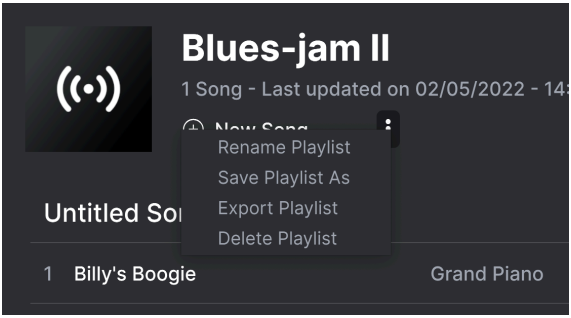
To delete a Preset from a playlist, right-click on its name to bring up a pop-up menu.



This menu also includes Copy, Paste, Duplicate, and Save As options. More management options are described below.

4.8.5. New Song and Playlist Management

The **New Song** button creates a new Song at the bottom of the Playlist. You can name it, then click and drag it to position it in the Playlist and add Presets to it in the desired order. To access other Playlist management options, click on the three dots icon next to the **New Song** button. This brings up a pull-down menu:



- **Rename Playlist**: Renames the current Playlist without making a copy.
- **Save Playlist As**: Creates a duplicate of the playlist with "Copy" appended to the name. You can change the name before saving.
- **Export Playlist**: Exports your Playlist to a location on your computer, with the filename extension "aplst."
- **Delete Playlist**: Deletes the current Playlist but does *not* delete any of the Presets in it.

5. THE MAIN PANEL

When you start Piano V3, this is the first page you see – a beautiful instrument, some easy-to-reach controls, and an 88-note keyboard.

The knobs on this page will let you explore the various piano types and perform some basic tweaking. When you want to dig into the finer details, there's a lot more to discover under the Advanced tab. But more about that later.

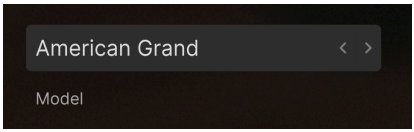
A Grand Piano. Welcome to Piano V3!

The piano in the main panel shows you what piano model is used in the current preset. Below you'll find a row of quick edit controls that allow you to easily home in on the sound you hear in your head. By clicking the keyboard, you can easily get a glimpse of what the current preset sounds like.

Life should be simple, and in Piano V3 it is.

5.1. Piano model

Above the bass keys of the piano keyboard is the Piano Model selector. Clicking the left and right arrows takes you through the twelve different piano models.

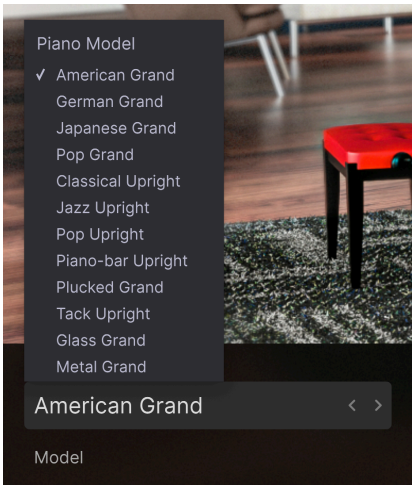


Piano model selection window

The piano graphics will change to give a visual representation of the source instrument.

There is more to each model than its appearance, though. We have painstakingly modeled every nuance of these twelve instruments, from the resonance of their materials to the way their sound changes in relation to the placement of the microphones in each configuration.

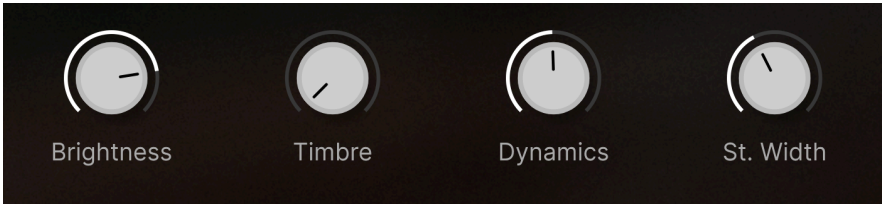
Another way to select a different model is to click the piano label, which will open a menu containing all twelve choices.



Twelve different piano models to choose from

A check mark indicates the current model. Make a selection and the menu will close.

5.2. Quick Edit Controls



5.2.1. Brightness

This knob controls the overall tone of the piano. Brightness controls hammer hardness and makes the overall sound brighter, just like a piano technician softens or hardens the wool felt of the hammers.

5.2.2. Timbre

Here you can turn a brand new instrument into a sadly forgotten one. Timbre controls age, overall tuning and the mechanical noises of the instrument. Turn this knob clockwise to hear the sound deteriorate.

5.2.3. Dynamics

The modern piano is a highly dynamic instrument. Getting the dynamics right is crucial, both for the live musician and the way a piano sounds in a recording environment.

You may have already fine-tuned the settings under Advanced -> Keyboard to make Piano V3 match the action of your keyboard. That's a very good start, but the Dynamics knob is part of every preset, so you can have a different keyboard response in every preset, if you want.

There are so many factors that affect the percieved response of a piano – if you play alone of with other musicians, the style of music you're performing, the current mood of the player, whether you're comping or soloing, etc.

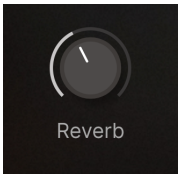
The Dynamics control allows you to narrow down the instrument's MIDI response to a very limited range. It doesn't matter if you play soft or hard, the volume will be more or less the same. This can be very effective in a tight mix, but it may sound unnatural in another scenario.

Turning the knob clockwise increases dynamics. This can be great if you are using a high quality keyboard and use a lot of dynamics in your performance. You may want to use the Limiter when being this expressive.

5.2.4. Stereo Width

For a focused, close sound, turn the Stero Width control all the way to the left. For a more spacious, wide, and embracing sonic stereo experience, turn it to the right.

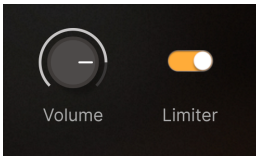
5.2.5. Reverb



Piano V3 sports a luxurious Convolution Reverb algorithms that add space to your sound. This effect can go from completely dry to very, very wet. How much reverb you want to use is totally up to you, the song you're playing, your place in the mix, the room you're in, etc.

Reverb is one of the most commonly used effects. Wrong settings can totally mess up a performance, while the right amount can lift your music. There are no rules here. Turn that knob!

5.2.6. Volume



Here's where you adjust the Volume of Piano V3.

5.2.7. Limiter (L)

It's easy to get carried away when tweaking knobs or playing music. You may find the overall volume gradually increasing during a session. Or you may not notice it; this is pretty common among musicians.

Too much output volume from Piano V3 may damage your ears or cause distortion in your computer or sound system. The built-in Limiter is more of a lifesaver than a sound enhancer.

It may me a good idea to keep the Limiter active at all times. As long as you avoid extreme settings, it won't kick in and affect the sound in any way.

5.3. The Piano Keyboard

At the bottom of the screen is an 88-key piano keyboard. It not only looks nice, it can also be practical when you want to quickly audition sounds. You'll hear different velocities depending on how high or low (vertically) you click on the keys.

Did you know that you can also play notes directly from your computer keyboard? This is a very practical feature if you're editing sounds, since you can use one hand for the mouse and the other to play notes.

Your computer keyboard keys A – L plays notes C – D in Piano V3, while computer keys W, E, T, Y, U, and O play the black keys in that range. You can change octaves with computer keys Z and X. (These characters refer to an English/American computer keyboard.)

6. THE ADVANCED PANEL

The upper toolbar has a tab called Advanced. Clicking on it takes you to either of two sub-pages, **Model** and **Effects**. These two panels let you modify your piano in a number of ways – from sweet and authentic to experimental and out-of-this-world.

Once you've set a working sound on the main panel, or loaded a preset, you can fine-tune a lot of components that make up a perfect sound on the Advanced panel and the Effects panel.

Are you into details? Here we go!

6.1. The Model panel

This panel lets you modify the innards of your piano. Now you're the piano technician!

The Model panel

> !: Turning knobs in Piano V3 is carried out with the left mouse button. For finer editing, you can use the right mouse button.

6.1.1. Action

One of the more demanding skills for a piano technician is to get the action right. It's a time-consuming and difficult task.

6.1.1.1. Hammer Hardness

When the felt on a piano hammer is new it is very soft, and notes played softly will produce less overtones. As the hammers age the felt becomes harder, and notes played softly have more overtones. In a very old or poorly maintained piano it may be difficult to play really soft notes.

This parameter simulates the condition of the hammers at various stages, from soft to hard.

6.1.1.2. Hammer Position

The point at which the hammers strike the strings has an effect on the overall brilliance. This parameter emulates what happens when the position of the hammers is changed.

Low values move the hammers closer to the end of the string, making the sound brighter. Higher values simulate hitting the string closer to the middle, which produces a darker tone.

6.1.1.3. Dynamics

The Dynamics control allows you to narrow down the instrument's response to a very limited range. It doesn't matter if you play soft or hard, the volume will be more or less the same.

Turning the knob clockwise increases dynamics. You may want to use the Limiter when being this expressive.

6.1.1.4. Release Time

With this knob in its normal (12 o'clock) position, the release time of the notes will be identical to a real-world piano. Turning the knob counterclockwise will shorten the release time to nothing, resulting in an abrupt, unnatural sound. Turning the knob to the far right will produce a very long release, almost as if you forgot to take you foot off the sustain pedal.

Please note: This control doesn't affect the notes in the top 1½ octaves, since these notes have no dampers in an acoustic piano.

6.1.2. Strings

The tuning of the piano strings may be varied by four different parameters: Tuning, Unison Detune, Stretch Tuning, and Age.

6.1.2.1. Tuning

If necessary, you can fine-tune Piano V3. The range is 400 to 480 Hertz, and a numeric read-out can be seen while turning the knob.

The most commonly used tuning today is A = 440 Hertz.

6.1.2.2. Unison Detune

The higher notes on a piano have more than one string per note, which allows them to be as loud as the heavier, louder bass notes. This parameter lets you specify the amount of detuning between those strings.

This control does not affect the lowest notes, since they only have a single string. It also has a greater impact on the higher notes than the middle notes, as the middle notes have only two strings per note while the higher notes have three.

> !: Do you want to create a jangle piano? By turning the Unison Detune knob, and you're halfway there!

6.1.2.3. Stretch Tuning

One advantage concert grand pianos have over upright pianos, and even over 'baby' grands, is that their strings are longer. We won't delve into the physics involved, but one result of this is a lower degree of 'inharmonicity'; i.e. the overtones of the longer strings are closer mathematically to the fundamental frequencies. This also holds true for the notes and intervals above them, which in turn means that the fundamentals and overtones are more closely related across the piano. This leads to a purer, more pleasing sound overall.

But it is the inharmonicity of the shorter strings which gives baby grands and upright pianos their distinctive sound. So for these instruments the technician must employ a technique known as 'stretch tuning' in order to minimize the beating of fundamentals and overtones against each other.

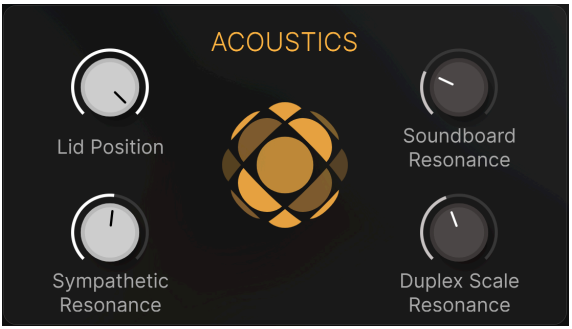
The Stretch Tuning control allows you to specify the amount the upper notes will be tuned sharp relative to the bass notes. This is all part of giving you the most authentic piano experience possible.

6.1.2.4. Age

By using the Age knob, you will turn your piano into an unattended instrument, which has lost most of its tuning, brightness and general stability.

A piano that sounds like it's time for repair can be an effective way to make your instrument stand out in a mix.

6.1.3. Acoustics



6.1.3.1. Lid Position

A piano sounds completely different with its lid closed than it does when the lid is open. This is true for upright pianos as well. Piano V3 gives you three lid positions for each piano model: closed, slightly open, and open.

The piano lid will open and close to match the setting you choose.

6.1.3.2. Soundboard Resonance

This parameter adjusts the sustain time of the piano by simulating changes in the characteristics of the soundboard. A more resonant soundboard will sustain longer, while a less resonant soundboard will produce shorter notes.

6.1.3.3. Sympathetic Resonance

By turning this knob clockwise, other notes start to resonate in sympathy. This is a behaviour that is always present in acoustic pianos.

Turn this knob all the way up and experiment by pressing down a few keys very slowly so they do not produce any sound. Then, while holding those keys down, play a few other notes staccato. You will hear the resonance introduced into the first depressed notes. Notes that resonate in sympathy are mainly octaves. If you release these notes, the sound will stop.

Example: Turn Sympathetic Resonance to max. Slowly press C, E, and, G. While holding those keys, play an upwards staccato scale starting from the C above. You will then hear a C chord (your initial keys) ringing in sympathy.

You can also do the "opposite" experiment. Play a note loudly and hold it, press silently another note, and release the first note: it continues resonating in the second note.

6.1.3.4. Duplex Scale Resonance

The Duplex scale parameter controls the loudness of the duplex scale resonance, issued from the undamped string parts located between the tuning pins and frame (front scale) and between the bridge and frame (rear scale).

The result can be anything from brighter sound to a reverb-like ringing with a lo-fi quality.

6.1.4. Noises

Each mechanism that helps produce the sound of an instrument adds its own distinctive rattle or rumble in the background. To eliminate these noises entirely would "sterilize" the sound, making it seem unnatural.

Piano V3 can dial in just the right level of mechanical noise, but it also lets you to go to either extreme!

6.1.4.1. Hammer

The hammers make a distinctive "thunk" when they hit the strings, though the sound is most obvious on the highest notes. This parameter allows you to control how much of this noise will happen when a note is played.

6.1.4.2. Key Release

This control sets the amount of noise the hammers will make as they return to their starting point after a key is released.

6.1.4.3. Sustain Pedal

When the sustain pedal is pressed it lifts all the dampers from the strings at the same time. The slight amount of friction of the felt fibers pulling away from the strings makes them resonate softly. With the Sustain Pedal noise control you can specify exactly how much of this effect you want each preset to have.

6.1.5. Mics

Pianos can be recorded and amplified in a number of ways in both studio and live situations. There are as many methods as there are sound engineers. The choice of microphones and their positioning, style of the musical performance, and acoustics in the room are vital considerations.

Luckily, we've simplified the whole process for you. You don't have to be an expert, but you still have a number of useful choices to explore.

6.1.5.1. Mic Setup

For grand pianos there are these choices:

- Classical
- Home
- Pop
- Mono

Upright pianos can be miked in the following ways:

- Classical
- Jazz
- Mono

The graphics give a visual representation of the microphone configuration.

You can select Mic Setup by clicking on the arrows or click the configuration label, which opens a menu containing all available choices for that piano model.

6.1.5.2. Stereo width

This knob goes from mono to stereo to wide stereo. A good starting point is usually near the middle position, but narrower and wider images both have their definite benefits.

The desired stereo spread is very often a choice based on the musical context. While a big, wide piano may sound stellar on its own, it may not function as well in a dense mix.

6.1.5.3. Ambient Mics

With only the close mics, the Piano V3 will sound rather close and dry. This is great for many situations, but you have loads of possibilities to create rooms around the instrument. Reverb is one obvious choice, but ambience created by distant microphones has its definite charm. It adds both realism and presence.

Turning up this knob is like mixing in microphones placed a few meters away. A bit like hearing the piano from a listener's postion, if you like.

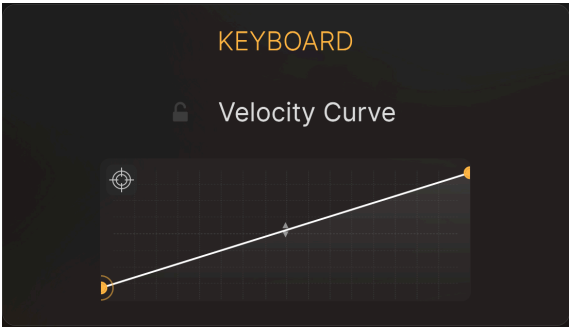
Constructing rooms around instruments is a very distinct and creative method of shaping a sound that touches the audience.

6.1.6. Keyboard

Getting the keyboard response right is *vital* for the musical joy of playing a piano. When the keyboard touch feels right, you can be the best you. So do spend some time on getting it right!

6.1.6.1. Velocity Curve

The first window under the Piano Settings tab contains the velocity curve editor.



The velocity curve editor

As notes are played on an externmal keyboard, vertical lines will appear inside the velocity curve editor window, indicating the velocity at which each note was played. The length of the line represents the amplitude of that particular note.

You can edit this curve to better suit your MIDI keyboard and playing style. It's an intuitive process.

- Move a point: Click and drag a velocity point to move it to a different location.
- Add a point: Click anywhere within the X/Y grid to add a point. The maximum number of points is 16.
- Remove a point: Right-click on a velocity point to remove it.

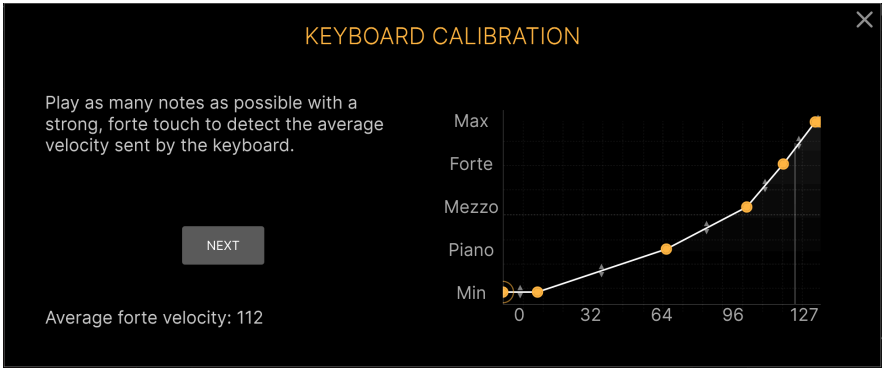
Each velocity curve can have as many as sixteen points, all of which can be edited. Think of the editor window as an X/Y grid, with the Velocity value along the X axis and Amplitude (volume) along the Y axis.

By clicking on *Velocity Curve* you can load preset curves and user curves. You can also name and save a setting you have created.

Here are some important things to remember about editing velocity curves:

- There can be as many as 16 velocity points but no fewer than 2.
- The first and last points can only be edited vertically and cannot be removed.
- The middle points can be placed anywhere within the X/Y grid.
- The middle points can be removed and added again.

6.1.6.2. Calibrate



Calibrating your MIDI keyboard

As stated earlier in this manual, it really pays off to make sure your keyboard touch matches Piano V3. It should always be a joy to play, and that can only happen when you feel the instrument responding to your musical intentions perfectly. Nothing is more important.

Adjusting the velocity response (*velocity* is computer lingo for how soft or hard you hit a MIDI keyboard) can be performed in two ways. The first method is desctibed in the previous chapter.

Piano V3 also has a Calibrate function. It's quite elegant! Click on the Calibrate icon to get started.

You will be asked to play a key softly. Do that and then press Next. Then even softer. Press Next again. After you've passed several stages, Piano V3 has learnt what velocity curve that suits you and your MIDI keyboard.

The curve will be drawn below the Calibrate button and it can be edited. Or you may decide to start all over again. The choice is yours.

6.2. The Effects panel

Clicking **Advanced** in the upper toolbar takes you to either the **Model** or the **Effects** panel. The Effects panel lets you add studio-quality effects to your piano sound. Now you're the sound engineer!

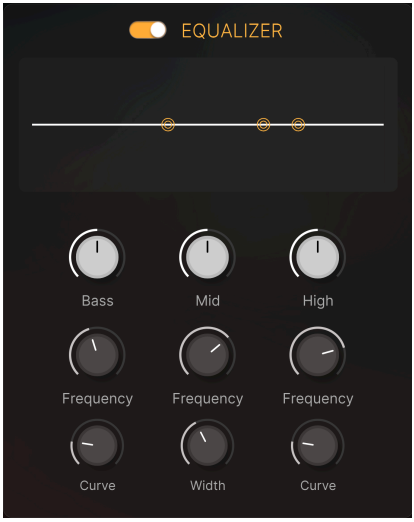
The Effects panel

If you want to use other kinds of effects with your Piano V3, you can add plenty of them in your DAW (Digital Audio Workstation) or PA system. There are no wrongs and rights here.

> !: Turning knobs in Piano V3 is carried out with the left mouse button. For finer editing, you can use the right mouse button.

6.2.1. Equalizer

To start off, here's an Equalizer (EQ). If you are not used to studio equalizers, think of it as tone controls with a bit more functionality.



This is an analog type three-band EQ, with curves inspired by the famous Pultec equalizers. The Bass and High bands have a shelf type filter, while the Mid band has a Peak (Bell) type filter.

In its default state, this EQ will let you boost of cut the bass, midrange, and trteble registers, just like the tone controls in any mixer, car radio EQ, or keyboard amplifier. When you turn any of those knobs, you will see the graph above them change accordingly. You will, of course, also hear the results when you play.

The second row of knobs indicates what frequency is being chosen. By turning the Bass Freq knob, you will see what part of the bass register that is being affected. Same with the two other bands.

The third row of knobs lets you adjust the width (or range, or *Q value*) you boost or cut. This feature is easy to understand if you boost the Mid range and then turn the Width knob. With the Width knob in its leftmost position, a wide portion of the frequency spectrum is being affected. Turn the knob to the right, and you'll see a much narrower part of the audio being filtered.

Do you want to boost or cut only a narrow EQ range? That's easy to do, and to aid you there's a convenient Hertz readout to the right of your mouse pointer.

A perhaps even easier approach is to drag the EQ points to where you want them. This is an intuitive way of changing the level and frequency of an EQ band simultaneously.

A great way to get acquainted with what this equalizer can do, is to start a MIDI file playing Piano V3 while you're fiddling with the knobs.

You can easily compare the filtered and un-filtered sound by using the On/Off switch at the top of the Equalizer section.

6.2.2. Compressor

Another very useful effect for treating a piano is the Compressor. At the top there's a button that enables you to bypass the effect.

6.2.2.1. Threshold

The Threshold knob sets the level where the compression will begin to have an impact on the sound.

6.2.2.2. Ratio

The Ratio control determines the amount of compression that will be applied once the threshold has been reached.

6.2.2.3. Attack

The Attack parameter adjusts the speed with which the compression will begin to affect the sound once the threshold has been reached.

6.2.2.4. Release

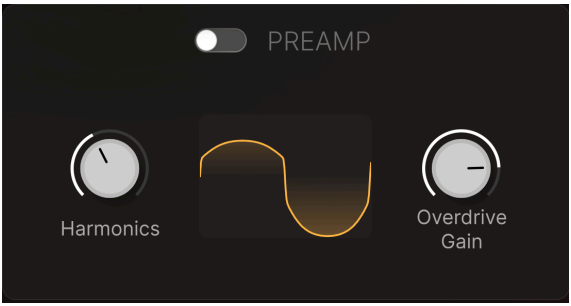
The Release knob determines the length of time the compressor will continue to affect the sound once the input signal has dropped below the threshold.

6.2.2.5. Make Up

The Make Up gain knob lets you compensate for the reducion in level caused by the compressor. This is important when comparing the compressed and un-compressed signal; you can evaluate the qualities without being flattered by the one that has the loudest volume.

6.2.3. Preamp

In order to spice things up a bit, we've added a Preamp in the effects chain. In today's pristine digital audio environments, there is usually no harmonic distortion. This Preamp enriches the audio spectrum in a way considered pleasant, not totally unlike analog tape recorders and tube amps of yesteryear.



The best method to use this effect is to play the piano and slowly increase the Harmonics and/or Overdrive knob. If the sound becomes too harsh and unpleasant, back it off a bit.

You can toggle the effect on and off with the switch next to *Preamp*.

6.2.3.1. Harmonics

This knob adds harmonics (overtones) to your piano. Harmonics is a popular method of making any instrument "sit in the mix" or stand out in a good way. But be careful – there's a fine line between *just enough* and *too much* here.

6.2.3.2. Overdrive Gain

Overdrive is another kind of distortion. It may sound harder or stronger (remember all these adjectives are highly subjective when applied to audio). This distortion is usually used in guitar amplifiers, and guitar players love it. This circuit has been tuned to suit the Piano V3.

6.2.4. Reverb

The Reverb in Piano V3 is very useful when you want to create a specific atmosphere. If offers 13 different rooms, all with their unique qualities. Time to start digging!

6.2.4.1. Reverb Room selector

The type of room you choose here will determine the basic quality of the reverbation. With the knobs for Pre-Delay, Size, and Dry/Wet set to 12 o'clock and Decay to max, you will be able to easily determine the differences between the rooms.

6.2.4.2. Pre-Delay

This knob adjusts the time it takes for the input signal to reach the reverb effect. In real life, there is often a natural pre-delay. You can think of it as an added delay element, if you like.

6.2.4.3. Size

Not only are there a lot of different rooms – they can also be of various sizes. Some would call this parameter *reverb length*, and that is quite accurate; the bigger the room the longer the reverb.

6.2.4.4. Decay

In almost any natural environment, the harmonic content (in this case, treble) dies out quicker than the lower frequencies. With this knob at its minimum position, you will hear the higher frequencies of the reverb tail fade out very quickly. At its max position, the reverb tail is bright throughout the entire duration.

6.2.4.5. Dry/Wet

This knob does the same job as the Reverb control in the lower quick-edit section. In the Dry position, you'll hear no reverb at all. The wet position gives you only the reverb and nothing else.

A setting somewhere between 9 and 12 o'clock is probably a good place to start, but as always, your mind and the musical context will tell you where to go.

No reverb will be heard when the Dry/Wet knob is set to Dry. The On/Off switch is located at the top of this section.

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