JPTree

Musical Composition x Modular Generation

by Path Set and Joop van der Linden

Manual v2.1 - Rev 1

Our Story

JPFree is **J**oop and **P**ath's **Free** plugin for mixing composition techniques with modular aesthetics.

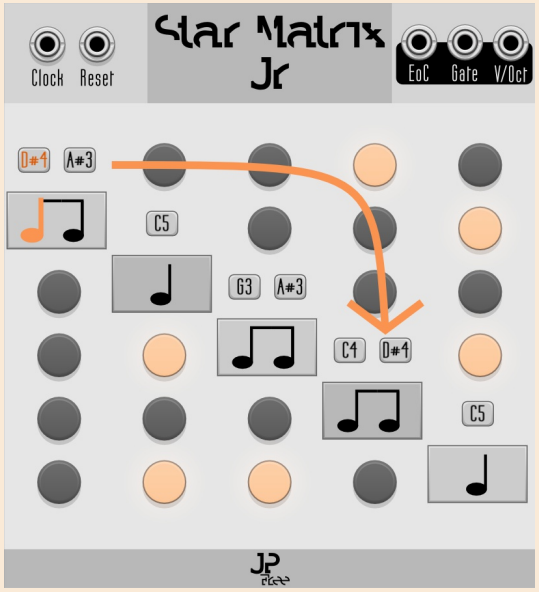
Harness sequencers that can react to your melodies like a jazz musician improvising on compositions.

Blend rhythmic subdivisions with weighted note pools to author or randomize rich melodies that mutate over time.

Your companion awaits...

Modules

JPFree has four main sequencers. Each has more feature rich version in the premium plugin JPLab or JPEvo.



Star Matrix Jr

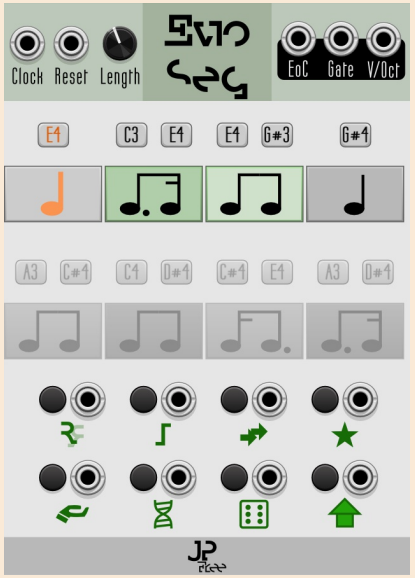
Fully control transition chance between any note block. Page 14 to 15.

Three Track

Program 3-voice melodies or chords. Page 9 to 13.

Improv Jr

Instantly responding sequencer to notes added through the keyboard. Page 16 to 19.



Evo Seq

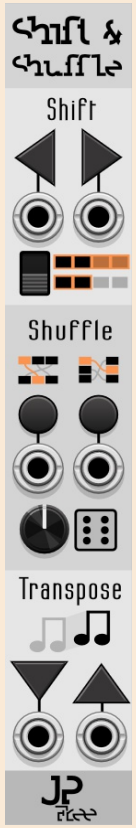
Seven triggerable ways to evolve an eight step sequence over time. Page 20 to 23.

Modules

JPFree also has an expander and utility module:

Shift & Shuffle

Expander for any main JP sequencer: CV controllable sequence modifications. Page 20 to 21.



Navi

Clock divider with a random variation each cycle. Page 22.

Tip: Use Shift & Shuffle on any JPFree, JPLab, or JP Evo main sequencer!

Common: Note Things

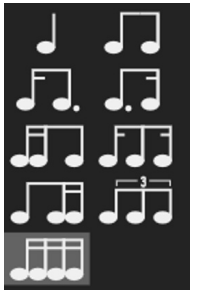
Tip: These concepts apply to all main sequencers in JP plugins.

Note Pool

These are the notes the sequencer uses. Left click to add a note. Right click to remove it. Each note has a weight you can set by clicking and dragging the note. The weight controls how frequently the note appears when CV is randomized.

Note Block

One beat of the sequence. Each note block can contain up to four notes in one of nine different subdivisions. Left click to cycle forward through the options. Shift + Left click to cycle backwards. Right click to see all options and select one.

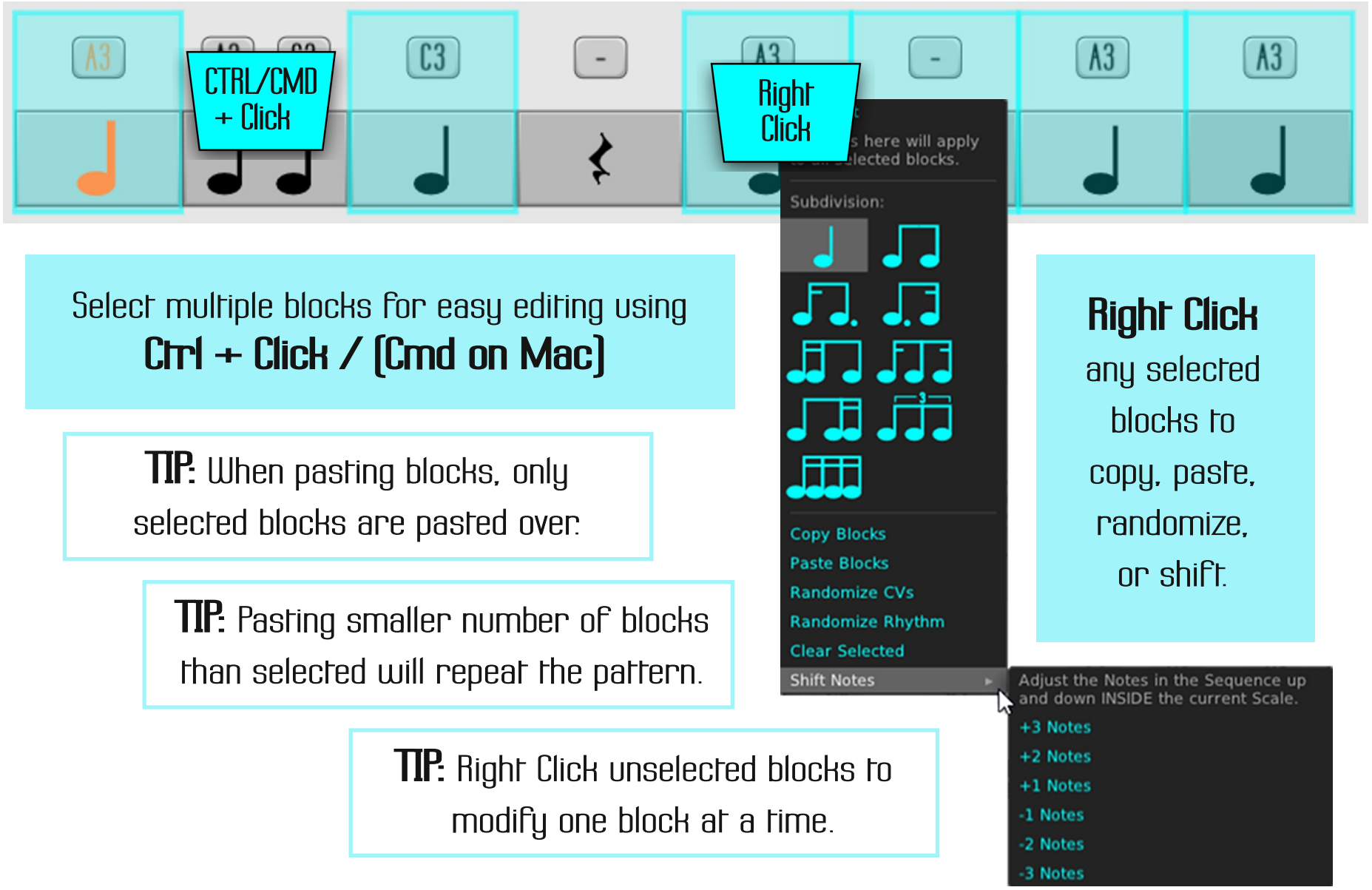


Note Button

Each note in the sequence has a note button. Click to bring up a keyboard where you can select a note. Use the slider at the top to set microtonal notes. You can also add Rests and Ties. Ties can only be set on the first note in a block. Rests can also be set directly by shift clicking a note button. Finally there is an Auto Advance button that you can use for quick note entry.

Common: Bulk Selection

Tip: Copy and paste between any main sequencers in JP plugins.



Select multiple blocks for easy editing using **Ctrl + Click / (Cmd on Mac)**

Right Click any selected blocks to copy, paste, randomize, or shift.

TIP: When pasting blocks, only selected blocks are pasted over.

TIP: Pasting smaller number of blocks than selected will repeat the pattern.

TIP: Right Click unselected blocks to modify one block at a time.

Common: Clock Mode

Gate Mode

In this mode the input clock is expected to be a consistant square wave with a peak of 2v+ and a vally of 0v. Each full cycle of the clock one whole note block is played.

If an inconsistant clock is used the modules will do their best to keep up, but will likely be a few cycles behind.

The duty cycle of the square wave is ignored.

Tip: To avoid skipping the first note block, use Impromptu Clocks and turn on On Start > Send Reset Pulse.

Phase Mode

In this mode the clock input is expected to be a triangle wave from 0v to 10v. Other signals that are similar to a triangle wave can create interesting rhythms and clock lengths.

Note that in order for the note block to advance, the input signal has to drop from above 9v to below 1v in a single frame.

Common: Right Click Menu

Clock Settings

Gate Length - How long each **Gate** output is high.

Swing - Add swing to each Note Block.

Clock Mode - Switch between a typical clock and a phase clock.

Randomize - Allows you to randomize CVs or Rhythm of the sequence.

Shift & Shuffle - Allows shifting and shuffling of the sequence. Behavior is similar to Shift & Shuffle expander.

Set Rhythm - Sets every note block to the same subdivision.

Note Pool - Set or Edit the note pool.

Custom - Set note pool using a keyboard.

Shift - Shift notes by semitones.

Randomize - Randomize the note pool.

The remaining options are presets.

Copy/Paste - Portable Copy and Paste

Sequence - Copy and Paste sequences between any JPLab sequencers and other sequencers supporting the portable format.

These are interoperable with the bulk selection's copy and paste tool as well.

Note Pool - Copy and Paste the current note pool between any JPLab modules.

Expanders - Easy way to add expanders.

Three Track

Program 3-track melodies or chords.

Three Track Quick Start

1. Add Modules: Impromptu's **CLKD**, JPFree's **ThreeTrack**, Atelier's **PALETTE** and VCV's **AUDIO**.
2. Connect Modules as shown above.
3. Click a **quarter note** to change its rhythm.
4. Click a **note letter** to change the pitch.
5. Click Track Configuration until just A and B show.

1. **Clock** – Advances one Note Block.

2. **Reset** – Resets to first Note Block.

3. **Length** – Controls the number of Note Blocks active in the sequence.

4. **EoC** – End of Cycle gate.

5. **Gate** – High when a note is playing. Polyphony if more than one track is configured.

6. **V/Oct** – Volt/Octave signal for the current tracks. Polyphony if more than one track is configured.

7. **Track Configuration** – Click to change number of tracks. More details on page 12

8 **Note Blocks** – 16 Note Blocks.
(Shift) Left click a block to change the rhythm.
Click a note to set value. Click and drag to set voltage.

Track Configuration

Click the Track Configuration strip on Three Track to change which rows are part of which tracks.

A B C – Each row is a track.

A A B – The first two rows form Track A. The third row is track B. Track B plays twice each cycle.

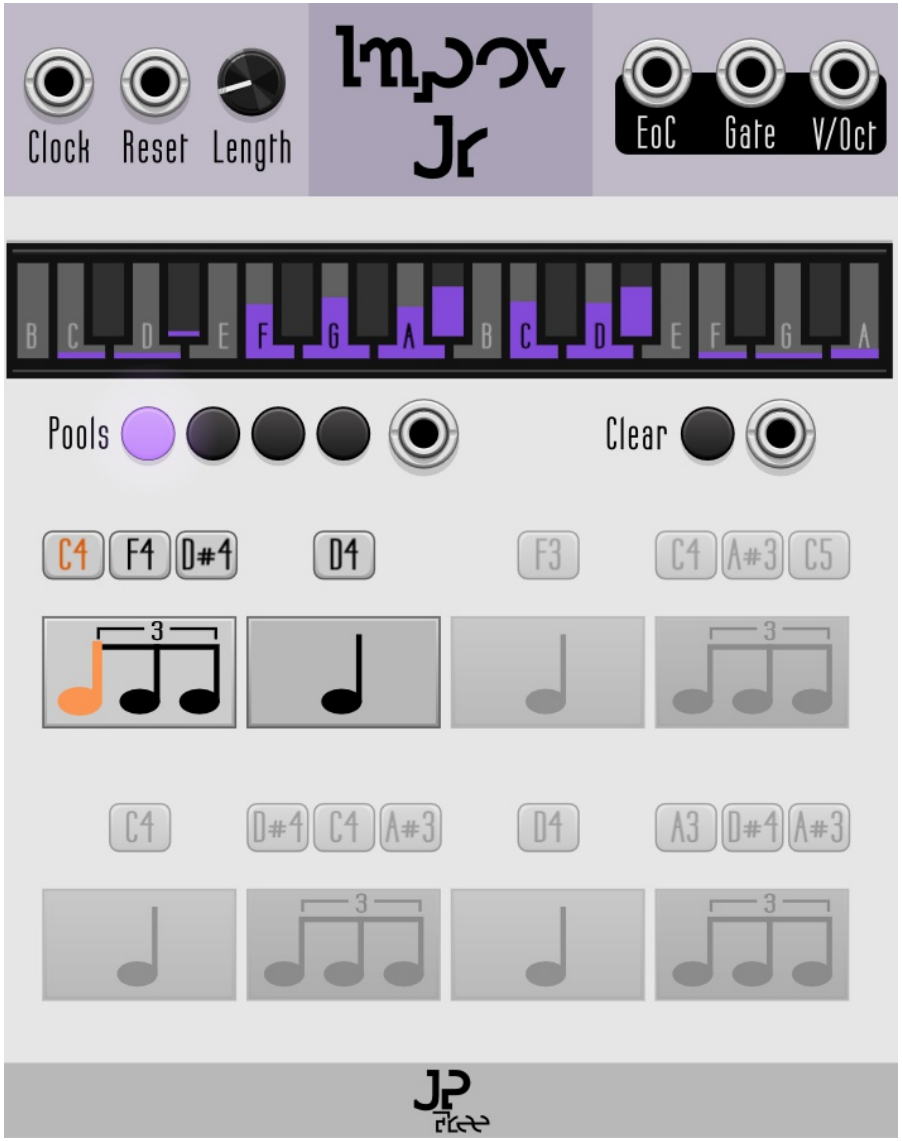
A A A – All three rows are Track A.

Chord Mode – Each column is a chord. Each row is forced to have the same subidvisions. This can also be enabled in the right click menu.

Tip: Clock and Reset both accept polyphonic cables. One channel per track.

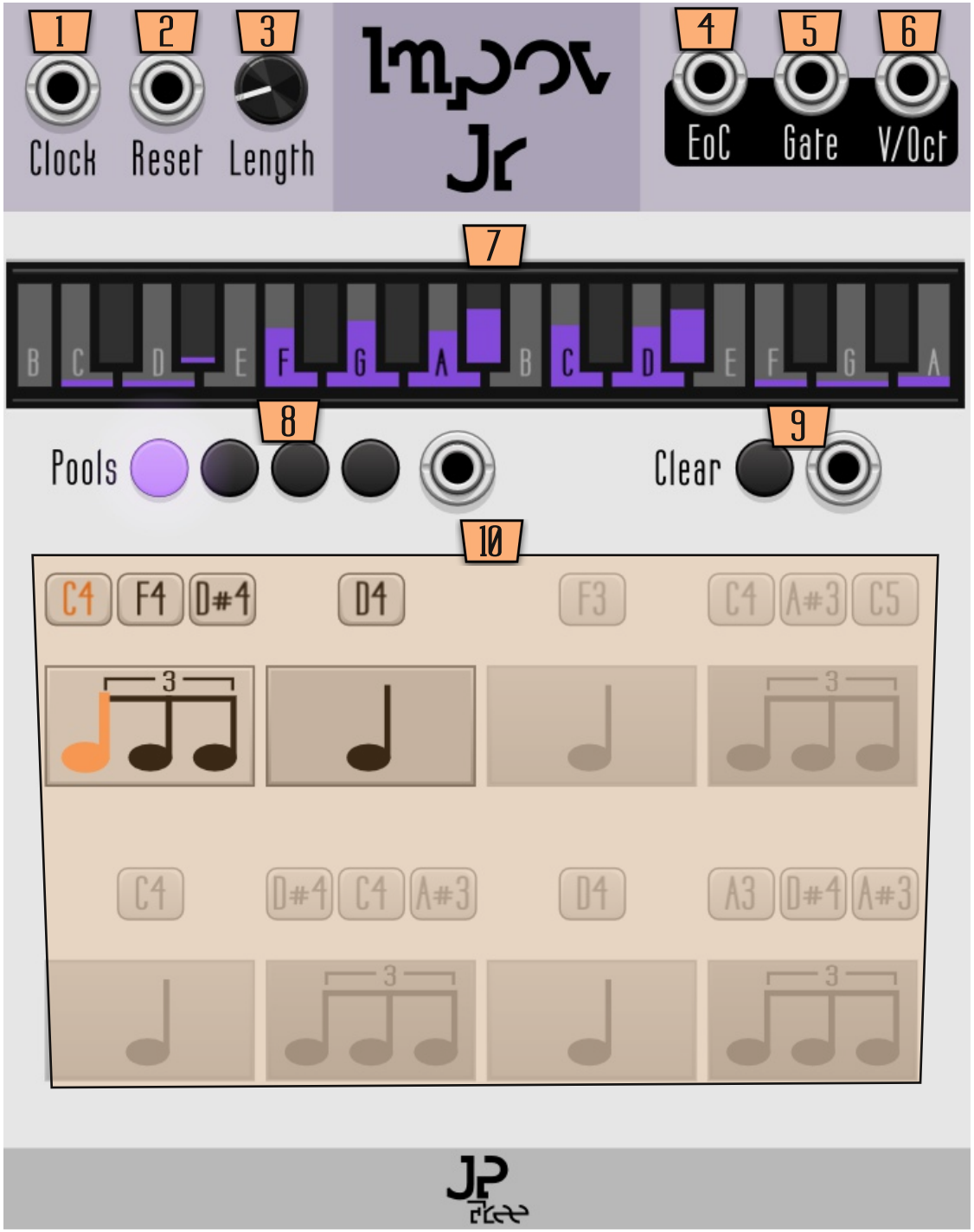
Improv Jr

Jazz inspired live performance sequencer; Instantly responds to changes in notes.



Improv Jr Quick Start

1. Add Modules: Impromptu's **CLKD**, JPFree's **ImprovJr**, Atelier's **PALETTE** and VCV's **AUDIO**.
2. Connect Modules as shown above.
3. On Improv's Keyboard, click and drag to set weight.
4. Click a **quarter note** to change its rhythm.
5. Click a **note letter**, then click Rest to add a rest back.



1. **Clock** – Advances one Note Block.

2. **Reset** – Resets to first Note Block.

3. **Length** – Controls the number of Note Blocks active in the sequence.

4. **EoC** – End of Cycle gate.

5. **Gate** – High when a note is playing.

6. **V/Oct** – Volt/Octave signal.

7. **Note Pool** – Click a note on the keyboard to add/remove it from pool and sequence. Drag up/down to add more or less of that note.

8 **Note Pools** – Store 8 note pools. Buttons change active note pool. Click again to randomize sequence. CV selects note pool. 1v-1.99v selects pool 1, etc.

9. **Clear** – Button and CV trigger to clear current pool and sequence.

10. **Note Blocks** – 16 Note Blocks.
[Shift] Left click a block to change the rhythm. Click a note to set value. Click and drag to set voltage.

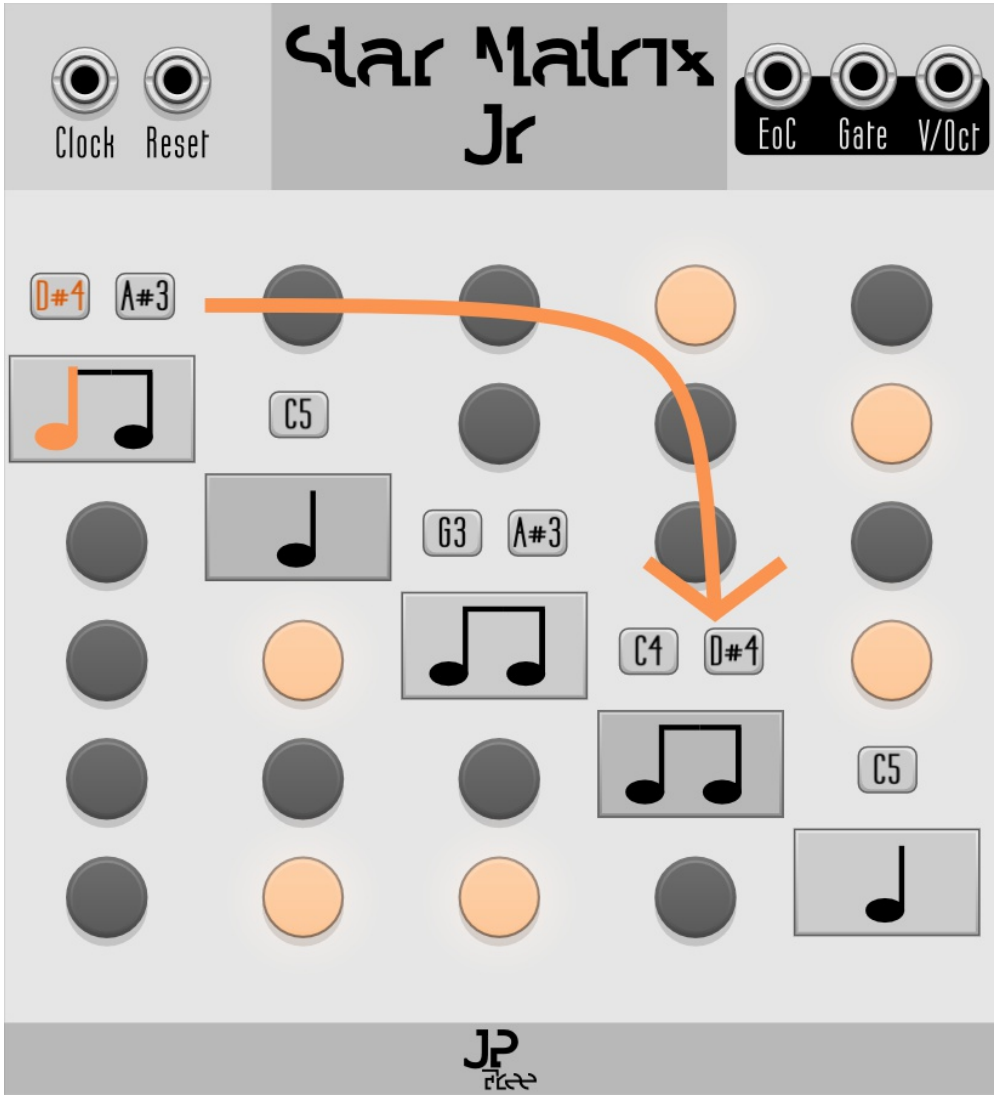
Right Click Menu

In addition to the common right click menu options found on page 8, Improv Jr has the following specific options:

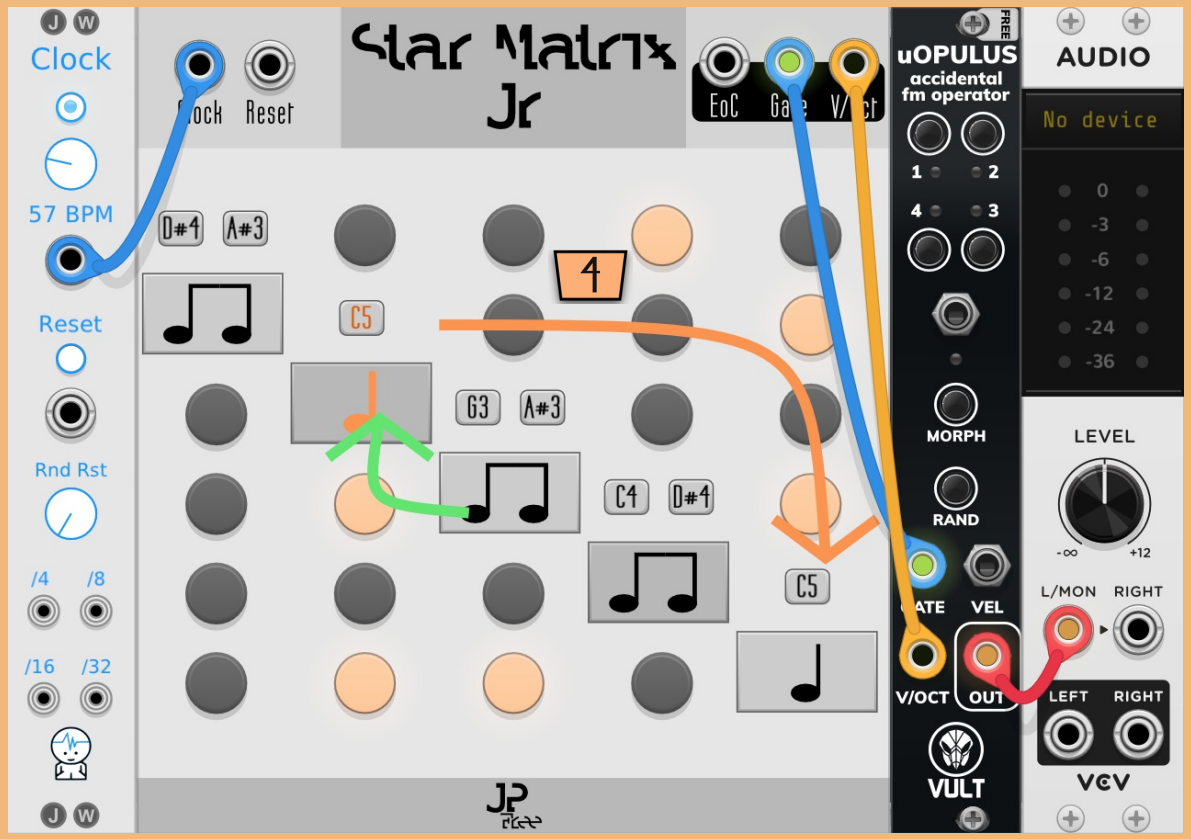
Fill Remaining Sequence - Randomly fills in all note blocks not active, using blocks that are active.

Star Matrix Jr

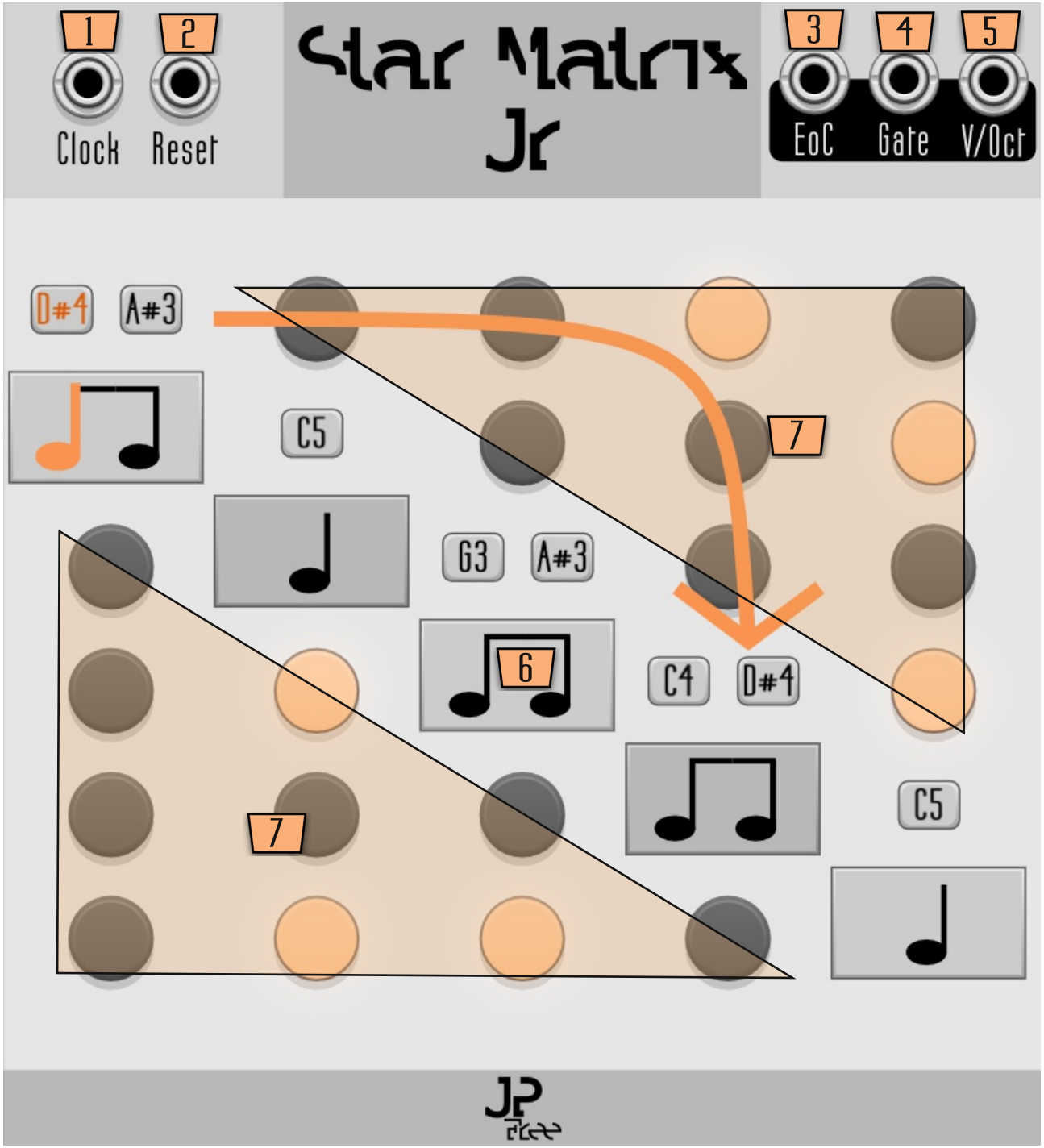
Fully control transition chance between any note block.



Star Matrix Jr Quick Start



1. Add Modules: JW's **Simple Clock**, JPLab's **Star Matrix**, VULT's **uOPULUS** and VCV's **AUDIO**.
2. Connect Modules as shown above.
3. Randomize **Star Matrix**.
4. Click to toggle **transition**. Drag to change probability.



1. **Clock** – Advances one Note Block.
2. **Reset** – Resets to first Note Block.
3. **EoC** – End of Cycle gate.
4. **Gate** – High when a note is playing.
5. **V/Oct** – Volt/Octave signal.
6. **Note Blocks** – 8 Note Blocks.
   (Shift) Left click a block to change the rhythm.
   Click a note to set value. Click and drag to set voltage.
7. **Transitions** – Controls chance of moving from one note block to another. Mouse over to see which transition is controlled. Click to toggle. Drag to change probability.

Right Click Menu

In addition to the common right click menu options found on page 8, Star Matrix Jr has the following specific options:

Transition Mode - Controls how the next note block is selected.

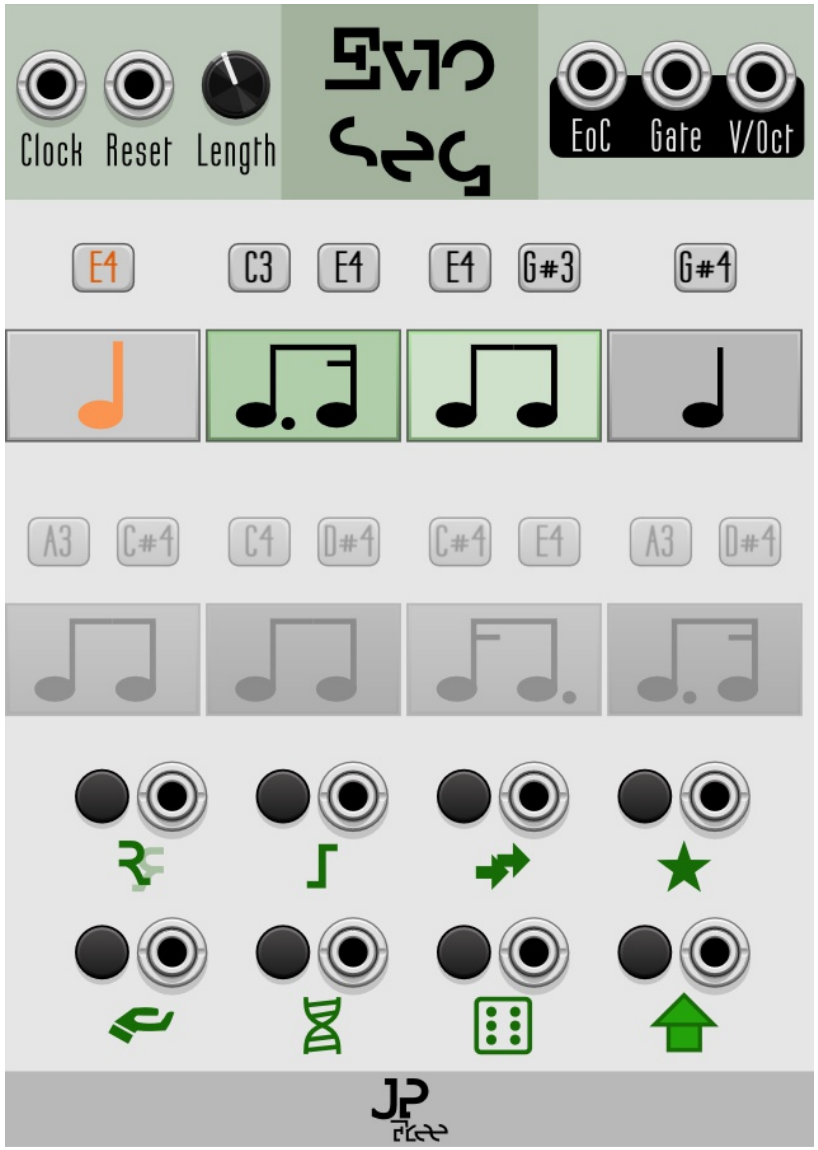
- **Chance** - In this mode each arrow's weight sets the probability of that transition happening. But the selected transition is random.
- **Cycle** - In this mode the order in which the transitions happen are consistant but the frequency at which they happen are determined by weights. For example if a block has two outgoing transitions, one at 50% and one at 100%, the second transition will happen twice as often.

Arrow Display Mode - Controls when the arrow overlays are displayed

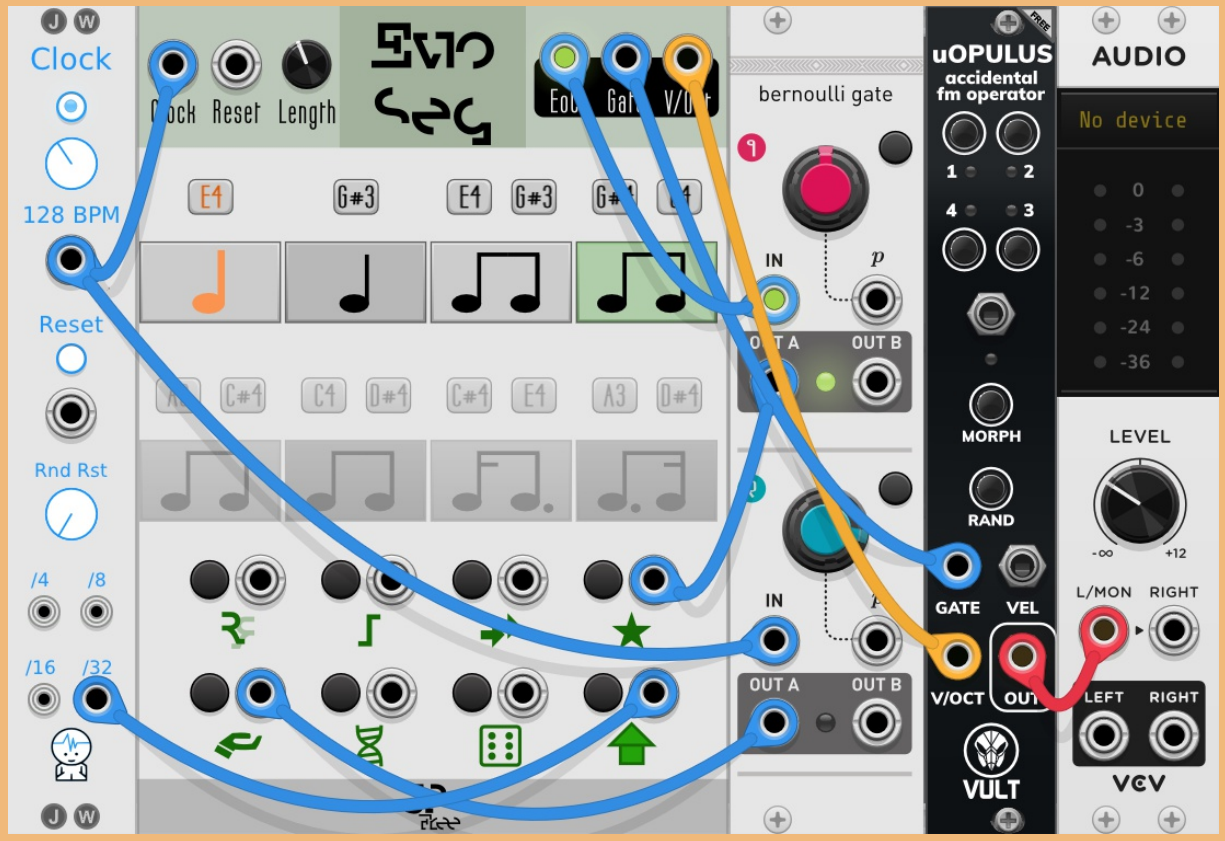
- **On** - If the cursor is not over a transition button, then arrows from the current block are shown. If the cursor is, then the arrow for that transition is shown.
- **Only Hover** - Arrows are only show when the cursor is over a transtion.
- **Off** - Arrows are never shown.

Evo Seq

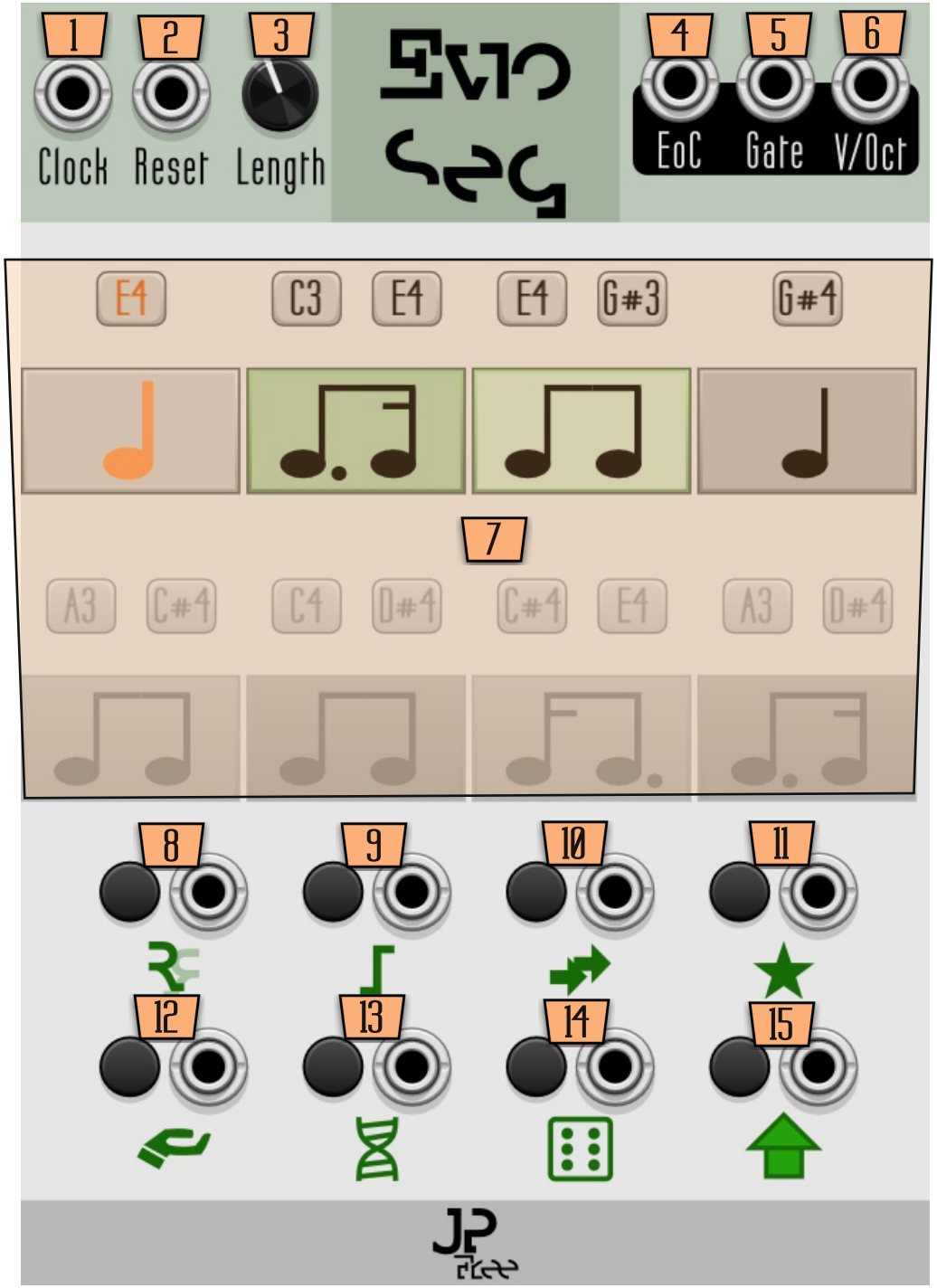
Seven triggerable ways to evolve an eight step sequence over time.



Evo Seq Quick Start



1. Add Modules: JW's **Simple Clock**, JPLab's **Evo Seq**, Audible Instruments' **Bernoulli Gate**. VULT's **uOPULUS** and VCV's **AUDIO**.
2. Connect Modules as shown above.
3. Randomize **Evo Seq**.



1. **Clock** - Advances one Note Block.
2. **Reset** - Resets to first Note Block.
3. **Length** - Controls the number of Note Blocks active in the sequence.
4. **EoC** - End of Cycle gate.
5. **Gate** - High when a note is playing.
6. **V/Oct** - Volt/Octave signal.
7. **Note Blocks** - 8 Note Blocks.
   (Shift) Left click a block to change the rhythm.
   Click a note to set value. Click and drag to set voltage.
8. **Backward** - Toggles playing sequence in reverse.
9. **Invert** - Toggles playing sequence inverted.
10. **Shift** - Shifts blocks forward or backward.
11. **New CV** - Randomize's next block's CVs.
12. **Borrow** - Borrows rhythm from another block.
13. **Mutate** - Adds or removes a note to the next block.
14. **Random** - Randomizes next block's rhythm.
15. **Clear** - Clears all evolutions.

Right Click Menu

In addition to the common right click menu options found on page 8, Evo Seq has the following specific options:

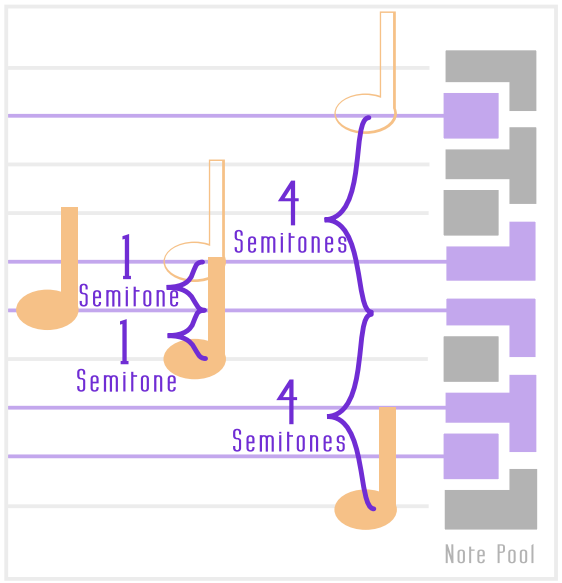
Permitted Rhythm Evolutions - Lets you set which rhythm options the borrow, mutate, and random button / trigger can use.

Fill Remaining Sequence - Randomly fills in all note blocks not active, using blocks that are active.

Invert Mode

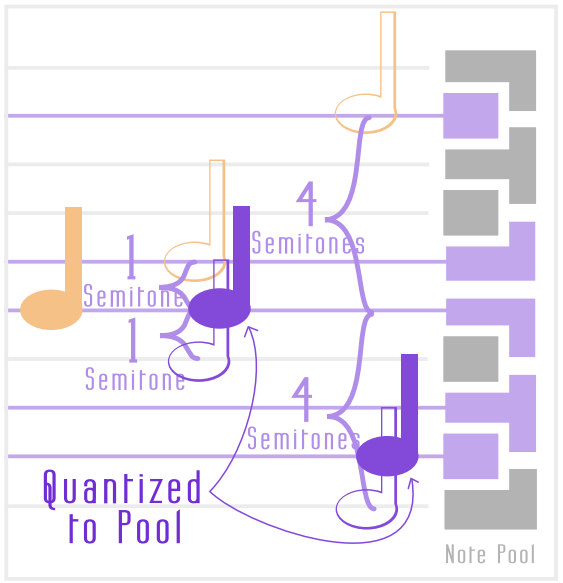
Evo Seq has three diffrent modes for measureing interval distance. Change which mode is active from the right click menu.

Semitones



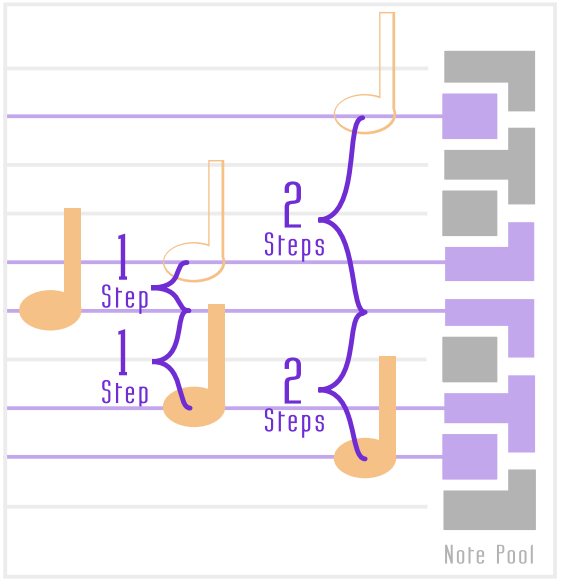
Distance is measured in Semitones.

Quantize



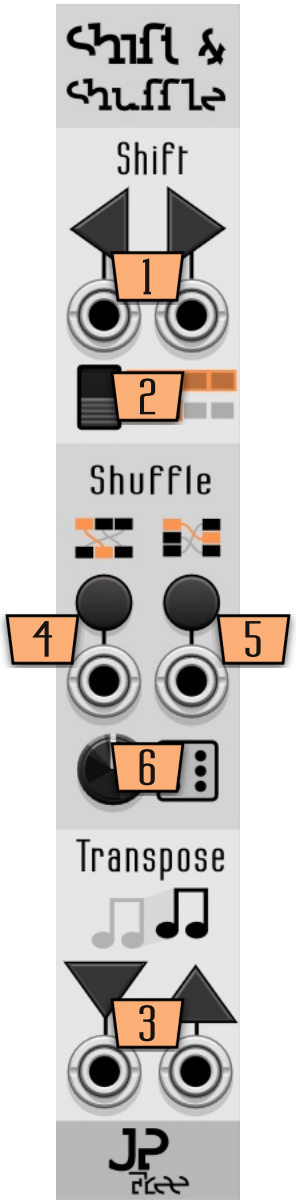
Distance is measured in Semitones. Then notes are quantized to the Note Pool.

Steps



Distance is measured by steps in the note pool.

Shift & Shuffle - Expander



Shift & Shuffle gives CV controllable modifications of the sequence.

1. **Shift Left/Right** - Shifts note blocks in the sequence one to the left or the right.

2. **Shift Mode** - Controls if shift applies to whole sequence or just currently active blocks.

3. **Shift Up/Down** - Changes all the notes in the sequence. Each note is shifted up or down to the next note in the current note pool.

TIP: Connect EoC to one of Shift & Shuffle's CVs!

4. **Shuffle Columns** - Each vertical column of note blocks has a chance to be swapped with a different column.

5. **Shuffle Rows** - Each vertical column has a chance to have its rows randomized.

6. **Shuffle Strength** - The chance that the columns or rows are randomized.

Shift Mode

In the right click menu of Shift & Shuffle you can set the shift mode for each of the 4 shift CV inputs:

Always 1 - Normal trigger. Shifts 1 position when voltage goes above 2v.

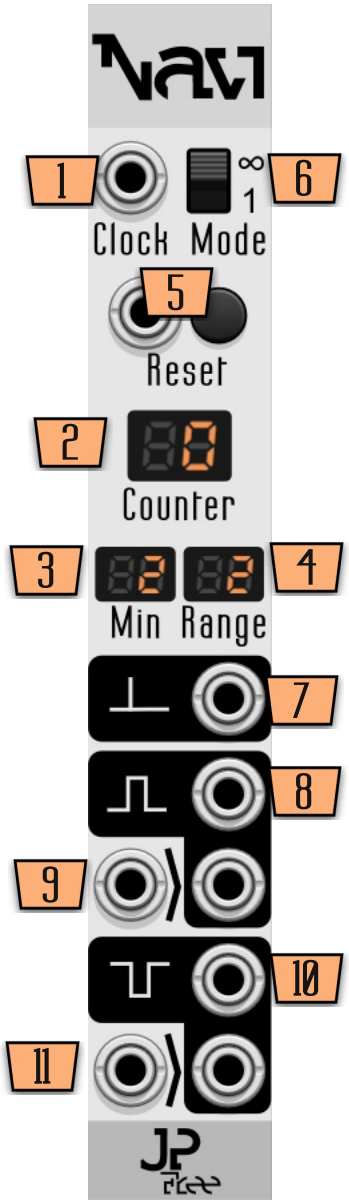
1 / Volt - Triggers on any voltage above 1v. Shifts by 1 position for each volt of the trigger.

1 / 2 Volts - Triggers on any voltage above 2v. Shifts by 1 position for each two volts of the trigger.

12 / Volt - Triggers on any voltage above 1/12th of a volt. Shifts by 1 position for each 1/12th of a volt.

Uni vs Bi - Some of the above modes have Uni and Bi versions. In the Uni version negative voltages are treated as 0. In the Bi version, negative voltages step in the opposite direction.

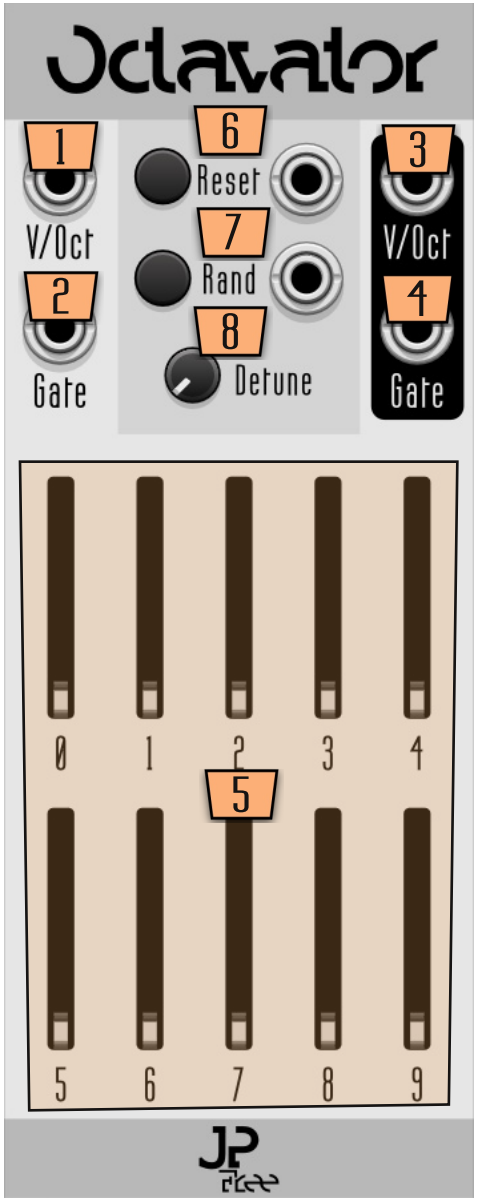
Navi – Utility



Navi counts a variable number of clock pulses before outputing its clock.

1. **Clock** – Input pulses.
2. **Counter** – Displays number of clocks recieved.
3. **Min** – Click and drag to set the min number of clock pulses to count.
4. **Range** – Click and drag to set the a number of extra clock pulses that maybe counted. This is in addition to the Min. Ex. Min of 4 and range of 2 means the step may last 4, 5 or 6 clock pulses. Set Range to 0 to make the step always have the same duration.
5. **Reset** – Resets counter to 0.
6. **Mode** – One shot or Repeat. On Repeat the counter automatically restes after counter hits the max.
7. **Trigger** – 1ms trigger when counter reaches its end.
8. **Gate Open** – High gate for one clock when counter reaches end.
9. **Input/Output A** – Passes input through to output when Gate Open is high.
10. **Gate Low** – Inverse of Gate Open
11. **Input/Output B** – Passes input through to output when Gate Low is high.

Octavator – Utility



Octavator replace or offset the Octave of a V/Oct signal.

1. **V/Oct** – Input CV.
2. **Gate** – Optional input Gate.
3. **V/Oct** – Output CV.
4. **Gate** – Output Gate.
5. **Faders** – Adjust the odds of various events.
6. **Reset** – Resets internal seed to create a repetable pattern.
7. **Rand** – Randomizes internal seed to create new pattern.
8. **Detune** – Add up to 100 cents of randomized detune.

Octavator has three modes, settable from the right-click menu:

Absolute – Faders are 0 to 9. Each fader represents and absolute Octaive that is set regardless of the input Octave.

Relative – Faders are -5 to +5. Each fader represents a shift in Ocatave and is added to the input Ocatve.

Relative + Intervals – Top row of faders is -2 to +3. Bottom row adds independant faders for sub-ocative intervals.

Links

JPLab

VCV Library Page

Manual

JPFree

VCV Library Page

Manual - This PDF

Path Set

Other VCV Plugins

Joop van der Linden

Spotify

Website