Using Panorama with Bitwig Studio

Applicable to Panorama P1, P4 & P6

www.nektartech.com
Apology to Our Bitwig Studio Panorama Users

Unfortunately this guide is not entirely complete, missing graphics and final editing. A section about the step sequencer is also missing as is some final descriptions of other Transport mode functionality.

We figured that an unfinished guide is better than no guide and since most of the functionality is documented, it should at least enable you to understand how to get the most out of your Bitwig Studio—Panorama system.

An updated version is being worked on and we will notify you when available.
Bitwig Studio Integration Setup and Configuration

The Panorama Bitwig Studio Integration is compatible with Bitwig Studio 1.0. These instructions assume you have one of these programs installed running on either Windows (Vista, 7, 8 or higher) or Mac OS X. If you are looking to run Bitwig Studio on Linux, please get in touch with our support.

**Installation**

Here are the steps you need to go through to get Bitwig Studio up and running with your Panorama:

- First make sure Bitwig Studio is installed and launched at least once.
- Locate the Panorama Installer in the zip file you downloaded with this guide. Run it and follow the onscreen instructions until complete.
- Update your Panorama’s firmware as described [here](#).
- In the zip file you downloaded with this guide, locate the “Nektar” directory and place it in the following location:
  - Windows: `<User>`\Documents\Bitwig Studio\Controller Scripts
  - OS X: `<User>`/Documents/Controller Scripts
- With installation complete, make sure your Panorama is connected to your computer and switched on.
- Launch Bitwig Studio and go to Options/Preferences/Controllers
- Click “Detect available controllers”. Your Panorama should now appear in the list.
- Click “Ok” and exit Device Setup.

That’s it, setup is now complete and you can move on to the fun part, learning how it all works.
Navigation & Transport

The following pages focus on how Bitwig Studio and Panorama work together. We do not attempt to describe how Bitwig Studio functions work, since this is covered extensively in the documentation for Bitwig Studio. So the aim is to provide a fundamental understanding of how Panorama interface with Bitwig Studio. From time to time, you may need to consult the Bitwig Studio documentation for additional information.

Let’s start by taking a look at the main panel buttons and then go deeper in to the Panorama menus from there.

Navigation

The six buttons pictured above allow you to navigate important parts of Bitwig Studio at any time. Here is what they do:

**Track - / +:** Navigates to the next or previous track in Bitwig Studio’s sequencer. This is the same as using the arrow up/down keys on your computer keyboard.

**Patch - / +:** Changes the patch of the currently selected instrument or effect device.

**View:** Changes the display view on your computer display to open or close the Mixer window in Mixer mode and the device window in Instrument mode.

**Bank < >:** Shifts the current selection of eight mixer channels in Mixer mode so the fader group assignments are changed from channels 1-8 to channels 9-16, for example. Hold [Shift] and press one of the [Track -/+ ] buttons to view an adjacent bank of channels.

**Zoom < >:** Controls the magnification of the arranger area in Bitwig Studio when its sequencer window is in focus. Hold [Shift] and press one of the [Patch -/+ ] buttons to zoom in and out on the sequencer window.

Transport Buttons

The transport buttons allows you to activate or deactivate important transport functions as listed in the table below. As with the navigation buttons, these are available in any mode, at any time.

<table>
<thead>
<tr>
<th>Key Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[F-Keys]</td>
<td>Press and hold this button to use the transport buttons as F-keys. F-keys can be used to trigger QWERTY macro’s to for example create tracks and trigger Bitwig Studio functions</td>
</tr>
<tr>
<td>[...]</td>
<td>Goto the Left locator</td>
</tr>
<tr>
<td>[...]</td>
<td>Goto the Right locator</td>
</tr>
<tr>
<td>[...]</td>
<td>Same as Undo in Bitwig Studio</td>
</tr>
<tr>
<td>[...]</td>
<td>Switch the metronome/click on or off</td>
</tr>
<tr>
<td>[...]</td>
<td>Toggles the arranger Overdub function on or off</td>
</tr>
<tr>
<td>[...]</td>
<td>Switch the loop/cycle between the Left and Right locators on/off</td>
</tr>
<tr>
<td>[...]</td>
<td>Moves the Play Start Position backwards by 1 bar for each press</td>
</tr>
<tr>
<td>[...]</td>
<td>Moves the Play Start Position forward by 1 bar for each press</td>
</tr>
<tr>
<td>[...]</td>
<td>Stop playback and resume from Play Start Position. Press Stop again to go to Zero</td>
</tr>
<tr>
<td>[...]</td>
<td>Activate play from the Play Start Position. Press again to pause</td>
</tr>
<tr>
<td>[...]</td>
<td>Activate record. Press again to deactivate record but continue play</td>
</tr>
</tbody>
</table>
In addition to the primary functions described on the previous page, there are several very useful secondary functions accessible by holding [Shift] while pressing a transport or navigation button. The secondary functions are outlined in the below chart.

<table>
<thead>
<tr>
<th>Key Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Shift]+[View]</td>
<td>Toggles between Mix and Arrange view in Bitwig Studio</td>
</tr>
<tr>
<td>[Shift]+[</td>
<td>Sets the left loop point to current Play Start Position</td>
</tr>
<tr>
<td>[Shift]+[ ]</td>
<td>Sets the right loop point to current Play Start Position</td>
</tr>
<tr>
<td>[Shift]+[Undo]</td>
<td>Redo</td>
</tr>
<tr>
<td>[Shift]+[Click]</td>
<td>Switch Metronome play ticks on/off</td>
</tr>
<tr>
<td>(Shift)+[Mode]</td>
<td>Toggles the launchers automation write on/off</td>
</tr>
<tr>
<td>[Shift]+[Cycle]</td>
<td>Stop all launcher clips from playing and switch all tracks back to arrangement playback mode</td>
</tr>
<tr>
<td>[Shift]+[Rewind]</td>
<td>Select previous Bitwig Studio target Scene</td>
</tr>
<tr>
<td>[Shift]+[Forward]</td>
<td>Select next Bitwig Studio target Scene</td>
</tr>
<tr>
<td>[Shift]+[Stop]</td>
<td>Stop playback of current clip</td>
</tr>
<tr>
<td>[Shift]+[Play]</td>
<td>Activate playback or record of current clip. If clip is already playing, this will activate stop at end of clip.</td>
</tr>
<tr>
<td>[Shift]+[Record]</td>
<td>Activate clip overdub</td>
</tr>
</tbody>
</table>

Learning the shortcuts is the real key to a fluent workflow. Once learned, you’ll find yourself reaching much less for the computer mouse and keyboard when you are creating. We therefore recommend that you revisit this page once you are more familiar with how Panorama integrate with Bitwig Studio. You’ll most likely rediscover some of the features in a new light.
Modes and Display

The Four Mode Buttons
Each of the Mode navigation buttons will configure Panorama to control different aspects of Bitwig Studio. It’s like having four control surfaces in one:

- **Mixer**: Assigns all controls to the Bitwig Studio mixer, Clips and Scenes
- **Instrument**: Assigns controls to the instrument of effect device currently selected for control
- **Transport**: Controls functions in the Bitwig Studio transport functions including tempo, shuffle and loop points
- **Internal**: Uses Panorama’s internal MIDI controller functions so you can jump out of our dedicated Bitwig Studio protocol and use Panorama as a traditional MIDI controller

Wherever you are in Panorama’s menu structure, pressing one of the Mode buttons will jump to that mode. The last menu you accessed in each mode is remembered, so pressing the Mode button once from any other mode will take you back to the remembered menu; pressing it twice will take you to that mode’s home page.

What the Display Tells You

The display Info-Bar is the top Red/Gray/Red area and provides the following status information for each of the three Bitwig Studio mode home pages:

Deeper in the instrument mode menu structure, the Info-Bar changes to display the following information:

**Instrument mode:**

<table>
<thead>
<tr>
<th>TRACK NAME</th>
<th>DEVICE NAME</th>
<th>CURRENT PAGE</th>
</tr>
</thead>
</table>

Display Buttons

The five display buttons are used to navigate menus or activate functions. On most pages there will be labels above one or more of these buttons in the display.

The first display image you will see after launching Bitwig Studio is the Mixer Home Page. The "Macros" label is red. The red color indicate that this menu is active and that the 2x4 encoders are currently controlling the macro parameters.

Whenever you see a display button in red, it means that menu is active.

If a button is used to control a parameter you will see a line above that’s either white or red to indicate the current status of the button. The image on the right shows you an example where a parameters status is "On".

To exit any page, press a Mode button and navigate to whatever page you would like to edit next. If you navigated to the Macros page, therefore press the [Mixer] button to go back to the mixer mode home page.
Bitwig Studio Mixer Control

Mixer Mode Home Page

Start by creating a new project in Bitwig Studio and make sure the Mixer mode is selected on Panorama.

The default Bitwig Studio project contains one audio track and one instrument track. Notice that the window in Panorama shows 9 faders corresponding to the 9 physical 45mm faders. The display looks like the mage on the right.

The info bar’s first red field shows the track name. Try changing the track name in Bitwig Studio and you will see it update on Panorama as well.

The first fader (of the group of 9) on Panorama now controls the mixer channel volume of the first track. Panorama displays the fader channel graphic and a square fader cap graphic shows the current volume setting in Bitwig Studio. The red line graphic shows the position of the physical fader (which is at the bottom in this image). Moving the fader may not change the volume immediately because the fader position have to first match the position in Bitwig Studio, to allow for smooth change to the volume setting. So move the physical fader towards the position of the virtual fader and notice once the two match, the fader cap graphic will follow the fader movement and in Bitwig Studio you are now changing the volume setting for the mixer channel.

Since the instrument track is empty, the middle info-bar field displays "No Device". Now insert a Bitwig Polysynth by dragging it from the Bitwig Studio browser and on to the track. You can now see clearly in the display info-bar center field, that the Polysynth device is selected on the current track.

Next press the [Track+] button to navigate to the second track.

Notice now that the background of track 1 has turned black and that the second track is now inverted with white background plus the track name has changed. The white background clearly shows you which track is currently selected.

Next create an additional 6 tracks (audio or instrument) so you have a complete bank of 8 channels to control with the faders.

Encoders & LED Buttons

The encoders above the faders are by default assigned to Pan. Try adjusting the Pan setting for a few of the tracks in the Panorama Window. To the right of the 8 encoders you’ll find a button labeled [Toggle/View]. Pressing this button will change the assignment of the 8 encoders to Send 1.

Pressing it again will change the assignment to Send 2 etc until after Send 8 they are finally assigned to Pan again. A faster option is to press and hold [Toggle/View] and move the Data Control to scroll through Pan and send options.

So this allows you to control send or pan across multiple channels. There is also an option to control all 8 sends for one channel only but we will cover that later.

The 8 LED buttons below the faders are by default assigned to Select. Try pressing first LED button 1 and then LED button 8. Notice this is a quick way to jump from one track to another.

Pressing the [Toggle/Mute] button will change the assignment of the LED buttons to Mute. Additional presses will assign them to Solo, Record Arm and then back to Select. As with the encoders, press and hold [Toggle/Mute] and move the Data Control to quickly scroll through the options.

The display image shows you the location of the labels that tell you what the 8 encoders and 8 LED buttons are assigned to control.
Navigating Tracks & Channels

Now create an additional 8 tracks in the Bitwig Studio song so we have a total of 16 channels to navigate. Use the [Track+] button to navigate to channel 14. That’s a lot of button presses but thankfully there is a quicker way. Press and hold the [Shift] button on Panorama, then press the [Track-] button. This button combination activates the second menu layer on Panorama (in this case [<Bank>] so we now view channels 1-8 again. Make sure the LED buttons are assigned to Select, and press the LED button that corresponds to track 6.

You have now learned how to navigate Bitwig Studio tracks from Panorama using 3 different methods:

- [Track-] and [Track+] buttons go to previous or next track in the Bitwig Studio sequencer
- [Shift]+[<Bank>] or [Bank>] bank over the 8 channels you operate in Bitwig Studio but doesn’t change the track selection
- Pressing the [LED buttons] when assigned to “Select” enables quick channel selection within the bank of 8 channels you are currently controlling from Panorama

Macros

By default, the 2x4 encoders are assigned to control Bitwig Studio’s device macros. If the [Macros] label is colored red, it means the 8 encoders are already assigned to control macros and you can just start turning the 8 encoders to adjust macro settings. That of course assumes that macros have been set up for the currently controlled device. Some setup is required to get the most out of macros but it’s worth the effort, both for performance and compositional workflows.

Macros are very useful because:

- Macros can be set up per preset to control the parameters you want instant access to.
- Macros can be controlled both from Panorama’s Mixer and Instrument mode
- Multiple parameters can be controlled from just one macro
- Parameters can be offset within a range and in both positive and negative directions

To see which macros are assigned to the Panorama 2x4 encoders, press the [Macros] button. The page shows the name of each macro assigned to Panorama’s controls and of course their current offset values.

If you have multiple devices on a track, you can navigate the devices once you are in the Macros menu by moving the Panorama Data Control. The center info-bar field updates as you navigate through devices in your chain.

Read more about macros in the Bitwig Studio manual page 278.

Sends

Earlier we covered how the encoders above the faders can control 1 send at a time for up to 8 channels. Pressing the [Sends] button in Mixer mode in addition allow control over up to 8 sends for the currently selected channel.

To create active sends in the Bitwig Studio Mixer, first create effect tracks from the Create menu. Once a send is active you will see the current send value above the graphical encoder in the Panorama display.

User

The Panorama [User] menu allow you to learn up to 8 global controls across a Bitwig Studio project. Right-click any parameter you want access and select “Learn Controller Assignment” in the popup menu.

In the Panorama [User] page, now turn one of the 2x4 encoders and the parameter will be assigned. All learned settings are saved with your Bitwig Studio project.
Launching Clips Using Transport Buttons

You can record and playback clips using Panorama’s transport buttons or pads (P4 & P6 only). Using the pads is the most transparent and intuitive approach however the transport clip options do have the benefit of being available at any time, in any menu.

**Recording Launcher Clips Using Transport Buttons**

Clips can be launched, navigated and recorded using the transport buttons secondary functions. First start by pressing [Shift] + [View] on Panorama to bring the Bitwig Studio Mix window in to view.

In our example we have set up 3 instrument tracks using the instruments E-Kick, E-Snare and E-Hat but of course any combination of tracks will work. You have already learned how to navigate the tracks using either the Track buttons or the LED buttons when assigned to Select.

Let’s start by first recording a Kick part by selecting that track.

- On Panorama, press [Shift]+[Play] to activate recording and play the Kick drum part on your keyboard or pads.
- Press [Shift]+[Play] to stop record.
- If you want to record another kick drum clip, press [Shift]+[Forward] to go to the next scene and repeat the process.

Next navigate to the E-Snare and E-Hat track and record clips by repeating the process described above. [Shift]+[Play] will activate record on the target clip if no clip is present and activate playback if a clip is present.

Below is a chart showing the shortcut commands relevant to the clip launcher.

<table>
<thead>
<tr>
<th>Key Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Shift]</td>
<td>The LED buttons corresponding to tracks with clips armed for playback in the target scene, will flash</td>
</tr>
<tr>
<td>[Shift]+[View]</td>
<td>Toggles between Mix and Arrange view in Bitwig Studio</td>
</tr>
<tr>
<td>[Shift]+[Mode]</td>
<td>Toggles the launchers automation write on/off</td>
</tr>
<tr>
<td>[Shift]+[Cycle]</td>
<td>Stop all launcher clips from playing and switch all tracks back to arrangement playback mode</td>
</tr>
<tr>
<td>[Shift]+[Rewind]</td>
<td>Select previous Bitwig Studio target Scene</td>
</tr>
<tr>
<td>[Shift]+[Forward]</td>
<td>Select next Bitwig Studio target Scene</td>
</tr>
<tr>
<td>[Shift]+[Stop]</td>
<td>Stop playback of current clip</td>
</tr>
<tr>
<td>[Shift]+[Play]</td>
<td>Activate playback or record of current clip. If clip is already playing, this will activate stop at end of clip.</td>
</tr>
<tr>
<td>[Shift]+[Record]</td>
<td>Activate clip overdub</td>
</tr>
</tbody>
</table>
Launching Clips Using Pads (P4 & P6 only)

To assign the pads on your Panorama to clips, first activate the [Clips] menu from the Mixer mode home page. This brings up a display page that illustrates the 12 pads and provides you with information about the status of the first 12 clips on the currently selected track.

Assuming you are still working with the clips created on the previous page no change the track and notice how the pad status updates as you navigate tracks.

Recording and Playing Launcher Clips Using Pads

To record a clip using the pads, simply identify a pad that corresponds to an empty (gray) clip slot and do the following:

- Hit the pad. This will activate record (red)
- Hit the pad again. This will deactivate record and play the clip (green)

Our example now shows several pads that are yellow. This indicates that the clip slot contains a clip and therefore can be played. Hit one of the yellow pads and notice how the pad turns green to indicate playback is active and the previous pad is now yellow.

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray</td>
<td>The clip slot is empty</td>
</tr>
<tr>
<td>Red</td>
<td>Recording is active for this clip slot</td>
</tr>
<tr>
<td>Green</td>
<td>Playback is active for this clip slot</td>
</tr>
<tr>
<td>Yellow</td>
<td>The clip slot contains a recorded clip and can be launched</td>
</tr>
</tbody>
</table>

Creating Clips With Fixed Length

It’s really hard to play right on the downbeat when you have to also activate record for a clip. With Panorama you can however create a clip with a predefined length and simply overdub record your part. Here is how:

- While in the [Clips] menu, press and hold the Panorama [Shift] button and turn the Data Control. This allows you to select a length for your clip.
- While holding [Shift], next hit a pad that corresponds to an empty clip slot (gray). This will now create a clip with the length you set in the previous step.
- Make sure “Launcher Overdub” is active by pressing [Shift]+[Record]. If the target pad needs to be red (if it’s green, press [Shift]+[Record] again.
- Press the target pad to activate record and start playing your part when it cycles around the second time.

Naming Clips

If you name your clips in Bitwig Studio’s Clip Launcher Inspector Panel, Panorama will display the name in the [Clips] page. The max length is between 7-9 characters depending on which characters you choose.

Read more about the Inspector panel on page 88 in the Bitwig Studio User Guide.

Accessing All 60 Clips

Bitwig Studio is able to handle up to 60 clips per track. To navigate the 60 clips from Panorama, press and hold the [Clips] button from the Panorama Mixer home page and turn the Data Control.

As you move the Data Control you can scroll through pages each containing 12 clip slots with the virtual pad display updating to show slot number and name (if applicable).
Scenes Using Pads (P4 & P6 only)

You can trigger scenes using the pads on the Panorama P4 and P6. In Mixer mode, press the 5th display button labeled [Scenes]. The Panorama display shows a graphic representation of the 12 pads.

To trigger a scene simply hit a pad. When a scene is playing, the display graphic of the corresponding pad is green.

Naming Scenes
If you name your scenes in Bitwig Studio, Panorama will display the name in the [Scenes] page. The max length is between 7 -9 characters depending on which characters you choose.

Accessing All 60 Clips
Bitwig Studio is able to handle up to 60 scenes. To navigate the 60 scenes from Panorama, press and hold the [Scenes] button from the Panorama Mixer home page and turn the Data Control.
As you move the Data Control you can scroll through pages each containing 12 scenes with the virtual pad display updating to show scene number and name (if applicable).
Motorized Fader (applicable to P4/P6 only)

If your Panorama is equipped with a Motorized fader, you may already have noticed that the fader follows the currently selected track. When you make track changes, the fader will jump to the volume position of the track in Bitwig Studio and you can simply change it at any time by just moving the fader. Try setting the volume of a few tracks to different settings and notice how the fader will jump to the right position every time you select a new track.

You also have Mute and Solo buttons with LED indicators that show if they are active for the current track. Try pressing the mute button for a track and notice now that when you change track, not only does the motorized fader update but also the status of the mute (and solo) button.
Bitwig Studio Instrument (Device) Mode

Pressing the [Instrument] button will select Instrument mode. Instrument mode is really a Device mode because this is where you control all devices regardless of whether they are instruments, effects or containers.

In the following we will cover how Instrument mode works with devices in general. Start by pressing the Panorama [Instrument] button.

Instrument Home Page

The first window you see on the Panorama display is the Instrument home page. The page is designed to provide the visual feedback and tactile experience of a hardware workstation.

If a track is selected without a device present, there are no parameters to control and the large character area will read "No Device"

First select or create a track containing the Bitwig Studio PolySynth.

Changing Patches

You can step through device patches within the current Bitwig Studio directory from Panorama, by pressing [Patch>] to go to the next patch or [<Patch] to go to the previous patch. As you change patch, the parameter values are updated in the Instrument home page. To scroll through quickly, press and hold one of the patch buttons and move the Data Control.

Selecting Patch Category or Author

To narrow down your search for patches you can also select a specific category and/or author.

From the instrument home page, press the display button labeled [Patch]. Two new options now appear above the last two display buttons: Category and Author.

First press Category. A pop-up menu appears listing all the categories available for you to select. Use the Data Control to scroll through the list and select "Monosynth" (second page) followed by pressing the display button labeled [Enter].

Pressing the [Patch+] button will now change the preset in the PolySynth device to “Biggie”.

As you expand your Bitwig Studio setup you will no doubt create a lot of your own presets. The author filter option works similar to the category option but of course filters by selected creator. This is useful if you just want to find your own presets. Press the [Patch] button again to exit or press [Instrument].

Macros

When you pressed the [Patch] button, you may have noticed that the parameters in the Instrument home page changed. Pressing [Patch] not only allows you to narrow your search for presets but also assigns the 2x4 encoders to the device macros.

Press the [Patch] button again to exit or press [Instrument].

Navigating Devices

The device you are currently controlling is called the Primary Device. If you have multiple devices on a track, you can navigate them from Panorama by moving the Data Control.

Try adding an Audio FX device to the PolySynth track we have already been working with.

Moving the Data Control will now enable you to navigate between the two devices with the display updating to show you which device you are currently controlling.

You can also use your mouse to select which device Panorama should control. Right-click on the left-hand header of the device you want controlled and select “Set as Primary Device” from the menu.
Bitwig Studio Instrument (Device) Mode

**Instrument Home Page**

Now lets take a look at how Panorama is structured to control PolySynth, a plugin that comes mapped for Panorama. The grid below the patch name, shows the parameters and values assigned to the 2x4 encoder group. If you would like to change the assignments on this page, go to the Bitwig Studio “Device Mappings Pane” page by clicking on the gear icon in the bottom left corner of the PolySynth GUI.

- Click on the header reading “OSC1”. This brings up the device pages for this device.
- Select “Common Parameters” page. The parameters listed now correspond to the Panorama Instrument home page.
- With your mouse, click on the 4th slot in the list labeled “LFO2 Rate” and drag it over to “Filter Type” and release.
- The 4th encoder in the instrument home page is now assigned to control the Filter Type parameter.

The home page should give access to a combination of parameters across all device menus, giving immediate control of the parameters, that typically have the biggest impact on the devices sound.

Customize your home page as described above and once you are satisfied with your setup, make sure to Save the parameter mappings as default.

**The Envs Page**

In Instrument mode, the entire Panorama control surface is available to just control the Primary Device in Bitwig Studio. As you will see you have the freedom to assign controls any way you prefer. A good approach is however to use the faders for envelope control where ever possible. The pre-mapped setup for PolySynth is set up this way following the guidelines below:

<table>
<thead>
<tr>
<th>Fader 1</th>
<th>Amp Attack</th>
<th>Fader 5</th>
<th>Filter Attack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fader 2</td>
<td>Amp Decay</td>
<td>Fader 6</td>
<td>Filter Decay</td>
</tr>
<tr>
<td>Fader 3</td>
<td>Amp Sustain</td>
<td>Fader 7</td>
<td>Filter Sustain</td>
</tr>
<tr>
<td>Fader 4</td>
<td>Amp Release</td>
<td>Fader 8</td>
<td>Filter Release</td>
</tr>
</tbody>
</table>

| Fader 9 | Instrument Volume |

Moving the faders now control these parameters in PolySynth and the top current parameter line shows you which parameter you are controlling and it’s value. Note that to avoid parameter jumping, a fader controls its assigned parameter only when its position matches the parameter value.

Press [Toggle/View] or the display button labeled [Envs] to see what the faders and the associated encoders are assigned to control and their current status.

**Assigning Modulation Sources**

The 4th display button labeled [Mods] allow you to assign Bitwig Studio device sources to any destination parameter. Here is how to do that:

- Press [Mods] and select a modulation source (such as modulation wheel) in the pop-up menu using the Data Control
- Press [Enter] to select. [Mods] will now be flashing to indicate that a destination parameter should be selected.
- Press the display button labeled [Pages] and select a destination menu (such as Filter) and press [Enter].
- Move the parameter you want to modulate such as Filter Frequency. Make sure to move it for the entire range you want to be controllable.
- Press [Mods] again to exit.

Your modulation wheel is now assigned to control the Filter Frequency. As with macros, multiple parameters can be assigned with both positive and negative modulation ranges. Bitwig Studio calls this the Unified Modulation System. Read more about it on page 277 in the Bitwig Studio User Guide.
Bitwig Studio Instrument (Device) Mode

Pages
PolySynth is premapped for Panorama so you have access to all parameters without having to create your own mapping. Press the [Pages] display button to navigate the menus using the Data Control. Press [Enter] to select.

You can customize every page using the Device Panel Pane as described for the Instrument home page. New pages can even be created by clicking the + icon to the right of the current page in Bitwig Studio. All pages are named Default when created but on your computer, press [Control]+[click] on the page label to rename it.

Controlling VST Plug-ins
You can also set up pages for your favorite VST plug-ins using the same methods described for PolySynth. Create pages that make sense for each plug-in and label them. They will be available for navigation in Panorama’s [Pages] pop-up menu.

Use the default “Common Parameters” and “Envelopes” as a starting point and build your map from there.
Transport Mode

Transport mode helps you to navigate and build up your song composition from Panorama. As explained earlier, the transport buttons are available in any mode but the dedicated Transport Mode provides access to extra tools that will make capturing ideas, beat creation and overdubbing easier.

Transport Home Page

Press the [Transport] button to enter Transport mode. Transport mode provides the visual feedback you need to know where you are in your project. Below the info-bar the large font readout shows the current Play Position which updates as you play the project.

Below the Play Position readout you see the position of the Left and Right locators. Here is how you set these location points:

- Move the Play Start Position to the location you want using the [Forward] or [Rewind] transport buttons.
- Press [Shift]+[Goto L] to set the left location point or [Shift]+[Goto R] to set the right location point.

The following 8 boxes show what each of 2x4 rows of encoders are assigned to control:

<table>
<thead>
<tr>
<th>Tempo</th>
<th>Pre-roll</th>
<th>Shuffle</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change the Bitwig Studio tempo.</td>
<td>Changes the Pre-Roll length</td>
<td>Sets the shuffle %</td>
<td>Changes the shuffle rate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accent</th>
<th>Rate</th>
<th>Phase</th>
<th>&lt;Loop&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes the Accent Amount</td>
<td>Changes the Accent Rate</td>
<td>Changes the Accent Phase</td>
<td>Moves the Left and Right locator loop forward or backward from their current position</td>
</tr>
</tbody>
</table>

Step Sequencer

Not yet documented.