ISOTONIK STUDIOS

ARCADE SERIES

POLYPIN

‘PolyPin’ is a **Polyrhythmic Performance Sequencer.** Inspired by Pinball. Up to 8 sequencers run in-sync or independently using specially developed sequencer modes; **Probability** for creating random chance-based beats, **Euclidean** for exotic polyrhythmic patterns or **Classic** for retro 16-step sequencing.

The Arcade Series is a collection of generative sequencers that can be used on their own or integrated with Ableton supported controllers. Designed and created by Ableton Certified Trainer Mark Towers each device takes its inspiration from the hours spent in front of flickering screens down the local Arcade…

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GLOBAL CONTROLS

❶ **Control Surface Active**

When the control surface is selected in the menu, this activator button will become active taking control of the control surface's 8x8 pad grid. Switching tracks or modes in Live will resume usual behavior until returning to the track containing PolyPin. Switching the activate button off will resume usual behavior of the control surface whilst keeping the device running in the background.

❷ **Control Surface Select Menu**

Select the correct control surface from the menu as per the device version (Push1, Push2 etc.) If needed, pressing the button to the right will refresh the menu with all currently connected control surfaces.

❸ **Device Lock**

Activating the device lock will lock the control surface to the device. This means that switching track will not affect the 8x8 pad grid which will still display and control PolyPin. This allows you to have multiple control surfaces being used with multiple Arcade devices.

GLOBAL CONTROLS

❶ **Control Surface Menu**

Select a supported control surface from the menu, use device lock for focused link between device and control surface (see above)

❷ **MIDI Ctrl**

If turned on, a standard MIDI keyboard can control PolyPin, sequencers can then be triggered by incoming MIDI notes that match the note settings for each sequencer. Velocity of incoming notes also effects sequencers if velocity controls are active

❸ **MIDI Thru**

Allows incoming MIDI data to be passed through the device to instruments and effects in Live

❹ **Trigger Snap**

Globally switches all sequencers between ‘Snap’ or ‘Free’ (see sequencer section for more details)

❺ **Trigger Mode**

Globally selects the trigger mode for all sequencers, the options are: All, Whole, Dotted, Triplets (see sequencer section for more details)

❻ **Global Swing**

Press to turn on, will then affect the amount of swing applied to all sequencers. *(See Global Sequencer Controls for more info on Swing)*

❼ **Reset**

Turns all sequencers off. If the ‘Reset’ is blue all sequencers will start from the beginning if Live’s transport is stopped and started. If grey sequencers will resume playback from where they were stopped.

❽ **Global Rate**

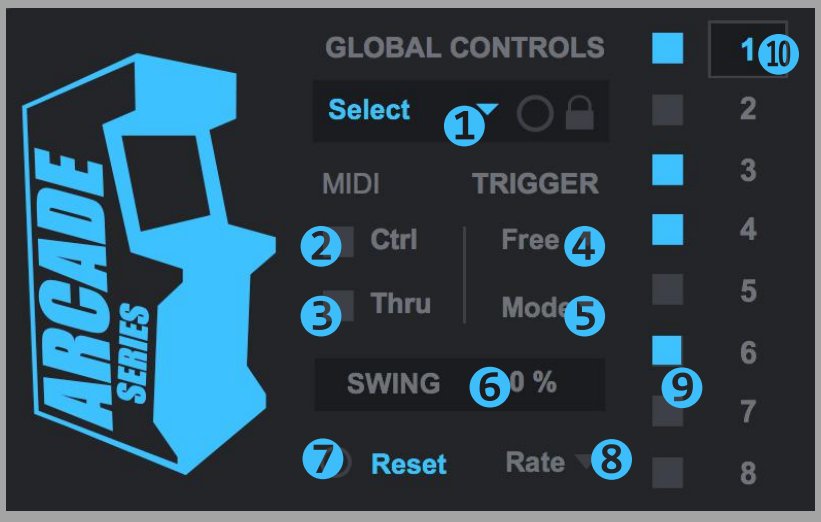
Controls the defaults rate that all sequencers will run at

❾ **Sequencer Activators**

Turn on to arm a sequencer, if playback of Live is stopped the sequencer will start immediately when playback begins, if Live is playing, the sequencer will wait for the next bar until it starts

❿ **Sequencer Select**

Use this tab control to select a sequencer for editing



Probability Sequencer

Create intricate rhythms by setting alternative chance and intervals between 4 clock sources

❶ **Rate**

Determines the interval between successive triggers. The higher the rate, the faster the intervals. Intervals can be tempo-synced note values or milliseconds

❷ **Chance**

Determines the chance of the 4 clock sources triggering compared to each other, only one will trigger at a time

❸ **Velocity**

Sets the velocity for the triggered notes independently for each clock source

❹ **Sync**

Switch between tempo-synced note values or millisecond time intervals

❺ **Presets**

Select from the menu of presets

❻ **Quantize**

Determines whether the clock sources are snapped to a grid or free

❼ **Global Velocity**

Press text to switch between global and single velocity control

❽ **Random**

Randomises the settings for the sequencer

Euclidean Sequencer

Generate exotic poly-rhythms with some simple controls

❶ **Steps**

Determines the number of steps in the sequencer, ranges from 1–32 are available. Choosing a step range does not match other sequencers can result in poly-rhythms

❷ **Hits**

Determines how many triggers will be generated as part of the sequence. Hits are spread out as evenly as possible across the step range

❸ **Rotate**

Once a sequence has been created use this control to rotate forwards or backwards

❹ **Presets**

Select from the menu of presets

❺ **Velocity**

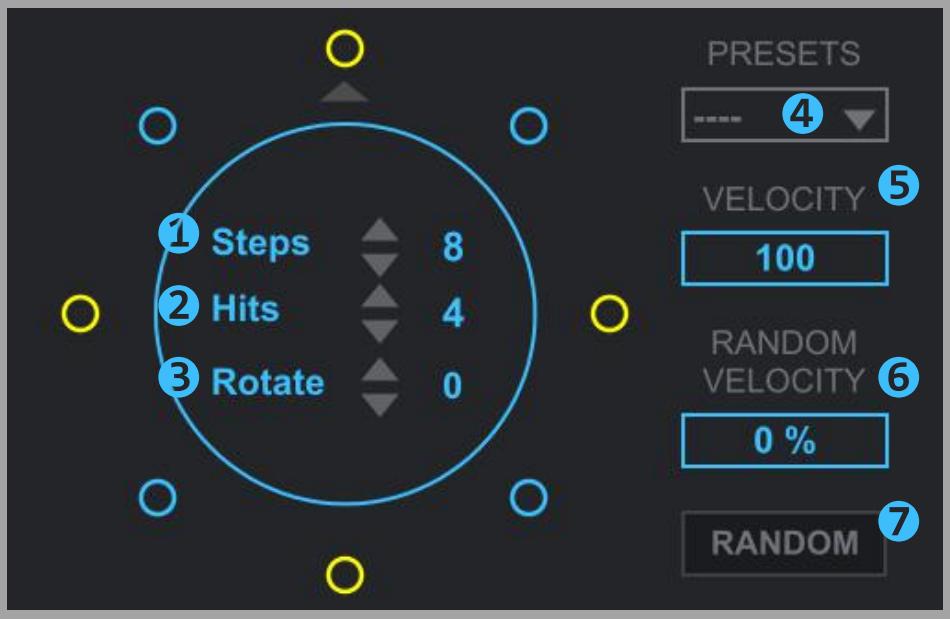
Sets the velocity of all the triggered notes

❻ **Random Velocity**

Introduces a random element to the velocity of the notes

❼ **Random**

Randomises the settings for the sequencer



Classic Sequencer

Classic 16/32 step sequencer

❶ **Mode**

Switch between 16 and 32 steps for the length of the sequencer

❷ **Random**

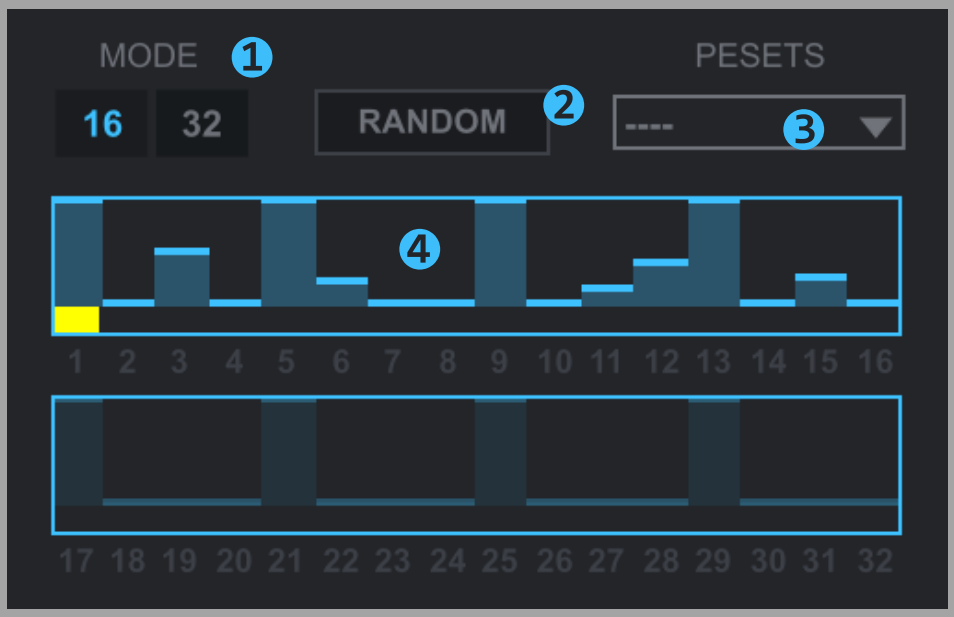
Randomises the settings for the sequencer

❸ **Presets**

Select from the menu of presets

❹ **Sequencer Grid**

Drag sliders up from the bottom to activate the step and trigger a note, the height of the slider also controls velocity



Global Sequencer Settings

❶ **Sequencer Selector**

Each of the eight sequencers can be one of three sequencer types; Probablistic, Euclidean or Classic Step Sequencer.

❷ **Accelerator**

The accelerator is used to speed up or slow down a sequencer, this is a way of adding live variation to your performances. The accelerators are activated by your chosen control surface (Push, Launchpad or Launchpad Pro) when a sequencer is running; pressing one of the upper 7 pads for that sequencer will trigger the accelerator.
When the accelerator is activated, you will notice the ‘Rate’ menu to the right change to a different speed. Rates can be Whole notes, Dotted, or Triplets, switching ‘Velocity’ on will disable the manual selecting of these controls, and the velocity applied to the pads will determine if the accelerator is Whole, Dotted or Triplets.
The ‘Lock’ option if on, makes pressing the pads toggle the accelerator, press once to activate it, press again to deactivate it returning to the default rate set in the menu to the right.
The ‘Snap’ button/menu determines whether the accelerator will wait for the next bar or half bar to change its settings.

❸ **Rate**

Determines the rate that the sequencer will run at. Turning off ‘Lock’ will allow sequencers rate to be determined by how hard the bottom pad is hit when starting a sequencer.
If Lock is turned off, the trigger menu will become active, this allows you to choose whether velocity triggered rates are forced into whole notes, dotted or triplets.
The ‘Snap/Free’ button determines if quantization is applied to the initial start of a sequencer. If Snap is on, sequencers will start at the next note value based on the rate menu above. (in the Global Controls you can also set the trigger quantization to something different like 1 bar for example). If Free is selected no quantization is applied to the start of a sequencer.

Global Sequencer Settings

❹ **Note**

Select the MIDI note to be generated. The are 8 in total, by default notes begin at C1 and move up, this will trigger the first 8 cells of a standard drum rack.

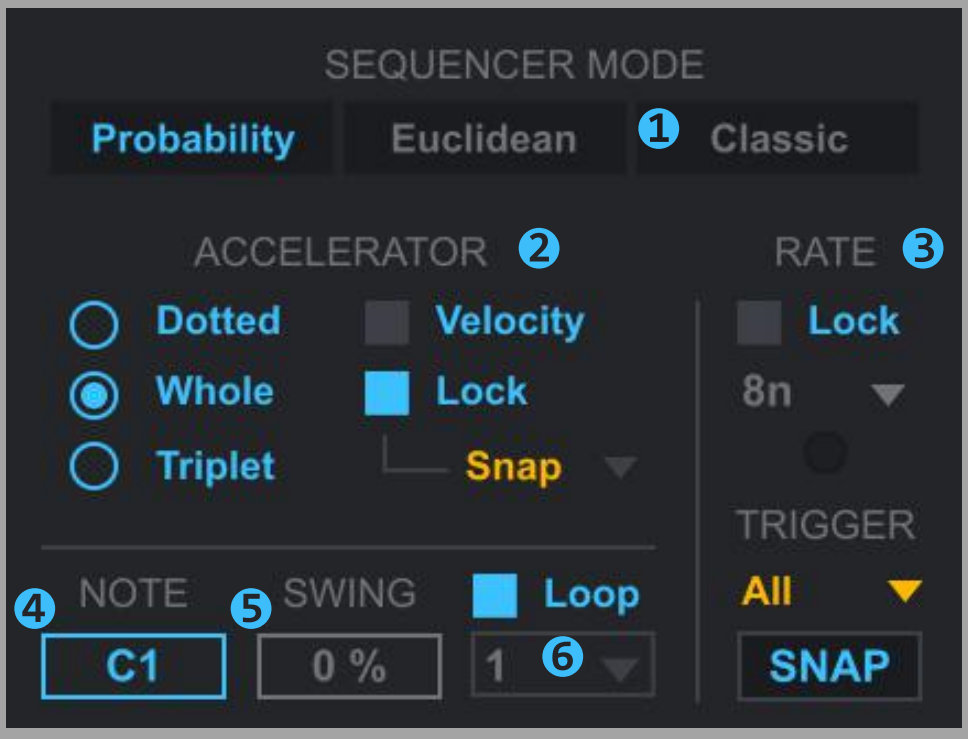
❺ **Swing**

Controls the amount of swing applied to a sequencer. If increased it will offset notes to create the swing effect.

Because it is possible for all 8 sequencer engines of PolyPin to run at different rates, global swing should be used with caution, ideally when all sequencers are running at the same rate i.e. 8n, 16n etc.

❻ **Loop**

When turned on will keep sequencers looping over after starting. If turned off, sequencers will play either 1 bar or ½ bar depending on the menu setting, and then stop. This allows the sequencer to be played in a Pinball style, as you will need to keep retriggering sequencers before they get to the bottom of the pads. You may want to try having some sequencers looped and a couple not looped.



Push 1 Controls

Make sure to load the ‘PolyPin(Push1).amxd’. This version has been specially modified to work with Ableton Push for complete hands on control. Once you have selected ‘Push’ from the control surface menu, you should see a green light next to the menu, if you see a red light, it means the incorrect control surface has been selected for this version of PolyPin

❶ **8x8 Pads**

Use the pads to trigger pinball sequencers. The very bottom pad will start a sequencer and retrigger it during playback, retriggering is quantized to the currently selected rate of the sequencer. If the rates ‘Lock’ button is turned off, the speed at which the sequencer runs is determined by how hard you hit the bottom pad.
Use the remaining 7 pads above to activate and deactivate the sequencer accelerators. Again velocity can be selected on the accelerator settings which means the type of accelerator (Whole, Dotted or Triplets) will be determined by how hard you hit the pad.

❷ **Sequencer Arm Buttons**

Use the top row of buttons to deactivate any active sequencers. Pressing any of these buttons when a sequencer is not running will arm that sequencer and it will begin playback on the next bar.

❸ **Shift**

Holding **Shift** will toggle the top row of arm buttons so that they control the loop state of a sequencer.

❹ **Select**

Holding **Select** will toggle the top row of arm buttons so that they control the accelerator lock state of a sequencer.

❺ **Device Controls**

Additional controls can be accessed via the 8 encoders and display screen on Push. Select the PolyPin device on Push, then press the ‘In’ button to see the 2 banks of controls:

Bank 1 – Rate control for each PolyPin sequencer
Bank 2 – MIDI note for each PolyPin Sequencer

Push Controls

Switching between tracks and between session mode and note mode work as normal when using Push to control PolyPin

Push 2 Controls

Make sure to load the ‘PolyPin(Push2).amxd’. This version has been specially modified to work with Ableton Push 2 for complete hands on control. Once you have selected ‘Push2’ from the control surface menu, you should see a green light next to the menu, if you see a red light, it means the incorrect control surface has been selected for this version of PolyPin

❶ **8x8 Pads**

Use the pads to trigger pinball sequencers. The very bottom pad will start a sequencer and retrigger it during playback, retriggering is quantized to the currently selected rate of the sequencer. If the rates ‘Lock’ button is turned off, the speed at which the sequencer runs is determined by how hard you hit the bottom pad.
Use the remaining 7 pads above to activate and deactivate the sequencer accelerators. Again velocity can be selected on the accelerator settings which means the type of accelerator (Whole, Dotted or Triplets) will be determined by how hard you hit the pad.

❷ **Sequencer Arm Buttons**

Use either the top row of track state buttons or the side column of scene launch buttons to deactivate any active sequencers. Pressing any of these buttons when a sequencer is not running will arm that sequencer and it will begin playback on the next bar.

❸ **Layout**

Use the layout button to switch between top row or side row arm/de-activation buttons

❹ **Shift**

Holding **Shift** will toggle the top/side row of arm buttons so that they control the loop state of a sequencer.

❺ **Select**

Holding **Select** will toggle the top/side row of arm buttons so that they control the accelerator lock state of a sequencer.

❻ **Device Controls**

Additional controls can be accessed via the 8 encoders and display screen on Push. Select the PolyPin device on Push, then press the ‘In’ button to see the 2 banks of controls:

Bank 1 – Rate control for each PolyPin sequencer
Bank 2 – MIDI note for each PolyPin Sequencer

Push 2 Controls

Switching between tracks and between session mode and note mode work as normal when using Push 2 to control PolyPin

Launchpad Mk1 Controls

Make sure to load the ‘PolyPin(Launchpad_Mk1).amxd’. This version has been specially modified to work with Novation Launchpad for complete hands on control. Once you have selected ‘Launchpad from the control surface menu, you should see a green light next to the menu, if you see a red light, it means the incorrect control surface has been selected for this version of PolyPin. To use the Launchpad select ‘User 2’ mode

❶ **8x8 Pads**

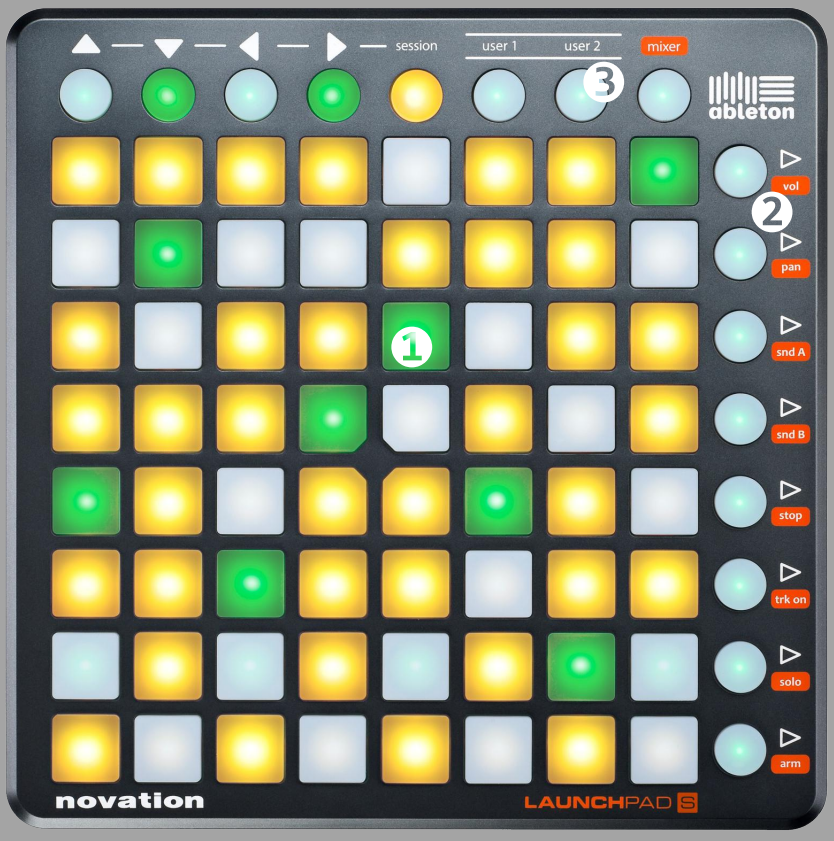
Use the pads to trigger pinball sequencers. The very bottom pad will start a sequencer and retrigger it during playback, retriggering is quantized to the currently selected rate of the sequencer.
Use the remaining 7 pads above to activate and deactivate the sequencer accelerators.

❷ **Sequencer Arm Buttons**

Use the side row of scene launch buttons to deactivate any active sequencers. Pressing any of these buttons when a sequencer is not running will arm that sequencer and it will begin playback on the next bar.

❸ **User 2 Button (held down)**

Holding **User 2** will toggle the side row of arm buttons so that they control the loop state of a sequencer.



Launchpad Pro Controls

Make sure to load the ‘PolyPin(Launchpad_Pro).amxd’. This version has been specially modified to work with Novation Launchpad Pro for complete hands on control. Once you have selected ‘Launchpad Pro’ from the control surface menu, you should see a green light next to the menu, if you see a red light, it means the incorrect control surface has been selected for this version of PolyPin. To use the Launchpad select ‘User’ mode, the User button should turn orange when the device is in use. The bottom row of Mixer Buttons function as normal

❶ **8x8 Pads**

Use the pads to trigger pinball sequencers. The very bottom pad will start a sequencer and retrigger it during playback, retriggering is quantized to the currently selected rate of the sequencer. If the rates ‘Lock’ button is turned off, the speed at which the sequencer runs is determined by how hard you hit the bottom pad.
Use the remaining 7 pads above to activate and deactivate the sequencer accelerators. Again velocity can be selected on the accelerator settings which means the type of accelerator (Whole, Dotted or Triplets) will be determined by how hard you hit the pad.

❷ **Sequencer Arm Buttons**

Use the side column of scene launch buttons to deactivate any active sequencers. Pressing any of these buttons when a sequencer is not running will arm that sequencer and it will begin playback on the next bar.

❸ **Shift Button (held down)**

Holding **Shift** will toggle the side row of arm buttons so that they control the loop state of a sequencer

❹ **Click Button (held down)**

Holding **click** will toggle the side row of arm buttons so that they control the accelerator lock state of a sequencer.

Launchpad Pro Controls

Switching between tracks and between different modes work as normal when using Launchpad Pro to control PolyPin

Launchpad Mk2 Controls

Make sure to load the ‘PolyPin(Launchpad_Mk2).amxd’. This version has been specially modified to work with Novation Launchpad for complete hands on control. Once you have selected ‘Launchpad MK2’ from the control surface menu, you should see a green light next to the menu, if you see a red light, it means the incorrect control surface has been selected for this version of PolyPin. To use the Launchpad select ‘User 2’ mode, the User button should turn orange when the device is in use.

❶ 8x8 Pads

Use the pads to trigger pinball sequencers. The very bottom pad will start a sequencer and retrigger it during playback, retriggering is quantized to the currently selected rate of the sequencer.
Use the remaining 7 pads above to activate and deactivate the sequencer accelerators.

❷ Sequencer Arm Buttons

Use the side row of scene launch buttons to deactivate any active sequencers. Pressing any of these buttons when a sequencer is not running will arm that sequencer and it will begin playback on the next bar.

❸ User 2 Button (held down)

Holding **User 2** will toggle the side row of arm buttons so that they control the loop state of a sequencer.