

Repeat Pro by NOISS COKO

DESCRIPTION

Repeat is a Max for Live MIDI effect, designed to easily program rhythmic and melodic patterns step by step, then played by synthesizers, samplers and other instruments, both inside and outside Live. The whole device is exclusively driven by a sixteen step sequencer, which among other parameters allows to set a different note, velocity, length, octave, control and delay amount for every single step.



Part of Repeat's magic resides on the uncertainty factor that surrounds its behavior and defines the state of its most important parameters. These random functions make it very easy to create melodic lines and patterns with only the need of a few simple operations.

An extra set of parameters reflect other global aspects of this device and help to shape each pattern even further. These control the sequence length, speed and direction, and the specific scale that gets ultimately played.

MANAGER WINDOW

This window is presented as soon as Repeat is loaded into a MIDI track. All its different sections can be accessed from here, allowing to adjust any parameter, change the way in which the sequencer behaves or even save and recall up to 64 presets.

Sequence

Opens the Effect Window, the main section that displays all device most important parameters and functions. By default this window will either be automatically opened every time the effect gets selected from Live's Device View or closed if any other device or track is chosen instead. It is possible to avoid this action by simply changing the Settings setup (take me to the [Settings Window](#) section of this manual).

Push

If Push2 is properly connected and already selected from Live's MIDI Preferences, this toggle will enable its use as a control surface for the sequencer (take me to the [Control Surface](#) section of this manual).

Settings

Opens the Settings Window. Various options and configurations can be edited from this menu in order to change how certain parameters behave.





Output

One side of this panel displays a set of toggles that, according to a specific group of data, offer individual control over the stream of MIDI input and output information. Also Program Change and Pitch Bend messages are sent from this section.

MIDI Thru

Outputs all incoming MIDI signals from previous devices and effects. No message will pass through Repeat while MIDI Thru remains off.

MIDI Notes

Outputs all MIDI notes produced by Repeat. If the toggle is turned off, the device will then filter out all note messages.

Ctrl Change

Besides modulating parameters inside Live, patterns defined by Control dials could also be sent as CC messages. Most of the time these messages are received by external instruments and then used to remotely control some of their functions. However, they could also be applied over other software parameters, both inside and outside Live. This toggle allows to either send or filter out all Control Change messages created by the effect.

Every MIDI Control Change message integrates two different kind of values, which help to identify a specific parameter that wants to be changed (CC Number) and what's the value that this parameter must adopt once the message is received (CC Value). By default the CC Number is 20, but it can be changed at any time from the Settings Window.

Map Values

This toggle lets Control values affect the previously assigned parameter. The [Map button](#) is used to target and then modulate a specific parameter inside Live. When it's off, the control pattern won't have any effect over the specified selection.

Program Change

MIDI Program Change messages are sent to external instruments and used to remotely navigate between all previously stored presets inside the receiving device.

Pitch Bend

Sends MIDI Pitch Bend messages to external synthesizers and other devices. By default most instruments assign pitch modulation to this type of message, but the range and real effect this has is ultimately specified inside each instrument configuration.

Presets

This panel allows to save and recall presets within Repeat. For **saving a new preset**, hold down the Shift key and then left-click over any of the 64 available slots. If a slot where a preset is stored gets selected, it will then be overwritten and replaced with the new one. To **recall a saved preset** just left-click over any of the currently active slots (coloured in soft yellow). The **Clear** button will erase all previously stored presets and return the panel to its default state.

Notice that both actions can also be executed from Push2, by means of the Layout and Shift buttons ([show me how](#)).



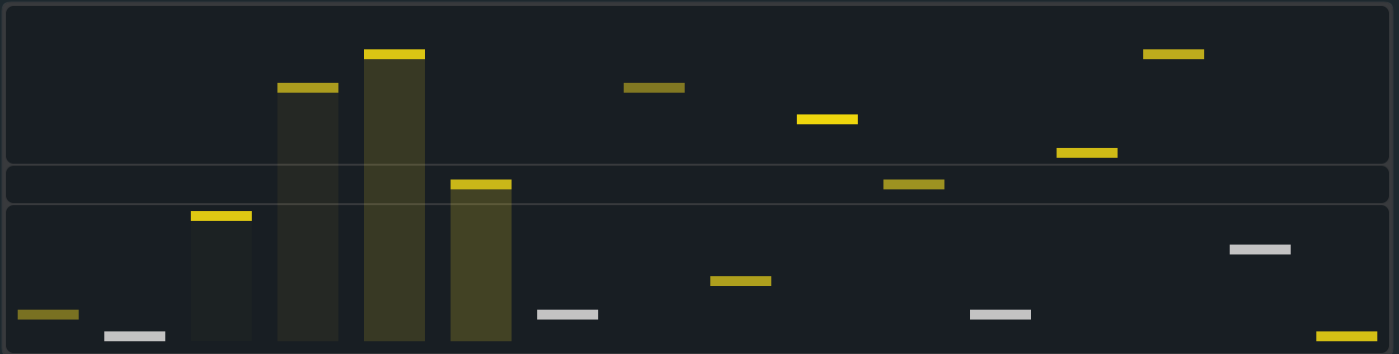
It is very important to consider that in Ableton Live almost every single parameter variation is saved in the history. Therefore, every time a new preset is recalled, all changes involved will be stored in the Undo/Redo History. Please use this feature being aware of this behavior!

EFFECT WINDOW

NOTE DISPLAY

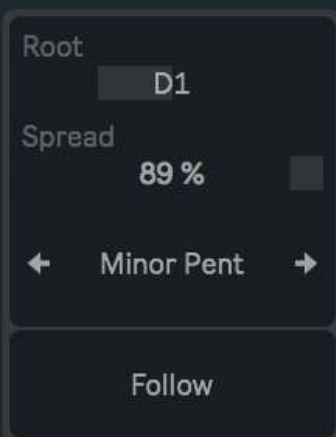
Multislider

Within a range of ± 12 st away from the central note, these individual sliders define a specific pitch for every note inside the sequence. Velocity values are also here represented by differences between soft and strong yellow. Notes get grey when those steps are disabled by switching off the Skip buttons.



Root

Basically defines the central or fundamental note of the scale. Changing the root number will simultaneously transpose all notes, though keeping the same interval relation between them.



Spread

Allows to either compress all notes around the center of the panel, or to spread them away from the root note. Its minimum value will then focus the sliders towards the center, while at 100% the multislider will make use of its full range.

Scale

According to the intervals defined by the multislider display, Scale sets a unique amount and arrange of notes that represent each alternative in its own structure. Chromatic, Major, Dorian, Phrygian, Lydian, Mixolydian, Minor, Locrian, Minor Pent w/9, Minor Pent, Major Pent, Whole Tone, Half-whole Dim, Whole-half Dim scales are available.

Follow

Enables the keyboard tracking function, allowing the root note to be adjusted by incoming MIDI notes. Also while it's on, the Start-Stop button is momentarily disabled and only gets activated when a Note On message is received. When notes are being edited using the

multislider or Push, their names will be as well displayed on this little panel. Different behaviors can be adjusted from the Settings menu.

PLAYBACK

Play-Stop

While this toggle is on the sequence initiates as soon as Live's global transport starts playing. However, the counter will still be running according to Live's transport and (depending on the Settings Window configuration) will only be restarted if the latter is stopped. By default the Play-Stop toggle is on, therefore the sequencer will start or stop according to the global transport state.

Reset

This button resets the counter and restarts the sequence from its first active step. Depending on the current Settings configuration, the counter will either be reset on the next step or only in sync with the first beat of the next bar. This button has no effect while the Playback Mode is set to Other or Any.

Playback Mode

Five different playback modes are available:

- **Right:** The sequence will be played forward.
- **Left:** The sequence will be played backwards.
- **Pong:** The sequence will be played back and forth. If the “Repeat when changes” toggle found on the Settings Window is active, the first and last steps will be repeated every time the direction changes.
- **Other:** All enabled steps, excluding the current one, could be randomly selected next. Therefore, this mode doesn’t allow consecutive repetitions.
- **Any:** All enabled steps, including the current one, could be randomly selected next. This particular mode offers an extra parameter (the number box located under the tab), used to restrict the number of steps that could next be chosen. If the value is set to 100%, Any will function as a normal random playback mode, where any active step could be selected next, whereas if it is set to 0%, random selections will only occur within a maximum range of ± 2 steps far from the sequence current position. All other values will increase or decrease this range, allowing bigger or smaller leaps between steps.



Rate Mode

This button switches between the three different unit styles that are available for the Rate Dial, which controls the sequence running speed.

- **Sync:** rate values are displayed as beat divisions, representing a specific fraction of Live’s global tempo.
- **Free:** rate values are displayed as integer numbers, expressing the frequency (beats per minute) at which the sequencer runs. Here the playback speed remains independent from Live’s global tempo.
- **Track:** it only allows individual steps to be triggered by incoming MIDI Note On messages. Naturally, the Play-Stop toggle will be disabled while this mode is active.



Map

Besides controlling external devices, Repeat allows to map and modulate any parameter inside Live. In order to perform a new selection, click over Map, and while the button is blinking, select the parameter that wants to be controlled by Repeat. When this action is done, the button will show the name of the recent selection.

To undo this action click over Map once again and wait five seconds. After this time the previous parameter will be cleared and the Map button default state restored. The current parameter will also be displaced and released every time a new one is assigned.

DIAL PANEL

Repeat allows to make adjustments over a selected group of parameters, in order to set specific velocity, length, octave, control and delay values for each individual step. This section manages which group of dials and buttons is displayed on the effect middle section.



Mute-Skip

This toggle switches between both groups of buttons:

- **Mute** buttons mute or unmute individual steps. If it is muted, that step is still enabled but no values assigned to it will be triggered.
- **Skip** buttons enable or disable individual steps. If it is disabled, that step is no longer part of the sequence, thus will be ignored. This function could also be used to establish the first and last step of the sequence.



Random

Depending on the last parameter that was selected, either from the Multislider Display, the Dial View tab or the Mute-Skip toggle, all Note, Velocity, Length, Octave, Control, Delay, Mute and Skip values could be randomised using this single button. For instance, if Velocity gets selected only its values will be affected when Random is triggered, while the rest remain unchanged.

It is very important to consider that in Ableton Live almost every single parameter variation is saved in the history. Therefore, every time Random is used, all changes involved will be stored in the Undo/Redo History. Please use this feature being aware of this behavior!

Dial View

As each parameter gets selected from this tab, a group of dials related to it will be displayed in the middle. Here is a brief description of the five different parameters that could be adjusted step by step:

- **Velocity** values assigned for each individual step. By default most instruments dedicate these numbers to control dynamics and specify variations in volume.



- **Length** defines a note duration for every step. These are specified using beat divisions or fractions, which result in time units directly correlated with Live's grid.



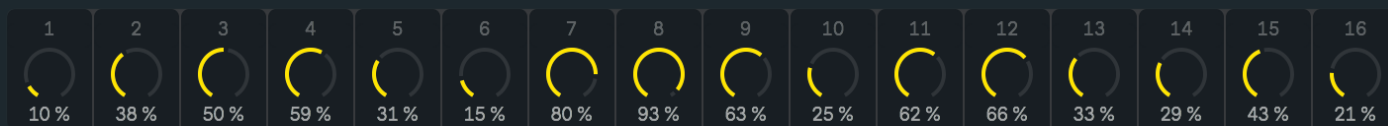
- **Octave** dials transpose individual steps within a range of ± 24 st, only being possible to create octave leaps between the lowest and the highest value.



- **Control** values can be used to map and modulate parameters inside Live, but also others from external devices by sending MIDI Control Change messages. By default the CC Number is 20, but it can be changed at any time from the Settings Window.



- **Delay** reflects how much time (expressed in a range from 0% to 100%) the articulation of each individual step gets deferred. The space between a step being triggered and the moment where it is actually articulated will always be the same in terms of beat divisions, regardless any change in Live's global tempo. As a general reference, while the **Delay Amount** modifier is set to 100%, a value of 25% will delay the articulation by a 16th note, 50% by an 8th note, 100% by a 4th note.



Range - Offset - Smooth - Amount

As well as the rest of the dials, these **modifiers** are independent for every single parameter and will only be displayed according to the current Dial View tab selection. Even if each one of them works slightly different, they all have a global effect over the parameters individual configuration, allowing to increase or decrease their values and the difference between dials.

- Negative **Range** numbers will shrink all **Length** values towards the minimum range, changing all notes duration while keeping some relative difference between them. Positive values will do exactly the opposite, leaning all lengths towards their maximum duration.
- Within a range of ± 12 st, **Offset** transposes all **Octave** dials according to their current position, thus keeping the original difference between individual steps. Only octave leaps can be defined for this modifier.
- Every time a new **Control** value is triggered, **Smooth** sets a transition between this number and the previous one. How long the transition takes is determined by this parameter.
- **Amount** works similar to Range, but here defining in what proportion every step value is applied over the **Velocity** and **Delay** dials. The differences between steps will become more and more effective as the amount starts getting near 100%. On the contrary, no Velocity or Delay fluctuations will be applied if this percentage equals 0%, regardless of their own position or configuration.

Link

While this function is on, all dials within a specific parameter are linked to its first active step. The rest still remain independent from each other and only will be affected when the blinking dial changes. Link works separately for Velocity, Length, Octave, Control and Delay. Notice that every time the Random button is triggered or a new preset is chosen, all Link toggles get instantly deactivated.

RANDOM PANEL

This section features a group of parameters dedicated to individually randomise various aspects of the current sequence. For Notes, Velocity and Octave amounts, these numbers also work similar to Spread, defining a specific range between the original value and the others that might replace it. At its maximum, random selections will cover each parameter whole range, while these will get near the original position as the amount decreases.

Chance

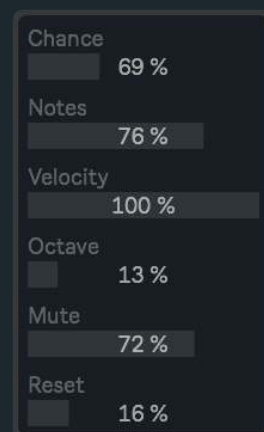
This amount determines the odds for each step to be triggered or not. Therefore, if Chance is set to 100%, active steps will always be triggered, while if it is set to 50%, steps could only be triggered half of the time. Any other alternative between a range of 0% and 100% is possible and will produce more or less unpredictable variations within the sequence.

Notes

Defines a probability between a note playing its original pitch and another one being output instead.

Velocity

Sets more or less random variations between each step original velocity value and the one that might replace it.



Octave

Randomly transposes each original note pitch, but only jumping between octaves.

Mute

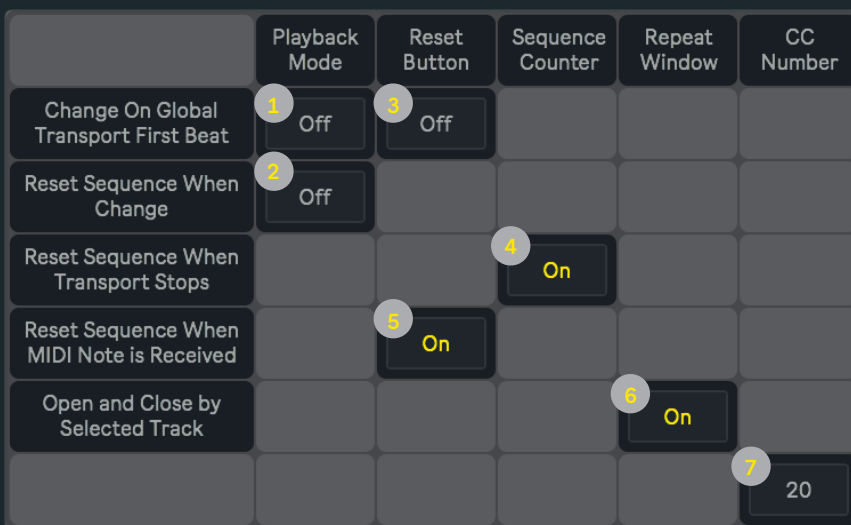
Depending on this amount, notes, together with all the other values attached to them, will get randomly muted or unmuted. Before making a decision, this function will take each step current state into account, then defining the odds for the next step to be different from the current one.

Reset

Assigns a random trigger probability for the Reset button, specifying how frequently the sequence will be restarted and played again from its first active step.

SETTINGS WINDOW

The Settings Window offers a few extra configurations only for a specific group of parameters. These determine their behavior and display while the instrument is active and playing.



(1) Depending on this setup, all changes on the Playback Mode tab could either have an immediate effect over the sequence or be delayed until the first beat of the next bar.

(2) Turn on this toggle in order to automatically reset the sequence counter every time a new Playback Mode is selected from the tab. This also **defines two different behaviors for the Pong mode**, where depending on the current configuration the first and last active steps of the sequence will be repeated or not every time the direction changes.

(3) Same as explained in point one, but in this case applied to the Reset button.

(4) While this function is active the sequence counter will be restarted after Live's global transport is stopped. Otherwise, the counter will always resume its previous location.

(5) Only while the Follow Mode is active, turn on this toggle to automatically reset the sequence every time a MIDI Note is received. This option will be momentarily disabled if the Rate Mode is set to Track.

(6) If this option is active, the Instrument Window will either be automatically opened every time the device gets selected from Live's Device View or closed when any other device or track is chosen instead.


(7) This value assigns a unique and exclusive Control Change Number to the message. It does not determine the parameter modulation, but it will be used to associate a specific Control Change message with the external parameter that wants to be modulated. With this control number, the receiver knows that this and no other parameter has to be changed.

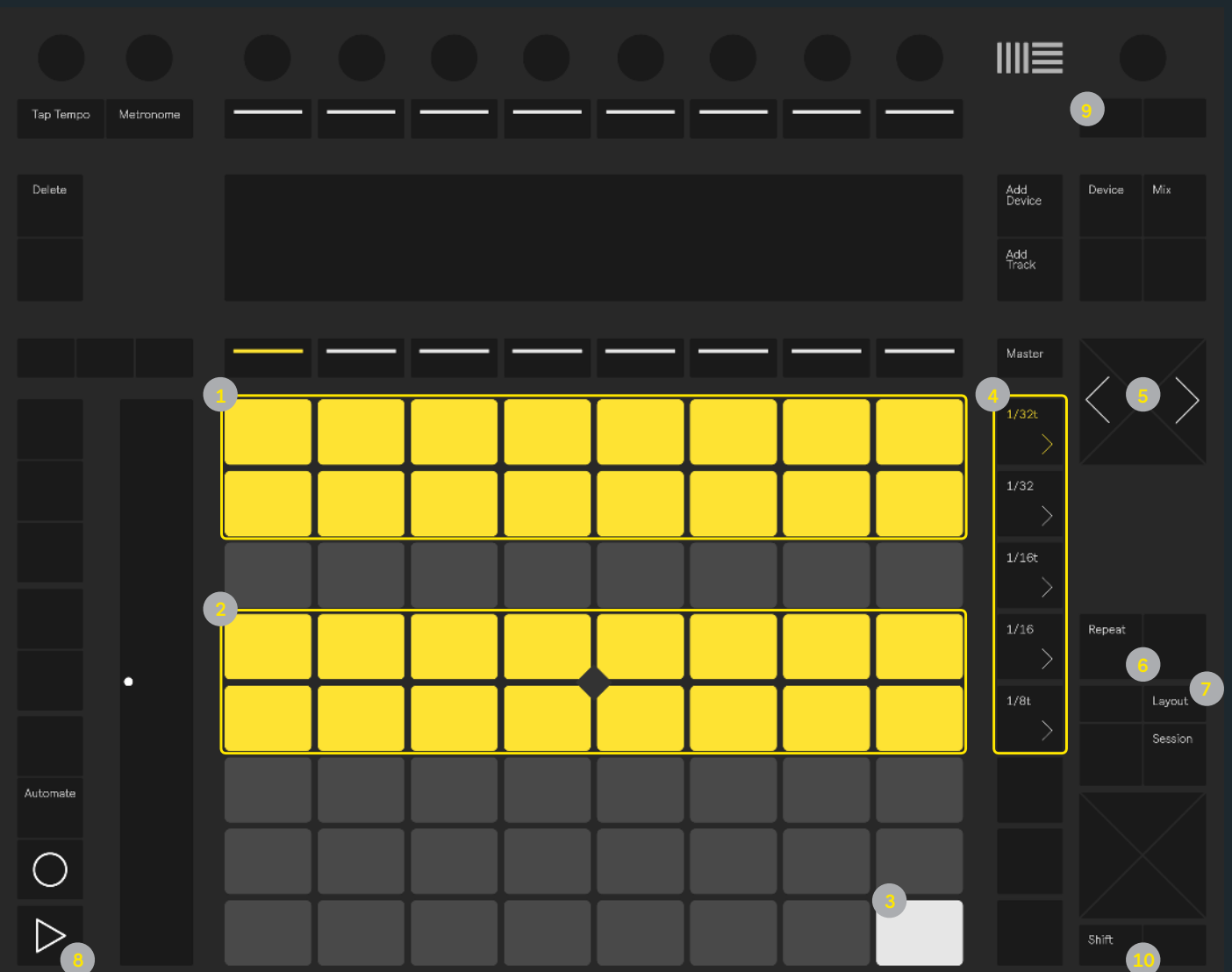
CONTROL SURFACE - PUSH 2

First of all, Push2 must be selected as a control surface, otherwise it will not be recognised by the instrument. Go to Live's preferences and be sure that Push2 is included on the MIDI section. Notice that for the moment **only Push2 is supported** as a control surface!

MIDI

	Control Surface	Input	Output	
1	Push2	Ableton Push 2 (L	Ableton Push 2 (L	Dump
2	None	None	None	Dump
3	None	None	None	Dump
4	None	None	None	Dump
5	None	None	None	Dump
6	None	None	None	Dump

After the previous step is completed, activate the **Push** toggle located on the Manager Window in order to use Push2 as a control surface for the sequencer. If other devices such as MIDI or audio effects are loaded into the same track, Push2 will immediately display the parameters and functions of the one that gets selected. This can be noticed by the symbol  located next to each device name. Finally, if the Note view is currently selected, the control surface should look like this:



Matrix

- (1) Rows 1 and 2 are used to turn **Mute** buttons on and off.
- (2) Rows 4 and 5 are used to turn **Skip** buttons on and off.
- (3) This button triggers the **Reset** function.

All 64 buttons can also be used to save and recall presets, but only while the Layout button is pressed (See the Layout description).

Scene Launch

- (4) By default the only five available buttons are used to control the **Playback Mode** tab, but while Shift is being pressed, these will display and switch between the different parameters that integrate the **Dial View** tab.

Arrow

- (5) These left and right arrow buttons help to navigate between different scales.

Repeat

- (6) Triggers the **Random** button. Notice that, as it was already explained before, the same function is used to randomise different parameters (Note, Velocity, Length, Octave, Control, Delay, Mute and Skip), but only one of them at a time. In this case, Shift can also be used to select the Mute or Skip parameters by pressing any of their buttons (while holding Shift) without changing their current state.

Layout

- (7) While this button is being pressed, instead of its default view, the matrix will display the **Preset** panel current state. Any of the 64 buttons within the matrix could then be used either to **store a new preset** (press and hold Layout together with Shift, then select any button inside the matrix) or **recall a previously saved one** (press and hold Layout, then simply select any button that already has a saved preset).

Play

- (8) Turns the **Play-Stop** toggle on and off. While Layout is being pressed, its original function is momentarily restored and therefore used to control Live's transport. Only if Track is selected as a Rate Mode, the Play button can also be used (like any other MIDI note on message) as a trigger to go from one step of the sequence to the next one.

While Push2 is used as a control surface for Repeat, many of its buttons will be disabled in order to offer a more clear view of the functions that do have an effect over the instrument. Those buttons that are not described above but still remain active are simply used for its own original purpose. For instance, the Session and Note buttons could be used at any moment to switch between the effect and Live's Session views.

Setup

- (9) Only while Shift is also being pressed, Setup could be used to target the Multislider Display, so its values can be randomly distributed every time the Repeat button is triggered.

Shift

- (10) Since this button only works in combination with others, all its related functions were already explained on the Scene Launch, Repeat, Layout and Setup descriptions.

CREDITS

ABOUT DEVICES

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