

Epic Arpeggiator V3.0

User Manual

Thanks for downloading the Epic Arpeggiator tool for Renoise.

In the next few pages i will give you detailed instructions of how the tool can be used in its basic form. Beyond that you have uncoverable levels of experimentation and exploration by executing endless possible combinations of figures that automate note creation process for you.

There are some limitations that apply in certain situations there where you can't go beyond, but those are explained here, yet in the majority of cases the limitations are self-explanatory (or are for your discovery where there are - or are no limitations :)).

Requirements for Epic Arpeggiator V3.0:

- Renoise 2.8.1
- Creative mind

Change log V2.0 → V3.0

Changes

- Minor changes like locking GUI options which do nothing in specific situations.

Additions

- Added UI customisation for the pattern arpeggiator
- Midi and PC keyboard recording for the note profiles
- Instrument envelope arpeggiator added (with some limited undo management)
- Scale Finder tool embedded

Change log V1.99 → V2.0

Changes

- Minor lockdowns on non function options depending on the combinations picked.
- Adapted to Renoise 2.8.0 to anticipate track aliases

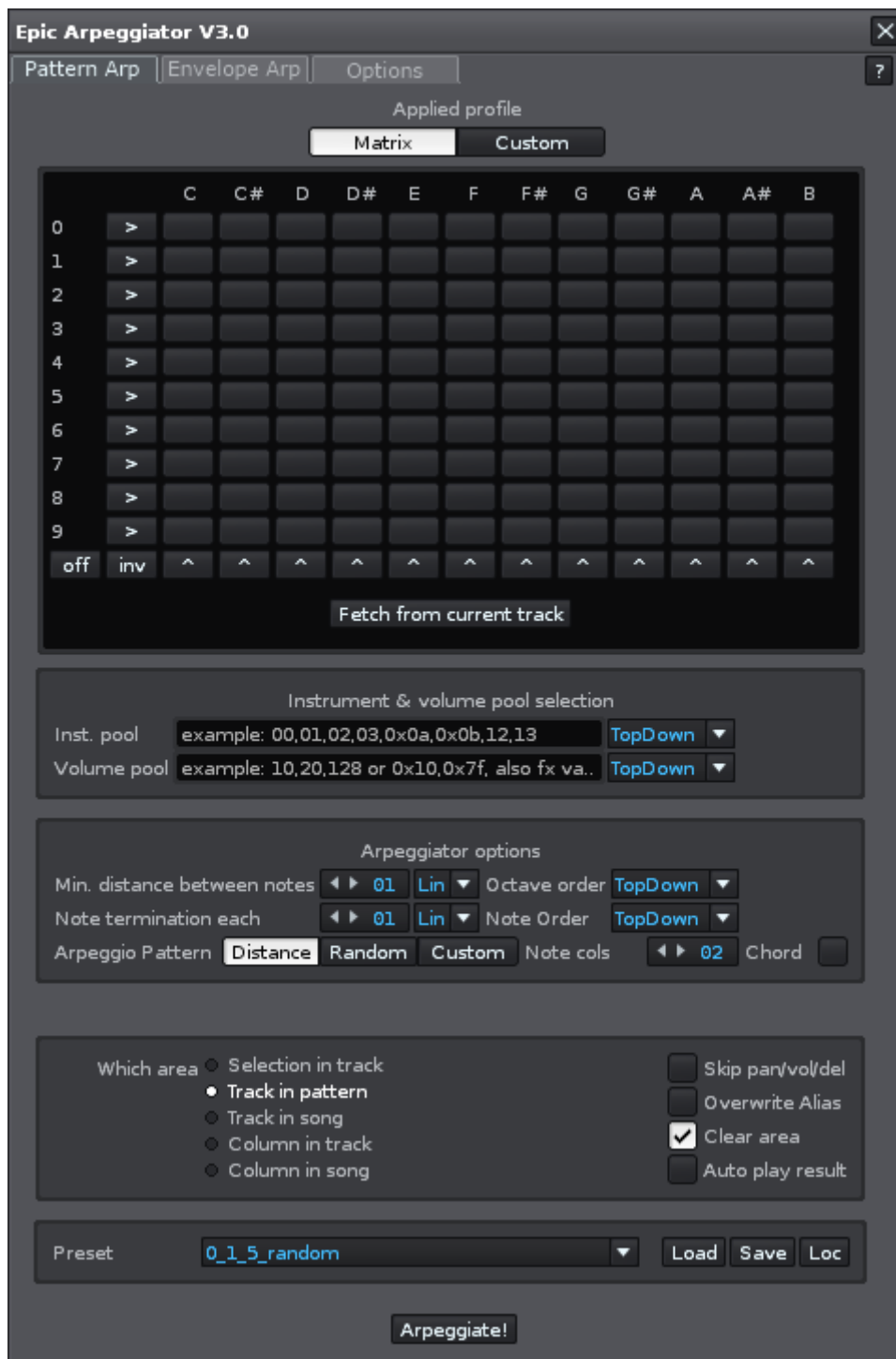
Additions

- Added binary mode for the custom arpeggio pattern
- Added preset saving/loading

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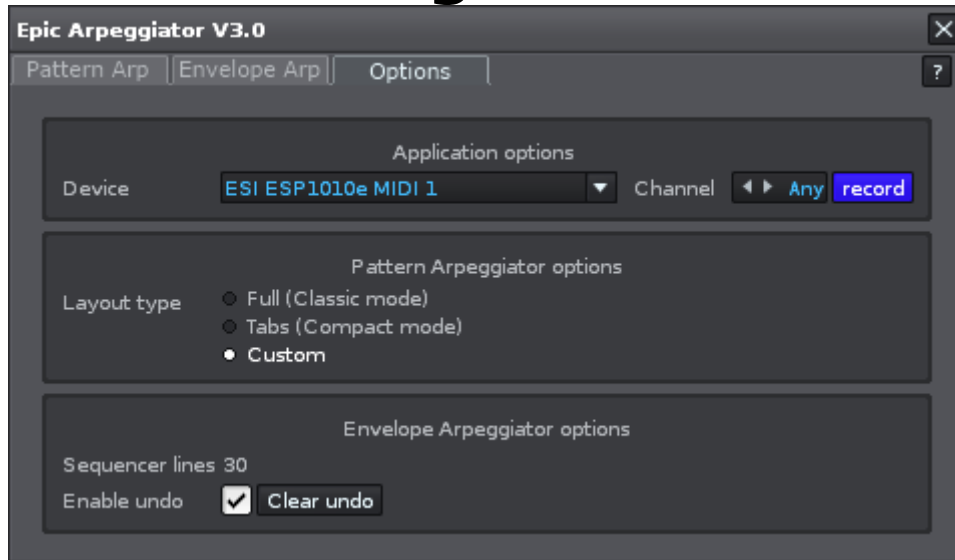
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In the Epic beginning, there was the matrix.....
Then there was too much:



If you are a veteran user, you are familiar with the above interface, yet two tabs will probably catch your eye and you are right: Those are new in V3.0. Regardless whether you are a new user or a veteran user, both should start configuring a few options first to adjust the tool to fit your need...

Configuration



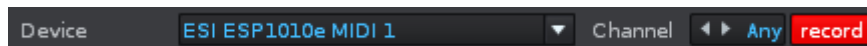
As you notice the big bulky tool-dialog the way it starts up initially, this demands quite some screen estate and specially for the net-book users, this hardly leaves space to look behind the tool and see what it is actually doing to the pattern editor.

So i made the tool a bit more Netbook friendly by allowing to customize the view of the Pattern Arpeggio tab. But the options start with a Midi device setting and a blue record button:

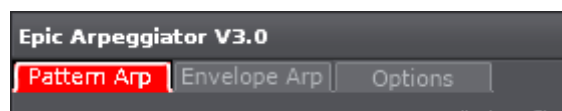


This device you can set to control input of notes into the tool, either in the matrix, or custom note pattern of the Pattern arpeggiator, or the note sequencer of the envelope sequencer.

The blue record button turns red if you click it, you can also toggle it by pressing F5 or Esc (Like you toggle record mode in Renoise). As soon as it turns red, record mode is armed and depending on which area you have selected, notes will appear there when you punch them in on your midi device...

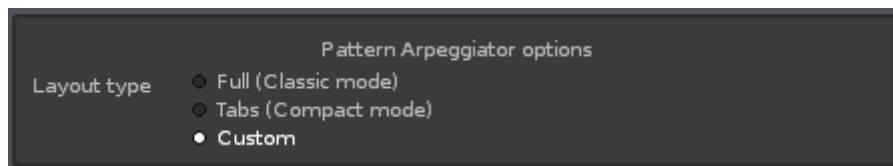


To keep you reminded whether record mode is enabled, also the specific tab of the area that you are manipulating is turned to red.



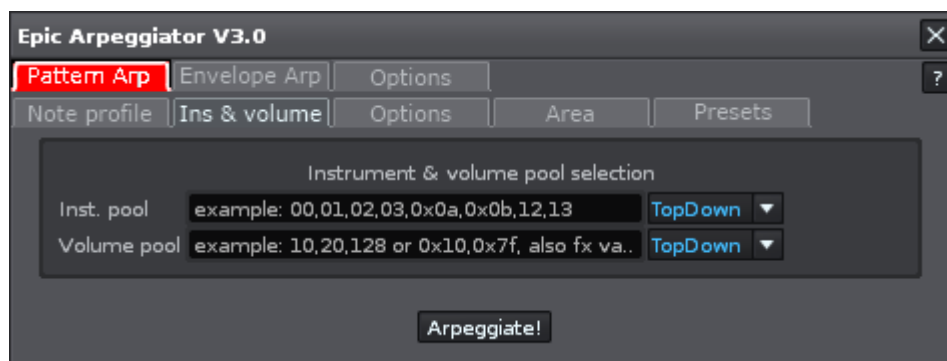
Note that if you do not have a Midi device, you can also record using your regular QWERTY (Or AZERTY / QWERTZ) keyboard just as you can do in the Renoise pattern editor! (See the renoise manual for details on how to use the computer keyboard)

Pattern Arpeggiator options



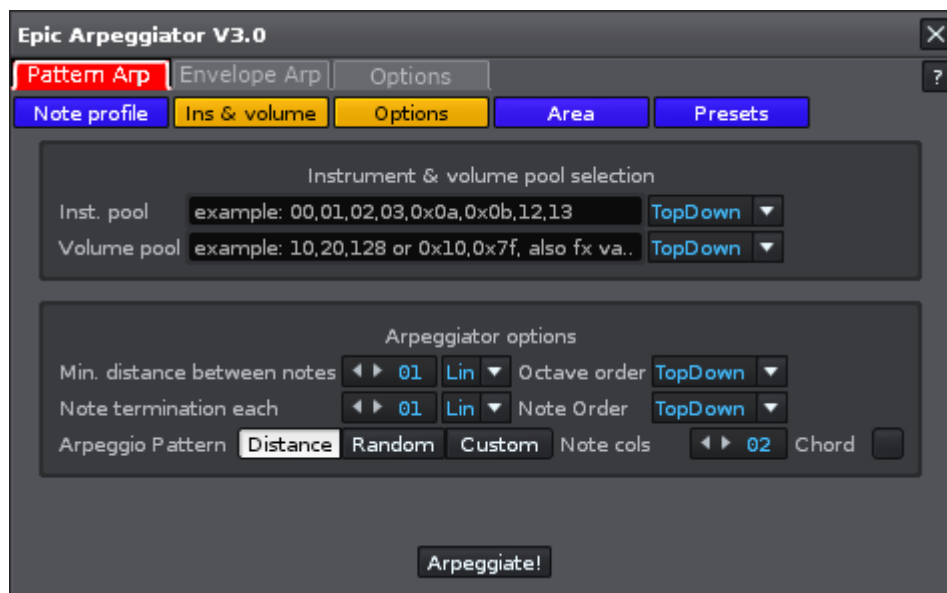
With the layout type you can customize the Pattern arp view. Either shorten the window by tabs or allow hiding specific areas that you don't need...

Tabbed:

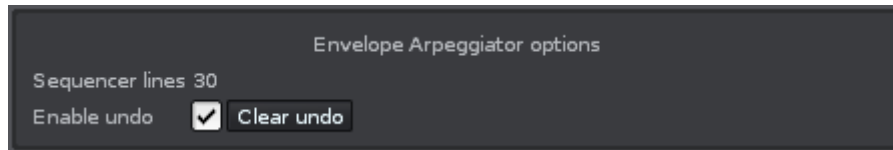


You can navigate the subtabs with Ctl/Cmd tab and Shift+ cmd/ctrl + tab

Custom:



Envelope Arpeggiator options



Sequencer lines 30

The sequencer lines allow you to adjust the amount of visible lines in the envelope sequencer. In the envelope sequencer, you can set this amount as well, but if you accidentally set this to a range where you can no longer change it because the field disappears beneath the screen border and the tool's top border can't be pulled any higher, then this is the only place where you can still recover that.



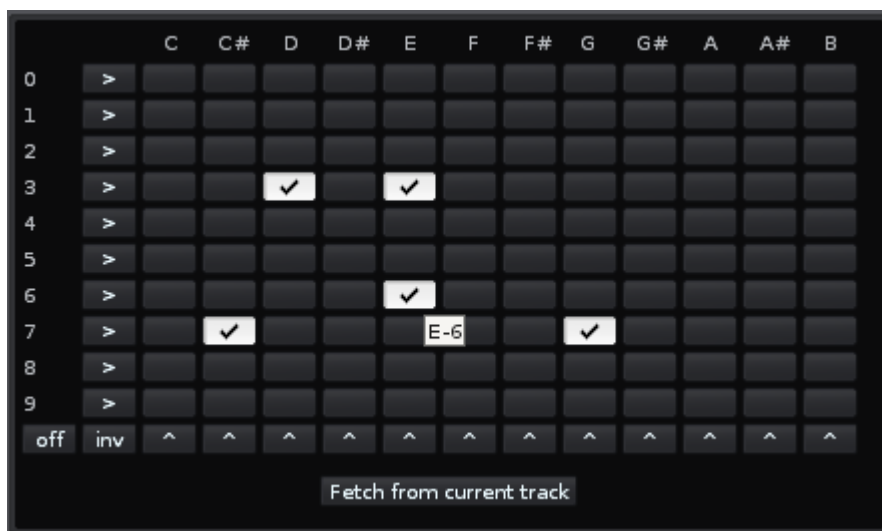
Epic Arpeggiator comes with an Undo Buffer for the larger changes in the envelope arpeggiator (This really only works for the envelope Arp!), these changes involve fetching notes from the envelopes/pattern or toggling volume/panning assistants. Pressing Ctrl/Command-U will pop up the undo dialog. More about that later.

Pattern Arpeggiator

Note profile



The first thing that you notice is the big matrix on top of the arpeggiator. The top row represents the note-column notations. The vertical figure row represents the octave rows. Each matrix button represents a checkbox, enabling it will add the note into the note-chain that you assemble to send to the Renoise pattern editor track. If you hover above a checkbox, it will show you the full notation of the note that it represents in a tooltip.

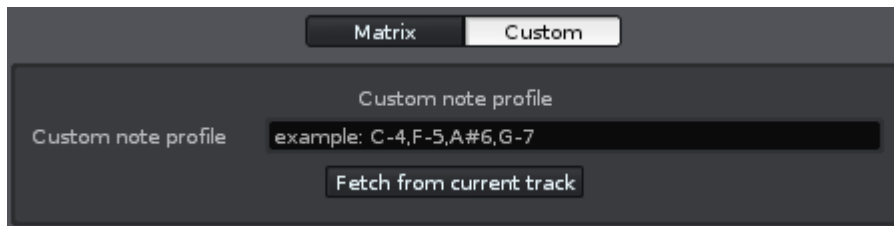


The arrows on the left side and bottom row invert the selection of the respective row or column. The Inv button inverts the whole matrix, the Off button toggles everything off.

If you click the “fetch from track” button, notes will be fetched from the

pattern editor, depending on the specific area that you have selected (area tab or Area toggle when in custom layout).

Custom note profile



If you toggle the Custom button, you get a note profile input field. In here you can insert note-combinations that are impossible to achieve with the matrix (like a double C-5 or specific sub-sequence ladders that should be repeated throughout the chain (e.g. c-5, d-5 , e-5, c-5, d-5, c-5, e-5)).

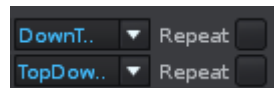
The fetch from current track button performs the same operation as it does with the Matrix, the only limitation here is that the area "Track in song" or "Column in song" does not work (both areas do work for the matrix).

Rotation schemes



Before we continue with the explanation for the next sections, first i want to explain one of the generic options around:

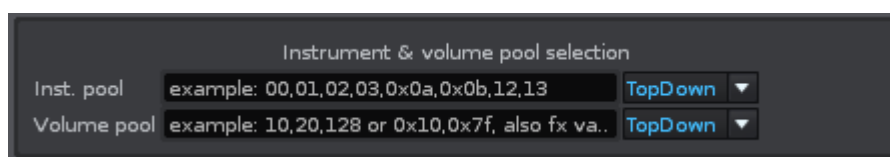
The rotation mode counts for several options in the Pattern arpeggiator, the TopDown DownTop can also be interpreted as LeftRight RightLeft when relating how values from the profile line are fetched and used. The TopDown phrase is actually coming from the Ferris Wheel that i named the routine to rotate the pools, so this rotation mode simply sets how the ferris wheel is turning to let people in and out and which folks get in more often and who are only allowed one ride :). To allow the first and last folks one extra ride like the rest, pick the TdT or DtD schemes and the following checkboxes appear:



The repeat boxes take care that the first and the last entry is repeated one more time before traversing to the next or previous entry in the list.

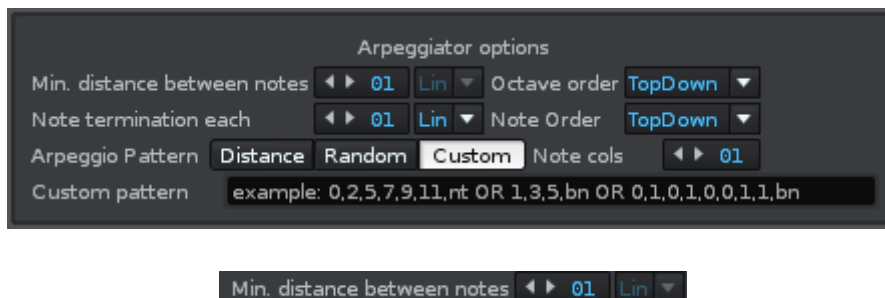
The random option does not take the line that folks are waiting in too strict and randomly allows one and another a ride. It does attempt to give anyone a fair turn though!

Instrument and velocity profiles



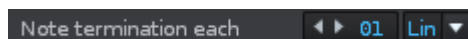
The instrument and volume pool is where you put the instrument references and volume values. Each note will contain one value of these pools depending on the rotation mode that you have selected behind the pool-line. Both input lines allow decimal or hexadecimal values for input so you don't need to convert values if you don't know them by head. The volume pool allows you to use any particular value that can be added to the volume column, these include the fx commands.

Arpeggiator options



The minimum distance between two notes is like the word explains: how many steps to take before the next note is initiated.

Two modes for it exist, however when the amount of note columns is set to 01, lines will be the only option. The other option is delay distance and for this purpose you need to enlarge the "Note cols" value to make that option effective. It will keep setting the distance between each note pair and also respects this value when repeating the pattern. If you cross pattern boundaries, the routine starts relative to position 0, so a line distance of 65 means in fact a line distance of 1 if your pattern size is only 64 lines large. Pattern sizes can differ within a song, i had no other idea how to solve this, sometimes the routine thinks even for its own when you cross boundaries but the tool should not crash.



Note termination sets the amount of lines or ticks to wait to terminate a note. When using ticks, it will place a note-cut command with the given value behind each generated note. The note-cut command is limited to a maximum value of 14 however for the reason that the value field does not rise above F and F is reserved for a different purpose. For sample based instruments, notes are instantly cut where for plugins, they will receive a note-off command for the specific triggered note. If you desire NNA and instrument envelopes being applied to the note upon internal instruments, you then need to use Lines mode instead. Each so many defined lines, the routine attempts to place a note-off but the spot will always be superseded by a new note if the next note position determined by the distance between notes routine overlaps a note-off position.

Arpeggio Pattern Distance Random Custom

The arpeggio pattern offers three placing modes in which it generates an arpeggio note scheme for you in the pattern editor:

- Distance (using above given note termination and distance values)
- Random, where still given distance and termination are respected as minima, but the routine determines where to set the new spot if this across any of these set boundaries.
- Custom: A custom distance mode

Custom pattern example: 0,2,5,7,9,11,nt OR 1,3,5,bn OR 0,1,0,1,0,0,1,1,bn

With the custom pattern you can also go two ways of defining what comes where:

- Literal mode: Here you tell the routine exactly on which line a note has to be placed.
- Binary mode: If you use binary mode, every 0 or 1 represents the specific line related from the first figure that you entered. So 1,0,0,0,1 means that on line 00 and 04, a note is entered.

The nt or bn are flags to let the routine know what to do when the custom pattern cycle ends and a new cycle has to be started. When ending with "nt" you tell the routine to pick the note termination value. "bn" means that the value between notes has to be picked to keep as a space between the previous cycle and the upcoming cycle.

Literal mode gives you the possibility to define a complete pattern design with the least input, but requires you to check out the line numbers up-close for fitage.

Binary mode makes it easier to see a more specific pattern, but requires a lot of input if you would design a pattern for 64 or 128 lines.

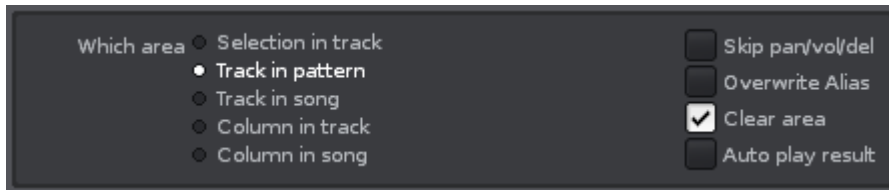
Note cols ◀ ▶ 02 Chord ☐

The amount of note columns that you set give you the opportunity to create a faster arpeggio rate than the line interpolation allows you (if you don't want to raise the BPM or LPB to get the faster pace). If you raise it, the "Chord" checkbox also appears. This checkbox allows you to fill up each note-column with a note from the rotation profile until the line is full and then advances to the next position according to the arpeggio pattern that you picked it to fill the lines out. The chord checkbox gets disabled when the distance between notes is set to delay, because the chord feature doesn't add any influence with the delay distance selection.

Octave order Random ▼
Note Order Random ▼

One thing you should know is that random mode applies to both octave and note-order, always, so you can't set one to random and have the other one operate in a different rotation scheme. Reason for this is that the random turns a lot less random or sometimes even makes incorrect combinations when the note-matrix scheme is used.

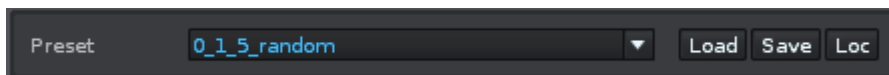
Execution plan



The area of selection should be quite clear to what area your programmed schemes should be applied to. A lot less obvious is that this area is also used when using the "fetch from current track" option in the Note matrix or custom note profile. In the note matrix all areas apply regarding the fetch from track. For fetching notes for the custom note profile, the "...in song" options are not applicable.

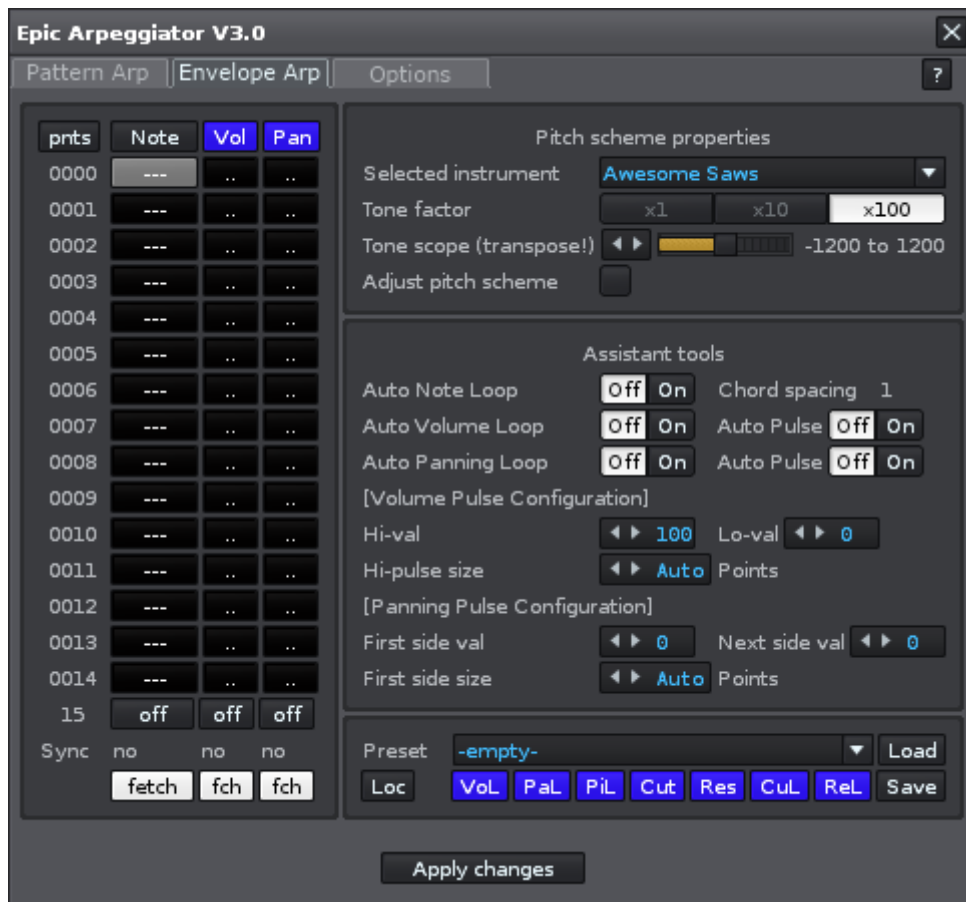
- Skip pan/vol/del: do not crosswrite existing values unless note-cut commands
- Overwrite Alias: If a track is an aliased track from another pattern, by default it will not be populated with generated content. However if you check this box, it will apply the schemes regardless.
- Clear area: Clears the selected area prior to adding new content.
- Autoplay result: Start to play from the beginning of where the content got placed.

Storage



Pretty self explanatory, but you can store your configured profile to a preset file and reload the preset back later. The "Loc" button pops up an explorer / finder window to show you where the presets are located (In case you want to share with someone or back them up). If you push the "save" button a dialog pops up allowing you to enter a preset name. By default the current selected preset name is given. If you want to overwrite it, simply hit enter and confirm the overwrite dialog (or cancel to abort). Else simply change the name.

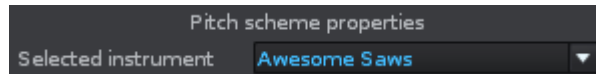
Envelope Arpeggiator



The envelope arpeggiator is a sort of mini sequencer where you can create your own note sequences being ported to the pitch, volume and panning envelopes of the instrument. As a bonus, the tool allows you to store and recall the other envelope values, together making it more or less a full preset manager for internal instruments compared to the simple envelope preset storage boxes that offer you limited space for single envelope shapes.

Some buttons have multiple functions depending on the key-click combinations that you make and there is even a special version of the scale-finder tool inserted to allow you to generate chord arpeggios. If that is not enough, to relieve you with some of the pain for manually typing in stuff that doesn't edit as easily as the pattern editor, there is an option that allows you to import pattern editor content, and full chords will automatically be converted to an arpeggio scheme.

Instrument selection



I start off with the most important thing to do first and this is simply select the instrument on the right side underneath the pitch scheme properties, of which you want to affect the envelopes from (or get values from). Be sure that your selected instrument is based on samples. It may contain plugins, but these are **not** affected.

Envelope sequencer



Getting to the envelope sequencer, let's simply start with a few of basics regarding the sequencer.

The sequencer does a lot of stuff that you can also do in the pattern editor, be it that it isn't that enhanced on every area and on certain areas it is more enhanced.

Let's start with the first button in the upper left corner:

pnts This button swaps recording mode between lines and points.

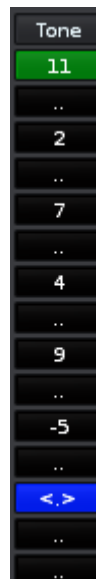
The sequencer is divided into rows and each row represents a point in all cases. However when you edit/record notes or values, you can let the sequencer automatically skip the amounts of points for you that represent one line as played in the original pattern editor, whereas when you have it set to points, it will always skip to the next edit step position in rows as it would do in the pattern editor.

The Edit step in the pattern editor is completely in sync with the envelope arpeggiator, so when you change the edit step in Renoise or in the tool using

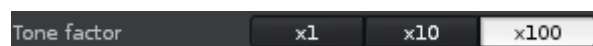
the same (default!) short-cut key combo, the Renoise edit step will be altered and both Renoise and the tool apply this step-skipping.

Note The note button swaps to tone mode, which allows you to set direct note-values for usage in the pitch envelope.

If you toggle it to tone, you will see the representation of the same note-scheme as is depicted in the introduction image, but then in note-values:





With the tone mode, also the tone-factor switch gets active:



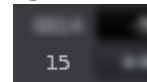
This allows you to work with larger note-values in higher precision allowing you to reach less common tones. This enables you to work with microtonal schemes within a two full octave scale using note-value ranges from -1200 to +1200. Each full note is represented by a full 100 cent tones. If you really prefer a value like 733, then you need to set the factor to "x1". If you need note division values like 77 of 55, then setting the factor to x10 will do (these values will be translated to 770 and resp. 550 cents).


Well i think you get the hint of how these conversions are done.

One important warning if you change back from tone mode to note-mode: the routine is automatically adjusting your values from the full 1xx scale back to a single semitone value and all note values that end up with decimals after the division by 100, are rounded to its nearest semitone. So you loose these values. You should be able to "undo" the performance by hitting CTRL-U and bring back any of the older change conditions which still contains the older values. Nevertheless, just a warning ahead so that you don't experience unpleasant surprises.

  The vol pan buttons are toggle switches, just like the VoL/PaL/PiL/etc. Buttons down below, if they are yellow lit, the values are applied when you hit the "Apply changes" button.

On the bottom left of the sequence row number indicators, there is another figure next to the loop buttons:


 Here you can set the amount of visible lines as explained earlier in the config section. And also explained, if you accidentally raise this number above a size that you no longer can correct, you can still recover that by rechanging the value inside configuration tab.

In the lower area, next to the row-count option, you have the loop-buttons that represent the loop-mode for each envelope they are placed underneath. Each button allows for all four states. (Loop forward, backward, ping-pong and off) 

Beneath that, is the line-sync row: 

You can make the routine automatically synchronise the note positions that each note reflects in the amount of lines that each pattern line takes. This also means that if you change the LPB, that the sync-mode adjusts the scheme everytime. Do be aware! It rearranges your note structure to measure up exactly that distance which means that uneven groove compositions get lost in the reconstruction, so use this option only if you are truly working with straight forward arpeggio schemes. You can have each envelope option synchronised to different line distances. One tip: if you only require one setting for all three columns and you do use a straight forward scheme, enable the auto pulse options for the other two and only set the sync value in the note-column, you will notice the other two columns will be automatically adjusted.

Underneath that are the fetch buttons. These buttons have multiple options, if you just plain hit the dark-grey buttons, you fetch the specific linked envelope-values and positions stored inside the selected instrument.



If you press the alt-key, the buttons turn white and for each column in the arpeggio sequencer, you fetch the column value of the selected area in the current pattern (note/vol/pan column are 1:1 linked to each other).:



If you press the shift-key, the buttons turn light-grey and in this case you fetch the contents of the complete track for that specific selected column.



If you hit the control/command key, only one button lits red and this will fetch all values from the current selected track for all columns:



You can also ctrl/cmd-Alt, which allow you to do the same for each note/vol/pan column but then the selected range in the track:



And if you perform a ctrl/cmd-shift, you will fetch the note/vol/pan values for the currently selected note-column:



For the modifier keys count: the right side modifiers accept keyrepeat, the left-side modifiers do not, but you get **one second** to click the button before the modification mode is being turned off again.

Navigating the envelope sequencer

The majority of navigation keys that you have at your disposal in the Renoise pattern editor count for the envelope sequencer as well, these include the default cursor keys and the page up and page down keys (or next/prior keys)

- Home jumps to the top of each column
- End jumps to the end marker of the specific column
- Ctrl/Cmd + End jumps to the absolute maximum that an envelope can be in size (1000 points)
- Ctrl/Cmd + up: jumps one edit step amount up, if mode is points, it will jump the edit-step factor in points, if the mode is set to lines, it will jump the amount of points reflecting the full amount of pattern editor lines.
- Ctrl/Cmd + down: jumps one edit step amount down, if mode is points, it will jump the edit-step factor in points, if the mode is set to lines, it will jump the amount of points reflecting the full amount of pattern editor lines.

Global keys


There are not many global keys, but there is a set of global keys that operate everywhere:


- F5 / Esc : toggle edit mode
- Ctrl/Cmd + 0-9 : set edit step size 0 to 9. (either numpad or upper row keys work) this affects the Renoise edit step size!
- Note keys: when edit mode is turned on: add notes into the free profile fields or toggle the specific note in the note-matrix
- [/]/[*] : Octave up / down (most useful if you only have the pc keyboard to punch in your notes), this affects the Renoise octave selection.


Arpeggio sequencer legenda and symbols

Speaking of colors, there are a few inside the sequencer as well:



 A green cell indicates a loop-start point

 A blue cell indicates a loop-end point in the envelope

 A White cell means that a sustain node is being set on that location

 The Cursor position is indicated by a grey cell, it overrides any other color.


 In Edit-mode, the cursor color is ofcourse:red.


  Any combination of different loop start/end and sustain positions that overlap eachother, result in different color mixes.



If you have the auto-sync mode turned on, you will notice the loop and sustain nodes shift if you drag these real-time in the envelopes. This is a good way to get an idea of how this visual representation relates exactly to the envelope positions.

Then there are a few other specific indications that have a specific meaning:

 This is the end marker to indicate that the envelope should end at this point. You cannot mark anything below point 6, as it is the smallest size an envelope can become. If no end-marker is set, the routine attempts to "guess" where you want your envelope to end, also a bit based on which assistant tool you are using, but you are encouraged to help the arpeggiator out by setting this delimiter at all times to be sure that envelope sizes terminate at the exact desired point rather than an estimated position.

 A bracketed note means that the note value falls outside the two octave scale range that can be supported by the pitch envelope. The base-note always sets off from C-4 and from there you can go to C-3 and C-5, anything higher or lower is getting between those brackets. You can use the tone scope with the "Adjust pitch scheme" checkbox checked, to shift the whole note-column in the arpeggio sequencer to a range where the note falls within the reachable scope. If anything falls outside the scope, the note-value is translated as the maximum or minimum value that the pitch envelope can handle. In tone-mode you will notice a value being outside the the range. When editing values, you don't get a change to submit anything outside this scope, these situations only occur when you fetch values from the pattern editor, but to prevent loss of values, they are retrieved. The tone scope shifter allows you to shift the note-range into the scale without you having to shift the note-pattern in the Renoise pattern editor instead. Do not have the auto-sync mode turned on when using the tone scope if you do not desire the sample-transpose slider to shift in the opposite direction! (more about these functions later).

Pitch scheme properties, tone scope in detail

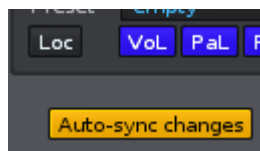


I have mentioned the tone-scope option a couple of times.

As said: The tone scope allows you to shift notes inside the envelope arpeggio sequencer, that fall outside the scope back into the scale that the pitch envelope can hold, but only if you check the "Adjust pitch scheme" checkbox.

There are a few reasons for this:

The main usage for the tone-scope is to shift the sample transpose of all samples a certain pitch. e.g. If your note pattern starts at a B-3 and you want to shift the offset a relative semitone up to a C-4, you allow the sample-transpose to add one semitone without you having to change the the note-table in the arpeggio sequencer. For the sample transpose changing, you need to have the "Auto sync-changes" mode turned on! (it is just a security measure, more info about the auto-sync feature further on in this document.)



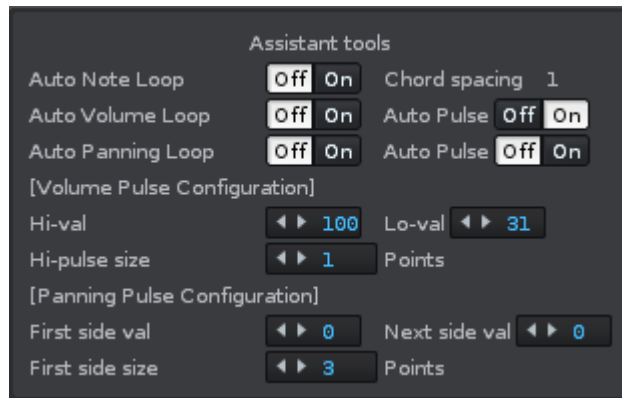
Most of you, probably don't prefer to mess up the sample transpose value (specially if you have multiple samples with different transpose offsets of which you don't know you are going to cross boundaries), the second reason is that when you import a note-scheme from the pattern editor, some notes might end up more than one octave outside the available scope that the pitch envelope can handle.

As long as your complete sequence itself falls within a scope of two octaves, you can shift the sequence up or down one octave having the adjust pitch scheme checkbox checked, then uncheck it, shift it back to the center and then check it again and do another shift for the remaining notes that still fall outside the scope. Though this method is cumbersome, the shifting feature is frankly designed with minor shifting alterations in mind for perhaps a few notes that fall outside the scale or simply a whole sequence that need to offset from a different starting note. This is also the reason why the input fields don't allow you to perform massive shifts of over two octaves. → you can click the start or end range of the scope range indication and insert a direct value which gets rounded up or down to 100 cents. Depending on which field you modify, the other field gets automatically adjusted one full octave away from the adjusted field.



The tone-scope transpose shifting using the input fields can be undone with the undo manager, the transpose scope changes done with the slider are stored with intervals, sample transpose values of the instrument samples are not reversed with the Undo action though!

Assistant tools



The assistant tools allow to make a lot of your editing-life a lot easier in the Arpeggio sequencer.

Auto loop options

The auto-noteloop will automatically set the start and end loop points and creates an envelope termination point for you, based on the note-distance. This might not work out well if you have a specific groove in your sequence pattern and the termination point should be put elsewhere of where it got calculated, in that case you can always turn off the loop assistant and adjust the end-termination point and perhaps also the end-loop node position in the sequencer.

The same counts for the auto volume loop and auto panning loop.

Auto pulse options

The volume and panning columns in the arpeggio sequencer also allow for an auto-pulse generation, which means that based on where a note starts, it sets a primary value and regarding the size setting, it will set a secondary value at the position x-points away from the primary value point.

So in the above case, the volume pulse would set the hi-val volume to 100% on a note start position on the same row and then set it to 31% the next point that follows the hi-val position (because the hi-val size is set to 1 point).

If the size field is set to "Auto", it will make an estimate by dividing the position in between the middle (or as much as possible in the middle) of two note values where a primary value is being set again.

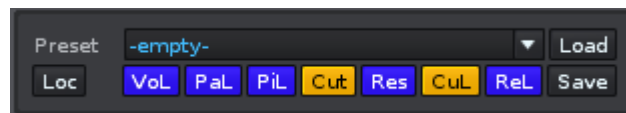
A size can be as large as 512 points, but the secondary value will not be positioned if the size exceeds a position beyond the next primary value position. So if in the above volume example, the next note would instantiate on point 3 and the hi-pulse size would be set to 4, there won't be a lo-val positioned on point 4 but 4 points further than the lo-val that started at position 4. Just raise and lower the size value and observe what happens in the sequencer to get a more animated idea of how the above explanation matches the result.

Chord spacing

Perhaps not completely in order of appearance, but the chord spacing is an option that applies to the pattern editor fetch facility and the Scale Finder feature, which means that if you have a chord in a track consisting out of 2 or more notes on a row in multiple note-columns, you can tell the Arpeggiator how many points it should space between each note after fetching the chord. This gives you the room to configure the pace of a chord-arpeggio, given that it fits within the same line! The amount of possible points that you can set the chord spacing to depends on the LPB setting, you cannot raise higher than the line-time a chord can fill.

The reason for this is that you can also fetch a complete sequence from the track including the chord lines and these must be in cope with the tempo of the complete sequence. If you want to have a slower paced chord, then lower the LPB. It won't make much difference if you raise the BPM to compensate the speed of lines being played though.

Presets



This section allows you to save and load presets.

The colored buttons stand for the following envelopes that are being saved and depending on their toggle-state (lit up yellow) also being applied when hitting the "Apply changes" button:

VoL – Volume LFO parameters

PaL – Panning LFO parameters

PiL – Pitch LFO parameters

Cut – Cut-off envelope parameters

Res – resonance envelope parameters

CuL – Cutoff LFO parameters

ReL – Resonance LFO parameters

All the values are **always** saved with the preset, yet these can only be edited within their respective envelope section in the instrument itself. The trick for applying specific envelopes after loading the preset is: simply toggle these envelopes that you want to be affected before saving to a preset, because the toggle-state of these buttons are saved along :)

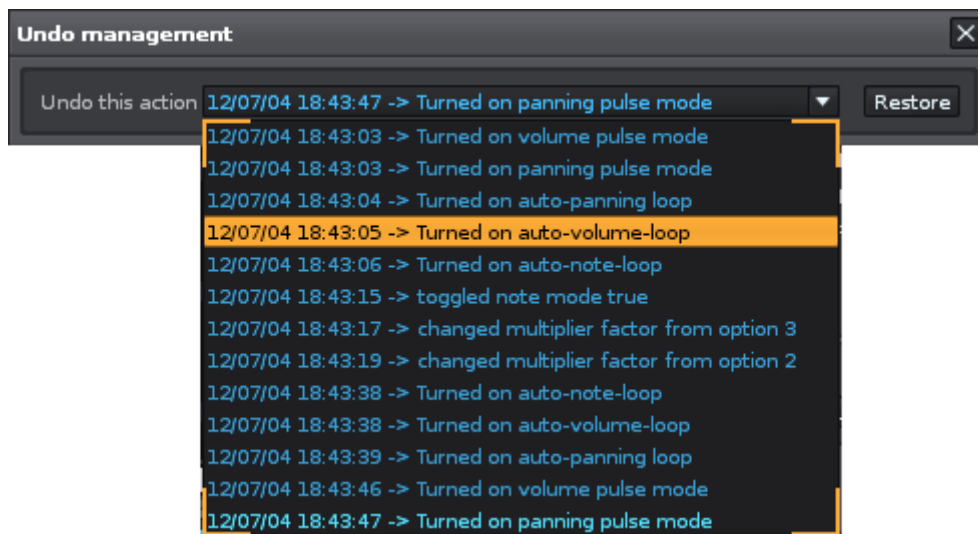
If you click on the save button, a dialog appears and allows you to supply a name for the preset. By default it comes up with the name of the current selected preset. So if you want to overwrite with a new version of that preset, simply press enter and confirm the overwrite warning or cancel and rename the preset to a none-existing preset name. Once saved, it will be listed in the drop-down.

LPB adjust



One last thing, if you set Renoise to an LPB rate that cannot be really translated to an exact division of points per line, you will notice the above button appearing. If you click it, it will adjust the LPB to a value that can be divided properly and then automatically adjusts the BPM to match the pace that the song was running, with the incompatible LPB value.

Undo manager

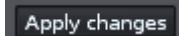


The undo manager keeps a few changes in mind done in the envelope arpeggiator area only. Also only major changes are reminded (changes affecting a complete column or all columns) so if you switch on an assistant, or toggle the transpose slider, before the move is done, a snapshot is made of the current configuration and the time and date is added to give you an orientation of when the change was made. For as long as the session is open, these undo settings are kept. If a new renoise session is started, the undo cache is cleared. Alterations recorded from the Scale finder are not recorded by the undo manager. You can frankly step through the list and pick a snapshot what is the best compromise of what you gained and contains the least handlings that you have to redo from that moment.

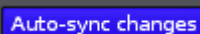
Undo snapshots are plain preset files, so you can copy a specific time session file from the undo folder and then rename it to a preset file, but it is a lot easier to jump back to a specific alteration moment and then rather save that moment manually.

Applying the sequence

So when you are done fiddling with all these settings you want to apply them using the apply button:



The arpeggio sequencer also has a secondary application mode that consequently synchronizes every change that you perform in the sequencer or vice versa in the envelope editor of the instrument itself. If you hit the shift-key, the button description changes and you notice a color...



If you click the button within that one/two seconds after hitting the left shift (or while keeping the right shiftkey pressed), the button lits yellow...



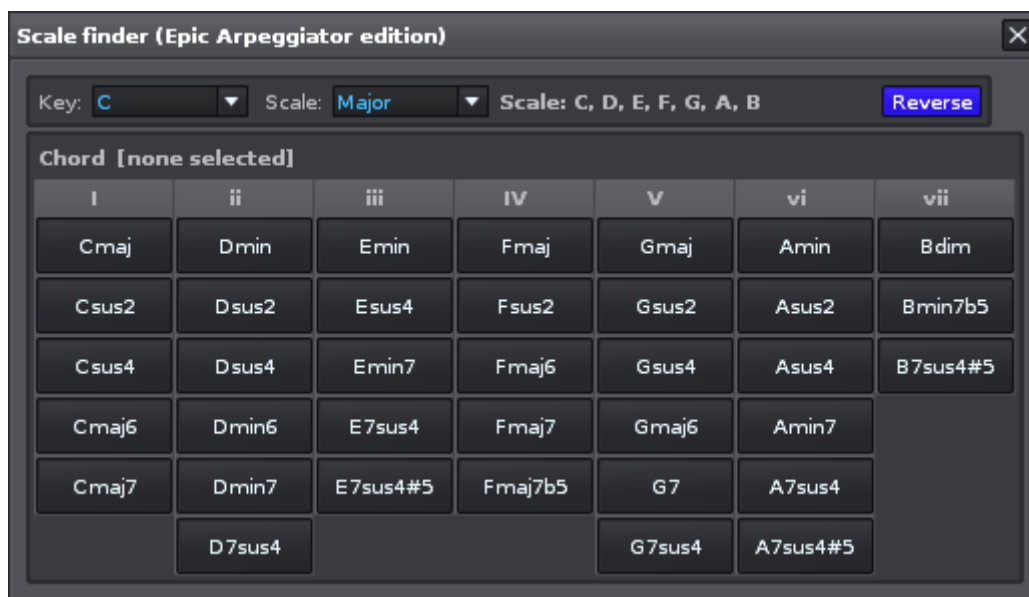
From this moment, any change in either sequencer or envelope editor is being reflected whenever possible. Some changes would cause indefinite loops so here you will notice that some options are not applied. (If this happens and you made a change in the tool dialog, then click the Auto-sync changes button to retry and see if the lockout mode has been terminated, else follow the pitfalls descriptions on the last pages)

To disable the autosync mode, simply press the shift key again and click that button.

This should also change back the button description after the timeout.

The colors really help out orienting what you do and remind you to give focus to the dialog, because if the tool dialog is not selected, you can press all modifiers you want, but the buttons don't perform more than their current basic mode they are set to.

Scale Finder Epic Arpeggiator version



Epic arpeggiator comes with an adapted version of the scale finder that you can download from the main Renoise Tools page.

By hitting Ctrl/Cmd + C you open it up.

The [Scale finder tool](#) is originally programmed by Cly/Suva (Jaan Pullerits) and allows you to pick a scale in any of the available key ranges and port this chord to the pattern editor, this will automatically create the specific chord for you. There is also an [OSC version](#) done by ReDread which is a Renoise 2.8 script version. The one in Epic Arpeggiator also sends OSC signals to the Renoise OSC server if you turn it on in the OSC preferences (Ctrl/Cmd comma in Renoise).

In the EA edition, there is one extra reverse button and this simply returns the chord in a reversed order into any of the note profile areas in the arpeggiator (pattern or envelope) though for the note matrix, this function will not make any difference.

Applying the Scale finder values to any of the note-specific epic arpeggiator areas, requires edit mode to be enabled. The scale finder seems to be more pleasant audible in a range where most notes fall outside the two octave scale. In this particular situation, the routine attempts to fit the notes automatically within the scale but only in a limited way (so that you at least don't have to mess around with the transpose slider). But the notes are still shown between brackets.

Pitfalls when fetching stuff

If you apply the fetch routines on notes on the pattern editor, you might stumble against strange behavior, but on second thought, there must be something less obvious that you might have overlooked or didn't caught your eye.

-An easy mistake to make is fetching everything from a complete track or selection where multiple columns are involved and some columns are completely empty. If you don't desire the fetch routine to incorporate the space from the empty note-columns, remove them, or simply select only that area that you want to have included in the fetch.

-Another easy mistake to make is (not) enabling any particular volume/panning column if you (don't) want to have the contents from the sequencer being applied. Click the buttons above the column and they turn yellow or blue (depending on whether you want or don't want the specific envelope being involved, the same counts for the other envelope parameters as well.)

-The sustain node is enabled in the volume or panning column which does not always make it too obvious that this is stopping the continueing process. However, if you see that white colored cell in the envelope sequencer, simply navigate the cursor to it and hit ctrl/cmd-s or go to the specific envelope in the instrument and turn off the sustain.

-Some of the notes are falling outside the two octave range, this will result in notes not crossing the +1200 or -1200 tone value in the pitch envelope and it might not sound very pleasing either if it doesn't fall into a harmonic scale. So check if you need to shift the tones using the tone scope, or use a hard measure and manually edit these few notes to make them fit within the octave scale.

-Are the loop start and end nodes in the correct place? Did you actually wanted to have loop-mode turned on at all? Turn off loop-mode, or turn off auto-loop in the assistant area.

-The end-marker disappears or the routine sets up an odd end position of the envelope size: did you checked by hitting the [end] key on your keyboard if it is where you needed it? If the cursor ends up on an empty cell, add an end-marker on the spot where you really want the envelope to end.

-The secondary options of the specific keys don't work, i modifier-click a key but it does its default thing, color doesn't change: focus the dialog by clicking on it with the mouse (you probably already did the first time when it didn't worked), then press the modifier key again, does it now work?

-The auto apply doesn't always work: It is rare, but this indeed can happen. Press the auto-Sync changes and see if that makes everything push through. Usually that does the trick, otherwise, check the earlier mentioned common mistakes...

-Sh*t!, when having the "Auto-sync changes" turned on and nicely played with the scale finder tool, it created so much undo steps in Renoise, it is a pain to go back to a specific change that i did in the pattern editor 1.500.243 changes ago\$@!!#!@#!@##!!!\$!!! : Yeps, sorry, there is not much i can do to prevent Renoise from storing this undo data but there is unfortunately too much going on in all these routines that doesn't make it an easy job at all to write undo management that also can figure out how many undo steps each action took and what their description is. I guess Renoise could use a similar undo manager as my tool has ;)

Closing words

All in all, i must say that this was quite a time consuming job, not that everything was specifically hard to program, but when you only have a couple of hours in a week to look into it and the larger such project gets, the harder it becomes to keep track of what is where. Ofcourse that made me change a lot of strategy on how to program what and where to put stuff, nevertheless, being pulled out of this full concentration for a long time and then having a small time to spend on it continueing the project does not make it easy completing it and getting everything bug-free. So i hope you can grant me some respect for the effort alone and i hope that this tool does for 95% of what you need it to do and the other 5% of quircks can be seen through.

Some problems were very hard to detect and there are still some hardly noticable bugs crawling around... Well, i hear them crawling, but i just can't see them and unfortunately i simply don't have the time to sit around with a fly-squatter and a can of beer and wait for these last bugs to come out in the open. Most people programming these kind of scripts also have something that they call a "life". Well don't know if i can call what i have exactly that, but it consumes an important part of my time and it makes my living.

If you stumble against bugs that really make the tool crash, then post them in the discussion topic on our forum and i will have a look into it as soon as i can. You help me out a lot better if you provide steps to reproduce or perhaps a preset that i can load and from that reproduce the steps to cause the problem. But i can't promise that i will be able to fix everything. I definately not going to promise to add functionality to – or enhance existing features in the tool.

Sincere regards,
Vincent Voois
Renoise Team 2012