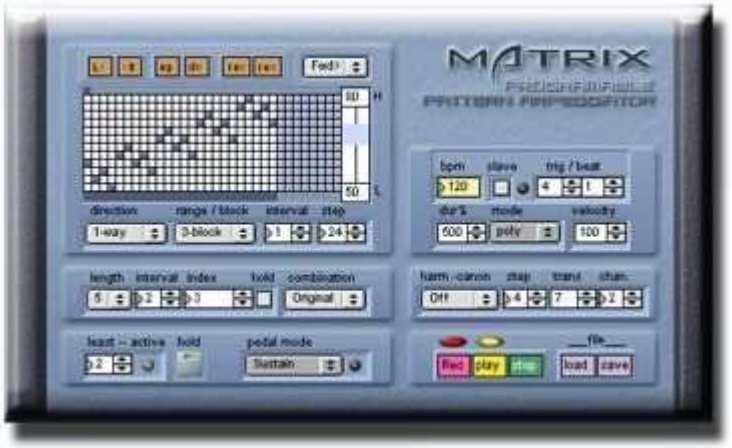
LINEAR-MOTION ALGORITHMIC™

SYNARP™

MATRIX

PROGRAMBLE PATTERN ARPEGGIATOR™



Manual

- **Introduction**

  Thanks for download **SynArp**™ plug-in.
  SynArp™ suggest Arpeggiator which is more interactive, and is unique in VST plug-in.
  Linear-motion-Algorithm™ enable unprecedented interactive performance expression
  by reacting to a change of the input chords and Those cardinality seamlessly.
  Please enjoy **SynArp !**

- **Install/Setup SynArp™ Arpaggiator Plug-in**

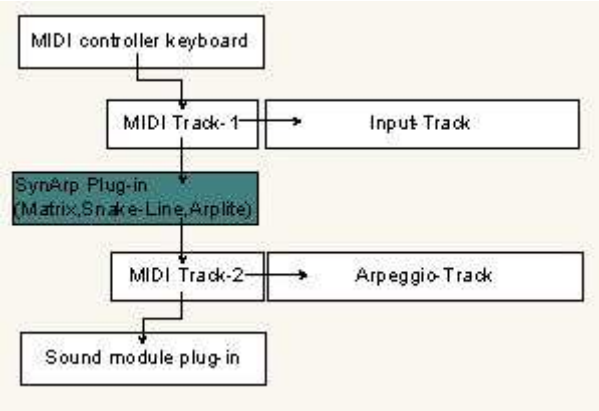
  Download "Pluggo Runtime" from Cycling'74 site, and please install it.

  Put **SynArp** plug-in(.dll) in an arbitrary VST folder.

  Start a host application, and load plug-in as a VST-Instrument.
  (For details, please refer to a manual of each host application.)

- **Setup MIDI Track**

  Make Two MIDI-Tracks with in a host application. and assume it **MIDI Track-1, MIDI Track-2** each.
  Choose each input and output of **MIDI Track-1,2** as follows.



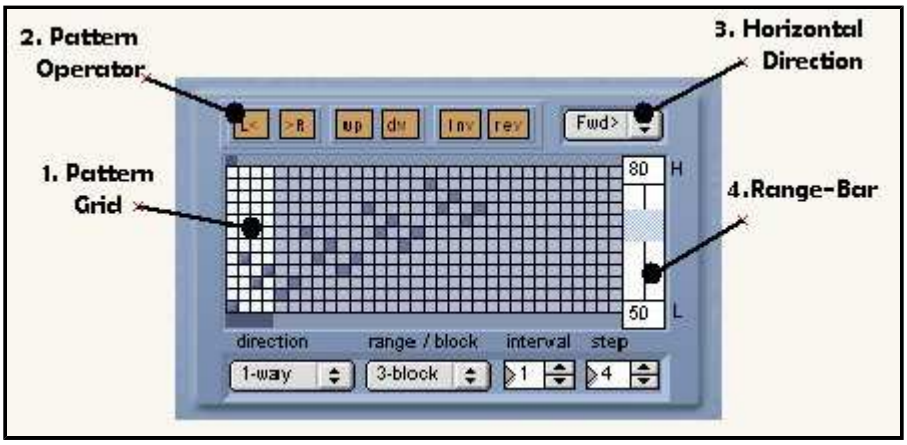
  - Choose a controller (a keyboard) as an input source of MIDI Track-1.
  - Choose SynArp plug-in (Matrix,Snake-Line,Arplite) as an output source of MIDI Track-1.
  - Choose SynArp plug-in (Matrix,Snake-Line,Arplite) as an input source of MIDI Track-2.
  - Choose an arbitrary VST instrument or a sound module as an output source of MIDI Track-2.

  In MIDI Track-1 a source (which you play with keyboards) of an arpeggio,
  and An arpeggio generated with **SynArp** returns to MIDI Track-2.

  ※ Example above is a way in Cubase,Nuendo etc.,
  In the case of other host applications, please refer to each manual.

- **Explanation of each part**

pattern editor



1.Pattern Grid

Edit and operate a pattern with mouse click. A "rest-note" is effective.
"active - rest" is replaced by a click in turn.
Consecutive same notes are tied-up with a [mono-tie] mode.(setting of a play mode)

2.Pattern Operator

Various transform operation of a pattern in active range on grid.
(Operation is not possible during an arpeggio run)
[L<][,R>],[up],[dw] button -Move by one step in top and bottom, right and left each.
[Inv] - Vertical Inversion.
[rev] - Horizontal Inversion.

3.Horizontal Direction

Choose a progress direction of a pattern. (Movement direction of a running cursor)
[forward]/[backward]/[lap] - Forward,Backward,Lap(Forward and Backward) each.

4.Range-Bar

Set the range of arpeggio. Sets top and bottom value individually by Shift+click.

Direction

[1-way] - up or down.
[lap] - up and down, or down and up. (Up/down direction depend on interval value with +/- .)

Range/Block

[Rnage] - Set a range of an arpeggio by a Range-bar. (Number indication of a range bar both ends is the note-number)
[Played] - Set a played -range(such as on keyboads) as a arpeggio-range.
By this setting, you can control an arpeggio-range in real time by pressed key-position.
[2-block]～[8-block] - Set an arpeggio with a 2～8times of step-block number.
An arpeggio start point is decided by setting of a range bar.
(The high value for downward direction, the low value for upward direction is effective each)

Interval (-5～+5)

Step interval of pattern.Positive numbers for an upward. negative numbers for downward direction.

Step (2～32)

Set the number of steps of a pattern. you can operate even a bar under a pattern-grid.
also, set a range to edit by [Pattern Operator].

pattern generator

length
Set a block size.
interval
Set an interval between pattern-blocks.
index
Index for permutations of pattern-block .
A variation of block-pattern by permutation has factorial of block size each.

block-length	2	3	4	5	6	7	8
index-variation#	2	6	24	120	720	5040	40320

combination
Set a type of pattern-combination .
[Original] Original pattern form.
[O+I] (original+invert) Pattern that reversed every block vertically.
[O+R] (original+retoro) Pattern that reversed every block horizontally.
[O+RI] (original+retoro/invert) Pattern that reversed every block verticallyandhorizontally.

In-put

Set the input and pedal control here.

least-active
Set the minimum number of notes in the input chords.
Get rid of unevenness of a timing of the chord input by setting it precisely.
This is the way that the fastest, and is effective, when sample a chord precisely from keyboard.
Display an active state by indicator.

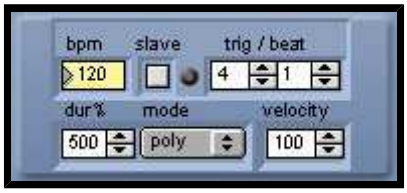
e.g. When you play a chord of 3 or 4 notes, you should set it to 3.

hold
Hold of an input chord and you can add a notes.
You can control it in controller **#69** .

pedal mode
Set a mode of sustine-pedal effect with control change **# 64**.
[Sustine] : Sustine-pedal effect.
This is not the through transmission of a "#64-sustine"message such as to sound module/midi-track, and effect is added by Matrix itself as a duration date. It is reflected directly for output MIDI-duration data.
[Sus-hold 1] : hold of a notes.
[Sus-hold 2] : The mode which turned over in ON/OFF of Sus-hold 1.
[Arp-on] : An arpeggio starts in pedal on, and an arpeggio is off in pedal off.
[Arp-off] : It is a turning over mode of Arp-on.

※Controller messege (except #64,#69) is just handed to an DAW track and/or sound module.

Quantize/Play-Mode



BPM/Slave
Set a tempo /synchronization with a host.

Quantize Trig/Beat
Set the number of times of trigger per every beat.

Duration% (5～500%)
Set duration in a ratio of a note value set in Quantize.
～50% for staccato,100% for legato,100%～ for pedal effect.

Play-Mode
Choose a play mode
[poly] - play poly mode.
[mono] - play mono mode.
[poly-nobis] - No repetition of the consecutive same notes with a poly-mode.
[mono-tie] - Consecutive same notes are tied-up with a mono-mode.

Velocity
Set velocity.

harmonic-canon generator

Set a [Harmonic-Canon] Effect here.
"Harmonic" adds a harmonic-line to an original line,
and "Canon" is delayed for a certain step from an original line and runs after it.
These two pairs create various harmonic-canon effects.

harm-canon
[parallel] - 2nd-arpeggio line is a parallel transposition of an original line.
[harmonic] - "Harmonic" does a transpose of a arpeggio-line with unique and peculiar ※Tonal-Harmonic-Agorithm.

※Tonal-Harmonic-Agorithm
Calculate consonant interval of an input chord automatically, and perform a transpose by the interval appointed in **trans**.
Please enjoy the harmonic-idea that is varying with an input chord variously without being seized with a standardized specific scale and chord.

step
Set a step# to start a canon-line. Count an original-line for 0.

trans
Set a transpose# of a canon.

chan.
Independent another Midi channel can set for a canon/harmonic-line.
Various variations are enabled by a combination of a tone-program.

recorder

[Recorder]

Performance in [Snake-Line-Arpeggiator] is possible to record with this recorder.
and it is possible to store/read as midifile.

Click it in order of **[Rec]** → **[play]** to do a record.
[Rec] button serves as a function of an auto record start.

Red LED turns on when you click a **[Rec]** button.
In this state, recorder start a record automatically when you begin to play on your key-boad.

[play] - Playback of a recorded performance.
[stop] -Stop a record or a playback.
[load] -Read a midi-file for play back.
[save] -Store a recorded performance as a midi-file.

Linear-Mortion-Algorythm™

In the case of approximate Arppegiator with simple algorithm, accompanied with a occurrence of an note-leaps with a change of an input chord.As this reason, it pronounce input note (reffer to a list) in specific order simply. As well as it,there is the kind that used re-trigger for as these measures.
In the case of this algorithm, deal with "change of an input chord" by giving "re-trigger"(reset) every note-on information.However, in this case, an arpeggio line is reset with every "re-trigger" (a chord change), and a natural line form breaks off."**Linear-Mortion-Algorhythm(L.M.A)**"solves these problems.
L.M.A, does return position-information of pronounced note by referring to a list at every pronunciation (trigger), then calculate the next note based on the position-information and appoint it.
The smooth arpeggio line which is not affected by a change of an input chord is enabled by this.