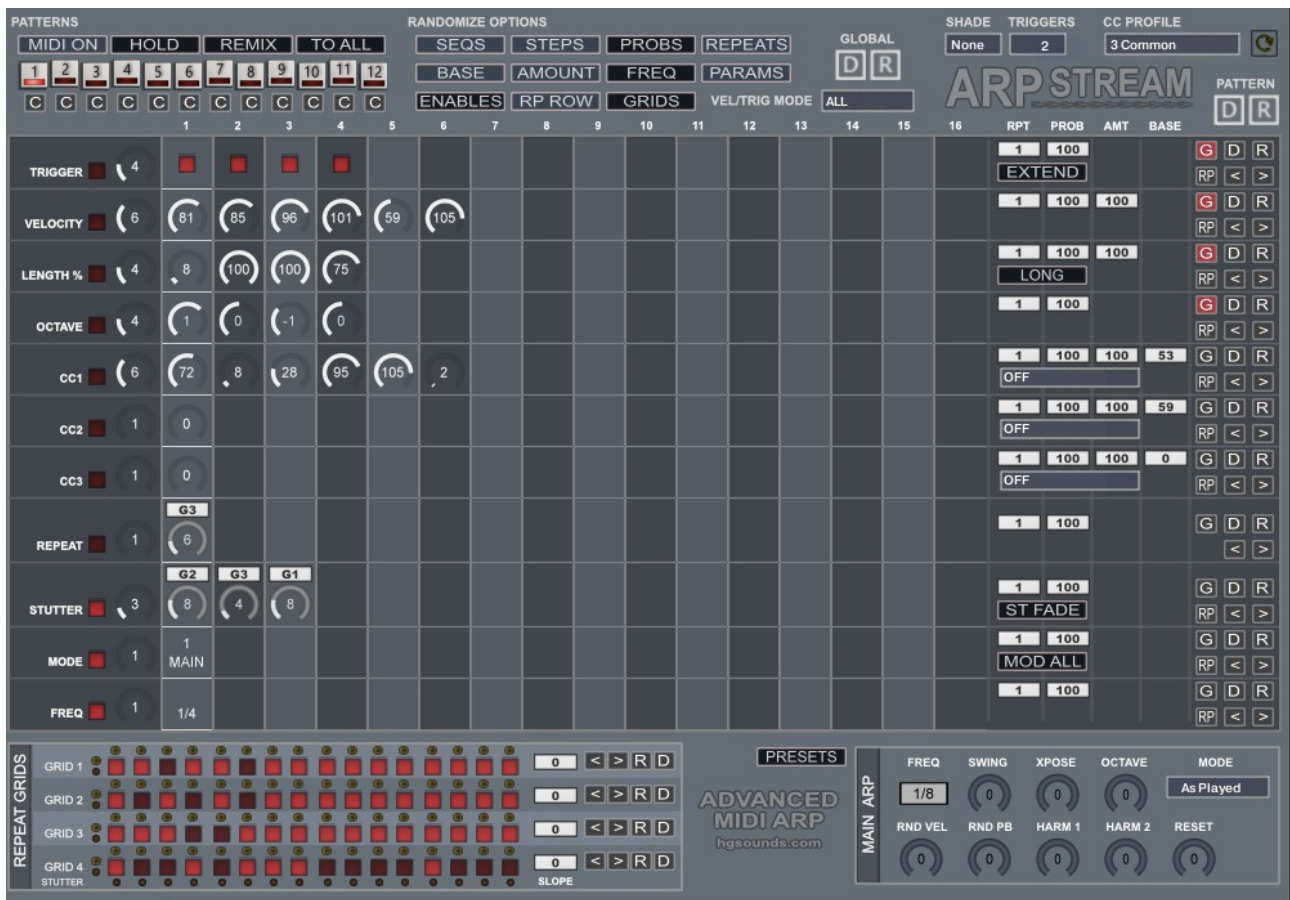


# ARP STREAM MANUAL

# Introduction



ARP Stream is an Advanced Midi Sequencer with an arpeggiator in it's heart. It functions in a fairly modular way with a range of different sequencers and techniques which can be combined in many different ways.

## Changelog

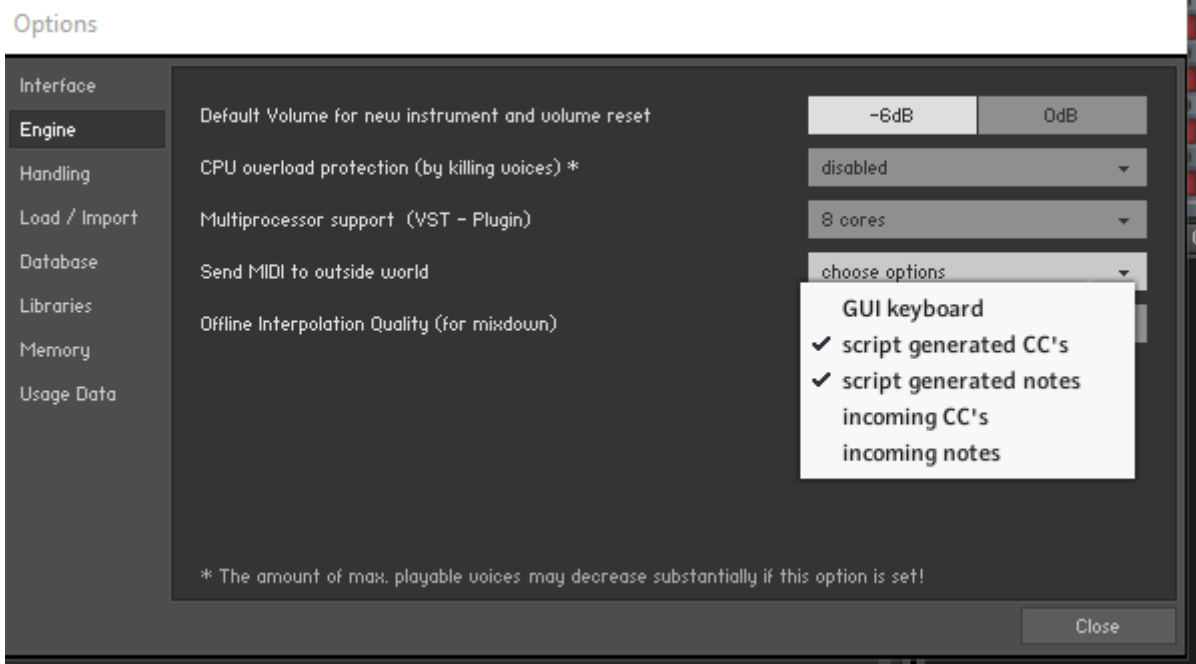
### V1.0

- Added option to use Grids for gating the Stutter Sequence. There is now an associated value to assign a Grid to each Step
- Fixed U-HE Synth hanging notes (hopefully)
- Fixed Remix not using all sequences
- Changed Sequence randomize so now it will randomize regardless as long as the 'G' Button is selected.

### V0.96

- Pre Release

## Configuring Kontakt for Midi Output



In the Kontakt Options make sure that these 2 are ticked so that both Notes and CCs will be sent out of Kontakt.



The Midi Channel is always the same as the input channel set on the instrument.

Using Kontakt Midi Output is done differently in each Host, here is a video I made for Midi Stream last year which shows how to do it in many Hosts:

<https://youtu.be/kcKY7F2si-I>

# Sequencer Rows

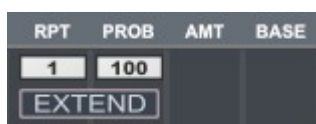
In total there are 11 Different Sequencer Rows which all share the same functionality and mechanism. Every sequencer Knob supports using ALT/OPTION to edit all rows simultaneously (using ALT elsewhere will edit the value in all Patterns Simultaneously).



- **G** - This will enable this sequencer in Global/Pattern randomizing, the Sequencer Row must also be enabled to be Randomized.
- **D** - Sets the sequencer Row to it's default state referencing the Global Default File. You can overwrite this with the current state by using 'Save Deafult' on the Presets page.
- **R** - This will Randomize the Sequencer
- **RP** - Determines if this row should use the Repeat Sequencer to repeat each step by the setting of the current Repeat Sequencer Step.
- **L/R** - Shifts the sequencer left or Right.



- **ENABLE** - Switches the Sequencer Row on.
- **STEPS** - The Steps knob determines how many steps from 1-16 the Sequencer Row will use. Use ALT/OPTION to edit in all Patterns simultaneously.
- The Sequence Step Knobs/Button can use ALT/OPTION when clicking/moving to edit all Sequencer Steps simultaneously.



All Sequencers have the following options. Other Options will be discussed below.

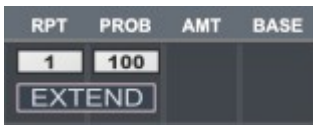
- **RPT - Repeat**  
This will determine how many times each step will Repeat before moving on to the next step, often having the effect of slowing down the sequencer by 'X.' If the Repeat Sequencer is also used, the repeats will be added together.

- **PROB - Probability**

Sets the percentage of how likely each Step will Trigger ranging from 0% (never) to 100% (Always). Note that these values on the Trigger Row will be calculated for each note played, and so if using Chord Mode it can bring some interesting movement.

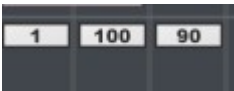
## Trigger Sequencer

The trigger sequencer will allow creating pattern of when Notes will Trigger at the Top Level. Even though the Repeat Sequence Grids also generate patterns, they will only play on a valid step created by this Sequencer. When Disabled every Step will Trigger.



Extend is used when Repeats are set to more than 1. The normal behaviour is that each repeat will trigger on each repeat. With Extend Enabled only the initial step will trigger so in essence it will Slow down the Frequency of the Sequencer.

## Velocity Sequencer

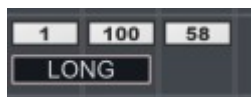


This will determine the Velocity used for a triggered Note.

- **AMT - Amount**

This forms the Maximum Velocity as a percentage of 127 and is the default used when the Sequencer is disabled. Each Velocity Step will be a percentage of this value.

## Length Sequencer



Determines the Length of a played Note.

- **AMT - Amount**

Represent the Maximum length of each Note and is the value used when the Sequencer is disabled. The 100% Length is calculated as a single step of the current Clock Rate of the current Frequency. Each Step will be a percentage of this AMT value.

- **LONG**

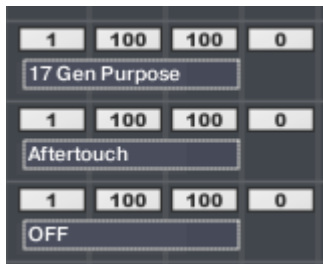
Normal behaviour is to make the length a percentage of the current step length. When Long is enabled, it will use a longer fixed size to be used instead. However this should be used with caution for example, if using Chord Mode it means that

overlapping notes will be sent of the same note number and this very much depends on how the target synth deals with this situation. It can lead to chopped notes as well as hanging notes. Some synths will be fine with it, others will not. If it is used it's best with continually changing Sequences to avoid doubling notes.

## Octave Sequencer

This sequencer can add -3/+3 Octaves to the output note.

## CC Sequencers (1,2,3)



These 3 sequencer can use any CC Number as well as Pitch Bend and Aftertouch as a destination.

- **AMT - Amount**  
This forms the Maximum output of the Sequencers and each step will be a percentage of this value.
- **BASE**  
This knob basically takes control of the CC Value between 0 and 127. It forms the Base value of any Sequenced values which are added to this. Even if the sequencer is disabled as long as the destination ID is set this value will be sent/used. This is useful for just changing the value per pattern even without Sequencing. It is also possible to use different CC Destinations in different patterns. In this scenario, when changing a pattern the current CCs are sent before the pattern is changed.
- **CC ID**  
Select which CC number should be used by the Sequencer. The options can be tailored specifically for a device using the CC Profile editor. So for example you could make one for a particular hardware synth and just show the relevant Labelled Parameters for it.

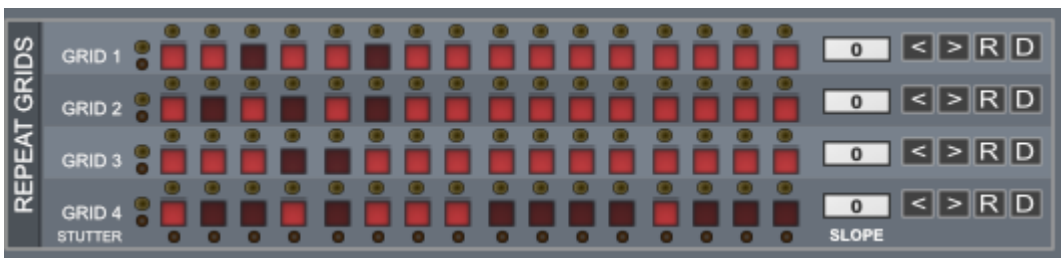
The easiest way to assign a Midi CC is using Midi Learn on the destination instrument, if you click on the Base value it will send a CC message which the listen at the other end will hear.

## Repeat Sequencer



This sequencer allows Repeating Steps up to 32 times. Any Sequencers which have the RP Button enabled will follow these repeats.

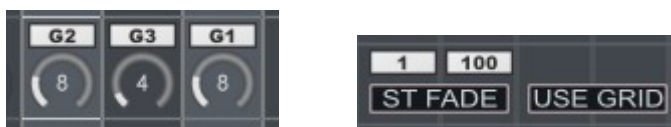
Additionally this Sequencer also use assignable Grid Gate Sequencers which can be assigned to each step. There are four 16 Step sequencers available for this purpose G1-4, or the selection can also be set to OFF which will just trigger every step.



Each sequence allows creating a 16 step gate pattern, the number of steps played is determined by the associated Repeat Value. They will always start from zero when the Repeat step plays.

The Slope setting allows creating either a Fade In or Fade Out slope to the Sequence. A positive value will create a Fade Out over X steps. A negative value is used for Fade In, which is calculated so that full volume is achieved on the last Repeat Step.

## Stutter Sequencer



This Sequencer is about diving the current step up into X stutter repeats and supports up to 32 splits which is very fast! It's perhaps more musically useful at lower Frequencies because it has the effect of increasing tempo. However when used with higher Frequencies it behaves more like an effect.

Using the ST Fade Button will make it behave like a digital delay so that each Stutter will lower in volume progressively.

Each Step can have a Grid associated with it to gate the Stutter Triggers. The Bottom Row of lights shows this in realtime and the lower of the left side lights shows which Grid is being used.



## Mode Sequencer



The Mode Sequencer has a large collection of different Note and time Manipulations which can be assigned to the step.

- **MAIN** - Essentially OFF and will just use the Main ARP Mode
- **CHORD** - This will enforce the Chord Mode which plays all Held notes
- **RND N** - Random Note selects a random note from all currently held
- **RND M** - Uses a random Mode. Normal Mode will just use the early Pitch Based Modes as possibilities, however if the 'MOD ALL' button is on it will also include the later Timing Modes as possibilities.
- **LOW** - Uses the Lowest Held Note
- **HIGH** - Uses the Highest Held Note
- **MID** - Uses any notes in between the highest and Lowest. If there are none, no notes will play.
- **L+H** - Plays both the Lowest and Highest Notes.
- **OCT-1** - This will add an Octave below note
- **OCT+1** - This will add an Octave above Note
- **OCT B** - This will add both an Octave below and an Octave above
- **POW** - This will play a Power Chord
- **+5** - Adds a +5 semitone note
- **1-2, 2-2** etc...  
These Modes use a counter to determine when a note should play. The 1<sup>st</sup> number represents the count position which will play and the 2<sup>nd</sup> number represent the total number of counts. So 2-3 means the 2<sup>nd</sup> count will play every 3 steps.
- **25% - 90%**  
These assign a probability to the step where 100% represent notes will always be triggered.

## Frequency Sequencer

This sequencer allows changing the Frequency per step which is great for experimental composition. Straight, Triplet and dotted Tempos are supported.

## Main ARP



### The main ARP settings

- **FREQ** - Frequency  
This determines the Clock division of the ARP when the Frequency Sequencer is not being used.
- **SWING**  
Applies a positive or negative swing to the Rhythm
- **XPOSE - Transpose**  
Transpose the pattern by -24/+24 semitones
- **OCTAVE**  
This is how many Octaves the ARP will cycle through after playing all held notes. It can be positive or negative.
- **RND VEL**  
Applies a random Velocity Amount to each triggered note
- **RND PB**  
This sends a random Pitch Bend Value. NOTE: when using this the Pitch Bend > Note Length feature is disabled which is necessary as setting the Pitch Bend in Kontakt affects both unfortunately.
- **HARM1/HARM2**  
These 2 knobs allow setting extra Notes to each note played. When set to zero they are not used.
- **RESET**  
This allows resetting the Sequencer clocks after X Steps. Note that because of the complexity involved in the sequencers, this may not be the position where you expect so experimentation may be needed.
- **MODE**  
The Main Sequencer Mode. This Mode will be used as the Main Mode but will be overridden by many of the pitch based Modes in the Mode Sequencer:
  - **As Played**  
This will cycle notes based on the order they were played
  - **Up**  
This will cycle notes in an upward direction

- **Down**  
Cycles notes in a downward Direction
- **Spiral Up**  
Plays every other note in an upward direction
- **Spiral Down**  
Plays every other note in a downward direction
- **Spiral Alt 1**  
Same as Spiral but Up and then Down
- **Spiral Alt 2**  
Same as Spiral but Down and then Up.
- **Random 1**  
Plays a random choice
- **Random 2**  
Plays a random choice with no repeats
- **Chord**  
Plays all held notes simultaneously

## Patterns



There are 12 Patterns in total assigned to the Red Octave for changing them via Midi. You can also use the GUI Buttons which can also be automated in your DAW. Each Pattern contains ALL values and sequences below the Pattern selectors.

- **MIDI ON**  
Turns On Midi changing of patterns. Useful to disable temporarily if you have already sequenced them and want to work on a pattern without it changing.
- **HOLD**  
Holds the Notes until the next chord is played, useful for working on patterns.
- **REMIX**  
This will Copy and Remix all other patterns using the currently selected Pattern as the template. Other setting will be randomized too according to the selected randomizer options.
- **TO ALL**  
Copies the current Pattern to all others.
- **COPY BUTTONS**  
This will copy the associated pattern to the Currently selected one.

## Randomizers



The Global randomizers can either be used on the current Pattern or Globally affecting the entire machine state. The Default will use the Default File as a template to restore to a default state, again either for the Pattern or globally. You can save your own by saving the current state using the Save Default button on the Presets Page.

There are many Randomize options as well as the ability to decide which Rows will be Randomized using the 'G' buttons.

- **SEQS** - Should Sequencer Rows be randomized
- **STEPS** - Should step lengths be randomized
- **PROBS** - Should Probabilities be Randomized
- **REPEATS** - Should the Repeat Values be Randomized (the per Row setting not the Repeat sequencer)
- **BASE** - Should the CC Base Values be randomized
- **AMOUNT** - Should the Amounts be Randomized
- **FREQ** - Should the main Pattern Frequency be Randomized
- **PARAMS** - Should the Main ARP section be Randomized
- **ENABLES** - Should the sequencer Enable Buttons be randomized
- **RP ROW** - Should the RP Buttons be randomized
- **GRIDS** - Should the Repeat Grid sequences be Randomized
- **VEL/TRIG MODE** - Affects the Trigger and Velocity Rows, used to determine whether velocity is always full level and whether Steps are always on.

## Global Options

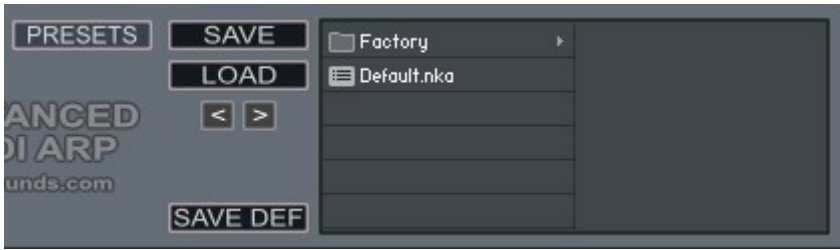


- **SHADE**  
This allows using a custom overlay which changes the colour of the Instrument.
- **TRIGGERS**  
This is the Octave used for the Pattern triggers highlighted in Red on the Kontakt GUI Keyboard
- **CC PROFILE**  
Selects which profile should be used for the CC Menus. Use the CC Profile editor to create your own if needed. If you have made a new one and want to refresh you can use the Refresh button to reload them.

Pitch Bend is used to either Decrease or Increase the Note Length but only when Random Pitch is not being used.

The Mod Wheel and Aftertouch have been left so that they can be used to target the Destination synth to use whatever they are assigned to. However result may be unpredictable if using the CC Sequencers to target them.

## Preset Browser



Midi Stream uses it's own Preset System and Presets can be loaded or Saved using the Preset Browser. The Preset Folder is called 'Midi Arp Presets'

Midi Stream does not come with many Presets of it's own, due to the complexity of it, it's more about making your own Sequences.

- **SAVE PRESET**

When you save a Preset, unfortunately Kontakt always opens the File Browser showing the data folder which stores all the configuration files for the Synth, so you must select the Presets Folder and save your preset there so it will be visible next time you load the synth. You can create sub folders in this directory if you wish, they will be listed on the Left hand side.

- **LOAD PRESET**

This is only needed to load a preset which isn't visible in the File Browser. Useful because Kontakt script provides no way of refreshing the browser except by reloading the Instrument. This provides a way of loading a preset in that situation.

- **SAVE DEFAULT**

All Homegrown Sounds Kontakt Instruments use a Default File for referencing when using any section or Global Default button. This Button will allow you to overwrite the file with the current state of the instrument, which will be used from then onwards.

- **PRESET PREVIOUS AND NEXT**

These Buttons will navigate through the presets. However a Preset must be loaded in the Browser first to create the start point.

# CC Profile Editor



The trouble with using CC numbers with hardware is that it often relies on having the Manual open in front of you, the profile editor is the way that Midi Stream deals with that. Internally uses 8 Permanent profiles. In the Editor you select which one of those you want to edit/change and it will be loaded. Be aware that changes are permanent to the slot after Saving or loading a profile from the file browser.

To edit a Text box just click it. You can set the Profile Name in the Name box, and change the names for all available CCs (except bank Change 0) as well as the visibility so that you can only see the relevant options. The CCs are spread across 2 Pages which you access via the Page 1/Page 2 buttons.

Once you have finished editing clicking save will update the current slot.

It's also possible to export Profiles so that they are easy to send to others or as a backup. Note that you must export both the Names and the States separately due to the way Kontakt stores arrays, however this can actually be handy for applying different states to the same names etc... When you load presets from the browser it is automatically saved to the slot.

After you have finished, you need to refresh the profiles in Midi Stream using the Refresh button next to the Profile Selection.

