

# StepPolyArp

Step Polyphonic Arpeggiator/Sequencer  
App and AUv3 MIDI effect for iPhone/iPad/Mac



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# Presentation

"StepPolyArp" is a real-time polyphonic and polyrhythmic MIDI step arpeggiator and step sequencer. It can be used as a standalone application or an AUv3 MIDI effect plug-in.

The application and the plug-in can operate as a step arpeggiator by automatically generating melodic patterns from played notes or chords, or as a step sequencer that doesn't require MIDI input to play.

Unlimited presets can be saved on a local device and synchronized to iCloud. Each preset contains 16 patterns, 5 customizable polyrhythmic step controllers, and a 32 steps event matrix with 11 polyphonic and polyrhythmic lines driving the arpeggiator engine.

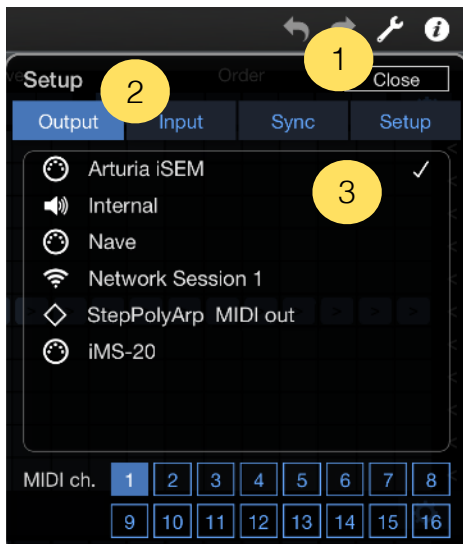
The application supports full internal and external MIDI connections for input and output, Ableton Link sync, and MIDI clock source sync. An internal sound bank is included.

The AUv3 MIDI effect plug-in supports multiple instances. A compatible host is required to run the plug-in. The host needs to support the Audio Unit v3 (AUv3) MIDI effect format.

# Application setup

## MIDI connections between iOS or macOS apps

"StepPolyArp" can send and receive MIDI from other applications installed on the same device. If an application is "Core MIDI" compatible, it will appear in the MIDI browser of "StepPolyArp", and you will be able to send and receive MIDI from it.



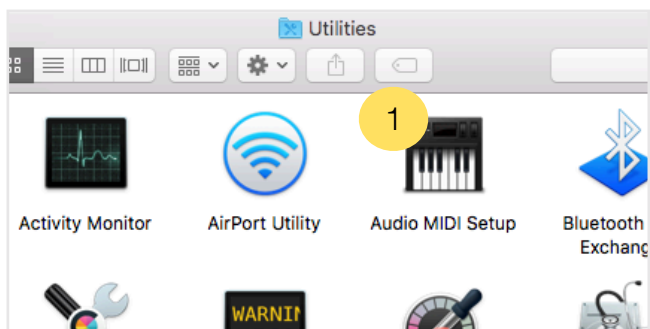
1. *Touch the setup button on the top right screen of "StepPolyArp".*
2. *Select the "Output", "Input" or "Sync" section.*
3. *Select the application you want to send or receive MIDI from.*

If the application you want to send MIDI doesn't appear in the "Output" browser, you can try to use the "StepPolyArp MIDI out" port, this is a specific virtual port created to send MIDI to any application that doesn't declare its own MIDI input port.

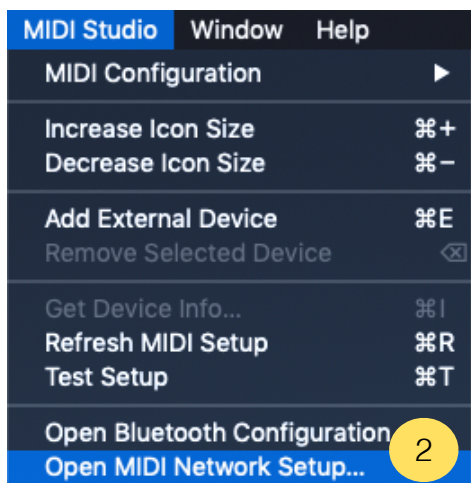
On iPhone or iPad, some applications are stopping to run when they are switched in background, then, they will not respond while "StepPolyArp" is in foreground. Most applications have an option to activate an "Audio Background " mode that will let them running, even if they are going in background. Please check the manual of your other applications to know if they support "Audio Background" mode and how to activate it.

## MIDI over WiFi to connect an iPhone or an iPad to a Mac

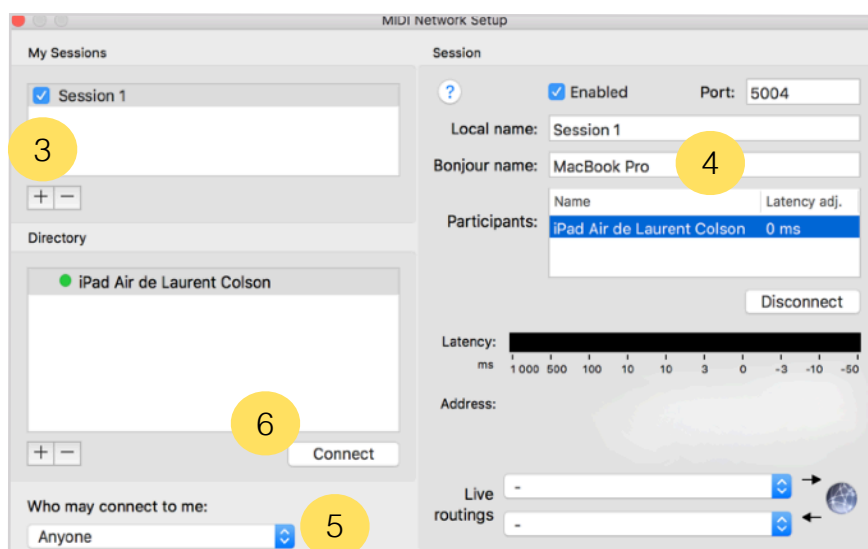
MIDI can be sent or received natively over a WiFi network between an iPad or an iPhone on a Mac. You can drive any DAW, virtual instrument or hardware gear hosted on the computer or receive MIDI from them.



1. On the Mac, go to the "Applications" folder, then "Utilities" folder and open the application "Audio MIDI Setup".



2. Select the item "Open MIDI Network Setup" from the menu "MIDI Studio".



3. Create a new session by clicking on "+" under "My Sessions".

4. Enter a "Bonjour name".

5. Under "Who may connect to me", select "Anyone".

6. Select the iPad or iPhone you want to connect, and click "Connect". If your device doesn't appear, be sure that "StepPolyArp" is launched, and the device is connected to the same WiFi network as the computer.

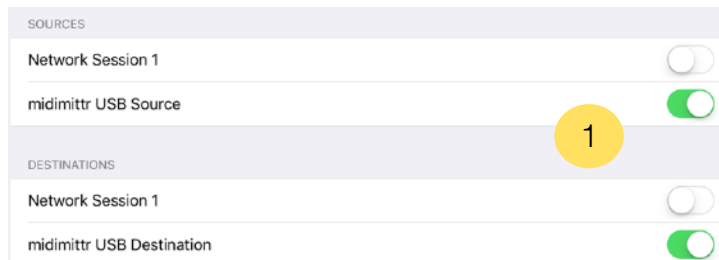


7. On "StepPolyArp", touch the setup button on the top right screen.
8. Select the "Output", "Input" or "Sync" section.
9. Select "Network Session 1" to send or receive MIDI through the MIDI over WiFi network.

If your iPhone or iPad is connected with the USB cable to a Mac, the MIDI over WiFi will use the wire connection cable to transmit MIDI directly to the computer instead of the wireless network. As soon as the MIDI cable is disconnected, the wireless connection is used again.

## MIDI over USB with midimitttr to connect an iPhone or an iPad to a Mac or Windows computer

MIDI can be sent or received through the USB cable to a computer running macOS or Windows. You can drive any DAW, virtual instrument or hardware gear hosted on the computer or receive MIDI from them.



1. Download "midimitttr" from the App Store on your device, launch it and select "midimitttr USB source" and "midimitttr USB destination" on the setup panel.



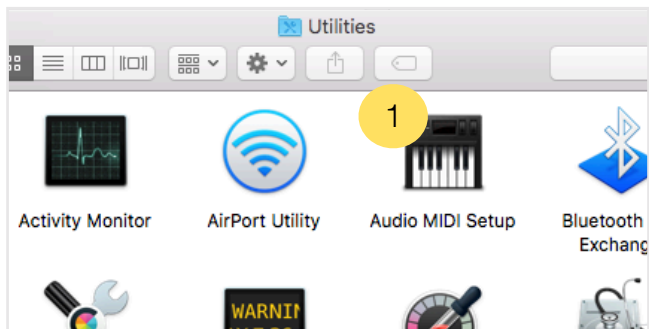
2. Download "midimitttr" for macOS or Windows on your computer from the website <http://www.s-r-n.de/midile/> and launch it on your computer.



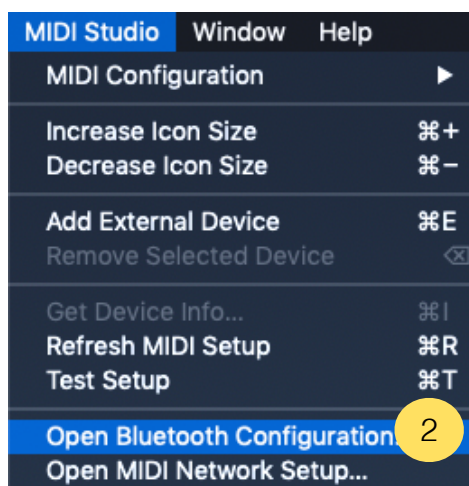
3. Touch the setup button on the top right screen of "StepPolyArp".
4. Select the "Output", "Input" or "Sync" section.
5. Select "midimitttr source" or "midimitttr destination" to send or receive MIDI through the USB cable.

## MIDI over Bluetooth to connect an iPhone or an iPad to a Mac

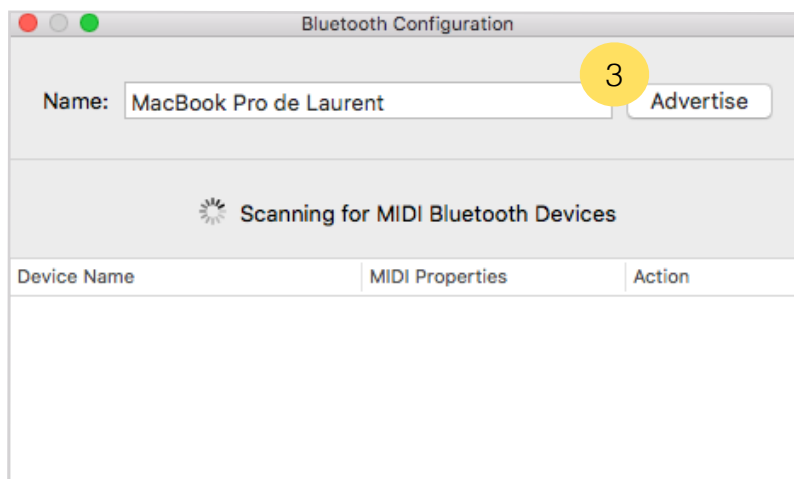
Like MIDI over WiFi, MIDI can be sent or received natively over a Bluetooth connection on macOS. You can drive any DAW, virtual instrument or hardware gear hosted on the computer or receive MIDI from them.



1. On the Mac, go to the "Applications" folder, then "Utilities" folder and open the application "Audio MIDI Setup".



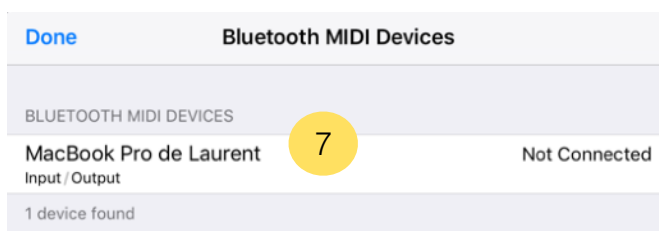
2. Select the item "Open Bluetooth Configuration" from the menu "MIDI Studio".



3. On the "Bluetooth Configuration" window, click on "Advertise".



4. On "StepPolyArp", touch the setup button on the top right screen.
5. Select the "Setup" section.
6. Click on the "Host" button.



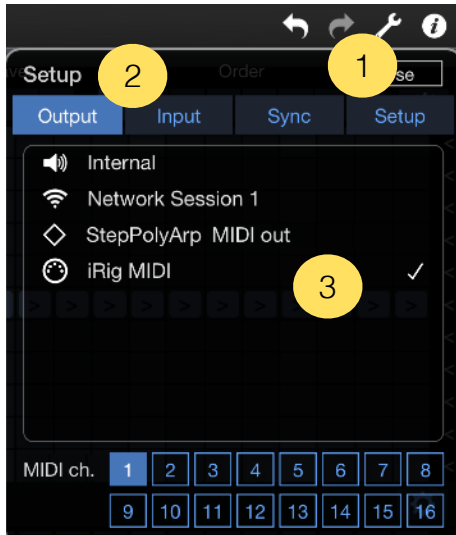
7. Select the MIDI device you want to join in the list to connect it.



8. Select the "Output", "Input" or "Sync" section.
9. Select the Bluetooth MIDI port to send or receive MIDI over the Bluetooth connection.

## MIDI to hardware setup

You can directly connect MIDI hardware to the iPhone, iPad or Mac by using a compatible MIDI interface. Once connected, the interface will be automatically recognized.



1. On "StepPolyArp", touch the setup button on the top right screen.
2. Select the "Output", "Input" or "Sync" section.
3. Select the MIDI interface port to send or receive MIDI through it.

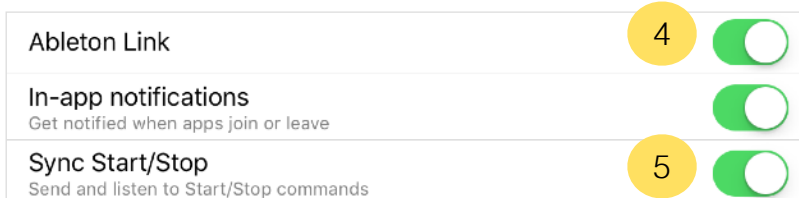


## Ableton Link sync

"Ableton Link" is a technology that synchronizes musical beat, tempo, phase, and start / stop commands across multiple applications running on one or more devices. Applications on devices connected to a local network discover each other automatically and form a musical session in which each participant can perform independently: anyone can start or stop while still staying in time. Anyone can change the tempo, the others will follow. Anyone can join or leave without disrupting the session.



1. On "StepPolyArp", touch the setup button on the top right screen.
2. Select the "Sync" section.
3. Touch the "Enable Link sync" button to open the Link panel.



4. Activate "Ableton Link".
5. "StepPolyArp" can share start / stop transport commands with other connected applications by activating the "Sync Start / Stop" option.



6. When connected on "Ableton Link" in "Sequencer" mode, "StepPolyArp" will perform a quantized launch based on the "Beats sync phase" selected in the "Tempo" panel.
7. A progression line above the tempo is indicating the position before the next phase.

## MIDI clock sync

"StepPolyArp" is able to sync from external MIDI clock. When receiving MIDI clock sync, the transport controls are driven by the MIDI clock master source. "MIDI clock" sync is unavailable if "Ableton Link" is activated.



1. On "StepPolyArp", touch the setup button on the top right screen.
2. Select the "Sync" section.
3. Activate "Receive MIDI clock" to enable the MIDI clock sync.
4. If necessary, select the MIDI port where the MIDI clock source come from. You should select a specific MIDI port only if the MIDI clock source is coming from an external MIDI connection (hardware MIDI interface, MIDI over WiFi, USB or Bluetooth).

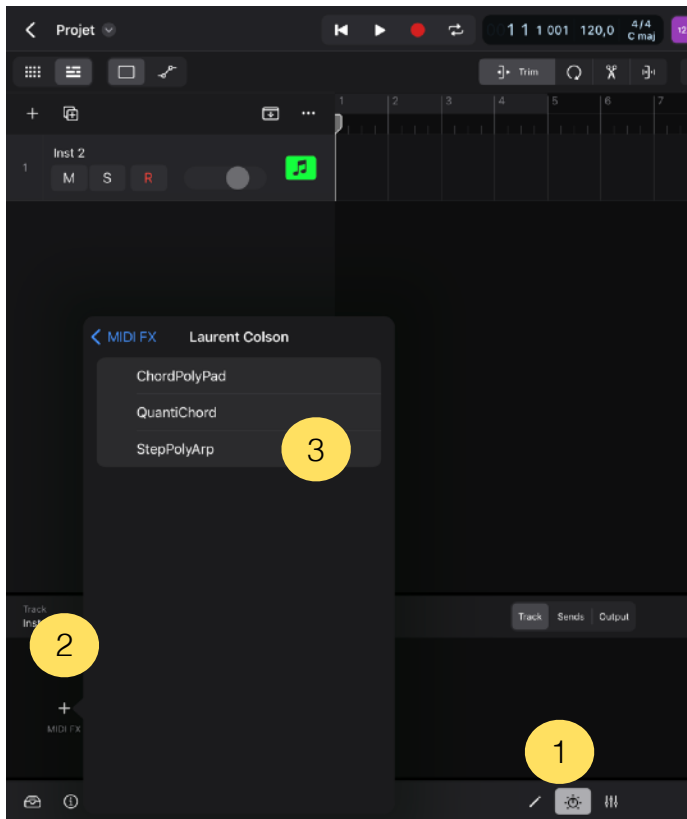
# The AUv3 MIDI effect plug-in

The AUv3 plug-in is automatically installed after opening the application at least once.

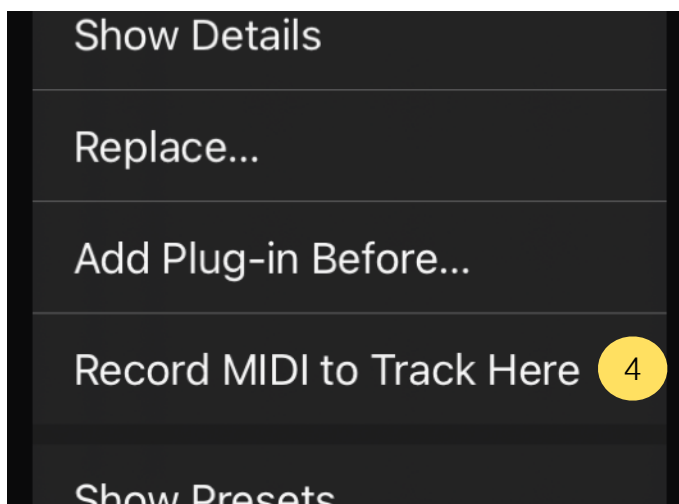
The AUv3 plug-in is able to run on multiple tracks or channels simultaneously, each instance memorizing its own settings. All the settings are automatically saved with the host project file and recalled when re-opening it later.

# AUv3 plug-in setup for iPhone and iPad apps

## Logic Pro AUv3 setup

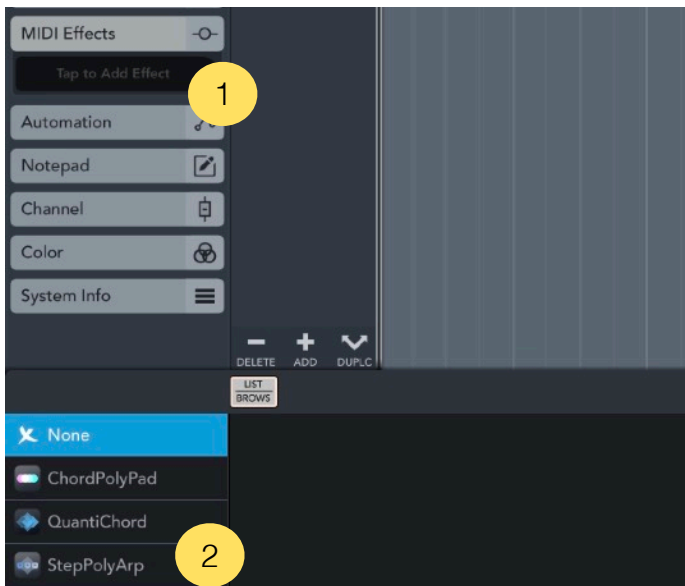


1. On the track you want to insert "StepPolyArp", press the "plugins" button.
2. Select "MIDI FX".
3. Then, choose "StepPolyArp" in the list of Audio Units plug-ins.

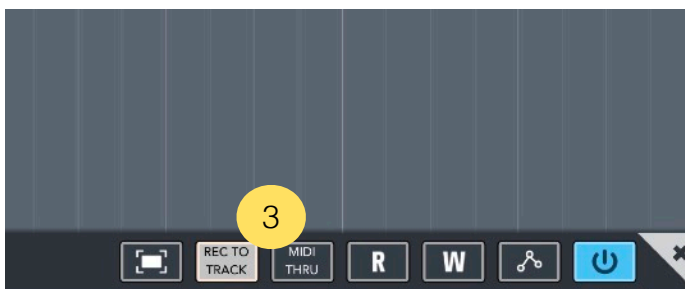


4. If you want to record the MIDI output processed by "StepPolyArp" instead of the notes you are playing, long press in the plug-ins view on the title of "StepPolyArp" and select "Record MIDI to Track Here".

## Cubasis AUv3 setup

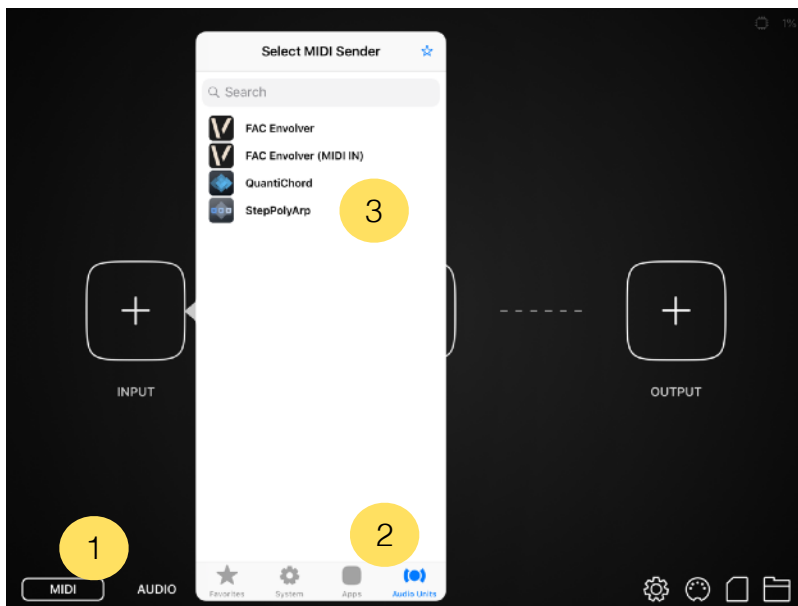


1. On the track you want to insert "StepPolyArp", select "MIDI effects" from the left panel.
2. Then, choose "StepPolyArp" in the list.

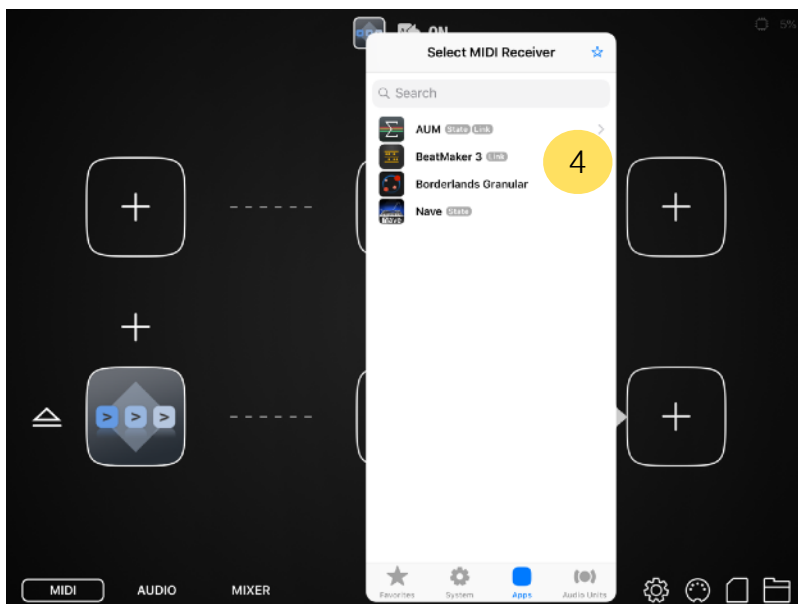


3. If you want to record the MIDI output processed by "StepPolyArp" instead of the notes you are playing, select the button "Rec to track" on the top right of the plug-in window.

## Audiobus AUv3 setup

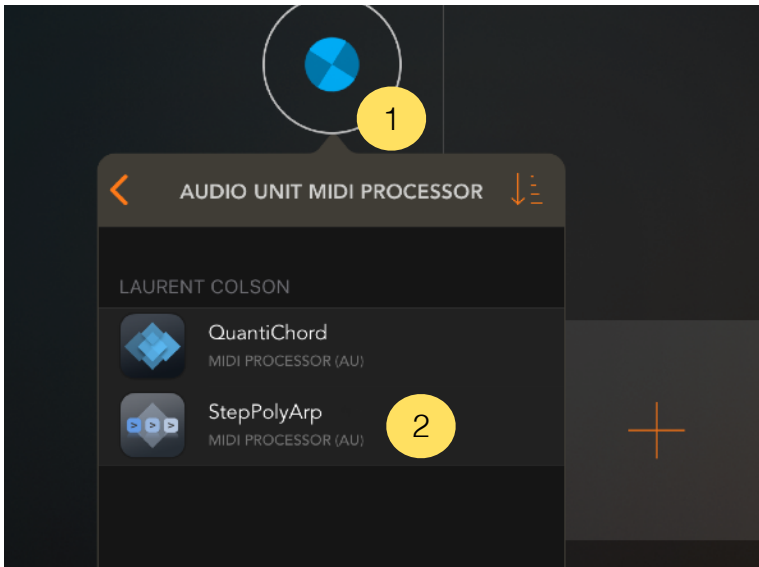


1. Select "MIDI" section in "Audiobus".
2. Open the "INPUT" or "EFFECT" slot, and select the "Audio Units" section.
3. Then, choose "StepPolyArp".

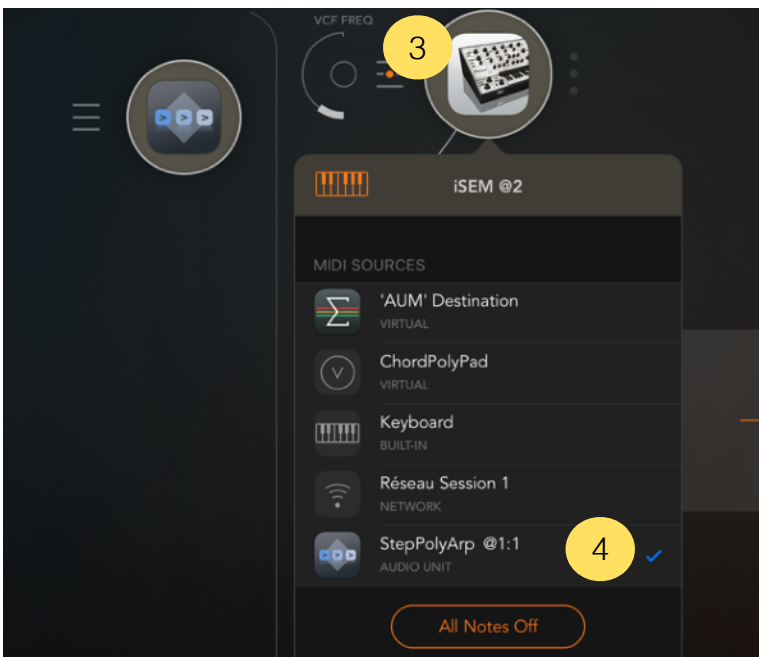


4. Insert a Midi receiver in the "OUTPUT" slot.

## AUM AUv3 setup

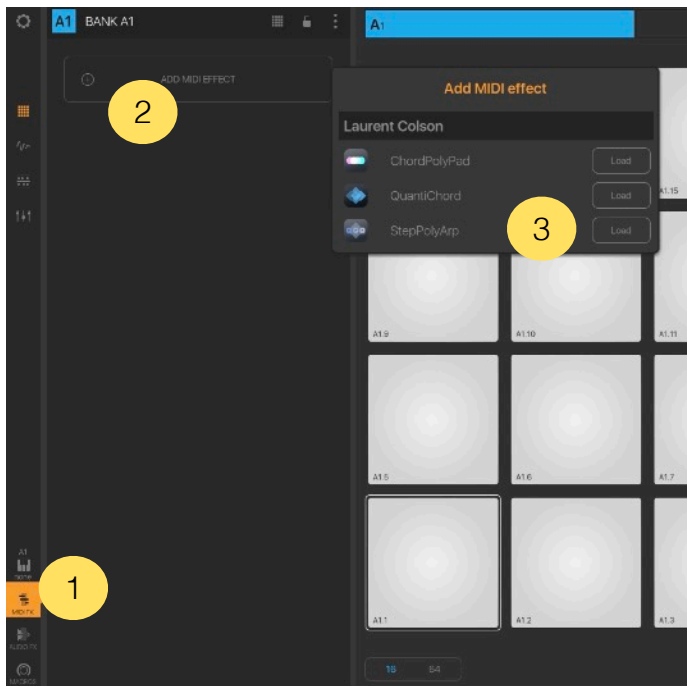


1. Create a MIDI channel and open the plug-ins list on the top.
2. Choose "Audio Unit MIDI processor" section and select "StepPolyArp".



3. Create an audio channel with an instrument and open its MIDI settings panel.
4. In the MIDI settings panel, select "StepPolyArp" to route the processed MIDI output of "StepPolyArp" to the MIDI input of the instrument.

## BeatMaker AUv3 setup



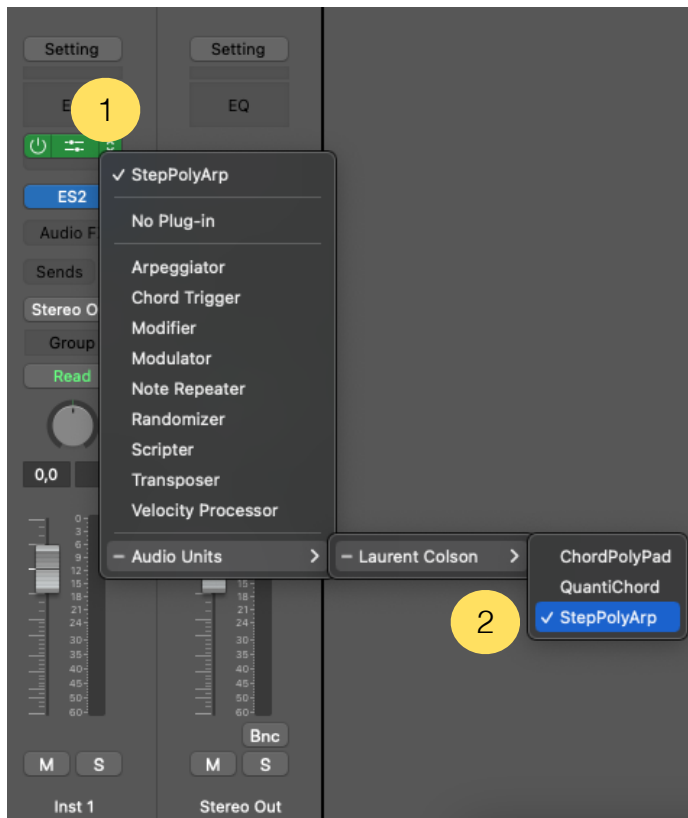
1. On the bank you want to insert "StepPolyArp", select the "MIDI effects" icon from the left panel.
2. Select "Add MIDI Effect".
3. Load "StepPolyArp" from the MIDI effects list.



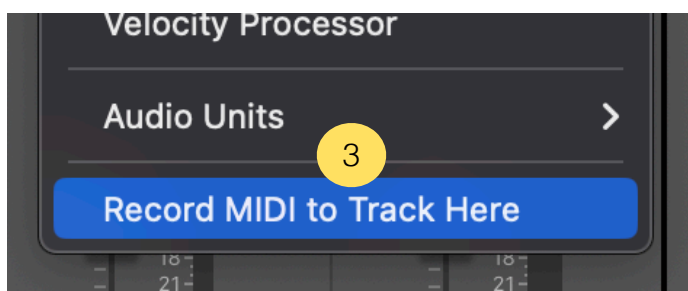
# AUv3 plug-in setup for Mac apps

## Logic Pro AUv3 setup

To use AUv3 MIDI effect plug-ins in Logic, the version 10.7 or later is required.

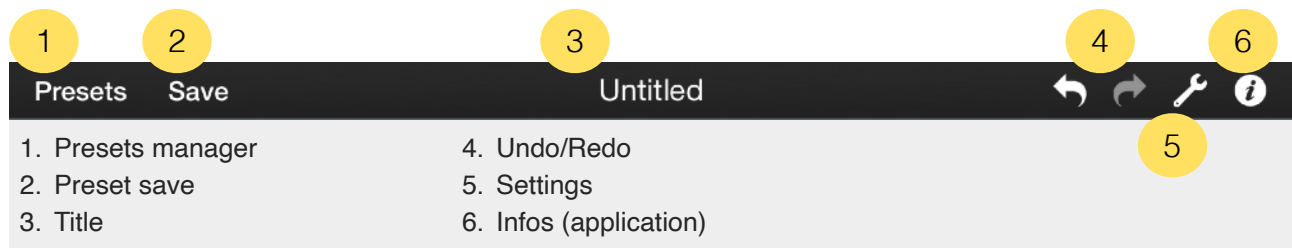


1. On the track you want to insert "StepPolyArp", select "MIDI FX" from the channel strip.
2. Then, choose "StepPolyArp" in the list of Audio Units plug-ins.

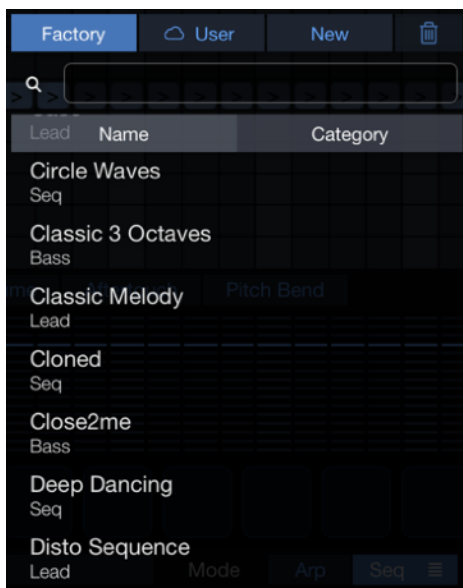


3. Since Logic 10.7.5, if you want to record the MIDI output processed by "StepPolyArp" instead of the notes you are playing, select the button "Record MIDI to Track Here" below the list of MIDI effects.

# The main toolbar



## Presets manager



The "Presets" button displays the list of presets available. You can load or create a new preset from this menu.

The list is divided in two groups, "Factory Presets" and "User Presets". The first list includes all the presets originally installed, and can not be modified. The "User" group, empty at startup, contains your own presets. If you activated [iCloud](#) sync, a cloud icon will appear to the left of the "User" button. "New" button will create a new default preset.

You can delete presets inside the "User" group by pressing the trash icon at the top right of the list and select the preset to delete. Confirm by pressing the "Delete" button that appears.

You can also delete a preset by making an horizontal slide on its name to erase it without having to press the trash icon first. As before, confirm the deletion by pressing the "Delete" button that appears.

Use the search box area to filter presets by names.

To order the list of presets by names or categories, touch the list header button "Name" or "Category".

## Save



Use the "Save" button to save your own presets. Enter the name you want to save the preset.

Select whether you want to save the tempo, scale, and MIDI out with this preset. By recording the tempo, the scale or the MIDI out, these will be recalled when loading the preset. Tempo and MIDI out are not available in the AUv3 version.

If you activated [iCloud](#) sync, a cloud icon will appear to the left of the "Save" button.

The share button lets you export the preset by "AirDrop", "Mail", "Message", "Files" or other available services.

## Title

Title of the loaded preset.

## Undo/Redo

Press "Undo" to cancel previous changes you made. Press "Redo" to restore the changes.

## Application settings

### → Output tab



Select MIDI output port and MIDI channel of the arpeggiator.

If "Internal" is selected, MIDI channels selector is replaced by a list of internal sounds.

"StepPolyArp MIDI out" is an internal virtual port that can be used to send MIDI to an application that doesn't have its own MIDI ports.

## → Input tab



Select the MIDI port you want "StepPolyArp" receive MIDI datas. MIDI channels can be filtered.

If you are sending MIDI directly from another application to the "StepPolyArp" MIDI port, you don't need to activate any MIDI input port here.

MIDI datas received but not processed are automatically resent to the MIDI Output.

## → Sync tab

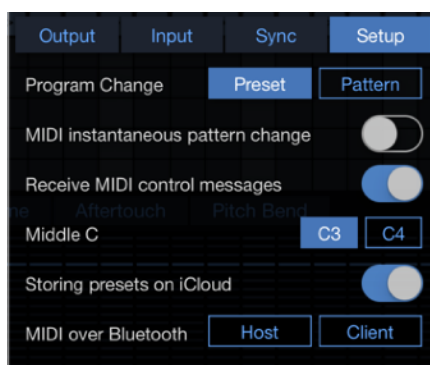


You can sync from an external MIDI clock or use "Ableton Link" sync sessions.

For MIDI clock sync setup, please see the [MIDI clock sync](#) section, for Ableton Link, refer to the [Ableton Link sync](#) section.

## → Setup tab

The parameters inside the setup tab are globals for all instances of the AUv3 plug-in and the application.



### ► Program Change

Select if MIDI "Program Change" command received is loading a preset or switching a pattern.

### ► MIDI instantaneous pattern change

This setting allows a "Program Change" or the "MIDI Control #21" to change the pattern instantly without waiting for the end of the loop.

### ► Receive MIDI control messages

Enable or disable the reception of MIDI control messages. For more informations about messages recognized, please refer to the [MIDI controls recognized](#) section.

### ► Middle C

Select if you want middle C labeled C3 or C4.

### ► Storing presets on iCloud

Enable or disable the storage of presets on iCloud. If iCloud is not activated on your device, this switch button is disabled. Refer to [Storing presets on iCloud](#) section to learn more about iCloud storage.

### ► MIDI over Bluetooth

Connect to a MIDI bluetooth device or make device detectable from other. To setup MIDI over Bluetooth connection, please refer to [MIDI over Bluetooth](#) section.

## AUv3 settings

### → MIDI channels tab

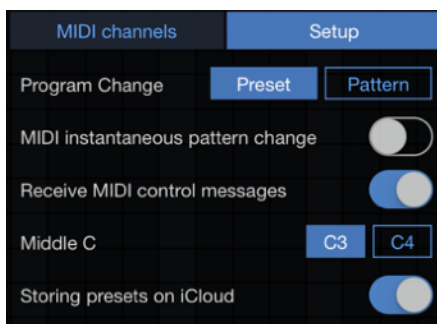


#### ► Channel out

Select the main MIDI channel for the MIDI out. The default MIDI out is 1. This parameter is saved with the host session for each instance of "StepPolyArp".

### → Setup tab

The parameters inside the setup tab are globals for all instances of the AUv3 plug-in and the application.



#### ► Program Change

Select if MIDI "Program Change" command is loading a preset or switching a pattern.

#### ► MIDI instantaneous pattern change

This setting allows a 'Program Change' or the "MIDI Control #21" to change the pattern instantly without waiting for the end of the loop.

► **Receive MIDI control messages**

Enable or disable the reception of MIDI control messages. For more informations about messages recognized, please refer to the [MIDI controls recognized](#) section.

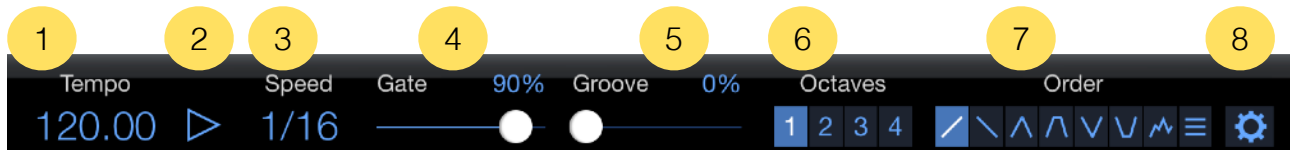
► **Middle C**

Select if you want middle C labeled C3 or C4.

► **Storing presets on iCloud**

Enable or disable the storage of presets on iCloud. If iCloud is not activated on your device, this switch button is disabled. Refer to [Storing presets on iCloud](#) section to learn more about iCloud storage.

# The arpeggiator



The screenshot shows the arpeggiator interface with the following controls and callouts:

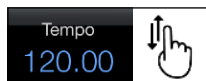
- 1. Tempo (application): 120.00
- 2. Play / stop (application): Play button
- 3. Speed: 1/16
- 4. Note length: Gate slider at 90%
- 5. Groove: Groove slider at 0%
- 6. Number of octaves: Octaves buttons (1, 2, 3, 4)
- 7. Notes order: Order buttons (/, \, ^, ^, v, v, ~, ~)
- 8. Functions: Settings gear icon

1. Tempo (application)	4. Note length	7. Notes order
2. Play / stop (application)	5. Groove	8. Functions
3. Speed	6. Number of octaves	

## Tempo (app)



The tempo can be modified by tapping on its value to open a dedicated keyboard. You can enter the tempo by using the numeric keys, or calculate it in real time by tapping the "Tap" button.



It is possible to modify the numerals and decimals value by sliding your finger or the mouse pointer up or down on them.

The "Beats sync phase" is used when [Ableton Link](#) is activated in [Sequencer mode](#). "Step-PolyArp" will perform a quantized launch based on the "Beats sync phase" selected here.

## Play / stop (app)

The transport button play or stop is viewed when "StepPolyArp" is working in "Sequencer" mode. Please, refer to the [Sequencer mode](#) section for more details.

## Speed

The speed is determining the musical value of a step in the grid.

## Gate

Specify the length of notes played. A length of 100% corresponds to a full step in the grid. A length of 50% is half a step.

## Groove

Add groove to the grid, no groove is applied at 0%.

## Number of octaves

Indicate the number of octaves generated automatically by the arpeggiator for each note pressed.

## Notes order

Arpeggiates the played notes in a definite order.

### ‣ Up

The notes are played from the lowest to the highest. For a C-E-G chord, the generated notes will be C-E-G-C-E-G.

### ‣ Down

The notes are played from the highest to the lowest. For a C-E-G chord, the generated notes will be G-E-C-G-E-C.

### ‣ Up & down

The notes are played from the lowest to the highest, then, from the highest to the lowest. For a C-E-G chord, the generated notes will be C-E-G-E-C-E-G.

### ‣ Up & down 2

Same as "Up & down," with the difference that the lowest note and the highest are re-played. For a C-E-G chord, the generated notes will be C-E-G-G-E-C-C-E-G.

### ‣ Down & up

The notes are played from the highest to the lowest, then, from lowest to highest. For a C-E-G chord, the generated notes will be G-E-C-E-G-E-C.

### ‣ Down & up 2

Same "as Down & up," with the difference that the lowest note and the highest are re-played. For a C-E-G chord, the generated notes will be G-E-C-C-E-G-G-E-C.

### ‣ Random

The order of notes is played randomly.

### ‣ Chord

The notes are not arpeggiated, but played as chord.



## Functions



### ► Copy

Copy the viewed grid in the clipboard.

### ► Paste

Replace the viewed grid with the one contained in the clipboard.

### ► Random mono

Generate a random pattern on the middle line in the grid.

### ► Random poly

Generate a random pattern over several lines in the grid.

### ► Fill all steps

Fill all steps on the middle line of the grid.

### ► Fill every 2

Fill every two steps on the middle line of the grid.

### ► Fill every 4

Fill every four steps on the middle line of the grid.

### ► Fill blank

Create an empty grid.

### ► Move left

Move all grid events to the left.

### ► Move right

Move all grid events to the right.

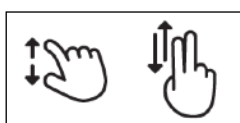
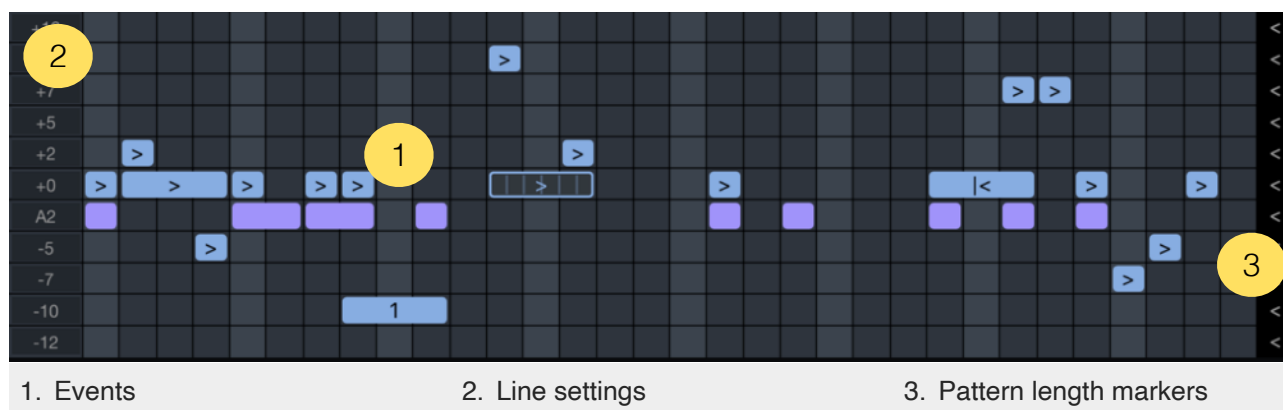
### ► Swap steps

Reverse horizontally all grid events.

### ► Swap pitch

Reverse vertically all grid events.

# The events grid



The grid contains events that are affecting the way the arpeggiator is processing notes played. On iPhone and iPad you can zoom the grid vertically and horizontally with a pinch gesture, and scroll it with 2 fingers. On Mac, you can resize the window to enlarge or shrink the grid.

## Events

An event allocates the notes for the arpeggio in time, length, and pitch. You can create new events by touching an empty step on the grid.

To change the length of an event, hold your finger or the mouse pointer on it and move to the right to increase the length or to the left to decrease.

You can move an event by holding your finger or the mouse pointer over it for half a second and move it to the location you want.

To delete an event, place your finger or the mouse pointer on it, then throw it with a quick movement in any direction to make it disappear, or just double-tap or double-click on the event to delete it.

To open the event edit panel, tap on the event you want to edit.



#### ► Order next [>]

This event asks the arpeggiator to play the note and then move to the next. This is the standard arpeggiator mode. For a C-E-G chord in "up" mode, if the pattern is "> > > >", the generated notes will be C-E-G-C-E.

#### ► Order equal [=]

This event asks the arpeggiator to play the same note as the previous one. For a C-E-G chord in "up" mode, if the pattern is "> = > >", the generated notes will be C-C-E-G-C.

#### ► Order previous [<]

This event asks the arpeggiator to play the note and then move to the previous. For a C-E-G chord in "up" mode, if the pattern is "< < < <", the generated notes will be C-G-E-C-G.

#### ► Order restart [|<]

This event asks the arpeggiator to reset to the first note. For a C-E-G chord in "up" mode, if the pattern is "> > |< > >", the generated notes will be C-E-C-E-G.

#### ► Order end [>|]

This event asks the arpeggiator to reset to the last note. For a C-E-G chord in "up" mode, if the pattern is "> >| > > >", the generated notes will be C-G-C-E-G.

#### ► Order by note number [1] [2] [3] [4] [5]

This event indicates directly the note number to play. For a C-E-G chord in "up" mode, if the value is "2", the generated note will be E.

#### ► Order of the second last [S]

This event indicates directly to play the second last note in the chord. For a C-E-G chord in "up" mode, the generated note will be E.

#### ► Order of the last [L]

This event indicates directly to play the last note in the chord. For a C-E-G chord in "up" mode, the generated note will be G.

‣ **Chance to play**

Indicate the probability for the event to play. At 100%, the event will always play. At 0%, the event will never play.

‣ **Play on cycle**

Indicates at which cycle the event should be played. It is possible to create a pattern over 10 cycles by indicating at what time the note will be played.

[ ■ □ ■ ■ □ ]

This pattern will play the note during the first, third and fourth cycle. To change the length of the cycle pattern, simply press and hold the step where you want it to end. By default, the pattern contains 4 cycles.

‣ **Rand pitch**

The event may have a random pitch each time it is played. The random pitch probability determines the chance that the event will be randomized. The higher the percentage, the greater the chance that the pitch will be randomized. At 0%, the event is not randomized. The random pitch range determines how many semitones the event can be randomized by. If the line is scaled, then the randomized pitch will also be scaled.

‣ **Rand gate**

The event may have a random gate each time it is played. The higher the random gate percentage, the greater the variation in gate value can be. At 0%, the event is not randomized.

‣ **Rand velocity**

The event may have a random velocity each time it is played. The higher the random velocity percentage, the greater the variation in velocity value can be. At 0%, the event is not randomized.

‣ **Note repeat**

Divide an event by the indicated number to make a sequence of repeated notes. The acceleration parameter increases (+) or slows down (-) the repetition rate. The velocity curve create a repetition with constant, up, or down velocity.

‣ **Event gate**

Sets a gate value to a specific event. This value takes precedence over the global gate value.

‣ **Event velocity**

Sets a velocity value to a specific event. This value takes precedence over the global velocity.

### ► Delete

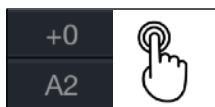
Delete the edited event.

## Line settings

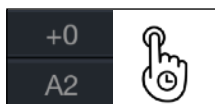


Each line contains a transposition value or an absolute note affecting the events located on it. You can change this value by dragging your finger or the mouse pointer up or down on it.

The transposition value is in semitones and is by default quantized by the selected scale. The arpeggiator being polyphonic, you can create multiple simultaneous events on different lines for a same step.

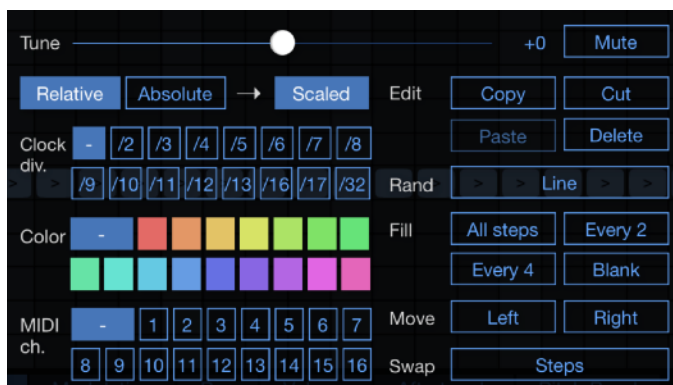


Double tapping or double clicking on a line will mute or unmute it.



It is possible to reorder a line by long pressing on it for more than one second. It is then possible to move the line to any position.

To configure a line, do a tap on the transposition value to open the configuration menu.



### ► Tune

Sets the transposition value or the note to play. In relative mode, the line is a transposition value in semitones. The value can be set from -36 (-3 octaves) to +36 (+3 octaves). In absolute mode, the line plays a fixed note from 0 (C-2) to 127 (G8).

### ► Scaled

When scaled is selected, relative transpositions, or fixed notes are constrained to the selected scale.

### ► Mute

When mute is selected, the line is muted and no longer generates events.

### ► Clock div.

Clock division allows a line to be played at a different speed than the main speed setting. This way, each line can have its own playback speed.

‣ **Color**

By default, lines in relative mode are blue, and lines in absolute mode are purple. Here it is possible to assign a personal color to a line.

‣ **MIDI Channel**

Each line can send MIDI notes on a different MIDI channel.

‣ **Copy**

Copy the line to the clipboard.

‣ **Cut**

Copy the line to the clipboard and delete it.

‣ **Paste**

Paste the line from the clipboard on the current line.

‣ **Delete**

Delete the current line.

‣ **Random line**

Create random events on the line.

‣ **Fill all steps**

Fill all steps of the line.

‣ **Fill every 2**

Fill every two steps of the line.

‣ **Fill every 4**

Fill every four steps of the line.

‣ **Fill blank**

Empty the line.

‣ **Move left**

Move all line events to the left.

‣ **Move right**

Move all line events to the right.

► **Swap steps**

Reverse horizontally the events on the line.

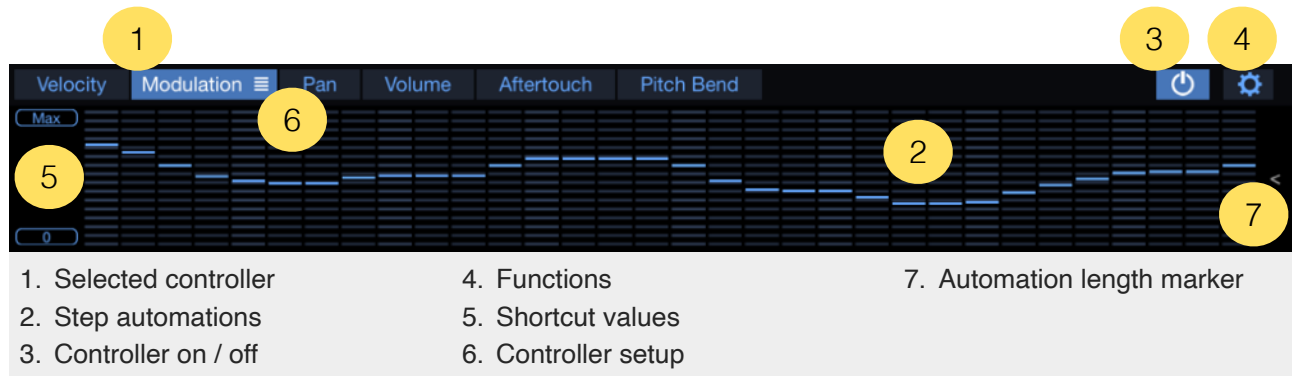
## Pattern length markers

You can change the length of each line of the pattern by moving the marker with your finger or the mouse pointer. The length of each line can be 1 to 32 steps. Using different lengths for different lines can be used to create polyrhythmic patterns.



If you want to move all steps at the same time, you need to activate the link lengths button located in [the function bar](#) at the bottom right of the screen.

# The step controller



If there is enough space on screen, the step controller is automatically viewed below the events grid. However, on the iPhone screen, or if the AUv3 area has not enough space, you need to open it from the control view button located in [the function bar](#).

## Selected controller

The default controllers available are velocity, modulation, pan, volume, aftertouch and pitch bend automation. Touch the controller button to select it and show its step automations.

## Step automations

To draw step automations, simply drag your finger or the mouse pointer over the area. You can use multiple fingers to draw lines between multiple points.

To reset a step to its default value, double-tap or double-click on it.

## Controller on / off

Apart from the velocity automation, all other controllers are turned off by default. To turn a controller on, press the power button on the top right, or touch the automation area. If one controller is not used, it is better to switch it off to avoid transmitting its datas.





## Functions

### ► Clock div.

Clock division allows a controller to be played at a different speed than the main speed setting.

### ► Color

By default, the color of the step controllers is blue. Here it is possible to assign a personal color for each controller.

### ► MIDI Channel

Each controller can send MIDI controls on a dedicated MIDI channel.

### ► Copy

Copy the viewed step controller automations in the clipboard.

### ► Paste

Replace the viewed step controller automations by those contained in the clipboard.

### ► Random steps

Generate a random automation.

### ► Fill every 2

Alternate minimum and maximum every two steps.

### ► Fill every 4

Alternate minimum and maximum every four steps.

### ► Move left

Shift the automation to the left.

### ► Move right

Shift the automation to the right.

### ► Swap steps

Reverse the automation horizontally.

### ► Swap values

Reverse the automation vertically.

## Shortcut values



The left area has buttons for fast initialisation values of each type of controllers. Press the shortcut button to quickly set a default automation value for each step.

## Controller setup

When selected, a menu icon appears to the right of the text button. This indicates that the controller can be customized. Touch the selected button to open the controller setup panel.



### ► Name

Change the name of the controller.

### ► Controllers list

Available MIDI controllers.

### ► Shortcut Max

Displays a set of buttons containing values 0 and max.

### ► Shortcut 100-Max

Displays a set of buttons containing values 0, 100 and max.

### ► Shortcut L-C-E

Displays a set of buttons for pan type controller containing values left, center and right.

### ► Shortcut Center

Displays a set of buttons containing a minimum value, maximum, and 0 in the center.


### ► Set to all patterns

Apply the current settings to all patterns.

### ► Reset to default

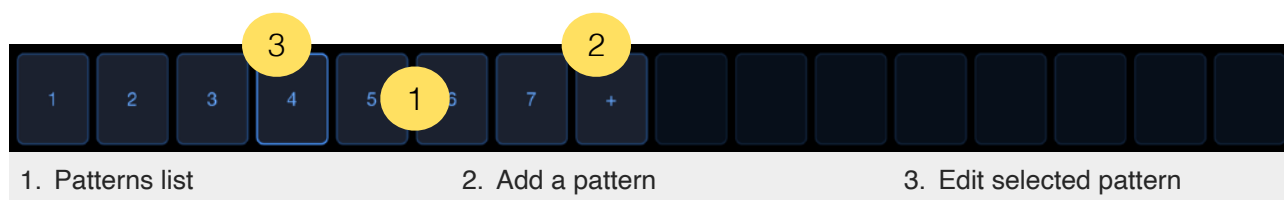
Reset the selected controller to its default settings.

## Automation length marker

 You can change the length of the automation by moving the marker with your finger or the mouse pointer. The length can be 1 to 32 steps. Using different lengths for different controllers can be used to create polyrhythmic controls.

If you want to move all lengths at the same time, you need to activate the "link lengths" button located in [the function bar](#) at the bottom right of the screen.

## The pattern selector



On the iPhone screen, or if the AUv3 area has not enough space, the pattern selector is located to the right of the controllers list.

## Patterns list

Each preset can contain up to 16 patterns. To select a pattern, press it. If the arpeggiator is playing, the pattern chosen will be activated only when the playhead reaches the end of the current pattern. Pressing a second time, the pattern will be activated immediately.

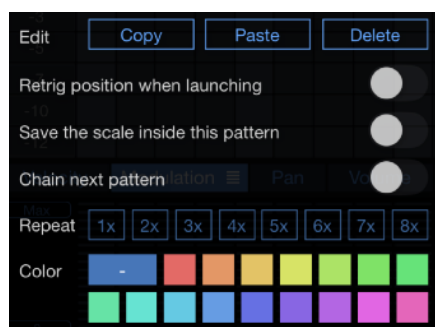
To delete a pattern, move it outside the selector pattern. You can change the order of patterns by moving them to the desired position.

## Add a pattern

By pressing the (+) button, you will add a pattern to the list. The pattern creates a copy of the current active pattern. You can create up to 16 patterns by preset.

## Edit selected pattern

To edit a pattern, just do a tap on the selected one.



### ► Copy

Copy the pattern in the clipboard.

### ► Paste

Replace the selected pattern with the one contained in the clipboard.

### ► Delete

Delete the pattern.

### ► Retrig position when launching

If activated, the playing position will be reseted from beginning for all lines when the pattern is launched.

### ► Save the scale inside this pattern

If activated, the selected scale will be recalled with the pattern.

### ► Chain next pattern after playing

Patterns can chain automatically when playing. When enabled, after playing the pattern by a specified number of times, it is automatically chaining the following.



It is possible to temporarily stop the chaining sequence by doing a long touch on the playing pattern. A small padlock will flash to indicate that the tracking pattern is temporarily stopped. To resume the sequence, just touch the locked pattern again to release it, or another pattern if you want to play a different one than that expected in the sequence.

# The function bar

1	2	3	4	5	6	7	8	9	10
1. Step controller / pattern selector view	2. Keyboard view (app)	3. Scale	4. Arpeggiator mode	5. Sequencer mode	6. Sequencer memory setup	7. Notes locking	8. Random generator	9. Reset step positions	10. Length makers linked

## Step controller / patterns view

On the iPhone screen, or if the AUv3 area has not enough space, the step controller and the pattern selector are not viewed by default. Touch this button to open them inside the grid area.

## Keyboard view (app)

On the iPhone screen, the keyboard is not viewed by default. Touch this button to open it inside the grid area.



## Scale

The scale determines the notes playable by the arpeggiator and the sequencer.

To use all 12 semitones, simply select "Chromatic" scale.

It is possible to define custom scales or choose an existing scale from the list.

## Arpeggiator mode

In the "Arpeggiator" mode, "StepPolyArp" is only playing when it is receiving notes from keyboard or external MIDI input. There is no start / stop transport notion in this mode. When synched from external source, a quantized sync is applied at step level.

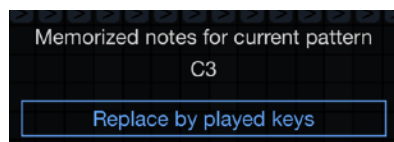
## Sequencer mode

In "Sequencer" mode, "StepPolyArp" is automatically following play / stop commands from the internal transport button, or from external sync transport. The default note played when starting is C3, but you can memorize any other note combinations for each pattern. It is possible to temporary play other notes in real time by playing the keyboard or external MIDI input. When synched from external source, the starting position is quantized from the sync source.

## Sequencer memory setup



When "Sequencer" mode is selected, a menu icon appears to the right of the button. Touch it to open the sequencer memory setup panel.

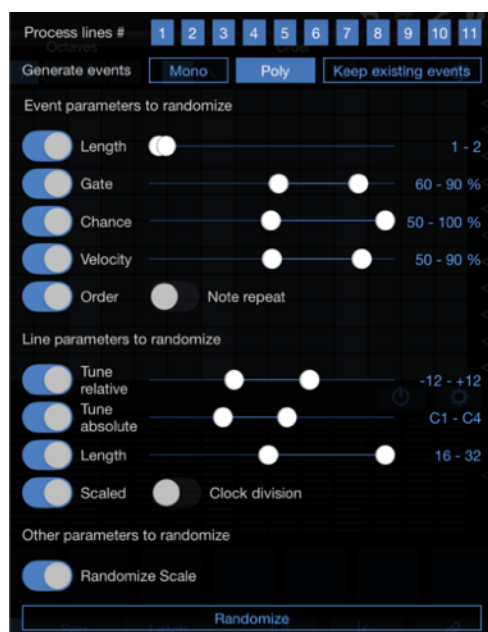


By default, in "Sequencer" mode, "StepPolyArp" is triggering C3 note. To modify the default behavior, just play the notes you want to be triggered on keyboard or from external MIDI input, and press "Replace by played keys" button.

## Notes locking

When the "Latch" button is on, the notes you play are maintained even when you release them. Touching other notes automatically release those locked. To release all the notes, press again those currently locked, or turn off the "Latch" mode.

## Random generator



### ► Process lines #

Defines which lines will be randomized.

### ► Generate events

Specifies how events will be generated. In mono, there will be only one event per line. In poly, events can overlap. Keep existing events will not create any new events, but will randomize existing ones.

### ► Event/line/other parameters to randomize

Specifies which parameters will be randomized, and in which range the randomization will be done.

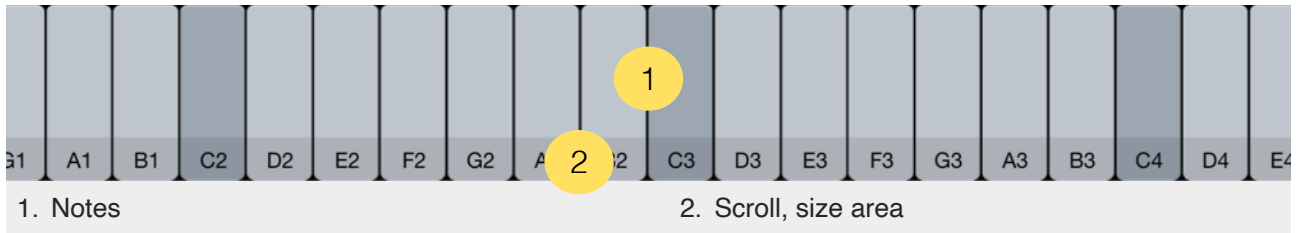
## Reset step positions

Reset all step positions to zero. On the first press, the reset waits for the end of the cycle to execute. A second press performs the reset immediately.

## Length makers linked

By activating this button, when moving a length markers, all other markers will get the same length.

# The keyboard (app)



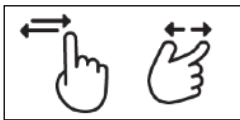
On iPhone the keyboard is not viewed by default, you need to open it from the keyboard view button located in the function bar.

The keyboard is not available in the AUv3 version, it is provided by the host.

## Notes

Only notes available in the selected scale are viewed.

## Scroll, size area



The keyboard can be scrolled by panning your finger, a trackpad or a mouse inside the bottom area. On iPhone and iPad, you can change the size of the keyboard by executing a pinch gesture in this same area.



# Storing presets on iCloud

"StepPolyArp" can store presets on iCloud to make them available and synchronized on all your devices.

Even if you choose to store the presets on iCloud, they remain stored on local in a specific iCloud container. You will be able to load and save the presets without internet connection. A connection is needed only to sync them between the different devices.

If iCloud is activated on your device, "StepPolyArp" will ask you if you want to use iCloud on the first use.

If you want to activate or deactivate it later, you can do it from the setup menu.

# Multitasking - Audio Background (iPhone and iPad app)

"Audio Background" is activated by default in "StepPolyArp". If the arpeggiator is playing when the application goes to background, music will continue to play and other applications can be launched. It is possible to control other musical applications from "StepPolyArp" on the same iPad if they are themselves multitasking and "Core MIDI" compatible.

"StepPolyArp" will automatically stop working in "Audio Background" mode after 30 minutes of inactivity.

# Slide Over and Split View support (iPad app)

"Slide Over" and "Split View" for iPad are fully supported in "StepPolyArp".

Use "Slide Over" to work on an application that slides in front of any open application, even over two open applications in "Split View".



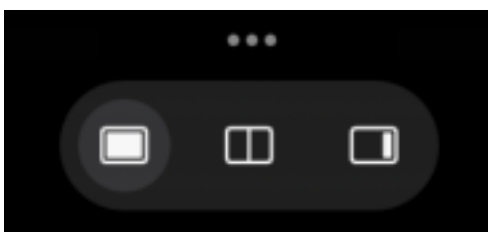
1. *Swipe up from the bottom of the screen to open the Dock.*
2. *On the Dock, touch and hold the second app that you want to open, then drag it to the screen.*

With "Split View", you can view and use two applications at the same time.



1. *Swipe up from the bottom of the screen to open the Dock.*
2. *On the Dock, touch and hold the second app that you want to open, then drag it off the dock.*
3. *When the app opens in Slide Over, drag the top horizontal bar inside the title area down.*

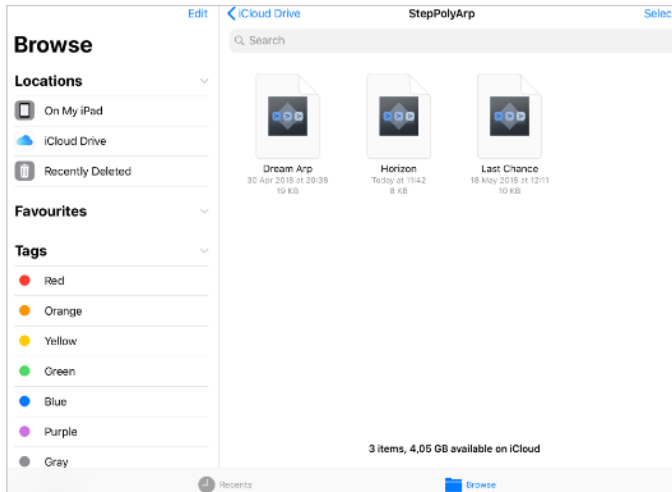
"StepPolyArp" will adapt its size to the available space. If there is not enough space, a minimal view with only the presets manager and the keyboard will be displayed.



Since iPadOS 15, using "Slide Over" and "Split View" has been simplified. Just touch the 3 little dots at the top of the screen to activate either mode.

# Files sharing

If you want to access your presets files directly, you need to activate iCloud in "StepPolyArp".



In the "Files" application from the "iCloud Drive" location on iOS, or in the folder "iCloud Drive" on macOS, you will find a folder named "StepPolyArp" that contains all your presets files. You can move and share them anywhere you want.

You can launch a preset from the "Files" application on iOS, or from the macOS "Finder", it will automatically load the preset inside "StepPolyArp".

# MIDI Program Change

The presets can be recalled from a "Program Change" command by inserting the program number as "#NNN" at the beginning of the preset name.

The number "NNN" is from 001 to 128.

For example, if you want to recall the preset "My Preset" by a MIDI "Program Change" number 10, you need to name it "#010 My Preset".

Some softwares or hardwares are using a number from 0 to 127, where "StepPolyArp" is using a number from 1 to 128. In this case, to recall a preset called "#010 My Preset" on "StepPolyArp", you need to send the 'Program Change' number 9 from the software or hardware (the "StepPolyArp" number minus 1).

# Recognized MIDI controls

"StepPolyArp" responds to MIDI control messages. Receiving MIDI control messages can be deactivated from the setup menu.

Control number	Values	Function
#16	0 to 127	Arpeggiator gate
#17	0 = 1/1      1 = 1/2D      2 = 1/1T 3 = 1/2      4 = 1/4D      5 = 1/2T 6 = 1/4      7 = 1/8D      8 = 1/4T 9 = 1/8      10 = 1/16D      11 = 1/8T 12 = 1/16      13 = 1/32D      14 = 1/16T 15 = 1/32      16 = 1/64D      17 = 1/32T	Arpeggiator speed
#18	0 to 127	Arpeggiator groove
#19	0 = 1 octave 1 = 2 octaves 2 = 3 octaves 3 = 4 octaves	Arpeggiator octaves
#20	0 = Up 1 = Down 2 = Up & down 3 = Up & down 2 4 = Down & up 5 = Down & up 2 6 = Random 7 = Chord	Arpeggiator order
#21	0 to 15	Pattern change
#22	0 = Disabled 1 = Enabled	Latch
#23	Any value other than zero	Reset all step positions to zero
#46 Line 1 #47 Line 2 ... #55 Line 10 #56 Line 11	0 = Line unmuted 1 = Line muted	Line mute

# Recognized automations (AUv3)

The AUv3 version of "StepPolyArp" responds to automation parameters if the host implemented it for AUv3 MIDI effect plug-in.

Parameter	Values	Function
Gate	15 to 100 %	Arpeggiator gate
Speed	1/1      1/2D      1/1T 1/2      1/4D      1/2T 1/4      1/8D      1/4T 1/8      1/16D      1/8T 1/16      1/32D      1/16T 1/32      1/64D      1/32T	Arpeggiator speed
Groove	0 to 100 %	Arpeggiator groove
Octave	1 octave 2 octaves 3 octaves 4 octaves	Arpeggiator octaves
Order	Up Down Up & down Up & down 2 Down & up Down & up 2 Random Chord	Arpeggiator order
Pattern	Pattern 1 to 16	Pattern change
Latch	On Off	Latch
Reset	Trigger Off	Reset all step positions to zero
Mute 1 to 11	Unmuted Muted	Line mute

# Support

To submit a bug report, please contact support from the website:

<https://dev.laurentcolson.com>

Do not forget to specify for which application you are requesting support, the type of device (iPhone, iPad, Mac), the version of the operating system, the way to reproduce the bug. The more details you provide, the faster the bug will be fixed.

For any issues related to the purchase, refund, app download, or occurring on the App Store, please contact Apple Support directly here:

<https://support.apple.com/apps>