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Overview

3 Step sequencer units (SEQ1, SEQ2, SEQ3)
2 Modulation units with 5 modulation engines (LFO, D-LFO, P-LFO, S-LFO, S&H)
Each sequencer unit can be controlled separately (speed, start, size, direction...)
Modulation and SEQ2, 3 can be used for internal/external parameter modulation.
Curve is used for controlling clock behavior.

You can change center panel display with this
**Modulation Panel**

There are 2 modulation units available.
Each unit has 5 modulation engines.
You can modulate internal/external parameter with these.
There are 8 modulation assignments available.

**Curve Panel**

You can make 8 curve shapes here.
These curves are used for controlling sequencer clock behavior.
Each sequencer unit can be applied one curve shape at a time.
Plugin Setup

Ableton

1, Load HY-SEQ16x3 as an instrument
2, Add another midi track
3, Set “Midi From” menu like picture above
4, Turn on track arm button or set monitor “In” for receiving midi out

Bitwig Studio

1, Load HY-SEQ16x3
2, Insert your instrument plugin after HY-SEQ16x3

Studio One

1, Add instrument track and insert HY-SEQ16x3
2, Add another instrument tack and insert your instrument
3, Set instrument input HY-SEQ16x3, with this setting midi output of HY-SEQ16x3 will be routed to the target track
**REAPER**

1. Load HY-SEQ16x3 as an instrument
2. Add another instrument track
3. Open routing menu of new instrument track
4. Set "Receives" menu HY-SEQ16x3

**Cubase**

1. Add instrument track and insert HY-SEQ16x3
2. Add another instrument track and insert your instrument
3. Set midi input menu HY-SEQ16x3
4. Turn on **monitor button** or **speaker button** of your instrument track
SONAR

1. Add instrument track and insert HY-SEQ16x3
2. Check “Enable Midi Output” Option
3. Add another instrument track and insert your instrument
4. Set midi input menu HY-SEQ16x3

Tracktion

1. Load HY-SEQ16x3
2. Insert your instrument plugin after HY-SEQ16x3
Fruity Studio

1. Load HY-SEQ16x3 as an instrument
2. Load your instrument
3. Set Midi Output Port of HY-SEQ16x3 and Midi Input Port of your instrument same number
Registration

There are 2 ways for the plugin registration.

1. Drag and drop

Drag and drop your **keyfile** to the plugin window directly.

2. Copy and paste

1. Open your **keyfile** with text editor and copy all strings
2. Click “Demo” button > select “Register” > paste it > press “register”

Once HY-SEQ16x3v2 is registered, “Demo” text will be changed to “Registered”.
**Plugin Menu**

Save : overwrites current loaded preset file
Save as : creates a new preset file
Initialize All Param Values : initializes all parameter values
Set Preset Folder : 
if you want to change preset folder location, you need to set new location with this function
Open Preset Folder : opens preset folder
Use Corner Resizer : turn on/off corner resizer
Resize : you can resize plugin window with this menu instead of using the corner resizer
Use OpenGL : if OpenGL is available on your computer, this option will show up
Reset Window Size : resets window size
Visit HY-Plugins : jumps to our homepage
Go to Manual Page : jumps to the manual page
**Preset**

You can load a stored preset file with clicking preset button or arrow button.

**Save** : overwrites current loaded preset file  
**Save as** : creates a new preset file

**Default Preset Folder Location:**  
Mac : Library/Audio/Presets/HY-Plugins/HY-SEQv3x2  
Win : C:\Users\user name\Documents\HY-Plugins\HY-SEQ16x3v2

**Resizing Plugin Window**

You can change plugin window size freely.
**Color Edit**

You can change a color of each section of the plugin.

1. click the icon
2. pick a color

**Window Mode**

There are 2 window modes available(normal, compact).

Click arrow icon, you can toggle the window mode.

The picture right is normal mode.

The picture below is compact mode.
SEQ1 can produce midi notes.
You can set pitch, octave, velo, gate, probability, slur and mute values per step.

**Sequencer control section**

- **Power Button**: sequencer unit on/off
- **Curve Menu**: sets the curve shape for the clock of this sequencer unit
- **Directions**: sets the running direction of the sequencer unit
  - >: forward, e.g. 1 > 2 > 3 > 4 ...
  - <: backward, e.g. 4 > 3 > 2 > 1...
  - >>1: for/back1, e.g. 1 > 2 > 3 > 4 > 3 > 2 ...
  - >>2: for/back2, e.g. 1 > 2 > 3 > 4 > 4 > 3 > 2 > 1 > 1 > 2...
- **R1**: random, e.g. 3 > 1 > 2 > 4
- **R2**: drunk, e.g. 1 > 2 > 1 > 2 > 3 > 4 > 3 > 2 > 3 > 4 > 3 > 2 ...
- **Speed Menu**: sets the running speed
- **Start**: sets the start position
- **Size**: sets the step size

**Rnd Panel**

You can randomize/clear step values here.
- **Range**: sets the randomize range(0 to 100%)
- **"N O V..."**: randomize target on/off buttons
- **R/C**: triggers randomize or clear action
### SetAll Panel

You can set all step values at once.

1. select target parameter
2. set the value
3. click “Set” button

### Rot/Dup Panel

**Rotate**: rotates step values left/right

**Duplicate**: You can duplicate step values.

#### Example of duplication:
If you select duplication menu 4, first 4 step of value states will be duplicated.
Click “Trig” button, these states will be applied to 5 to 16 step.

### Step Value Control

You can set step value of each parameter here.

- **Pitch**: sets the pitch of this step
- **Lock**: if lock is active, that step will not be affected by randomize/clear, setall and duplicate actions.
- **Octave**: sets the octave of this step (-2 to +2)
- **Slur**: turn on this, gate length of this step will be stretched out to the next step. If pitch of the next step is same as to this step, slur becomes "tie".
- **Mute**: sets mute on/off
- **Velocity**: velocity level of this step
- **Gate**: gate length factor of this step
- **Probability**: triggered probability of this step
**Settings**

**Goct** : sets the global octave value

**Transp** : sets the transpose value(-12 to +12 semitone)

**Transp Pre/Post** : if “Pre” is selected, out pitch will be transposed before scale process. If “Post”, out pitch will be transposed after scale process.

**Swing** : sets the swing level(-100 to +100 %)

**Scale lock** : if lock is active, scale setting will not be affected by preset change

**Scale mode** : sets the scale mode(normal, custom)

**Root** : sets the root note

**Root shift** : if this is active, output pitch will be shifted by root pitch

Example :
If root is “C” and root shift is on, shift value is 0.
IF root is “E” and root shift is on, out pitches will be shifted by +3 semitones.

**Scale mode** : sets the scale mode
SEQ2/3

Sequencer unit 2 and 3 can be used for controlling seq1 params or modulation source.

Parameter Assign

You can control a parameter with output signal of SEQ2/3.
Output signal of SEQ2/3 can be used for modulation source in modulation matrix page.

Min : minimal value of SEQ2/3 output
Range : value range of SEQ2/3 output

Example:
If you set target parameter of SEQ2 “Velo”, velocity value of SEQ1 will be replaced to output value of SEQ2.
Clock Curve Editor

You can make 8 curve shapes here and use them for controlling sequencer clocks.

“1 2” Button: sets the number of curve points
Reset: resets the curve shape

Each sequencer unit has curve assign menu.

In the case of the left picture, the clock behavior of SEQ1 is controlled by curve shape 5.
And the clock behavior of SEQ2 is controlled by curve shape 3.
Modulation

There are 2 modulation units available. Each unit has 5 modulation engines. You can make 8 modulation assignments.

**Modulation assignment**

**Modulation source** : sets the modulation source(Mod1, Mod2, SEQ2, SEQ3)

**Min** : sets the minimum modulation of this assignments

**Rng** : sets the modulation range of this assignments

**Target** : sets the modulation target

**Knob** : modulation depth(-100 to + 100 %)
Modulation Engine

LFO

Simple LFO

Parameter:

Rate : controls the lfo speed
Sync : turn on/off bpm synced
Phase : sets the start phase position

D-LFO

Drawable LFO

You can draw its waveform with multi-slider(max 32 steps)

There are 3 interpolation modes for wave drawing.
From the left, linear, spline and non interpolation.
R : randomize step slider values
C : clear all step slider values
< : rotates step values left
> : rotates step values right

**P-LFO**

Probability based LFO
Triggered waveform, LFO speed and phase can be controlled by probability.

**Waveform control**

You can set the weight of each waveform triggered probability here.

**Example:**

In this case, only triangle waveform will be triggered.

In this case, most likely rectangle and sometimes up or random waveform will be triggered.
Rate/Phase control

You can set the range of lfo rate and phase here.
If these range control is active, these values will be randomized within its range per each cycle period.

S-LFO

Sequencer controlled LFO
You can trigger different waveform with different rate per step.

Step LFO Control

Waveform Selector:
Pick a waveform then click a step slider, you can change step waveform.
You can also change step waveform with right-right menu

Step Lock: toggles the lock state on/off
if lock is on, that step will ignore waveform change or randomize

Step On/Off: toggles the step on/off state
Step Rate: sets the lfo speed of a step
**Step Rate**

There are 2 step rate modes.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode1</td>
<td>In this mode, step rate is independent from the sequencer speed of the step lfo. (except slave state)</td>
</tr>
<tr>
<td>Mode2</td>
<td>In this mode, step rate is relative to the sequencer speed of a step lfo.</td>
</tr>
</tbody>
</table>

**Mode1:**

In the picture left, step rate of first step is “Slave”. This case sequencer speed is “1/8”, so step rate of the first step is “1/8”.

Step rate value of the second step is “1/16”, so 2 periods waveform will be triggered at this step.

**Mode2:**

In the picture left, step rate value of the first step is “x1”. This means “sequencer speed of step lfo x1”. So actual speed of this step is “1/8”.

Step value of the second step is “0.5”, so in this case actual step rate is half speed of the sequencer speed of the step lfo.

**Right-click Waveform Select**

You can change a waveform of each step with right-click menu.
**Sample and hold**

Capturing source signal and holds it for the defined interval.

**Source :**
- **Waveform** : sets the source waveform
- **Rate** : sets the rate of the source signal
- **Sync** : turn on/off bpm synced state
- **Phase** : sets the start phase position

**Sample & Hold:**
- **Rate** : sets the sampling interval
- **Sync** : turn on/off bpm synced state
- **Smooth** : smoothness of the sample & hold output
**Keyboard Control**

You can control snapshot change, transpose change and sequencer trigger via midi note inputs.

**Key > Snapshot**

You can change snapshot with note value C1 to B1.

**Key > Transpose**

You can change transpose value with C3 to C5.

- C4 = +/- 0
- C3 = -12 semitones
- C5 = +12 semitones

**Key > SEQ Trigger**

You can control sequencer trigger with C2 note.

There are 3 trigger modes.

- **Mode1:**
  You can trigger/stop sequencer with note on message.

- **Mode2:**
  Once receiving note on message, sequencer starts to run and continue to run while C2 note is pressed.

- **Mode3:**
  Each note on message trigger one clock.
**Snapshot**

You can make 12 snapshots of step values of SEQ1/2/3.

**Copy/Paste Snapshot**

1. select a snapshot you want to copy
2. click “Copy” button
3. select a snapshot you want to paste to
4. click “Paste” button
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