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Using Panorama
with Bitwig Studio

Panorama P1, P4 & P6

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Table of Contents

The Panorama Bitwig Studio Integration is compatible with Bitwig Studio and Bitwig Studio 8-Track. The instructions assume you have one of these programs installed running on either Windows, Mac OS X, or Linux.

Installing Panorama P-series Driver (Windows only)

Installing the Panorama driver is required to get Panorama up and running with Reason. If you have previously completed this part, jump straight to Firmware Update. To install the driver:

• Run the Panorama_P_1.2.3.5 installer (part of the zip file you downloaded with this guide) and follow the on screen instructions until complete. This installs the Panorama driver.

Panorama P-series Firmware Update - Windows

1. Connect Panorama P-series to your computer via USB.

2. With Panorama P-series switched off, press and hold [Toggle/View]+[Mixer] while switching the unit on (P1 needs to be plugged in while holding the buttons). The display will be white when the unit is on.

3. Locate the downloaded package that this guide came with and make sure it's unzipped. The nkupdate app is in the "Firmware" folder.

4. Launch the nkupdate application. Once launched, it should look like the left image.

5. Follow the nkupdate on-screen instructions to load and update Panorama P-series firmware. The firmware file should be selectable after clicking the [Load File] button.* Close nkupdate app when complete

6. Reset Panorama to it's default settings (note this will erase any internal preset or map settings**) by switching the unit off and press [patch-]+[Patch+] while powering on again. Keep holding the buttons until you see the fader display. On P1, press the [Cycle]+[Record] buttons and then press the [Patch-] + [Patch+] buttons within the 2 seconds countdown.
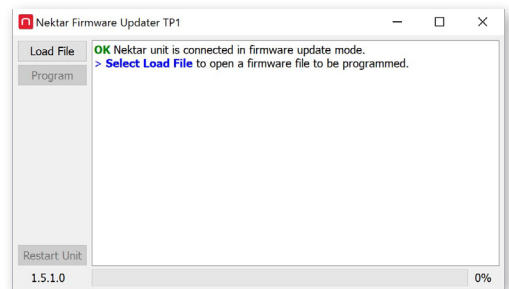
Note: If the Load button is not active, close nkupdate and open it again.

Note: Firmware update can only be done on a Windows or Mac system.

** **Reset Panorama to default settings:** If you want to keep your user memory banks; please do a backup, and restore after resetting.

Nektar Bitwig Integration Setup - Windows

1. Make sure Bitwig is already installed on your computer.
2. Locate the Panorama_Bitwig_Support installer included with this package and run it.
3. With your Panorama's firmware updated and the unit switched on, launch Bitwig. Panorama should be automatically detected and ready for use.
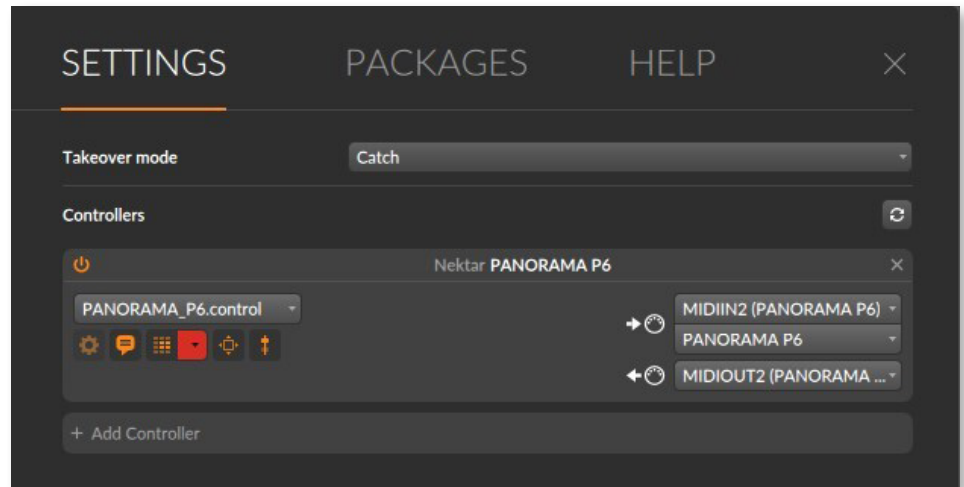

Troubleshooting

If Panorama is not detected, check and complete step 6 from page 2 of this guide—'Reset Panorama to Default Settings' as this may be the reason. Next check that the Panorama control surface is available in the Bitwig Settings/Controllers menu, when you click Add and select Nektar. If all is OK and Panorama is still not detected, restart your computer.

Panorama P-series Firmware Update - MacOS

Updating Panorama's firmware, is required to get Panorama up and running with Bitwig. Previous versions of the firmware will not work with OS X 10.11 or higher.

1. Connect Panorama P-series to your computer via USB.
2. 2. With Panorama P-series switched off, press and hold [Toggle/View]+[Mixer] while switching the unit on (P1 needs to be plugged in while holding the buttons). The display is white when the unit is in firmware update mode.
3. Locate the dmg file named "Firmware P1-P4-P6 MacOS 10_11 or higher" in the downloaded package this guide came with, and double-click to open.
4. Launch the nkupdate application. Once launched, it should look like the image. If the "Load File" button is grayed out, close nkupdate and launch it again.
5. Follow the nkupdate on-screen instructions to load and update Panorama P-series firmware. The firmware location can be selected after clicking the [Load File] button.
6. On the left side of the file browser window, select Location 'P1-P4-P6 Firmware_MacOS'. Next select the file for your device, and click 'Open'.
7. Click [Program] and finally close the nkupdate app when complete.
8. IMPORTANT: Reset Panorama to it's default settings (note this will erase any internal preset or map settings *) by switching the unit off and press [patch-]+[Patch+] while powering on again. Keep holding the buttons until you see the fader display. On P1, press the [Cycle]+[Record] buttons and then press the [Patch-] + [Patch+] buttons within the 2 seconds countdown.

* Backup your settings: If you want to keep your user memory banks; please do a backup, and restore after resetting.
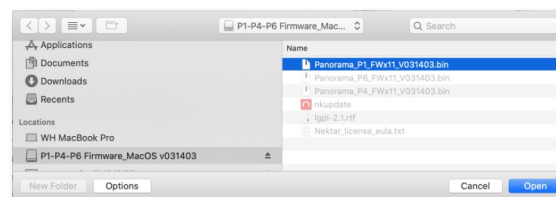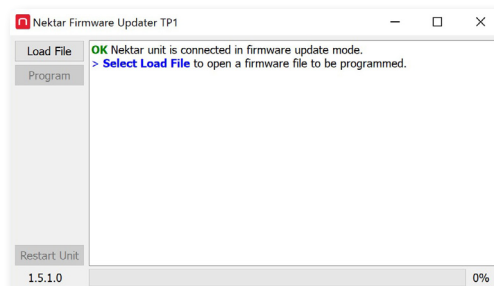
Panorama Installation and Setup in Bitwig - MacOS

• First make sure Bitwig Studio is installed and launched at least once.
• In the zip file you downloaded with this guide, locate the "Panorama_Bitwig_Support" installer and run it.
• With installation complete, make sure your Panorama is connected to your computer and switched on.
• Launch Bitwig and click on the Bitwig logo top center.
• Select the menu Settings/Controllers.
• Click "Detect available controllers". Your Panorama should now appear in the list.
• Click "OK" and exit Device Setup.
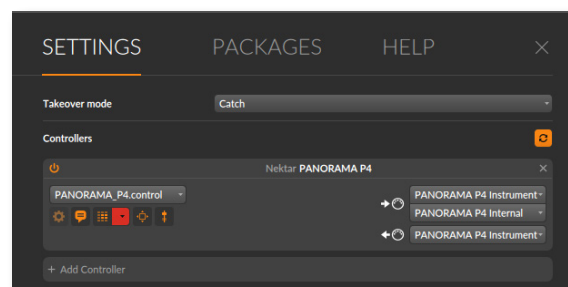
That's it, setup is now complete and you can move on to the fun part, learning how it all works.

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Panorama P-series Firmware Update - Linux
Firmware update can only be done on a Windows or Mac system. Please follow the firmware instructions on earlier pages of this guide.

Nektar Bitwig Integration Setup - Linux
• First make sure Bitwig Studio is installed and launched at least once.
• In the zip file you downloaded with this guide, locate the "Nektar" folder and move the 'Nektar' folder from the .zip file to the following directory: //home/Bitwig Studio/Controller Scripts/
• With installation complete, make sure your Panorama is connected to your computer and switched on.
• Launch Bitwig and click on the Bitwig logo top center.
• Select the menu Settings/Controllers.
• Confirm that the Panorama appears as shown in the image below. If not, add it manually as described.

If Panorama is not identified and configured automatically, you can configure it manually.

• Click the 'Add controller' button
• Select 'Nektar' for manufacturer
• Select 'Panorama P6'

Configure the ports as follows
• Input1: Panorama P6 Instrument
• Input2: Panorama P6 Internal
• Output1: Panorama P6 Instrument
• Output2: Panorama P6 Internal
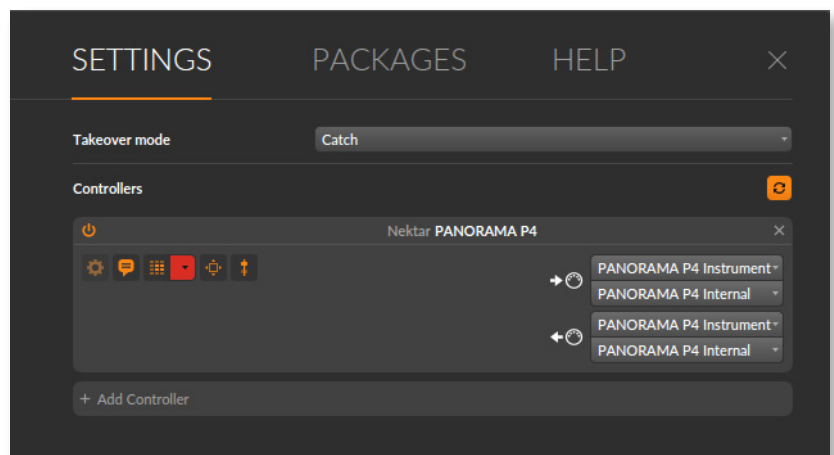
Troubleshooting
If Panorama is not detected, check and complete step 6 from page 2 of this guide—'Reset Panorama to Default Settings' as this may be the reason. Next check that the Panorama control surface is available in the Bitwig Settings/Controllers menu, when you click Add and select Nektar. If all is OK and Panorama is still not detected, restart your computer.

The following pages focus on how Bitwig Studio and Panorama work together. 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.
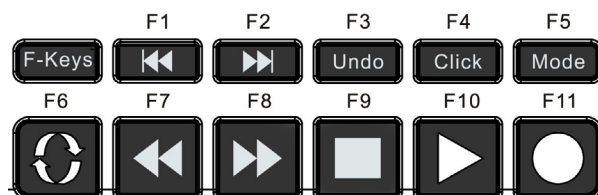
Navigation

◄ Bank   Bank ►   ◄ Zoom   Zoom ►

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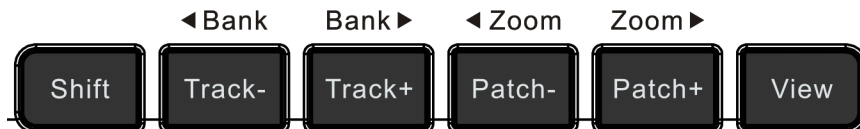
The six buttons pictured above allow you to navigate important parts of Bitwig Studio at any time. Here is what they do:

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

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.

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. Hold [Shift] and press [View] from Mixer Mode to switch between Arranger and Mixer View. Hold [Shift] and press [View] from Instrument Mode to open third-party plug-in window.

Data Control: Scroll through the device chain in Mixer and Instrument mode. Note that in transport Mode the data encoder moves the song position in Beat increments. In addition it's used for selection options in pages with a [Menu].

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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.

| Key Combination	Description
[F-Keys]	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. Note that QWERTY Macros are only supported in Windows. F-Keys can be used to transmit standard MIDI messages.
[◀◀]	Go to the Left Locator
[▶▶]	Go to the Right Locator
[Undo]	Same as Undo in Bitwig Studio
[Click]	Switch the metronome/click on or off
[Mode]	Toggles the arranger Overdub function on or off
[Cycle]	Switch the loop/cycle between the Left and Right locators on/off
[Rewind]	Moves the Play Start Position backwards by 1 bar for each press
[Forward]	Moves the Play Start Position forward by 1 bar for each press
[Stop]	Stop playback and resume from Play Start Position. Press Stop again to go to Zero.
[Play]	Activate play from the Play Start Position. Press again to pause.
[Record]	Activate record. Press again to deactivate record but continue play.

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Transport Buttons

In addition to the primary functions described on the previous page, there are several very useful secondary functions access by holding [Shift] while pressing a transport or navigation button. The secondary functions are outlined in the below chart.

Key Combination	Description
[Shift]+ [⏮]	Sets the left loop point to current Play Start Position
[Shift]+ [⏭]	Sets the right loop point to current Play Start Position
[Shift]+[Undo]	Redo
[Shift]+[Click]	Switch Metronome play ticks on/off
[Shift]+[Mode]	Toggles the arranger automation write on/off
[Shift]+[Cycle]	Stop all launcher clips from playing on the selected track and switch the track to arrangement playback mode
[Shift]+[Rewind]	Select previous launcher scene
[Shift]+[Forward]	Select next launcher scene
[Shift]+[Stop]	Stop playback of current clip
[Shift]+[Play]	Activate playback or record of current clip. If Clip is already running, this will restart the clip according to Launch Quantize setting.
[Shift]+[Record]	Activate clip overdub and Clip automation write

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.

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   Instrument   Transport   Internal

Display
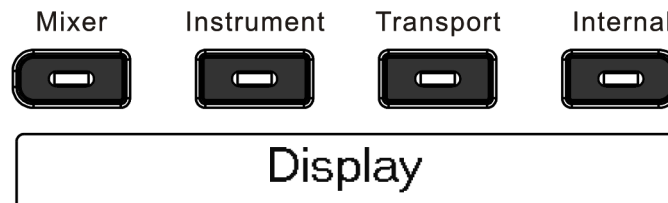
Mixer: Assigns controls to Bitwig Studio's Mixer and Device parameters
Instrument: Assigns controls to the currently selected instrument or effect device
Transport: Assigns controls to Bitwig Studio's Transport functions including tempo, shuffle and loop points
Internal: Uses Panorama's internal MIDI 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 page you accessed in each mode is remembered, so pressing the Mode button once from any other mode will take you back to the active page for that mode; 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:

Mixer & Transport modes:

TRACK NAME	CHANNEL NUMBER	SELECTED DEVICE

Instrument mode:

TRACK NAME	DEVICE NAME	CURRENT PAGE

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. If you press the display button labeled 'Sends', that button label will be highlighted red. The red color indicates that this page is active and the 2x4 encoders are currently controlling send levels for the selected track.

Press the Mixer button again and note that the 'Sends' label is still lit red, which indicates that the 2x4 encoders are still assigned to Send levels.

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.
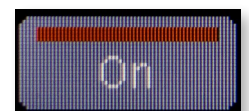
Mixer Mode Home Page

Start by creating a new project in Bitwig Studio and make sure [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 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 .

Moving the fader may not change the volume immediately because the fader position needs to first match the position in Bitwig Studio, to allow for smooth change to the volume setting. 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 right info-bar field is blank. 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.
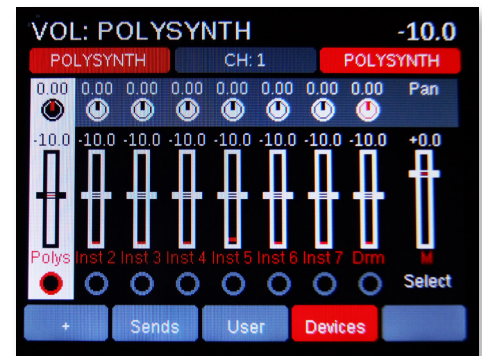
Next press the [Track+] button to navigate to the second track.

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.

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 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

[+]

The first display button is labeled with a [+]. Press the button to bring show Bitwig Studio's pop-up browser. Navigating the browser will be covered in more detail in the section which covers Instrument Mode starting on Page 14.

[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 allows 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 Add 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] page allow you to learn up to 8 global controls across a Bitwig Studio project. Right-click any parameter you want access and select "Map to controller or key" 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.

[Devices]

The Devices menu allows you to control devices from within Mixer mode. The functionality is largely the same as Instrument mode which is described starting on page 14. But there are two important workflow options due to the fact that Panorama has 2 devices menus.

- The Devices menu only utilizes the 2x4 encoders. This means that you can still control the mixer while for example tweaking effects on the selected track.

- Selection of a device is independent of Instrument mode device selection. You can therefore control one device in instrument mode, press [Mixer] (assuming the Devices menu was previously selected) and immediately control a different device on the same track.

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 position of the selected track's volume 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.

The [Fader] button turns the Write Arranger Automation function on and off. When this option is on, the 'Write' LED below the button will be lit.

Press the [Instrument] button to select Instrument mode. Instrument mode allows you to control all devices in a chain.

In Instrument mode, the 16 encoders, 9 faders and 8 LED buttons are all dedicated to controlling the selected device. The Devices menu in Mixer mode by comparison is limited to the 2x4 encoders and 4 display buttons.

In the following we will cover how Instrument mode works with devices in general.

Controlling the Bitwig Studio Browser
Hold [Shift] and press [Instrument] to create a new Instrument Track. Bitwig's pop-up browser will appear and the following button labels will appear on Panorama's display:

Button Label	Description
Browser	Press this button to open/close the Bitwig Studio Browser.
<	With the Browser open, press the arrow left button to tab left through the panes.
>	With the Browser open, press the arrow right button to tab right through the panes.
OK	Press OK to create a device or load a preset.
Data Control	Scroll through options in the currently selected pane.

Pressing [Browser] at this point will close Bitwig's browser again without making a selection. Press the [+] button to open the browser again. With the Devices Browser in focus, you can now use the <> buttons to jump between the two open panels. Move the [Data Control] to scroll through devices. Select a device and click [OK] to insert on the instrument track.

Next press [Browser] again and move the [Data Control] to scroll through available presets for the selected device. Press [OK] when you have found the preset you want to load.

To narrow the options you can set filters by using the arrow buttons to step to panes and then select the filter using the [Data Control].

With the browser open, you can also use the [Patch-] and [Patch+] buttons to audition patches before pressing OK. But note when the browser window is closed, the patch buttons on Panorama follow the preset filters as set on Panorama.

Note: Bitwig and the browser have to be in focus to allow Panorama to control them.

Device Preset Selection from Panorama
With a device created and selected on a track, you also have the option to select [Preset] in addition to [Browser]. [Preset] opens the popup menu that allows you to scroll through the list of presets for the selected device. Press [Enter] to load a preset.

To narrow down your search for patches you can also select a Category and/or Creator filter. Press [Category] and move the [Data Control] to select and then press [Preset] to scroll through the filtered preset selection using the [Data Control]. The process is of course the same to select a specific Creator.

Changing Presets using the Patch Buttons
You can step through device presets 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. To scroll through quickly, press and hold one of the patch buttons and move the Data Control.

The first window you see on the Panorama display, after selecting Instrument mode, 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".

Navigating Devices

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

Default, Panel and Nektar Mapping

Device mapping can originate from 3 different sources:

Default map   The parameters a device/plugin sends when no other mapping is present.

Nektar map   Nektar advanced device/plugin mapping that premaps all device parameters in easy to navigate menu pages. Supersedes panel mapping except the device home page.

Bitwig Remote Controls: The parameters a device/plugin sends when no other mapping is present.

Nektar Mapped Devices

Bitwig Studio's instrument devices are all Nektar mapped devices as well as many common and popular VSTi plugins. Selecting a track hosting Polysynth for example is a good place to start experiencing the power of Nektar mapping.

When a Nektar map is present, the label of the 5th display button reads "menu". Press this button and use the [Data Control] to scroll through the controller pages, each labeled clearly so you can find the section you want to control really quick. Press [Enter] to load the page or [Esc] to exit without loading.

A controller page can show assignments for one of 3 sections: 2x4 encoders, faders + 1x8 encoders or faders + LED buttons.

Each of these controller sections are of course active at any time so you get the full benefit of all Panorama's controls. Pressing the toggle buttons toggle the view so you can see what each of the sections control.

- [Toggle/View]: Toggle between faders + 1x8 encoders and the 2x4 encoder views. Press the button again, to return to the previous page.
- [Toggle/Mute]: Toggle between faders + LED buttons and the 2x4 encoder views. Press the button again, to return to the previous page.
- Finally you can press [Instrument] at any time to return to the device home page.

Nektar maps typically assign envelopes to the faders and since many instruments feature 4 stage ADSR type envelopes, the below table show typical assignments. Polysynth is no exception so even without looking at the display, you can with confidence move the faders and know what they control.

Fader 1	Amp Attack		Fader 5	Filter Attack
Fader 2	Amp Decay		Fader 6	Filter Decay
Fader 3	Amp Sustain		Fader 7	Filter Sustain
Fader 4	Amp Release		Fader 8	Filter Release
			Fader 9	Instrument Volume
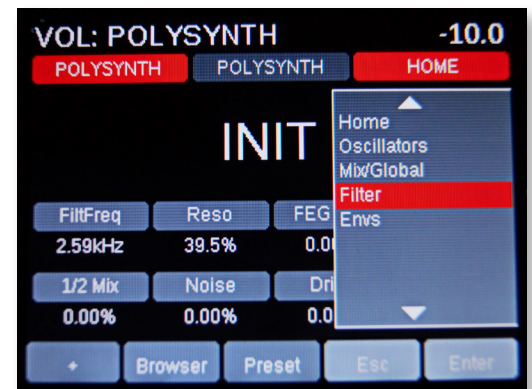
Remote

Bitwig's Remote Controls Pages allows complete customization of your own mapping for any device, using the 8 encoders.

With Instrument mode active, press the display button labeled [Remote].

Panorama now controls the parameters mapped using Bitwig's Remote Controls Pages which means you can customize mapping and create new pages.

On Panorama, press the display button labeled [Pages] to view available map pages and use the [Data Control] to scroll the list. Press [Enter] to select.

You can create as many pages as you can manage as well as name pages and parameters.

To assign a control, click on an empty control slot. It will start to blink. Then click on the parameter you want to assigned.

If you want to change a controls assignment, first delete the current assignment and then assign a new parameter.

For more information about the Remote Controls Pages, check the Bitwig documentation.
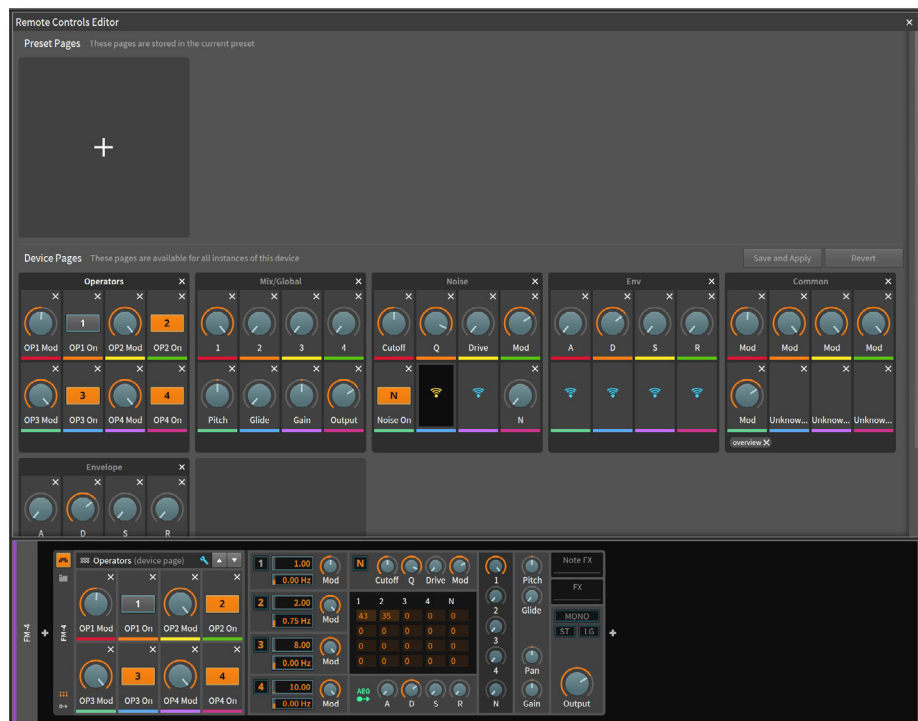
Drum Machine Device

Panorama controls the Bitwig Drum Machine container device similar to how a traditional drum machine would work but with lots of flexibility and some nice extra's. To get started, make sure to load a Drum Machine preset or drag some devices to the Drum Machine slots.

The device home page shows the name of the preset loaded in the currently selected pad slot. The 2x4 encoders are mapped to the Device Home Page parameters. Here is how it all works in more detail:

Select: When this button is active, hitting a pad will assign the 2x4 encoders to the Device Home Page parameters of the device populating the slot. If the [Select] button is left active, switching between slots in real-time and controlling parameters while building up parts can be really powerful. However the purpose of the function is to simply select the drum slot and we recommend that you deactivate this function when playing faster repeating notes. Otherwise some dropout may occur.

Pads: Pressing the display button labeled [Pads] provides an overview of the preset loaded in the pad slots. Some additional functionality is available in this menu including:

Row D:	Switches Panorama's top row of pads from C to D.
	D = Drum Machine slots 13-16.
Mute:	When enabled, Mute can be activated/deactivated for each of
	the Drum Machine slots, using either the pads or LED buttons.
Solo:	When enabled, Solo can be activated/deactivated for each of
	the Drum Machine slots, using either the pads or LED buttons.
Clear M/S:	Clears all Mute and Solo settings when pressed
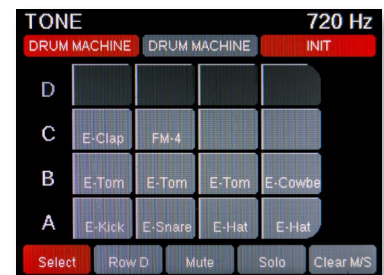
Preset: Opens the popup menu that allows you to scroll through the list of presets available for Drum Machine. Move the [Data Control] and press [Enter] to load a preset.

Remote: Assigns Drum Machine Remote Controls Pages to the 2x4 encoders.

Menu: Select mapping pages for the currently selected device.

Faders: Faders 1-8 control volume for Drum Machine slots 1-8 by default. Fader 9 controls Drum Machine Output.

Encoders 1x8: Control pan for Drum Machine slots 1-8 by default.

LED buttons: Control Mute for Drum Machine slots 1-8 by default.

Toggle/View: View current status of slot volume and pan. Change slot assignments by pressing [9-16] and [1-8].

1-8:	When active, assigns faders, 1x8 encoders and LED buttons to control Volume, Pan and
	Mute for slots 1-8.
9-16:	When active, assigns faders, 1x8 encoders and LED buttons to control Volume, Pan and
	Mute for slots 9-16.
Clear M/S:	Clears all Mute and Solo settings when pressed.

Changing Preset for Individual Slots

It is possible to select presets for a device within a Drum Machine slot, however this does mean you no longer control the Drum Machine container itself. The device needs to be the "Primary Device":

In Bitwig Studio, right-click on the device panel, just below the device name.

Select "Set as Primary Device"

You can now control that device directly from Panorama including changing it's presets.

Panorama can control up to 12 device layers within the Bitwig Instrument Layer container device. The functionality is similar to the Drum Machine container but with some important differences.

The device home page shows the name of the preset loaded in the currently selected pad slot. The 2x4 encoders are mapped to the Device Home Page parameters. Here is how it all works in more detail:

Mix: When [Mix] is active (default), faders 1-8 control volume, the 1x8 encoders control pan and the 8 LED buttons control Mute for each of the layers. If you switch [Mix] to it's off position, the faders will be mapped according to the mapping of the currently selected layer device.

Layers: Pressing the display button labeled [Pads] provides an overview of the preset loaded in the pad slots. Some additional functionality is available in this menu including:

Mute:	When enabled, Mute can be activated/deactivated for each of the Drum Machine slots, using either the pads or LED buttons.
Solo:	When enabled, Solo can be activated/deactivated for each of the Drum Machine slots, using either the pads or LED buttons.
Clear M/S:	Clears all Mute and Solo settings when pressed.

Presets: Opens the popup menu that allows you to scroll through the list of presets available for Instrument Layer. Move the [Data Control] and press [Enter] to load a preset.

Remote: Assigns Layer Remote Controls Pages to the 2x4 encoders.

Menu: Select mapping pages for the currently selected device.

Toggle/View: View current status of slot volume and pan. Change slot assignments by pressing [9-16] and [1-8].

1-8:	When active, assigns faders, 1x8 encoders and LED buttons to control Volume, Pan and Mute for layers 1-8.
9-16:	When active, assigns faders, 1x8 encoders and LED buttons to control Volume, Pan and Mute for layers 9-12.
Clear M/S:	Clears all Mute and Solo settings when pressed.

Changing Preset for Individual Layers

It is possible to select presets for a device within a Drum Machine slot, however this does mean you no longer control the Drum Machine container itself. The device needs to be the "Primary Device" :

• In Bitwig Studio, right-click on the device panel, just below the device name.
• Select "Set as Primary Device"

You can now control that device directly from Panorama including changing it's presets.

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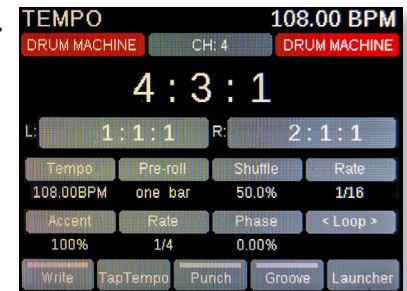
The 8 boxes show what each of 2x4 rows of encoders are assigned to control:

Tempo	Pre-Roll	Shuffle	Rate
Control the tempo of your Bitwig Studio song	Sets the Punch Out point in Logic's timeline	Adjusts the Shuffle Amount	Sets the Shuffle Rate

Accent	Rate	Phase	<Loop>
Sets the Accent Amount value	Selects the Accent Rate	Sets the Accent Phase	Moves both the Left and Right loop points forward or backward

The display buttons in addition control the following:

Write: Switch write automation on/off

Tap Tempo: Press this button repeatedly in a steady beat to set Bitwig Studio's tempo

Punch: Activate Punch in and punch out

Groove: Activate the Groove parameters

Launcher: Activates the launcher menu (check next page for detail).

You can combine Transport Mode with the global navigation, transport and F-keys functions to great effect. Use the F-keys to open Bitwig windows and menus for example, is an effective way to customize your setup and navigate Bitwig.

Familiarity with the transport buttons and their secondary operations in addition will help you create a faster workflow. The transport buttons functionality is covered on page 3 but here is a summary of the less obvious functions:

Key Combination	Description
[F-Keys]	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. Note that QWERTY Macros are only supported in Windows. F-Keys can be used to transmit standard MIDI messages.
[◄◄]	Go to the Left Locator
[►►]	Go to the Right Locator
[Shift]+ [◄◄]	Sets the left loop point to current Play Start Position
[Shift]+ [►►]	Sets the right loop point to current Play Start Position
[Mode]	Toggles the arranger Overdub function on or off

Pressing the [Launcher] button in Transport mode assigns the pads to trigger and record clips and opens the "Launcher" menu.

The display page illustrates the 12 pads and provides you with information about the status of the first 12 clips on the currently selected track. If you use a lot of clips, moving the [Data Control] scroll through clips pages up to 60.

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)

Created clips that are not currently selected are marked yellow. If you hit the corresponding pad, the clip will turn green to indicate that it's selected.

| Color	Description
Gray	The clip slot is empty
Red	Recording is active for this clip slot
Green	Playback is active for this clip slot
Yellow	The clip slot contains a recorded clip and can be launched

Creating Clips With Fixed Length

You can also create empty clips from Panorama at a pre-determined length.

• Press the [New Clip] button.

• Move the [Data Control] to set your clip length while the [New Clip] button is active.

• Press the target pad to create the clip at the desired length and exit "New Clip".

You can also create clips at any time (even if [New Clip] is not active) by pressing

[Shift]+[Hit a pad]. The length will correspond to current New Clip length.

And finally, you can create a clip by pressing [New Clip] and [Enter]. Then Move the [Data Control] to select

your destination slot and press [Enter] again.
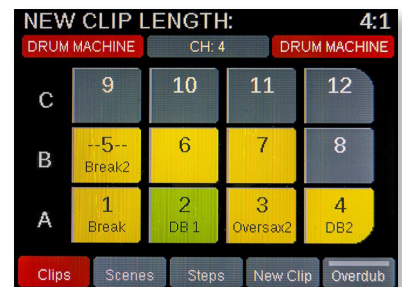
Overdub Existing Clips

Activating the Overdub menu enables you to immediately start recording on a created empty clip or overwrite and existing performance.

• Press the [Overdub] button.

• Select the clip you want to record on by hitting the corresponding pad.

• Hit another pad to immediately start overdub recording another clip.

When you are done, deactivate the "Overdub" menu.

Deleting Clips

You can also delete an already created clip. Press [Shift]+[Hit a pad] and use the same button combination again, to create a new empty clip.

Another option is to activate [New Clip] and hit the pad corresponding to the clip you want deleted.

This method allows for multiple clips to be deleted.

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 in the Bitwig Studio User Guide.

Scenes

You can trigger Scenes from Panorama using the pads.

With the [Launcher] menu active, press [Scenes]. This immediately assigns the pads to trigger scenes.

As with clips, the display graphic shows which scenes are assigned to each pad. Hit a pad to trigger a scene.

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 up to 144 Scenes

You can navigate up to 144 Scenes from Panorama. To access more Scenes, turn the [Data Control] while the [Scenes] menu is active.

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).

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]+[Record] to activate recording and play the Kick drum part on your keyboard or pads.
- Press [Shift]+[Stop] 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.

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

Step Sequencer

In Transport Mode, press the display button labeled 'Step Seq' to access the Step Sequencer. This page allows you to enter notes into a currently selected Note clip by setting a note value (use the keyboard or data encoder to select a note for all steps, use the encoders above the faders to select notes for specific steps), setting a velocity value (velocity is set, per step, by the faders) and then create a note by pressing one of the LED buttons below the faders.

You will see the LED button light up to indicate that there is an active note on that step.

Getting started with the Step Sequencer:

Here is what each of the controls on Panorama do when you activate the step sequencer:

- LED Buttons - Activate/Deactivate steps
- Faders - Set step Velocity
- Encoders above faders - Set step Note
- Data encoder - Sets Note for all steps
- Keyboard - Sets Note for all steps

Creating Notes in the sequencer, step by step:

1. First create a Note clip in Bitwig Studio's clip launcher.
2. While on Panorama's Step Sequencer page, press the LED button below Fader 1.
3. Observe that a note is created at the start of the Note clip and the LED for the button lights up. The note is C1 with velocity of 100.
4. Press the LED button below Fader 1 again to remove the note and observe that the LED turns off.

Setting Note values:

1. Press a key on Panorama's keyboard
2. Observe that the value displayed above the encoder graphics changes as you press different keys. By default the Note value is set to 36 (which corresponds to MIDI note C1)
3. Press the LED button below Fader 1
4. Observe that a note is created with the value of the last key you pressed on the keyboard

You can also change the note value for all steps by turning the data encoder.

If you want to change the note value for one step, turn the encoder that corresponds to the step you want to change.

Note: Changing the note value with the keyboard or the encoders will set the note for the next step you create. It will not change the note value for active notes. The same is true for velocity. It's also important to note that each step of the sequence/Note clip can have more than one active note, so you can actually create polyphonic sequences directly from Panorama.

Setting Velocity values:

1. Move Fader 2 down to a value of 64. By default the Velocity value is set to 100
2. Press the LED button below Fader 2
3. Observe that a new note is created with the same note value as the first step but with Velocity set to 64 rather than 100

Sequence length and Step size:

1. Click play on the Note clip in Bitwig Studio (you can also trigger the clip using Panorama's clip launcher, in Mixer Mode)
2. Observe that the LED buttons below the faders light up one by one to indicate which step is being played. If you created a 1 bar clip, there should be 16 steps in the sequence (as the step sequencer defaults to a step size of 1/16 notes, more about this later) but you can only access 8 steps at a time. To access the other steps you can either press the buttons below the display (labeled 1-8, 9-16, 17-24, and 25-32). You can also quickly access steps 9-16 by holding the Toggle/Mute button.
3. The length of a sequence is always determined by the length of the clip but the maximum length of any sequence is 32 steps.
4. Press the display button labeled 'Step Size' to set the length of notes.

Observe that the labels for the display buttons change, you can now select a step length of 1/4, 1/8, 1/16 or 1/32.

If you select 1/32, all 32 steps will fit in a 1 bar clip. If you select 1/16, you will need a 2 bar clip to fit all 32 steps. 1/8 will require a 4 bar clip. 1/4 will require an 8 bar clip.

Selecting Clips to sequence:

To select a clip for step sequencing, simply click on a Note Clip in the Clip Launcher or the Arranger.

You can also select clips by tapping the pads when Panorama's Clip page is active in Mixer Mode.